

Rugayah Hashim
Abu Bakar Abdul Majeed *Editors*

Proceedings of the Colloquium on Administrative Science and Technology

CoAST 2013

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Rugayah Hashim • Abu Bakar Abdul Majeed
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Springer

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Preface

We are very happy to present the first proceedings book of the Colloquium on Administrative Science and Technology 2013 (CoAST 2013). CoAST 2013 focuses on the areas of Administrative Science and Technology, Management, and Arts and Humanities. Other specific areas of social science through technology by providing contemporary insights within the scope of public sector institutions. The conference was organized by the Research Management Institute (RMI), Universiti Teknologi MARA (UiTM) in cooperation with IEEE Joint Chapter of Malaysia, with its proceedings to be archived in Springer Digital Library.

The CoAST 2013 conference received 98 submissions with a 67.3% acceptance rate. However, the final count of 47 papers was submitted to Springer for publication. All submitted papers were subject to double blind peer review by an independent international review board of 750 experts.

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Chapter 1

Leadership Development Initiatives to Ensure Succession Planning Effectiveness

Sakinah Muslim, Shireen Haron, Rugayah Hashim and Norraidah Hassan

Abstract Leadership development has received considerable coverage in recent decades, and this is evident by the proliferation of research and popular literature covering this topic. In practice, organizations are employing leadership development initiatives in an effort to nurture talented individuals who will provide effective leadership. As a leadership development becomes prevalent in academia and practice, it is critical to understand what are leadership development initiatives and their related concepts. In this chapter, we review the literature on these ubiquitous yet elusive concepts. We begin by exploring what are leadership development initiatives, distinguishing between leader development and leadership development terms and highlighting the difference between experiential and educational leadership development. In the final part of this chapter, we highlight the importance of leadership development initiatives in succession planning. This chapter uses supportive literature to examine leadership development initiatives to ensure succession planning effectiveness.

Keywords Leadership · Development · Succession planning · Academic · Practice

1.1 Introduction

Leadership development program or leadership initiative is “the banner under which potential successors are developed systematically and visible way” [1]. In detail, leadership development initiatives are processes or programs that develop

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characteristics of leadership, competencies, personal attributes, traits, and organizational vision, thereby creating emotional connections that support sustainable change within an organization [2].

Leonard and Lang [3] stressed that identifying future talent needs and creating solutions to those needs are very important in succession planning. The challenge is how to create leadership development initiatives that can cater the leadership skills needed in future. Hence, the aim of this chapter is to explore leadership development initiatives in ensuring succession planning goals achieved and related concepts.

1.2 Leadership Definition and Related Issues

Having a valid leadership theory as a roadmap to guide leadership development initiatives is fundamental to understanding how it works. It can ensure that we can expect and evaluate the right things. However, many authors fail to provide a definition of leadership before discussing leadership development [4].

The leadership literature is diverse and lacks consensus. There is little agreement on the exact nature of leadership and the effectiveness of particular approaches. Basically, leadership is “the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives” [5]. There are many leadership theories that have been developed over the years. From traits, behaviors through contingency theory and situational theory to transformational, researchers have long attempted to understand the determinants of effective leadership. Besides, two mutually exclusive views about leadership involve the school of thoughts holding that leaders are born and the school of thoughts holding that humans need to work hard to develop these qualities [6].

1.3 Leadership Development Initiatives

How can potential leaders be cultivated and readied for the challenges they will face in their institution? One of the answers is implementing leadership development initiatives. There are many developmental activities or internal employee developments related to succession planning, or they are part of the succession planning process. For instance, Rothwell [7] posited that there were 300 general ways to develop individuals. From a practice standpoint, leadership development has been classified in many different ways. The majority of the leadership community agrees that leadership development is best addressed through a systems approach in which individuals are exposed to developmental opportunities through experience, mentorship, and formal training [8]. Although Kouzes and Posner [9] suggest that formal leader development programs or initiatives constitute the smallest portion of an effective leadership development mix, they are still significant.

To that end, the American Society for Training & Development (ASTD, cited in [10]) classified these initiatives under four general types of leadership development practices: experiential learning, education, coaching, and assessment. These four broad types of initiatives are also known as assessment option, coaching option, learning option, and experience option.

a. *Experiential learning*

In related literature, the term developmental experiences, developmental job assignment, experiential learning, experiential leader development, and experiential job assignment are frequently used interchangeably.

There are a few important activities included under these initiatives. While the classification of developmental assignment can vary, there are a number of common initiatives typically associated with the effective approach. Day [10] claimed that action learning, job rotation, and stretch assignment were under this approach.

Velsor, McCauley, and Ruderman [11] added up job moves, temporary assignment, and leadership roles outside work in the list. Groves [12] recommended stretch assignments, cross-divisional or cross-site assignments (job rotation), and action-learning projects as the most critical of this technique. DeRue and Wellman [13] argued that the types of assignments that were particularly developmental included an increase in the scope of responsibilities and unfamiliar responsibilities, creating change, job rotations and transitions, stakeholder engagement assignment, and working in a different culture or across boundaries. Basically most of the scholars discussed quite the same approach but in different and sometimes interchangeable terms.

b. *Education*

Another factor impacting the succession planning goal is education. Education is one of the important developmental initiatives of especially strategically relevant and powerful well-timed programs [14]. Education includes formal training or targeted educational programs. However, it should be supplemented with real-world experiences [15].

According to McCall [16], educational experience becomes a significant part of learning when

1. used as an opportunity to reflect on and make better sense of experience,
2. substituted for an experience that is either unavailable to enough people or is too risky or expensive to use for development, and
3. preparing people to choose more wisely and get more from the experience.

c. *Developmental relationship*

Coaching and mentoring or developmental relationships are often considered as a formalized form of feedback and often lead to succession planning goals. Coaching can be a short-term intervention intended to develop specific leadership skills or a more extensive process involving a series of meetings over time. Coaching can take place in two different forms. A coach may choose to work one-to-one with an individual manager or conduct workshops and seminars with larger groups of managers. The latter approach is a one-to-many coaching process, also defined as team

coaching [17]. Mentoring, on the other hand, is a committed, long-term relationship, in which a senior person supports the personal and professional development of a junior person [4]. Sosik, Lee, and Bouquillon [18] concluded that mentoring relationships have been increasingly used as a means for leadership development across a range of contexts. As a result, organizations may enhance the levels of organizational commitment, retention, managerial succession, and productivity by supporting mentoring.

The difference between mentoring and coaching is that a mentor is normally someone who is higher up in the organization while a coach can be someone in or outside the organization. According to Rothwell et al. [19], a mentor serves as a sounding board and offers a less experienced person advice on what to do, when to do it, and how to do it. On the other hand, coaching enables to provide an individual, unfiltered feedback and provides reinforcement of the knowledge and self-awareness gained in the developmental process. Coaching can strengthen the ties of the other inputs to knowledge and self-awareness.

Furthermore, coaching is question based in which the coach does not need to have any specific “sector” experience. Coaching therefore extracts all the various options available to the one being coached through questioning, encouraging him to select the option he feels best fits the issue. In contrast, mentoring is solution based. The mentor is able to guide the conversation in a manner that will enable the mentee to profit from the mentor’s experience in context with his issue [20]. In short, the coach demonstrates and the mentor models and guides.

d. *Assessment*

Assessment or feedback mechanism is also argued as an important intervention in achieving the succession planning goal. Under the assessment method, the 360° feedback has gained momentum and become the most important trend in leadership development [21]. The 360° feedback is an assessment tool used in many executive development initiatives to evaluate leadership skills of participants based on an organization’s core competencies. This is conducted by surveying supervisors, peers, subordinates, and outside colleagues in order to gather feedback to be used to narrow the performance gaps [22]. By using assessment, the future potential of an employee is analyzed in terms of not just what was accomplished in the past, but also what this individual could bring to the table in going forward. The organization is then able to see where the employee’s potential plays into future company strategies, analyze any gaps, and chart a development course for closing those gaps [23]. At the same time, this approach also encourages self-reflection and self-analysis [24]. However, this effort is not a stand-alone event, but there must be follow-up sessions.

1.4 Leader Development and Leadership Development

The topics of leader development and leadership development are very important in the context of development in succession planning. However, leader development and leadership development are not synonymous. Therefore, a distinction should be made between these terms [25].

Leader development as described by McDermott, Kidney, and Flood [26] is one aspect of leadership development. Leader development is based on a traditional, individualistic conception of leadership that occurs through the development of individual leaders. That means it is concerned with the personal development of individual leaders or intrapersonal aspects while leadership development is based on contemporary relational strategies which help individuals understand how to relate to others and coordinate efforts or interpersonal aspects.

Based on the works of McCauley and Velsor [27] and Velsor, McCauley, and Ruderman [28], leader development is enhancing a person's capacity whereas leadership development is the expansion of organizational capacity. As Day [29] suggests, leader development is individual level development whereas leadership development involves interaction between individual leaders and the social cultural environment in which they function. Thus, leader development is an orientation toward developing human capital whereas leadership development is an orientation toward social capital.

In short, leadership development is a multi-level phenomenon, with individual leader development as a foundation and collective leadership development at the apex [30]. Amidst differences, all leadership developments must be linked with leader development.

1.5 Experiential and Educational Leadership Development

In an effort to develop potential leaders, diverse developmental job experiences have been identified as the best way to increase readiness. Barnett and Davies' [31] extensive review of succession planning and leadership development literature to determine the best practices in succession planning led to the conclusion that "new or expanded job responsibilities, stretch assignments and otherwise challenging experiences are the best ways to prepare individuals for future leadership roles" (p. 729). This conclusion is in line with Garman and Tyler's [32] report on succession planning in freestanding US hospitals and Hernez-Broome and Hughes' [33] reviews of notable trends where they highlighted that any developmental job experience is one of the "best practices" used to develop the needed skills and network.

On the other hand, McCall [34] also draws our attention to the importance of formal initiatives or classroom-based programs. He stressed that formal trainings, especially strategically relevant, powerful well-timed programs, are also needed as supplements to the experience-based development. In fact, the greater the variety of leadership development methods, the better it will be for the potential leaders [35]. One of the reasons is that each approach has its strengths and limitations and sparks a different kind of learning and development [36].

Basically, the importance of experience and actual work events as vital elements in expanding the individuals' capacity to learn is very clear. Specifically the merit of an on-the-job experience versus formal training is very clear. Workplace development rather than classroom-centric development as a primary source of leader

growth is proven in many studies [37]. All these studies reinforce the importance of providing meaningful developmental experiences for developing leaders. Furthermore, many researches support the idea that assignments are a major source of development for managerial skills [38].

Theoretical framework by Tesluk and Jacobs [39] outlined a process model in which work experiences produce intermediate outcomes such as work motivation, knowledge, and skill development and work related attitudes which in turn result in secondary results such as performance and career development. McCauley and her colleagues [40] found that challenging work experiences are interconnected with learning and performance results.

In addition, there is also empirical evidence for the relationship between work experiences and leader development. For instance, McCall, Lombardo, and Morrison [40] asked successful executives of six Fortune 500 companies to describe the key developmental events in their career. More than half of the events reported stories about work assignments. Hewitt Associates [41] surveyed 373 private companies and found 89% of the top 20 companies grow their high potential through developmental assignments. The use of developmental assignments is considered very important to develop potential leaders, but these assignments should be long enough to allow sufficient time for learning to occur.

Clearly, providing succession candidates with challenging job assignments is a potent developmental strategy. Review of succession systems has emphasized the importance of developing future high-level managers by placing them in assignments for which they are not fully qualified [42].

Hill [43] emphasizes stretch assignment as the most important learning experiences. Stretch assignment is an experience which stimulates and potentially broadens a person's current capability of the lens of individual goal orientations. The Center for Creative Leadership (CCL) conducted a research to answer the questions of the processes that can make executives learn, grow, and change. They discovered that stretch assignment and developmental relationship are critical to the development of successful executives [44].

Action learning, described by Groves [45], is the project-based learning directed at current, critical business problems, often involving cross-functional teams of high-potential people. Further, Leonard and Lang [3] claim that action learning is being used increasingly as a main method for building leadership skills and improving leadership behavior.

Action learning teams usually set out to solve a business problem. In so doing, members learn from each other and from the project experience, and those lessons help to build individual and organizational competence. Hernez-Broome and Hughes [4] note that action learning solved important real-time organizational problems.

The action learning method gives the kind of real-world practice and accountability that Hicks and Peterson [46] identify as necessary situations for transferable leadership learning to occur. One of the strengths of action learning is that learning focuses on the skills that individual team members consider high priorities for them. Furthermore, individual team members determine what behaviors or leadership skills they want to develop at that time and given the problem at hand [3].

Recent studies also found job rotation as one of the important activities, and useful development takes place when job rotations are part of an integrated leader development program binding into a larger succession plan [47]. One of the paramount goals of job rotation is to create a strong base of talent that can be matched up to a portfolio of available jobs within a company [48]. There is a general consensus in the business literature that rotating potential leaders through a number of leadership experiences provides a variety of challenges that cover the spectrum of the company's activities and gives the new leader the best opportunity for learning [49].

In short, experiential approach toward leadership development is very important and effective. This has been proved by many previous studies. However, the practice is always misdirected where an organization emphasizes more on formal training compared to experiential learning [50]. Thus, the architecture of the pipeline should be weighted much more heavily toward work experiences than formal programs.

1.6 The Importance of Leadership Development Initiatives in Succession Planning

Why do we need succession planning? The main reason is to get the best people to lead the organization [51]. In detail, the goal of succession planning is to ensure that potential leaders are identified, fully capable, and ready to contribute [52]. We cannot expect good leadership to simply exist in the organization. According to Allio [53], "leadership is a potentiality, undeveloped and unrealized until it is developed" (p. 1072). Therefore, leadership development initiatives play an important role in succession planning by helping to provide leadership capabilities to employees.

As reflected in most of the literature, leadership development is an essential factor in developing a successful succession planning. Leadership development is seen as one of the ways to assure that enough leaders are present to meet the future challenges [54]. The first step in effective and integrated succession planning system is to decide how the succession process will link to other management and HR systems including links to leadership development [55].

In general, the use of development initiatives is considered to be a best practice leading organization as a means of ensuring the maintenance of leadership pipeline or bench strength [56]. However, there are criticisms of developmental initiatives as well. For example, research focusing on outcomes of developmental activities is still considered, by some, to be in a relative early development [57], and most programs have an ad-hoc nature [58].

Systematically driven leadership development initiatives usually lead to enhanced leadership capabilities and organizational performance [59]. Accomplishment of the most comprehensive succession planning systems involves providing the process and structure for identifying and understanding the leadership talent in the organization and emphasizes and facilitates ongoing learning and development for the organization's most talented leaders [60].

It is argued that succession planning can be successful only if high-potential employees are given the opportunity to develop their skills, knowledge, and attitudes through an ongoing learning process [61]. It is therefore not surprising that research by advocates indicates a direct link between development opportunities provided by an organization to leaders and the overall strength of the leadership bench. Hence, the critical task, faced by any organization, is to ensure that the potential leaders have access to the right developmental opportunities.

1.7 Conclusion

In ensuring a qualified pool of potential leaders to ascend to leadership positions, developing sufficient leadership development initiatives is very critical. A combination of both experiential and educational leadership development is very important to cultivate the next crop of leaders in effort of succession planning. There must be a proper planning for every individual development, and it must be an ongoing process. The year-end practice of formulating a set calendar of development programs for the following 12 months, where people self-nominate, has to be reconsidered with elements of individual potential leadership character that is further enhanced and upgraded. To upkeep the schedule for a future year training projection may no longer be effective and may not meet people's actual needs at work.

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Chapter 2

Batek Phrases for Biodiversity Researchers: A Preliminary Language Descriptive Analysis

Tengku Intan Suzila Tengku Sharif and Teo Kok Seong

Abstract The Kuala Keniam Research Centre is situated on the Tembeling riverbank within Pahang's Malaysian National Park. Researchers may request to use this center which operates as a transit point for accommodation and access to Batek Orang Asli guides. These Batek guides have precious knowledge of the Malaysian jungle flora and fauna which are valuable to biodiversity researchers. Unfortunately, their limited competence of the English language would hinder their willingness to share such information. Thus, it is pertinent for researchers to know some basic Batek phrases which can ease the cultural and language barrier. Data were collected through experiential observant-participation of approximately three months' field visits. Findings may provide essential Batek phrases for future researchers and may suggest that the /-lew/ stem is a possible indicator of Wh- questions equivalent. IPA transcription is provided for easy reference and some descriptive analysis is included for the future establishment of Batek grammar.

Keywords Batek Orang Asli · Aslian language · Batek phrases

2.1 Introduction

The Kuala Keniam Research Center is situated about 25 km north of Kuala Tahan, in the 434,300-ha Malaysian National Park. It serves as a transit station to ground the importance of the park as a biodiversity treasure fit for advanced researchers from environmental disciplines to social sciences [1]. The Batek Orang Asli dwell in this preserved area and some work as guides who indirectly may provide

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precious knowledge and experience of the jungle. As such, knowing basic phrases for communication in Batek would extend chances of establishing rapport with the local Batek guides and unlocking the abundant secrets of their natural heritage. It may ease icebreaking efforts and create a symbiotic relationship between the guides and researchers. Some researches that have been conducted at Kuala Keniam include studies on birds [2], rattan [1], trees [3], tribal folklore and beliefs [4], and language [5].

The Aslian languages are a subdivision of the larger Mon–Khmer language family. Despite the substantial amount of research on Aslian languages among the indigenous communities (*orang asli*) in the Malaysian Peninsula (notably in the work of Temiar [6], Semelai [7], Mah Meri [8], Jahai [9], and several others), in some of which grammar and dictionaries have been published, research on the Batek language has been minimal. The latest known language-descriptive publication of Orang Asli languages is on the Semnam language [10]. There have been concerns amid researchers that the Aslian languages, Batek included, are facing the possibility of extinction due to several factors [11]. Among the factors affecting this is the influence of a more dominant language in the area where the indigenous tribes live. In the Malaysian Peninsula, [11] argued that the dominant Malay language has a long-term interaction with the Orang Asli tribes, mainly due to economic reasons and proximity. However, indigenous tribes which are in isolation or with limited contact with the Malays such as Cek Wong have managed to retain their languages [12]. Tribes with a higher degree of self-sufficiency, larger farming populations, and remote locations tend to have fewer borrowings from the dominant language [11].

Among the pioneering works on the Batek are done by Endicott and Benjamin in the 1970s. Their work concentrated on the social aspects of the Batek as well as their interaction with the forest. Recent notable work on Batek knowledge acquisition and living has been done by Lye [13–15]. This research concentrated mostly on the relationship between the Batek and the surrounding forest, focusing more on the anthropological and environmental aspects of the lives of Batek. The Batek Hep' are “lowland forest people and mobile hunter-gatherer” [13, p. 166] and consider the forest as “their dwelling place, source of food and refuge and the basis for cultural continuity” [15, p. 250]. The Batek are one of 19 or so of Malaysia's Orang Asli Austroasiatic language speaking peoples [13]. They rely significantly on foraging activities and the trading forest produce with the local traders. Today, some of the Batek Hep' are seminomadic and have frequent contact with the local Malays due to trading activities and serving as tourist guides. This has made their language become more vulnerable to the influence of the much more dominant Malay language. As such, more loanwords can be seen in their daily language use [5]. To date, some studies in Batek Aslian include work by Lye [14, 15], which although not a study on language includes a short list of Batek words; Sultan [16] on the syntactic structure of Batek; and Ahmad et al. [5] on Batek loan words.

2.2 Methodology

2.2.1 Methods

First, experiential observant-participation of approximately 3 months' duration, of several visits was undertaken. This was to understand the lifestyle and become familiar with the speech sounds. Then elicitation was conducted with several Batek men who regularly work as guides either for researchers or tourists and some females who dwell in the visited villages. Common daily phrases were observed and some phrases were given to them for translation. These translations were recorded (audio and video) and later transcribed. The assistance of a retired Department of Wildlife and National Parks officer who had worked with the Batek people and is proficient in Batek language was initially adopted for cross-referencing clarification of the translation.

2.2.2 Objectives

The findings presented here are a part of progressive research for the establishment of the Batek grammar. The immediate aim, however, is to assist future biodiversity researchers who wish to conduct researches at Kuala Keniam to gain basic communicative ability with the Batek guides. Secondly, the phonemic and some semantic analysis may indirectly unfold some elements toward the establishment of a grammar of Batek.

2.2.3 Informants

A few Batek villages, namely Aur, Teresek, and Dedari along the Tembeling river and Cangkung and Rincing along the Keniam river, were visited to document the Batek language. Male and female Batek in their 30s to 40s acted as informants. Ethical constraints [17] were imposed.

2.2.4 Phrase Analyzed

The number of phrases analyzed is shown below in Table 2.1. The existence of Malay loanwords is generally high among the Batek community [9], the contemporary Batek who work as guides and those who dwell at the show villages are showing threats of the loss of language. They show ignorance of synonymous lexicons and failure to recall Batek past lifestyle-related lexicons. The elderly Batek acknowledge this phenomenon and call the youth ignorant. Yet those who avoid the tourism monetary industry may have better grasp of the Batek language.

Table 2.1 Number of analyzed phrases

Category	Phrases		
	Phrases entry	Table 2.2	Table 2.3
1	Batek phrases	14	24
2	Batek phrases with loanwords	2	6
3	Batek phrases with language change	1	0

Table 2.2 Icebreaking phrases

Phrases			
Questions	Literal meaning	Reply	Literal meaning
/ʔaylew ¹ kabar?/	<i>What news?</i>	/nɛŋ kabar/	<i>No news</i>
/moh ʔuʔlew?/	<i>You who?</i>	/kenmoh yek ² .. /	<i>I (My) name is...</i>
/səh ³ nan loh ^{1a} ?/	<i>Come from where?</i>	/yek ^{2a} səh nan.. /	<i>I come from...</i>
/moh səʔ ^{3a} masa? ʔiʔloh ^{1b} ?/	<i>You arrive time when?</i>	/də-dəʔ ⁴ yek səh/	<i>Just now I come</i>
/moh ⁵ panek ʔaylew?/	<i>You want what?</i>	/yem ^{2b} pi ʔol moh pi-deŋ halbow baʔ həp/	<i>I (to) request you to show path to jungle</i>
/halbow baʔlew?/	<i>Path which?</i>	/halbow Kənyam/	<i>Path Keniam</i>
/halbow dəʔ ke baʔlew?/	<i>Path this to where?</i>	/halbow baʔ tɔm pədəh/	<i>Path to river near</i>

Table 2.3 Asking questions

Phrases			
Questions	Literal meaning	Reply	Literal meaning
/ʔaylew deʔ ^{4a} ?/	<i>What this?</i>	/bəlaw/	<i>Blowpipe</i>
/ʔaylew mə ^{5a} -dik ⁸ deʔ?/	<i>What you do this?</i>	/yem jət/	<i>I (to) smoke</i>
/ʔaylew mə-dik?/	<i>What you do?</i>	/cɔm ʔəs/	<i>Look (for) fire-start fire</i>
/ʔaylew dik?/	<i>What do?</i>	/ʔuʔ yem dik ^{8a} /	<i>It I do...</i>
/ʔaylew moh kedap?/	<i>What you look for?</i>	/kedap batan ... /	<i>Look for ... tree/plant</i>
/deʔ batan ʔaylew?/	<i>This tree/plant what?</i>	/taŋgoy/	<i>Rambutan</i>
/batan deʔ cambah ke ⁹ baʔlew?/	<i>Plant this grow at where?</i>	/təbŋ tɔm/	<i>Bank river</i>
/batan kayu? mabu? bah ^{6b} ?/	<i>Tree trunk poisonous?</i>	/ʔuʔ deʔ... /	<i>It (is) now ...</i>
/bətʔet ¹⁰ bah ^{6c} batan kayu?/	<i>(is this) Good tree trunk?</i>	/bətʔət/	<i>Good</i>
/deʔ batan buləh di-ʔubət?/	<i>This plant can cure?</i>	/weʔ dək, jəbɛc ¹¹ /	<i>Exist poison, bad</i>
/kləŋ ʔaylew deʔ?/	<i>Sound what this?</i>	/kləŋ kawaw/	<i>Sound (of)bird</i>
/halət baʔun? ¹² /	<i>(is it) Dead there?</i>	/nɛŋ, gos/	<i>No, (it's) alive</i>

2.3 Findings

The phrases provided here may serve to help researchers to start communicating with the Batek tribe in their own mother tongue. These phrases may serve as an icebreaker and indicate the willingness on the part of the researchers to learn and

communicate in Batek language. However, for language-descriptive purposes, vowel variants exist in many lexicons as Batek Aslian language does not have a written record.

2.3.1 *Icebreaking and Greetings*

The phrases in Table 2.2 can be used as an initial greeting upon meeting a Batek guide. Better reputation with the Batek guides shall then be achieved. For standard reference IPA transcription is adopted except for [j] is replaced by [y] (see [7]).

In this dialogue, bound morpheme /-lew/ (1) may suggest a question tag. Specifically, these lexicons: /ʔaylew/, /ʔɪʔlew/, /baʔlew/, /ʔuʔlew/, and /kə baʔlew/ can be translated as “what,” “when,” “which,” “who,” and “where,” respectively. /ʔaylew gən məʔahʔ/, on the other hand, would be “why they angry?” While /ʔaylew nəŋ/ means “do not know,” /nəŋ ʔaylew/ means “no other.” In a sentence, however, each lexicon may sound differently as assimilation can occur. (1a) and (1b) are derivations from / kə baʔlew/ “where” and /ʔɪʔlew/ “when.” Pronunciation can vary from /ye:loh/ and /ʔayloh/ to /ʔeyloh/. These variations may occur due to laziness or play. However, not every /-lew/ signals a Wh-question. For example, /ʔalew/ is a white squirrel and /jəlew/ is a vervet monkey.

(2, 2a, 2b) and /yɛ/ are variants of the first person singular pronoun of “I.” Each lexicon positioning relies on sound assimilation though initial analysis may suggest (2b) is usually at sentence-initial whereas (2) and (2a) can occur at both sentence-initial and -final. (2b) is often followed by bilabial [p] and [m]. In (2a), voiceless velar [k] precede voiceless alveolar [s] and /yɛ/ is usually midsentence.

In (3), [n] follows [h] yet in (3a), a glottal stop [ʔ] precedes [m] for ease of articulation. (5) is translated as singular second person “you.”

2.3.2 *Directions*

There are a few phrases that might be useful when asking or looking for directions. The following phrases can be used when talking about directions in the jungle. The phrase /cəp baʔ⁶ həp/, meaning “go to jungle” can signal your intention, and the phrase /halbow dəʔ ke baʔlew/? which means “path this to where?” where a reply could be, for example, /halbow baʔ həp/ “path to jungle.” The Batek used to travel by /pərahuʔ/ “canoe” but modern facilities have introduced them to /mötɔr/ “boat” and is the preferred choice of transport for the obvious reason. Thus /galah bəʔ^{6a} kəntək/ “pole upstream” or /galah bəʔ kiyum/ “pole downstream” may not be popular phrases anymore. /galah/ is a Malay loanword meaning “long pole” but it connotes rafting which, with the exception of children playing, they generally do not use anymore. (6, 6a) are speakers’ variants of “to” but rather “to+action,” and not “to+place.” Vowel [a] and consonant [ʔ] are followed by [h], yet [ə] and

[ʔ] followed by [k]. (6b, 6c) below are other variants which may take place as mid- or sentence-ending may have a connotation of a tag question “is it?” A Batek would tell you that as both variants are understood, no restriction is demanded. This, however, demands further analysis.

2.3.3 *Asking Questions*

It is pertinent that researchers are able to ask the right questions so as to get the desired answer. This limited yet basic list is sufficient for researchers to start their inquiry.

Between questions (7) and (7a), the latter is more common because it is already implied which action the speaker is referring to. (7b) or /ʔuʔ dɪkʔ/ are usually phrases said in fuss over a child’s mischief. When one wants to confirm the action and word meaning or to simply repeat the information, one may ask /ʔaylew məh kədəhʔ/ “*what you say?*” /batəŋ/ is a Malay loanword which means “*trunk*”. However, it does not translate literally to “*tree trunk*” but “*tree*” or “*plant*”.

(5a) on the other hand, is an example how [ɔ] and [h] sound in (5) assimilated to [d] sound. Comparing (4) in Table 2.2 with [4a], the lexicon has a different meaning in both sentences; that is, “*now*” in the former and “*this*” in the latter.

Antonym of (4a) is /tun/ though a variant of /boʔ/ and /baʔ/ may precede turning “*that*” to “*there*” by dropping initial [t] changing it to (12). Here (12) is preferable to /boʔ un/ as again it is just a sound play.

A near-minimal of (4) is (8,8a) which means “*do*.” (9) is a “*to + place*” directional marker similar to Malay. However, as seen in Table 2.1, this additional preposition (9) changes semantically “*which*” to “*where*.” (10) and (11) are antonyms.

2.3.4 *Some Minimal Pairs*

Some minimal pairs that can be suggested here are as follows:

- /dɪk/ “*do*” and /deʔ/ “*this*”
- /-lew/ “*question tag*”, /ləw/ “*return/arrive or reach*” and /lew/ “*uninhibited*”

There are more minimal pairs in Batek language that demand analysis, especially those involving nasalized vowels. The present study is an eye-opener in unfolding more features of Batek grammar.

2.4 Conclusion

The phrases provided in this paper are certainly not exhaustive but could be a catalyst in initiating better communication between researchers and the Batek tribe. It would display to the Batek that researchers are also inclined to understand their

language. This could help to break any communication barrier that may hinder the research process. It would prove to the Batek that researchers are making an effort in understanding and mastering their mother tongue. To summarize:

- a. /-lew/ may represent a Wh-question equivalent yet not exclusively.
- b. Contraction of words may occur as a possible umlaut.
- c. Speakers variants in pronunciation may occur as form of sound play or ease of pronunciation which may also be an effect of dental issues.

These findings would serve as a doorway for future research into the grammar of Batek Aslian language.

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Chapter 3

The Cabotage Policy: Is It Still Relevant in Malaysia?

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Abdul Karim

Abstract This paper argues that cabotage policy as a nontariff barrier has harmed the domestic economy and is inconsistent with the premise of trade liberalisation agenda. The effect of cabotage policy limits market access and has formed monopoly in the shipping industry. The policy might increase efficiency in terms of technology and consolidating resources in one participant of the industry but does not improve the overall welfare of the participants in the industry. The Equality Opportunity Commission introduced under the Economic Transformation Program, which was aimed at addressing the problem of monopoly, was dropped due to mounting pressure from Malay-based NGOs and right-wing nationalist groups. Recognising the government's limitations in pursuing drastic change, this paper proposes a midway-out approach. This approach proposes taking incremental steps towards change and requires a committee system to review and streamline the cabotage policy. In this paper we name the committee the logistic committee (LC). The LC is envisioned to be working towards liberalising the transportation and logistics industry. It is suggested that the committee members should comprise NGO, private sector, professional and East Malaysia representatives. Additionally, it is proposed that the committee decision be binding and the primary source of policy making input.

Keywords Committee system · Liberalisation · Protectionism · Incrementalism · Policy change

3.1 Introduction

Malaysia is a trade-dependent nation in which the service industry plays an important role in sustaining the nation's economic activities. A key factor for investors looking to embark on a business venture in any country is the effectiveness of the service sector, particularly, in the context of transportations and logistics. The establishment of the Malaysia International Shipping Corporation (MISC) by the Malaysian government in 1968 marked the entry of Malaysian shipping industry into

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international shipping. Indicating a strong interest in competing in the international shipping industry, in 1982 MISC pioneered the introduction of containerised shipping in Malaysian domestic trade. Over the years, the government has tried to elevate Malaysian's service industry to a level of international competitiveness. The government has invested considerable amounts of money to ensure the service sector achieves this goal [1]. The Malaysian government has invested heavily in strengthening the local shipping industry and improving the physical infrastructures.

Currently, MISC remains the owner and operator of the largest fleet of Malaysian registered containerships with 27 vessels, placing MISC in the 17th ranking for the world's top 20 container ship owner-operator league based on Clarkson Containership Register¹. The government's efforts to strengthen its shipping industry have also helped a number of local shipping companies to emerge, mainly under Bumiputra ownership, that are involved in international trade, such as Halim Mazmin Berhad, Nepline, Global Carriers, PDZ, and Malaysian Merchant Marine Berhad². Nevertheless, the Malaysian merchant fleet remains small by global standards, carrying less than 20% of Malaysian cargo. The development of Malaysian shipping industry is closely linked to national policy. Over the years the government has been working at promoting the growth of the national merchant fleet to have a larger share as a carriage for international cargo on national flagged ships. The government still deems the maritime industry in Malaysia as being in its infancy thus it has adopted more protective measure to ensure the industry will grow and achieve the necessary economies of scale. Hence, the government's primary aim is to reduce severe outflow of freight payment to nonnational shipping lines. To achieve this goal, the government introduced the cabotage policy with the aim of protecting the national shipping company under the rubric of setting national shipping sight on moving towards self-sufficiency so that they are able to grow over the years.

This paper argues that cabotage policy, such as nontariff barriers, limits market access and does more harm than good to the domestic economy. It is thus important that this issue be addressed both for the betterment of the national economy, and more so, for the growth of the East Malaysian economic growth. This paper is a preliminary attempt at exploring this subject. Firstly, the paper will discuss the theoretical foundation of trade liberalisation and protectionism. Secondly, it will explain the details of the cabotage policy that was introduced in 1980. Thirdly, it will examine the downside of the cabotage policy to the domestic economic growth of East Malaysia, particularly the state of Sabah. Lastly, this paper will explore alternative solutions for the problem.

3.2 Debate Between Protectionism and Liberalisation

Any assessment of the impact of trade policy reforms on economic performance requires an understanding of the notion of trade liberalization. By definition, trade liberalisation is an open economy or an 'outward oriented' economy [2–4]. Outward

¹ See http://www.unescap.org/ttdw/publications/TPTS_pubs/pub_2392/pub_2392_fulltext.pdf.

² Please refer to www.malaysianshipowners.com.

orientation is closely linked with a country's policy on trade. A country may be considered more outward oriented if trade reforms imply a move towards neutrality, liberality or openness. A move towards neutrality involves equalizing incentives between the exporting and import-competing sectors [5]. Furthermore trade liberalisation attempts to reduce tariff and removal or relaxation of nontariff barriers, and reduce state intervention. Nontariff barriers constitute limiting market access and can be deemed as trade tools for state intervention to protect 'special-interest' industry. Nontariff barriers appear in various forms: environmental policy, intellectual property rights and haulage rights (road, air and coastal waters) among others. Such state intervention aims to hinder freer trade within the trade regime. Some argue that without trade openness, it will slow down economic growth [6–7].

According to the standard classical economic model, liberalised economies allow for countries to trade based on comparative advantage and improve allocation of resources effectively [8]. A market based on open economy is driven by competition, which is less likely to cause trade distortion. A less distorted market would increase welfare gains and improve growth [9]. In addition, the neoclassical growth models propound that trade openness increases technological innovation (which is the main driver of growth), in line with Grossman and Helpman [10] who argue that technological change can be influenced by a country's openness to trade. Openness to trade provides access to imported inputs and new technologies, and increases the size of the markets, which in turn raises returns to innovation and affects a country's specialization in research-intensive production. Thus a country's openness leads to improvements in domestic technology.

However, there are economics scholars who remain sceptical with the perceived positive linkages between openness and trade policy. According to Sachs and Warner [11], Rodrik [12] and Stiglitz and Charlton [13] the East Asian Miracle is empirical evidence that economic growth is less associated with trade openness; rather it is closely linked with the role of institution intervention that helps growth, particularly in promoting export. Whenever the role of institution is in place, it is likely the government would employ a trade protectionist approach. Protectionism is usually advocated as 'second best instrument' as part of trade-restrictive policy to shield the domestic economy from foreign competition [14]. The restrictive policy includes tariff, nontariff barriers, quota and subsidies. It is commonly employed by institution to protect their infant industry.

Protectionist policy is referred to as bad economic tools because theoretical analysis indicates that it may lead to market distortion and cause misallocation of resources. As a result it reduces gains from trade and market efficiency. Even though in theory protectionism breeds bad economics, and in practice it does to a certain extent, it is an important tool employed by governments to protect infant industry or government-linked companies. Ha Joon Chang [15] pointed out that during industrialisation the US government employed high tariffs. During the Great Recession, the USA used the higher level of protectionism provided by the Smoot-Hawley Tariff in 1930 to protect specific industries that had strong political networks [16]. Organised groups engage in rent-seeking behaviour attempting to obtain economic rent through political networks [17]. They spend money for political lobbying to

influence political representatives for economic regulations such as tariffs, quotas and subsidies. The political institution will shield ‘organised group’ businesses from foreign competition via protectionism. However, protectionism such as this, it has been argued, is counterproductive to growth, as it will not improve distribution of wealth, because the economic pie tends to be concentrated among rent seekers rather than profit seekers. This will result widening the gap between the elite and nonelite.

However, restrictive policy to a certain extent can be applied to promote the development and growth of basic economic fundamentals. Protected from foreign competition, the growth of domestic industry can improve [13]. Institutions can take this opportunity to focus their investment, R&D, and human capital development. This improved learning of the domestic firms. Such a claim may go against the conventional wisdom of neo-classical economists; nevertheless the East Asian countries like South Korea and Taiwan have seen the growth of domestic firms through protectionist policy [18]. According to Evans [19] the success of state intervention in East Asian economies is through (i) regulatory measure (on entry, capacity, technology); (ii) state influence on banking and lending decision; and (iii) through ‘informal’ channels which influences firms. Protected industries also benefit from allocation of resources to alter the domestic relative-price ratio in favour of the comparatively disadvantaged sector [20]. In the long run, countries benefit through the economies of scale and comparative advantage that such policies create. As firms grow they may invest in real and human capital and develop new capabilities and skills. Once these skills and capabilities are developed there is less need for trade protection, and barriers may eventually be removed, at least theoretically.

3.3 Overview of Cabotage Policy

The term ‘cabotage’ refers to the ‘reservation to a country of traffic (coastal water) operation within its territory’ [21]. It is an exclusive right for companies to operate within the domestic borders of another country [21]. Cabotage regulations that limit other companies’ trade within the country’s territories might constitute trade restriction policy. Cabotage policy in Malaysia was introduced in 1980 by the Ministry of Transport to protect and help develop Malaysia’s domestic capacity in trade and logistics. The policy requires that all ports comply regardless of whether they are under the purview of the state government or the Marine Department. The policy stated that domestic trade between any two ports in the country can only be served by Malaysian-owned shipping companies. The rationale of the cabotage policy is as follows [22]:

1. Making Malaysia a maritime nation
2. Reducing the country’s dependence on foreign ships by increasing the level of participation in Malaysia international and coastal shipping business
3. Engaging in shipping commitments through bilateral, regional and other trade agreements
4. Training and development of Malaysians in technical, professional and commercial aspects of shipping business, especially in regard to the Malaysianization of floating staff and support to higher educational institutions

The introduction of the policy led to the amendment of Merchant Shipping Act 1952 section 65A which defines ‘domestic shipping’ for the shipment of goods or carriage of passengers (i) from any port or place in Malaysia to another port or place in Malaysia or (ii) from any port or place in Malaysia to any place in the exclusive economic zone and vice versa. According to the Act, to own a Malaysian ship the person(s) must be (a) Malaysian citizen(s), or a corporation which satisfy the following requirements:

1. The corporation is incorporated in Malaysia.
2. The principal office of the corporation is in Malaysia.
3. The management of the corporation is carried out mainly in Malaysia.
4. The majority, or if the percentage is determined by the Minister, then the percentage so determined, of the shareholding, including the voting share, of the corporation is held by Malaysian citizen free from any trust or obligation in favor of non-Malaysians.
5. The majority, or if the percentage is determined by the Minister, then the percentage so determined, of the directors of the corporation are Malaysian citizens.

Following the amendment of the Act, the government appointed the Domestic Shipping Licensing Board (DSL) to regulate and control the licensing of ships. This is in line with the MSA 1952 Part II ‘Qualification of International Ship Registry’. Furthermore there is another criteria for companies intending to apply for the ‘unconditional license’. For this, the company is required to fulfill two criteria: firstly, 30% Bumiputra participation in terms of equity, directorship and office staff; secondly, 75% Malaysian citizen employment as ratings on the vessels. The aim of the policy is to encourage local participation, particularly of the Bumiputra, in the shipping industry. The policy explicitly protects the domestic industry by limiting foreign market access in the local maritime industry. Implicitly, the nature of the policy has given the government a monopoly over the power to decide who, how and when applicants receive the shipping license and access to domestic market. The policy may hold good; however discriminating against foreign competition may lead to unfair practices that may do more to harm the domestic market.

3.4 The Downside

Cabotage policy is a barrier to trade which limits foreign competition. The policy is intended to pursue national interest by causing the local infant shipping industry to grow [12]. The Cabotage policy may aim to facilitate the local shipping industry, for example Malaysia International Shipping Corporation (MISC) and member of Malaysia Shipowner Association (MASA) to grow and become self-sufficient. But after 32 years this policy seems to be anachronistic because it does not really serve the purpose of making the Malaysian shipping industry more competitive; rather it has harmed domestic growth and distorted competition in the local maritime industry. The policy serves as trade barriers making the industry unable to mobilise its capital according to its comparative advantage [23], and creates inefficiency in

resource allocation. Thus the industry is unlikely to achieve its economies of scales and does not increase welfare gain.

For Sabah's economic growth, the Cabotage policy remains a bottleneck due to its imposition and limited market access. According to the President of the Federation of Manufacturing Sabah (FSM) Datuk Wong Khen Tau, the Cabotage policy failed to benefit domestic shipping lines and continues to contribute to the high cost of goods in Sabah. However, the Chairman of the Malaysian Shipowners Association (MASA), Ir. Nordin Mat Yusoff, propounds that high cost of goods could not be associated with freight charges solely. There are other factors that may contribute to the higher retail price in Sabah, among others, lack of manufacturing sectors. Both positions, for and against the Cabotage policy, have made strong points for their cause. The former point out that high transaction costs cause price discrepancies between western and eastern Malaysia. The latter argues that shipping cost could not be deemed the sole variable that leads to price distortion. To some extent Nordin may have a point that Cabotage policy is not the only factors that determine price discrimination. It is quite difficult to contend that the policy has clear causal relationship to higher cost of goods in Sabah. However, with the presence of protectionist policy, clearly it would limit participation of firm in the economic activities. This leads to unfair competition and distort price formation in the market, thus in such interventionist contexts the price becomes less competitive [24].

Cabotage policy in Malaysia limits participation of firm in the market, which then allow Malaysian shipping companies to be 'selective' in positioning indigenous carriers. For instance, Petronas holds 65% of the shares of Malaysia International Shipping Corporation (MISC). So the focus is on tanker fleets to largely cater to the shipping abroad of crude oil. With the presence of the Cabotage policy that limits carriers' participation in the shipping industry, MISC has no option but to operate in space-sharing alliances, placing it in a weak position in terms of bringing about change or supporting national objectives [25]. This scenario shows that limited participation causes inefficiency and monopoly in the industry. Theoretically protectionist policy should allow competition from within. Like Cabotage policy, such protectionism presumably promotes learning for protected private firms to grow, since there is less competition and the state could focus on managing the firms' resources. Gradually, the policy aims to increase more local private shipping company to enter the market. Nevertheless, the policy seems to give the Malaysian shipping industry more incentive to use most resources and technology invested in vessel and tanker fleets in favour of Petronas. Cabotage policy also creates 'natural monopoly' that gives MISC an advantage in shipping most of the goods abroad. Similarly the other Malaysian shipping company under the Malaysia Shipowner Association (MASA) benefits from the shipping industry monopoly. The natural monopoly that forms from protectionist tools should allow firms to utilise resources effectively and improve domestic market. But these advantages given to the local shipping industry, that is MISC and MASA, do little to develop more vessels carrying goods from West to East Malaysia.

3.5 Looking for Alternatives

The 32-year-old anachronistic policy needs to be reviewed for effectual change. The change of policy should attempt to make the shipping industry more competitive and to enhance growth within Malaysia. To do away with the cabotage policy may not be easy or feasible at this point in time, but maintaining the policy as status quo is counterproductive. Nevertheless, gradual change in regards to cabotage policy is plausible. At the outset, cabotage policy could be reviewed by the Equal Opportunity Commission (EOC) established under the Strategic Reform Initiatives (SRIs) the New Economic Policy 2010. The aim of this commission is to ensure fairness and to address any undue discrimination brought about by dominant groups. This commission was intended to reduce the market power of the organised group who have monopoly control in certain sectors [26]. Due to strong pressure from UMNO the main component party in the ruling Coalition as well as from right-wing Malay nationalist groups such as PERKASA, the EOC has been decommissioned [27].

Inspired by the EOC, gradual change in regards to cabotage policy is plausible. A feasible starting point, government could adopt the midway-out approach [28]. This approach aims for a structural change in the system by incorporating a 'committee system' to review policy changes. In the case of cabotage policy, government can initiate a 'logistic committee' that discuss how the policy can be re-formulated to reduce its negative implications. The composition of the committee members is important if they are to make incremental but significant changes. Committee members should represent a mix of both administrators and implementers and not lean too heavily on either end. An unbalanced mix may cause overemphasis on one agenda rather than a more nuanced approach to addressing the problem. Policy decision making needs to be done by actors whose power formulates policies derived by virtue elites [29, 30]. The committee members should consist of those who understand the interest of the public, namely private sectors, civil society, professional groups and representatives from Sabah and Sarawak. The Chairman of the LLC should be the Minister of Transportation. Sabah and Sarawak representatives should also be given a central position as they are most affected by the cabotage policy.

In line with Prime Minister Najib's call for greater transparency and accountability in governance, the committee system can be a demonstration on how the Ministry of Transportation can operate in a more transparent and accountable way. This is possible, because with the presence of an LC, it will provide for an avenue for state representatives and other stakeholders to discuss transportation and logistics policy (including trade facilitation). In addition, to indicate that the members of the LC are not tokens, it is suggested that the members' decisions should be binding and deemed as a primary source of policy input for the Ministry of Transportation. With such an initiative, the government may be able to address the problem arising from natural monopoly that exist in the shipping industry. With more transparency and accountability, the shipping industry could operate in Pareto efficiency. This means that the shipping industry can be improved by reducing the monopoly, increasing more domestic player in the shipping industry. Hence it makes the market

more competitive and improves welfare gain for all participants. This committee system could also enhance 'credible commitment' of members through consistent interaction among representatives to come out with more feasible cabotage policy and prepare for further liberalisation in the future.

3.6 Conclusion

The cabotage policy introduced by the government aims to reduce severe outflow of freight payment to nonnational shipping lines. This is the main agenda to sustain the domestic shipping industry, which remains as an infant industry. Hence cabotage policy as a protectionist tool (nontariff trade barriers) is employed under the rubric of 'setting national shipping sight on moving towards self-sufficiency so that they are able to grow over the years'. This approach might appeal to public confidence regarding the government handling of the industry as well as in making the shipping industry more competitive. But after 32 years, this 'second best instrument' has not really served its intended objectives. As nontariff barriers, it may have helped to shield foreign competition but it has also harmed domestic economic growth particularly in East Malaysia. The implications of the trade restrictive policy causes limited market access and natural monopoly in the shipping industry which has hindered growth in East Malaysia. Theoretical literatures suggest that protectionism is supposed to allow a government to mobilise resources for infant industry to grow. Resources invested in infant industry should improve domestic firms' learning curve, making them more competitive. This is part of preparation for trade liberalisation. However the cabotage policy has adversely impacted domestic shipping industry, slowing down the East Malaysian export-oriented growth.

After the government decommissioned the EOC, this paper suggests that the next best option to solve the problem related to the present practice of the cabotage policy is through the formation of a LC as midway-out solution. The composition of the committee members is of central importance to the effectiveness of making incremental change. The committee members could not be too elite centric (top-down approach) or leaning too much towards local implementer (bottom-up approach). The former might decide based on elite consideration and the latter may lay too much emphasis on autonomy whereas policy decision making needs to be done by actors whose power formulates policies derived by virtue elites. The representation of committee should consist of those who understand the interest of the public namely, private sectors, civil society, professional groups and representative from Sabah and Sarawak. The Chairman of the LC will be the Minister of Transportation. Sabah and Sarawak representatives are central in this committee because they are most affected by the cabotage policy. It is proposed that the decision of LC should be binding and become central input to policy decision making. This also reflects the virtue of transparency and accountability as espoused by the federal government. It is also argued that a credible commitment towards a solution to the cabotage policy, such as through the LC, will be a catalyst for representatives to introduce further liberalisation in the shipping industry.

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Chapter 4

Does Cuteness Sell? A Content Analytic Study of Children Portrayal in Press Advertisement

Khairudin Murad, Suhaimée Saahar@Saabar and Abuzar Abdul Halim

Abstract It is known to all that children-based products and services are reaching lucrative markets and receive a huge demand from a variety of segmentations. Advertisement through its campaign and promotion strategy is predominantly used by advertisers to portray children as the heart of selling points. The advertisers will seize and manipulate children portrayals in their ads in order to gain awareness from the specific target audience as well as to be accepted by the society. Advertisers should be smart in implementing competent advertising medium, such as the television commercial advertisement, magazine or newspaper advertisement, or outdoor advertisement. Hence, the flow of the message as well as the information is correctly delivered to the intended group. The power of children portrayal in advertisements is the main factor that influenced the consumer's purchasing power in every product category. For instance, children images, visual on nutrition products, are often portrayed as energetic, brilliant, and cute. On the other hand, most of the advertisements picture children as bubbly, exciting, happy, fun, innocent, and pure. With the usage and the mixture of these characters, it creates attention to the readers. This chapter analyzes the content of press advertisements against children portrayals and stereotypes. Children, kids, and babies were made the selling point for products and services with a maximum of manipulation of the physical form and cuteness, which, as was seen, could deceive the consumer's buying power. The focus of this research is to analyze the aspects of children role and stereotype, advertising appeal and persuasion as well as the creative strategy in relaying the issues and messages effectively to the consumers of the products and services of the press advertisements. To achieve the research's objective, the method employed is a quantitative approach with the emphasis on content analysis. Hence, the analysis unit in this study is the advertisement which was gathered from The Star newspaper

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for 1 week, well defined as a subset of a sampling and representing accurate data measurement for this study.

Keywords Children portrayal · Press advertisement · Advertising creative campaign

4.1 Introduction

In the UK, restrictions exist on ads that “might result in harm to children physically, mentally or morally” and on ads employing methods that “take advantage of the natural credulity and sense of loyalty of children.” Nor may advertisements “exhort children to purchase or to ask their parents or others to make enquiries or purchases.” There are rules on food advertising, health, hygiene, safety, and decency, and there are restrictions on transmission time (for alcohol, medicines, and slimming products). Greece has a ban on advertisements for children’s toys between 7 a.m. and 10 p.m. and a total ban on advertisement for war toys. Research has confirmed the influence of the media upon the close conformity between children’s tastes and perceived needs and the content of the programs they watch. According to Crabb [3], teachers say they know what has been on TV the night before by the games the children play the next day. It has been found that the effectiveness of advertising increases when the ads are shown in between programs aimed at children, or when children perceive an advertisement to be made for them as, for example, with toys or breakfast cereals. It has confirmed the influence of the media between children’s tastes and needs and the content of the programs they watched.

Today’s children are unique in many ways compared to previous generations, but perhaps the greatest influence on our young children today is commercial advertisements. In 1997, the nation’s estimated 34 million children aged 12 and under will have spent or influenced others spending a sum of US\$ 500 billion [2]. There is obviously a great deal of interest in this subject; many books have been written, and many studies and reports have been done on the effects of TV advertising on children. Advertising is surrounding the consumer everyday, whether it is in the newspaper you pick up daily or on that billboard you see while driving down the highway. Some people may say that they are not in fact influenced by the advertising that is thrown at them each day, and that they do not fall into it, but everyone does. Many children are often the target for most advertisers because they know if they hound at their parents enough, they will give in and buy their product, and everyone will be happy. Some advertisers try to portray more positive items to children, but many children are overcome with the negative ways of advertising. With television being the most popular way to advertise to young ones, the average American child may view as many as 40,000 television commercials every year [11].

Schools are now even advertising to children without them being aware that they are actually doing it. Food, clothing, toys are just a few of the many types of advertisements which influence children daily. Many advertisements being directed towards children are that of food. Many of these food advertisements that children are being

exposed to are products that are of low nutritional value. McDonalds spends roughly US\$ 570 million a year on advertising [1]. Children will try no matter what to get what they want from their parents. They will bug their parents until their parent gives in and buys them what they want. Many advertisers and marketers target children because of that. Children who spend so much time watching television are prone to get influenced by the advertisements. They want what they see even if that thing is not good and inappropriate for them. By the age of three, children have recognized the brand names by observing the logo and the color of certain brands, for example, “M” for McDonalds.

Advertisers need to gain the trust of children and their parents through effective and honest advertising. In turn, parents must take responsibility for their children, monitor what they watch and read, determine how they spend their free time, and educate them to become responsible and informed consumers. Advertising to children will become less controversial only when advertisers and parents assume mutual responsibility for its content and exposure. Children can easily adapt what they see and hear. They can easily get interested on what they see even if they do not understand what the advertisement is all about, for example, a toy advertisement that exaggerates on the functions and size [7]. Children would not know the truth behind what they see on television; they will think that whatever they see on television is realistic. That is why children are the most important target market among the advertisers and marketers. Parents should monitor what their children are watching, and at the same time they have to educate them (children) and tell them what advertising really is. This will make sure that their children understand the value in real things and know the intention of advertisements.

4.2 Problem Statement

The portrayal of children in press advertising always has the same interpretation and same characters. For example, on milk products children are portrayed as being energetic, brilliant, and cute. If it is about baby products, a cute sleeping baby with his/her mother is always portrayed. The same is valid for the advertisement for the festive season in Malaysia. Although it is a Hari Raya advertisement, the advertisers will still portray multiracial children who are united.

With that kind of judgments or images that is being portrayed by the advertisers, it makes children want to follow and practice what they see. For example, a milk advertisement in the newspaper shows or portrays a tall kid who can grow as tall as a giraffe when he/she drinks milk. Children who see and observe the advertisement will think that it is true, and they want to be tall like that kid whereas the adults know that it is just exaggerating. However, there are advertisements that deliver a good example for children to follow. Education advertisements mostly present children as achieving much and being brilliant rather than lazy and sloppy.

Sometimes, advertisers use children as their model to attract people. Because children are very lovable and everybody loves kids, advertisers take this chance and create an advertisement that does not really relate with the product and services provided.

4.3 Literature Review

Advertising to children is a sensitive issue because children are easily influenced and like to experiment with new things. The proliferation of products, advertising, promotions, and media targeted to children is of concern to lawmakers, the industry, and the general public. Advertising to children is under attack because it is perceived as “making kids what they do not need” and puts pressure on parents to respond to those needs. More recently, advertising is accused of being a factor in causing children’s obesity. While there are more regulations in effect than ever before, there is a public outcry for even more.

Pediatricians, parents, and the public alike are concerned about high and rising rates of overweight and obesity among children. The problem of childhood obesity has captured public attention and is regularly featured on the news, school letters, and magazines. According to Macklin [10], this means that the advertising rules surrounding children are very strict. No ads should contain anything likely to result in children’s physical, mental, or moral harm. There are also rules about advertising of products such as gambling and alcohol, to make sure they are not advertised inappropriately. And it is not just ads addressed to, targeted at, or featuring children that have to adhere to the rules. Even if ads are aimed at an adult audience, advertisers have to take great care to place them appropriately and not cause harm or distress to children [8].

Advertising to children has been a very successful way to build a solid consumer base that will win the minds of children in order to secure a lifetime consumer purchasing. It may sound heartless, but the fact is it works, and advertising to children is a big business. It may also sound harmful for the public, but the advertisers think about it from a different angle. Advertisers need to have a cold heart to get the sale that they want to achieve. In accordance to Dumont [5], a soft marketplace will give many advertisers the leisure to extend the actual up-front period over several months—similar to last year, when the kids’ up-front market started in April and moved slowly, with deals finally finished in August. The up-front kids’ market refers to the network time on children’s programs bought before the fall season. Most of the advertisers spent about US\$ 800 million last year advertising on network, syndication, cable, and local shows targeting kids aged 2–14.

Davidson [4] argues that most people must understand that the advertiser’s motive is to sell a product. It is easy to see how directly advertising to children can generate huge profits for companies, thereby helping our economy. Everything a child picks up these days has some type of advertising on it. Cartoons are no longer fun and silly, but they are long commercials for certain toys or television programs. One of the biggest advertisers to children today is Upin & Ipin. Every kid wants to wear their clothes, have their DVD’s and anything that has the cartoon on it.

It is a norm when companies feature teen models, child models, toddler models, or baby models because it vastly improves the effectiveness of their advertising campaign. Furnham [6] mentions studies relating specifically to the Morrisons advertisement that features children talking to a fisherman, suggesting that it is remembered on average of 75% more than others which have appeared on tele-

vision during August. Equally noteworthy is the fact that figures relating to the viewers' recall of the brand in association with this advertisement are even higher, at an incredible 143%. This view of children may reflect a universal perception of childhood as a time of innocence. Their charm brings out a sense of protectiveness, nostalgia, and superiority in adults. If they are hurt or suffer misfortune, adults feel the need to express both sympathy and moral outrage. As a result, however, children are accorded a status somewhere below that of citizenship.

Portraying children as victims or as "cute" appendages of adults gives a limited and false impression of them. The media would argue that this bias stems from the fact that news, by definition, focuses on the unusual. But that ignores the equally important role of the media to present a mirror of society so that people are better able to understand what is going on around them. Media practitioners are more aware than many that perceptions are often more powerful than facts. By distorting perceptions of young people, the media does a disservice to both children and the wider society, even possibly violating people's rights [9]. Consumers will remember the advertisement more if it catches their mind. Advertisements that feature a child model are highly successful compared to advertisement that does not use children as their model to catch attention. Most advertiser portrays feature only cute and charming kids to catch the audience's attention. Children are the most innocent and pure human beings in this world. Their personality and their behavior are cute and touch our emotions at times. With their personality, the audience will have emotional feelings when they watch advertisements as this will remind them of their own childhood and family. Thus, such advertisements will be the audience's favorite, and it will be in one's mind for some time.

Stereotypes are somehow harmful. In this case, advertisers have a very stereotypical image about child portrayal in their advertisements. Normally, children are presented as cute, active, and innocent, which brings a positive image for the viewers about the kids. But sometimes, the advertisers portray kids as obese, naughty, and pester, and these images bring about negative perceptions on how the public looks at them [12]. From the observation from the newspapers, girls are portrayed as girlish, soft, and timid while boys are more outstanding, active, and high achieving. Realistically, not all girls and boys have these features as advertisers ascribe to them.

4.4 Research Objective

Three specific objectives were developed in this study:

- a. To discover how children from all ages are being portrayed as in press advertisements by the advertisers
- b. To study what type of product categories that portrays children the most is used in press advertisement
- c. To analyze how often the portrayal of children appears in press advertisements by advertisers in a week

Table 4.1 Product category

No.	Product category Item	Frequency (<i>f</i>)	Percentage (%)
1.	<i>Travel and tourism</i>	15	20
2.	Nutritions and vitamins	7	9
3.	Toys	1	1
4.	Apparel	4	5
5.	Education	10	13
6.	Property	13	17
7.	Automotive	1	1
8.	Hair and body care	2	3
9.	Electronics	9	12
10.	Others	15	19
	Total	77	100

4.5 Methodology

In order to ensure the objective of this research, the research had implemented the content analysis method to analyze the contents of the selected press advertisement. The analysis unit in this research is the advertisement which appeared within a week in The Star newspaper, i.e., from 1 March to 6 March 2013. The researcher chose The Star newspaper as the material for this research because of the editorial contents. Furthermore, most advertisers would want to advertise their products and services in this English newspaper. Physical appearances such as age, gender, and appeals from different categories of products are analyzed thoroughly to discover what type of advertisements from different product categories uses the most children in their ads. For example, baby products such as baby shampoo and baby bath use a lot of babies who are aged below 2 years, and most of the babies are fair and plump. Besides that, the behavior of children in the press advertisement is also analyzed by the researcher. The researcher gathers all of the advertisements that portray children from different product categories to know which product category uses certain or specific children personalities to sell their product. For example, malt drink Milo always portrays active and sporty kids in their advertisement to deliver the “strong and healthy drink” message. The focus of this research was on a descriptive and explanatory form. Therefore, the analysis of the content of this research focused on the descriptive features, forms, and contents of press advertisements, which were selected in this research.

4.6 Results

This section will discuss the findings of the research based on the analysis of the content of 77 advertisements in The Star published from 1 to 6 March 2013 Table 4.1.

Table 4.2 Gender talent

No.	Talent	Frequency (<i>f</i>)	Percentage (%)
	Item		
1.	Male (boy)	12	16
2.	Female (girl)	65	84
	Total	77	100

Travel and tourism is the product category that portrayed children the most in their ads with a total percentage of 20%. Others comes second with 19%, followed by the property category with 17%, education 13%, electronics 12%, apparel 5%; hair and body care holds 3% and both toys and automobiles share the same percentage as low as 1%. Travel and tourism portrays children and parents together in an advertisement. This is to show to readers that travel and resorts offer travel deals for the whole family including their children. Education portrays mostly only children in their ads. Most children are portrayed as high achievers in the education category. This is because it will attract the parents' attention and interest in enrolling their kids in that education organization. When kids are portrayed as well achieved in the advertisement, parents will be bought by the ads and will make an action out of what they see. Property is mostly portrayed both to children and adults in one ad to show to readers that the product/services are targeted to both of them. The same is valid for electronics whose ads portray adults and children. The portrayal of children in the ad is to prove a point to readers that the product is safe and children friendly. Apparel mostly portrays children in school uniform as the school season starts, and marketers are competing with other marketers in selling school uniforms. Toys, automotive, and hair and body care product categories are rarely found in the newspaper that portrays children in the advertisements. Most of it focuses more on the products itself and/or uses adults as the representatives.

From the research, female children are portrayed more often compared to male children. The differences between male and female children are slightly, of 12%. Female children are mostly portrayed in the education category while male children are portrayed mostly in the travel and tourism category. Female children are portrayed mostly as loving and caring. Girls were portrayed as loving and caring because that is what most parents want their girls to be. It is in our nature that girls are seen more loving and caring compared to boys. Girls are mostly portrayed as princesses and cute, and in a way it could create emotions of other girls to make it as an example on how to portray themselves. Boys are mostly presented as energetic and playful to show that they are the strong ones and that one day they will be the hero for their family. However, there are not many differences in both as most of the press advertisements portray both male and female children in their ads. Travel and tourism agencies portray both male and female children in their ads together with the parents. This shows that the ads are targeted to families Table 4.2.

The content in The Star newspaper for a week shows that children from the age of 4–5 years are portrayed with the percentage of 44% in the advertisements and are followed by the 6–9 year olds that hold only 16%. Children aged 10–12 years come third with 12%; the 2–3 year olds hold 10%, and the least are toddlers with the percentage of 13%. From the observation made, children between the age of 4–5

Table 4.3 Children age

No.	Age		
	Item	Frequency (<i>f</i>)	Percentage (%)
1.	0–12 months	10	13
2.	2–3 years	8	10
3.	<i>4–5 years</i>	34	44
4.	6–9 years	16	21
5.	10–12 years	9	12
	Total	77	100

Table 4.4 Children portrayal

No.	Orientation		
	Item	Frequency (<i>f</i>)	Percentage (%)
1.	Energetic	3	4
2.	Achiever	21	27
3.	Playful	17	22
4.	<i>Loving</i>	35	46
5.	Disorganized	1	1
	Total	77	100

and 6–9 years are the most portrayed in the advertisements because of the school holiday season. March is the holiday season where school holidays are almost done and every school and kindergarten is ready for the next enrollment and newbie. All these education organizations advertised their school and kindergarten in the press for the parents. Most of the advertisements showed that the kids are in a happy environment and also high achievers. With these portrayals, it would catch the parents' eyes and develop interest in the schools and kindergartens Table 4.3.

Children are mostly portrayed as loving where the percentage is 46%, followed by achiever that holds 27%, playful 22%, and last energetic which holds only 3%. From the researcher's view, loving children are portrayed the most in press advertisements to create an emotional appeal among readers. Since press advertisements deliver their messages through images and words, advertisers need to attract readers by portraying cute and loving children in their ads to catch the reader's attention. For example, electrical products by Karcher. This brand uses mostly toddlers in its ads that do not have any relation with children. But, with the portrayal of toddlers/children in their ads, it will attract readers to read and pay attention to the ads. As for achiever, since March is the month where education organizations are competing with each other, most of their ads portray male and female kids as the brightest and smartest to attract the parent's attention to enroll their kids in that school or kindergarten. Travel and tourism mostly delivers kids as playful and energetic. This is because most of the travel agencies offer fun activities and amazing places to visit. Energetic and playful children are the focal point in the ads to show the excitement of choosing the travel agency together with what the agency has to offer Table 4.4.

From the observation, the advertisers chose to focus more on the images of children with 32% as the focal point compared to product (20%) and headlines

Table 4.5 Advertisement focal point

No.	Focal point		
	Item	Frequency (<i>f</i>)	Percentage (%)
1.	<i>Children</i>	25	32
2.	Product	15	20
3.	Headline	17	22
4.	Combination	20	26
	Total	77	100

Table 4.6 Children portrayal appeal

No.	Advertising appeal		
	Item	Frequency (<i>f</i>)	Percentage (%)
1.	<i>Emotional appeal</i>	61	79
2.	Fear appeal	1	2
3.	Brand appeal	14	18
4.	Humor appeal	1	1
	Total	77	100

(22%). Combination comes second with the percentage of 26% in which photos of children and headlines are both the focal point of the advertisement. From the content analysis, the researcher has found that the product categories that use children as the focal point are education, travel and tourism, and nutrition and vitamins. This is to attract the reader's attention when descent and pleasant children are portrayed. Most of the travel and tourism category and also nutrition category portray children with adults. The adults are parents and grandparents. The education category portrays kids with adults as well, but mostly with teachers or/and educators. The combination category for both headlines and images is focused to enhance and to stress on what the marketer got to offer to readers together with attractive children images to deliver a clearer message. The headlines that are used by advertisers sometimes lead to puffery that does not relate to children and the benefits of the products Table 4.5.

In order to send messages to the readers through press advertisements, advertisers have to create an appeal among readers. The emotional appeal is the appeal that is chosen most by the advertisers with the percentage of 79%. Brand appeal, as second, holds 18%, while both fear appeal and humor appeal hold only 2% and 1%. From the research, it is found that most of the advertisers from all sorts of product categories chose emotional appeal to attract readers. For example, electrical products portrayed children as loving and happy to prove and show to readers that the products are safe and user-friendly for children. Most of the advertisers would portray a loving and caring child in their ads to create emotions among readers. Some advertisers portray kids together with their parents to show the tight bond between the families. Brand appeal focuses more on the brand than on children. This portrays how strong the brand is in the market and how the brand could create emotions among readers Table 4.6.

4.7 Conclusion

To conclude this research, the portrayal of children in advertisements has become a new trend in Malaysia's advertising industry especially in newspaper advertisements. Many advertisers think that by portraying children in their advertisement emotions as well as attention will be created in the readers. There is no doubt that children are the apple of everyone's eyes, and with that in mind, advertisers took this opportunity to have children in their ads in a way that their ads work as an eye stopper.

It is hard to attract the reader's attention by just promoting products in newspapers. A catchy headline and an attractive image have to be presented as well. Consumers, nowadays, are smarter than earlier, and they know what they want to see and what they want the products to offer. This is because consumers nowadays have various choices in gathering information and also a variety of products to choose from time to time. To follow this fast development by the consumers, advertisers need to compete with others and follow the styles and approaches in advertising to ensure that their products and services can be sold.

From the study, the researcher has found a total of 77 children ads and 900 print ads. By this, it can be assumed that not many advertisers use children as their selling strategy. However, what the researcher has found is that the majority of kid portrayals in a press ad are mostly not from the products for kids. This makes the average of 10 advertisements that involve children in a day. From the product details, the researcher has found that the total for products is 38 and for services 37. The difference between both is only one. This explains that both products and services have the same motives in producing an ad that is to create emotions by portraying children in their advertisements.

Girls are more likely to be portrayed in a press ad compared to boys. This is because girls always portray an image of being loving, caring, and happy. Such a personality will attract the readers' eye and go straight to the heart, from there creating an emotion towards the ad. Boys are mostly portrayed as being playful and energetic. These characters are stereotypical; girls are more loving while boys are the active ones. However, these are the behaviors that parents want them to be. Advertisers took this advantage and portrayed children as what the public and the parents want to see. Most of the advertisements also portray parents and adults with the child, especially the kindergarten and tourism advertisements. This is to show readers that travel deals are for kids and adults, and the kindergarten is the best place for kids to study, under high surveillance by the adults.

The visual image in printed copies of advertisements is one of the advertising techniques that has been used by many companies to promote their products and services or to convey a message for the readers. Throughout this research, many advertisers focused on images as their focal point rather than on headlines to create a long-term impact on the readers' mind. This is a good idea that the advertisers have come up with as this will enhance the editorial and newspaper ads. It conveys messages through advertising, and at the same time it can reach potential target markets.

As for the children portrayal, loving is the personality that most advertisers chose for their advertisements. Loving is the personality that easily attracts the heart. Press advertisements are not as commercials where sounds and dialogues can create emotions in the viewers/consumers. Press advertisements only use the images and headlines as the strong point to create emotions among the readers, and loving plays the big role in attracting emotions.

Portraying loving children creates an emotional appeal more than any other appeal such as fear appeal, brand appeal, humor appeal and others. From the research, 61 ads out of 77 created an emotional appeal towards the readers. This helps the advertisers to gain more readers compared to normal ads that do not portray a children image but, instead of it, a product. Readers will get attracted with certain advertisements because it entertains and creates a feeling or an emotion. For example, a cute baby was presented in a diaper ad. Readers look at the baby, and the image of the baby makes them feel at ease, from the cuteness and sweet smile. But, some of the ads are very much likely confusing, for example, an electrical product from Seng Heng. It shows various electrical products and appliances, such as TV, washing machine, kitchen appliances, and out of nowhere a child is portrayed sitting on a dining table with a smile on his/her face. Consumers do not like an ad if it confuses them.

From the findings, the researcher has found that most of the ads had the Junior Page as their ad size and black and white as the ad color. These are very hard to see as the images are too small and one can barely understand what it is trying to deliver. A reader will ignore the ad and flip it to the next page as the advertisement looks dull and uninteresting. Last but not least, the portrayal of children in press advertisements is very effective among readers and their attention. By portraying children, it is a good direction of the advertisers and marketers to create an image of their products. It is a new trend in advertising as the portrayal of children catches one's emotion and attention easily.

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Chapter 5

A Data-Driven Study of the English Lexical Verbs Some Quantitative and Qualitative Evidence in Learners' Academic Writing

Noorzan Mohd Noor and Shazila Abdullah

Abstract Lexical verbs have been predominantly significant in any written texts, as revealed by many corpus-based studies. Past research on second language acquisition (SLA) also shows that lexical verbs have been one of the most difficult items for non-native learners. Therefore, in the perspective of second language learning, the significance of lexical verbs can be viewed as twofold: in the learning of vocabulary and in the learning of grammar. In view of this, this chapter presents the findings of an ongoing data-driven study through quantitative and qualitative analyses of the lexical verbs in a corpus of academic writing of Malay ESL (English as a second language) learners, i.e. Written English Corpus of Malay ESL Learners (WECMEL). It aims to describe the linguistic classification and grammatical structure of the lexical verbs used by Malay ESL learners. The findings generally show that learners have the tendency to use lexical verbs repeatedly and to employ one verb form, i.e. VVI, more often than the others. The lack of vocabulary repertoire and overuse and underuse of verb forms by these learners may indicate some linguistic inability. It is hoped that the findings would lead to some pedagogical implications that could improve learners' use of lexical verbs in academic writing and hence enhance their general writing ability in the academic context.

Keywords Lexical verbs · Learner writing · Learner corpora · Academic writing · Data-driven study · EAP

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5.1 Introduction

A recent word frequency profiling of two learner corpora has shown that among the lexical items used in writing, nouns and verbs seem to dominate a text [1]. It is not surprising as nouns and verbs are the main lexical items that make up a sentence. Every written sentence requires at least a noun and a verb, as in *Girls are obedient* and *Birds fly*, where ‘are’ and ‘fly’ are the verbs of the sentences. They are, however, different types of verbs; the former is a ‘be-verb’, which is under the category of auxiliary verbs, and the latter is known as ‘lexical verb’. A ‘be-verb’ merely links or complements the subject with the words that follow and does not carry any semantic meaning. In contrast, a lexical verb carries a semantic meaning and therefore may be dependent on the semantic meaning of the lexical item that precedes or follows. Moreover, the English lexical verbs are not straightforward as, although a sentence may be constructed of only one verb, the construction of a verb, on the other hand, may not necessarily consist of only one word, as shown in the following examples:

I have prepared chicken roast for dinner tonight.
 The award-winning movie *will have been watched* by
 three million people by next month.
 The decision *was not agreed* unanimously.

In the verb phrase *will have been watched*, the verb consists of one lexical verb, i.e. *watched*, from the base form *watch*. Whereas, the other words in *will have been watched* are identified as auxiliary verbs. The lexical verb is also known as the main verb which terms the process taking place. It is the most ‘important’ verb as it conveys ‘meaning’, as compared to auxiliary verbs, also called the *helping verbs*, which only convey the time and aspect of the verb phrase. It is the lexical verbs that are the main concern of this study.

Due to the significance of verbs in sentences, lexical verbs are found in abundance in many written discourses, especially in narrative. Although the frequency of lexical verbs in an academic discourse may not be as high as in narrative or oral exchanges, lexical verbs still play an important role in written academic discourses as some main EAP functions, such as expressing opinions, cause and effect and summarizing and contrasting [2], require the use of lexical verbs that may only be pertinent to an academic discourse.

5.2 Literature Review

5.2.1 *The Learning and Teaching of Lexical Verbs*

The teaching of verbs normally comes under the teaching of grammar. Teaching verbs implicitly would mean applying the traditional method where the rules pertaining to the formation of verbs are highlighted. The belief that grammar is important has led several language instructors to focus on the acquisition of grammar

rules that include the learning of the forms of lexical verbs. Nonetheless, this usually results in getting good grades in grammar tests, but, very often, learners are not able to apply the grammar rules to actual writing, even after a substantial number of years of learning them [3]. Thus, mistakes made in the use of lexical verbs would impede effective communication.

As far as vocabulary learning is concerned, there has not been given any specific attention to the learning of lexical verbs. Although lexical verbs carry semantic meanings, they are often neglected in vocabulary teaching. As a matter of fact, vocabulary teaching in Malaysia has often received cold treatment in the ESL (English as a second language) classroom due to the approach of communicative language teaching that focuses on communicative competence. Vocabulary is indeed an important aspect of a language, and a low repertoire of vocabulary items, which include lexical verbs, may result in monotonous writing, reflecting its non-nativeness.

The lexical verbs can be categorized into three different types: intransitive, copula and transitive [4]. Intransitive verbs do not take an object or describe the subject, for example, *The little girl is screaming*. However, this sentence can still be expanded to include a prepositional phrase to indicate the position of the action, such as *The little girl is screaming in her bed room*, or an adverb phrase to describe the verb, such as *The little girl is screaming piercingly*. In contrast, transitive verbs can take an object, such as *We watch television almost every day*. Not only are there different types of lexical verbs which carry different semantic meanings but, most importantly, they also carry tense markers in the tense and aspect system of the English language, which is found complex by second language learners especially to those whose first language does not employ the same system.

From the Table 5.1, it can be seen that the examples of lexical verbs shown in the sentences are in different forms. There are six verb forms of English lexical verbs, which are base form, past tense, past participle, progressive, present plural and infinitive, which can further be categorized as finite or non-finite. A finite lexical verb can change its form based on the subjects (singular or plural: *drives or drive*) or simple tenses (present or past: *drive/drives or drove*). A non-finite lexical verb, on the other hand, does not change based on tenses or subjects. It can either be in its base form, infinitive, progressive or past participle (*drive, to drive, driving or driven*) [4]. The finite and non-finite tense systems are further illustrated by Halliday [5] who differentiated three tense systems based on the finiteness of the verb structure.

5.2.2 *The Types and Classifications of Lexical Verbs*

Hinkel [6] categorizes the lexical verbs into five different classes, which are activity verbs (*make, use, give*), reporting verbs (*suggest, discuss, argue, propose*), mental/emotive verbs (*know, think, see*), linking verbs (*appear, become, keep, prove*) and logico-semantic relationship verbs (*contrast, follow, cause, illustrate*). However, these classifications may pose some problems for certain lexical verbs as they may have more than one classification, such as *keep* which can also be an activity verb as

Table 5.1 Examples of lexical verbs

No.	Examples	Base form	Verb form	I or T or I/T	Finite or non-finite
1.	The little girl <i>is screaming</i>	Scream	Progressive	T	Finite
2.	The new company car <i>will have been driven</i> by next week	Drive	Past participle	I/T	Finite
3.	We <i>watch</i> television almost every day	Watch	Base form—present plural	T	Finite
4.	The angry man <i>scolded</i> the lazy boy	Scold	Past tense	T	Finite
5.	My sister <i>plays</i> the violin during her free time	Play	Present singular	I/T	Finite
6.	I might <i>go</i> to the talk tonight	Listen	Infinitive	I	Non-finite

I intransitive, *T* transitive, *I/T* intransitive or transitive

in ‘*She kept the money in the drawer*’, or the verbs may hardly be used as the classification suggests, such as *make* which is not commonly used as an activity verb as in *Jack makes vases every day* (Most probably Jack is a pottery maker.). ‘*Make*’ is more commonly used as in ‘*The manager makes the decision in the company*’ where ‘*make*’ does not denote any activity and is, therefore, not used as an activity verb. The two examples of verb i.e., *keep* and *make*, are in actual fact examples of delexical verbs.

According to Carter and McCarthy [7], delexical verbs are transitive verbs that are followed by certain nouns. Sinclair and Fox [8] add that these verbs do not retain their original meaning when used in this way, for example, *keep a distance*, *have fun* or *make my day*. Similarly, the definition given in Collins COBUILD English Grammar [8] seems to imply that these verbs are simply used to show that there is an action going on and that someone ‘is doing the action’, but the verbs used may not directly affect the object, for example, *make a turn*. Other delexical verbs in English include *give*, *take*, *do* and *hold* and often appear in the list of high-frequency verbs [9]. As high-frequency verbs are often characterized by different semantic meanings, they are often said to be causing problems to second language learners [9].

Lexical verbs which are not delexical verbs can either be dynamic verbs or stative verbs [10]. Dynamic verbs are the verbs that are used to exhibit action, process or sensation, such as *play guitar*, *walk to school*, *kick the ball*, which can occur repeatedly and/or for a duration of time. The dynamic verbs are equivalent to activity verbs in Hinkel’s [6] classification of lexical verbs. Stative verbs, on the other hand, are the opposites of dynamic verbs; they do not denote any action but instead describe a situation which can either signify a cognitive, emotional or physical state. The examples include *love*, *need* and *think*. The stative verbs are also similar to Hinkel’s description of mental/emotive verbs.

Transitive verbs can be further divided into mono-transitive, di-transitive or complex transitive verbs. Since transitive verbs require an object, mono-transitive verbs are followed by one object, for example, *he cooked some rice*; in contrast, di-transitive verbs take two objects, one which is indirect and the other direct, such as *she gave me the present*, with *me* as the indirect object and *present* the direct object. Complex transitive verbs are verbs that require the use of a complement following the object, e.g. *She drew the line crooked*. Since transitive verbs are followed by

nouns, which may have the potential of forming verb-noun collocations, they are the ones which second language learners are confused with, especially the high-frequency verbs. Perhaps these verbs occur so frequently that learners may have thought that they can be followed by any possible nouns. In actual fact, the nature of the verbs shall determine, quoting Firth [11], which ‘company they shall keep’.

Therefore, the classification of lexical verbs may help learners to understand the nature of lexical verbs which would lead to the appropriate use of lexical verbs in academic writing; hence improve the writing quality of these learners’ written text. Granger and Paquot [2] also indicate that a proper classification of lexical verbs used in academic writing is essential before extracting a list of lexical verbs that is used in an EAP course. Therefore, it is vital to have a proper classification for commonly used lexical verbs in academic writing before a more in-depth analysis is done so that a linguistic framework on the use of these lexical verbs can be constructed. The framework would enable language practitioners to assist learners with the knowledge acquisition of the lexical verbs used in academic writing, as noted by Granger and Paquot [2, p. 194] who state that a lack of this knowledge ‘prevents them (learners) from expressing their thoughts in all their nuances and couching them in the expected style’. Nevertheless, due to the linguistic differences and complexity of the English verb forms, lexical verbs prove to be one of the challenging parts of speech to be learned by learners and taught by language instructors. For this reason, this chapter pursues two objectives: (1) to present the grammatical structures and linguistic classifications of lexical verbs used by Malay ESL learners in academic writing and (2) to provide some suggestions on the learning and teaching of lexical verbs that could help learners to improve the grammaticality of the lexical verbs and their use of lexical verbs as vocabulary items.

5.3 Methodology

The data for this study were based on the Written English Corpus of Malay ESL Learners (WECMEL) [12]. It is a learner corpus consisting of approximately 475,000 words of academic writing. The contributors to the corpus are 720 Malay ESL learners who each wrote an argumentative essay of about 500–900 words in length. These learners were from the pre-law degree program; it is a requirement for them to have a high distinction in the English paper in SPM, a national level exam at the end of their school years, upon entrance to the program. Due to this, these learners, who all fulfilled the entrance requirement, were considered to have the English proficiency of an upper-intermediate to advanced level.

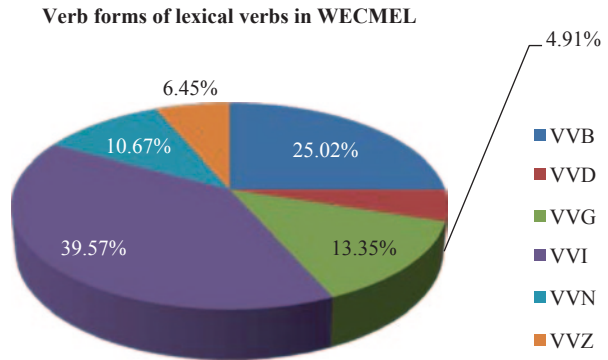
The extraction and analysis of lexical verbs from WECMEL were made possible through CLAWS¹ and WordSmith Tools² version 5. The tags used to annotate the lexical verbs are based on BNC Tagset 5³, which are [13]:

¹ CLAWS (Constituent Likelihood Automatic Word-tagging System) is an automated part of speech (POS) tagger which was developed by UCREL at Lancaster University.

² WordSmith Tools is a computer lexical analysis software that was developed by Mike Scott at the University of Liverpool.

³ BNC Tagset is available from <http://www.natcorp.ox.ac.uk/docs/c5spec.html>.

Fig. 5.1 Percentage of verb forms in WECMEL



- VVB The finite base form of lexical verbs (e.g. *write, lend, use, play*; including the imperative and present subjunctive).
- VVD The past tense form of lexical verbs (e.g. *wrote, lent, used, played*).
- VVG The -ing form of lexical verbs (e.g. *writing, lending, using, playing*).
- VVI The infinitive form of lexical verbs (e.g. *write, lend, use, play*).
- VVN The past participle form of lexical verbs (e.g. *written, lent, used, played*).
- VVZ the -s form of lexical verbs (e.g. *writes, lends, uses, plays*).

The quantitative and qualitative analyses of the lexical verbs are based on the wordlist and concordance functions in WordSmith Tools. An earlier corpus-based study on the lexical verbs in WECMEL shows that there are a considerable number of lexical verbs used by Malay ESL learners [1]. This is anticipated as lexical verbs form the main structure of a sentence. Since this is a data-driven study, it only focuses on a small number of lexical verbs that are derived from the quantitative analysis. These lexical verbs are further analysed qualitatively.

5.4 Findings and Discussion

There are a total of 48,620 lexical verbs used by Malay ESL learners in WECMEL. Figure 5.1 shows a pie chart of the verb forms of the lexical verbs used by these learners.

VVI appears to be the most common verb form used by Malay ESL learners. It is not surprising that VVI, which is the infinitive form of the lexical verb, is more frequently used than other verb forms. This is because in academic writing, such as in argumentative essays, the nature of writing may not be time specific and, in fact, sometimes requires the use of modal auxiliaries, for example, *can, could, will, would, may, might, shall, should, must* and *ought to*, followed by infinitive verbs to express either possibility, necessity, permission, willingness or suggestions.

The high use of modal auxiliaries also suggests that Malay ESL learners may have been more cautious or discreet in expressing their opinions. This could be

Table 5.2 Top 10 most commonly used verb lemmas in WECMEL

Verb lemma	Most commonly used verb form	Frequency (%)	Type
Get	VVI	1560 (3.20)	T
Make	VVI	1545 (3.17)	T
Take	VVI	1022 (1.84)	T
Participate	VVB	896 (1.84)	I
Give	VVI	889 (1.82)	T
Drive	VVI	868 (1.78)	I/T
Know	VVB	851 (1.75)	I/T
Help	VVI	785 (1.61)	I/T
Need	VVB	776 (1.59)	T
Lead	VVI	775 (1.58)	I/T

I intransitive, *T* transitive, *I/T* intransitive or transitive

reflected in the Malay culture itself which promotes modesty in the way one speaks. Nevertheless, the influence of culture in their usage of VVI can only be verified through a discourse analysis which is beyond the scope of this study.

Since the VVI verb form comprises the highest use of lexical verbs, further analysis of lexical verbs was based on this finding. In spite of the high number of lexical verbs used by Malay ESL learners, it was found that they only employed 575 types (2.98%) of VVI lexical verbs out of the total 19,241 VVI verb forms used in WECMEL. This indicates that there is a lack of variety of vocabulary repertoire in the writing of Malay ESL learners which further implies that Malay ESL learners had used the same type of lexical verbs repeatedly, thus making their writing appear to be dull and repetitious.

The analysis also reveals that a few of the lexical verbs are more commonly used than the others. The VVI lexical verbs are considered commonly used as they appear at least 48 times (i.e. 0.10%) out of 48,620 lexical verbs in WECMEL. From the total number of VVI lexical verbs used in WECMEL, the Malay ESL learners had commonly used 87 types of VVI lexical verbs (15.13%). This result further confirms that Malay ESL learners had a limited repertoire of lexical verbs and had used some of them repeatedly. These verbs may be commonly used in the VVI form, but in order to get the whole picture of whether they are also commonly used in other verb forms, I decided to look at the verb lemmas to find out if these VVI verbs are also commonly used in lemma forms. Generally, the finding shows that the Malay ESL learners have also used the lemma verbs in high frequency; however, the result reveals that the sequence of the frequent use of lemma verbs is no longer the same as the sequence of VVI lexical verbs. This indicates that some lexical verbs also appear commonly in other verb forms than VVI. Table 5.2 shows the top 10 most commonly used verb lemmas in WECMEL.

The finding shows that the VVI verb form is still the most commonly used verb form in the top 10 most commonly used lexical verbs in WECMEL. This result is, therefore, in accordance with the earlier finding that Malay ESL learners had used

Table 5.3 Analysis of *get*<VVI>

Grammatical structure and usage	Samples of <i>get</i> <VVI>	Finite or non-finite
Auxiliary verb + verb<VVI>	1. ...we <i>can get</i> a lot of experience...	Non-finite
To + verb<VVI>	2. ...a person <i>to get a qualification</i> to enter the university...	Non-finite
Verb<VVI> + past participle (passive)	3. ...they will not <i>get punished</i> .	Non-finite
Auxiliary verb + not + verb<VVI>	4. We <i>will not get</i> bone problem...	Non-finite

the VVI verb form in most of the lexical verbs found in WECMEL. From the list of the top 10 most commonly used verb lemmas, five of the verbs are transitive, four can either be intransitive or transitive and only one verb is intransitive. It can be generally said that Malay ESL learners used more transitive verbs than intransitive verbs, which suggests that there may also be a high frequency of verb-noun combinations as verb-noun combinations are usually formed from transitive lexical verbs. The top three most commonly used transitive verbs as appeared in the list are *get*, *make* and *take*; this finding is in accordance with the results of Biber et al. [14] which also reveal that *make*, *take* and *get* are the most frequently used lexical verbs in any written text. Qualitative analysis of the lexical verbs is, therefore, based on these most commonly used lexical verbs. However, due to space limitation, this chapter only describes the lexical verb *get*, which is the most commonly used VVI lexical verb (*get*<VVI>) (Table 5.3).

The analysis shows that there are four different grammatical structures that Malay ESL learners used with *get*<VVI>, which correspond to the finite and non-finite tense systems as outlined by Halliday [5]. *get*<VVI> is used with a modal auxiliary as in sample 1, with *to* infinitive as in sample 2 and in simple future tense as in samples 3 and 4. Sample 3 also shows that the lexical verb *get* can be followed by a past-participle verb and hence used as a get-passive construction. These findings disclose that Malay ESL learners had clearly shown their general ability in using the VVI form of lexical verbs in appropriate syntactic structures. The tendency to use the non-finite form of the VVI structure could have been resulted from the nature of VVI itself which is unmarked.

The linguistic classification of lexical *get*, on the other hand, depends on the noun that follows. Since *get* is basically a transitive verb, it therefore takes a noun, with a possibility of forming a verb-noun collocation. The quantitative analysis reveals that there are 11 nouns that have a significant relationship to occur with the lemma verb *get* in the learner corpus, as listed in Table 5.4.

Based on the samples given, it is quite difficult to classify *get* into any of the classifications as outlined by Hinkel [6]. Samples of *get* as used by Malay ESL learners do not show whether they are activity, reporting, mental/emotive, linking or logico-semantic verbs. Nevertheless, the closest classification that can fit *get* would be the activity verb even though it is not used as an activity verb in the actual sense. The above examples, on the other hand, show that *get* is also clearly a mono-transitive verb that can either take a tangible (e.g. *money*, *marks* and *scholarship*) or intangible (e.g. *achievement*, *health* and *information*) noun.

Table 5.4 Noun collocates of the lemma verb *get*

Noun collocates	Learners' samples in WECMEL
Achievement	...they will <i>get</i> better <i>achievement</i> ... (d19.s10.m12)
Body	...the students will <i>get</i> healthy <i>body</i> ... (d23.s26.m10)
Education	...younger generations are eager to <i>get</i> more <i>education</i> ... (d19.s13.m17)
Health	We can <i>get</i> good <i>health</i> ... (d24.s6.m11)
Information	...drivers should <i>get</i> some <i>information</i> ... (d1.s18.m10.5)
Job	...in an interview to <i>get</i> a <i>job</i> . (d17.s10.m13)
Marks	In order to <i>get</i> marks... (d26.s23.m11)
Money	...we also could <i>get</i> <i>money</i> from it... (d18.s15.m11)
Scholarship	...the students that <i>get</i> the <i>scholarship</i> ... (d18.s13.m11)
Scholarships	...you are not going to <i>get</i> any <i>scholarships</i> ... (d18.s16.m15)
Sleep	...they will not <i>get</i> enough <i>sleep</i> ... (d15.s26.m10)

5.5 Conclusions and Suggestions

In summary, this data-driven study of the lexical verbs used in WECMEL reveals that Malay ESL learners have the tendency to use the VVI lexical verb form on most of the lexical verbs. Taken positively, in the context of academic writing, the learners are actually on the right track of using one of the most dominant verb forms in academic writing. Nevertheless, learners must also be able to use other verb forms appropriately, especially VVB (i.e. the base form). In an academic writing, besides using modal auxiliaries in expressing opinions, the most appropriately used tense is simple present tense that requires the use of VVB and VVZ (i.e. the *_s* form of the lexical verb). In addition, what is evident from the quantitative analysis is that Malay ESL learners have a limited repertoire of vocabulary items especially where lexical verbs are concerned. One of the findings exposes that a considerable number of the lexical verbs have been used repeatedly, suggesting a lack of vocabulary selection. The trend in the findings also shows that Malay ESL learners are more inclined towards using transitive verbs, implying a high possibility of verb–noun collocations. The learners will then have to know the classification of the lexical verbs in order to be able to use them with the appropriate noun collocates.

The above findings, therefore, have several pedagogical implications. Although grammar is still given the main emphasis in an ESL classroom, the teaching of lexical verbs could actually be a mix of two approaches: vocabulary and grammar. Grammar learning would include the teaching of the grammatical structure of the lexical verb forms whereas vocabulary learning would include the learning of a variety of lexical verbs and their linguistic classifications. This would be deemed necessary as knowing to use a variety of lexical verbs would increase the learners' repertoire of vocabulary items, and at the same time knowing the grammatical structure and classification of the lexical verbs would enable the learners to use the lexical verbs and their noun collocates accurately and appropriately. It is indeed a fact that the learning and teaching of this aspect of lexical verbs have often been neglected in EAP syllabuses; perhaps due to the unawareness of the significance and/or lack of knowledge of this aspect of lexical verbs. Therefore, it is high time that language practitioners be made aware of the significance of the linguistic property of lexical verbs.

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Chapter 6

Critical Factors in Organizational Change and Employee Performance

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Abstract Change is sometimes perceived as an opportunity for growth for business and sometimes as a necessary evil to survive. The purpose of this study is to examine the relationship between organizational change and employee job performance at Sabah Credit Corporation, Sabah. The organization changes in this study consist of two critical factors which are technology and structure. A total of 138 questionnaires were distributed to eight departments at Sabah Credit Corporation, currently going through a series of change. Multiple regression analysis revealed that technology and structure factors did highly support organization change and significantly affect employee job performance. It can be concluded that organizational change practiced in the organization has an effect toward employee job performance. As a result, management should be concerned with organizational change elements which lead to employee job performance. Further research is suggested in exploring emotional intelligence as a strategy for employees to embrace and manage change in the workplace.

Keywords Organizational change · Job performance · Task performance · Contextual performance

6.1 Introduction

Change in organizations is a norm today and most organizations are influenced by multitude factors which are influenced by both internal and external environments. Change in organizations does not happen in a vacuum, and if nothing happened to suppress the organization, organizational life change would be slow and, perhaps, merely accidental [1]. Therefore, organizational change plays an important role in any organization since managing change is perceived as an uphill task. When the

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organization says managing change, it means making changes in a planned and systematic fashion. According to [2], organization change also represents the process, technique, and tools to manage the people side of the business so that the organization can achieve their business outcome. Prosci [2] further stated that management should realize that organizational change can be met effectively with the infrastructures that exist in the organization. However, Cummings and Worley [3] also believe that successful organizational change must be derived through facilitation of an organizational development consultant who understands several core competencies.

Organizational change is difficult to manage. According to Paton and McCalman [4] most organizations view change as a highly programmed process which takes as its starting point a problem that needs to be rectified and broken down into constituent parts. In addition, they further stated that businesses and managers are now faced with a highly dynamic and ever more complex environment. Therefore, organizational change is needed to support as well as to improve the organization's productivity. Organizations should further request and make analyses of alternatives, select the preferred solution, and provide diagnoses and resolutions that are inevitable in any change management process. There were also claims that when organizations change, employee job performance will be significantly affected. Performance can be regarded as almost any behavior which is directed toward task or goal accomplishment. Good performance among employees in an organization has many implications such as high motivation among employees, outstanding ability, good organizational climate and infrastructure, excellent leadership that can sustain rapport and productivity, and good relationship among staff.

According to Manring [5], the organizations nowadays are pressured by rapid technological change and the need for organizations to "turn a dime" to best position themselves for regional, national, and global competitiveness. It is supported by Whittington et al. [6] that the rapidly changing environment and organizations have to change in order to create and sustain competitiveness. Organizational change in essence consists of technology, people, structure, and task needed for any organization to grow. In relation to the job performance, it is the result of three factors working together: skills, efforts, and the nature of work conditions. Skills include knowledge, abilities, and competencies the employee brings to the job; effort is the degree of motivation the employee puts forth toward getting the job done; and the nature of work conditions is the degree of accommodation of these conditions in facilitating the employee's productivity. Therefore, this study aimed to investigate the relationship between organizational change and employee's job performance at the selected private organization in Sabah Credit Corporation.

6.2 Literature Review

6.2.1 Organizational Change

In organization theory, organization change is defined as the adoption of a new idea or behavior by an organization [7]. In organizational behavior, change is defined

as “the act of varying of altering conventional ways of thinking or behaving” [8]. Changes are sometimes perceived as an opportunity for growth for business and sometimes as a necessary evil to survive [9]. These descriptions and definitions do not provide a clear conceptualization of what is organizational change, and given the types of research completed within the scope of organizational change (type, readiness, process, and inertia), the definitions above do not adequately address the scope. Change management is a systematic approach to dealing with change, both from the perspective of an organization and on the individual level. In this study, the [10] model was used, and it highlighted the impact of organization and illustrated four variables of organizational change comprising four interaction variables.

Changes that affect any one variable will, to a greater or lesser extent, interact with the others to create knock-one-effects. Change the task or purpose of the organization, and the competencies (people), technology (processes which accomplish the task), and structures (communication, power, reporting systems) must also adapt and change. The companies that have and will survive are those that are able to withstand constant changing conditions both internal and external to the organization, to continually innovate, and have the knowledge within the organization to make decisions directed at achieving organizational success [11].

6.2.2 Leavitt’s Model

Leavitt’s model highlights the impact of organization change and illustrates four variables of organization change. It views the organization as comprising four interaction variables. Changes that affect any one variable will, to a greater or lesser extent, interact with the others to create knock-one-effects. If one wishes to modify or change the task or purpose of the organization, the overall competencies (people), technology (processes which accomplish the task), and structures (communication, power, reporting systems) must also adapt to the changes or face greater challenges that may impede the performance of the whole organization.

As technology changes lead to a new set of rules embedded in the organization information system, restructuring the established organizational arrangements and procedures and state that technology changes is a process that involves a major redesign of the institutional framework via its information technology system [12]. According to Checkland [13] technology changes should not be viewed and analyzed within a limited scope of modifying process, positions, and technology within organizations. Instead, they should be interpreted in a broader sense, incorporating notion systems thinking that link with the elements of organization change.

Technology changes are often managed from a single and narrow perspective on the organizational process. Change managers typically focus on either information technology or organization on issues, rather than obtaining a coherent overview of the change process. They conclude that technology change projects in the scope of the definition when the organization adopts new information technologies that lead to major changes in people’s work organization processes and organization performance. Although technology changes potentially lead to major improvement in organizational performance, the transformation could disrupt the common routines of

employees, customers, and managers. In essence, technology changes are complex processes involving users, project leaders, managers, and technologists, and require one to carefully plan all elements of those changes [14].

Structures include communication, and power must also adapt and change. According to Wilson and Rosenfeld [15], organization structure is the established pattern of relationship between the component parts of an organization, outlining communication, control, and authority pattern. The structure distinguishes the parts of an organization and delineates the relationship between them. According to Stacey [16], organization structure can also be defined as a formal way of identifying who is to take responsibility for what, who is to exercise authority over whom, and who is to be answerable to whom. Understanding how to communicate an intended organizational change is one of the challenges for organizational communication scholars for the new century [17]. The focus of this study is on the role of communication on individual employees, and in particular on the responses to a planned organizational change. Organization structure can vary along a number of dimensions. Early studies varied along a number of dimensions. However, an influential piece of research by Pugh et al. [18] identified the following six primary dimensions of organizational structure, namely, specialization, standardization, formalization, centralization, configuration, and traditionalism.

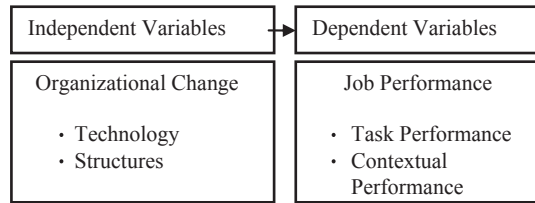
According to Pugh et al. [18], specialization refers to the number of different specialists' roles in an organization and their contribution; standardization is the number of regularly occurring procedures that are supported by bureaucratic procedures of invariable rules and processes; formulization is the number of written rules, procedures, instructions, and communication; centralization is where authority lies in the hierarchy to make decisions that have an impact for the whole organization; configuration is the width and the height of the role structure; and traditionalism is how many procedures are "understood" rather than having to be written down.

6.2.3 Job Performance

Performance can be regarded as almost any behavior which is directed toward task or goal accomplishment. Good performance among employees in an organization has many implications such as high motivation among employees, outstanding ability, good organizational climate and infrastructure, excellent leadership that can sustain rapport and productivity, and good relationship among staff. Task performance and contextual performance are two distinct behaviors at work that contribute independently to effectiveness outcomes [19]. Borman and Motowidlo further mentioned that both task performance and contextual performance describe specific behavior of an individual, and it can be distinguished from the effectiveness which impacts that behavior and outcomes that are valued by the organization. According to Griffin et al. [20], this distinction emphasizes that performance is defined by the behavior itself while effectiveness is the consequence of behavior.

Task performance involves a pattern or behavior that is directly involved in producing goods or services or activities that provide indirect support for the organization's core technical processes [21]. Task performance contributes to

Fig. 6.1 Conceptual framework of organizational change and job performance



organizational effectiveness either by transforming the organization's raw material as a step toward creating the organization's product or by providing necessary services and maintaining staff functions [22].

Contextual performance is defined as an individual effort that is not directly related to the main task function but is important because it shapes the social organization and psychological context that serve as the critical catalysts for task activities and processes [23]. According to Van Scotter et al. [24], when employees help others to complete a task, cooperate with their supervisors, or suggest improving organization processes, they are engaged in contextual performance. In fact, contextual performance is viewed as the most important aspect of work behavior, and it has sometimes been regarded as being synonymous with overall job performance. The contextual aspect contributes to organizational effectiveness by supporting the organizational social and psychological context whose technical core must function [19].

6.2.4 Conceptual Framework

The framework is adapted from Leavitt's model of organizational change which consists of technology, people, structure, and task as the independent variables (IVs), and job performance was adapted from Borman and Motowidlo [19] which consists of task performance and contextual performance as the dependent variables (DVs) as outlined in Fig. 6.1.

Thus, this study hypothesized that:

- H1: Technology significantly influences task performance.
- H2: Structure significantly influences task performance.
- H3: Technology significantly influences contextual performance.
- H4: Structure significantly influences contextual performance.

6.3 Methodology

To date, various methods have been developed and introduced to measure the organizational change and job performance. An organizational change component was prepared by adapting from the Leavitt's model. Two factors were extracted from

Table 6.1 Demographic backgrounds

Demographic		Frequency	Percent
Gender	Male	47	36.2
	Female	83	63.8
Age	Below 25	4	4.0
	26–30	29.8	28.7
	31–35	18	17.8
	36–40	9	8.9
	41–45	13	12.9
	46 and above	28	27.7
Length of service	Less than 1 year	1	1.0
	1–5 years	31	30.7
	6–10 years	23	22.8
	< 10 years	46	45.5

the model, namely, technology and structure. Adapting from the main sources, a five-point Likert Scale ranging from (1), strongly disagree, to (5), strongly agree, was used as a medium to record the responses. The initial samples consisted of 138 employees from various departments selected to complete this research, which was also the population. Job performance was measured by task and conceptual performance. In this study, it was hypothesized that the two categories of job performance were the determinants to be adopted in measuring the significant relationship between organizational change and employee job performance.

6.4 Findings and Discussion

For the purpose of this study, a survey was conducted to 138 sets of questionnaire to the respondents at the Sabah Credit Corporation, Sabah. The response rate for this study was 73% ($n=101$). As a result, total questionnaires analyzed were 101 (73%) from the sample size.

6.4.1 Demographic Factors

Descriptive analysis, as shown in Table 6.1, explains the gender, age, and working experience of respondents in Sabah Credit Corporation, Sabah. The study found that 47 respondents of the study were male while 54 of the respondents were female persons. Most of the respondents were between 26–30 years old (28.7%), followed by the respondents with the age of 46 years and above (27.7%). The majority of the respondents had more than 10 years of working experience ($n=46$, 45.5%) followed by those in the range of 1–5 years of working experience ($n=31$, 30.7%).

Table 6.2 Regression analysis between organizational change and task performance

Variables	Model 1 (β)
Technology	0.364
Structure	0.444
R ²	0.366
F value	13.826
Significant. F value	0.000

* $p < 0.05$, ** $p < 0.01$

6.4.2 Reliability Analysis

To assess whether the data were reliable, a Cronbach's Alpha was computed. According to Zikmund [25], Cronbach's Alpha values should be above 0.70 for an internally reliable measure of the concepts. From the findings, the alpha values of the technology factors were found to be 0.92, and structures were 0.87, which indicated that the items formed reasonable internal consistency reliability. Similarly, the alpha value for the competence scale for job performance, task performance, was 0.71, and contextual performance was 0.86, which indicated good internal consistency of the variables.

6.4.3 Regression Analysis

Table 6.2 analyzes the relationship between the IVs (technology and structure) and the DV (task performance). The findings indicate that 36.6% of the variance in the DV can be predicted from the IVs. Overall the regression model is significant ($F = 13.826$, $p < 0.01$). The technology element also influences the task performance ($\beta = 0.364$, $p < 0.013$) and structure element ($\beta = 0.686$, $p < 0.002$). Therefore, hypotheses H1 and H2 were accepted for this study.

Based on the result, it was found that the element structure did significantly influence task performance. The management of Sabah Corporation practiced good structure within an organization to ensure that employee job performance increases. The result also shows that the technology element also has significant influence on the employee task performance. Technology is a major phenomenon, gaining momentum in both profit and non-profit organizations. According to Paton and McCalman [4], change management is a systematic approach in dealing with change, both from the perspective of an organization and at the individual level. They further mentioned that change management has at least three different aspects, which were adapting to change, controlling change, and affecting change.

In different DVs, Table 6.3 analyzes the relationship between the IVs (technology and structure) and contextual performance. The findings indicated that 33.1% of the variance in the DV can be predicted from the IVs. Overall, the regression model is significant ($F = 11.887$, $p < 0.01$). The technology element also influenced the conceptual performance ($\beta = 0.373$, $p < 0.014$) and structure element ($\beta = 0.686$, $p < 0.000$). Therefore, hypotheses H3 and H4 were accepted for this study.

Table 6.3 Regression analysis between organizational change and contextual performance

Variables	Model 1 (β)
Technology	0.373
Structure	0.686
R ²	0.366
F value	13.826
Significant. F value	0.000

* $p < 0.05$, ** $p < 0.01$

6.5 Conclusions

As a conclusion, organizational change is unpredictable. It is inevitable that the organization expects what will be in the future in terms of technology and structure and relate that to employee performance which is later translated into profits for that organization. This is perceived as high challenge elements in the organization as well as for the employees. Therefore, the management and employees have to play their roles to adapt, control, and embrace change. Advance technology will help the organization and individuals to work together in achieving higher productivity.

Effective strategies of technology and organizational structures influence the way how employees need to adapt and control their performance. If there are lacks of strategies, the employee performance will be affected and may reduce the productivity among the employees. It will also affect the emotions of the employees in facing and embracing change. Instead of that, strategies in managing change will help to reduce the negative consequences among employees in the organization. Even though many organizations and individuals have strong belief and value change, they will have to look forward in a positive manner to embrace change that will eventually affect both their task and contextual performance.

Management will have to ensure that the technology and structure practices in the organization are good strategies to face and embrace change.

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Chapter 7

Service Quality and Customer Satisfaction in a Natural Monopoly Company

Sarina Muhamad Noor and Noraini Nasirun

Abstract One of the parameters used by businesses to measure their performance is through quality of services. Many studies were conducted in this area; however, few have investigated the situations in a natural monopoly organization. This study intends to determine the level of service quality at a government-linked company that provides electricity to Malaysian consumers. In addition, this study also looks at the service quality factors that contribute in explaining the customer satisfaction at the particular organization. Using a combined dimension that investigated the service delivery process, a survey was conducted to 385 customers in the northern state of Malaysia. Results indicate an average level of service quality was administered to the customer. However, there is a high predictive power among the studied variables with customer satisfaction. The result suggests training for employees must involve elements of respecting and acknowledging customers as their main shareholders.

Keywords Service quality · Customer satisfaction · Utility · Electricity

7.1 Introduction

Service quality is important for all businesses to ensure survival and to maintain their competitiveness. Many benefits are gained by investing in service quality. It leads to customer satisfaction, loyalty, repeat purchase, and long-run profit through positive word of mouth. In addition, firms that deliver good quality services will spend less money in handling mistakes. A natural monopoly firm such as utilities encounter customers' dissatisfaction as there is an increase in consumption [1]. Moreover, the distinctive aspect of this business is to ensure a reliable supply and proper timing of the services [2] without sacrificing the element of safety.

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The utility company in Malaysia is engaged in a natural monopoly as it is the only firm that serves electricity to the Malaysian domestic consumers. Being a natural monopoly, the company enjoys several advantages such as a restrictive barrier to entry and lack of competition. The mentioned company was privatized in 1993 by the government though it is still a government-linked company (GLC). The records show that the company is one of the Malaysian government's most successful privatization efforts.

However, the company cannot ignore the service quality aspect even though the company is the sole provider of electricity. Hence, in studying the service quality aspect of this business, the process that includes three sequences of events is appropriate. Therefore, the current tools in ensuring customer service is modified to capture the process before, during, and after the services are delivered. As there are limited studies on service quality of natural monopoly companies, especially with GLC status, this study intends to understand the phenomena. Thus, this study uses the five dimensions of SERVPERF with another dimension of recoverability to determine the level of quality services offered to customers and to identify their relationship with customer satisfaction.

The structure of the chapter is as follows. After a brief introduction, a condensed review of literature is presented followed by the method taken to undertake the study. Then, a discussion on result and analysis will be elaborated. Finally, the chapter concludes with several recommendations for managers to upgrade their services.

7.2 Literature Review

Studies on service quality have gained momentum since it was first mentioned in the late 1980s. Authors such as Cronin and Taylor, Groonros, Parasuraman, Zeithmal and Berry, and Rust and Oliver were some of the well-known names in this area. They have suggested several models namely SERVQUAL, SERVPERF, and PARKSERV to measure the level of customer service quality. Nevertheless, they have recommended that any service quality model used must be tailored to the industry served. This is because each industry has its own unique characteristics. Moreover, the customers' perception on the level of service offered will differ.

The companies in the electricity utility industry are faced with different demands and issues. Firms' ability to supply the electricity, the processes in supplying the electricity, including the frequency of interruptions, and the performance of the power service are among factors that affect the quality of an electricity firm [1, 3]. Previously, many dissatisfied consumers in the industry tolerated the poor service as there were no channels for them to voice their opinions. With the advent of technology, customers become sensitive and consequently demand a premium service.

Most studies on service quality have focused on the hospitality industry [4], retail [5], educational sector [6], telecommunication [2], and service factories [7]. Several authors who have investigated the electric utility industry focused on benchmarking of service quality [3], price acceptance [8], transmission and network [9], manage-

rial behavior [10], and evaluation of service quality aspects [1]. As these studies have underemphasized the situation where customers patronize the company for further transactions, this study attempts to fulfill the need in understanding the customers' experience.

In addition, the study on this electric utility company in Malaysia is necessary as the nature of competition is limited. This is especially true as it is impossible for customers to switch to another competitor. Furthermore, customer satisfaction is not reflected in the company's profit [8], especially when the company has a social altruism approach [11]. Hence, there is a tendency for companies to ignore investing in quality-enhancing factors. On top of that, studies suggest that privatization does not enhance service quality for similar industries [10].

7.3 Methodology

Data were collected randomly using self-administered questionnaires to customers in December 2012. A 5-point Likert scale ranges from "1" (strongly disagree) to "5" (strongly agrees). An average of 100 customers visited the premises daily, making a total population of roughly 24,000 for 1 year. A simple random sampling was utilized to distribute 400 questionnaires. The respond rate was 96%. However, 15 questionnaires were excluded due to incomplete information provided by respondents.

SERVPERV was chosen as the basis for this study as previous authors have discussed the appropriateness of this instrument as compared to SERVQUAL [12, 13]. This is especially important as SERVQUAL requires the gap analysis in order to determine the level of service quality. In order to capture the comprehensive experience, another dimension proposed by Oloruninwo was added to the instrument [6]. There are 27 items representing 6 service quality dimensions, namely: tangibility, reliability, responsiveness, assurance, empathy, and recoverability.

In operationalizing the variables, similar questions used in previous literature were adapted. Tangibility refers to the cleanliness, seating arrangement, equipments, and parking space while reliability measures the accuracy, security of information, and correct services. Responsiveness reflects the staff's attitude, availability of staff, and feedback by staff. Assurance, on the other hand, reflects safety of transaction, knowledgeable employees, and trustworthiness. Empathy indicates the attention given by the staff and understanding the customer's needs. Meanwhile, recoverability indicates the staff's willingness to accept mistakes, the way staff deal with complaints, and are empowered to take action. The items on tangibility reflect the customers' experience before the service is performed while the items covering reliability, responsiveness, assurance, and empathy reflect the customers' experience during delivery of services. Finally, the item used to measure the "after-effect" of service delivery is known as recoverability.

Table 7.1 Reliability analysis

Variables	No. of items	A
Tangibility	3	0.90
Reliability	4	0.86
Responsiveness	4	0.90
Assurance	4	0.87
Empathy	4	0.91
Recoverability	4	0.91
Customer satisfaction	4	0.86

A Cronbach alpha values

Table 7.1 displays the reliability analysis for variables constructed in the study. The Cronbach Alpha values for all dimensions are above 0.86 which indicates that the variables are suitable for further analysis.

7.4 Data Analysis and Results

Tables 7.2–7.4 report the results of the study. The analyses used are: frequency analysis, descriptive analysis, and multiple regressions. All data were analyzed using SPSS 17.0.

Table 7.2 exhibits information about the respondents' profiles. The majority of respondents are between 26 to 35 years old (34.3%), male (71.2%), and Malays (79%) with the education level of SPM (Sijil Pelajaran Malaysia).

The descriptive analysis of this study is reported in Table 7.3. Mean for all variables are above the midpoint, ranging from 3.4 to 3.7, indicating that most customers agree with the statements in the questionnaires. Meanwhile, the standard deviation display values range from 0.92 to 1.1. The result indicates that on average customers are satisfied with the service provided.

In order to understand the predictive power of each dimension with customer satisfaction, a multiple regression test was performed. Table 7.4 displays the result of multiple regressions. The adjusted R-square for this model indicates that 76.2% of customer satisfaction is explained by the model. All variables constructed for this model, namely tangibility, reliability, responsiveness, assurance, empathy, and recoverability, have a significant relationship with customer satisfaction. Assurance contributes 42% in explaining the customers' satisfaction, followed by recoverability (23%). Obviously, assuring the customers is enhanced by the element of recoverability that indicates "the ability to control the situation" [6]. Thus, both contribute greatly to explain customer satisfaction in the industry.

The result of this study shows that tangibility has a significant value in explaining customer satisfaction. This result indicates that tangible services that are provided by the organization may affect customers satisfaction in visiting the premises. The company provides convenience for customers who have to deal in person with the service provider. Even though the variable is important in the service quality

Table 7.2 Frequency analysis of demographic factors

Factor	Categories	Frequency	Percentage
Age	Less than 25 years	53	13.8
	26–35 years	132	34.3
	36–45 years	80	20.8
	46–50 years	88	22.9
	51 years and above	32	8.3
Gender	Male	274	71.2
	Female	108	28.1
Race	Malays	304	79.0
	Chinese	48	12.5
	Indian	27	7.0
	Others	3	0.8
Education level	PMR	33	8.6
	SPM	224	58.2
	MCE	18	4.7
	Diploma	58	15.1
	Degree	25	6.5
	Master	6	1.6
	PHD	12	3.1
	Others	9	2.3

PMR Penilaian Menengah Rendah (Lower secondary level), *SPM* Sijil Pelajaran Malaysia (Higher Secondary level), *MCE* Malaysian Certificate of Education

Table 7.3 Descriptive analysis

Variables	Min.–max. value	Mean	Std. deviation
Tangibility	1–5	3.5	0.93
Reliability	1–5	3.4	1.0
Responsiveness	1–5	3.5	0.85
Assurance	1–5	3.7	0.92
Empathy	1–5	3.6	0.93
Recoverability	1–5	3.5	1.1
Customer satisfaction	1–5	3.6	1.0

Table 7.4 Multiple regression analysis (dependent variable: customer satisfaction)

Variables	B	Significance
Tangibility	0.14	0.02
Reliability	0.19	0.00
Responsiveness	0.14	0.02
Assurance	0.42	0.00
Empathy	0.17	0.01
Recoverability	0.23	0.00
F value=205*		
R square=0.765		
Adjusted R square=0.762		

* $p < 0.01$

B Beta value

study, previous literature agrees that tangibility is not the main factor of the quality elements as compared to responsiveness and recoverability [5, 13].

Reliability is also one of the contributing factors that explain customer satisfaction. Based on this study, the company is able to gain customer satisfaction through its reliability of its services. It is important for the customers to feel secure with the personal information provided to the organizations, especially when it involves monetary transactions [14, 15].

Responsiveness refers to the willingness to assist customers as well as providing prompt services whenever required [14]. As for this study, the customers perceived that employees of this organization were always ready to serve the customers. This result aligns with previous scholars who found responsiveness is able to influence the quality of services provided by the organization. This variable also indicates that it is possible to predict customer satisfaction in the retail industry [4]. Another study in the airline industry revealed that responsiveness is the main quality element that contributes to customer satisfaction.

Assurance is another dimension of service quality that emerges with a similar result. Many scholars found that this variable is one of the most important elements in service quality [4, 5, 16]. In the retail industry, assurance of services is reflected by promptness of services, speed of services, and the accuracy of transactions [15].

Empathy focuses on the needs of the customers. For this study, the customers perceived that the employees of the organization were customer oriented and willing to assist the customers whenever required. However, the satisfaction levels towards empathy among customers may vary among industries. Most of the industries believe that empathy is an important quality element and very complicated to address [14].

The last variable used in this study was recoverability. Recoverability refers to the ability to control the situations when something is not alright. Clearly, the customers perceived that employees of this organization were able to handle the complaints well. The ability of the employees to respond to the customers' requests and to handle complaints appears to be an important factor in the service-oriented industries and thus conveys a good image of the organization [14].

7.5 Conclusions and Recommendations

This study analyzed customers' satisfaction with the services provided by a natural monopoly company. The objectives were to determine the level of service quality offered and their relationship with customer satisfaction. Results indicate that on the whole, respondents "agree" as to the satisfaction of services received before the services are performed (tangibility dimension), during the delivery of service (dimensions: reliability, responsiveness, assurance, and empathy), and after-effect of the service (recoverability dimension). However, only 76.2% of customer satisfaction can be explained by these dimensions. Among all variables, assurance carries the weightiest contribution followed by recoverability, reliability, empathy,

responsiveness, and tangibility. Hence, the service providers must incorporate these elements in their training programs as they are vital to the customers' satisfaction.

The establishment of a natural monopoly company could also influence this study. The privatization of this company means government outsourcing its services to private firms and it does not mean economic liberalization that opens up to a system of competition. Thus, expectations of customers towards performance of the monopoly company are confined to the company's customer charter. As assurance has the highest beta value in explaining customer satisfaction, organizations should consider these elements when constructing their training programs.

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Chapter 8

Work Happiness and Intention to Leave of ICT Professionals in Malaysia: An Exploratory Study

Safiah Omar and Fauziah Noordin

Abstract Study on work happiness is important in individual especially in organization settings since the positive psychology movement started in the year 2000. This study assessed several factors that can contribute to maximize the quality of work performances. It was found that the existence of positive emotions at work contributed to reducing the employees' intention to leave. As an exploratory study, the results also found that the constructs of work happiness have negative relationships with both intention to leave the organization and the career. Only general work happiness is significant with both intentions to leave whereas satisfaction with work was found to be not significant in the studied model through regression analyses. Implications of this study and recommendation for future studies are discussed.

Keywords Work happiness · Intention to leave · ICT professionals

8.1 Introduction

The use of information and communication technology (ICT) in business, social, and economic settings is very important for the development of a country. Advances in technologies decrease the amount of time to complete any work tasks, saving the environment by going paperless, enable networking between systems around the world, and many others. Although the growth of technologies is increasing, the growth of skills of human capital, however, is not growing at the same rate with the technological advancement [1]. This has caused the supplies of human capital in ICT to become insufficient. The risk of shortages in skill supplies is increasing

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with the number of baby boomers in the industry and those who are retiring [2]. On a similar note, the number of students taking ICT programs and the number of ICT graduates are also decreasing [3].

Studies on intention to leave enable the possibilities to identify whether the employees are leaving or staying in the organization. Answering the call from positive psychology movement [4, 5], this study measured the positive emotions in order to determine whether the intention to leave can be reduced among the employees in ICT industry. According to the broaden-and-build theory, the existence of positive emotions contributed in widening and broadening the individual's thought action [6]. This means that feelings such as happiness and joy enable individuals to assess on several solutions before making a decision rather than just rushing to a conclusion without proper judgments [7]. Therefore, this study believes that the existence of happiness at the workplace may contribute in reducing the level of the intention to leave among the ICT professionals because happy individuals will think about many solutions to their problems before going to the final option which is leaving. Thus, putting work happiness as the independent variable, intention to leave the organization or career as the dependant variables enable this study to measure the potential influences between the constructs of work happiness and the intention of employees with regard to leaving.

8.2 Literature Review

8.2.1 *Work Happiness*

Happiness is the evaluation of both affective and cognitive states of emotion felt in the sum aspect of the individual's life [8]. Happiness can also be defined as "a positive emotional state that is subjectively defiance by each person" [9]. Previous research found that happiness is the most important goal in someone's life [10]. Individuals spent most of their time in their workplace which raises the concern that such need to feel happy at one's workplace is also deemed to be very important. This is consistent with the previous literature that provides evidences where such organizations that focus on the strength rather than on mistakes and correcting them have better work performances and financial stability [11].

There are two aspects of happiness which are affective components (emotions) and judgmental components (cognitive) [12, 13]. Affective components examine the positive or negative sides of emotions while the judgmental component looks at the satisfaction aspect. These two aspects clarified how individuals perceived the feelings and whether they are satisfied with the particular conditions. In other words, the affective component determines whether the person is happy and the judgmental component determines whether the person is satisfied. The combination of both aspects leads this study to further the assessment by examining whether the intention to leave, among the employees, can be reduced among the ICT professionals.

8.2.2 *Intention to Leave*

Intention to leave is the immediate potential to actual turnover because what an individual intends to do will reflect on the actual behavior [14]. The employment turnover issues in ICT industry attacks Malaysian employment market as it was reported that the rate was at 75.72% in the year 2012, putting it as the highest industry with such turnover rate [15]. There are advantages in studying the intention to leave rather than the actual leaving. Having the intention to leave means that the individual is not yet leaving and, with some adjustments, the intention can be reduced to a minimum level. It is important to reduce the intention to leave because individuals with the leaving intention often disengage from the work tasks, have high absenteeism, and have poor work performances [16]. Therefore, it is important to find effective ways to reduce the employees' intention to leave especially for this particular study, the ICT professionals.

The employment leaving mechanism started from small to severe. It starts with leaving from unit to unit, from organization to organization, and the most severe is from one career to another [17]. Thus, this study distinguished between two intentions to leave which are the intentions to leave the organization and the intention to leave the career. The intention to leave the organization happened when an individual intends to leave the current organization and work in another organization but still stays in the same career. The intention to leave the career occurs when the individual has the intention to leave the current organization and work in favor of another organization in different types of careers. For example, an ICT professional leaves the organization and the ICT career to work in a pre-school as an English teacher. Although the situation seems rare, the ICT industry cannot afford to lose any single current professional employee especially with the findings that the new generations (especially generation Y) are not attracted to the ICT industry as they associate it with complicated work tasks, tiring work hours, and no glamour as compared to other types of occupations [1, 18, 19].

8.3 Methodology

The quantitative method was used in this study in order to explore whether there exists a relationship between work happiness and both the intention to leave the organization and the career. The aim is also to measure the relationship (if any) between work happiness and both intentions to leave based on past researches that have been established in the West which reported on the existence of this particular relationship.

Three types of collection methods for the questionnaires were used which were mail, drop-off/pick-up, and online. These three methods were given to the human resource managers in the participating organizations to choose before the distributions of the questionnaires were held. Among 15 organizations that participated in

this study, two organizations chose the mail method, nine organizations chose the drop-off/pick-up method, and four organizations chose the online method.

There were two types of sampling methods used in this research. In choosing the participating organizations, cluster sampling was used. The list of world class status taken from the Multimedia Super Corridor (MSC) was obtained in order to represent the ICT professionals' population of Malaysia. Then, convenient sampling was used in choosing the individual/ICT professionals to participate in this study by the human resource representative for each particular organization.

8.3.1 Samples of Study

Samples of this study consist of 303 ICT professionals. Sample frames were taken from the MSC's world class status list. There were 15 organizations that participated. The respondents work nature ranging from and not limited to networking, software development, system technician, etc. There were 59% men and 41% women. A bachelor degree was obtained by 63%, master degree by 18.6%, and professional courses by 1.7%. The samples were Malay (61.9%), Chinese (25.2%), Indian (11.3%), and others (1.7%).

8.3.2 Assessment Instruments

The instrument used to measure work happiness for this research was happiness measure [10] which used to measure the general work happiness and the satisfaction with life scale (SWLS) [20] which was converted to be used under the condition of satisfaction towards work for organization purposes. The happiness measure was chosen to assess the general work happiness because it is a thoroughly analyzed well-being assessment instrument and has been considered as the "granddaddy" of happiness measures with the strongest correlations in daily affect and life satisfaction [21]. Two aspects of happiness were examined in this study, which are the affective components (emotions) and the judgmental components (cognitive) [12]. The combination of the two aspects are expected to cover the whole constructs in measuring the individual's happiness at work. The Cronbach's alpha results obtained from the reliability test were 0.90 for general work happiness and 0.922 for satisfaction with work.

The instruments used for the intention to leave were taken from [22]. There were three items which cover the aspects of searching, thought, and intend. For example, "Presently, I am actively searching for another job." The same instrument was used to measure the intention to leave the organization and the intention to leave the career. The words that referred to leaving the organization were modified in order to give meaning to the leaving the career. For example, "Presently, I am actively searching for *another career than ICT*." The instrument uses a 7-point scale where 1 represents "strongly disagree" and 7 represents "strongly agree." The Cronbach's alpha for the intention to leave the organization is 0.88 while the intention to leave the career is 0.92.

Table 8.1 Mean score for work happiness and the intention to leave

Dimensions	Mean	SD
Work happiness		
General work happiness	4.92	0.88
Satisfaction with work	4.94	0.94
<i>Average work happiness</i>	<i>4.93</i>	
Intention to leave the organization	4.13	0.88
Intention to leave the career	3.53	0.85

1.00–3.99= low, 4.00–4.99= low–moderate, 5.00–5.99= moderate–high, 6.00–7.00= high

8.3.3 Analyses

The responses obtained from the respondents in measuring their work happiness and intention to leave were analyzed using Statistical Package for Social Science (SPSS) version 20. The data were first analyzed for the descriptive information in order to determine the level of the respondents' work happiness and intention to leave. The data were then further analyzed for correlations and regressions to test the relationships that might exist.

8.4 Results and Findings

8.4.1 Descriptive Statistics

The mean scores for all variables are at moderate level. The respondents have higher intention to leave the organization ($M=4.13$; $SD=0.88$) compared to the intention to leave the career ($M=3.53$; $SD=0.85$). This shows that the possibility of the ICT professionals to leave the organization is much higher than to leave the ICT career.

Satisfaction with work achieved the highest mean score ($M=4.94$; $SD=0.94$) within the work happiness construct followed by general work happiness ($M=4.92$; $SD=0.88$). The ICT professionals are moderately happy at work. The average means score for work happiness construct is 4.93 (Table 8.1).

8.4.2 Correlations

Correlation results shown in Table 8.2 stated that the relationships between the constructs of work happiness and both the intention to leave the organization and the career were significant and negatively related. All results were significant at 0.01 levels. In intention to leave the organization, it was highly correlated with general work happiness ($r=-0.49$) followed by satisfaction with work ($r=-0.398$). The highest correlation between work happiness constructs and intention to leave the career is for general work happiness ($r=-0.41$) followed by satisfaction with work ($r=-0.392$).

Table 8.2 Correlation results between the intention to leave the organization, intention to leave the career, general work happiness, and satisfaction with work

Variable	1	2	3	4
1. <i>SWW</i>	1			
2. <i>GWH</i>	0.908 ^a	1		
3. <i>ITLO</i>	-0.398 ^a	-0.49 ^a	1	
4. <i>ITLC</i>	-0.392 ^a	-0.41 ^a	0.791 ^a	1

SWW satisfaction with work, *GWH* general work happiness, *ITLO* intention to leave the organization, *ITLC* intention to leave the career^a Correlation is significant at the 0.01 level (two-tailed)

Table 8.3 Regression analysis between work happiness and the intention to leave the organization

Variable	Intention to leave the organization						
	B	P-value	df	F	R-square	ANOVA	Result
<i>SWW</i>	-0.097	0.44	2	32.4	0.178	0.000	Not sig
<i>GWH</i>	-0.331	0.01					Sig

SWW satisfaction with work, *GWH* general work happiness

8.4.3 Regressions Analyses

Referring to Table 8.3, the model tested between work happiness and the intention to leave the organization is significant ($p < 0.001$). The standardized Beta (B) value was significant only for general work happiness ($B = -0.331$; $p < 0.05$). The relationship between the satisfaction with work and the intention to leave the organization was found to be not significant. The R -square is 0.178 which indicates that 17.8% of the intention to leave was explained by work happiness.

Table 8.4 shows that the model tested between work happiness and the intention to leave the career was also significant ($p < 0.001$). Only general work happiness was found to be significant with the intention to leave the career ($B = -0.292$; $p < 0.05$). The R -square is 0.169. This means that 16.9% of the intention to leave the career was explained by the existence of work happiness among the ICT professionals.

8.5 Discussions

This exploratory study found that there are negative relationships between work happiness and both the intention to leave the organization and the career. Thus, work happiness can be one of the antecedents in order to explain the behavior of the intention to leave. It is expected that the existence of positive emotions such as being happy at work can help organizations to reduce the unhealthy intention to leave either the organization or the career. These are consistent with previous studies that measured the elements of work happiness such as job satisfaction [23] that found the same negative relations with the intention to leave [24–26].

Table 8.4 Regression analysis between work happiness and the intention to leave the career

Variables	Intention to leave the organization						
	B	P-value	df	F	R-square	ANOVA	Result
<i>Satisfaction with work</i>	-0.126	0.32	2	30.4	0.169	0.000	Not sig
<i>General work happiness</i>	-0.292	0.02					Sig

SWW satisfaction with work, *GWH* general work happiness

Although the correlation studies found that both constructs of work happiness were significantly negatively related to both the intention to leave the organization and the career, the regression analyses, however, found that only the general work happiness was significant. The *B* values for the satisfaction with work were very low for both the intention to leave the organization and the career. Because previous studies strongly provide significant negative relationships between job satisfaction and the intention to leave [27], the result found in this study was unexpected.

The real reason for insignificant results between satisfaction with work and the intention to leave perhaps is due to the unexamined element in the model. The work nature of ICT professionals somehow relates to the ability for them to be adaptable in coping with the fast technological advancement. Although being satisfied with work explained the happiness at work, it does not necessarily become the reason for them to leave the organization. Being satisfied with work can be just the factor of human nature, especially in showing that they are capable of doing the work tasks. Satisfaction at work in overall can be inferred as the state of mind where the individual is feeling grateful with what they are having. Especially in Malaysia, the culture is very different from the West counterparts where such conflicts faced by individuals are normally moderated by the elements of religion and good manners [28, 29]. The foundation of this culture element brought this study to speculate that these ICT professionals will have the favorable mindset that their works are always satisfying no matter what happened. This means that ICT professionals are indifferent with regard to either to stay or to leave the organization or career. Thus, it is consistent with this study where it was found that there were no significant relationships between the satisfaction with work and both intentions to leave.

Satisfaction at work alone did not cause the ICT professionals to leave but together with the existence of happiness felt at work, the relationship becomes negative and significant. This is because positive emotions encourage individuals to become resilient, fight the setback, and rise again for self-development [30]. The creation of upward spiral in the organization derived from the positive emotions such as work happiness brings individuals to focus on their strengths rather than on their problems [31], which in parallel reduces the level of potential intention to leave.

In conclusion, it is important for organizations to encourage positive emotions among the employees because it might reduce the poor work performances and absenteeism that derived from the high level of intention to leave. More benefits can

be acquired from positive emotions, especially in developing individuals to become more productive, creative, flexible, and positive. Because this study cannot be generalized to other industries than ICT in Malaysia, further studies should replicate this study model into different industries or in different work settings such as in a different culture. Other elements related to positive work attributes such as adaptability in career and career commitment can also be studied in order to find better models of the intention to leave. Finally, the study of work happiness should also be considered to be studied qualitatively in order to find the real subjective reasons for individuals to feel happy at work.

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Chapter 9

Conceptualizing the Influence of the Islamic Value System on Quality Management Effectiveness

Amal Hayati Ishak and Muhamad Rahimi Osman

Abstract In the literature, a plethora of research conducted has approved the significant relation between organizational culture and effectiveness. Various variables of culture including values and norms based on industry or nationality have been studied. However, these studies provide less attention to religious influence in organizational culture and its subsets. In certain localities, such as Malaysia, religion is crucial in shaping organizational culture. This can be verified from various policies and slogans established depicting Malaysian government initiatives to consistently nurture and inculcate Islamic values in administration. This chapter proposes a conceptual framework of the Islamic value system's influence on organizational effectiveness, with special reference to quality management effectiveness by summarizing the linkage between the two. Prior to that, this chapter elaborates on the concept of organizational culture and values. This chapter also summarizes the linkage between organizational culture and effectiveness based on previous studies. This is followed by an explanation of the Islamic value system and its uniqueness. Finally, this chapter concludes with some future research agenda.

Keywords Organizational culture · Organizational effectiveness · Islamic value system

9.1 Introduction

Management studies have produced various methods and tools of management for the aim of comprehensive betterment. Western management theories have been widely disseminated and taught in higher educational institutions. However, this does not deny the existence of management in Islam or other ideologies. Ibnomer [1] suggests that Islamic principles can offer complete guidance to structure and direct the organizational management system. Muslim scholars since the 1980s have built the foundation of the Islamic management system deriving from the Quran,

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traditions of the Prophet including leaders of the glorious Islamic era. Reviewing articles on Islamic management, one may find that areas of management have been enlightened with the spirit of Islam [2]. The heart of Islamic management are the inherent values and the firm belief system which guarantee the conformance with the values [3].

Studies have provided evidence of direct linkages between organizational culture and effectiveness [4–6]. However, these studies mainly analyze culture based on corporate practice, industry, and nationality, which thus may differ from one organization to another. Particularly, less attention has been given to the influence of religion-based values to organizational effectiveness. In certain places, religion plays a crucial role and influences the organizational culture.

In Malaysia, since early years of independence, management and administrative reforms depict the tendency to instill Islamic values with the aim of improving service delivery. For that purpose, various policies, slogans, and rules were created and executed, including the introduction of quality and productivity concepts. These policies and slogans were established with the intention to wipe away the influence of Western colonization in the bureaucracy system and organizational ethics. Dasar Penerapan Nilai-nilai Islam (1982), Etika Kerja Islam (1987), Gerakan Budaya Kerja Cemerlang (1989), Kod Etika Penjawat Awam (1993), Islam Hadhari (2005), Budaya Kerja PERDANA (2009), and Sistem Pengurusan Audit Nilai (2009) are among the policies which have been formulated to instill Islamic values in public administration [3]. However, the effort has been widened to private institutions with the establishment of MS 1900, known as *Quality Management System: Requirements from Islamic Perspectives*. Interestingly, Malaysia is the first country to establish such a standard. This may be an opportunity for Malaysia to be a reference point for the Islamic Quality Management System (IQMS) if the system.

The MS 1900 has also been referred to as IQMS by Siti Arni and Ilhaamie [7] and has three main aims: (1) to inculcate *shariah* requirements into the Quality Management System (QMS) with emphasis on value-based management, (2) to enhance effectiveness and efficiency through practice of good conduct on all organizational levels, and (3) to enhance the level of *shariah* compliance and confidence among Muslims and stakeholders (MS 1900 Standard, 2005). The MS 1900 is operationalized using ISO 9001 (QMS) as its foundation. It assists organizations to structure their production or service systems to fulfill customers' requirements, regulatory requirements, as well as *shariah* requirements. *Shariah* requirements are additional requirements which differentiate MS 1900 and ISO 9001 and aim to complement ISO 9001 [8].

Referring to its framework, the *shariah* requirements consist of tangible and intangible elements. The first refer to processes, activities, resources, and materials involved whereas the latter refer to organizational shared values. In a nutshell, the standard aims to integrate Islamic values in QMS to achieve effectiveness and efficiency [9].

The importance of values, specifically Islamic values, has been highlighted by Khaliq [10] as capable of creating a conducive work environment for quality management effectiveness. This view has been supported by Siti Arni and Ilhaamie [7].

However, studies explaining the role of Islamic values in assisting organizational effectiveness are mainly conceptual, suggesting various relevant Islamic values to be applied in quality management dimensions. Among the suggested values are diligence, respect, trustworthiness, etc., which are well-rooted in Islamic sources. Nevertheless, less empirical studies have been conducted to approve the linkage between the Islamic value system and organizational effectiveness. This chapter will conceptualize the linkage for future empirical studies.

9.2 Organizational Culture and Values

In theory, according to Chell [11], there is an interdependency between an organization and its environment. The interdependency is based on the approach of viewing an organization as an open system which recognizes the interaction between an organization and its environment. Individuals possess values and live them whereas organizations provide a conducive environment for the practice of values by organizational members. Thus, individuals and organizations are inseparable. Chell [11] also asserts that an organization's survival depends on its adaptability to the environment which consists of technological, social, political, and economic factors. Moreover, on a wider scope, environment also comprises sources of materials, energy, and information [12], as well as culture and values [13].

The concept of organizational culture has been initiated by Hofstede and Schein in the 1980s [5]. Although there may be different definitions of organizational culture, there seems to be a consensus pattern of defining it as shared practices, values, beliefs, expressive symbols, attitudes, behaviors, and norms which are shared by organizational members [14].

Hofstede et al. [15] describe culture as holistic, historically determined, related to anthropological concepts, socially constructed, soft, and difficult to change. They categorized culture as practice and values. Practice is normally visible and includes symbols (such as words, gestures, pictures, and objects that provide information regarding the organizational culture), leaders (as the exemplar of a standard behavior), and rituals (such as annual business review, annual general meetings, or appointment of consultants). On the other hand, values are less visible. They normally refer to opinions and feelings of good and evil, normal and abnormal, rational and irrational, safe and unsafe. These values are not shown explicitly except in indicating behaviors. Hofstede et al. (1990) also believe that values are the core influence on the organization system. The categorization of practice and values is supported by Schein [16]. However, Schein [16] categorizes culture into three levels: artifacts and creations, values, and basic assumptions. Schein's categorization is somehow similar to Hofstede's. Schein's artifacts and creations are similar to Hofstede's practices whereas Schein's values and basic assumptions are both included in Hofstede's values [13].

Other scholars have widened the scope of organizational culture, yet, still linger in previous explanations based on Hofstede's and Schein's concepts. Martin [17]

lists six organizational cultures: (1) routine behaviors such as organizational rituals, ceremonies, interaction, or language spoken throughout the organization; (2) certain norms shared by organizational members such as “a fair day’s work for a fair day’s pay”; (3) dominant values such as “product quality”; (4) philosophy guiding organizational policies; (5) rules that create a sense of belonging; (6) feeling or climate represented by the physical layout. Schein [18] further adds embedded skills, habits, shared meanings, rituals, and celebrations. Since there is a long list of organizational cultures, this study focuses on values which refer to the publicly announced and accepted values that are collectively pursued by organizational members [19].

Organizational values are a subset of organizational culture. Roe and Ester [20] refer organizational values as “latent constructs.” It is considered as a managerial instrument connecting individuals and organizations since individuals possess and practice values, not the organizations [21]. Nevertheless, an environment allowing the practice of values is created by organizations. Thus, Mowles [21] refers to organizational values as a mutual dependence relationship between individuals and organizations.

Schein [18] opines that there is no organization without values. Jaakson [22] further explains the significance of organizational values as they (1) enhance good relations of inside and outside organizations and (2) regulate the behavior and character of individuals in their workplace. Jaakson [22] also suggests four effective organizational features: (1) instrumental features, which means the values are able to provide guidance for the working process; (2) features which regulate employees’ characters; (3) features which relate to well-being; and (4) ethical features.

In addition, understanding organizational values is also crucial since it sets the foundation towards understanding attitudes and motivations of the employees. Consequently, employees’ behavior may also be predicted and guided by top management [23].

According to Robbins [24], culture leads to consistent behavior. In an organization, it is an influential instrument of control and may act as a substitute of formalization [24]. Formalization is important as it creates stability, predictability, uniformity, and consistency even in the absence of written rules and regulation. It is also considered to be more powerful than written documents as culture dominates mind, body, and soul [24]. Deming [25] and Peters and Waterman [26] assert the influence of organizational culture on organizational behavior and performance, which is an indicator of effectiveness. In quality management, cultural change is important for a successful implementation [27].

9.3 Linking Organizational Values and Quality Management Effectiveness

Organizational effectiveness is used interchangeably with organizational performance simply referring to how well an organization is doing. Hence, it is also referred to as organizational performance. Various indicators or measurements

have been used in organizational effectiveness studies such as productivity, profit, growth, turnover, product quality and innovation, employee satisfaction, or employee work attitude. These indicators may generally be divided into financial and nonfinancial according to the context under study. Ezani [13] has suggested a larger view of organizational effectiveness including the organization's contribution to society and nation, which has been increasingly considered via corporate social responsibility nowadays. Given the wide array of organizational effectiveness indicators, literature has agreed on the dearth of consensus in indicators of organizational effectiveness [5, 28].

A series of research has approved the relationship between organizational culture and values, and quality management effectiveness. Baird et al. [4] report significant positive associations between organizational culture and quality management practices. They discovered that culture, teamwork and respect, and outcome orientation and innovation exhibited the most significant positive association with quality management practices. Research suggests that the management needs to enhance the organizational culture to support and ensure the success of quality management. This is because successful quality management practices need to be implemented in a conducive environment.

Prajogo and McDermott [5] claim developmental culture influences organizational performance in three measures: product quality, product innovation, and process innovation. They further suggest to the management to understand organizational culture in order to strategically plan the organization's direction.

Mead [29] claims cooperative culture improves and assists quality management efforts. This is supported by Powell [30], stating that organizational culture determines quality management success. Powell's findings have been supported by later studies of Miron et al. [31] and Naor et al. [32].

These studies have mainly related organizational culture to organizational effectiveness. Fewer studies have been conducted to conceptualize and empirically analyze the influence of religion on organizational culture.

9.4 Islamic Value System

In Islam, ethics and values belong to the discipline of *akhlaq* [3, 33]. Indeed, values are popularized with the term *akhlaq* in Islam. According to Imam Ghazali in his great treatise *Ihya' Ulumuddin*, *akhlaq* is categorized as fardhu 'ain and hence compulsory to learn [3].

Akhlaq literally comes from the Arabic word "*khuluq*" which means natural habit, custom, behavior, or lifestyle of an individual or a community. Technically, *akhlaq* means natural habit or behavior including habit acquired through training or education. The discipline of *akhlaq* is defined as the knowledge of determining good and evil, what should be done, what should be the aim, and how it should be done in accordance to revelation, the nature of man, and his intellect [33].

According to Miskawayh (died 1030), a pioneer of Islamic morality, *akhlaq* is a state of soul or a disposition formed in man's soul which directs a person how to behave. Inspired by Miskawayh, Al-Ghazali (died 1111), defined *akhlaq* as a strong disposition in man's soul producing behavior without difficulties of thinking and deliberation. In other words, *akhlaq* is the character which is innate (naturally) in the heart and simply arises from its actions without consideration. Two major points of Al-Ghazali's definition are the constant stability of desire to behave and spontaneous behavior. Later Islamic moralists, Fakhru al-Din al-Razi (died 925), Nasir al-Din al-Tusi (died 1274), and al-Dawwani (died 1502) agreed with this definition. Therefore, *akhlaq* can be described as the underlying reason of behavior which comes naturally and spontaneously. If a person has good values, then he is well-behaved, in contrast, if a person has negative values, then he is ill-behaved [33].

Akhlaq can be divided into *akhlaqmahmudah* and *akhlaqmazmumah*, which is similar to positive values and negative values. There are two criteria in distinguishing *akhlaqmahmudah* and *akhlaqmazmumah* which are the *shariah* and intellectual capacity of man. Each commandment of the *shariah* (from primary sources of Islam) is good and each prohibition is evil. The acceptance of certain acts by man's intellect can be considered as good even if there is no underlying evidence from the *shariah* [33].

In Islam, *akhlaq* is very crucial and must be applied in every deed of a man. It is the foundation of every discipline, not merely a part of it. This is because any work done diligently will be blessed and will produce good results. As an analogy, worship (*ibadah*) performed with sincerity (*ikhlas*) and focus (*khusyu'*) will be accepted and rewarded, but worship performed with pride (*riya'*) is worthless [33].

In a nutshell, ethics and values are words in the discipline of human conduct. However, they are slightly different from each other. Ethics is a philosophy or theory regarding human conduct, often regulated and formally executed as code of conduct. The human conduct comprises right and wrong acts which are the values commonly written as positive and negative values [33, 34]. Another point of difference is that ethics originates from humans' mind, whereas *akhlaq* originates from religion [34]. That is why in Islam, ethics and values are discussed under *akhlaq* which is an obligatory subject to be learned by every Muslim.

A value system is a set of preferred ethics based on individual or society judgment and comprises positive and negative values [35–37]. Nik Azis [36] further suggests a faith-based value system as the modern Western civilizations have ignored the influence of religion in their ethical issues [3, 35].

Alhabshi [35], in explaining his idea of Islamic value-based management, defines the Islamic value system as the preferred values and manners originating from the *shariah*. The foundation is the belief system (*tauhid*) and the source is the revelation. Therefore, values are closely related to belief, feeling, emotion, tradition, and pride. He also points out that values may be naturally innate, emulated, nurtured, or forced. He further elaborates that positive values will result in positive results such as improved relationships, respect, performance, and reduced stress. Since values instruct a person's feelings and actions, he considers values as the "moral navigational devices."

Similarly, Jabir [37] explains that the Islamic value system is a collection of *akhlaq* which moulds excellent Muslim character capable of contributing to the society, of cooperating, and of striving for the well-being of individuals, family, and religion. He states that the basic foundation of values in Islam is active quest of knowledge, as prevalent in the first revelation which is Surah al-Alaq, verses 1–5. The core information valued in the first revelation is the importance of knowledge and both reading and writing as method of acquiring knowledge.

9.5 The Uniqueness of the Islamic Value System

In the Islamic value system, *iman* (faith) and *taqwa* (piety) are the foundations which direct Muslims towards the right path in a rightful manner [3, 35]. Alhabshi [35] further states that both faith and piety have influence on the behavior and character of an individual. Character is the state of soul which produces consistent and spontaneous physical actions. If the soul is pure, it will produce pure character consistently. In contrast, if the soul is impure, the character will be evil and bad. For instance, the value of brotherhood and unity will discourage a Muslim from inflicting harm on others, and the value of responsibility will encourage a person to perform his duties well. Furthermore, the foundation of *tauhid* (oneness of God) is capable of providing a strong abstaining and enforcing authority to observe ethical attitudes [10, 35]. *Tauhid* includes the belief in an eternal next life which is one of the pillars of faith.

In Islam, ethics and values are *akhlaq* which uses the revelation as a standard to determine good and evil. On the other hand, the modern value system is based on previous inherited beliefs of the society, and the evolution of man and the surroundings and does not guarantee that people are protected from bad deeds [38].

In Islam, *shariah* distinguishes positive values from negative values. *Shariah* refers to the laws and regulations revealed by Allah to his Messenger, Prophet Muhammad SAW. Good values are made obligatory (*wajib*), are recommended (*sunat*), and will be rewarded, whereas bad values are prohibited (*haram*) and subject to punishment. Therefore, the *shariah* provides a standard of guidance for Muslims' behavior. Reward and punishment are the enforcers for Muslims to apply the values. However, in Western theory of value, human judgment establishes the standard of positive or negative values is [3, 33, 34]. Determination based on human judgment is not universal and difficult since every person may have a different interpretation [34]. Nevertheless, Islam offers a systematic set of laws consisting of the primary sources, the Quran and the Hadith, and secondary sources including the *ijtihad* and *ijma'* of the ulama' (the consensus of Islamic scholars) and *'uruf* (customary practice which does not contradict the *shariah*) (for a reference source see [3]).

The Islamic value system is certain and fixed regardless of time, place, and culture. This means whatever is considered as bad today will never be considered as good in the future. In contrast, the modern value system determines positive or negative values based on the society's acceptance. Thus, the values are not universal

Table 9.1 Explanation of Islamic legal rulings. [3]

Hukum	Explanation	Effect on Islamic Value System
<i>Wajib</i>	Obligatory to do Sin if omitted	A person will perform the values with faith and piety even if it is not regulated in the organization or not within working hours or not within the organization
<i>Sunat</i>	Encouraged to do Not sin if omitted	A person will perform for Allah's blessings and rewards voluntarily
<i>Harus</i>	Permissible either to do or omit	A person will be aware that the value is permissible in Islam and that it is optional
<i>Makruh</i>	Encouraged to omit	A person will be discouraged to perform even though it is not a sin
<i>Haram</i>	Obligatory to omit Sin if done	A person will avoid and leave the deeds based on faith and piety even though it is not regulated

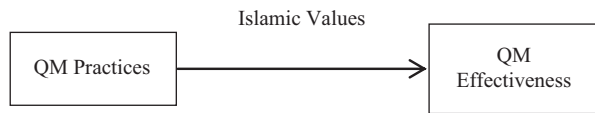
and may differ between societies or change over time and space [3, 35]. Alhabshi [35] added, as an example, modern society has been paving way towards liberalism and homosexuality in the name of freedom and individual rights. This reflects the changing of values due to changes in the society's belief over time. In secular societies, values are not affected by religion; thus, changes in values are allowed. In contrast, values underpinned with religion are firm and sustainable. In the Islamic value system, these elements remain prohibited as stated by Quranic injunctions (the primary source in Islam) and will never be modified. For example, a simple act of lying is prohibited and will never be considered acceptable no matter what the rationale is. Maqbouleh [39] further adds that in order to preserve the permanent values, self-control is important to ensure a person would not transgress. Self-control is actually the fruit of *iman* and piety, which are the foundation of *akhlaq*.

The Islamic value system is effectively enforced through the system of Islamic legal rulings, which refer to *wajib*, *sunat*, *harus*, *makruh*, and *haram*. Understanding this will ensure conformance with the values leading to a peaceful and harmonious society. For example, the custom in Malaysian Malay society to bend down the body while walking in front of the elders as a sign of respect is considered permissible, somehow encouraged, as it can create a harmonious culture and environment [3]. Table 9.1 explains the effects of Islamic legal rulings on the value system.

There are two important consequences of the above-mentioned system of legal rulings. First, the system positions the feelings of hope (*raja'*) and fear (*khauf*) towards the Creator. Hope that Allah will strengthen the faith and spirit to fulfill all His commands and prohibitions, and fear to transgress the commands and prohibitions of Allah. Both lead to obedience. Second, the understanding of Islamic legal rulings will assist in realizing the values as a regulated code of ethics. This has been highlighted by al-Ghazzali, quoting that values inculcated in human soul can produce good deeds spontaneously. Another scholar in *akhlaq*, Ibn Manzur, agreed by saying *akhlaq* is a reflection of values arising from man's inner self based on obedience towards the *shariah* [3].

Furthermore, Islamic values permeate all spheres of human life [10, 40]. Therefore it symbolizes a holistic concept of positive values and its adaptability within

Fig. 9.1 Conceptual framework of the Islamic Value System influence on quality management effectiveness



the system of legal rulings in all facets of life. For instance, in quality management, Islamic values are believed to be capable of creating a conducive work environment [10].

9.6 The Proposed Framework

The framework is based on an open system approach which connects individuals and organizations. Individuals as actors, possess values and work in the environment prepared by organization. Therefore, the creation of a conducive environment is important. This has been highlighted by Khaliq [10], stressing on the importance of the application of Islamic values to form a conducive environment for a successful implementation of quality management. Sidani and Thornberry [41] share the same view by stating that Islamic values are conducive to change and development, which is an important element in the implementation of quality management. The strength of the Islamic value system lies in the firm enforcement and other unique characteristics explained in the previous section. Therefore, it is suggested that quality management practices should be implemented in the set of the Islamic value system. This will lead to a conducive environment for organizational members which are the actors of an effective quality management Fig. 9.1.

9.7 Conclusion and Future Research Agenda

Studies have reported about the significant relationship between organizational culture and effectiveness. There are various subsets of culture, but this study focuses on values, specifically values based on the religion of Islam. In Malaysian context, Islamic values are influential in shaping organizational culture. Malaysian leaders are consistently integrating Islamic values in its administration through various policies and slogans. Due to the universality of Islamic values, it has been well accepted by Malaysians. Moreover, for the Muslims, the values have firm enforcement characteristics which assist in value conformance. This chapter conceptualizes the influence of the Islamic value system on organizational effectiveness. Previous studies of the Islamic value system in the area of management are mainly conceptual, providing less empirical data. However, the concept demands further investigation and empirical tests. Empirical data would strengthen the conceptualization and consequently provide assertive alternatives for managers in pursuing effective quality management practice.

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Chapter 10

Project Management Technical Reference Framework for the Malaysian Construction Industry

M. F. Mustaffa Kamal, P. F. Hassan, M. Che Mat, Z. Ismail
and H. Mohd Affandi

Abstract The purpose of this chapter is to present the validation result for the preliminary works on the development of a conceptual project management reference framework that had been previously carried out and published. This study is part of a main study which aims to develop a reference framework for designing public client project manager training provisions. Earlier studies had been carried out in order to establish the activities that need to be incorporated into the framework. The findings of this study were formed into a questionnaire survey and then evaluated, drawing data from practicing project managers. The Rasch model has been used to validate the findings. The findings suggest that the knowledge and skills required in project management can be precisely identified by extracting the core competencies needed in managing each stage of the project life cycle. The proposed framework will significantly ease the process of mapping the knowledge and skills needed. The generalization of the findings may be limited to the conventional type of projects. As a whole it may not be suitable for other types of projects but may be used with little modifications. This chapter contributes to expand the knowledge base of the project management process and serve as a reference for developing training programs, education provisions, etc.

Keywords Project management · Project life cycle · Reference framework

10.1 Introduction

This study is part of the main research which is generally focused on issues of Malaysian public client project managers' technical competency. The study was instigated by the emerging issues of public client project managers lacking in project management technical competency and the partial role they play in recent endless government project failure.

Preliminary studies had been carried out in order to identify what the underlying factors are that contribute to this issue and reports had been produced and

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presented at the Colloquium on Humanities, Science and Engineering Research 2012 (CHUSER 2012). In the findings, several issues arose regarding the needs for training which comprise the lack of competency standard, training framework and, most importantly, the qualification of the intended trainees which is in question and posits the need of developing a framework for identifying the training needs.

The next stage of the research was to identify the major activities in project management through interviews and literature analysis. Through this study, a conceptual framework of the activities has been designed with the input from professional practitioners and these findings have been validated and presented in this chapter.

This chapter presents the findings from data drawn from the government, semi-government and private sector to develop the framework. This framework will serve as a general project management reference framework that can be used by any sector. Further validation using focus groups has been scheduled to identify which reference framework is suitable for the use of public client project managers.

10.2 The Need for a Reference Framework

A preliminary study on the matter was carried out in order to justify what the underlying factors that affect the performance of public client project managers are. One of the major findings in the preliminary study concerned the training of these officers [1]. A shortage of terms of reference (TOR) for designing training provisions for these project managers was identified [2]. This has drawn criticism due to the fact that the training provided falls short of delivering the key knowledge and skills they require in their job [2].

A recent workshop held by the Implementation Coordinating Unit (ICU), Department of the Prime Minister of Malaysia on 12–14 October 2012 discovered that there is a lack of comprehensive project management TOR for project implementation especially for public organizations [2–4]. Further studies indicate that the shortage of these TOR has resulted in insufficient standard operating procedures (SOP) in managing projects for the public sector [2, 3]. With the absence of proper SOP, many things can go wrong without knowing what went wrong. This matter has been debated on the national level and it is reckoned to be important that such a framework has to be developed.

During this study, questions such as ‘Why do we need such framework?’, ‘Should the Project Management Body of Knowledge (PMBoK) guideline, provided by the Project Management Institute (PMI) already be sufficient?’ arose. Yes and no. PMBoK is a guideline regarding the knowledge about project management. It gives a guideline of what project management consists of rather than to give guidance in how to manage a project. Furthermore, PMBoK is a general guideline which is produced to cater project management in all sorts of fields and lacks specialization on construction project management.

Furthermore, the current government policy of appointing client project managers from the Diplomatic Administrator Officer scheme has raised concerns about

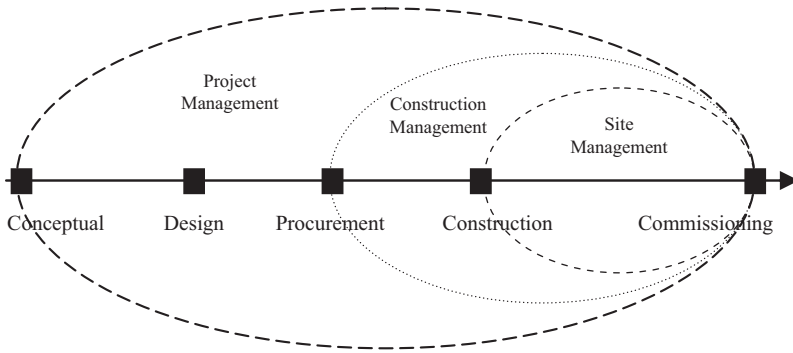


Fig. 10.1 Management scope in project management life cycle. (Adapted from: Kamal et al. [2])

the abilities of these officers. Many of them lack the educational background in technical areas especially in the construction field [1]. With this lack of depth in knowledge about project management, it is in question whether they can fully grasp the essence of the PMBoK and apply it in real practice of managing projects.

10.3 Project Management Life Cycle

The different levels of management found in the project management life cycle as shown in Fig. 10.1 demand different sets of technical and non-technical skills in managing each stage of the project life cycle. This study focuses on the project management which covers the widest spectrum of the project management life cycle.

10.3.1 Conceptual Stage

This stage marks the beginning of a project. Strategic planning of the project in this stage is considered to be important for the project to achieve its goal. Activities such as the inception, planning, feasibility studies, consultant appointment, client's brief, site visit and investigation, conceptual design, preliminary estimate and budget allocation are the major activities that need to be considered in managing this stage [2].

10.3.2 Design Stage

Once all the project requirements have been confirmed and are running, the design stage will take place. At this stage, scheme design, detail design and specification will be produced considering the authorities' requirements. Factor estimate and control estimate also will be planned simultaneously as the design takes place [2].

10.3.3 Procurement Stage

This stage begins when the design stage is completed and the consultant prepares for tendering to select the most qualified contractors who will develop the physical component of the project. At this stage the main activities that will take place are the tender documentation, tendering exercise, tender receipt and evaluation and finally the tender award [2].

10.3.4 Construction Stage

Once the main contractor has been selected and the project has begun, project owners need to monitor the project and manage the contract. These activities are found to be the major activities in this stage of projects [2].

10.3.5 Commissioning Stage

This stage is where the handing over of the project will take place. Once the physical works have been completed, testing and commissioning will be done. This is to ensure that prior to handing over the project to the owner, the mentioned project is fit and working fine. Once handed over, the defect liability period will start. During this period, all the defects and problems found need to be rectified by the contractors. With the end of the defect liability period, the project can be closed. This final phase is called 'close out' [2].

10.4 Methodology

The main study uses the mixed method approach for obtaining the result. Sequential exploratory design which emphasizes the sequence of the qualitative approach followed by the quantitative approach has been adapted in theorizing and validating the findings [5]. The qualitative approach uses metadata analysis and interviews as tool for data collection while a questionnaire survey has been used as tool for the quantitative component. This chapter mainly reports the quantitative part of the research.

10.4.1 Sample

For the questionnaire survey, project managers and project team members from government, semi-government and private organizations located in the central

region of Malaysia were selected to answer the survey. From the survey, 116 responses were successfully gathered.

10.4.2 Data Analysis

Quantitative data has been analyzed using the Rasch model. Item fit analysis has been used to identify whether the activities tested for the framework are fit to be included in the framework. This also serves as the validation stage of the framework. The validation of the reference framework is presented in the next section.

10.5 Findings and Discussion

The metadata analysis and interviews from the previous studies have been analyzed to serve as the foundations in identifying the major activities found in the project life cycle. These activities are shown in Table 10.1. These findings have been formed into a survey and distributed around the central region of Malaysia. One hundred and sixteen responses have been successfully gathered and the data have been analyzed using the Rasch model software. This analysis determines which item is fit for the framework. For this analysis, the indicators that need to be observed are the outfit mean square, outfit z-standard and point measure correlation. The three criteria must be fulfilled when considering outliers and misfits [6].

The result indicates that all the activities in Table 10.1 are fit to be included in the reference framework. However, there are certain activities with a value above the margin of the indicator set. Still, the correlation value is within the margins and these activities are accepted to be included in the framework. With this, the proposed framework is as shown in Fig. 10.2.

10.6 Conclusion

The establishment of this framework will be the basis of assisting the development of training provisions for public client project managers. The framework will provide the training provider with an overview of the project process that needs to be focused on and highlighted. Through this identification, identifying the activities and the required knowledge and skills that need to be acquired during training can be more easily identified in the training development and will hence ultimately produce a holistic training.

Table 10.1 Item fit result for activities in the framework

Activities	Outfit mean square	Outfit z-standard	Point measure correlation
	0.5<0<1.5	-2<0<+2	0.4<0<0.85
Initiation/inception	1.19	1.3	0.63
Planning	0.69	-1.7	0.63
Feasibility studies (macro level)	0.96	-0.2	0.67
Consultant appointment	1.50	3.0	0.60
Clients' brief	0.80	1.2	0.65
Site visit and investigation	1.02	0.2	0.58
Conceptual design	0.90	0.6	0.58
Preliminary estimate	0.82	1.2	0.65
Budget allocation	1.06	0.4	0.54
Scheme design	0.83	1.1	0.67
Detail design and specification	1.96	4.3	0.53
Factor estimate	0.89	0.8	0.67
Control estimate	1.09	0.6	0.62
Authorities' requirements	1.30	1.7	0.49
Tender documentation	1.09	0.5	0.54
Tendering exercise	0.87	-0.8	0.63
Tender receipt and evaluation	0.72	-1.6	0.62
Tender award	1.01	0.1	0.58
Contract administration	0.98	-0.1	0.57
Project monitoring	1.04	0.2	0.48
Testing and commissioning	1.17	0.9	0.55
Handing-over exercise	0.94	-0.4	0.66
Defect liability period management	0.89	-0.7	0.65
Project close out	0.86	-0.9	0.67

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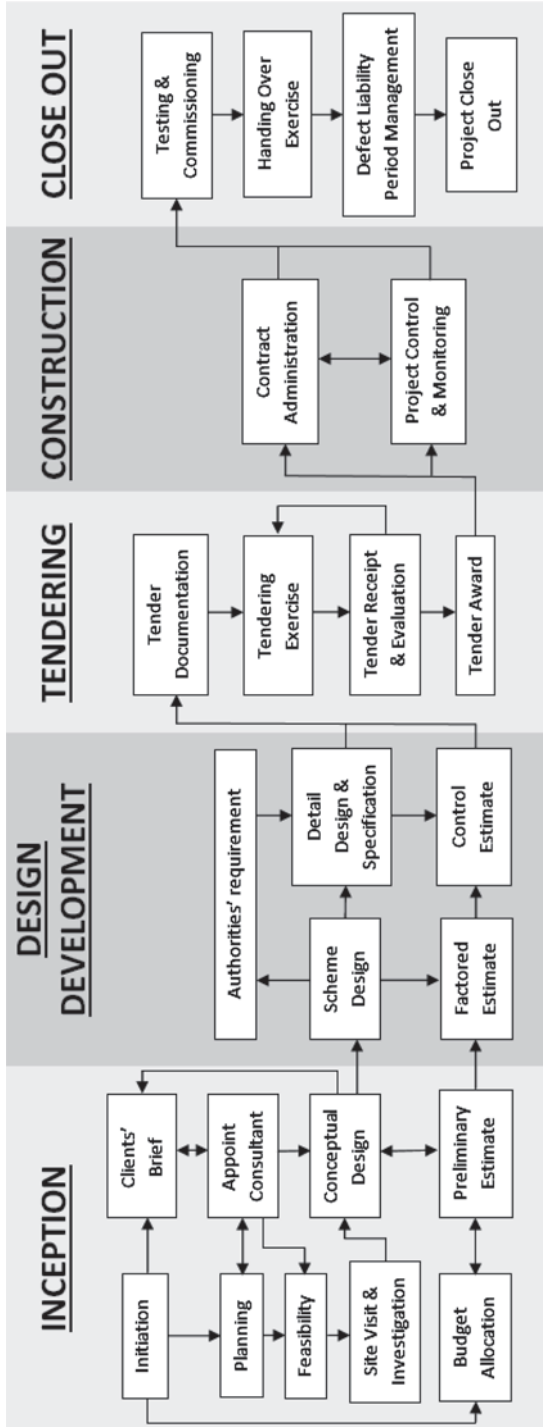


Fig. 10.2 Project management major activities reference framework

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Chapter 11

Criteria Overview for Functional Performance Evaluation Pertaining to Refurbished Historical Building

Hasnizan Aksah, Ahmad Ezanee Hashim, Elma Dewiyana Ismail and Zarina Isnin

Abstract This paper covers the theoretical aspect of building functional evaluation through Post Occupancy Evaluation (POE) concept. POE concept has been applied to identify problems in building, and to develop guidance and criteria for future design. Through functional evaluation, it addresses how a building could support the organisation's goals and user needs. Malaysian historical buildings built over the last century are valuable assets to the country for their architectural landmark and tourism potential. Nevertheless, most of these buildings are dilapidated and left unattended. Several initiatives have been carried out to sustain the buildings such as upgrading and refurbishment works. The issue of inherent complexity and uncertainties of refurbishment work were cited to be one of the main reasons that affect functional performance evaluation. Other issues are constrained by heritage regulations and restrictions in judgment and decision. Other than that, little research has been carried out on POE toward historical building in Malaysia including functional performance evaluation. The main aim of this study is to identify the criteria in POE. Second, is to highlight relevant criteria to be used in measuring functional performance for refurbished historical buildings. The research adopts comprehensive literature reviews from numerous published sources such as journals, magazines, government reports, unpublished thesis, and website documents focusing on refurbished historical buildings in Malaysia. The paper anticipated several criteria that require building managers to ensure good functional performance of future historical building refurbishment projects in Malaysia. The criteria are space relationship, aesthetic value, comfort, amenity, services safety, operational management, and life cycle cost. This research has the potential to create awareness among the designer and building management team on the relevant criteria for future historical building refurbishment which may enhance occupants' satisfaction.

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Keywords Post occupancy evaluation (POE) · Building performance · Functional performance · Refurbished historical building

11.1 Introduction

POE generally refers to the assessment of an occupied building facility. Assessing building performance using POE could assist the construction professional practice to create better buildings in the future. Meir et al. [1] stressed that POE serves as a way of providing subjective and objective feedbacks for planning and maintenance throughout the building's life. Many lessons could be learned as it provides insights into the consequences of past design decisions and the resulting of building performance. It may also provide a good opportunity for a better design and planning of future buildings.

11.1.1 Problem Statement

There are several challenges in dealing with refurbishment works in historical buildings which lead to poor building functional performance. Building functional performance is to measure the building occupants need and satisfaction level. Some of the pertinent issues identified from previous studies were constrained by heritage regulations and restrictions that affected judgment and decision in conservation works of any historical building [2]. According to the conservation principle, building conservation activities such as refurbishment works should maintain as much as possible the original building structure and fabric. However, the inherent complexities of the existing buildings and uncertain nature of work were cited to be the main reasons for poor building performance [3]. It was also difficult to match new construction materials with the original materials as the required materials may no longer be in production. Most of these buildings were also deteriorated due to the aging factor. In addition, most of the buildings have minimal passive fire fighting requirements [4]. There are significant POE studies carried out on hospitals, low cost housing, schools, public and government buildings. However, there is insufficient or little research on POE toward historical buildings especially on building functional performance evaluation.

11.1.2 Research Aims

The main aim of this study is to examine the criteria for functional performance evaluation related to the POE concept for refurbished historical building. The first objective is to identify the concept of POE. Second, the study examines relevant criteria that could be used in measuring functional performance for refurbished historical buildings.

11.1.3 Scope and Limitation of the Research

The study on POE is focused on the areas of functional assessment. The research adopts comprehensive literature reviews from numerous published sources such as journals, government reports, unpublished thesis, and website document focusing on refurbished historical buildings in Malaysia. Comprehensive literature reviews focus on the POE theory, criteria, and functional performance evaluation in refurbished historical buildings. There are several issues highlighted on the functional evaluation performance. The reviews will be summarized and highlighted for identifying the relevant criteria to be used in measuring functional performance for refurbished historical buildings.

11.1.4 Definition of POE

Based on literature reviews, the term POE can be defined as follows (Table 11.1):

From the various definitions of POE by different authors, it can be summarized that POE is an important tool that creates impact over the short, medium, and long terms in building performance to fulfill building users' needs. It compares systematically and rigorously the actual performance of buildings with explicitly stated performance criteria. It systematically evaluates the extent to which a building or facility meets the intended organisational goals and user needs during occupation. The feedbacks received from the building occupants are important for better management and planning of future building design or facilities.

11.2 Criteria of POE

POE is a way of providing feedback throughout a building's life from the initial concept to the occupation stages. The feedbacks inform about the physical state of the building and the performance that could assist the building management. Building performance criteria are an expression and translation of client goals and objectives, functions and activities, and environmental conditions that are required [7].

Table 11.2 below shows several criteria suggested by other studies that are used to evaluate a building.

POE can be carried out at any time during the lifecycle of a building and it is not necessary to be conducted within a stipulated time frame. The criteria to evaluate a building's performance are different. They depend on the types of buildings and the purpose of conducting the POE.

Based on Table 11.2, it shows that functional performance is a relevant criteria to be used as it measures the occupants' ability to efficiently and effectively operate a building.

Table 11.1 Definitions of POE

Author(s) and Year	Description	Findings
Dorasol et al. (2012) [5]	POE has brought a new dimension in evaluating building performance by auditing user feedbacks	Most of the authors agreed that POE is a tool used for building assessment to evaluate the requirements and performance of the building occupants' needs
Chohan et al. (2010) [6]	Through post occupational survey, the designer usually realizes the shortfall they have made during the design process	The feedback from building occupants is important to provide lessons for future building design or facilities
Khalil et al. (2009) [7]	POE is introduced to empower the occupants' opinion as the benchmark of building performance evaluation	Identification and proposal of solutions to problems in building facilities
Khalil and Nawawi (2008) [8]	POE of buildings is vitally needed to ensure that building performance and facilities are sustained	Accountability for building performance by design professionals and owner
Turpin and Viccars (2006) [9]	To consider the extent to which a building meets the needs of its end-users while also recognizing ways in which design, performance, and fitness for purpose can be enhanced	Long term improvements in building performance
Hewitt et. al. (2005) [10]	POE is defined as an examination of the effectiveness of occupied design environments for human users	
Preiser and Vischer (2005) [11]	To reflect on the extent to which a building meets the needs of its users addressing such issues as occupant performance, worker satisfaction, and productivity	
Zimmerman and Martin (2001) [12]	Logical conclusion to the design process, with the feedback loop providing a valuable platform for lessons to be learned from building occupants	
Preiser et al. (1995) [13]	POE focuses on the requirements and performance of building occupants' needs	
Carpenter and Oloufa (1995) [14]	POE is used to assess the quality of completed facilities as determined by the users' satisfaction with the completed product and the degree to which the setting supports the needs and goals of the occupants	
Preiser (1995) [15]	POE is a new tool which facility managers can use to assist in continuously improving the quality and performance of the facilities which they operate and maintain	
RIBA (1991) [16]	POE from an architectural perspective can be defined as "a systematic study of buildings in use to provide architects with information about the performance of their designs"	
Preiser (1989) [17]	The process of evaluating buildings in a systematic and rigorous manner after they have been built and occupied for some time	

POE post occupancy evaluation

Table 11.2 Criteria in POE

Author(s) and Year	Criteria	Findings
Dorasol et al (2012) [5]	Health factor, safety, security, functionality, efficiency, social needs, psychology, aesthetics, operation and maintenance, comfort, durability, adaptability, circulation, building economics, culture	Each criteria that has been evaluated is different according to the types of buildings and the purpose of conducting the POE Functional performance is a relevant criteria to be used because majority of the researchers (73%)
Khalil et al. (2009) [7]	Building element, building services, environment	agreed and applied functional performance in their research as a criteria to measure occupants' ability to efficiently and effectively operate a building
Hassanain and Mudhei (2006) [18]	Technical performance, functional performance	Functional evaluation addresses how well the user needs are supported
Blyth (2006) [19]	Process performance, functional performance, technical performance	
Turpin and Viccars (2006) [9]	Human needs, building performance, facilities management	
Preiser and Vischer (2005) [11]	Health, safety, and security performance; functional, efficiency, and work flow performance; psychological, social, cultural, and aesthetic performance	
Preiser and Schramm (2002) [20]	Health, safety, and security performance; functional, efficiency, and work flow performance; psychological, social, cultural, and aesthetic performance	
Kian et al. (2001) [21]	Functional comfort, indoor air quality, visual comfort, thermal comfort, acoustic comfort, building integrity	
Preiser (1995) [15]	Health/safety/security level; functionality/efficiency level; social, physiological, cultural, and aesthetic level	
Preiser (1989) [17]	Use of a building Pertaining to the original, intended use of a building, as documented in the program Pertaining to the state of the art in a given building type Relate to management of the client organization versus those which pertain to the end users/occupant Internalized knowledge and experience which the evaluators may apply as experts is regarding certain building types	
Preiser et al. (1988) [22]	Technical performance, statutory performance, functional performance, behavioral performance	

Table 11.3 Functional performance criteria

Author(s) and Year	Functional performance criteria	Findings
Dorasol et al. (2012) [5]	Design and planning, adequacy of space, technology	Functional performance is focused on how the building can support the client's and user's need as much as possible
Vidovszky (2012) [23]	Strategic value, aesthetics, space, comfort, services, equipment, use, maintenance costs, life cycle costs	From the issue and problem statement that have been stated, relevant criteria that can be used in measuring the functional performance of a refurbished historical building are space relationship, aesthetic value, comfort, amenity, services, safety, operational management and life cycle cost
Hassanain (2008) [18]	Functional requirement for student housing facilities Interior and exterior finish system Room layout and furnish quality Support services Efficiency of circulation	Functional performance criteria can assist designer and building management team to design and plan future historical building refurbishment that should enhance to occupants' satisfaction
Blyth (2006)	Strategic value, aesthetic and image, space, comfort, amenity, serviceability, safety, operational cost, life-cycle cost, operational management	
Akman (2002) [24]	Space relationship, services, amenities, location, environmental condition, overall effectiveness	
Carpenter and Oloufa (1995) [14]	Spatial quality, adaptability, work flow	

11.3 Functional Performance

For functional evaluation, it addresses how well the building supports the organization's goals and aspirations and how well the user needs are supported [19]. The functional elements also covered the ability of occupants to operate efficiently.

Table 11.3 shows several criteria suggested by other researchers to evaluate the functional performance in a building.

Functional performance is to measure the building occupants' needs and satisfaction level. POE is an important building performance evaluation technique to evaluate whether a building meets the user's requirement in respective of the functional performance.

From the issue and problem statement that have been stated, the relevant criteria that can be used in measuring functional performance of refurbished historical building are space relationship, aesthetic value, comfort, amenity, services, safety, operational management, and life cycle cost. Strategic value is an important criteria in business objectives while aesthetic and image create harmonious environment [19]. Meanwhile, space focuses on size and adequacy of an area that could encourage social interaction and adaptability. Comfort enhances on the satisfaction toward the environmental aspects which includes lighting, temperature, and ventilation. The criteria for amenity emphasizes on privacy, staff working conditions, and favorable public impression [24, 25]. For serviceability, it covers the criteria such as cleaning work and routine maintenance. Safety is an important criteria in design for access and space layout. The life cycle cost emphasizes on cost of operating,

replacement, and maintenance for retaining or restoring assets, facilities, and equipment to the specified operable condition. Finally, for the operational management, it covers criteria such as booking allocation system and user support for providing quality services and enhancing customer satisfaction [22]. Based from the stated criteria, the POE findings can create awareness to designer and building management team on any of the building problems that may affect operational efficiency, productivity and workflow. The anticipated findings may assist them to plan, design, and manage better future refurbishment projects for historical building that will enhance the occupants' satisfaction.

11.4 Conclusion

The purpose of POE depends on the building occupants and their needs in evaluating the building performance. The requirement to conduct POE as a means of providing essential feedbacks to inform future actions would appear to be self evident. Functional performance is part of the POE criteria. It is important to sustain the client's and user's needs as much as possible. The complexity and uncertainties of refurbishment are the main reasons for poor building performance. There is little research on POE toward the historical buildings. The functional performance through POE tool can be used to evaluate the building performance and users' needs in refurbished historical building.

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Chapter 12

Social Construction of Body Image in Overweight and Obese Adolescents: Preliminary Findings

Suriati Sidek, Ajau Danis and Safiah Md. Yusof

Abstract Obesity has been linked to poor body image. Generally, adolescents' physical condition of obesity leads to an undesirable body shape, thereby making them feel dissatisfied with their body image. Very few studies have examined body image, as a social construct, in Malaysian context and the process by which such construction is perceived, experienced, and reacted to, through various interactions. Therefore, this study aims to explore the social construction of body image in overweight and obese adolescents. A qualitative study was employed and participants were recruited using criterion purposive sampling. In-depth interviews were conducted with seven Malaysian adolescents aged 13–17 years old. Thematic content analysis identified a range of body image perceptions. The body image of overweight and obese adolescents was socially constructed through social interactions. Most of the participants indicated a desire to improve their body image. These findings provide preliminary evidence which suggests that the identification of social construction of body image in relation to overweight and obesity is important for the development of obesity prevention programs in managing adolescents' weight.

Keywords Body image · Social construction · Obesity · Adolescents · Qualitative study

12.1 Introduction

Obesity has been linked to poor body image [1]. Body image is important because it can help in managing the body weight [2, 3]. National Eating Disorders Association [4] defines body image as “How you feel about your body, including your height, shape and weight.” The concept of body image depends on the epistemological

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postulations about the nature of the mind, the body, the individual, and society [5] and is a multidimensional construct [6]. In recent times, the ideal thin body image for adolescents is widely spread and is overemphasized by western culture, making it likely that adolescents are always anxious about their body image [4] especially those with whopping body weight. Being thin is good for health and much associated with aesthetic reasons, whereas being fat is considered an unwanted condition [7]. Obesity among adolescents is also often associated with body image dissatisfaction [8, 9] and adolescents may feel ashamed of their physical appearance. Interestingly, body image dissatisfaction is not only a phenomenon in western countries but is also becoming increasingly prevalent in non-western countries [10]. Body image, as a social construct might be perceived differently by one another. However, adolescents' construction of body image is largely dependent on perceptions that develop through social interactions. The understanding of body image is shaped by media, parents, peers, culture, and society [10–12]. Various studies have identified negative social and emotional consequences of excessive body weight. For example, obese teens perceive themselves as less attractive, less accepted by peers, have less communication with parents, and receive a lower academic assessment at school [11]. Research on obesity has also documented the weight-related stigma experienced by overweight and obese people. Weight-related stigma includes verbal teasing, physical bullying, and relational victimization [13]. This weight-related stigma may lead to difficulty in making friends [8] and peer rejection. This weight-related stigma, teasing, and peer rejection may cause impairment in health, emotional well-being, and psychosocial functioning.

The obesity-related health problems are also prominent. Overweight and obese adolescents are at increased risk of the onset of adult chronic diseases such as diabetes, heart disease, hypertension, stroke, and some types of cancers [2]. Thus, these populations often perceive themselves as unhealthy [8, 14] and susceptible to disease. Furthermore, research suggests that the overweight adolescent has difficulties to fit into fashionable clothing. Adolescents prefer smaller body size because it allows them to wear fashionable clothing [14]. It seems that there are many factors that can affect the social construction of body image and most of the factors are related to various interactions. However, very few studies have examined the body image, as a social construct, in Malaysian context and the process by which such construction is understood, experienced, and reacted to, through social interactions. It is equally important to understand the social construct of body image and its effects on adolescents, besides the attention to decrease the obesity rates. Therefore, the aim of this study was to use qualitative methods to explore how the body image is perceived by overweight and obese adolescents in the context of their daily lives and how social interactions constructed their perception towards their body image.

12.2 Methods

A qualitative study was employed to study the social construction of body image among overweight and obese adolescents. Specifically, a phenomenological approach was adopted. In this study, the phenomenological approach attempts to describe the meaning of body image within their own contexts, to understand the experiences of being overweight and obese, and also allows further exploration of such experiences in daily encounters. The approval to conduct the study has been obtained from the Research Ethics Committee of the Faculty of Health Sciences, Universiti Teknologi MARA, The Ministry of Education Malaysia, the state education department and the participating school. In addition, consent was obtained from the parents and the participants.

12.2.1 Recruitment of Participants

The participants were drawn from a school in Klang Valley. Klang Valley is classified as an urban area with evidence that adolescents living in this area are more likely to be overweight and obese. A school was contacted and a list of participants' weight and height was obtained from the physical education teacher. Eligible participants were derived in accordance to the overweight or obese class based on the WHO categorizations [15].

12.2.2 Data Collection and Procedures

Interviews were conducted after the participants had returned the completed and signed parental informed consent form. Data were collected through in-depth interviews with overweight and obese adolescents. The interview was conducted in the Malay language and was recorded. It was conducted by the researcher after school hours at the school of study and each interview took approximately 1 h. An interview guide was used to address three main topics; perception, experience, and reaction. Participants were asked to (1) describe their perception of body image, (2) express their experiences of being overweight and obese and (3) elaborate their reaction on such experiences in daily encounters. Each question was followed with probes used to gain a complete understanding of the issues raised by participant.

12.2.3 Data Analysis

The data were analyzed using thematic content analysis guided by the guidelines provided by Braun and Clarke [16]. First, the data were transcribed verbatim in the Malay language. Then, they were translated to English by a language expert to

ensure that the data were equivalent in meaning. The textual data were carefully read, line-by-line to identify emerging themes related to body image. Finally, the emerging themes were reviewed.

12.3 Results

Seven adolescents aged 13–17 years old, including four girls and three boys participated in the study. Overall, four main themes emerged in the data. The first two themes are related with the perception of body image. The first theme is dissatisfaction with body image, the second theme is that being fat is not beautiful and makes one susceptible to diseases, the third theme is the participants' view on how the social interaction constructed the body image, and the fourth theme deals with a desire to improve one's body image.

12.3.1 *Own Dissatisfaction of Body Image*

Adolescents' body image can be understood by seeking their perception of body image. Most of the participants expressed their feeling of dissatisfaction with their current body image. For example,

Interviewer: How do you feel about your body image?

Girl: Oh, I'm not satisfied with my body image (14 years old).

Girl: I dislike my body. When I look at myself in the mirror...Eiii...it's ugly! I can see my 'fat' self in the mirror. Then, I imagined myself looking skinny in the mirror (13 years old).

Despite the frequent dissatisfaction of body sizes, a boy expressed a preference to be taller. He said,

Boy: I want to be taller

Interviewer: How about your body size?

Boy: It's just fine (16 years old).

12.3.2 *Being Fat Is Not Beautiful and Makes One Susceptible to Diseases*

A participant attributed her physical conditions as fat and not beautiful when asked to describe her body image. Example is as follows:

Interviewer: How do you describe your body image?

Girl: I'm quite fat because I've a large body frame. I think I got the fat genes from my father while my elder sister has always been thin because she inherited my mom's body size. Being fat is not beautiful because I don't look good in my clothes. Yeah, it is difficult. I am fat and the clothes are small. My friends told me the same thing. They said that being thin is beautiful as you can fit into any clothes well (14 years old).

Although most comments focused on the association of overweight and physical appearance, few participants also discussed the obesity-related health problems, as supported by the statement below:

Interviewer: What is your opinion on obesity and health?

Girl: Being overweight is susceptible to diseases including diabetes and heart attack. In addition, it is hard for you to walk because you have to carry your heavy body. However, it doesn't mean that being fat is unhealthy and being thin is healthy (15 years old).

Boy: Fat is unhealthy. My grandmother told me that fat people is at risk of getting diabetes and heart attack (16 years old).

12.3.3 Body Image Is Constructed by Social Interaction

The third theme that emerged from the interviews was related to how participants' social interactions with family members, peers, and social environment constructed their understanding of and perception towards their body image.

1. Feedback from peers and family members

The interviews revealed that participants constructed their body image from the feedback of others. For example,

Boy: I think I'm fat

Interviewer: What makes you think so?

Boy: Because people around me such as my family members and friends said so

Interviewer: What did they say?

Boy: For example when I eat, they will say, "Can you watch what you are eating and have control of it? Don't you know that you're fat?" (14 years old)

2. Body image role modeling

Participants also acknowledged that they view their peers and siblings as role models for having the ideal body image. A girl reported that she would like to look like her friend. She said,

Girl: I want to look like my friend, Nadirah.

Interviewer: Why?

Girl: She's tall and thin so she can fit into any apparel nicely. I'd like to be slimmer and taller because I want to wear fashionable clothes and to avoid being scolded by mom. My mom said it is difficult for her to find nice clothes for me because of my big size (13 years old).

Additionally, there was also a girl, who adores the body image of her sibling. As described by this girl,

Girl: I want to be thin and tall like my sister...thinner than her if possible (14 years old).

Unlike girls, boys do not have role models for ideal body image, as shown in the following statements:

Interviewer: Do you have somebody as your body image role modeling?

Boy: No. I don't think so.

Interviewer: For example like an actor?

Boy: No

Interviewer: Or your grandfather?

Boy: No (17 years old).

3. Social environment

The interaction with social environment such as school was also found to influence participants' construction of body image. They faced weight-related stigma and teasing, and social exclusion in their daily encounters. Several participants' explanations about how their social environment influences their construction of body image were captured in the following interviews:

Boy: I'm embarrassed with my friends because of my big body size. They have asked me to finish their left over meals. So, I really get embarrassed (17 years old).

Girl: There are a few naughty boys in my class who often tease me. They used to tease me with names like "Bobby" and "Bob". I will usually ignore them but sometimes...I get mad and would scold them back when I've had enough. I'm embarrassed (13 years old).

Boy: I'm not involved in football because it is like my friends always ignore me. I believe I can play football but when they look at my physical appearance, I assume they probably think "Oh, he can't play because he is fat" (14 years old).

Despite the common assumption that the social environment could bring negative messages of being overweight and might cause emotional disturbance, several boys expressed a feeling of acceptance of being overweight, as evidenced in the following statements:

Interviewer: If you're teased by your friend because of your overweight look, do you feel embarrassed, sad, or mad?

- Boy: I'm not embarrassed because it is me, myself. I can't be embarrassed of myself. I'm furious at those who tease me, but that's it (14 years old).
- Boy: No, I'm not. I'm used to being teased about my body weight because I'm fat and have been this way since I was a toddler (16 years old).

12.3.4 Desire to Improve Body Image

Most of the participants do take action to improve their body image. They were involved in weight management to reduce weight. As explained by these two participants:

- Girl: When I got invitation to take part in this study, I feel embarrassed with myself. I want to do something to be thin. But, both my parents are always busy with their work. So, it's like I can't do more. I hope that my parents will bring me out for jogging (13 years).
- Boy: I was upset with the weight-teasing. So, I want to be thin. And that is the reason why now I eat least. Previously, I always ate three times a day but now I skipped my breakfast. I just take my lunch and dinner. Yeah, I feel hungry sometimes, but I can bear with it because I really want to be thin! (14 years).

12.4 Discussion

The purpose of the present study was to explore how the body image is perceived by overweight and obese adolescents in the context of their daily lives and how social interaction constructed their perception towards their body image. Most of the participants expressed dissatisfaction with their current body image and would like to improve it. This is also interesting as some of the boys also indicated dissatisfaction towards their body image especially in relation to height. Such findings concur with other studies [8, 9]. Their physical condition leads to an undesirable body shape [7]. It was suggested that body dissatisfaction among adolescents may be prevented by encouraging healthy relationship with peers [17] and the dissatisfaction may be reduced if adolescents have cognitive view of seeing themselves as "big" rather than "fat" [1]. It is actually a good sign for overweight and obese adolescents to have a feeling of body image dissatisfaction. For example, body image dissatisfaction caused by obesity may motivate people to reduce weight [1]. This argument, however, is challenged by research which suggests that overweight adolescents with body dissatisfaction are at risk for engaging in unhealthy weight control behaviors [18] and involving in disordered eating [2, 19].

Adolescents in the present study talked about “fatness” often when being asked to describe their body image. Wills et al. [20] also found that overweight young people always referred themselves as fat and big. Aesthetic appearance is more likely to be acknowledged by female adolescents to describe their body because they always see body as an object to be viewed and evaluated [21]. Besides, thinness in women is frequently represented in the media [22] and the association of thinness with beauty, success, and attractiveness is pervasive. Consistent with the findings in the study of Katz et al. [14], results from the present study reveal that obesity health-related consequences were also raised as considerations by adolescents. They admitted that an obese individual is susceptible to diseases and that fat is unhealthy. However, Diedrichs et al. [22] argued that the assumption about being unhealthy related to overweight is inaccurate. Evidence supporting this assumption is shown in the study of Wildman et al. [23], which found that some of the overweight people are metabolically healthy.

The results also indicated that there are several social interaction domains that influence the construct of body image among adolescents, including feedback from peers and family members, body image role modeling, and social environment. The results of the present study complement those of Mellor et al. [10], which suggest that feedback from peers and parents accounts for body image dissatisfaction and body change behavior. For example, parents’ opinions on body weight and shape have resulted in body dissatisfaction [24] and peers’ feedback on body image may lead an adolescent to lose weight [12]. Unlike participants in the study of Diedrichs et al. [22], adolescents in the present study were more likely to compare their appearance to people they see in real life such as siblings and peers, rather than people in the media. Several reasons were proposed for why media’s influence on overweight and obese adolescents may not be as strong, as it is for adolescents with average body weight. However, this body image role modeling only involved girls and was not applicable to the boys. This finding supports the idea that men are often valued for other traits such as humor or capabilities [22], rather than their appearance. This study adds to our knowledge of the body image role modeling by demonstrating that female adolescents are more likely to view somebody to get the idea of an ideal body image as compared to male adolescents.

In concurrence with past research, present findings also revealed that the social environment may affect adolescents’ perception and understanding of body image, suggesting that obesity may cause adolescents to encounter the negative social and emotional consequences. As part of a socially stigmatized group [11], overweight and obese people are thought to be responsible for their body size [1] and weight-related teasing is a message communicated to them that their body shape and weight are not acceptable in the society. Negative messages about being overweight and obese reflect a strong anti-fat attitude among general population. This is evident in the peer interaction [11], media, schools, and in daily encounters [1]. For example, overweight adolescents experienced peer rejection in school [25]. Internalization of such messages may lead to emotional disturbance [25] and can greatly influence overweight adolescents’ perception of their body image. This might also be one explanation of why overweight and obese adolescents were discontent with their

bodies. These findings highlight the importance of creating healthy social environment by improving society's attitudes towards overweight and obese individuals.

Moreover, adolescents in the present study are motivated to improve their body image. It was suggested that the body image dissatisfaction and the negative outcome from social interaction may be indicative of the emergence of weight management. This finding aligns with the finding by Fonseca and de Matos [8]. This is positive, as it suggests overweight and obese adolescents have a good intention to reduce weight to conform to a prescribed ideal. For example, it was found that overweight adolescents may attempt to reduce weight by engaging in physical activities and involving in dieting regime. It was found that overweight adolescents have greater weight loss strategies [12]. However, this is of concern as they may involve in eating disorders [2, 19] such as anorexia nervosa and bulimia nervosa [3, 4] as these adolescents have greater concern about their appearance and body image. In some of their weight loss strategies, the adolescents mentioned the need to have a companion to be with them. This is most noticeable if the strategy involves physical activities. Therefore, support from parents and friends are greatly needed to encourage adolescents' participation in physical activities.

12.5 Conclusion

This study provides preliminary evidence which suggests that social interaction constructed the perception about the experiences and the responses to adolescents' body image. Therefore, it is essential to consider these formative influences and the social interaction processes of body image construction among overweight and obese adolescents, in developing obesity intervention programs. The obesity intervention program may be helpful in managing adolescents' weight and initiate motivation for weight reduction. Overweight and obese adolescents must be thoroughly taught and effectively informed about the significance of healthy weight and a good body image. However, as has been noted throughout, the present findings are preliminary and should ideally be used to encourage additional research on this important topic. A further in-depth qualitative study is needed to give fuller and richer results. Future research should interview parents to gain their perspective. Parents' perspective would contribute to our understanding of the topic.

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Chapter 13

Generation and Composition of Solid Waste in University Campus

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Abstract Solid waste generation and composition analysis is a critical first step towards developing successful and effective planning of waste management service and strategies across university campus. This chapter presents findings of solid waste study in UiTM (Perak). The objective of the study was to identify the types, quantity, and composition of solid waste in hostel area. A waste audit was conducted at four hostel blocks to estimate the quantity of waste generated. A total of eight bins were selected for waste sampling for a duration of 6 days for each block. Waste from every sample were sorted manually and weighed. All the data were recorded according to the waste categories in a standard form. The total waste collected at the hostel blocks was 1,660 kg/day. Based on the hostel occupancy of 3,498 students at the time of the study, the waste generation rate per student was estimated as 0.47 kg/day. The types of solid waste collected were paper, aluminum, glass, plastic, food waste, e-waste, clinical waste, and others. The highest composition was food waste which accounted for 48.30% by weight. Meanwhile, the lowest composition was clinical waste with the percentage of 0.64%. Based on this data, the quantity of solid waste in this hostel area was estimated at 605,900 kg a year. Currently, solid waste collection and disposal in UiTM (Perak) are managed by Department of Facilities Management through two appointed contractors. All the collected solid waste is sent to the municipal dumpsite for final disposal. In conclusion, the characterization of solid waste in UiTM (Perak) provides a better understanding of the waste profile. This can facilitate the provision of better waste management system which emphasizes on the minimizing and recycling of waste.

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Keywords Waste generation · Waste composition · Waste quantity · Waste management · University campus

13.1 Introduction

Urban growth has caused an increase in the generation of wastes coming from activities carried out in homes, places of public and private service, buildings, and commercial and service establishments. Rapidly growing populations, rapid economic growth, and rise in community living standards have accelerated the generation rate of municipal solid waste (MSW) causing its management to be a major worldwide challenge [1].

Solid waste management requires a good understanding of the composition and the processes that determine the generation of waste [2]. Special attention should be paid to the waste generation source since the characteristics and composition of the waste differ according to their source [3]. The solid waste generation and composition rate is used to determine the quantity of waste to be managed, as a guide for designing final waste disposal facilities and planning other solid waste management processes, and as an indicator of solid waste generation pattern. Solid waste quantity and composition analysis is fundamental for proper planning of waste management system.

As centers of learning and research and dynamic communities, universities are well positioned to foster sustainable behavior among their students, faculty, and staff which hopefully get carried forward to the society [4–8]. As higher institutions, it is their moral responsibility to encourage and support sustainability [5, 7]. Solid waste generation and management gave the greatest challenge in order to reduce campus ecological path and pursue institutional sustainability [7].

One of the major problems in solid waste management is to determine the quantity and composition of solid waste generated mainly in the university campus. The design, implementation, and operation of the economical solid waste handling, collection, transport, and disposal systems require accurate information on the quantities and characteristics of the solid waste to be processed. It is necessary to conduct a study to estimate the generation of solid waste when the present collection system does not adequately cover the campus and the existing records cannot be related to the population or other generation parameters. The increment of population and development of new buildings in a campus will subsequently increase the generation of solid waste. Therefore, characterizing, analyzing, and understanding the composition of solid waste in a campus is a critical first step towards developing successful and effective strategies for reducing solid waste generation and disposal, thus improving recycling efforts among the campus community.

This study has been conducted in UiTM (Perak) Seri Iskandar Campus with an objective to identify the types, quantity, and composition of solid waste. The findings provide a basic understanding of solid waste profile in the campus.

13.2 Materials and Methods

13.2.1 Sampling and Characterization

The estimation of solid waste quantity in UiTM (Perak) through a waste audit was conducted at the hostel area only because a major quantity of solid waste was produced by the students. The selected blocks were Angsana, Bidara, Cemara, and Damar. All the blocks are identical in terms of the floor level and layout. The Angsana and Bidara blocks are boys' hostels while Cemara and Damar are girls' hostels. The waste audit was conducted at one block at a time due to limited equipment and manpower available. The waste audit in this study started with Cemara block, Damar block, Bidara block and Angsana block accordingly.

There are four floor levels in each block. Only two bins located near the stairs were selected for sampling at each level. These bins were selected because of their accessibility and higher probability of students throwing rubbish into it. For waste audit activities, the sample was labeled as ID sample which stand for Identity sample. For level 1, the ID sample was labeled as T1 and T2. For level 2, the ID sample was labeled as T3 and T4. For level 3, the ID sample was labeled as T5 and T6. Lastly for level 4 the ID sample was labeled as T7 and T8.

The waste audit for every sample of each block was conducted for six consecutive days (excluding Sunday) which align with the frequency of waste collection by the appointed contractors. For sampling purposes, the solid waste were classified as paper, aluminum, glass, plastic, food waste, e-waste, clinical waste, and others and listed in a standard form. Waste from every sample was manually sorted according to its categories. The sorting scheme applied to the sample was similar, but not identical to the previous studies by [3, 9, 10].

The sorted waste from every sample was weighed using a standard weighing scale with a sensitivity of 0.1 kg. Then, data were recorded in the standard form for analysis.

13.2.2 Waste Analysis

All the recorded data were computed in a standard spreadsheet for waste analysis. The waste collection rate of each bin was calculated using Eq. 13.1. Then, the total waste collected in this study was calculated using Eq. 13.2. Later, the percentage by weight for every waste category from the total waste was calculated. This will generate the waste composition according to the weight. The waste generation rate per students in the studied hostel block had also been determined.

$$\text{Waste collection rate} = \frac{\text{Total waste weighed (kg)}}{\text{No. of sample (bin)}} \quad (13.1)$$

$$\text{Total waste collected} = \text{Collection rate(kg/bin/day)} \times \text{No. of bins provided} \quad (13.2)$$

Table 13.1 Waste sample for the studied hostel blocks

Block	Total samples (6 days)	Total waste (kg)
Angsana	48	245.95
Bidara	48	232.49
Cemara	48	114.69
Damar	48	172.30
<i>Total</i>	<i>192</i>	<i>765.43</i>

13.2.3 Limitations of the Study

There were some limitations as the study was carried out. The hostel areas in UiTM (Perak) are divided into two zones, Zone 3 and Zone 4 with a total of 16 blocks. Due to time constraints, the waste audit conducted was limited to Zone 3 only which consists of 4 blocks.

The second limitation was the usage of a 20-kg weighing scale which might be slightly inaccurate. The data will be more accurate if a 10-kg weighing digital scale with a lower accuracy is used for weighing purpose.

The last limitation was miscommunication with the waste collector. The waste collector had collected waste from three samples, T3, T4, and T5 at Bidara block on Thursday, 11 April 2013 before the waste was sorted and weighed. This might give a minor impact to the results.

13.3 Results and Discussions

13.3.1 Waste Characterization

The waste audit at four hostel blocks produced results as shown in Table 13.1. There were 192 samples from all the blocks with a total waste of 765.43 kg. The highest waste quantity was 245.95 kg recorded in Angsana block. This was followed by Bidara block and Damar block with waste quantity estimated at 232.49 kg and 172.30 kg respectively. Meanwhile, the lowest waste quantity was in Cemara block.

Angsana block was the last block being audited which was at the fourth week of the study. Coincidentally, the audit at this block fell on the end of the semester. All the students needed to clear their hostel before going off for semester holiday. This activity included disposing off their unwanted belongings which contributed to more waste at this block. The highest category of waste found at Angsana block was papers from students' projects such as assignments, notes, drawings, and models.

Table 13.2 shows the types and composition by weight of solid waste collected in Zone 3 hostel area. The highest composition of waste was food waste with a percentage of 48.30%, followed by paper (30.90%), and plastic (9.01%). Meanwhile, the lowest composition of waste was clinical waste (0.64%). Food waste was found to be of the highest composition as the students had meals (packed food)

Table 13.2 Composition (%) by wt.) of solid waste generated in Zone 3 hostel area

Types	Weight (kg/day)	Percentage (%)
Paper	236.54	30.90
Aluminum	25.59	3.34
Glass	9.11	1.19
Plastic	69	9.01
Food Waste	369.7	48.30
e-waste	6.09	0.80
Clinical waste	4.9	0.64
Others	44.5	5.81
<i>Total</i>	<i>765.43</i>	<i>100.00</i>

Table 13.3 Total waste collected at Zone 3 hostel area

Block	Total number of existing bins	Generation (kg/bin/day)	Total generation (kg/day)
Angsana	97	4	388
Bidara	104	4	416
Cemara	110	4	440
Damar	104	4	416
<i>Total</i>			<i>1,660</i>

in their hostels and threw away the leftovers in the bins. The high composition of food waste is influenced by the students' lifestyle of buying packed food instead of having their meals at a stall or restaurant. Normally, students buy packed food from a night market near UiTM (Perak), which is held every Monday, Tuesday, and Wednesday. They prefer buying food from the night market as the food is cheaper and there are more varieties.

The total amount of waste sampled in this study was 765.43 kg and the mean weight of every sample is 4 kg/bin/day (refer Table 13.1). This mean weight is also considered as the collection rate for each bin as shown in Table 13.3. The collection rate for every bin was calculated by using Eq. 13.1. The total number of existing bins provided by the Department of Facilities Management of UiTM (Perak) for every block is shown in Table 13.3. By using the waste collection rate and the total number of existing bins, this study enabled to estimate the total waste collected at the four blocks as 1,660 kg per day. During this study, there were 3,498 students living in the Zone 3 hostel. Thus, the waste generation rate for the hostel in Zone 3 was found to be 0.47 kg per student per day.

13.3.2 Current Waste Management in Campus

More than 20 years ago, waste management programs began in higher education, and vary from voluntary and local effort to institutionalized programs [11]. Higher education institution would be expected to be a role model or a leader towards

responsible waste management. Moreover, proper waste management would bring benefits such as financial reduction to the institutions.

Current solid waste management in UiTM (Perak) is basically controlled and managed by the Department of Facilities Management of UiTM (Perak). They had appointed two contractors to collect and dispose all the solid waste in the campus. The frequency of the collection was once a day for 6 days from Monday until Saturday. All the waste from the hostel blocks are then transferred to a temporary collection area at a nearby parking lot. A one tonne lorry is used to transport the collected waste and sent it to the nearby municipal dump-site.

Recycle bins are also provided for every blocks. Unfortunately, these bins are underutilized as little quantity of recyclable waste was found in the bins during the study. On the contrary, this study found that the composition of recyclable waste, namely paper, aluminum, glass, and plastic was 44.44% from the total waste audited. There are many possible factors which may lead to these problems and need to be considered in a future research. Among them, are lack of knowledge and awareness on waste sorting and recycling, unsuitable location of the recycle bin, and students' attitude on waste recycling. For example, the location of the recycle bins near the staircase at the ground floor level of the hostel block is not easily accessible to students who stay on the higher floors. This situation might hold back their intention to sort and send the recyclable waste to the recycle bins. Therefore, the bins should be relocated to a more accessible area to facilitate and encourage students to sort and recycle waste.

13.3.3 Recommendations

Based on these findings, this chapter proposed five recommendations to minimize waste disposal, namely disseminating of knowledge on waste management hierarchy, raising awareness on environmental impact, composting of food waste, giving rewards to students for their sorting and recycling activities, and also providing adequate recycle bins.

Knowledge is vital in order to practice better solid waste management. Therefore, adequate knowledge on solid waste management hierarchy needs to be disseminated to all students. They will then know about practicing other techniques in managing waste apart from waste disposal. Introduction to reduction, reuse, and recycle activities is beneficial in order to minimize waste for better waste management practices.

With a better understanding of solid waste and its environmental impact, hopefully, the students will understand and realize the importance of solid waste management good for the society and for the world as a whole. Consequently, there is a need to put more effort into raising students' awareness. This can be achieved by awareness campaigns emphasized on the considerable change in the attitude and perception of the students towards solid waste management. Hopefully, with the

raised awareness, it will inevitably change the students' habits and also behavior towards good solid waste management practice.

This chapter also recommends food waste composting to be conducted enormously at the hostel block as food waste was the highest composition of waste collected. The food waste has the potential for recovery of organic wastes to produce fertilizer. Later, the fertilizer can be used to fertilize plants around campus. Simultaneously, this practice could reduce the amount of waste to be disposed off at the landfill. Only residual waste will be transported to the landfill and this will reduce transportation cost, landfill fee, and extend the life of the landfill.

In UiTM (Perak), students are required to collect activities' coupon or commonly known as activity stamps to qualify them to stay in the hostel for the following semester. So this chapter proposes that the activity stamps be given to students in order to encourage them to participate and practice waste sorting and recycling activities. Appreciation from the senior management of the campus will hopefully encourage students involved in these activities.

The recycle bins currently at the hostel block seem to be inappropriate because only a small quantity of recyclable waste was found in the bins during the study. Recycle bins should be provided adequately and located at more accessible areas to facilitate and encourage students to sort and recycle waste. Then, at the end of every semester when students need to clear their rooms, the hostel management should provide extra recycle bins and place them at every floor. There is a high tendency that they will dispose more waste which might include recyclable waste. This will facilitate them to sort the recyclable waste especially when the recycle bins are nearer to their rooms.

13.4 Conclusion

A well-organized waste management system requires not only an estimation of the solid waste but also an understanding of the students' habits and behavior towards managing solid waste. The data from this study can facilitate the above requirements. Besides that, the generation rate from this study can also be used to make projections of total waste generated for the whole hostel area. Hence, it is recommended that the university needs to provide encouragement, education, and awareness to its students in order to minimize waste and also improve recycling effort. Hopefully, the findings and recommendations from this study would be beneficial to the university campus. So the adoption of an integrated solid waste management approach would also help to improve the lives of the campus residents by providing a safer and environmentally sustainable living condition.

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Chapter 14

Implicating the Undergraduate Studio Learning Through Establishing a new ‘Content Making’ Framework

MD. Fuad Arif, Farrah Aini Lugiman and Nadiah Mohamad

Abstract There seems to be no exiting written research conducted in the field of developing a scheme in ‘content making’ compared to scheme in art criticism or art interpretation. This research which is in its first stage of two will be outlining key principles in the context of content making and establishing a proposed framework. Fundamentally, content making plays a major role in structuring ‘ways’ of developing deeper understanding and ideas for fine art students when they are conducting their theoretical individual studio research. Because there are no written examples in teaching content, the methodology of this research will be looking into and making interpretations from two ‘art interpretation’ frameworks. One will be from Lucy Lippard’s framework extracted by Cynthia Freeland and the second will be from Terry Barret.

Keywords Content making · Form and content · Art teaching model · Art-as-research · Art-based research · Phenomenological theme · Studio practice

14.1 Introduction

Over the last 2 decades, there has been an ongoing debate concerning the role of art and design practices in the field of academic research [1]. These discussions have in turn created an opportunity in the academic world where these roles and position as ‘knowledge’ are questioned and developed. The questioning and development has targeted not only on the question of art’s own epistemological situation but

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also concerning its pedagogical position i.e. how it is being taught and how it is being learnt. This is true with the situation of studio inquiring in the undergraduate and postgraduate level. One of the primer concerns in fine art studio practice other than the making of the 'art object' (form), is the crucial concern in starting and developing the 'content' which is more theoretical (written) in nature. It is well known that the teaching of fine art student in starting and developing their own art content has always been an open-ended and exclusive situation amongst the fine art lectures or instructors. Each fine art lecturer has his or her own way of teaching their students on how to develop their own artistic content. Surprisingly with such situation there are not existing researches or academically written models in content making compared to those of art criticism or art interpretation. Thus as a way to enrich this situation with the intention of doing something that is more structurally and academically written, this research is conducted. For that this research which is in its early stages will be outlining key principles in the context of content making and thus establish a proposed framework. Because there are no examples of written models in content making, the methodology of this research will be looking into and making interpretation from two 'art interpretation' frameworks. One will be from Lucy Lippard's framework extracted by Cynthia Freeland and the second will be from Terry Barret's.

14.2 Reviews on Related Literatures

With the ever global push of methodologies in the social sciences and (natural) scientific research which is empirically, instrumentalist and positivist in its characteristics, seem to dominate ways of knowing. This domination is evident in institutions of higher learning with their input-output accountabilities attached to calculable measures in funding and investment. Yet it is clear that vested concentration towards empirical and instrumentalised approaches to research may not be suiting the best interests of those in the creative and artistic practice such as music, theater, fine art i.e. painting, sculpture, installation, etc. Bolt explains that unlike science, which has set in progress an object-sphere particular to its discipline and distinct its systematic methods and approach of analysis, the approaches taken in art-based research, such as in painting-studio enquiry, often contradict with what is commonly projected of (natural and social science) research [2]. Art proceeds on the assumption that we can never know the outcome in advance and that knowledge is emergent rather than prescribed [2]. In Grierson and Brearley, they suggested that there is a growing need for articulated research methodologies appropriate to creative arts practice and diverse cultural knowledge systems [3]. In Hannula, Suoranta and Vaden they stated that the discussion about artistic research should be carried out specifically in the field of artistic research and on its own terms [4]. Daichendt emphasizes that the writing component (content) is a valuable aspect of art education and in many ways the only form of research recognized by contemporary universities [5].

14.3 Methodology

‘Qualitatively’ this research requires gathering relevant data from the specified documents—art interpretation framework or model—compiling and comparing literature in order to look into the material and arrive at a more comprehensive understanding in developing a proposed framework for content making in fine art studio practice within the undergraduate level. It is imperative to understand that some qualitative researchers are not ‘concerned about validity’ as it is commonly understood, preferring to aim for ‘understanding’, which might be achieved by what Wolcott calls ‘rigorous subjectivity’ [6]. The quest is not so much with ‘getting it right’ as getting it ‘differently contoured and nuanced’ [7]. To some, there are many overlapping truths operating at different levels and constantly subject to change. Thus interpretivism is a way to attain insights through discovering meanings by improving our comprehension of the whole. Qualitative research explores the richness, depth and complexity of phenomena. Research done qualitatively, broadly defined, means ‘any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification’ [8].

14.3.1 *Secondary Data*

This research will be based on two art interpretation models. One will be from Lucy Lippard’s and the second will be from Terry Barret. These frameworks will then be interpretatively reformed to structure a new framework in content making and not a newly form of art interpretation framework. In doing the comparative studies, both frameworks are not subjected towards an analysis of weakness and strength because these models are not used to ‘extend’ the art interpretation framework but are comparatively and interpretatively studied to frame a new content making framework.

14.4 Finding

As stated, in this initial stage, the research was conducted to pinpoint main principles and thus creating a new content making framework. The objective of using these models is more of a ‘reverse engineering’ means. Due to the nature of various art interpretation frameworks used by art critics and art educators such as Lucy Lippard and Terry Barret (these are the commonly used in art interpretation) in interpreting artworks, these same principles which are used are in themselves building blocks in understanding the meaning of artworks, and thus can be used as the same building block (principles) for art students when they are developing and framing their own art ‘content’. From Lucy Lippard’s framework which was extracted by Cynthia Freeland [9], she divided Lippard’s framework (Fig. 14.1) which she calls

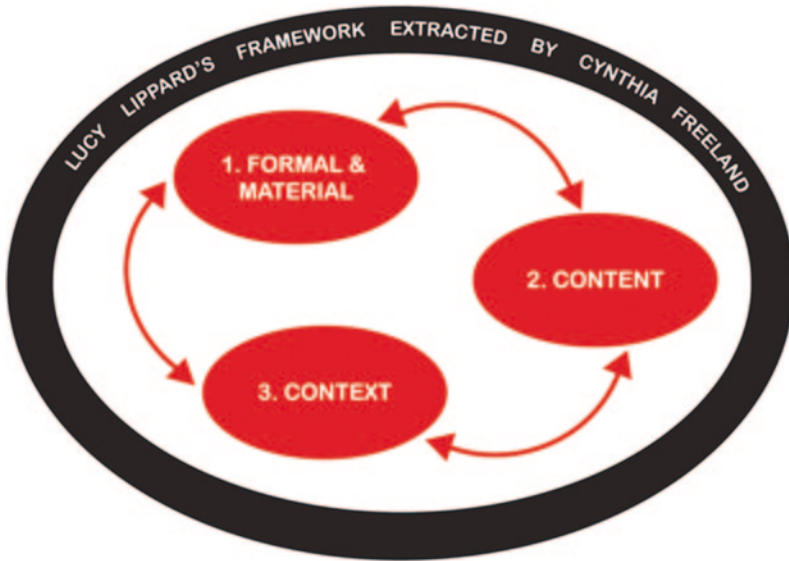


Fig. 14.1 Lucy Lippard's framework extracted by Cynthia Freeland

her 'three-pronged analysis' [9] into three sections, one is 'Form and Material', second is 'Content' and the third is 'Context'. As in Barret's framework (Fig. 14.2), he divided his framework into five distinctions, one is 'Subject Matter' second is 'Medium', third is 'Form', fourth is 'Context' and fifth is 'Meaning'. Each one of the principles as also in Lippard's model have their own unique meaning and commitment that shape a particular understanding and are all connected [10]. Thus, this division is stated below in the two already established frameworks, one extracted (outlined) framework and one finished framework.

From the studies done the researchers managed to extract seven important principles. These extracted principles outlined in a non sequential order are presented in Fig. 14.3 which consists of 'Medium', 'Subject Matter', 'Contexts', 'Content', 'Meanings', 'Formal & Material' and 'Form'.

As indicated in the two models, there are similar concepts that can be formulated into a single framework. Some principles have distinctive similarities in the name or title, for example, as in 'Context' which are both found and used by Lippard and Barret and some principles have similar concept even though having different names as in the case of Lippard's no. 1 principle 'Formal & Material' with Barret's no. 1 'Subject Matter', no.2 'Medium' and no.3 'Form'. As a result the finish framework has been formulated in 'Fig. 14.4'.

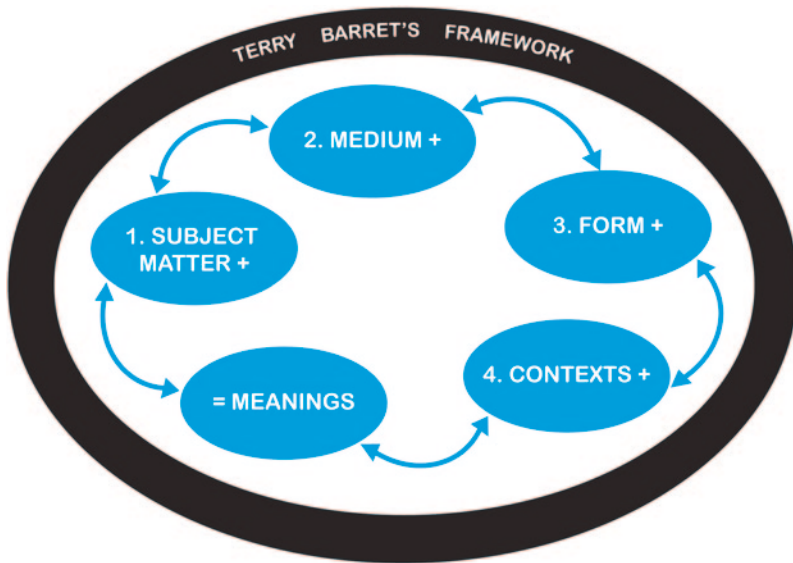


Fig. 14.2 Terry Barret's framework

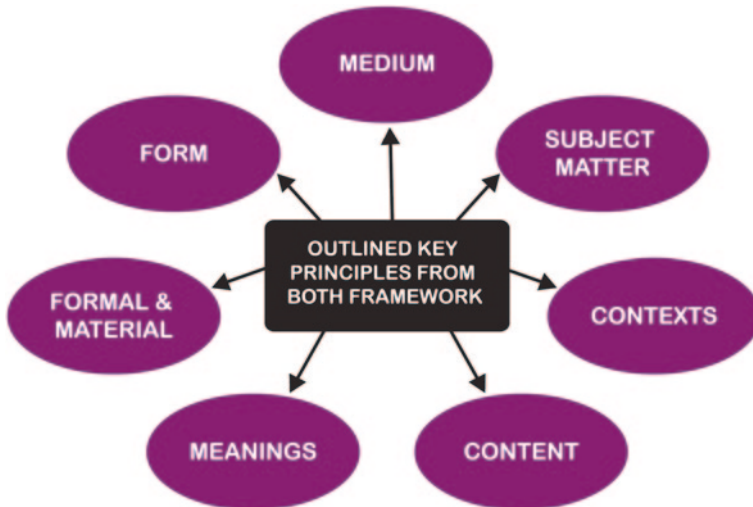


Fig. 14.3 Outlined key principles from both frameworks; building block for 'content making' is indicated in purple colour

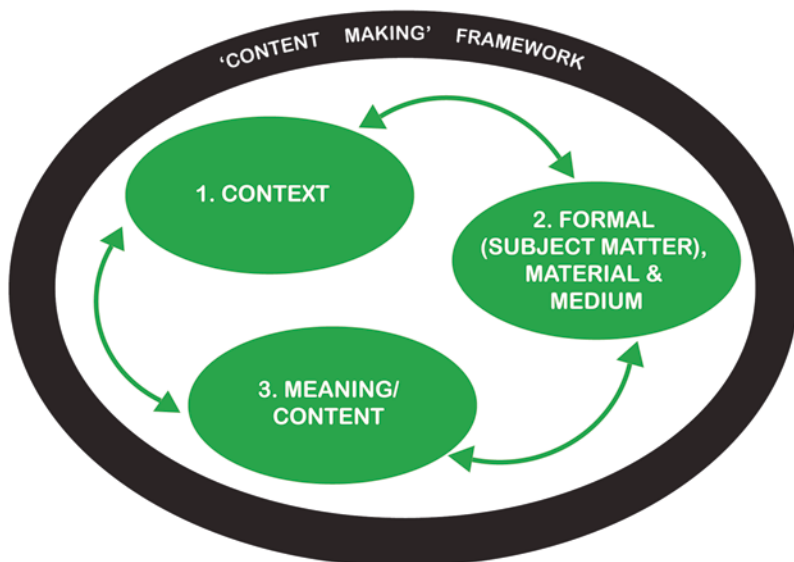


Fig. 14.4 Key principles for 'content making' framework

14.5 Conclusion

As the stage of this research is still in its first stage of two stages, this paper is more inclined towards presenting a finished framework that will further be developed and elaborated in the coming research and future papers. One distinction that needs understanding is that, the two models used are not in themselves models for content making but are art interpretation models. Thus these models are not used as to extend or create new model in 'art interpretation' but are used in a 'reverse engineering' manner to locate main principles (building blocks) in understanding (interpreting) artworks, that are in themselves conceptual principles that can be used in art content construction. As a conclusion there are three main principles that the researchers have managed to extract and outline. These principles are summarized from both Lucy Lippard's and Terry Barret's art interpretation framework. One designated principle is concerning on 'Context', the second is 'Formal (Subject Matter), Material & Medium' and the last is 'Meaning' (Fig. 14.4). All three principles are dealing with conceptual and theoretical building. Even though in the second section 'Formal (Subject Matter), Material & Medium' is somewhat implying towards an object (form) orientated inquiry but in the process of developing the content these concepts are actually interconnected within the interplay of an artwork meaning. In the process of making the art object, the second section also acts as the main condition of such engagement. 'Context' acts as the background investigation and is positioned at the first stage. It is positioned as such due to its fundamental situation as being a 'gateway' towards how students want to allocate and initiate their own interest within the larger picture of the art inquiries.

For item no. 2, the concept bracketed ‘Subject Matter’ is grouped in this section because formally, such concept is dealing with similar analysis. When cross-referencing Lippard’s and Barret’s discussions concerning the understanding of ‘subject matter’, where in Lippard the allocation of ‘subject matter’ is located in the ‘Formal’ section and in Barret it is in the same title. As an initial discussion, ‘subject matter’ involves a concept concerning ‘subject of focus’ in the student’s own individual art investigation, whether it is concentrating with representational subjects such as ‘humans’, ‘trees’ and ‘animals’. For example, in the case of artists such as Chuck Close, his subject matter has always been dealing with ‘human-faces’ (portraiture), or non-representational subjects such as ‘lines’, ‘colours’, ‘shapes’, ‘forms’, ‘sounds’, ‘physical movement’ or ‘speech’ as in the subjects, for example Piet Mondrian artworks, which focus on basic visual elements such as colours, shapes and lines. But as mentioned, elaborations for this framework will be refined further and discussed in future stages of this ongoing research. For example, also in the ‘Context’ division, such refinement will concern matters as such as ‘art themes’, which will be looked into from Heartney’s (2008) *Art & Today*, from Sollins & Dowling’s *ART21*, Seasons 1–6 (2005–2012) short-format documentary series and also from Robertson & McDaniel’s (2010) *Themes of Contemporary Art: Visual Art after 1980*.

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Chapter 15

Islamic Financial System Epidemic

The Effect of Financial Crises

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Abstract The global financial and ensuing economic crises have had negative impacts on a majority of firms, businesses, countries and indeed, the society. The traditional and capitalist way of financing has been criticised for its failure; thus, the consumer has started to move towards an ethical and sustainable form of finance. Islamic finance, which already existed by the period is said to be the panacea to the global crisis. It is being presented that Islamic finance may pose as the remedy in curbing economic ills. How true is this? Over the period of more than 40 years since Islamic finance was first introduced, the main players and regulators discuss pertinent issues to the development of the Islamic finance industry. Bankers and lawyers were vocal about the need for education and more regulatory upheavals in order to create a level playing field for Islamic finance, as well as propagate Islamic banking products to a wider clientele. This paper discusses a series of financial crises and the outbreak of Islamic financial system. The Islamisation of the conventional financial system in Malaysia is highlighted. We conclude that there is room for improvement, and there also is prominent untapped potential in non-bank financial institutions.

Keywords Financial crises · Islamic finance · Financial system · Islamisation · Malaysia

15.1 Introduction

The series of financial crises that hit the world economy required questing for an alternative way of financing. Muslims around the world started actively pursuing the Islamic way of financing, as it supposed to hold the principles of justice, fairness, transparency and proper distribution of wealth. Non-Muslims were also riding the boat as the Islamic way is seen as an alternative mode to free their mind and ease the burden of the compounding effect of the conventional loan.

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The rapidly evolving nature of Islamic finance sectors demand the players, regulators and customers to be continuously updated on current trends and development. In a country with a majority of Muslims, most of whom have taken the ideology and principles of Islam very much to heart, one would assume that on a retail or grass-roots level at least, Islamic banking products would have become the instrument of choice for financing. However, many bankers believe that there is still much education and awareness needed at the consumer level to allow for Islamic banking and finance to prosper. There is an obvious spate of deals originating in the Middle East, while a handful of deals are also expected to originate from new markets such as the USA, the UK and Thailand.

This paper explores the series of financial crises and its effect on Islamic finance. In order to ease the readers' understanding, we highlight the benefits of Islamic finance and Islamisation of the conventional financial system in Malaysia, being one of the leaders in Islamic finance.

The paper proceeds as follows. Section 15.2 discusses the financial crisis series and the impact on the financial system. This is followed by the Islamic finance epidemic around the globe with the rise of an underserved Muslim population. Section 15.4 continues with the Islamisation of the conventional financial system in Malaysia. Section 15.5 concludes.

15.2 Financial Crises

Financial crisis refers to disruptions in financial markets causing constraint to the flow of credit to families and businesses, and consequently, having an adverse effect on the real economy of goods and services. It is generally used to describe a variety of situations in which investors unexpectedly lose a substantial amount of their investments, and financial institutions suddenly lose significant proportion of their value [1]. Financial crisis may include stock market crashes, financial bubbles, currency crisis and sovereign defaults. In order to understand the causes and consequences of financial crisis, we provide Table 15.1 below:

The global financial crisis and other similar crises dating back to the Great Depression in 1930 highlighted the fragility of the western capitalist system and the free market economy. Financial crises have occurred with increasing frequency since the advent of financial liberalisation and deregulation in the 1970s [2]. Furthermore, Abdullah and Chee [3] revealed that the three recent major global economic crises in the conventional system—the 1973 oil shock, 9/11 and the 2008 subprime crisis—contributed to the growth of Islamic finance. Each economic bombshell led to the Islamic finance being searched and demanded by both Muslims and non-Muslims. Between 1970 and 2007, there were 124 banking and financial crises worldwide, whereas between the 1940s and the 1970s, when banking was regulated and capital flows were controlled, such crises were less frequent [2].

The 2007–2008 financial crises can be subdivided into three phases. The first phase was the decline in US real estate price that drew attention to subprime loans.

Table 15.1 Possible causes of financial crisis, its description and the consequence. (Source: [1])

Causes of financial crisis	Description	Consequence
Leverage	Borrowing to finance investment	Bubble that leads to bankruptcy
Asset–liability mismatch	The disparity between a bank’s deposits and its long-term assets leads to the inability of a bank to renew short-term debt it used to finance long-term investments in mortgage securities	Bank runs
Regulatory failure	Improper regulatory control: 1. Insufficient regulation which results in lack of transparency and makes it possible for financial institutions to operate without having sufficient assets in meeting contractual obligations. 2. Excessive regulations that require banks to increase their capital when risks rise leading to substantial decrease in lending when capital is in short supply.	1. Excessive risk-taking (2008 financial crisis) 2. Potential deterioration of financial crisis
Money supply	Uncontrolled printing of paper money that is not backed by real asset/commodity	Higher inflation
Contagion	Where the failure of one particular financial institution to meet its financial obligations (due to lack of liquidity, bad loans or a sudden withdrawal of savings) causes other financial institutions to be unable to meet their financial obligations when due. Such a failure may cause damage to many other institutions and threatens the stability of financial markets.	Systemic risk
Fraud, corruption and greed	Enticing depositors through misleading claims about their investment strategies and manipulating information. 1. Creating financial assets without any real economic activity 2. Extreme economic greed overrides basic ethical consideration in investments.	Subprime mortgage crisis and collapse of financial institutions

It turned out through the miracle of securitisation onto the balance sheets of major international financial institutions. The second phase involved losses suffered by such institutions triggering claims for which major Wall Street firms and other companies such as insurer AIG were utterly unprepared. Through highly lucrative and unregulated credit derivatives, high-flying financial firms had in effect insured countless institutions against defaults. As the world's leading global financial institutions discovered the time-bombs on their balance sheet (toxic assets and unfunded liabilities), they realised that they were basically insolvent; the ensuing credit freeze caused a global financial meltdown which soon spread to the real economy. The third phase was the global economic recession, which would have turned into a depression if not for massive government intervention worldwide [4].

The conventional view holds that the current global financial crisis was caused by extraordinarily high liquidity, reckless lending practices and rapid pace of financial engineering, which in turn created complex and opaque financial instruments used for risk transfer [1]. Thus, a demand for a more viable alternative arises especially from the fallout of the subprime crash and the wider economic [5]. This had opened the door for Islamic finance in view that the traditional financial system could not sustain the financial crises impact. By the time of the 2008 financial meltdown, Islamic finance had become part of the mainstream of global economy [4]. The limited impact of the global financial crisis on Islamic financial institutions (IFIs) should be learnt and precautionary measures should be taken in order to make it more resilient to a similar crisis.

The breakdown of the lender–borrower relationship together with the lack of transparency in asset prices, particularly in the structured credit instruments market had been viewed as a real test of the resilience of the Islamic financial system. It is also evidence that the Islamic financial system is able to present itself as a more reliable alternative to the conventional financial system. This is supported by the Islamic financial scholars and practitioners' view that the global financial crisis, in reality, is a crisis of failed morality [6].

Islamic finance has risen as Muslims around the world is now concern on the religion. The *maqasid shari'ah* (objective of Islamic law) requires IFIs to comply with the standards of virtue and moral consciousness that have been advocated by the *shari'ah* [7], which expects a balance, upheld by firms, in relation to the rights and responsibilities of the individual and of society [8]. As such, the many prohibitions established by the *shari'ah* should be treated with the aim of providing a level playing field in order to protect the interests of everyone involved, as well as creating the harmonious society that has been envisioned by the *maqasid shari'ah*. While the global banking industry is facing profound difficulties of closures and bankruptcies, Islamic banking defies the trend by embarking on new global undertakings [1].

“Islamic finance is seen as a way of opening capital and credit markets, enhancing competition and innovation, fostering social inclusion, and promoting greater engagement and integration in the Asia Pacific”, said Bernie Ripoll, the parliamentary secretary to the treasurer and member of the Australian Labor Party during a 2012 forum in Melbourne. More importantly, the *shari'ah* prohibition on

highly speculative activities not only helps to protect the economy against abuses and distortions but also forges a closer link between financial activity and the real economy. The victim of bullish economies since the 2009 global credit crisis, i.e. Australia, takes to Islamic finance and appreciates its value in the country's financial and economic system. The introduction of Islamic finance products into the domestic market was a way to open Australia's financial services sector, and economy, to new opportunities for growth [9].

Islamic banking presents the West with an opportunity and concludes that Islamic banking and finance is in the West to stay and that the West should promote Islamic banking and finance. On top of that, a number of new Islamic banks had been formed, which extended their operations into new countries such as Botswana, Iraq, Kenya, Syria and South Africa. Germany, France and Japan, amongst other non-Muslim countries, have recognised the potential contribution of Islamic banking and finance towards restoring credibility and stability to the international financial market [1].

15.3 Islamic Financial System Epidemic

Financial system refers to a system that allows the transfer of money between depositors/customers and borrowers. Gurusamy [10] described the financial system as "*a set of complex and closely interconnected financial institutions, markets, instruments, services, practices, and transactions*". While Allen and Gale [11] mention that, "*Financial systems are crucial to the allocation of resources in a modern economy. They channel household savings to the corporate sector and allocate investment funds among firms; they allow intertemporal smoothing of consumption by households and expenditures by firms; and they enable households and firms to share risks. These functions are common to the financial systems of most developed economies. Yet the form of these financial systems varies widely.*"

It is reported that the oldest existing bank in the world is Italy's Banca Monte dei Paschi di Siena, which was founded in 1472. It was originally formed to make loans to the poor out of charity. Citizens of Siena would put up the income of the land as guarantee against loans for farming and city infrastructure. As of today, the bank has branches throughout Italy [3].

15.3.1 Underserved Muslim Population

According to the CIA World Factbook, there are 1.4 billion Muslims representing over 21% of the world population of 6.8 billion. They are currently being underserved and want to be served. Many Muslims who have had to rely on conventional finance would surely like to consider Islamic finance, as would non-Muslims who are looking to diversify their choices and fulfil their ethical values. Islamic finance

extends choice and enables Muslim to conduct their financial affairs in a manner consistent with their beliefs and values [12].

As for the non-Muslims, Islamic finance is appealing because it is based on ethical principles that can be appreciated by everyone. Many non-Muslims use Islamic finance to satisfy their sense of social responsibility. Non-Muslims find the cooperative nature of Islamic finance very much aligned to that of conventional cooperative societies.

15.3.2 Islamic Economic and Financial System

The Islamic economic and financial system is anchored on universal honourable values, ideals and morals—honesty, credibility, transparency, cooperation and solidarity. These fundamentals values uphold stability, security and safety in any financial transactions. As *shari'ah* prohibits any economic and financial transactions involving *riba'*, lying, gambling, cheating, unsubstantial risk or uncertainty, monopoly, exploitation, greed, unfairness and injustice, it could be worth mentioning that Islamic finance is ethical and is the right way of doing business [13].

Islamic economic principles are founded on the basis of justice, equity and welfare. The aim is to establish an all-encompassing solace minus the plague of unemployment, while at the same time maintaining the economy at an optimum growth rate [5]. Thus, the Islamic financial system may and will serve to circumvent credit crunch, or on a larger scale, a global financial crisis as the IFIs operate on the principle of partnership between the depositors/customers and the banks as the manager of the funds. It is, therefore, imperative that Islamic finance be underlined with social commitment as guided by *maqasid shari'ah*.

Islamic finance had been gaining its momentum since the 1970s mainly due to the accumulated petro-dollars in Arab countries. It was thought in the West that respecting Islamic principles in finance would attract wealthy Arab investors [14]. The critical turning point of Islamic finance was due to the collapse of the conventional financial system based on interest. It was sought that Islamic finance is more efficient, equitable and even a sustainable form of finance. Islam prohibits interest-based transactions but encourages business and trade activities that generate fair and legitimate profit. As linkages between financial flow and productivity in Islamic finance exist, it moves away the potential risks resulting from excess leverage and speculative financial activities. The fundamental principle of profit and risk sharing of Islamic finance requires a high level of disclosure and transparency. These disclosures allow the market to assign appropriate risk premiums to companies, thereby enhancing the potential for market discipline to take effect. This features as required by *shari'ah* provide built-in checks and balances which serve to ensure Islamic finance stability.

These and more features of Islamic finance had caused Islamic finance to transform and grow tremendously since the year 2000. It is reported as one of the fastest growing financial markets over the last 5 years and is expected to continue as

Muslims and non-Muslims realise the benefit of Islamic finance over the traditional form of financing.

The evolution of Islamic finance is evident in four dimensions. Firstly, Islamic finance is regarded as a competitive form of financial intermediation with significant participation by non-Muslims. Secondly, the emergence of diverse IFIs and the development of Islamic finance markets have expanded to include private equity, project finance, the origination and issuance of *sukuk*, funds, assets and wealth management activities [14]. Thirdly, significant enhancement in the regulatory and legal framework of Islamic finance has ensured the growth and development of Islamic finance industry. Lastly, the international dimension of Islamic finance has rapidly gained significance as it evolves to be another important part of the international financial system and poised to contribute to greater global financial integration.

Moreover, the three recent series of major global economic crises in the conventional system contributed to the growth of Islamic finance, by forcing Muslims and non-Muslims to search for alternatives to conventional banking and finance.

15.3.3 Islamic Finance Outlook

Islamic finance has reached the mainstream as it now has an array of products and services. The adoption of international standards has increased the use and acceptance of Islamic finance around the world. Many countries with a minority Muslim population consider Islamic finance an increasingly important part of their financial systems.

Globally, Islamic finance is growing at a rate of 15–20% a year. Double digit growths are expected from the Islamic finance, being that many Muslims are underserved; thus, untapped potential exists especially in many Muslim countries. The global growth of Islamic finance continued its trajectory in 2011 despite the uncertainty in the world's financial market [15]. The Economist reported that Islamic assets under management should rise to US\$ 1 trillion in 2010 from US\$ 700 billion in 2008 [3]. Worldwide *shari'ah*-compliant assets stood at about US\$ 1.4 trillion at year end 2011, and this is likely to continue in the coming 2–3 years.

Islamic banks are the main providers of *shari'ah*-compliant services, and are being entrusted with the majority of Islamic capital/financial assets. In the early 2000s, it was regarded as a niche market in most jurisdictions with only a few institutions offering basic depository and financing instruments. Now, the Islamic banking system is mushrooming throughout the world and will continue to grow to the point of becoming a parallel financial system for investors seeking an alternative to the existing global interest-based capital market dominated by Western banks.

The growing sophisticated of existing players combining with new entrants is likely to pave the way for the coming age of a truly global Islamic finance industry. The Ernst & Young World Islamic Banking Competitiveness Report, which was launched in December 2009 at the 19th Annual World Islamic Banking Conference (WIBC Global), noted that Islamic banking industry is growing 50% faster than the

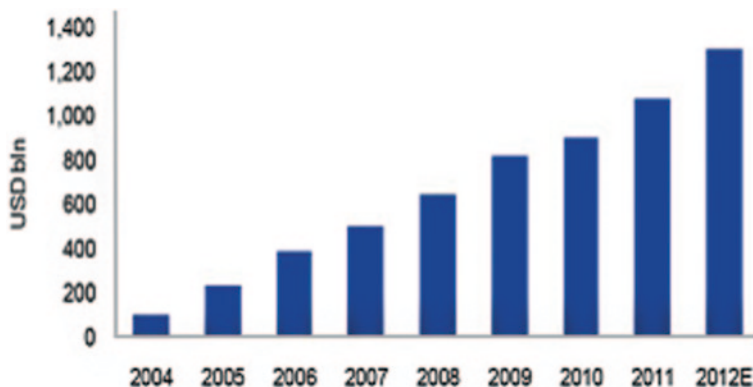


Fig. 15.1 Islamic banking assets growth trend. (Source: Regulatory authorities, Bloomberg, Zawya, central banks, individual institutions, corporate communications, The Banker, KFHR [16])

overall banking sector in several core markets. The global Islamic banking assets with commercial banks now surpassing the US\$ 1.5 trillion mark and estimates projecting the industry to hit the US\$ 2 trillion mark by 2015, it is undoubtedly one of the fastest growing components of the global financial system. Globally, the industry continues to record robust growth with reports indicating Saudi Arabia, Malaysia and the UAE as the top three markets for Islamic assets.

Islamic banking has been the major driver of industry growth over the past decades, taking the largest share of financial assets. A sample of 50 Islamic banks across 11 countries in Fig. 15.1 shows that the Islamic banking industry has witnessed significant growth over recent years. The value of total assets with these Islamic banking reached US\$ 411.4 billion at the end of 2011, which represents 63.9% of the estimated total banking assets in 2011. Total assets with these Islamic banks have grown at a compound annual growth rate (CAGR) of 16.6% between 2007 and 2011 [16].

During the global financial crisis period, despite the turmoil across financial markets, Islamic banks remained relatively resilient, still able to grow at a significant pace. The balance sheets of Islamic banks were relatively unscathed as compared to their conventional peers due to the fact that demand for financial products has been essentially domestic-driven, which was helped further by banks' high capitalisation and ample liquidity that provided a relatively higher degree of confidence to counterparties. An IMF working paper entitled "The Effects of the Global crisis on Islamic and Conventional Banks: A Comparative Study" highlighted similar finding, including that factors related to Islamic banks' business model helped limit the adverse impact on profitability in 2008. Moreover, Islamic banks' credit and assets growth performed better than conventional banks. Despite this, the paper highlighted that weakness in the risk management system of some Islamic banks led to greater declines in profitability in 2009 than experienced by conventional banks.

Following the global financial crisis, Islamic banks in Asia have been able to increase their financing portfolios substantially and develop the retail Islamic banking sector to offer a more diverse range of products and services.

The growth in Islamic finance comes mainly from the Gulf Cooperation Council (GCC) and Asia, which combined, form half of the industries. Powering the Islamic banking industry is the existence of stable demand of Muslim countries with predominantly young and fast-growing populations. Thus, it is reasonable to project a CAGR of about 20% over the period 2011–2015. The prospects of Islamic finance other than the banking sector include takaful, which was only available in the late 1970s, Islamic fund industry and assets under *shari'ah*-compliant management.

The positive growth of Islamic finance from various corners of the world in the time of crisis could be interpreted as a vote of confidence in the Islamic financial system. Economists and politicians envisage that the current global financial crisis is set to create a “new international economic order” and to restructure the global economic institutions [1]. The opportunities and challenges for Islamic finance are enormous and can be concluded on three different views—theoretical, operational and implementational. These challenges will have significant impact towards future development and direction of Islamic financial system.

15.4 Islamisation of Malaysian Conventional Financial System

The *Qur'an* encourages Muslims to engage in trade and invest in their efforts for Allah SWT to ensure abundant returns. It was only in 1963 that the first modern Islamic bank named Mit Ghamr, a savings bank, was set up in Egypt. The first Islamic financial institution in Asia was Malaysia's Muslim Pilgrims Savings Corporation (Lembaga Tabung Haji) set up in 1963 to assist Muslims for performing hajj [3].

15.4.1 What is Islamic Finance?

Islamic finance offers similar services as conventional finance: taking deposits, giving loans, providing trade finance, investing in financial assets and distributing insurance. Thus, Islamic banking, takaful and Islamic capital market was reformed to follow a structure similar to existing financial systems. These had given the customer, especially the Muslims, an alternative way of financing. Changing from a conventional to an Islamic way of banking, insurance and trading provide the Muslims ways to fulfil their obligation as Muslims. On the other hand, non-Muslims are also benefiting as they are allowed to choose their preferred way of doing things.

In the Islamic financial system, efficiency, truth and fairness are equally important. What is most crucial is the conformity to Islamic ethics [3]. Thus, the goal of an Islamic economic system is to ensure sufficiency and peace, which involves eradicating hunger and fear from society and making sure that individual's basic needs are fulfilled. Islamic banking is the major contributor to Islamic finance. Figure 15.2 depicts a theoretically simplified representation of an ideal Islamic bank.

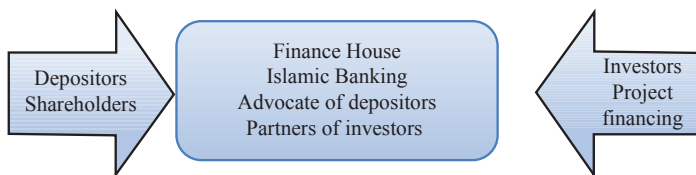


Fig. 15.2 An ideal Islamic bank

In a nutshell, an Islamic bank is a finance house that sources its funds from depositors and shareholders and mobilises the funds into projects in partnership with customers/investors. Profits and losses from the projects are shared with the customers/investors and also the capital providers. Theoretically, an Islamic bank shares all risks on the assets side, and shares project financing with depositors and shareholders. Hence, depositors are not lenders, and customers are not borrowers [17]. In its daily operations, an Islamic bank is expected to consider the interest of the society as a whole, betterment of the society as stated in *maqasid shari'ah*.

15.4.2 Why Islamic Finance?

Islamic finance is an alternative form of finance which is based on *shari'ah*. *Shari'ah* represents the idea that all human beings and governments are subject to justice under the law, and extends to everything from business contracts and marriage to punishment and worshipping.

“*Maqasid shari'ah* of the Islamic law highlights rationales, purposes and common good in the Islamic rulings and stresses their importance, while basing itself on the Islamic scripts and observing the Islamic faith.” [18]. The ultimate objective of *maqasid shari'ah* is to realise and secure the general good, i.e. to serve the interests/welfare of all human beings and to save them from harm and injury.

When discussing Islamic finance, one must ensure that the five key principles of Islamic finance are held true. The principles are (1) belief in divine guidance, i.e. Allah SWT and the Prophet (pbuh) (2) no excessive interest or *riba'* (3) no *haram* or impermissible activities such as gambling, alcohol and pornography (4) risk-sharing is encouraged by ensuring the credit-worthiness of the project as well as the financial viability and (5) financing is based on real assets which help to curb excessive speculation and credit expansion. These principles in turn will enhance transparency and promote mutual trust and fairness in dealings. The application of the principles of Islamic finance could help alleviate poverty and stabilise economies at the same time [3].

Islamic finance goals go far beyond monetary indicators and growth as it promotes ethics, responsibility and market discipline [19]. Islamic finance should not be judged by its quantitative impact on global markets, but more importantly by the quality of the service and its effect on the perceptions and thinking of global financial players [12].

15.4.3 *Islamisation of Malaysian Conventional Financial System*

Malaysia and other Southeast Asian countries have experienced two major financial crises, the first being the Asian financial crisis (1997–1999), and the second, an offshoot of the recent global financial crisis that originated in the USA [2]. The second crisis is more about trade and gross domestic product (GDP) growth rather than a financial crisis, as most of the Asian countries including Malaysia rebuilt their banking and financial sector after the crisis to be more resilient.

The Malaysian financial system comprises of a diversified range of institutions to serve the more varied and complex needs of the domestic economy. The financial system consists of the conventional financial system and the Islamic financial system which coexists and operates in parallel. The government, Ministry of Finance and Bank Negara Malaysia (BNM) play a major role in assuring that Islamic finance is developed and nurtured in the country. There were basically four steps involved in making this “Islamisation” event a reality.

The first step taken was to allow the financial institution to set up an Islamic window. An Islamic window is a unit within a conventional bank through which *shari'ah*-compliant instruments are formulated and distributed. To induce banks and society to accept the new idea, three operational functions were put in place: ensuring *shari'ah* compliance, segregation of funds from the conventional and accounting standards for Islamic transactions introduced by the Accounting and Auditing Organisation for Islamic Financial Institutions (AAOIFI).

As the activities of the Islamic windows expanded, the financial institutions were encouraged to establish a full-fledged Islamic bank. This is done to ensure the operations are separated from the conventional bank by creating a subsidiary or converting to a full-fledged Islamic bank. This resulted in full-fledged Islamic bank increases to 16 in year 2012.

The third step is to open non-bank financial institutions which include takaful, fund management, derivatives instruments, and money market securities. The non-bank financial institutions will assist and enhance the Islamic financial system in offering a complete set of financial services that is based on *shari'ah* principles.

Finally, internationalising Islamic infrastructure helps in promoting greater integration with the global Islamic and conventional financial systems. International trade is one of the main beneficiaries of financial integration as it facilitates the efficient exchange of capital, goods and services across geographical borders [3].

15.5 Conclusion and Moving Forward

The world financial system based on capitalism is becoming increasingly fragile and unstable. Asset inflation has been the driver of economic boom and bust and was the main cause of global financial crises as opposed to consumer price inflation [2]. The series of financial crises had increased the desire for Islamic finance to grow as it was presented as a panacea in curing economic ills. Although Islamic

finance is not immune from the crises' effect, it was agreed that Islamic finance dealt with them better as compared to the traditional and capitalist way of financing.

As growth and demand for Islamic finance become prominent, players, regulators and government need to assess and foresee future potential, especially the untapped potential which could materialise over the years. In order for Islamic financial system to be on the same playing field with the conventional one, its international infrastructure will need to be strengthened. This is crucial as *shari'ah* is open to interpretation, thus allowing Islamic finance laws and regulations to vary across countries. Therefore, it is difficult to standardise Islamic finance activity. International standards in various disciplines (i.e. accounting, documentation, governance and product structures) help to harmonise practices across countries and to increase the marketability and acceptance of Islamic products around the world. Further standardisation is likely to shape the future Islamic finance industry.

Islamic finance shall grow stronger in terms of social impact and in terms of substance if true Islamic principles and *maqasid shari'ah* are being instilled. There exists an unprecedented opportunity to open up the details of Islamic economic system as well as the solutions that can be proffered by Islamic finance for some problems in the current financial crisis. As Islam and *shari'ah* constitute a comprehensive system in fulfilling society's basic needs, its principles and tenets should be followed strictly. Market players, economists, analysts, financial experts and society will need to be fed with the universal Islamic values that expound a complete way of life, socially, in trade and finance, consumerism, in this world and hereafter. History has proved that Islam has the capacity to deliver and succeed in providing a viable economic system. And it is our hope that one day Islamic products can stop "imitating" conventional products.

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Chapter 16

Significant Aspects of Wedding Ring Designs Among Malay Couples in the Malaysian Jewellery Industry

Nur Balqis Hakim Bt Lokman Hakim

Abstract The significance of wedding rings is strongly influenced by the culture of the people. In the Malaysian culture, rings are perceived as a gift from the groom to the bride and vice versa, unlike wedding rings in the western culture which are perceived as a symbol of one's marital status. Thus, the design of a wedding ring or a pair of them differs according to these perceptions. Malaysia, being a country that once upon a time was colonized by Western powers has moulded a local culture with a lot of assimilations from the colonization. Aside from that, immigrants from India and China which made their way into the country have also influenced the culture of the Malays. These assimilations include the wedding cultures of the Malays. The openness for assimilations is, however, limited by the margin of good and bad. This publication seeks to determine the significance of wedding rings within the Malay culture currently which may have been assimilated with other cultures, specifically the Western. The significance will strongly affect the designs of wedding rings that will be in demand. This will help in constructing a prediction pattern for the jewellery designers in designing and marketing to enhance the local jewellery industry. The method of conducting this study is descriptive research and what to observe is the current Malay culture, the wedding culture and also the perception of the society towards the significance of wedding rings. For this, the researcher will conduct a survey to gather information from samples of the target population.

Keywords Wedding rings · Significance · Malay culture · Assimilations

16.1 Wedding Ring Designs

In Malaysia, wedding rings are available in various designs ranging from the traditional look to contemporary ideas. The idea of wedding rings in Western culture is to be in pairs, but not in the Malay culture, where wedding rings do not come in pairs. The designs for both bride and groom rings do not match, and for some, the ring is only given by the groom to the bride and not vice versa. This happens

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Fig. 16.1 Yellow gold pattern-forged ring



because in the Western culture, the idea of wedding rings is not mere wedding gifts. They are a sign of one's marital status. In the Malay culture, it is more common as a gift rather than a sign of one's marital status. A filled ring finger does not necessarily mean being married, and the common idea of a wedding band does not exist in the Malay culture. Being in a multiracial country, the Malays are exposed to many cultures, and thus, the culture of the wedding ring exchange ceremony might be influenced by other cultures.

The design in this context refers to the pattern or the physical look of a product, specifically a metal product. Scoping down to jewellery, there are a lot of traditional designs, differing by culture and trends. For example, the norm of wedding rings for the Malays is usually yellow gold pattern-forged rings with floral or geometric motifs (Fig. 16.1). But the development in the jewellery industry paved the way for more contemporary design, thus giving a wide choice for consumers to be creative with jewellery wearing, specifically for wedding ceremonies, which is strongly influenced by culture. The metal products in Malaysia have expanded and developed, and so have the wedding ring designs.

16.1.1 Wedding Trends in Current Generations

The design of wedding rings in the Malaysian market is a current concern because the trend will change when the new generation changes. This is closely related to the development of culture. Wedding rings are an object of culture, and thus, the changes in its design will set a new direction. This is going to continue in the future and this study will hypothetically determine the direction of how wedding ring designs will be.

In regards to the designs of wedding rings, it affects the young generation of the Malays, aged 20–30. This is because as of July 2012, the average age of (first) marriage for males and females in Malaysia is 28 and 25 respectively. Their choices of designs will determine the significance of wedding rings. Their choices will be

a trendsetter for the next generation and will, in the long run, create a neo-Malay culture. As the majority in consumers of wedding rings, they have an important role to define the significance of wedding ring designs in the Malaysian market.

This study will substantiate the Malay wedding tradition that is currently upheld by the society. Changes in wedding cultures are beginning to arise, and the context of wedding ring designs is an important element of the changes. The existing knowledge of the Malay wedding culture will be revised with the evidence of new cultures in the current generation.

The variables that will be measured are the age of the population, which in this case is 20–30 years old, the conservative Malay wedding tradition and the influences from other cultures of wedding tradition assimilated in our society, the traditional designs of wedding rings and the current designs of wedding rings. The relationship of current wedding culture in the Malay society with the current trends of wedding ring designs is to be examined.

16.2 Generalization of Malaysian Wedding Cultures

In Malaysia, there are several classes of jewelleries which are related with marriage culture, and are different in each racial society: Malay, Chinese, Indians etc. It is also influenced by the integration of different religions: Islam, Christianity, Hinduism, Buddhism etc. This is because a marriage ceremony is a significant event not only in the cultural values but also dominantly guided by the preaching of one's religion. For example, the Christian bride and groom will exchange rings in the church after their oath. Traditionally, Indians require a piece of necklace for the bride as a symbol of marriage.

Commonly in the Muslim Malay culture, the three main functions of rings in the context of wedding ceremony (Fig. 16.2) are 'merisik' (proposal), 'bertunang' (engagement), and 'akad' (marriage). 'Merisik' is the initial step of the groom's family to ask for a girl's hand. The usual ring for this event is a pattern-forged ('belah rotan') gold ring. As for the engagement, there's no exact law or trend for the ring designs. It depends on how much the groom-to-be would want to spend on it. Both of these rings are only given to the bride and no exchange is required.

The final one is the main wedding ring which is for the 'akad'. An 'akad' is the ceremony of marriage itself, handing over the bride as a wife to be the groom's responsibility. Some couples choose to exchange rings, but of no specific matching band design. The ring given to the bride is actually a gift. Some don't even give rings, but a bracelet or a necklace. But in the current trend, the matching set wedding ring designs have set their place in the Malaysian market and seem to get positive response.

The culture of ring exchange is seen as a symbol of a promise by both the bride and groom to spend their lives with each other for eternity. The wedding ring is a sign of one's marital status, to show the society that this particular person is no longer available. This idea which originated from the West is not a negative culture, but

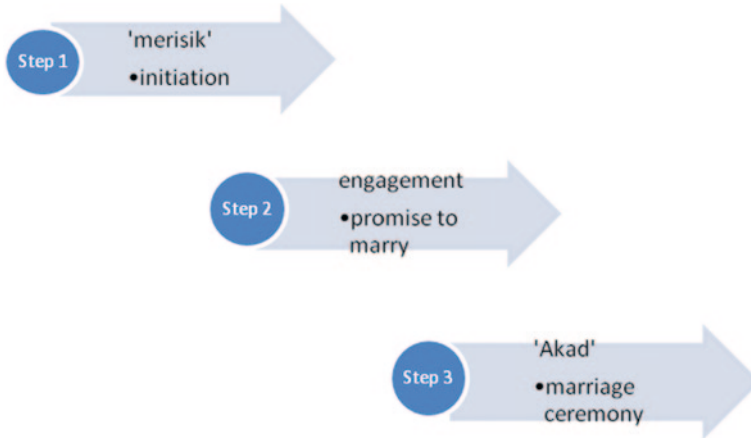


Fig. 16.2 Processes of wedding ceremony

in fact has a logical sentimental purpose. There is no harm for the Malays to adapt this idea, and the advertising and media agents have been a great influence to instil that idea into our society.

This research is conducted to determine the significance of wedding rings in Malaysia from the perspective of the Malay society. The study will determine the consumer demand of wedding rings, and the current demand seems to have evolved. Vast exposure to many other cultures of the world changes the perception and importance of wedding rings in the Malay marriage ceremony. This will also affect the significance of wedding ring designs that will be available for the current market.

16.2.1 Wedding Rings to Denote Marital Status

In the USA, engagement and wedding rings are used to denote status, with the engagement ring seen as a promise of marriage (Fig. 16.3), and the wedding ring worn to indicate a formal (and usually legal) alliance with another person [1] (Fig. 16.4). This is a famous Western culture that has been adopted in most Western societies.

Based on this finding, we can see that wedding rings are not a mere gift from the groom to the bride and vice versa, it is a symbol of eternity and commitment. The symbolism is understood by the common perception of the society that if a woman wears a (usually solitaire) ring on her left hand ring finger, then it's an engagement ring, and if a gold band is worn, then it means she's married. This is a culture which began in the Western society, but a tradition of great value for any other societies to adapt to. Some women prefer to wear both engagement and wedding rings together (Fig. 16.5). This substantiates the credibility of the rings to be a universally understood denotement of one's marital status.

Fig. 16.3 Solitaire ring**Fig. 16.4** Wedding bands

16.2.2 Wedding Rings as Communication Objects

Object communication extends beyond clothing to other bodily adornments like the wedding rings or bind to indicate marital status [2]. In this paper, object communications are defined as objects that were worn or used by communicators and served as something that were able to tell receivers about that particular person. Attire is said to be the most common form of communication object as an assessment of people's personality traits.

We discussed three stages earlier: 'merisik', engagement and 'akad'. The significance of a ring is dispersed into these three purposes. Because of the two rings prior to the 'akad', some couples choose to get a bracelet or a necklace instead for that

Fig. 16.5 Engagement ring and wedding ring worn together



main ceremony. In this context, the ring or bracelet or necklace is considered as a part of the dowry or gift from the groom to the bride. So this defeats the purpose of the object as a communication object because with this culture, a piece of jewellery can be anything, worn for any purpose.

16.2.3 Three Stages of Marital Status

There are three stages in the evolution of the human marital status as written by the institutional writes: (1) wife capture, (2) purchase, and (3) mutual assent [3]. The family of the suitor will send to the family of the chosen one ring of gold, silver or copper according to its circumstances, an unmistakable sign that the family begs the hand of the woman. This is a method of purchase marriage epoch, and then the father of the bride will decide the compensation and the condition of the wedding as the essential preliminaries of the purchase marriage [3].

The existence of ring-giving culture in the Malay marriage tradition is proven by these findings. It is stated that ring-giving is an unmistakable sign that the family is asking for the girl's hand in marriage. Regardless of the design of the ring, or the material—gold, silver, or copper—it works as an unmistakable sign because only the family and the woman are the important parties to understand. This is also in the context of the ring as a symbol (of engagement), but the symbol is only given by the man's family to the girl's family. This method has emerged as a Malay cultural tradition in marriage, and the design and material of a ring evolved in accordance to requests by the woman's party. The symbolism is still at stake, but it is important only to be understood by the associated parties. In contrast, in Western culture, the symbolism of wedding ring is to be understood by everyone in the society.

16.2.4 Significance of Wedding Rings as a Symbol of Status

If we consider the mentality of the Malays, by nature they love to adopt symbolism in their lives, for example, a 'keris' as a symbol of power and strength. Thus, they are more prone to adopt the significance of wedding rings as a sign of one's marital status. This affects the design of wedding rings in the current market to make it a symbol of marriage, universally understood.

To imply that a ring is a wedding ring, and as a portrayal of one's marital status, the ring has to be of a specific design or worn in a specific system. For example, like in Western culture, a pair of wedding rings is designed, where each one is a plain gold band worn on the ring finger on the left hand.

Wedding rings are to be perceived as an object that speaks for itself, meaning, without having to declare, a person may portray the ring as his/her marital statement.

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Chapter 17

The Relationship Among Academic Achievement, General Life Satisfaction and General Health

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and Sharfizie Mohd Sharip

Abstract The vision of Universiti Teknologi MARA (UiTM) is to establish UiTM as a premier university of outstanding scholarship and academic excellence capable of providing leadership to Bumiputras's dynamic involvement in all professional fields of world-class standards. In line with this, it is crucial to determine and recognise the features related to academic excellence which play a big role in determining the academic success of students. Rather than examining the well-studied features such as time management and campus facilities, this research aims to study something that is seldom discussed: general life satisfaction and general health. Questionnaires were used to solicit data from the respondents which consist of semester three and four students, from various programmes, of UiTM Negeri Sembilan. A total observation of 406 was recorded. The collected data was analysed through Path Diagram Analysis using SPSS and AMOS software. The data in this study meet the required assumption for statistical analysis and do not depart from normality as well as it provides a reliable measure of internal consistency. This study also suggests that there is a significant hypothesised path in the model. Thus, general life satisfaction and general health have a significant relationship with academic achievement (CGPA).

Keywords Life satisfaction · Health · Academic achievement · Path diagram analysis · Regression · CGPA

17.1 Introduction

Education plays a vital role in contributing to a country's development. The same situation can be observed in Malaysia where education is emphasised as an important investment, especially on the human capital front. In line with this, Universiti Teknologi MARA (UiTM) was established with the purpose of enhancing

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educational opportunities among Bumiputra. As an institution that emphasises quality and excellence, UiTM has taken several steps in ensuring the quality of its graduates. Hence, students' academic achievement will determine the continuation of the nation's growth and development.

A study by Zaiton Shariff et al. [29] revealed that Bumiputra students' performances at three public universities are lower compared to the non-Bumiputra students. To illustrate, there are only two Bumiputra students at Universiti Utara Malaysia, as compared to 137 non-Bumiputra students, awarded first-class honours. Most Bumiputra students achieved second-class honours and below (7,131 out of 8,773 Bumiputra students). Furthermore, only 717 out of 4,089 non-Bumiputra students achieved second-class honours and below. As for Universiti Malaya, only 20% of the first-class honours achievers are Bumiputras. At Universiti Teknologi Malaysia, out of the 6,766-strong Bumiputra population, only 28 achieved first-class honours. However, out of the 3,068-strong non-Bumiputra population, 301 achieved first-class honours. Many Bumiputra only obtained the second-class and the third-class honours. The performance of students at UiTM is quite similar to the Bumiputra students from other universities. Only a minimum percentage of them achieved the first-class honours. Many students at UiTM seem to be less motivated and less interested in getting good results except for only getting a diploma or degree. Most of them are easily satisfied with what they achieve and are not serious in getting quality education.

Being aware of this issue, the study will examine the factors that contribute to the students' academic achievement (CGPA) which is closely related to the students' experience itself. Instead of looking at students' satisfaction with their campus, lecturers, time management and other things, this study will examine factors that have not been researched extensively, namely, general life satisfaction and general health.

17.1.1 Literature Review

Academic achievement can be defined as an arrangement of elements including personal, institutional and demographic variables. According to Flashman [13], academic achievement is a main factor that is decisive of future educational and prospect in occupational success. On the other hand, Steven et al. [27] stated that academic achievement is a cumulative function of current and prior family, community and school experiences, whereas Cunningham [7] explained that academic achievement is performance on academic achievement tests. In other words, academic achievement is very significant with several other aspects such as health, students' satisfaction, time management and general wellbeing. It was supported by Hanson, Austin and Zheng [17] when they stated a reason for low level of achievement among students is when the basic needs such as wellbeing, health and behavioral problems are not addressed accordingly.

The academic achievement of a student is always associated with many components of a learning environment. Academic performance is typically assessed by the

use of teacher ratings, tests, and exams. Low Kuek Long et al. [20] stated in their study that since the potential outcomes or effects of education are many and varied, educational achievement measured by test score is still widely used to evaluate educational programmes. The public, parents and students generally value higher test scores because they are normally the yardstick for selecting individuals to further education at all levels of education. In the public sector, academic achievements or test scores are also used as a basis of selection for employment and training. It is therefore not surprising to find that research on the determinants of academic achievements has been mushrooming.

Norhidayah Ali et al. [4] mentioned in their study that the Cumulative Grade Point Average (CGPA) measures students' academic achievement. CGPA shows the overall students' academic performance where it considers the average of all examinations' grade for all semesters during their tenure in university. The study also mentioned that, in Malaysia, researchers evaluate the student academic performance based on CGPA [2, 3, 21]. Most of the research studies done in other countries used GPA as the measurement of academic performance [7, 8, 10, 28, 30]. GPA was utilized in the studies since they were studying the respondents' performance for a particular semester. Some other researchers used test results since studying performance for the specific subject were studied [16, 18, 32].

Students' satisfaction also contributes to better academic achievement. Sweeney and Ingram [31] define satisfaction as the perception of enjoyment and accomplishment in the learning environment, whereas Wu et al. [34] argued that satisfaction is the sum of a student's behavioural beliefs and attitudes that results from aggregating all the benefits that students receive from using the blended system. According to Graunke and Woosley [15], students' satisfaction has been associated with their academic performance as well with the certainty of their career plans. Hence, the feelings of satisfaction and content will lead to intrinsic motivation that is seen as vital to achieve better academic performance. It is because they tend to pursue challenging tasks as well having positive feelings towards the learning situation [26].

Rafidah [25] explored the factor of general health on academic performance. She suggested that most students experienced moderate levels of stress and that none of the stress factors significantly affect the academic performance of students. It can be said that this study has examined the relationship between stress factor, which considered the health and wellbeing of students, and its impact on their academic performance.

Allington [5] suggested that by improving the students' health, it will automatically increase students' ability to learn, reduce absenteeism and ultimately improve their physical fitness and mental alertness. This view was supported by Eric et al. [12], where the researchers stated that it is crucial to identify the students' health and educational progress by treating students' health conditions such as vision, hearing, and speech impairments, as well as asthma, mental disorders and more recently obesity. They also added that when students deal with common health conditions, it brings negative impacts on their ability to learn and simultaneously may affect their academic achievement.

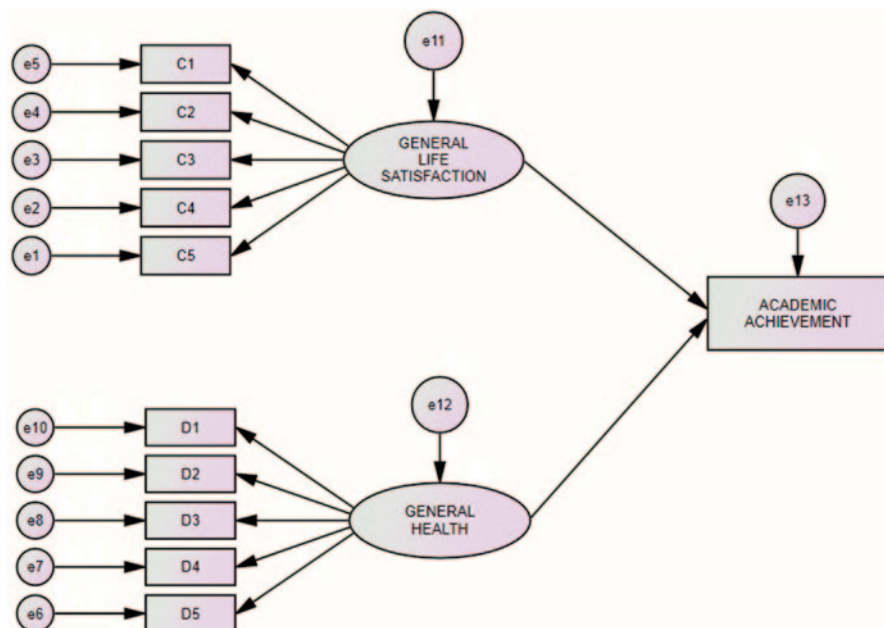


Fig. 17.1 Theoretical model

Likewise, a study by American Public Health Association [6] also stated that students who show improvement of their health and emotional wellbeing would eventually improve their academic performance. Gilman and Huebner [14] argued that wellbeing might also boost academic performance, though little is known of the academic benefits of high wellbeing.

A research by Murray et al. [22] stated that school health programs are important in order to make sure that all students are in the know about the impacts of all those programs to their academic achievement. It was supported by research conducted by Association of State and Territorial Health Officials (2002) when it stated that one of the important elements that is significant between the student’s health and achievement is academic school health education.

17.2 Methodology

This study examines the relationship among academic achievement (CGPA), general life satisfaction and general health of students in Universiti Teknologi MARA, Negeri Sembilan by using structural equation modeling. A theoretical model is shown in Fig. 17.1. A total of 428 students were involved in this study. However, the valid samples are 406 observations. The questionnaires were distributed to part four and part five students in UiTM Negeri Sembilan from various programmes. The

Table 17.1 Subscale, item and code of item

Subscale	Item	Code of Item
General life satisfaction	In most ways my life is close to my ideal	C1
	The conditions of my life are excellent	C2
	I am satisfied with life	C3
	So far I have gotten the important things I want in life	C4
	If I could live my life over, I would change almost nothing	C5
General health	I eat a healthy diet	D1
	I lead a healthy lifestyle	D2
	I am generally healthy	D3
	I feel physically fit	D4
	I get a healthy amount of sleep	D5

scoring procedure in the questionnaire follows the rule of Likert scale 1 (strongly disagree) to 5 (strongly agree). The questionnaires are divided into three parts. Part A is student's information background, followed by part B general life satisfaction and part C general health. There are five items each in Part B and C. The details of the questions are listed in Table 17.1.

Goodness-of-fit of the structural model can be measured by using Absolute Fit Index (AFI), Incremental Fit Index (IFI) and Parsimonious Fit Index (PFI). AFI measures the overall goodness-of-fit for both the structural and measurement model. On the other hand, ICI measures goodness-of-fit that compare the current model to a specified null model to determine the degree of improvement over the null model. Meanwhile PFI measures the overall goodness-of-fit, which represents the degree of fit per estimated coefficient. It attempts to correct any 'over-fitting' of the model and evaluates the parsimony of the model compared to goodness-of-fit.

Path coefficient can be calculated by the variance of observed variables and the significance of the coefficient is estimated by using standard error of covariance between the variables. In order to test the null hypothesis two, the critical ratio (CR) will be used. The Critical ratio value is obtained by dividing the estimation of regression weights with standard error.

Each of the dimensions in the model's constructs will be developed using principal component analysis procedures with VARIMAX rotation and the selection of factor. The reliability of the study are assess using Cronbach's alpha test. The next procedure is to run regression analysis and illustrate the output using path diagram analysis.

17.3 Results

Table 17.2 shows the descriptive scores for each of the eleven items. The table also presents the mean and standard deviation. The skewness and kurtosis statistics for all variables, fall between -0.090 and 0.744 . The measure between -1 and 1

Table 17.2 Mean, standard deviation and normality statistics

	Mean statistic	Standard deviation statistic	Skewness statistic	Kurtosis statistic
CGPA	3.1198	0.46030	-0.517	0.142
C1	3.4167	0.68713	-0.241	0.572
C2	3.4667	0.72673	-0.146	0.433
C3	3.7361	0.67985	-0.366	0.536
C4	3.4889	0.76474	-0.413	0.614
C5	3.2361	0.90022	-0.368	0.093
D1	3.2250	0.80868	-0.273	0.466
D2	3.3750	0.81486	-0.446	0.405
D3	3.5583	0.79479	-0.577	0.744
D4	3.3528	0.84806	-0.331	0.404
D5	3.1750	0.92018	-0.268	-0.090

is considered normally distributed and acceptable to proceed with the parametric analysis procedure. Hence, the data in this study meets the required assumption for statistical analysis and do not depart from normality. The next step is to measure reliability by using Cronbach's alpha. The value obtained is 0.843 which is higher than 0.6 and provides a reliable measure of internal consistency.

In order to obtain the statistical measure required in this study, the AMOS model was developed. Goodness-of-fit reveals that the model is fit and consistent. The p -value for chi-square statistic, which exceeds the predetermined significant level of $p=0.05$ shows that there is no significant difference between the population and sample covariance. The chi-square value is 265.394 with degree of freedom of 43. The baseline comparison and root mean square error of approximation (RMSEA) are used for this purpose. Normed fit index, incremental fit index, and comparative fit index are 0.814, 0.840 and 0.837, respectively. The results are close to 0.90 which indicative of good fit. The value of RMSEA is 0.113. The model is significantly fit when RMSEA is more than 0.06. Thus, all values indicate a good fit between the model and the observed data.

Further analysis was conducted to identify significant paths in the model. Circles represent latent variables and rectangles represent measured variables. The numbers on arrows from latent variables to observed variables are factor loadings or regression weights. Maximum likelihood estimation was chosen because the data are normally distributed. The model with regression weight is presented in Fig. 17.2.

Table 17.3 shows the estimation of regression weights to identify significant paths in the model presented in Fig. 17.2. It appears along with standard errors, critical ratios and p -value. The p -values show a significant hypothesised path at 95% confidence level, since the predetermined significance level of $p=0.05$ value of CR is outside ± 1.96 of rejection H_0 region.

Thus, the results show that all constructs have significant relationship with their latent variables, which are general life satisfaction and general health. These latent variables also show significant relationship with academic achievement measured by CGPA.

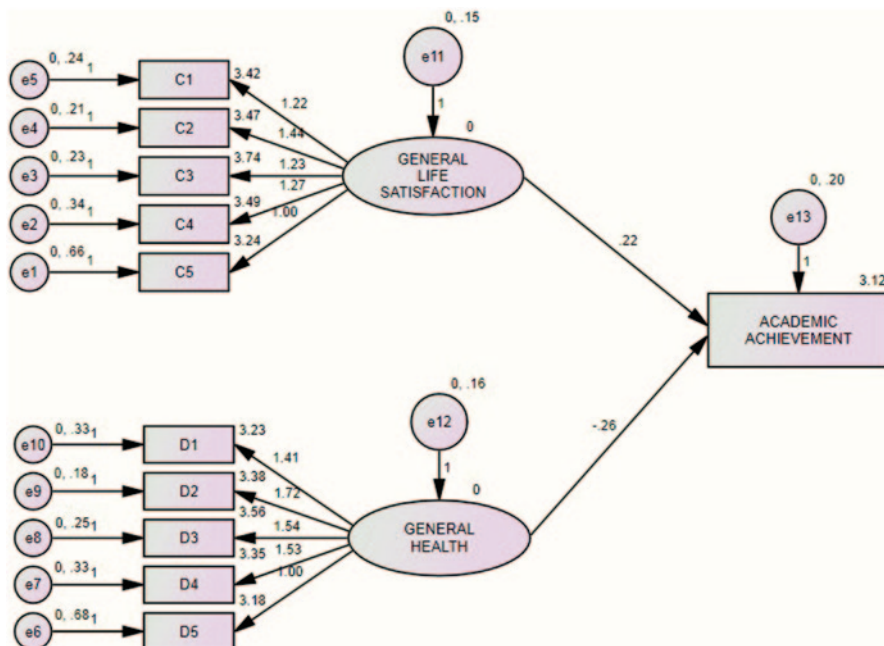


Fig. 17.2. Specification of model with estimated model parameters

17.4 Conclusion

An analysis was run using SPSS and AMOS software to find a significant path in the model. The data in this study meet the required assumption for statistical analysis and do not depart from normality and they provide a reliable measure of internal consistency. It is also found that there is a significant hypothesised path in the model. Thus, general life satisfaction and general health have a significant relationship with the academic achievement (CGPA).

Since institutions are very concerned with the students’ achievement, actions should be taken by looking at the factors that contribute to students’ achievement. In this study, it has been proved that general life satisfaction and general health are among those factors. Since the students themselves determine general life satisfaction, there is nothing much that can be done by the institutions. However, the institution can stress on general health of the students. The health of students can be increased by providing healthy food on campus. Sports facilities such as jogging track, gymnasium, tennis court and others should be provided. These facilities will help students to lead a healthy lifestyle and become generally fit. It then helps students to easily capture the learning process and increase their CGPA.

Two variables used in this study might be too general and too wide. Thus, it is recommended for the future study to specify the variables. Future research may also

Table 17.3 Maximum likelihood estimates regression weights

			Estimate	SE	CR	<i>p</i>
C5	←	General_Life_Satisfaction	1.000			
C4	←	General_Life_Satisfaction	1.274	0.181	7.051	***
C3	←	General_Life_Satisfaction	1.226	0.169	7.254	***
C2	←	General_Life_Satisfaction	1.444	0.194	7.452	***
C1	←	General_Life_Satisfaction	1.220	0.169	7.216	***
D5	←	General_Health	1.000			***
D4	←	General_Health	1.534	0.198	7.767	***
D3	←	General_Health	1.535	0.193	7.936	***
D2	←	General_Health	1.725	0.212	8.122	***
D1	←	General_Health	1.409	0.184	7.662	***
A5	←	General_Life_Satisfaction	0.215	0.073	2.966	***
A5	←	General_Health	-0.261	0.070	-3.710	***

add another factors contribute to academic achievement such as socioeconomics and parenting styles. These two factors are rarely discussed and may bring significant results.

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Chapter 18

Malay Traditional Kitchen Furniture: A Form and Function

Mohamad Hanif Abdul Wahab, Mohamad Awang, Nor Aniswati Awang Lah and Abu Bakar Abd Hamid

Abstract The purpose of this paper is to reveal the furniture in the Negeri Sembilan traditional house kitchen. The furniture is essential to determine the lifestyle, environment and social activities. Studies on the origins of the Malays enable us to understand the background and social life of traditional Malays, which eventually led to their civilization. Data analyses are focused on the kitchen area in Negeri Sembilan traditional houses, since it is the most active area in the house. The definition of furniture through an interview with experts played an important role in defining furniture categories, types and usage. The significant activities in the kitchen are analysed to define the furniture function. In conclusion, Malay furniture which exists in the kitchen of traditional Negeri Sembilan houses is categorized into three as per its function—body-supporting unit, storage/utility and tool. The furniture is designed into two types—loose item and built-in with house structure. The furniture is simple, but the design is direct to the basic needs of user and kitchen function.

Keywords Malay · Traditional · Furniture · Form · Function

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18.1 Introduction

Furniture plays an important element in human life. However, it is not a must-have item for some people. Built-in furniture which is often thought as ‘modern’ is, in fact, the earliest we know—a neolithic house at Skara Brae in the Orkneys incorporates built-in seats and sleeping-place [6].

The social background indeed provides the key to the story, for furniture is above all, functional. It is an essential part of the home, and its specific purpose is to serve many activities—meals, entertainments, recreation, study and so on—and the inactivities—sleep and rest of domestic life [5]. In addition, architecture and the decorative background are intimately related to furniture, and any integral study of furniture must always be judged in relation to its architectural environment [2].

18.2 Issues and Objective

The character of the furniture in Italy, France, Spain, England, America, Japan, Korea as well as the Chinese furniture of the Ming dynasty are clearly defined. It is essential to determine the background aspects such as the temperament of the people, wars, alliances and trade.

The Malays are well known for their carpentry skill and are also known for building their houses with functional spaces. Even though the Malay kingdom was established as early as 1397 in Melaka, and the Malay had grown in the Malay world since 40,000 years ago, there was no proof of furniture’s existence in their houses. What is Malay furniture? How does it function?

To answer these questions, we need to analyse data from a case study—the Negeri Sembilan traditional house. We limit our scope of study to kitchen area—the most active area in the house. Since the kitchen represents human activity and the furnace, we describe cooking, and the storage of items as kitchen activities.

18.3 Methodology

The overall research methodology is qualitative based on case study, field work and observation. This research employs the expert interviews on furniture definition and observational and visual analysis on human activities in the Negeri Sembilan traditional kitchen. The approach to the observation carried out in Haji Omar Ngah’s residence, located in Kampung Paya Kumbuh, Rembau was selected as a case study. The reason is because Haji Omar Ngah has been the owner in the last three generations while the age of the house is more than 100 years. Data are collected in several stages:

- Stage 1: Study the importance of furniture in the development of civilization by referring to social background, lifestyle and activity, architecture and art. Reflect upon the objective of the research. Select appropriate case study (at least 70-year-old Negeri Sembilan traditional kitchen) and drawings of case study and then analyse them.
- Stage 2: Analyse literature reviews from proceedings papers, journals, books, internet webpages and unpublished theses. Understand the social background of Malay and the architecture of Negeri Sembilan traditional house. The analysis establishes the limitation of study—kitchen area as the most active area with human activities.
- Stage 3: Gather experts' opinion on Malay architecture, screen the variables to define the furniture categories and establish furniture definition.
- Stage 4: Conduct walkthrough observations for 5 days and record using notepad and digital camera, the observation focusing on building structure, space planning and organization of space. Gather residents' opinion on kitchen activities, function of utensils and tools, and human behaviour towards spatial and kitchen activities.

All data were recorded and all images taken were analysed to identify possible results. The data was justified after related sources were extracted and explored linkages were analysed. Finally, a table containing three analysed categories defines the furniture definition. The categories focused on the issues and summarized the findings. Research method performed as in the Fig. 18.1:

18.4 Literature Review

18.4.1 *The Malay Origin and the Migration Within the Mainland*

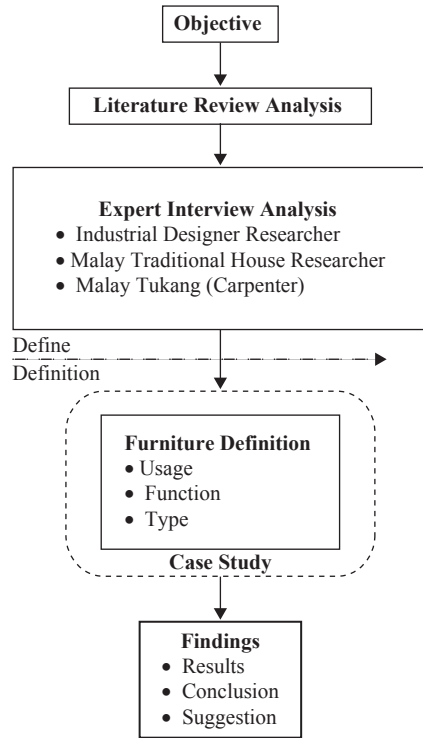
According to emeritus professor Dr. Nik Hassan Shuhaimi and Shahar [8],

“The Malays are the dwellers of the Malay world spread from Madagascar to the Pacific Ocean and to Taiwan. DNA studies show Malay, aborigines and Bumiputera natives are similar ancestry. They have grown in the Malay world since 40,000 years before or more. They separated more than 8,000 years and reconnect around 2,000 years before through the availability of sea faring effectiveness”.

He also believed that the civilization of Malay heritage exists in the mainland of the Malay people around the Malay Peninsula, Sumatra, Java and Borneo (Fig. 18.2).

Migration to the Malay Peninsula happened in several waves. The main reason is trading, which resulted in development and local settlement. One of them was in the thirteenth century, involving the migration of Minangkabau community of Sumatera, to the district of Rembau, Negeri Sembilan [3]. They entered Negeri Sembilan through four rivers in Eastern Sumatra namely Sungai Siak, Sungai Kampar, Sungai

Fig. 18.1 Research framework by Mohamad Hanif Abdul Wahab.



Indragiri and Sungai Batanghari. Those who used Kuala Sungai Linggi, resided in Rembau, Sungai Ujong and Seri Menanti in Negeri Sembilan [10].

Rembau is one of the nine districts in Negeri Sembilan. According to Khoo Kay Kim, emeritus professor in the History Department in Universiti Malaya, Negeri Sembilan should be named as Rembau [14]. The marriage between Datuk Batin Sekudai’s daughter from the Jakun aborigine and Datuk Lela Balang from Minangkabau set up a rule rule system of Rembau. Two clans were formed who inherited the rule, with the rank of Datuk Undang Rembau [1].

Since 1540, Rembau has developed drastically as the administrative centre. Migrations have increased its population that created settlements known as kampong or villages. Generally, the house compound in the kampong is meticulously well-kept, with the compound well swept and planted with vegetables and fruit trees, especially with coconut and banana and, to a lesser extent, with guava, pineapple, papaya and rambutan trees [15].

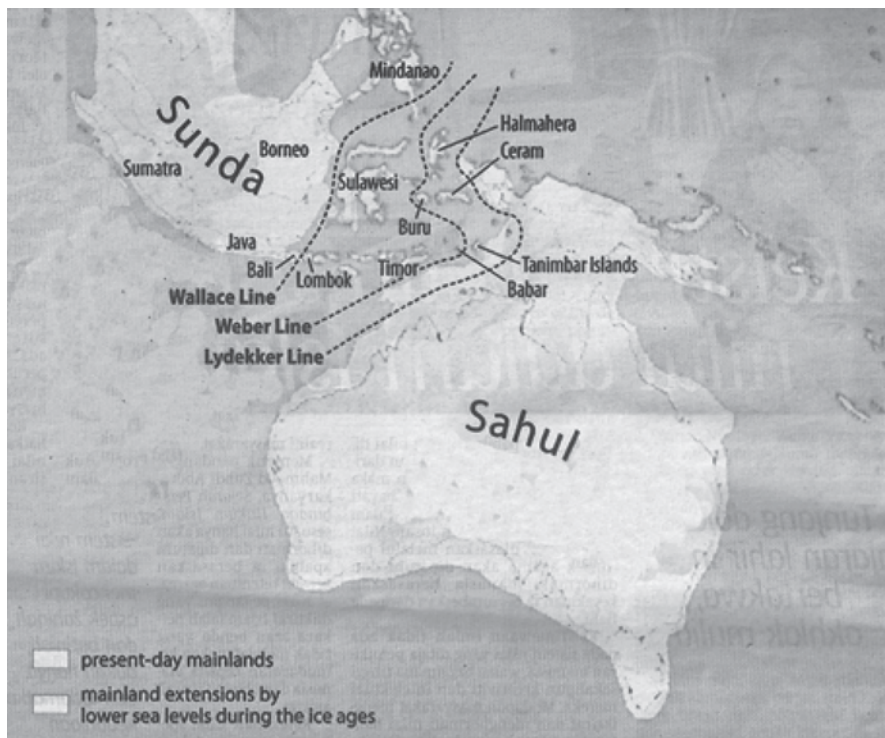


Fig. 18.2 Sunda Stage and Sahul Stage of the Malay archipelago. (Source: Berita Harian 2012)

18.4.2 *Negeri Sembilan Traditional Malay House*

Nature and the way of life at sea greatly influenced the thinking of the Malays, mainly in design. This is because when Malays sail for the purpose of trade, fishing or migrate from one place to another, the boat serves as a home. It provides refuge, rest, place to cook and takes care of the household. Consequently, the influence of seafaring culture and the way of life was evident in the architectural features of a traditional Malay house. Thus, there are many boat analogies used in the house as described by Gibbs [4],

“The word for the posts of the house is *tiang*, which is also the word for the mast of a boat. The word for flooring is *lantai*, which is also the word used for the flooring at the bottom of the boat. The word for the equilateral triangular gable-end is *tibar layar*. *Tibar* means ‘end’ and *layar* (‘the sail of a boat’). Sitting on the floor of Malay house is analogous to sitting in the breeze blowing off the sail of a boat”.

The most significant is the design of the roof of Negeri Sembilan traditional house which resembles the shape of the boat. Instead, it is a perpetual reminder of their

Fig. 18.3 Curved roof of Negeri Sembilan traditional house is adopted from the shape of a boat



maritime origin still remains in the widespread expression of boat symbolism in the resultant tribal culture [7] (Fig. 18.3).

The way of life in the boat also affects the Malays' interaction with the surrounding space. When routine life on a boat is applied and adopted in the residential space, it makes the relationship between the boat, house and space intimate. The way they sit cross-legged while eating, chatting and working on the boat on the raised timber floor layered by *Tikar Mengkuang* (Pandanus mat) is same as in the Malay house. The raised floor is strengthened with the installation of *Bendul* (sill) forming zones in the Malay house.

Yaakub [13] divides the Negeri Sembilan traditional house spaces into three zones—front, intermediate and rear. The front zone consists of the *Serambi*, a long rectangular hall. The *Serambi* functions as a meeting hall, and normally a place where a male guest entertained. The intermediate zone consists of *Tengah Rumah*, *Bilik* and *Loteng*. The *Tengah Rumah* is the main area of the house, functioning as a family area. *Bilik* is a small room located beside a *Tengah Rumah*. When interviewed on 4 June 2012, Malia Idin, owner of a traditional house in Jasin, explained that the *Bilik* functions as a sleeping room for parents or daughters or the elders of the family. The *Loteng* is the upper space located above the *Tengah Rumah*. The *Loteng* is a place where daughters hide and sleep if an insurgent situation arises. The rear zone consists of the *Dapur* or kitchen. The *Dapur* is a place where women cook, store utensils and other kitchenwares.

18.5 Furniture Definition

There are various definitions of furniture. Formally, furniture can be defined as something that can be moved, for example, tables, chairs, beds in a room or office [12]. According to Mohamad Awang, a professor in Faculty of Architecture, Planning and Surveying, Universiti Teknologi Mara, who has conducted an extensive study on design preferences and consumers' selection principles of household furniture in Malaysia, elaborates the definition based on usage, function and type. Mohamad's explanation shows that furniture is not limited to a movable thing only but

Table 18.1 Lists of three categories of furniture—usage, function and type

Categories		
Usage	Function	Type
Body-supporting unit	Sitting, sleeping, and leaning	Built-in and loose
Storage/utility	Storing, keeping	
Tool	Working	

expanded through its usage—body supporting, storage and tool. It is categorized into two types: built-in and loose. In addition, a Malay traditional house researcher from Universiti Teknologi Mara, Associate Professor Dr. Anuar Talib said that the Malay house is equipped with utility furniture. For example, the *Peran* (attic) is used for storage of larger tools and utensils for seasonal occasions such as weddings and *Para* (shelf) is a place to keep and dry the regularly used utensils.

18.5.1 Summarization of Furniture Definition

Data from expert interviews were analysed and the definition of furniture was confirmed. The furniture can be defined as falling into three categories—the usage, functions and the types of furniture. These categories need to be investigated by an observational approach in Haji Omar Ngah’s residence in Kampung Paya Kumbuh, Rembau. The categories to observe are disaggregating as shown in the following table (Table 18.1):

18.6 Site Analysis Discussion

18.6.1 Negeri Sembilan Traditional Kitchen

Kitchen is one of the important areas in the traditional Malay houses. It is located at the rearmost from the front entrance of the house. According to Alias, a retired Malay traditional tukang (carpenter) in Rembau, who has 40 years’ experience in constructing the Negeri Sembilan and Melaka traditional houses, the Negeri Sembilan traditional kitchen is built based on the number of posts. A normal-sized kitchen uses eight posts while a six-post kitchen is considered small. In the kitchen, the main equipment is the Dapur Kongkong (hearth) to cook the food. It is built by the owner or sometimes by the tukang (carpenter) depending on the owner’s request during the house construction. In some cases, the owner also requests the tukang to prepare a Kukur Kelapa (coconut rasper) for preparing food ingredients.

Besides its use for the cooking, kitchen also functions as a family area. The kitchen is considered as the most active area with a multitude of activities. Norhalim [11] explained the kitchen is a place for cooking. It is also a family area where the family

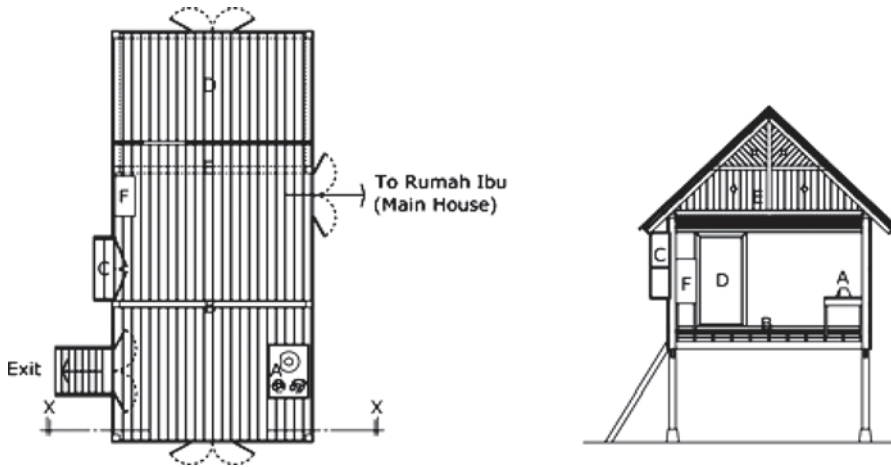


Fig. 18.4 Kitchen layout plan (*left*) and cross-section elevation (*right*) of Hj. Omar Ngah's kitchen. *A Dapur Kongkong* (Fireplace), *B Bendul* (Sill), *C Para* (Shelve), *D Pemingang Dinding dan Alang* (Wall Stud and Truss), *E Peran* (Attic), *F Almari* (Shelve Cabinet)

can sit and relax, meet and chat, have breakfast or lunch, and even lie down. The family gathers to eat regularly in the kitchen. Female guests are greeted and treated here informally. To explore more about the furniture in kitchen, Haji Omar Ngah's residence, located in Kampung Paya Kumbuh, Rembau is selected as a case study. The reason is that Haji Omar Ngah has been the owner for the last three generations while the age of the house is more than 100 years. Data from an existing owner are important to ensure a significant result. Since the kitchens represent human activity and the furnace, the cooking and storage are analysed in defining the furniture category (Fig. 18.4).

18.6.2 Malay Traditional Kitchen Activities

Through an interview with Haji Omar Ngah, the following are the findings:

- Processing food ingredients
The cooking process starts with the washing of all the ingredients and then placing them in the central kitchen area. The designated tools are used to grind chillies, rasp coconuts, pound spices and cook rice. Some tools require the person to sit on them while working, such as the coconut rasper (Fig. 18.5a). Rice and other dry ingredients are usually stored in the covered *Tempayan* or Jar (Fig. 18.5f) while wet ones are used instantly.
- Cooking
Cooking area is the most important area for food preparation. *Dapur Kongkong* or hearth (Fig. 18.5b) (Fig. 18.5c) acts as a stove. It is similar to a desk with 1,200 mm × 900 mm × 900 mm (length × width × height) in dimension. The

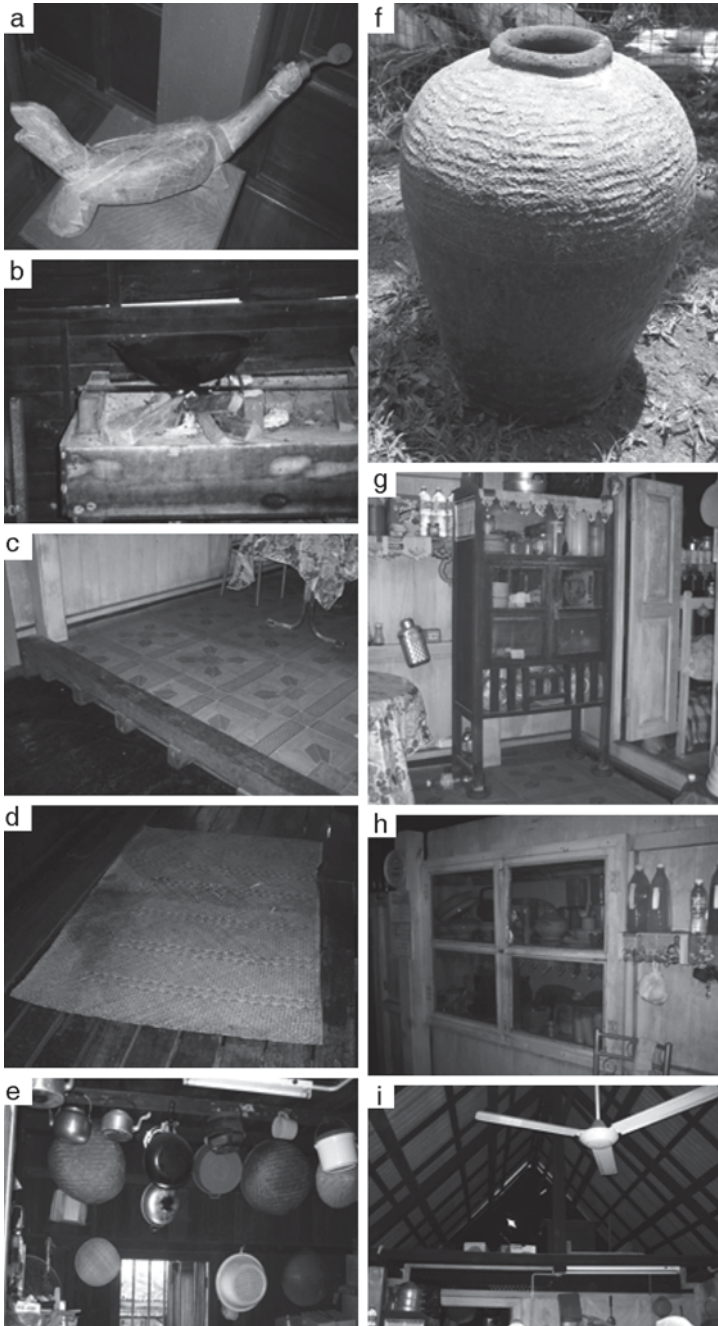


Fig. 18.5 *a Kukur Kelapa b Dapur Kongkong c Bendul d Tikar e Wall stud and beam f Tempayan g Almari h Para i Peren*

mixture of soil and salt is poured on the surface as the heat insulator and to prevent the occurrence of fungi/mold. It consists of three parts, a *Sabak* (furnace) and two *Tungku* (riser stone with double horizontal rod iron). Women would stand in front of *Dapur Kongkong*, or sit on *Bendul* or sill (Fig. 18.5c) while waiting.

- Food preparation

The central kitchen area will be cleaned and tidied-up once the cooking is done. *Tikar Mengkuang* or Pandanus mat (Fig. 18.5d) will be laid while eating. The dishes and cups are taken out from the *Para* or shelves (Fig. 18.5h).

- Storing

After each meal, cleaned utensils have to be kept or stored in *Para* or shelves (Fig. 18.5h). It has two-door leaves and a built-in cantilever protruding through the kitchen wall. However, larger utensils such as pan, pot or kettle is kept at a store room where they are mounted on the *Pemidang Dinding* (wall stud) and *Alang* (truss) with nails (Fig. 18.5e). Others are stored in the *Peran* or Attic (Fig. 18.5i). The *Peran* is a mezzanine floor between kitchen and a roof. The remaining of the food is kept in *Almari* (Fig. 18.5g). The *Almari* is a free-standing shelved cabinet which is supported by four posts and closed by two door leaves, which is covered by micro hollow metal wire for air circulation. It is 900 mm × 450 mm × 1,600 mm (length × width × height).

18.7 Findings

Experts' opinion was collected through interviews to confirm the findings. The data established the definition of furniture based on the types of activities, furniture function and usage. Unlike a formal definition, furniture can be defined as something that can be moved and tangible to seen. Malay furniture is more analogous and symbolic to describe. The purpose of Malay furniture is not to solve a human problem of comfort or to be an object that represents a social hierarchy. Malay furniture is used to sustain daily life by performing activities such as working, cooking and resting.

The Malay lifestyle is simple but difficult. They survive by being fishermen, carpenters who built their own house and farmers who planted the earth with vegetables and fruit trees. They depend on the nature, and the nature influence the Malay design process and imagination. They use timber to build houses as shelters, as a place to rest/sleep by layering a *Tikar Mengkuang* on it, and to keep utensils inside the space by stacking, hanging on the house structure and organising it in *Para* and *Peran*. They use stone and earth to create tools such as *Lesung Batu*, *Batu Giling* and *Tempayan* for preparing food. They create equipment from timber to grate coconut and prepare delicious food ingredients. They design the *Almari* to keep the remaining food for the next day. As described by Malay proverb, '*Kais Pagi Makan Pagi, Kais Petang Makan Petang*' (whatever you find when you scratch in the morning, is just enough for you to eat in the morning; whatever you find when

Table 18.2 Type of furniture, usage and function

Categories			
Activity	Functions	Usage	Types
Processing food ingredients	Working tool and body-supporting unit	<i>Kukur Kelapa</i> (coconut grater)	Loose
	Working tool	<i>Lesung Batu</i> (mortar and pestle)	Loose
	Working tool	<i>Batu Giling</i> (metate)	Loose
	Working tool	<i>Alas Pemotong</i> (cutting board)	Loose
	Storage/utility	<i>Tempayan</i> (jar)	Loose
Cooking food ingredients	Equipment	<i>Dapur Kongkong</i> (hearth)	Loose
	Body-supporting unit	<i>Bendul</i> (sill)	Buit-in
Preparation of food and drink	Body-supporting unit	<i>Tikar Mengkuang</i> (pandanus mat)	Loose
Storing food and utensil/tool/equipment	Storage/utility	<i>Para</i> (shelve)	Buit-in
	Storage/utility	<i>Almari</i>	Loose
	Storage/utility	<i>Pemidang Dinding</i> (wall studs)	Buit-in
	Storage/utility	<i>Alang</i> (beam)	Buit-in
	Storage/utility	<i>Poran</i> (attic)	Buit-in

you scratch in the evening, is just enough for you to eat in the evening) explained the difficulty to find the food and the importance to keep the remaining food.

The establishment of the Malay furniture must be searching by overlook the purpose of furniture in Malay life. Experts' opinion generates a new term of furniture definition to prove the existence of furniture in Negeri Sembilan traditional house kitchen. The definition of furniture was analysed based on the types of activities, furniture function and its usage in the kitchen. The significant result show that 13 items defined as furniture complied the categories of furniture definition. As a result, the data can be viewed as in Table 18.2:

18.8 Conclusion

Analysis of the kitchen design, activities and the usage of utensils has highlighted the existence of furniture in the Negeri Sembilan traditional house in three areas—the cooking area, central kitchen and storage area. The furniture was used as a body-supporting unit, working tool and storage/utility. It is categorized into two types—loose items and built-in with house structure. The furniture is simple in form, and the design is direct to the basic needs of user and kitchen function. The furniture presents a manifestation of the unique culture and the way of life of the Malay. It has shown the identity and the reason behind the form and function of the furniture. It may be simple, but it is practical. The purpose is crucial to sustain the Malay routine activities, to help them survive and serve their desire. The beauty of the design is not its physical appearance but the purpose of its existence. While the formal furniture

flourishes with elements and characteristics presenting individual identity and social background, Malay furniture exists to serve, organize and sustain the Malay way of life in the traditional Malay house.

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Chapter 19

Malay Women in Postpartum Period: Food Beliefs and Practices

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and N. A. Ahmad

Abstract Postpartum or confinement period generally perceived by most countries in the globe as an illness or disease requires special attention and treatment for women who experience it. However, due to technological and social advancement, the belief and practices are changing which therefore lead to different ways by which old and young generation mothers perceive this confinement period. Using qualitative approach employing semi-structured interview, young mother has more logical reasoning before accepting the food and practices in postpartum period as compared to old generation mother. The cultural belief and knowledge that is passed from generation to generation is now strengthened and supported by scientific proof as young generation mother is explained scientifically the relevancy of their ancestor in postpartum food practices and belief. Thus, the word “traditional practices” evolve with time and technology.

Keywords Food · Foodways · Belief · Practices · Malay · Postpartum

19.1 Introduction

It is the happiest day for a husband and wife once they see their beautiful child is born. The moment the baby is born, is the time when the women will start the confinement period which in general is around 40 days [1, 2]. In some part of the world, this period is considered as a disease for women because women are vulnerable to certain illness and also need to avoid almost any heavy tasks [2]. Though it is considered as illness, it is noted that postpartum phase is the time when women

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give less attention on their health especially in western countries [1]. In contrast, most scholars reported that there is support from social milieu—family, neighbour, and paid care provider—during this period.

The aboriginal strongly hold to shaman words [3, 4]. Previous studies stated that the Malays, especially in rural areas, still believe in shamans and bidans who determine the actions that the women should go through during these 40 days [5–7]. The action permitted and prohibited includes sexual prohibition, contact with decease family, and housework with dietary guidance [2]. Generally, one of the utmost factors that affect health is food [5], which women are instructed about, and the family spreads beliefs, habits, attitudes, and behaviors including food belief and habits [1]. In this period, women are encouraged to eat hot food to keep the body warm [7]. The food can be divided into few categories or elements like hot, cold, poisonous [1, 2, 7], and windy [5].

In Malay community, the practices were strongly influenced by Hinduism when the Hindus migrated to Malaysia in the early centuries until about 1400s [7]. They posited this traditional food and its knowledge practiced heretofore is the intersection between Hindu belief and Islamic religion.

The advancement of medical facilities significantly promises good health care and treatment among mothers where many urban women nowadays prefer medical attention under the care of a specialist with modern facilities [7]. According to previous scholars, rural community holds the culture and custom pretty strong, and on the other hand urban area seems to be more fragile in believing this food belief [7]. Therefore, they believed on anything that has been passed from generation to generation regarding the food after childbirth; nevertheless, due to the evolution of social status whereby women seek for status equality [8], this has driven women to seek a higher education and ergo the tendency of questioning the traditional belief is somehow rather appeared. Though there are studies on the confinement period food of Malay, the paucity of research in determining the belief gap of this respective food and foodways still exists. Therefore, it is worth to comprehend and understand the old and young generation mothers' belief on food and foodways during the confinement period. By understanding, both beliefs explain how cultural identity can change or redevelop looking from the lens of postpartum food and foodways.

19.2 Literature Review

19.2.1 *Postpartum Period*

Postpartum custom is rather a cultural setting with symbolic and practical functional meaning and is conducted by ritual of guidelines of quarantine and dietary [9]. From community perception, postpartum period is the time for women to regain strength and to bond with the baby [10]. In some parts of the world, this period is considered a disease for women because women are vulnerable to certain illness and also need to avoid heavy tasks [2]. Though it is considered as illness, postpartum phase is the

time when women give less attention on their health [1]. Traditional rituals are seen as old fashioned and “behind the times” because such practices do not fit in with the modern medical technology [7].

In Malay, postpartum is called *waktu berpantang selepas bersalin*. It is assumed that the different forms of postpartum care are closely linked to cultural patterns that are meaningful in specific social settings [1]. Food is being highlighted as one of the crucial factors in determining the health of an ill mother during their postpartum care period [5]. This is the period whereby women need to carefully select and eat food, thus commonly called “abstinence, diet or quarantine” [1]. The careful choice of food is based on culture and belief as it is believed that it has an effect on the health of the mother and also the baby during weaning activity. Postpartum care has been constructed essentially within family [1] whereby the selection of food and food practices within this period in the olden days is based on a generation belief which is passed from mother to daughter. A study posited that women do not seek care due to poverty, distance and limited understanding of the benefits of health sector [10]. Before discussing in-depth on food and foodways during the postpartum period, it is worth to discuss the definition of food and foodways.

Food and its associated rituals are one of the forms of expression on how culture documents societal norms [11]. Previous studies highlighted that food functions as a transmitter of cultural knowledge [11, 12]. Also, scholars believe and connote that the generation gap is a contributing factor that leads to the diminishing of old practice during her interviews with her informants [13]:

There’s a gap between the young and the old.... There’s a generation gap. ...the youngster learning from those with experience, the old ones passing knowledge on and therefore being valued, engaged and useful. That was what was missing....

A study in general proved and recognized that the outcome of technology is distancing traditional rituals and food practices with the term coined technological utopianism [14] and in specific looking into the perception of women in technology during the confinement period [7]. When world nowadays is gearing into more advanced society, some of the customs and rituals that are being practiced traditionally during postpartum period still cannot be answered by science [9].

19.2.2 Malay Food and Foodways During Postpartum Period

Scholars articulated that food practices are subject to pressure for change by environmental and acculturative factors [15]. A study showed that the postpartum period in hospital disallowed to follow certain traditional food practices thus causing minor ailments [16]. Latest study revealed that women do not practice postpartum food guidelines because of the incomplete knowledge about it [17]. Looking at the consumption of the food, it is important to feed the postpartum women with small amount of food [9].

Because in this confinement period when women are considered physically and symbolically ill [1], they adopt an array of food practices. Like any culture in

this world, the Malay also have their own set of rules of dietary practices during postpartum period. This community practices were strongly influenced by Hinduism when the Hindus migrated to Malaysia in the early centuries until about 1400s and it was then accepted by the Malay as local culture until the Islam belief arrived [7]. They reported that 46 types of pantang are practiced in which one of the most five common pantang is hitting or killing animal. This pantang is not only exclusive to women but also to men—husband—though he slaughters and fishes for food preparation. If one fails to follow the food practices it would negatively influence the health of newborn [18]. It is considered taboo for women to do household duties in the kitchen [9].

This dietary is believed to be associated with medical methods contained within Malay medical books known as kitab-kitab tib in which the most popular is called kitab Mujarrabat Melayu [5, 6]. Furthermore, these medical books explained any physical and spiritual—or supernatural—disease that includes incantation and magic. To understand how food affects the health of human, these books explained four elements of human which is soil, water, fire, and wind. The balance of these four elements will have an effect on human's health in which if any one of the element dominates the other three elements, human will go to unhealthy state [5]. When many scholars stated a vulnerable state of women after delivering a baby they fall under the state of unhealthiness [1, 2, 7, 19–21]. Food is the most significant factor that affects the balance of the human elements [5]. Moreover, foodways (preparation up to consumption) are believed to affect the human's health [7].

In Malay food context, medicinal food is derived from both flora and fauna. The food that is derived from flora is obtained from roots, flowers, and leaves either cooked or raw which are called jamu. Food component derived from animal includes exotic ingredients such as *hempedu gajah*, *hempedu sawa*, *lemak landak*, *tulang sotong*, etc. [5] treats inner and outer disease. Foods obtained from both flora and fauna can be further categorized as cooling, windy, hot, sharp, poison, or itchy in food confinement period [22]. Traditionally, this is conducted with the shamanistic methods. In addition, the effectiveness of food in treating the unhealthy condition (in this case, postpartum mother) must be followed with certain *pantang larang*.

Malay community still believes and follows *pantang larang* even though it comes to third millennium and is ready to accept changes [23]. A study reported that there is no significant difference in the belief of *pantang larang* in food between the women in the urban and rural area [3].

19.3 Methodology

The qualitative approach is well suited in this context of study as suggested by a scholar [24] whereby belief and practice are subjective to individual, and therefore, this approach is appropriate to understand and scrutiny the social process in context. This also helps to increase the depth of understanding on how Malay women believe and practice their food and foodways during the 40 crucial days of

the confinement period. As this study is looking on the belief and practice of food and foodways during postpartum period, using qualitative approach in this study was justified. Five young generation mothers and five old generation mothers were chosen as sample study to measure the actual impact of human behavior; precursor, antecedent, or those who had an experience and were able to give meaningful information than those who did not have the experience. Semi-structured interviewing method was employed for data collection process and the interviewing process took approximately 30–40 min.

19.4 Findings

19.4.1 *Young Generation Mother Food Belief and Practices*

In looking at the experience of practicing diet in postpartum period, two informants gave almost an identical answer whereby they have no idea what it is like during the first baby is born. One of them shared her experience:

...I have two children now and the most challenging would definitely during my first baby was born. I have no idea after I delivered my first baby. I don't know any specific rules in doing things and even what to eat.

Another informant recalled her memory showing how the act of ignorance had an impact on the psychology by not knowing the dietary practice during postpartum period:

I am so lucky to have a supportive people around me which helped me undergone one month of postpartum period. I was totally blurred on what to eat and what cannot be eaten. I guess my ignorance towards postpartum period impact my psychology at that point of time. Serve me right [laughing].

Based on the answer given by the informants, it can be said that the place where a mother gives birth to a child has a significant relationship on how they obtain the information about food intake but not about food practices. Also, relatives who have experience, especially the mother and mother in law, share their personal experience. One of the young mothers did not explain directly about how hospital plays a role in constructing her first food intake during postpartum but it is understood in a same notion as previous informant:

During my time in hospital, I just ate whatever that is served by nurses and food that were brought by my mother and mother-in-law since I have no idea about food that is beneficial for my health.

Informant did explain demystified that she had no idea about the food but she rather accepted whatever was given by the nurse without questioning. Her mother in contrast showed more love and care by explaining the benefit of food she brought:

I have to admit that I obtained the information relating to postpartum guidelines firstly from nurses who took care of me. I do remember they gave me rice porridge, plain water and fish which I don't know what kind of fish was that in a one week I was at hospital.

My mother and my mother-in-law also came to visit me and brought food that they said is nutritional which beneficial for my health and my baby.

It can be said that place and relatives have importance in constructing food intake among mothers; young generation mothers nowadays, have various range of reading material that enable them to strengthen their knowledge about food intake and practices. She continued her explanation by elaborating it:

But then, relying on them [mother and mother in law] would not be sufficed which I also search for books, articles and friends who had undergone the postpartum period. Yet, not all foods that were good for them are not necessarily good for me.

One of the young mother shared her effort in obtaining information through her experience:

During my time at home, I started to read any materials related to foods during postpartum period.... I started to read on health magazine, read on internet about food during postpartum period. It took me quite some time to absorb anything that is crucial for me to undergo the process.

Many previous researches have outlined the food consumed during postpartum period and looked in nutritional value but not really into how much the mother believed on the effect of the food. One of informants articulated what she “needs” to eat as oppose to what she preferred:

I mostly ate ‘ikan haruan’ (type of fish) and ‘gamat’ (sea cucumber) because it is believed to accelerate healing process. I don’t simply eat anything because I was so scared if anything happened when I consume food that is not suitable for my baby [pause] and me.

I am a person who likes fried food and it is truly true for me when my mother said it is a tiresome month when I can only be allowed to eat food that are steamed, poached, boiled and soup. Everything was water based cooking method. No oil was allowed.

Based on the explanation given, she addressed that food during confinement period does not have a pleasant taste which was based on her personal taste bud and she also gave information about the benefit of cooking with spices and herbs according to her mother’s lessons. She exemplified it:

Most of my foods during that time were rice and vegetables such as white radish, carrot and mustard green which I can tell you, the taste was not that good especially mustard green which it has a bitter aftertaste. I also eat ikan haruan, red meat and chicken. All foods that I have listed were mostly cooked with ginger and black pepper. My mother said that ginger is good to prevent you from bloating (masuk angin or kembung) and black pepper is to regulate maintain your body temperature. At the end of every meal, I consumed orange and apples.

Further, one of the informants also explained how the food should be consumed based on the temperature and by the hot and cold characteristic of the food:

...my food consumption must be hot which immediately consumed after cooked. Do not even try to consume food that considered as ‘cold’ such as cucumber, spinach as it is believed to drop your body temperature.

19.4.2 Old Generation Mother Food Belief and Practices

An old mother at one point of the interview session expressed her ambivalence feeling about the food intake as she compared the doctor's advices with relatives' experience:

Doctor also advices me to consume various type of food because each food offers specific nutritional value however doctor's advices mostly contradict with advices provided by my mom.

As an old generation mother who had vast experience about postpartum period because she had undergone normal childbirth and also caesarean surgery, another informant demystified it in a very systematic way by categorizing the foods that are allowed and prohibited; have to and preferred:

...to ease your understanding dear, I break the food into their type. For vegetables, I mostly ate pucuk pegaga and pucuk maman (type of vegetables eaten raw), green mustard but only the leaves, not the stem, cauliflower, cabbage and mushroom. The vegetable that must be included in almost of my food is bitter gourd. Like it's name, it taste bitter and believe act as a cure. For meat, it needs to be cooked until dry with black pepper, ginger, garlic and shallot. Chicken is prohibited especially for caesarean operation because it can cause itchiness at the surgical part. You don't have to ask me about chicken egg. Eating it could cause purulent caused by the egg yolk. For the fish, I can only eat fish that could not result in itchiness such as tenggiri, parang, bawal, ikan merah and haruan which is also believed to accelerating healing process. As for fruit, I can eat tangerine and orange provided that it is ripe and sweet. I don't like sour food. I also eat honey dew, pear and papaya but I felt a bit cold after eating it. It might be the characteristic of the fruit itself which cool in nature.

The reason why pineapple cannot be eaten during the postpartum period was clearly explained, whereas, for banana it could not be explained—by one of the informants—on the relevancy of restriction, and had to follow the guideline.

Never to eat pineapples because I was told that it has 'sharp' characteristic that will result in body aching. I don't know about that because I don't even dare to eat it.

My mom really stressed out that never to eat pineapple and banana. For some reason, I don't know why I can't eat banana but pineapple will surely cause my womb to ache.

Further, she added, based on her mother's experience, that iced water would have repercussion on new mothers if they intended to consume it:

...never drink iced water because it will decelerate the healing process. The other thing that my mom told me that the consequences that you will bear is not in the present but in the future in the age of forty and above whereby your body can easily become weak.

Also, she shared and added the ideology and belief on body condition as she grew older and had more children. Moreover, the reason of following strict diet is for her child's safety:

From the first child until the forth, I follow the rules accordingly. I follow the rules as strict as possible on my forth born child. Most of the veins around stomach will never recover; my mom said I was in a very vulnerable stage as compared to the first three children. Therefore, the tendency of body aching is considered high. Again, I strictly follow the rules for all my children.

19.5 Discussion

The notable findings depicted that the belief of women in postpartum period have slight changes. Those changes in Malay custom can be seen, if it is observed from the differences in the conversation pattern between old and young generation mothers. They believed the number of babies they have indicate the vulnerability of pain they will encounter. However, it is too early to hypothesize such statement but what can be postulated here is that the postpartum diet that has been set by predecessors is to reduce the postpartum pain endured by mothers, not to restore the condition before pregnancy. Some of them might believe that some of the veins in the womb cannot be healed. While literature states that most mothers still depend on their predecessors' rules and experience in determining food during postpartum period, the finding of this study only partially agrees with the statement. Old generation mothers are mostly following the traditional dietary guidelines of postpartum but it is surprising that there are also old generation mothers who have ambivalent feeling about the traditional practices which they compared with the knowledge of doctors. It is irrefutable, they rely on mother's experience but they cannot deny the expertise of doctors, which needs to be credited in determining their health. What makes them follow the postpartum diet is for the sake of health but at the same time from the beauty aspect also. While focusing on how postpartum diet practices are tailored with experience and knowledge, the study also captures the significant finding where the differences of two different generation beliefs and practices is a proof that the postpartum food and foodways had undergone an evolution process. The culture is reinvented in line with time and technology. The word "traditional practices" might evolve in line with time and technology. It is undeniable that it is a different custom having different set of beliefs which one might support or contravene with the other beliefs. Thus mothers will use their personal preferences and justification in determining the intake of food.

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Chapter 20

Shariah Stock Screening Methodology: A Comparison Between Shariah Advisory Board of Securities Commission Malaysia and International Index Providers

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Abstract The research emphasis on stock screening methodology is provided, and implemented by regulators and index providers. The main objective of this study is to analyze the differences in the screening process. Thirty-five top Shariah-compliant stocks listed in Bursa Malaysia were tested against four stock screening methodology providers, namely Dow Jones Islamic World Index (DJIM), Morgan Stanley Compliance Islamic Index (MSCI), Financial Times Stock Exchange Shariah Index (FTSE), and Standard & Poor's (S&P) Shariah Index. The results from the test generally indicate that Shariah-compliant stocks listed in Bursa Malaysia are not necessarily Shariah-compliant stocks in these indices. The test also shows that high debt and low market capitalization are the main factors of inability to pass other screening methodologies provided by the indices. Apart from that, the results show that companies listed in Bursa Malaysia are not due to their attraction towards Bursa Malaysia but rather due to the inability to pass the international index screening. The research concludes three stages of screening in the most "Islamic" stock screening process which are screening on industry, income statement, and balance sheet.

Keywords Stock screening · Shariah-compliant · DJIM · MSCI · FTSE · S&P

20.1 Introduction

Islamic finance is a well-developing area of discipline in the current time. The significance of Islamic finance is focused and concentrated since many people believe that it can be the best alternative to conventional finance. In order to provide a solution

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to the weakness in the conventional banking and financial system, many people are becoming alert to the resilience of Islamic finance as a feasible alternative. In addition, Islamic finance is deemed to operate in line with Shariah.

20.2 Literature Review

Having a surprise attraction and awareness on Islamic stocks, it has allowed the equity market to grow fast [10]. Most of the Muslim and non-Muslim country regulators are taking steps to develop Islamic finance, and it has resulted in tremendous global growth, ranging between 12% and 15% per year [20]. The growth of Islamic finance implies that the demand for Islamic instruments is increasing.

In Malaysia, for example, Islamic finance market has started since 1969 and currently is regarded as a leading center for Islamic capital market because of its pioneer status. To date, Malaysia's Islamic capital market has 56% of its share in the total capital market, and there are 839 companies listed as Shariah-compliant stocks under Securities Commission. This is counted for 63% of Shariah-compliant stocks to total market. Apart from this, Islamic finance in Malaysia is a global center as Malaysia is the second largest by Shariah funds, and by net asset value [21].

Since Islamic finance has been widely developed throughout the whole world, Islamic equity indices are expanded in order to cater the need of current financial market. In order to classify equity as Shariah-compliant, many index providers establish Shariah screening methodology. There are differences in screening methodology for every index provider which will be discussed in later paragraphs. The concerned indices in this study include Dow Jones Islamic World Index (DJIM), Morgan Stanley Compliant Index (MSCI), Financial Times Stock Exchange (FTSE) Shariah Index, Standard & Poor's Shariah Index (SPSI), and Shariah Advisory Council of Securities Commission (SACSC).

20.2.1 *Shariah Stock Screening*

One of the methodologies which is a concern of this study is Shariah stock screening. In the current Islamic finance system, there are many Shariah stock screening providers. The providers can be index providers as well as a country's Shariah Advisory Council. In this study, five Shariah stock screening providers will be discussed, namely, DJIM, MSCI, FTSE Shariah Index, S&P Shariah Index, and SACSC.

These Shariah stock screening providers have come out with different kinds of screening methodologies, which will be explained in the next chapter. The issue that might arise from the differences is which one of these methodologies is the best or the most "Islamic" way of conducting Shariah stock screening. Since these methodologies might be changed over time, the effect on the stocks performance could be one of the determinants to modify the screening methodologies, because

the change in the benchmarks will result in the change in asset universe. Asset universe refers to stocks that are listed in the index. However, according to Nathie [13] equity market does not get influenced by the change of compliance status. Yet, as Islamic finance has gained much awareness from the public, including Muslim investors, the compliance status has become one of the indicators in deciding the purchase of stocks.

Having said that, the quantity of stocks demanded by Muslim investors will affect the movement of demand and supply, and thus result in price determination. One situation that can explain this is when, in the case of the stocks turning into noncompliant stocks, Muslim investors have to sell off the stocks. It increases the supply for the stocks, and if given that the demand does not change, the price of the stocks will go down. This situation shows that Shariah-compliant status is one of the significant determinations of the stock performance.

The approach of this study will include Shariah-compliant stocks approved by SACSC listed in Bursa Malaysia. It will be used as a benchmark to calculate the compliant status from the aforementioned four methodologies. As far as the study is concerned, the prohibited income benchmark will not be tested as it is assumed that as long as these stocks have been considered as Shariah-compliant under SACSC, prohibited income will not be an issue since it has been filtered out.

The main difference between SACSC and the other four screening methodologies is the use of a balance sheet as part of the screening benchmark. Balance sheet items, particularly liquidity and leverage, are not part of the screening in SACSC as their focus is mainly on prohibited income, i.e., prohibited income earned by subsidiaries or associates. Hence, this paper will study each screening methodology, and explore their differences and similarities. In addition, the different status of the same stock will also be analyzed and discussed. This study will also conclude the factors of differences in Shariah-compliant status among these indices. Subsequently, the most “Islamic” screening methodology will be indicated. Another part of this study will cover an analysis on the attractiveness of Bursa Malaysia to be a preferred avenue for listing.

Dow Jones Islamic World Index (DJIM) Companies cannot be involved in any nonpermissible activities which include pork production, non-halal food products, alcohol beverages, gaming, interest-based, financial institution, entertainment, arms, defense, tobacco, and any other activities contrary to Islam. There is an argument regarding the types of nonpermissible activities included as part of the screening. In the DJIM case, arms and defense are argued to be excluded, since it is essential for every country to have armed forces for protection. However, due to the reason that arms and defense might lead to bigger problem rather than benefits, it is included. In addition, most of the arms and defense companies are supplying the weapons to countries which attack Muslim countries. Thus, as Muslim investors, they should not invest in such companies. After screening well at the first stage, and if companies are screened for not being involved in any of these activities, the next stage, which is financial screening, will be analyzed in order to determine the equity status.

Financial screening indicates that the change on the basis of the ratios is done in order to cater to economic conditions during a specific time. For example, DJIM has increased the trailing period from 12 to 24 months in order to cover up the effect of crisis during the time. The short period leads to downsizing the market capitalization, and thus resulting in high ratios. High ratios lead to non-Shariah compliant status. In addition, the change between the use of total asset and market capitalization was due to the claim that total assets can be manipulated by accounting treatment. DJIM believed that market capitalization will bring more accurate ratios in finding the Shariah-compliant equities.

Morgan Stanley Compliance Islamic Index Most of MSCI-prohibited activities, industries, and products are generally agreed to be non-Shariah-compliant. In this case, they expand the entertainment into music, cinemas, and adult entertainment. They also include hotels as part of nonprohibited industry. It is also arguable regarding types of music that are not allowed as well as the subjectiveness of adult entertainment. This issue is practically solved by their Shariah scholars. After having a first-step, i.e., clean companies, the second step which is financial screening is done.

Changing in liquidity ratios was first started with account receivables over total assets which should be less than 70%. The reason behind the ratio is to cater for Islamic banks. Since Islamic banks are financial intermediaries, they are dealing with cash, and consequently, the ratio will be higher. As a result, Islamic banks will not be considered as Shariah-compliant businesses. Despite having a better ratio for Islamic banks, they changed the ratio. This is because the ratio reduces the number of counters listed in the index since not all companies have similar nature of business with Islamic banks. Moreover, crisis has been a cause for the change since companies might face difficulties in collecting the debts, and thus increase the total amount of account receivables. Thus, the changes done in screening methodology is affected by economic condition, and the changes are needed in order to manage the turnover of the asset universe.

FTSE Shariah Index FTSE screening methodology has similar nonpermissible activities with DJIM. After companies are well filtered, then the second part of the screening is done. In 2006, FTSE has collaborated with Yasaar Ltd. which is a wholly owned subsidiary of the leading global Shariah consultancy as an effort to enhance its integrity by being neutral. Subsequent to the collaboration, the screening methodology was developed to be more conservative. They use total assets as a benchmark in order to reduce the effect of fluctuation of share prices. This method also allows the index calculation to be less speculative and more keeping with Shariah principles. Prior to 2006, liquidity and prohibited income are not part of their determinants for the Shariah-compliant status criteria. These ratios are also considered as an effort to increase its Shariah-compliant integrity.

Standard and Poor's (S&P) Shariah Index Referring to the lists of nonprohibited activities, industries, and products, S&P Shariah Index has a similar nature of prohibited business with other indices. It includes gold and silver trading as cash on deferred basis as part of prohibited activity. It is not debatable as all scholars agreed

that it leads to *riba'*, thus prohibited. After a clean filter for the stage one, financial ratio screening takes place.

S&P Shariah Index has similar screening methodology with DJIM as they both use market capitalization as a basis. However, S&P include prohibited income as part of their determination on Shariah-compliant status. Note that in 2009, the bigger trailing months have allowed the index provider to consider the effect of crisis towards the number of constituents listed in the index. This is because events during and post-crisis have impacted on the reduced share price, and thus, resulted in bigger ratios. The bigger ratios have taken out many equities, and due to this, the asset universe reduced. Therefore, the change in the screening methodology is flexible, and it is allowed in order to cater for unique reasons.

Securities Commission (SC) Malaysia Securities Commission Malaysia has also developed two stages of screening methodology. The first screening has prohibited all financial services based on *riba'* (interest), gambling/gaming, manufacture and/or sale of non-halal products, manufacture or sale of tobacco-based products or related products, conventional insurance (*gharar*), entertainment, stockbroking or share trading in Shari'ah noncompliant securities, and the activities deemed nonpermissible.

Generally, it has similar types of industries with other indices. After having filtered by industry screening, financial screening takes place. As per SC screening, liquidity and debt ratios are not included. The authority has used income ratios as only determinants to classify as Shariah-compliant companies. Benchmarks on certain types of prohibited income are developed. There are 5% clearly prohibited activities (pork, gambling), 10% Umum Balwa activities (interest from conventional financial institutions), 20% rental from non-Shariah-compliant activities and 25% generally permissible activities but involve *Maslahah* (hotel).

The level of tolerance is determined by *Ijtihad*. The quantitative screening ratios are calculated in order to access Shariah-compliant level. They include interest income/group turnover $\leq 10\%$, nonpermissible income other than interest income/revenue $\leq 5\%$, profit before tax (PBT) of subsidiaries or associates (non-halal activity)/PBT of group $\leq 5\%$, PBT of subsidiaries or associates (mixed rental income)/PBT of group $\leq 20\%$, PBT of subsidiaries or associates (hotel and resort)/PBT of group $\leq 25\%$, PBT of subsidiaries or associates (hotel and resort)/PBT of group $\leq 25\%$, turnover of subsidiaries or associates (non-halal activity)/turnover of group $\leq 5\%$, turnover of subsidiaries or associate companies (mixed rental income)/turnover of group $\leq 20\%$, and turnover of subsidiaries or associate companies (hotel and resort)/turnover of group $\leq 25\%$.

20.2.2 Motivation of the Study

Muslim investors in the current arena are very much concerned on halal income earned. As such, the Islamic finance system should be geared in such a way that could provide confidence towards these investors. In reference to the equity market, the most general business activity is stock trading. In buying and selling stocks,

it is crucial to ensure that the stocks are classified as Shariah-compliant. With the existence of different stock screening, it might generally affect the confidence of the investors in taking part in this business activity. Furthermore, current studies have yet to cater to all five screening methodologies, and thus, the conclusion of which factors that determine the different statuses are to be studied in this dissertation.

Some prominent scholars have suggested that there is a need to standardize the screening methodology in order to obtain global Shariah stocks. By having a standard stock screening methodology, investors from all over the world can trade without the need to check the compliant status for every stock exchange. This will encourage foreign investments, and thus expand the world economy. Nonetheless, in the current system, each stock screening provider has its own developed methodology which differs with each other. Due to the differences, this paper would like to discuss the similarities and differences, and examine the number of Shariah stock compliance approved by SACSC that are also approved by four different indices, namely, DJIM, MSCI, FTSE, and S&P. The findings will indicate and answer the research questions which will be discussed below.

The differences in the methodology have triggered the idea of this study. However, based on articles that are available, research was done mostly in regard to the comparison of performances, risks, and such between conventional and Islamic equities, but rarely in examining Shariah screening methodology. Due to this, it is hoped that this research will bring another strong impact on the mentioned matter. In addition to that, this study is done with a belief that Shariah status for a particular stock is very important as it reflects the faith in Allah SWT. It is clear in Al-Quran that Allah has prohibited *riba* and men must obtain the growth of their wealth in a rightful manner. Because of its crucial element in the spirit of Islam, this study will examine whether the compliant status of the Shariah-compliant companies under SC is also holding Shariah status under international indices' screening methodologies.

20.2.3 Problem Statement

The central point of discussion throughout this paper is differences in current Shariah stock screening process provided by SACSC, and international index providers, namely DJIM, MSCI, FTSE, and S&P. The main concern of this study is whether the differences in the screening methodologies would result in differences in Shariah status for a particular stock.

20.2.4 Research Objective

The objectives of this study are as follows:

1. to check whether Shariah-compliant stocks under SACSC are also considered as Shariah-compliant under international indices

Table 20.1 Financial measurement

	Dow Jones Islamic Market	Morgan Stanley Compliance Islamic	Financial Times Stock Exchange	Standard & Poor's
Liquidity ratios	Account receivables/24-month MA market cap <33%	Total cash + account receivables/total assets <33.33%	Account receivables + cash/total asset <50%	Account receivables/36-month MA market cap <49%
	Cash + interest-bearing securities/24-month MA market cap <33%	Cash + interest-bearing securities/total assets <33.33%	Cash + interest-bearing securities/total assets <33%	Cash + interest-bearing securities/36-month MA market cap. <33%
Debt ratio	Total debt divided by trailing 24-month average market capitalization <33%	Total debt/total assets <33.33%	Total debt/total asset <33%	Total debt/36-month MA market cap <33%

MA monthly average

2. to examine the factors that lead to differences in Shariah-compliant status
3. to indicate the most “Islamic” stock screening methodology

20.3 Methodology

This study is exploratory and descriptive in nature. The differences between SAC-SC and international indices are two financial measures which are liquidity and debt ratios. In addition, timeline research will be done in order to measure the consistency of the compliant status. Three-year lists of Shariah-compliant stocks under SC Malaysia, i.e., from 2009 to 2011 will be chosen as a sample.

20.3.1 Sample and Data Collection

The population of the study consisted of 839 Shariah-complaint companies under SC as in November 2011. To rationalize the study, top 100 Shariah compliant companies are filtered. In addition to its rationalization, the top 100 companies are chosen to ensure the relevancy of these companies to expand their business internationally. After removing companies that did not have complete information and were not Shariah-complaint for 3 years, the total final sample is 35 companies. The financial measures are calculated based on each index Shariah stock screening methodology. It is summarized in Table 20.1.

Table 20.2 Compliance status

Index	2009	Percentage	2010	Percentage	2011	Percentage
DJIM	14	40.00%	14	40.00%	14	40.00%
MSCI	18	51.43%	24	68.57%	24	68.57%
FTSE	18	51.43%	24	68.57%	24	68.57%
S&P	17	48.57%	14	40.00%	14	40.00%

All balance sheet data are gathered by using data stream. In getting market capitalization, monthly prices from 2007 to 2011 are compiled, and it was then averaged according to the ratios, i.e., 36 months and 24 months.

20.3.2 Research and Data Finding Procedures

After filtering the samples, each company's data were gathered by using data stream. The main method of this study is calculating the ratios. As such, each company's ratios were calculated by using the formulas mentioned above. The information gathered from the data stream is listed below:

1. total asset
2. total debt
3. cash and cash equivalents
4. interest-based securities
5. market prices
6. account receivables
7. cash

In addition, 3-year ratios were calculated for each company. When the calculations were complete, the compliant status was obtained. The companies are then grouped as follows, and the numbers of Shariah-compliant stocks were calculated based on the percentage in Table 20.2.

The factors that cause the different compliance statuses are determined based on the compliance status for each index. In other words, when the company is not Shariah-compliant under all indices, it is concluded that the company has either high debt or high liquidity or even both. In addition, if the company is Shariah-compliant under FTSE and MSCI but not under DJIM and S&P, it is concluded that the company has low market capitalization. Moreover, when the company is Shariah-compliant under DJIM and S&P but not under MSCI and FTSE, it is concluded that the company's total assets are low. The score table is presented in Table 20.3. To calculate the score, the per year situation is taken into calculation.

Table 20.3 Scores for DJIM, MSCI, FTSE, and S&P

Situation	Score = 1
When all stocks are non-Shariah-compliant due to high debt	High debt
When the stocks are Shariah-compliant under FTSE and MSCI but not under DJIM and S&P	Low market capitalization
When the stocks are Shariah-compliant under DJIM and S&P but not under FTSE and MSCI	Low total asset
When all stocks are non-Shariah-compliant due to high cash and interest bearing securities	High cash and interest bearing securities
When all stocks are non-Shariah-compliant due to high account receivable	High account receivable

20.4 Finding and Discussion

Research Question One To check whether Shariah-compliant stocks under SACSC are also considered as Shariah-compliant under international indices.

After the ratio test, in 2009, 14 and 17 companies are considered as Shariah-compliant stocks under DJIM and S&P, respectively, while 24 companies are Shariah-compliant stocks under both FTSE and MSCI. In the 2010 result, 14 companies are Shariah-compliant under DJIM and S&P and 24 companies under FTSE and MSCI. In 2011, the number of Shariah-compliant stocks is maintained for each index, i.e., 14 companies in DJIM and S&P and 24 companies in FTSE and MSCI. From the finding, FTSE and MSCI have resulted in higher number of Shariah-compliant stocks as compared to DJIM and S&P. The reasons behind that are discussed in the next research question.

Research Question Two To examine the factors that lead to differences in Shariah-compliant status.

After determining the status of each company, the factors that lead to non-Shariah compliance were examined. From the results, the highest factor that contributes to non-Shariah compliance is low market capitalization. It reflects the lesser number of Shariah-compliant stocks under DJIM and S&P as a result of using market capitalization as their divisors.

Furthermore, the second highest factor that affects the compliant status is high debt. Due to high debt, many companies were unable to pass the benchmark used in each index. Because of this, not all companies listed in Bursa Malaysia as Shariah stocks were also considered as Shariah stocks in international indices. Apart from

these two significant factors, the other three insignificant causes are low total assets, high cash, and interest-bearing securities as well as high account receivables.

Research Question Three To indicate the most “Islamic” stock screening methodology.

The most “Islamic” stock screening methodology is to have three stages of screening. For the first stage, industry screening is a must, and it seems not much controversial on the issue. All screening providers have included the first stage in their screening. The second stage is screening on income statement. This is also important to ensure that the company’s income is generated through halal activities. After passing the screening, the last stage is to screen the balance sheet. In this case, two controversial items which are debt and liquidity should be included as part of the screening. The ratio should generally agree to be less than 33%.

20.4.1 Research Result Implication

After a complete investigation in this study, it is confirmed that SC benchmarks are developed in order to provide high number of Shariah-compliant stocks listed in Bursa Malaysia. The reason behind that is to encourage Muslim investors to participate in the equity market. The involvement of Muslim investors in the equity market is important since it increases the number of traders as well as playmakers in the industry. Consequently, the equity market moves. From the result, it is proven that SC has not taken balance sheet as part of its screening since it will downsize the number of Shariah-compliant stocks. In addition, taken the issue into consideration, a high number of Shariah-compliant stocks are needed due to the fact that has been mentioned above.

Nonetheless, there are many other benefits that can be barely seen when debt and liquidity ratios are included as part of the screening. By having such ratios as part of screening, the integrity of Islamic stocks will be strengthened. Consequently, it will increase investors’ confidence in Islamic finance. This is very crucial since in this current time, there are strong understanding and awareness among investors as well as the public as a whole. Furthermore, when debt is taken as part of screening, companies will tend to avoid taking finance from banks. Generally, debt would bring bad impacts in the economy when it has to be paid with an extra amount because money will be created out of nothing to back it up. When it happens, no real economy is generated and only fiat money is created to pay the debt, and as a result, inflation will occur.

Given a simple scenario mentioned above, it is crucial for debt ratio to be included as part of the screening as subsequently banks, entrepreneurs, and companies will be encouraged to get involved in profit and loss sharing investments. It means that assets are financed by equity, not long-term debts. This will cultivate and instill the essence of “real” Islamic finance where partnership or profit and loss sharing are highly recommended in the system. In addition, according to Khatkhatay and Nisar [11], equity market is very close to the genuine Islamic profit-sharing investments.

Hence, the inclusion of debt ratio in the screening will generate a better Islamic finance system as well as the economic system as a whole.

Apart from debt ratio, liquidity ratio is also significant to be included in the screening benchmark. This is because companies will have a better collection on account receivables. The lesser amounts of account receivables generate lesser liquidity ratios. As such, companies will have an opportunity to pass the screening. In addition to that, by investing the money in proper investment channels, the economy will move. Due to that, companies will avoid holding much money, and thus, they will have the chance to pass the liquidity screening. Since the inclusion of interest-bearing securities is part of the screening, companies will avoid investing in such investments, and in return they will invest in Islamic securities and hence, the Islamic finance will develop further.

In discussion of the ratios, one issue to be highlighted is the basis. As mentioned in the previous section, DJIM and S&P use market capitalization as the basis of the ratios, while MSCI and FTSE use total assets as the basis. According to the finding, MSCI and FTSE have resulted higher number of Shariah-compliant stocks as compared to DJIM and S&P. Total assets is a better basis due to the reason that it does not get reflected by market forces. As compared to market capitalization, it is exposed to market condition as it can change in a split second. By having total assets as the basis, the asset universe will be more stable and appropriate. Nonetheless, those who are against total assets mentioned that the balance sheet items are not appropriate due to the fact that accounting could be manipulated. In addition, the availability of the figures could only be known at the end of the year.

However, total assets will be the best basis because of its stability. In addition, to argue the manipulation of accounting, it could not be true because procedurally, before the financial statement is published, companies have to send the completed financial statement for auditing. Once auditing is done, the credibility of the financial statement would increase, and it is a practice in most of the companies that financial statement is prepared periodically. Due to this, there is no reason that the financial statement is not available at the time of screening. For example, in SC, the periodic screenings are in May and November, and since SC will have the authority to request for the financial statements, total assets is the most practical basis to be used in the screening ratios.

In a nutshell, SACSC may want to redevelop the screening methodology by including the debt and liquidity ratios. By the inclusion of debt and liquidity ratios, Islamic finance could be better in the future. In addition to that, total assets are a better basis as compared to market capitalization. Apart from advantages mentioned above, the use of total assets will eliminate the choice of trailing months. As DJIM and S&P use different trailing months, it creates a gap in Shariah-compliant status, thus reducing the credibility of Islamic stocks as well as destroying investors' perception on Islamic stocks. Hence, it is essential for Shariah stock screening providers to include debt and liquidity ratios a part of prohibited income.

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Chapter 21

Participation of Malaysia Under the Montreal Protocol and the Kyoto Protocol

Maisarah Makmor, Zulhabri Ismail and Rugayah Hashim

Abstract The ozone hole in Antarctica has created a major buzz in the environmental protection realm. This devastating event has escalated the environmental concerns and has also spawned a series of environmental protocols. This paper highlights the two environmental protocols namely, the Montreal Protocol and the Kyoto Protocol. Furthermore, the paper also focuses on the involvement of Malaysia under both protocols. This paper is designed to not only review the essences in both protocols but also analyses the measures taken by Malaysia under these protocols. The literature review has revealed numerous efforts that have been administered by Malaysia to comply with the obligations under both protocols. These measures are taken into action to not only fulfil the commitments under the protocols but also to create a better nation gearing towards sustainable development and a cleaner environment.

Keywords Montreal Protocol · Kyoto Protocol · Malaysia · Environmental protection

21.1 Introduction

Environmental concerns have been circulating the world news when the first environmental movement was made by the American community in the 1970s. The environmental concerns have heightened among the world community when the new Antarctic ozone hole made headlines in the year 1985. This catastrophic event

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has multiplied the global environmental movement by various international organizations such as the United Nations. These global movements are transformed into various environmental protocols or agreements to encourage more serious measures to be taken to address, reduce and mitigate these severe environmental issues. In this paper, two equally important environmental protocols which are the Montreal Protocol and the Kyoto Protocol are analysed and discussed. This paper also included Malaysia's participating acts and addresses local measures taken by Malaysia under these two protocols.

21.2 Montreal Protocol

One of the steps to be taken towards achieving sustainability in the modern world requires the conservation of the world's environment. Due to the event of Antarctic ozone hole in 1985, proliferating numbers of environmental concerns have created a massive hype regarding extreme change of world climate mainly involving global warming. Portman et al. [1] mentioned that current occurrence of the ozone hole has given a high impact of chlorine in the ozone layer since 1984. Moreover, aggravating production of halocarbons have been documented in various research since the 1980's which have eventually led to the complete collapse of the ozone layer and contributed to the global warming [1]. The alarming issue of the ozone depletion was first discussed in 1976 by the United Nations Environment Programme (UNEP) and followed by a meeting in 1977 where UNEP has convoked experts on the ozone layer to periodically assess the ozone depletion [2].

In 1985, the Vienna Convention for the Protection of the Ozone Layer was adopted which addresses global protection of human health and the environment against adverse effects resulting from the ozone depletion [3]. The Vienna Convention 1985 outlines the applicable measures to be taken to modify the ozone layer, publicise the awareness on the depletion of ozone layer and establishes a framework for reducing the substances that deplete ozone layer [3, 4]. In accordance with the Vienna Convention, the United Nations Environment Program (UNEP) has prepared and drafted a protocol that administers the consumption of chlorofluorocarbons and halons which are categorized as ozone depleting substances [5]. The protocol created under the Vienna Convention 1985 is the Montreal Protocol on Substances that Deplete the Ozone Layer which was adopted in 1987 [3].

The global ozone treaty stresses on the importance of eliminating the usage of the ozone-depleting chemicals and was initiated by 27 countries in Montreal which was then named as the Montreal Protocol [6, 7]. According to Biermann and Simonis [8], The Montreal Protocol came into force in 1989 as binding international law and has been modified and extended since then. Furthermore, adjustments have been to the protocol to suit current development and the Amendments to the Montreal Protocol have been recognised as 'London 1990', 'Copenhagen 1992', 'Vienna 1995', 'Montreal 1997' and 'Beijing 1999' [2]. Since the commencement of the agreement in 1987, 193 nations have signed the agreement and major suppres-

sion in the field of ODS productions around the globe occurred with the presence of Montreal Protocol [9]. The Montreal Protocol 1987 aims to control and thus obliterate the ozone-depleting substances which can deteriorate our health and damage the environment [10]. A multi-basket scheme has been executed under the Montreal Protocol where various 'baskets', i.e. groups of ozone depleting substances (ODSs) are regulated separately [11]. Daniel et al. [11] have listed the four most significant chlorine containing baskets consisting of the chlorofluorocarbons (CFCs) which are CFC-11, CFC-12, CFC-113, CFC-114 and CFC-115, hydro chlorofluorocarbons (HCFs), carbon tetrachloride and methyl chloroform.

In the year 1990, a body has been established by the United Nations to financially assist the developing countries which are known as the Article 5 countries to have the sufficient financial assistance to comply and achieve the stated requirements in the Montreal Protocol [12]. The Multilateral Fund for the Implementations of the Montreal Protocol consists of four institutions which are responsible to ensure the progress and implementation of the Montreal Protocol are The United Nations Environment Programme (UNEP), The United Nations Development Programme (UNDP), The United Nations Industrial Development Organization (UNIDO) and The World Bank which are all existing bodies under the United Nations [8]. The Multilateral Fund has been operating since 1991 and has funded 5700 projects that have been executed by a total of 146 developing countries [13]. The funds that amounted to over US\$ 2.3 billion were contributed by 49 industrialised countries to support the projects that phase-out the consumption and production of the ODS [14, 15].

Malaysia is one of the developing countries that does not manufacture the ozone depleting substances (ODSs) but does import the ODSs from industrialised and developing countries such as USA, UK, Japan, Italy, German, India and China [14, 15]. Nonetheless, Malaysia has taken responsibilities towards the environment and has an active participation on international environmental protocols and programmes [16]. Initially, Malaysia has taken part in the several discussions and deliberations on the amendments that have been done towards the environment protocol i.e. the Montreal Protocol. A significant speech was made by the fourth Prime minister, Tun Dr. Mahathir Mohamad in an environmental conference where he addressed the issue of double standard and unfairness for phasing out programmes for the developing countries under the Montreal Protocol [16].

Consequently, Malaysia has decided to join the force in protecting the ozone layer by acceding both, the Vienna Convention and the Montreal Protocol on the 29 August 1989, the London Amendment 1990 and the Copenhagen Amendment 1992 on 16 June 1993 and 5 August 1993 respectively [17]. Eight years after the accession, Malaysia has ratified two other Amendments namely, the Montreal Amendment 1997 and the Beijing Amendment 1999, both on 26 October 2001 [17]. Razman et al. [18] added that Malaysia has been recognized by the society of the world when Malaysia's Ministry of Environment was awarded with the UNEP Ozone Awards in 1999. Additionally, Malaysia has also been appointed twice as the Vice President in the Meeting of Parties (COP) in the year 1991 and 1994 [16, 18].

Table 21.1 Malaysia's importation and consumption of CFCs, 1995–2010 (metric tonnes). (Adopted from: UNDP [2])

Year	Actual imports	Under Montreal Protocol	Permit allocation for NCFCP commitment
1995	3,442	–	–
1996	3,048	–	–
1997	3,351	–	–
1998	2,351	–	–
1999	2,040	3,271	–
2000	1,651	3,271	–
2001	1,538	3,271	–
2002	1,606	3,271	1,855
2003	1,174	3,271	1,566
2004	1,116	3,271	1,136
2005	662	1,635	699
2006	–	1,635	579
2007	–	491	490
2008	–	491	401
2009	–	491	332
2010	–	0	0

In conjunction with the accession and the ratification over the environmental protection protocols and amendments, Malaysia has developed and established the Ozone Protection Section under the Ministry of Environment to regulate and execute programmes on ozone protection in order to comply with the Montreal Protocol [19]. In compliance to the implementation of the Montreal Protocol, the Government of Malaysia has devised a National Steering Committee (NSC) to supervise and manage the national action plans under the environment protocol [20]. The NSC comprises of representatives from different ministries and agencies such as the Ministry of Natural Resources and Environment (MNRE), Ministry of International Trade and Industry (MITI), Malaysian Industrial Development Authority (MIDA), and the Custom Department [2].

The NSC functions in two separate phases where the first phase was executed from the year 1992–2001 while the second phase were carried out in the year 2002–2010 [15]. The phase two of the NSC is identified as the National CFC Phase-Out Plan (NCFCP) which has an aim of phasing out the consumption of CFC in accordance with the phase-out schedule under the Montreal Protocol [2]. The phase-out schedule can be referred to Table 21.1.

From Table 21.1 the consumption amount of CFC by Malaysia is declining since the year 1995 although the starting amount allocated under the Montreal Protocol is higher which was highlighted in the table in the year 1999 [2, 15]. Another programme which is the Institutional Strengthening Project was carried out by the Ministry of Environment to support the implementation of the Montreal Protocol in Malaysia and was funded by the Multilateral Fund (MLF) with an amount of US\$ 1,526,520 for duration of 11 years [19].

The Montreal Protocol has been proven to be a successful environmental agreement in achieving its aim. The result of this success can be represented by the percentage of consumption of ODS at end of the year 2002 where the industrialised countries have minimised the use of ODS up to more than 99% while the developing countries have achieved a percentage of more than 50% [21]. The success rate achieved from the Montreal Protocol would have not been accomplished without the projects that have been carried out by the Multilateral Fund. Most of the projects mainly involve introducing new substitutes for Chlorofluorocarbon (CFC) which contributed to the lower percentage of an approximate 20% of CFC consumption worldwide [22].

21.3 Kyoto Protocol

Severe global climate changes have created concerns among scientists and have encouraged scientific consensus to cultivate on environmental policies to minimize thus halt the effects to the global environment. To act on this matter, two United Nations agencies which are the United Nations Environment Program (UNEP) and the World Meteorological Organization (WMO) have gathered scientific experts from around the world to monitor, evaluate and produce strategies and solutions to the global climate problems. This set up is named as the Intergovernmental Panel on Climate Change (IPCC) which was established in the late 1988 [23].

Diverse research related to climate change have resulted to the production of the first assessment report by the IPCC in 1990 which summarizes on the issue of human impact contributing to the serious climate changes and the increasing emission of the greenhouse gases which will lead to severe global warming [24]. Hence, the United Nations Framework Convention on Climate Change (UNFCCC) was inaugurated as the first international agreement that was made related to global climate change which was signed by 154 countries on June 1992 at Rio de Janeiro [2, 25]. The UNFCCC held series of meetings to attain an agreement to resolve the issues involving greenhouse emission and global warming [26].

The third Conference of the Parties to the UNFCCC (COP 3) was held in Kyoto, Japan on 11 December 1997 produced the Kyoto Protocol which is a legally binding agreement and was adopted by 160 countries [27, 28]. The Kyoto Protocol is similar to the Montreal Protocol as both are international treaties. However, Kyoto Protocol differs from Montreal Protocol as it relates to the issues of greenhouse gas emissions to reduce global warming which is linked to the UNFCCC [27, 29]. The Kyoto Protocol then entered into force on 16 February 2005 which was after 8 years from the pursuance of the treaty. The delay was due to terms of agreement where the Kyoto Protocol will only be effective after 90 days with ratification by at least 55 countries. Furthermore, the ratifying countries must correspond to at least 55% of the world's total carbon dioxide emission for the base year of 1990 [30].

The United States, the European Union (EU), Russia and Japan are the four largest countries that emit greenhouse gases to the atmosphere which contributes to

global warming [31]. After Russia's ratification of the Kyoto Protocol in 2004, three out of the four largest greenhouse gases emitter have ratified the protocol making it effective in February 2005 [32]. The USA is the first largest country that emits Carbon Dioxide (CO_2) and has refused to ratify the Kyoto protocol due to the high cost of emission reduction [33]. Even though the United States signed the protocol on 12 November 1998, President George W. Bush has decided to reject the protocol for the United States in 2001 [34]. The reason of rejecting the protocol by the United States is due to two main issues which are the significant impact of vast emission reduction towards the US economy and the lack of emission commitments for the developing countries under the Kyoto Protocol [25]. Nevertheless, the US efforts to overshadow the Kyoto Protocol's goals failed as the implementation of the Kyoto Protocol prevails where the protocol induces more significant changes upon its the application towards ratified nations [35].

Carbon dioxide (CO_2) is the dominant greenhouse gas in the Kyoto Protocol including other greenhouse gases such as methane (CH_4), sulphur hexafluoride (SF_6), nitrous oxide (N_2O), hydro fluorocarbons (HFC) and other halocarbons (CFCs) [36]. The main purpose of the Kyoto Protocol is to lower the amount of anthropogenic greenhouse gas emissions by the industrialized countries or more known as the Annex 1 countries [37]. According to the treaty, 37 industrialized nations or Annex 1 countries have agreed to reduce their greenhouse gases emission to a collective emission of 5.2% below 1990 greenhouse gases emissions levels within 5 years dated from the year 2008 until 2012 [35, 38]. On the other hand, the developing countries or referred as the Non-Annex 1 counties, have a non-quantitative commitment to the Kyoto Protocol in terms of greenhouse gases emissions [34].

The main reason the Kyoto Protocol did not impose any quantitative commitments for the Non-Annex 1 countries is because the overall emission from the developing countries is much lower to be compared with the overall emission from the industrialized countries despite the rapid growth of emission from the Non-Annex 1 nations [37]. Furthermore, the reason behind the implications of greenhouse emission control to the Annex 1 countries will result to a ripple effect towards the countries that have not agreed to share the burden of control [39, 40]. For example, the quantitative commitments imposed to the Annex 1 countries will increase the cost of usage for carbon-emitting fuels and increase the production costs for energy-intensive goods, and thus, will result into a reduction of the global demand for carbon-emitting fuels. Babiker et al. [39] added that the act of emission control will also help to depress, and thus, suppress the countries demand towards carbon-emitting fuels and then significantly contribute to the protocol itself.

The idiosyncrasy of the Kyoto Protocol is a flexible international agreement whereby three different compliance systems are introduced to ratified parties to restrict and halt the exceeding amount of allocated greenhouse emissions in compliance to the aim of the protocol [41]. This statement has been supported by Lo [40], whereby he stated that the Kyoto Protocol provides the ratifying countries freedom to choose whether to meet their obligations 'individually' or 'jointly' via the available compliance systems. In order to fulfill the commitments made by ratifying countries to the articles in the Kyoto Protocol, the three flexible mecha-

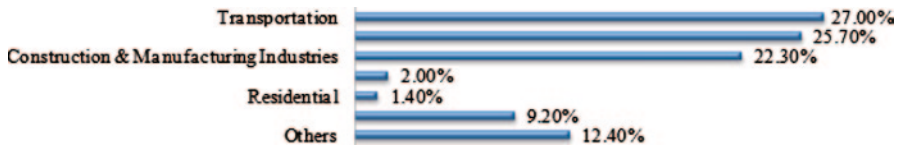


Fig. 21.1 CO₂ emission by sectors in Malaysia. (Adapted from: Oh, T. H., and Chua, S. C. [43])

nisms that are available to be utilized by committed nations are Clean Development Mechanism (CDM), Joint Implementation (JI) and Emission Trading (ET) [35, 42, 43]. The first mechanism which is the Clean Development Mechanism (CDM) is a mechanism that grants the Annex 1 countries to obtain certified emission reduction (CERs) units by engaging on greenhouse gases abatement projects in Non-Annex 1 countries in order to achieve their commitments made in the acquired reduction of greenhouse gases emission in the Kyoto Protocol [44–46].

As for Joint Implementation (JI), it is almost similar to the Clean Development Mechanism (CDM) where it involves project-based activities whereby one country funds a project that actually lowers the emission level in another country thus allowing the funding country to receive certified emission reduction (CERs) units [30, 34, 46]. Lastly, the Emission Trading (ET) consists of a process of trading in emission by the ratified countries in a commodity that tracks and trades carbon called ‘Carbon Market’ [42]. The main reason for allowing Emission Trading (ET) is to assist a country to lower the cost of reducing greenhouse gases emissions to the required level as per agreement.

Oil and gas are the main carbon emitting fuels that have been exploited in the vast growing of the Malaysian economy [47]. As a fast developing country, Malaysia has exhibited a high energy consumption where it was estimated about 2.5 quadrillion Btu in 2007 which is approximately 400% increase from the early 1980s [43]. According to Oh and Chua [43], the amount of 2.5 quadrillion Btu is considered as high compared with other developing countries or even with some of the developed countries. Statistics have shown that the amount of global CO₂ emission mainly comes from man-made activities especially from transportation sector [48]. For Malaysia’s case, the transportation sector has the highest percentage of the CO₂ emission from various sectors in the Malaysian economic and this is shown by Fig. 21.1.

Thus, this matter has raised concerns to the Malaysian government and feasible measures have to be applied to minimize the energy consumption without jeopardizing the Malaysian economic growth [49]. Malaysia has been actively involved in international environmental agreements for the past decades and has not missed to be a part of this protocol. Malaysia has signed the Kyoto Protocol on 12 March 1999 and has ratified the treaty on 4 September 2002 [43]. Before signing of the Kyoto Protocol in 1999, Malaysia has already applied few energy-related policies such as the National Energy Policy (1979), the National Depletion Policy (1980) and the Four-Fuel Diversification Policy (1981) to ensure sustainable socio-economic development in the nation [43, 50, 51].

According to Oh and Chua [43], the purpose of the fuel diversification policy is to ensure a balance in utilization of oil, gas, coal and hydropower and is reviewed from time to time to avoid an over dependency on only one main source of energy.

In the year 1999, the Four-Fuel Diversification Policy was then upgraded to Five-Fuel Diversification that integrates the renewable energy (RE) concept into the fuel diversification policy which was included into the Eighth Malaysian Plan (8MP) from the year 2001 until 2005 and also the Third Outline Perspective Plan (OPP) for 2001–2010 [43, 47, 48, 50]. From the fuel diversification strategies, Oh and Chua [43] and Lau et al. [50] have agreed that a significant drop of oil to the energy mix from approximately 90% in 1980 to a mere 2.2% in 2005, with the remaining of 70.2 and 21.8% resulting from natural gas and coal respectively. Consequently, Malaysia has ratified the Kyoto Protocol in 2002 and pledged to achieve an aim of sustainable development with a decreased amount of CO₂ emission as much as 40% in the year 2020 using the 2005 levels depending on the financial assistance and technology transfer from other developed countries [43, 48].

In conjunction of promoting RE in Malaysia, the Government of Malaysia has launched the National Biofuel Policy (NBP) in 2005 which supports and promotes the development of biofuel production in the country thus striving to reduce and eliminate the import of fuels [48]. Moreover, the 5-year Malaysian Building Integrated Photovoltaic Technology Application Project (MBIPV) was initiated in 2005 to induce greater application and utilisation of photovoltaic technology in buildings in Malaysia [47]. In connection with the Kyoto Protocol, the Government has addressed and emphasized the concept of energy efficiency (EE) in the Ninth Malaysian Plan (9MP) which explicitly advocates energy saving especially in industrial and commercial sectors [47]. To support the EE concept in the Ninth Malaysian Plan, Low Energy Office (LEO) building was constructed with a purpose of promoting the minimization of energy consumption in a building without sacrificing the occupants' comfort [50]. Following the success of the Low Energy Office (LEO) building, a Zero Energy Office (ZEO) was built in 2007 that utilizes a higher rate of energy efficiency using Building-Integrated Photovoltaic (BIPV) panels that generates solar electricity for building consumption [50].

Additionally, Oh and Chua [43] stated that another concept has been included in the Ninth Malaysian Plan which is the Green Building concept. The green building concept has officially been applied to the Malaysian construction industry when the Malaysia Architect Association and the Association of Consulting Engineers Malaysia (ACEM) have launched the Green Building Index (GBI) on May 2009 to evaluate the impact of a building towards the environment [43]. Furthermore, incentives are given from the Malaysian Government in the Malaysian Budget 2010 to boost the usage of the GBI in new buildings to further promote the Green Building concept. Malaysia has also implemented one of the flexible mechanisms under the Kyoto Protocol which is the Clean Development Mechanism (CDM). The Biomass Energy Plant Lumut was the first Malaysian project that was registered as a CDM project by the United Nations Framework Convention on Climate Change (UNFCCC) [47]. This is one of the many steps that has been implemented by the Malaysian Government to ensure sustainable development alignment with the commitments under the Kyoto Protocol.

Table 21.2 Malaysia and The Montreal Protocol

The Montreal Protocol

Created under the Vienna Convention 1985
 Adopted in 1987
 Initiated by 27 countries in Montreal
 Came into force in 1989
Aim: To control and obliterate the ozone-depleting substances
Measures taken by Malaysia under the Montreal Protocol
 Acceded both the Vienna Convention and the Montreal Protocol on 29 August 1989
 Ratified two other Amendments namely, the Montreal Amendment 1997 and the Beijing Amendment 1999
 Ministry of Environment was awarded with the UNEP Ozone Awards in 1999
 Appointed twice in the year 1991 and 1994 as the Vice President in the Meeting of Parties (COP)
 Established the Ozone Protection Section under the Ministry of Environment to regulate and execute programmes on ozone protection
 Devised a National Steering Committee (NSC) to supervise and manage the national action plans under the Montreal Protocol
 Ministry of Environment established the Institutional Strengthening Project to support the implementation of the Montreal Protocol

Table 21.3 Malaysia and The Kyoto Protocol

The Kyoto Protocol

Established on 11 December 1997
 Adopted by 160 countries
 Entered into force on 16 February 2005
Aim: To lower the amount of anthropogenic greenhouse gas emissions by the industrialized countries
Measures taken by Malaysia under the Kyoto Protocol
 Signed the Kyoto Protocol on the 12 March 1999
 Ratified the Kyoto Protocol on 4 September 2002
 Applied the National Energy Policy (1979), the National Depletion Policy (1980) and the Four-Fuel Diversification Policy (1981) to ensure sustainable socio-economic development in the nation
 Upgraded the Four-Fuel Diversification Policy to Five-Fuel Diversification and integrates the renewable energy (RE) concept
 Launched the National Biofuel Policy (NBP) in 2005 to support and promote the development of biofuel production in the country thus striving to reduce and eliminate the import of fuels
 Initiated the 5-year Malaysian Building Integrated Photovoltaic Technology Application Project (MBIPV) in 2005 to induce greater application and utilization of photovoltaic technology in buildings
 Incorporated energy efficiency (EE) concept in the Ninth Malaysian Plan (9MP)
 Constructed Low Energy Office (LEO) building to minimize energy consumption in a building without sacrificing the occupants' comfort
 Built Zero Energy Office (ZEO) in 2007 that utilizes a higher rate of energy efficiency using building-integrated photovoltaic (BIPV) panels that generates solar electricity for building consumption
 Launched the Green Building Index (GBI) on May 2009 to evaluate the impact of a building towards the environment

21.4 Conclusion

Alarming climate change and global warming have resulted to the nascence of the Montreal Protocol and Kyoto Protocol. Both protocols share a similarity of being an international agreement but possess different aims. Montreal Protocol aims in reducing the consumption of ozone depleting substances while the Kyoto Protocol's goal is to lower the greenhouse gas emissions worldwide to reduce global warming. Both protocols have been ratified by major countries in the world and Malaysia has decided to join the group in ratifying both protocols. Malaysia's participation in both environmental protocols has increased the awareness of protecting the environment among the local communities. The measures that have been taken by Malaysia under both protocols are analysed and summarised in Table 21.2 and 21.3.

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Chapter 22

Performance Profiling of Malaysian Junior Tennis Players

Mohamad Rahizam Abdul Rahim, Balbir Singh, Nagoor Meera Abdullah, Vincent Parnabas, Norasruddin Sulaiman and Rahmat Adnan

Abstract This study investigated the effects of an intervention program on selected performance attributes among Malaysian junior tennis players. Twenty-four ($n=24$) nationally ranked junior tennis players between the age of 12–16 years old (18 males and 6 females, mean age 14.29 ± 1.65 years) were selected using purposive sampling method and were equally divided into experimental and control groups. The experimental group performed four sessions of intervention every week for 8 weeks while the control group performed normal training sessions and match play for the same frequency and duration. All participants were tested on four different performance areas namely, the physical, psychological, technical, and tactical profiles. Normality test showed that all data were normally distributed (Kolmogorov–Smirnov test). The results of sample paired t test analysis subscales with every performance attributes showed significant improvement in all performance attributes with level of significant differences of $\alpha < 0.05$ after the intervention program. These methods correlate with the objectives of this study which focused on the effects of an intervention program and the results proved that the participants showed an improvement in their performance based on the four major areas of physical, psychological, technical, and tactical skills. The selected performance variables have indicated significant improvement after the intervention and can be used in the profiling of players' performance. The Player's Performance Profile which was designed from this study should be able to assist the National and State Tennis Associations, coaches, parents, and most importantly, the players to monitor performance and to provide a road map towards achieving success at the highest level possible.

Keywords Performance · Profile · Training · Tennis · Coach · Player

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22.1 Introduction

It is an aspiration of any coach to train and produce a successful athlete. Effective training is about providing not only quantity but also quality programs. Athletes must also be able to demonstrate excellent levels of technical and tactical abilities as well as the ability to persist longer than the opponents physically and mentally. A simple subjective view of how well the athletes perform is no longer applicable as a foundation of training and competing. The need to record, analyze, and evaluate information on key performance areas such as physical, psychological, technical, and tactical has become fundamental to elite performance. The information on several characteristics of sports performance is the foundation for providing feedback on how the athlete is performing. This feedback will lead to the development of up-to-date coaching interventions or methods centered on evidence-based training programs. If athletes are to attain world class performances, information from continuous assessments of training and competition must be made available in order to assist in the evaluation of athletes' performance and progress. Therefore, it is important for coaches to possess a solid framework of sport science support system which is designed to help foster the skills of athletes and improve their performance.

Tennis is a distinctive sport which demands an integration of multiple factors or components. Over the years, tennis has turned into one of the most popular sports being played all over the world and many competitive tournaments are being organized. As competitive tennis continues to develop and grow, accompanied by rapid transformation of the game, there is also an increasing need to develop performance qualities in which elite players can train to achieve their goal of international excellence. In recent years, many Asian countries have produced world class tennis players. However, the current standard of tennis players in Malaysia is still far behind as compared to the other Asian countries such as Thailand, Indonesia, South Korea, India, Chinese Taipei, and Philippines. All these countries have produced their world class tennis players especially at the junior level. No Malaysian tennis player has ever been ranked in the top 200 in the world ranking or has won any championship at Asian level for the past 20 years.

In order to play tennis at competitive level, certain standards need to be achieved in all major components of performance such as physical, psychological, technical, and tactical areas of skills or abilities. A high level of performance can only be achieved through a meticulously planned and well-controlled training system based on scientific knowledge and proven methods of training fundamentals. As such, many sports scientists have been researching methods and studying new approaches or tools to help train tennis players in the lab and on the court. This is to facilitate tennis players to reach their full potential during competitions as well as in their playing career. One approach that is becoming increasingly popular with coaches and sports researchers is performance profiling. It has many benefits and is useful for assessing athletes' performance. According to Crust [7], performance profiling is a coaching tool for identification of strengths and weaknesses, designing training programs, and developing better communication between coaches and athletes.

Many high performance coaches agree that there are four main components that are required to develop the complete athlete; psychological, physical, tactical, and technical [8]. Each of these components has its own development path and methods. Developing all of the components in an integrated way is known as a holistic approach and all are interconnected. According to Bangsbo [1], performance of an athlete at the elite level depends on the athlete's technical, tactical, physiological, and psychological/social characteristics. Improvement in performance, particularly at the elite level, largely depends on applying scientific knowledge to increase the quality of training programs. Therefore, it is always recommended that tennis players train in a specific manner to improve tennis-specific performance. Improving tennis performance is the main goal of every coach and player; as such effective planning and training programs will definitely help to optimize the players' performance. It has been proven that the development of specific areas such as techniques and tactics as well as mental and physical skills will contribute to the success and improvement of athletes.

Training tennis players requires the effective integration of tactical, technical, physical, and psychological components in order to ensure successful performance. Technical development will improve players in various strokes such as forehand, backhand, serve and volleys; tactical development will assist in the use of different strategies or approaches while mental preparation will provide stability of the players in critical situations. Physical prowess will help players to execute skills at optimum level. Performance profiling appears to be an instrument that is particularly useful for aiding the design of specific physical, psychological, technical, and tactical training programs. The central involvement of the athlete in the process is the forte that may increase their motivation and encourage adherence to any intervention strategies devised. Additionally, the profile can be utilized as a monitoring device to assess the effectiveness of any intervention and highlight areas of good and poor progress. The comprehensive monitoring of athletes' performance is necessary particularly during phases of training overload in order to allow a coach to make a decision regarding the effects and consequent planning of training. The principle of individualization suggests that every athlete will react differently to any training stimulus [2]. Performance profiling is the key to developing the self-awareness players need, to develop their emotional intelligence, and understand how their behavior and personality impact on their performance and results. No matter at what level the players are, they can use sports profiling to take their performance to a new level. According to Butler and Hardy [3], performance profiling can help coaches and sports scientists to develop a better understanding of their athletes by highlighting perceived strengths and weaknesses, clarifying the athlete's and the coach's vision of the key determinants of elite performance and highlighting any differences, establishing areas where the athlete might resist change, providing a means of monitoring progress and highlighting discrepancies between the athlete's and coach's assessment of performance.

The purpose of the study is to produce an integrated profile of performance characteristics among the existing national elite junior tennis players aged between 12 and 16 years old and to provide evidence-based recommendations

that can be adopted by players, parents, coaches, and national associations in the training programs with the objective of upgrading the performance level and achievements of Malaysian junior tennis players. The findings of this study will provide important information, knowledge, and guidelines for coaches, parents, and players on a systematic approach to become a better player and to reach the maximum potential of the player. Tennis players looking forward to reach their full potential deserve to be trained using the most up-to-date or systematic approaches which have been scientifically proven to enhance their performance. It is the responsibility of the coach to impart the latest information and findings into a successful evidence-based training program to enhance players' performance and to achieve their fullest potential. The aim of this study is to seek a realistic and feasible solution in order to improve and to enhance the performance of Malaysian junior tennis players as well as to upgrade the standard of their achievement at international level.

The objectives of this study are:

1. To explore the high performance tennis profile and characteristics of Malaysian junior players.
2. To examine the effects of an intervention program on key performance areas of Malaysian junior tennis players.

This research seeks to address several fundamental questions in relation to understanding high performance tennis profiles and characteristics.

1. What are the performance profiles associated with a successful tennis players?
2. Is the training intervention effective and able to enhance the performance of Malaysian junior elite tennis players?

22.2 Methodology

22.2.1 Participants

A total of 24 junior tennis players ($n=24$) were selected for this study using the purposive sampling method where all the participants were top tennis players in Malaysia between the ages of 12–16 years old (18 males and 6 females, mean age 14.29 ± 1.65 years) and were ranked in the National Junior Ranking System. The ranking system was based on the accumulated points collected by the players in various national level tennis tournaments. The points collected determine the ranking achievement of each of the players who participated in the national tennis tournaments. All testing and training procedures were fully explained, and written parental consent was obtained for each participant, all of whom agreed to participate in the study.

22.2.2 Procedures of Study

All subjects were tested on four different performance components namely the physical, psychological, technical, and tactical profile. These four performance components were tested utilizing established and proven reliable instruments as well as reliable procedures. Each of the performance profiling was assessed using a standard scoring methodology. These methods correlate with the objective of this study which focuses on effects of an intervention program on the four selected performance components. The participants were inducted into an intervention program which was employed for 8 weeks. An integrated training program employed as the intervention was adopted and adapted from existing training program used by many professional tennis players and recognized by a panel of qualified coaches. The participants were tested on the four criterion performance variables before and after the completion of the intervention training program. During a 2-day testing phase of pretest and post-test sessions, four experimental sessions were conducted as described below:

- a. A series of fitness test batteries based on United States Tennis Association Fitness Protocol. The test batteries were:
 - a. Aerobic Endurance—using bleep test, a 20 m shuttle run test to maximal exhaustion.
 - b. Flexibility—using sit and reach test.
 - c. Speed—20 m sprint using timing lights.
 - d. Grip strength—using dynamometer.
 - e. Upper-body strength—using 1 min sit-up test.
 - f. Leg Power—double leg counter movement vertical jumps.
 - g. Body Composition—using Body Mass Index (BMI).
 - h. Agility—using Illinois Run Test.
 - i. Balance—using 1 min stork stand test.
- b. International Tennis Number (ITN) on-court assessment, a tennis skill assessment method developed by International Tennis Federation (ITF).
- c. Mental Performance Inventory. (PPI; Loehr 1986) A 42-item self report inventory with seven subscales, designed to measure factors that reflect mental toughness in an athlete.
- d. Tactical Performance Profile. Components of tactical skills based on coach's observation of player's on-court performance.

22.3 Significance of Study

The development of a champion should start from the early age. This is because in general, it takes 8–12 years of training to build a talented player to become a World Class Player. Performance profile appears to be a tool that is particularly useful for

aiding the design of specific mental, physical, and technical training programs. The central involvement of the athletes in the process is a key of strength that may boost motivation and promote adherence to any intervention strategies devised [5]. Additionally, the performance profile can be used as a monitoring device to assess the effectiveness of any interventions.

The findings of this study will provide important information, knowledge, and guidelines for coaches, parents, and players on the systematic approach to reach optimum potential and to achieve the performance target. Tennis players looking forward to reach their full potential deserve to be trained using the most up-to-date or systematic approach which have been scientifically proven to enhance players' performance. It is the responsibility of the coach to impart latest information and findings into a successful evidence-based training program to enhance players' performance.

22.4 Results

22.4.1 Statistical Analyses

The results of this study were analyzed using the Statistical Package Social Sciences (SPSS) 18.0. Results showed that all data collected in pretest and posttest were normally distributed (Kolmogorov–Smirnov test), and therefore, a 2-tailed paired t test was used to detect differences for each test between the pretest and posttest periods. Effect sizes were calculated and interpreted according to Cohen's standards [4]. A level of $p < 0.05$ was considered to be statistically significant. A reliability analysis for tactical profile data was conducted and it has been shown that Cronbach's alpha for experimental group was 0.98 and was more than 0.70 as suggested by Nunnally [11]. Therefore, they were adequately reliable and appropriate to be used for further analysis.

22.4.2 Data Analysis on Physical Profile

Table 22.1 shows the t test results on each component of the physical profile. The obtained t values were statistically significant at $\alpha = 0.05$. The results which indicate the t values were: cardiovascular endurance (-14.01), flexibility (-6.52), speed (3.73), strength (hand grip) (-2.88), leg explosive power (-4.31), muscular endurance (-3.92), body composition (-3.03), agility (5.20), and balance (-4.78). The obtained t values were statistically significant at $\alpha = 0.05$. Hence, it also clearly shows that most of the attributes in the physical profile by these experimental group participants have produced an improvement with level of significant differences of ($\alpha < 0.05$) on cardiovascular endurance ($0.000 < 0.05$), flexibility ($0.00 < 0.05$), speed ($0.003 < 0.05$), handgrip strength ($0.02 < 0.05$), leg explosive power ($0.001 < 0.05$), muscular endurance ($0.002 < 0.05$), body composition ($0.01 < 0.05$), agility ($0.00 < 0.05$), and balance ($0.001 < 0.05$).

Table 22.1 Significance of means between pretest and posttest on physical profile

Physical profile (experimental group)						
Variables	Pretest	Posttest	Difference	S. error mean	<i>t</i> test	<i>p</i> -value
Cardiovascular endurance	43.73	46.13	2.39	0.17	-14.01	0.00
Flexibility	33.37	35.89	2.53	0.39	-6.52	0.00
Speed	3.60	3.52	-0.09	0.02	3.73	0.00
Strength (hand grip)	64.50	65.15	0.65	0.23	-2.88	0.02
Leg power	27.00	29.08	2.08	0.48	-4.31	0.00
Muscular endurance	26.42	27.58	1.17	0.30	-3.92	0.00
Body composition	20.07	20.08	0.01	0.01	-3.03	0.01
Agility	17.59	17.21	0.38	0.07	5.20	0.00
Balance	17.83	19.33	1.50	0.31	-4.78	0.00

22.4.3 Data Analysis on Psychological Profile

Results in Table 22.2 have indicated a significant improvement for all attributes that were tested among participants with a significant difference of $\alpha=0.05$. The results of the *t* test for each performance attribute in this profile were on self-confidence (-9.87), negative energy (-4.01), attention control (-9.11), visual and imagery (-9.57), motivational level (-10.86), positive energy (-8.07), and attitude control with *p* value (-3.53). Furthermore, the results of the *p*-values for each attribute on this profile were on self-confidence ($0.00 < 0.05$), negative energy ($0.002 < 0.05$), attention control ($0.00 < 0.05$), visual and imagery ($0.00 < 0.05$), motivational level ($0.00 < 0.05$), positive energy ($0.00 < 0.05$), and attitude control with *p* value ($0.01 < 0.05$). The results have confirmed the existence of an improvement for all attributes that had been tested among the participants in the experimental group with a significant difference of $\alpha=0.05$.

22.4.4 Data Analysis on Technical Profile

Table 22.3 displays the results of significant differences for each attribute on technical profile. Based on the results, *t* values for each attribute were: forehand groundstroke (crosscourt) (-14.18), backhand groundstroke (crosscourt) (-13.40), forehand groundstroke (down the line) (-8.40), backhand groundstroke (down the line) (-4.02), forehand groundstroke (crosscourt) (-6.97), backhand groundstroke (crosscourt) (-4.01), first serve (-9.13), forehand volley (-6.09), and backhand volley (-6.17). The *p*-values for each attribute were forehand groundstroke (crosscourt) ($0.00 < 0.05$), backhand groundstroke (crosscourt) ($0.00 < 0.05$), forehand groundstroke (down the line) ($0.00 < 0.05$), backhand groundstroke (down the line) ($0.002 < 0.05$), forehand groundstroke (crosscourt) ($0.00 < 0.05$), backhand groundstroke (crosscourt) ($0.002 < 0.05$), first serve ($0.00 < 0.05$), forehand volley ($0.00 < 0.05$), and backhand volley ($0.00 < 0.05$). Hence, the results confirmed a significant improvement for every tested attribute because the *p*-values were less than the significance level ($\alpha=0.05$).

Table 22.2 Significance of means between pretest and posttest on psychological profile

Psychological profile (experimental group)						
Variables	Pretest	Posttest	Difference	S. error mean	<i>t</i> test	<i>p</i> -value
Self-confidence	18.33	21.08	2.75	0.28	-9.87	0.00
Negative energy	17.00	17.92	0.92	0.23	-4.01	0.002
Attention control	17.17	19.50	2.33	0.26	-9.11	0.00
Visual and imagery control	18.33	20.83	2.50	0.26	-9.57	0.00
Motivational level	20.67	23.17	2.50	0.23	-10.86	0.00
Positive energy	17.42	19.67	2.25	0.28	-8.07	0.00
Attitude control	18.83	19.75	0.92	0.26	-3.53	0.01

Table 22.3 Significance of means between pretest and posttest on technical profile

Technical profile (experimental group)						
Variables	Pretest	Posttest	Difference	S. error mean	<i>t</i> test	<i>p</i> -value
Forehand GS (depth)	26.00	31.33	5.33	0.38	-14.18	0.00
Backhand GS (depth)	24.92	30.50	5.58	0.42	-13.40	0.00
Forehand GS (down the line)	13.33	15.75	2.42	0.29	-8.40	0.00
Backhand GS (down the line)	14.00	14.83	0.83	0.21	-4.02	0.00
Forehand GS (crosscourt)	14.75	16.00	1.25	0.18	-6.97	0.00
Backhand GS (crosscourt)	14.83	15.75	0.92	0.23	-4.01	0.00
First serve	73.75	78.83	5.08	0.56	-9.13	0.00
Forehand volley	20.67	23.83	3.17	0.52	-6.09	0.00
Backhand volley	21.17	23.92	2.75	0.45	-6.17	0.00

22.4.5 Data Analysis on Tactical Profile

Table 22.4 shows the results of significance of means difference analysis of each attribute on tactical profile. The *t* values of the experimental groups on attributes are as follows: attacking shots (-6.17), defensive shots (-5.00), court positioning (-5.00), anticipation (-7.42), game plan (-3.32), depth (-10.38), and decision making (-7.42). The obtained *p*-values for *t* test results to be significant at $\alpha=0.05$ and the *p*-values for each attributes in tactical performance were: attacking shots ($0.00 < 0.05$), defensive shots ($0.00 < 0.05$), court positioning ($0.00 < 0.05$), anticipation ($0.00 < 0.05$), game plan ($0.01 < 0.05$), depth ($0.00 < 0.05$), and decision making ($0.00 < 0.05$). Therefore, the *p*-values showed less than 0.05 and it can be concluded that there was a significant improvement in all the components on tactical profile.

22.5 Discussion

The findings proved that participants showed an improvement in their performance based on four major areas of physical, psychological, technical, and tactical skills as key in engaging in a better quality of training development

Table 22.4 Significance of means between pretest and posttest on tactical profile

Tactical profile (experimental group)						
Variables	Pretest	Posttest	Difference	S. error mean	<i>t</i> test	<i>p</i> -value
Attacking shots	5.67	6.58	0.92	0.15	-6.17	0.00
Defensive shots	6.42	7.25	0.83	0.17	-5.00	0.00
Court positioning	5.92	6.75	0.83	0.17	-5.00	0.00
Anticipation	5.83	6.67	0.83	0.11	-7.42	0.00
Game plan	6.17	6.67	0.50	0.15	-3.32	0.01
Depth	6.25	7.42	1.17	0.11	-10.39	0.00
Decision making	6.08	6.92	0.83	0.11	-7.42	0.00

program. The findings indicated that participants from the experimental group have shown significant improvement in all performance components while the control group showed significant improvement in some of the performance components based on four major areas of physical, psychological, technical, and tactical skills. The influence of physical abilities on tennis play may be more apparent during the age of 12–16 years due to dramatic increase in strength, size, and endurance [12]. Knowledge of the relationship between various physical attributes and the ranking of junior tennis players could assist in determining the relative importance of such measurements and providing effective training programs. Tennis is an open loop sport which requires constant decision making, response organization, spatial awareness as well as wide range of physical, psychological, technical, and tactical abilities [10]. Therefore, a tennis player cannot be successful if he or she only excels in one area such as technical aspect but lacks in other areas such as physical, psychological, and tactical aspects. Since the effects of training on the body are very specific and not easily transferred from one activity to another, the exercises used in training should reflect the demands and characteristics of tennis play.

Based on the results, the performance variables that have been identified were significant and can be used in the profiling of players' performance. It also validates the positive effect of the training intervention program as sample paired *t* test analysis subscales with every performance profile results showed a significant difference after the intervention. The participants showed a higher improvement results which dictate the optimistic effect of intervention training program developed in this study. The findings on physical profile were supported by a previous study of Girard and Millet [9] who found that sprint, power abilities, and handgrip strength can be good predictors in tennis performance. According to Cook [5], tennis is an impact game that needs overall fitness which comprise of several components. Psychological skills are of considerable advantage to tennis players. Some psychological characteristics can be developed independently while some of the skills can be coached [14]. Technical skills also play an important role in the successful performance of tennis players. As pointed out by Crespo and Higuera [6], the ability to produce good groundstroke is a distinguishing feature of modern tennis. The findings on tactical skill are also supported by Scully and O'Donoghue [13] who demonstrated the interaction between knowledge and decision making; their study showed that winners in tennis matches made similar changes in tactics.

This demonstrates that elite tennis players are able to combine their knowledge of the game and situations that arise during the competition to make decisions on tactical moves.

The Player's Performance Profile which was designed from this study should be able to assist the National and State Tennis Associations, coaches, parents and most importantly, the players to monitor performance and to provide a road map towards achieving success at the highest level possible. In conclusion, the practicality of information gathered from this study can be applied when designing training programs for elite tennis players. The need analysis on players' performance will help coaches to identify the strengths and weaknesses of players and design a proper training program for performance enhancement of the players accordingly. Throughout the above in-depth discussion of the research findings, the researcher has wound up certain important elements as well as attributes of a successful tennis player which should be adopted in tennis training intervention programs as a benchmark of many previous studies. It can be concluded that all the four performance components; physical, psychological, technical, and tactical skills are important attributes of successful tennis players which should not be ignored in any coaching methodology. Performance profiling provides a way of understanding how coaches identify the qualities that are necessary to achieve peak performance based on athletes' current performance. This information can be used to develop the training schedules in order to help the athletes to improve on relatively weaker areas of performance. In conclusion, the practicality of information gathered from this study can be applied when designing training programs for elite tennis players. There are many factors that determine the success of a tennis player. Effective planning and training programs will help in designing an effective, productive, reliable, and safe program design to help in optimizing the performance.

22.6 Practical Applications

An 8-week training program for competitive junior tennis players was adopted and adapted in this study and used as an intervention. The supervised training sessions are conducted four times a week for 3.5 h per session. The training program covers all four areas of performance profile: physical, psychological, technical, and tactical skills. All training and testing procedures are performed on the tennis court. Further research is recommended to determine if this training program can reduce the incidence of injuries among junior tennis players.

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Chapter 23

Policing the Peace Keeper

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and Azlan Bin Abdul Rahman**

Abstract Royal Malaysia Police: Being in a security force requires a great need for the police officers to conduct their tasks and duties in a very efficient and effective way as they are the peacekeepers of the nation. However, the performance of the police force in Malaysia is arguable. The complaints lodged against them reflect the dissatisfaction of the public towards their performance. This paper attempts to explain the root cause of the problems by which malpractices done by personnel could be a hindrance towards attaining the government's ultimate goal to serve the public. On top of that, this chapter also discusses the public perception towards the police force which brings along the statistics of the matter, the cases involving policemen, the internal root cause of the problems, and last but not the least, solutions and actions to be taken to improve their performance in keeping up the national security.

Keywords Police force · Malpractices · Pay · Workload · Enforcement Agency Integrity Commission

23.1 Introduction

Law enforcement officers are never 'off duty'. They are dedicated public servants who are sworn to protect public safety at any time and place that he peace is threatened. They need all the help that they can get. (Barbara Boxer)

Public servants are the pillars of a nation. They determine how quickly development takes place in that state. If we compare the development of countries with

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fewer corruption cases, like Singapore, to that of countries with a high number of corruption cases, like Indonesia [1–3], it can be clearly seen that this phenomenon reflects on the national building and development. The basic idea of the public service is to serve the public to the fullest, as they are designed, set up and are being paid to serve the public.

In a world without boundaries, information is now becoming accessible at any time and place. Thus, the masses have become knowledgeable and informed resulting in them having high expectations towards public service, which is where they place their money every year.

The failure of the public servants to serve the public has drawn the public's attention. Lots of reports are being logged to the authorities every year. In this article, the authors would like to draw attention to the analysis of the causes of police malpractices and suggest solutions to prevent them.

23.2 Problem Statement

Article 3(3) of the Police Act 1967 describes the duties of the police as follows: the maintenance of law and order, the preservation of the peace and security of the Federation, the prevention and detention of crime, the apprehension and prosecution of offenders, and the collection of security intelligence.

Referring to Article 3(3) of the Police Act 1967, there is a great need for the police officers to conduct their tasks and duties in a very efficient and effective way as they are the peacekeepers. However, the trend of the statistics of complaints released by the Public Complaint Bureau has shown different results from the expected. In 2011, a total of 841 complaints were recorded, which ranked them at the first place [4]. In 2012, the complaints against them were 721, and they held the second rank [5]. In the first quarter of 2013, it showed a high number of received complaints against this force, with a total of 242 complaints [6].

23.2.1 *Malpractices of Police*

The cases involving the police force which have been reported include accepting bribes or corruption, delay in service delivery or no action, unsatisfied service quality, unfair treatment, so on and so forth. According to the 2002 Police Commission Report (Disciplinary Unit) [7], disciplinary actions were initiated against 754 police personnel, and 98 were relieved of their duties in 2002. The statistics showed an increase of 177 cases, or 30.7%, compared to the previous year. In 2001, 577 police personnel were subjected to disciplinary action. According to the report, 145 police personnel were punished for making mistakes in their duties, and it was added that 48 others were involved in corruption cases. The report also said one police officer was taken off task for rape, another for concealing his or her marital status and

another for ‘creating fear’ in the suspects. Additionally, there has been an increasing number of complaints about the abuse of power by the police. It was the Deputy Minister of Internal Security who revealed in the Parliament in April 1999 that 635 people were shot dead by the police between 1989 and 1999 [8]. It appears that the situation has not improved. On top of that, according to Human Rights Report 2002, there is a slight increase in the reported deaths of criminal suspects while in police custody: 6 in 2000, 10 in 2001, and 18 in 2002 [8]. It is shocking that the total number of deaths of suspects while in police custody has been 221 cases since year 2000 (example of Kugan, N. Dharmendran, R. Jamesh Ramesh cases, and many more). But, each and every time, they try to cover it up by saying that it was a sudden death, heart attack, asthma or natural causes [9].

23.3 Analysis of the Problem

23.3.1 *Theory of Plan Behaviour*

In understanding the causes and reasons of the malpractices of Royal Malaysian Police, the authors would like to deploy the Theory of Plan Behaviour. This theory has been one of the most influential and popular theories explaining the human acts. It was proposed by Icek Ajzen in 1985. It conceives that individual behaviour is driven by behavioural intentions, where behavioural intentions are a function of an individual’s attitude towards the behaviour. This theory links attitude and behaviour. This theory is an extension of the theory of reasoned action [10].

Intentions to perform behaviours of different kinds can be predicted with high accuracy from attitude towards behaviour, subjective norms and perceived behavioural control; these intentions, together with perceptions of behavioural control, account for considerable variance in actual behaviour [11]. Intention as a drive to capture the motivational factors is meant to influence the behaviour of a person. A rule of thumb is, stronger the intention to engage in one behaviour, more likely it is to be performed by a particular individual.

According to [12], human behaviour is guided by three kinds of considerations: belief about the likely consequences or other attributes of the behaviour (behavioural beliefs), beliefs about normative expectations of other people (normative beliefs), and beliefs about the presence of factors that may further or hinder performance behaviour (control beliefs). In finding of why such acts were done by the police officers, the authors would like to underline several root causes that initiate the problems to occur.

23.3.2 *Low Police Pay*

First and foremost, it relates to the pay police officers receive monthly. Many scholars have supported this notion. Pay could be classified as the safety need for an

individual as according to Maslow Hierarchy Need Theory. A person would depend on his salary to secure his life and his family, to ensure their purchasing power, and to secure their well-being from deprivation. Besides the Equity Theory by John Stacey Adam, an employee compares what they get from a job (outcomes) in relation to what they put into it (inputs) [13]. Thus, it is believed that money is the primary factor that could lead to one's performance. Not having enough pay to an individual would be a barrier for an individual to perform effectively, and it would also lead to other serious problems such as being involved in bribery cases.

In Malaysia, the system of merit pay called New Remuneration System introduced in 1992 was said to have problems of measuring performance. Thus, it was replaced by the present Malaysian Remuneration System (SSM) based on competency and once indicated by courses or examinations (PTK). This system has been revised in 2012 with an increment of 7–13% after the termination of Public Service New Remuneration Scheme (SBPA) policy.

The reality in Malaysia is that the police force is underpaid. The Star Online, 24 June 2009, has reported that the former Inspector General of Police (IGP), Tan Sri Bakri Omar, has said that the police force is really underpaid and the cabinet has agreed to provide them with additional financial support to fight crime [14]. Low police pay could lead to corruption. When the police are underpaid, they would seek other sources of income to ensure their wellbeing or at least to support the daily expenses. Of the 926 complaints the Royal Commission of Police received from the public between March 2004 and March 2005, 98 were of police corruption [15]. It was also alleged that police personnel gave bribes to senior officers to get promotions or transfers. One officer was alleged to have declared assets of RM 34 million, but no investigation was carried out to determine how he acquired such a vast fortune. Besides, Tenaganita, in their memorandum submitted to Royal Commission on the Malaysian Police on 15 June 2004, has revealed corruption and abuse of migrants done by the police but no action was taken [8]. It does not only happen in Malaysia, but it is a common situation in this region. John S.T. Quah in his article stated that, the most widely cited factor for corruption to happen in Asian countries is low salary of civil servants. Moreover, to let the police handle the task of controlling corruption, it would be like giving candy to a child, expecting that it will not be eaten [16].

23.3.3 Inadequate Staff and Equipment

The second identified cause is the inadequacy of staff and equipment of Royal Malaysian Police. The task to protect the nation which lies in the hands of the police force requires an adequate staff and enough financial sources, equipment, so on and so forth. This is because it has never been an easy job to protect the national security. Police would deal with robbery cases, snatch thefts, murder cases and so on, which require the police to have good equipment to combat those cases effectively. It is hard for them to carry out their duties with the absence of enough equipment

such as guns, patrol cars and staff. The motivation of police would be low to carry out their duties in such situations.

According to the former Inspector General of Police (IGP), Tan Sri Bakri Omar, not only is the police force under-paid but also under-equipped and under-staffed. The force was already 122,000 strong, and needed an additional 28,000 personnel for 2015 [17], which makes the ratio of the existing personnel to the population of Malaysia (28,859,154), in 2011 [18], about 1:237. In addition to that, in high-density urban areas like Petaling Jaya, the police to population ratio is only 1:1,154. Apparently, there are only 50 patrol cars in Kuala Lumpur. Besides, the police to population ratio in Penang was only 1:3,000 [14]. This is quite worrisome as the number of crimes in urban areas like Kuala Lumpur and Penang are increasing from time to time. Therefore, it is hard for this force to perform their task in an effective manner. To deploy more personnel quickly, the police force would shorten the training period of the new recruits from the current 9 months to 6 months. In addition, the General Operations personnel and Police Volunteers Reserves would be deployed. However, these efforts could lead to another serious problem. Having shorter time of training and deploying General Operations personnel and Police Volunteers Reserves would diminish the service quality given by the police.

23.3.4 Too Much Police Workload

The third identified cause of the poor service quality by police force is too much workload that is being assigned to them. Work overloads result in harmful emotional and physical responses when the requirements of the jobs do not match the capabilities, resources or needs of the workers [19]. Meanwhile, Katz and Kahn [20] described work overload as a stressful condition caused by role pressures an individual with unique traits and abilities perceives to be unrealistic. As explained earlier, the total number of police in Malaysia is not enough, and there is a great need to increase their number. The inadequacy of staff in Royal Malaysian Police comes with the workload, which is too much and they need to be in a ready state beyond their normal working hours.

The duties of the police range from protecting the nation, providing security to the public, fighting the criminals such as snatch theft, robbery cases, murder, human trafficking, smuggling, child abusing so on and so forth. On top of that, as stated in Article 19, Part VII, Police Act 1967, every police officer, extra police officer, and watch constable should be deemed to be always on duty and should perform the duties when required [21]. This article indicates that police should be prepared 24 h for working duties. The police cannot simply give excuses when they are being called for duty.

However, this matter could lead to low motivation amongst the police which indirectly could lead to poor performance. This is because policemen are also human beings like other public servants. They have their own family, their lives, their friends, relatives, preferences and so on. As stated by Abraham Maslow, the employees have their own desires which need to be satisfied. Thus, if their job

dictates their whole life, certainly it could be a burden to them and the nature of the job is not interesting anymore for them.

23.4 Solution to the Problem

23.4.1 Raising Salary and Providing Better Pension Plan to Police

The essential way of motivating the police is by providing them with extrinsic rewards. It could be done by raising their salary and providing better pension plans to them. Thus, the element of safety needs, as proposed by Abraham Maslow, is satisfied. Besides, it also has been supported by some other theories, for example, the Equity Theory, which argues that the police should get the equivalent output (salary, wages and good pension plan that can secure them) after putting in their input (effort, loyalty and good performance) in performing their tasks [13]. Basically, we could see that corruption happens because they believe that they have not been compensated well. With the burden of work being assigned to them and having to be prepared 24 h for duty, the police should be paid more and equivalent to their tasks. This is the way to reduce the probability of them indulging in bribery. This is because the inadequate wages force the police to accept ‘speed money’ to expedite citizens’ requests on services.

It is good that the government has seen the issue and regulated the new salary scheme and gave an increase to the fixed police service allowance (ITKP) since 2009. Home Minister Datuk Seri Hishammuddin Tun Hussein said that through the scheme, an Inspector could expect a salary of RM 2,060.28 compared to RM 1,423.50 previously while their maximum salary of RM 3,710.66 would now be increased to RM 4,962.39. Meanwhile, an Assistant Superintendent of Police will receive a new salary of RM 2,130, which is an increase of RM 69.72 as compared to RM 2,060.28 previously, while the maximum salary is now at RM 5,170.53 as compared to RM 4,962.39 previously [22]. The new scheme, effective 1 January 2009, would involve adjustments to their salaries at the quantum of three annual salary increments; however, the date for the payment of the new salaries is yet to be decided.

Besides, there is a need to have better pension coverage for the police in order to enhance their motivation level. Starting from 1 January 2009, the maximum period of service for retirement calculation is 30 years as compared to before, which was 25 years [23]. What has happened is, they do not want to retire early even though they are not fit anymore to work and bored with their long period of service. This is because they believe that if they retire early they cannot earn full benefit of pension because they need to comply with a maximum of 30 years of service to earn that.

In addition to that, the researchers feel that the unsavoury part of the retirement plan is, those pensioners need to continue their life in some 15–20 years with only

more or less of 50% of their final salary. If we do a comparison with other countries, the percentage of pension gained by pensioners in Malaysia is considered low. This is because, in the USA for instance, the percentage of pension money for the public sector employees is 90% based on their last drawn salary [24]. This is because as time moves on, the value of money cannot remain the same. The prices of household goods will keep increasing from time to time. However, the pension of police officers remains the same without any increment. It could worsen the inflation and lead to economic down turn. To recover the matter, luckily, the government has taken an initiative to help the pensioners. In the 2009 budget, under the Social Safety Net Programme, the government has announced to increase the amount of given to RM 720 for those who earn below that rate as the poverty line income in Malaysia is RM 700 [25].

23.4.2 Increase the Number of Police Staff

To combat criminals effectively in a country, police should be provided with adequate staff and enough funding as fighting criminals is expensive in terms of skilled manpower, equipment and financial resources, and it is never an easy task to be resolved. The number of police force in Malaysia in 2011 was only 122,000 [17] as compared to the Malaysian population in 2011 which was about 28,859,154 [18]—not including the migrant workers, legally or illegally. It is hard for the insufficient number of police in Malaysia to protect the country well. With the absence of those facilities that they need, it is hard for them to pursue their duties effectively.

Not only that, the researchers believe that the Royal Malaysian Police Force needs to exercise care in recruiting honest and competent staff, as any misconducts done by their staff member will result in a significant examination of credibility and legitimacy of the organization by the public. With good equipment and enough staff, they will be motivated to carry out their duties in the expected manner. Besides, having honest policemen in Malaysia will decrease the tendency of corruption and malpractice.

23.5 Strengthening Public Agencies Control

23.5.1 Enforcement Agency Integrity Commission—EAIC

The task of the police is to ensure peace, harmony and security of a country. In performing their task, they would certainly arrest those who commit crimes. But, in cases involving their members, there is a body that has been set up, called Enforcement Agency Integrity Commission (EAIC), for policing the police force. The set up EAIC is said to be as sufficient as IPCMC (Independent Police Complaints and Misconduct Commission). The idea of setting up IPCMC was first mooted by the

Royal Commission chaired by former chief justice Tun Ahmad Dzaiddin Abdullah, in an effort to improve the police force. It is viewed as an independent, external, overseeing body, whose principal function is to receive and investigate complaints about Royal Malaysian Police and its personnel. It is also meant to make Royal Malaysian Police much more accountable, and will help restore and sustain public confidence in the force. However, the idea had been rejected under the premiership of Tun Abdullah and instead created a Special Complaints Committee [26].

Basically, this EAIC was set up on 1st of April 2011 through appointment of date of coming into operation of the Enforcement Agency Integrity Commission Act 2009 [PU (B) 148/2011]. It is a statutory body of the government. It has the power to conduct investigations over 19 enforcement agencies constituted in the EAIC act 2009 as provided by the Criminal Procedure Code [27]. This Commission was established with the purpose to prevent misconduct among law enforcement agencies, enhance and cultivate integrity among federal enforcement agencies, nurture and strengthen public confidence in the enforcement officers and federal enforcement agencies.

With the denial of Minister Datuk Paul Low Seng Kuan in the Prime Minister's Department to set up IPCMC, the EAIC is hoped to perform at its very best. They are expected to do an in-depth investigation and provide the adequate solution to the problems that have happened. This is where the commission will put a stick instead of carrot to urge the police force to avoid doing bad deeds and perform better.

23.6 Conclusion

In a nutshell, it is true that the police in Malaysia are not doing their job well, since there are lots of complaints lodged against them based on the statistics that have been presented by the authors. But as discussed earlier, there are lots of predictors, causes, and reasons that drive such malpractices. Emphasis on 'will' and 'capacity' is needed in combating and fixing up the existing system. The concept of 'capacity' as discussed, constitutes adding more number of staff, providing better facilities and equipment to them, and not to forget to provide better pay for them. Meanwhile, the 'will' concept takes place when the EAIC was set up to do an in-depth investigation and provide an adequate solution to the problems that have happened. By doing several adjustments in the Royal Malaysian Police Force, it is hoped that their performance level will restore the public's trust.

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Chapter 24

Quantifying Social Media Sentiment in Predicting the Malaysian 13th General Elections

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Abstract The 13th General Elections (GE13) were regarded as the most competitive, contentious and divisive ever in the history of Malaysian General Elections. It was aptly described as the ‘mother of all elections’, while Prime Minister Najib Razak termed it as the ‘social media election’. Communications scholars and analysts have long studied the increasing role of social media in political and democratic activism. However, to what extent is the online discourse and sentiment in the social media reflective of the actual voting pattern and behaviour? This paper hypothesised that social media can predict future electoral outcomes. Methodologically, this research employed a web content analysis across major social media platforms throughout the GE13 campaign period. The data and findings of this research showed a significant 95% prediction accuracy in comparison to the actual GE13 results.

Keywords Social media · General elections · Malaysia · Politics · Sentiment analysis

24.1 Introduction

The question is no longer should we be doing social media, it's are we doing it right?—Erik Qualmann [1]

The use of social media as a political tool has almost reached its peak today to the extent that it is almost impossible to imagine an aspiring politician going into elections without having an online presence in any of the existing social media networks. The use of social media for politics first gained widespread popularity during the 2008 US presidential elections when it was often credited for being one

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of the major factors which led to President Obama's landslide victory over his opponent, John McCain [2]. The success of President Obama has led to a significant global recognition about social media, particularly about its roles, functions and powers in shaping and effecting political change.

The series of events which led to the Arab revolution in the Middle East in 2011—popularly known as the 'Arab Spring'—that successfully overthrew Arab dictators in Tunisia, Egypt and Libya, suggested a strong influence of social media usage such as Facebook and Twitter in accelerating the revolution [3]. Understandably, while some scholars may argue that it was not the social media that caused the revolution—pointing out that social media do not overthrow governments, but people do—nevertheless, social media tools were exceptionally influential in disseminating and exchanging quick information, organising gatherings and debate at a speed unimaginable in the previous century [3].

The availability, speed, free and easy access of the social media has turned it into becoming the tool of choice for political groups, politicians, activists and supporters to spread their influence to the masses. More importantly, social media serve as an effective tool to voice opinions, to communicate and to engage with potential voters and other members of the community [4]. In spite of this, there is little empirical study being done to analyse the social media sentiments and its relation to the real world.

Therefore, the purpose of this paper is to quantitatively analyse the political sentiments in the social media platforms such as Facebook, Twitter and blogs. From thereon, the data were to be tabulated and decoded to predict: (i) popular votes and (ii) the number of parliamentary seats to be won by Barisan Nasional (BN) and Pakatan Rakyat (PR). The result of this research is expected to serve as an important reference in the field of social media studies as well as to the respective stakeholders from the government agencies and political parties.

24.2 The Malaysian 13th General Elections

The 13th General Elections (GE13) which was held on 5 May 2013 was often referred to by political analysts and observers as the 'mother of all elections' precisely due to its nature being the most competitive, divisive and hotly contested ever in the history of Malaysian democratic elections [5].

On one hand, the multiethnic coalition of the BN led by the incumbent Prime Minister Najib Razak contested to defend its five-decade rule while his main opponent, the de facto leader of the opposition coalition PR, Anwar Ibrahim, campaigned on a populist platform to unseat Najib Razak and wrest Putrajaya. An important point to note was that GE13 marked the first time that the PR actually had a realistic chance of winning the elections.

Prior to GE13, the opposition's participation in the electoral contest was only about denying the BN's two-thirds majority in the parliament. Things began to change dramatically in the aftermath of the 12th General Elections (GE12) in 2008,

Table 24.1 Malaysian 13th General Election results. (Source: [6])

Party	Votes	% of votes	Seats	% of seats
<i>Barisan Nasional</i> (UMNO, MCA, MIC, Gerakan, PBB, Others)	5,237,986	47.38	133	59.9
<i>Pakatan Rakyat</i> (DAP, PKR, PAS)	5,624,011	50.87	89	40.1
Independents	86,931	0.79	0	0
Others (Berjasa, Parti Cinta Malaysia, SAPP, KITA etc)	105,959	0.96	0	0
<i>Total</i>	<i>11,054,887</i>	<i>100</i>		<i>100</i>

where BN lost its traditional two-thirds majority for the the first time since 1969, as well as losing five states to the federal opposition, PR.

The impact of GE12 had succeeded in solidifying the opposition and its supporters and this was evidently clear in the outcome of GE13 (Table 24.1). However as fate would have it, the PR fell short of 44 parliamentary seats to win the elections. The incumbent BN won, though with a reduced majority from 140 in GE12 to 133 seats. Although the PR won 89 federal seats, they have essentially claimed moral victory for winning the popular vote for the first time since 1969. PR won 51 % of the popular vote against the BN, 47 % [7].

GE13 also registered a series of significant records of sorts; for instance, for the first time, all parliamentary seats and state seats were being contested, indelible ink was used as part of the new voting procedures and there were a record-breaking 85 % voter turnout, a record number of independent candidates contested and so on.

24.3 Social Media and Electoral Prediction

A ‘prediction’ is a statement made about the future, or forecasting [8]. The traditional method of predicting the elections is through opinion poll surveys. With the increase in the social media usage, impact and consumption, together with its rich and resourceful data, social media is now seriously becoming a new ground for the predictions of democratic elections.

Unlike the traditional poll surveys which collect data from ‘passive’ voters, Ming [9] noted that the advantage of data from Twitter was that they were collected from ‘active’ voters, who are more likely to vote in an election.

The debate on whether social media can predict electoral outcome reached its height during the 2012 US presidential election between President Obama and Mitt Romney. In 2012, studies showed that President Obama dominated the social media battle, and ended up winning the presidency [10]. This observation led to an important question: can social media accurately predict future elections? A number of scholars and analysts have conducted researches to essentially ‘test’ the predicting power of the social media.

Ming [9] added that findings in his research clearly showed that social media, in particular, Twitter, can predict future elections. He, however, pointed out that there were still many inconsistencies in the result despite having a similar trend, citing examples of the huge gaps between data in Twitter and in the real world in a few constituencies [9].

Mexatas, Mustafaraf and Gayo-Avello [11] offered a somewhat critical analysis towards social media prediction. In their work entitled 'How (Not) to Predict Elections' which analysed the 2010 US Congressional elections, they argued that just because a candidate is scoring high in some social media metrics, it does not guarantee electoral success [12]. In another electoral prediction analysis by Tumasjan et al. [12] and Tjong and Bos [13], both studies were positive in the sense that their findings shows that social media predictions are as credible as the traditional opinion polls. Tumasjan et al. [12] focused on how Twitter is used in political discourse by comparing party mentions on Twitter with the result of the 2009 German parliamentary elections. It concluded that the relative number of tweets mentioning a party is a good predictor of the number of votes for that party in an election [12].

To produce an effective electoral prediction based on social media sentiments, it is significantly important for one to have a complete and comprehensive picture of the social media demographics. The latest record shows that Malaysia has a total population of 13.5 million Facebook users, of which 53% are male and 47% are female [14]. 9 million, out of the total population, are potential voters, while it is estimated that around 6.3 million registered voters are on Facebook [14].

24.4 Research Methodology

In an attempt to quantify the political sentiments in the social media and to test the hypothesis, this research used an online content analysis methodology. Generally, content analysis is a research technique for coding symbolic content, structural features and semantic themes [15]. A 'web content analysis' on the other hand, can be seen in two different ways: (1) the application of traditional content analysis techniques, narrowly construed, to the web and (2) the analysis of web content, broadly construed, using various (traditional and nontraditional) techniques [15].

This paper presented a relatively new methodological technique and tool in analysing social media sentiments. A thorough social media content analysis was conducted by using a web-based social media monitoring and tracking tool: Trackur (Trackur.com). In total, 1,398 amount of raw data from Facebook, Twitter and blogs were sampled for sentiment analysis. Data were collected starting from the announcement of the dissolution of parliament to the second week of the election campaign (5 April–2 May 2013).

In order to get a good sample of data, several keywords were tested beforehand. Based on the trial, two search keywords were adopted for analysis: (1) BN and (2) PR. After gathering the first corpus of social media data, proper cleaning were done

Table 24.2 Prediction of total seats and popular votes

Date	Prediction for BN		Prediction for PR		Total seats	Remainder (neutral)
	Seats	% votes	Seats	% votes		
5 April	125	47	82	48	222	15
25 April	112	42	94	55	222	16
2 May	107	40	89	52	222	26

BN Barisan Nasional, *PR* Pakatan Rakyat

to avoid redundancy and to ensure only relevant data were chosen in the sample. The sample of data were then categorised according to their political inclination:

1. Pro Barisan Nasional (BN)
2. Pro Pakatan Rakyat (PR)
3. Neutral

Social media postings that showed a strong or weak inclination towards BN or PR were recorded accordingly, while postings that do not reflect support towards any parties were recorded as 'Neutral'. To ensure reliability and validity in the research process, the data collection process was replicated three times across different timeframes: 5 April, 25 April and 2 May 2013 (Voting Day was on 5 May 2013).

Lastly, the results of the data were then computed and correlated with the previous 2008 General Election results in order to predict the number of parliamentary seats for BN and PR. As a point of note, the number of parliamentary seats in 2013 is similar to 2008, 222 seats. In 2004 there were 3 seats less, 219 seats.

24.5 Data Findings

The following data in Table 24.2 are the complete data tabulated across a period of 1 month from the dissolution of parliament to the last days of the campaign period (5 April–2 May 2013).

From the result above, a literal analysis of the data would show a consistent trend for both BN and PR during the timeframe of the study. It was clear that the PR commanded greater support in the social media compared to BN (Similar trend in the GE13 outcome whereby the PR won the popular votes).

PR were in the lead throughout the 1 month period from 5 April to 2 May, averaging 51.6% (actual popular vote is 50.9%) compared to BN with an average of 43% (actual popular vote is 47.4%). If the data in the social media were to be compared with the actual election results, the variance for PR was only 1.1%, while for BN it was 7%.

Based on the 2008 correlation between popular vote and parliamentary seats, the prediction result showed that although BN obtained a low 40% of popular vote, BN would still be able to win slightly more seats—107 seats—compared to PR; 52% of popular votes, with 89 seats. The remainder 26 seats were construed as the 'hot

seats' in the elections. The result also pointed towards aggressive campaigning by PR supporters in the run-up to Voting Day.

While the popular votes in the social media increased for PR, from 48% to 52%, the trend for BN appeared to have consistently gone downhill—from 47% to just 40%—from the day of the parliament dissolution towards Voting Day.

In qualifying the results further, it was clear that the prediction for BN was somewhat slightly lower than the actual GE13 result, while for PR, it was very much closer to reality. This can probably be explained by the fact that the majority of PR supporters are located in the cities; therefore it can be presumed that there are more PR supporters connected to the internet. On the other hand, BN appeared to be slightly underrepresented in the social media, and this too can partly be due to the fact that the majority of BN supporters are more evenly located in the rural and sub-rural constituencies.

Translating the data into number of parliamentary seats, then the result in the third study (2 May) appeared to be perfectly accurate for PR, in which the data from the computational prediction correctly predicted the exact number of seats won by PR in the GE13, 89 seats. However, the computational prediction for BN appeared slightly inaccurate, with only 107 parliamentary seats, while the remainder seats remained relatively high, 26 seats.

To interpret this data, both the prediction data and the actual voting results of GE13 were tabulated and compared. From the comparison, it can be said that the remaining 26 seats were seats with less than 5% of victory margin. Based on the comparison between the two sets of data, it would appear that the bulk of the 'remainder seats' were won by BN.

24.6 Conclusion

The result from the research showed that social media can indeed predict future election results. The only concern is the level of precision. However, the social media model for predicting future elections is not an attempt to replace the present rigorous opinion poll survey—far from it—but at the very least it could give a strong indication of the prevailing mood or sentiment on the internet.

Undeniably, though there was some slight exaggeration in the prediction—whereby PR were slightly overrepresented and the BN were a bit underrepresented in the social media—the result showed some positive signs that social media is an important domain for analysing political sentiments and discourses.

With the rising trend of urbanisation and the increase in broadband penetration, which means more people are connected to the Internet; increase in political awareness, which means more political expression online; and the growing popularity of social media tools, the differences or inconsistencies in the data would only get smaller and smaller, while the gap between the real world and the virtual world is getting narrower each day. It is possibly just a matter of time

before the virtual world becomes the new reality and social media becomes the new mainstream media.

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Chapter 25

Share Prices' Reaction to Dividend Announcement: A Study on the Listed Local Commercial Banks in Bursa Malaysia

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Abstract This study focused on the reaction of listed commercial banks in Bursa Malaysia share prices on dividend for the year 2011. Empirical evidence from non-financial firms suggests that dividend announcements affect the share price and typically shows that dividend changes should be followed by stock price changes in the same direction. However, in most of past research, banking institutions are excluded with the reason that they are unique and highly regulated. Therefore, it is important for this study to seek further evidence to support existing research made that dividend announcement do affect the share price. This research employs a standard event study methodology to further analyse the effect of dividend announcement of 1 year share prices on eight listed local banks in Bursa Malaysia for the year 2011. In line with the results of prior literature, this study found that dividend announcement had no significant effect to the share prices in the banking industry in Bursa Malaysia for the year 2011. Therefore, it is suggested that the time horizon should be increased over a period of few years to ensure the accuracy of the result.

Keywords Event study · Dividend announcement · Commercial bank · Bursa Malaysia · Share prices

25.1 Introduction

Dividends are one of payments made by corporations and banks to their shareholders. In general, it is a portion of the profit that a company gets and gives as a reward for its shareholders. Borokhovich, Brunarski, Harman and Kehr [5] reveal that dividend increase leads to positive news for the shareholders and consequently perceived as an increase in the current or future cash flows. In addition, dividend announcement plays an important role in seeking investment by various potential investors. Furthermore, due to the shareholder's anxiety, banks have to consider the assurance needs and confidence of their customers.

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Dividend announcements of stable or growing dividends may be applied by banks as a means for providing positive information about the stability of the banks to shareholders, customers and regulators. The importance of dividend payments leads to the assurance about the bank's current success, and the consistency of a regular dividend payment over a long period of time strengthens confidence in management. Therefore, investors may appreciate dividend announcements as a signal of the bank's financial capability.

Investors' reaction and predilection towards firms' dividend announcements have been extensively studied by academics and securities investors. However, the effect of dividend announcement on share prices in the banking sector is the least studied.

Most of the earlier empirical studies show that the response between dividend announcement and stock price movements is mostly positive. However, the uniqueness of banking institutions and the financial sector are usually perceived as quite different from nonfinancial firms in capital market studies. Dividend announcement could also provide reliable information to investors. Naturally, dividend announcement would convey information to the shareholders in assisting them revealing the actual financial condition of the banks.

Little research has been done on how share prices in the banking sector respond to dividend announcements. The latest study by Bayezid and Tanbir [3] on the private commercial banks in the Dhaka Stock Exchange (DSE) proved that dividend announcement generates very low significant impact on the stock price movement. Therefore, this study will focus on identifying the relationship of dividend announcement on share price of listed commercial banks in Bursa Malaysia.

This research investigates the effect of share price to the announcement of dividend concentrating on listed commercial banks in Malaysia in the year 2011. The event study methodology prescribed by Brown and Warner [6] has been applied in construction of the study.

25.2 Literature Review

The objective of this research is to analyse the effect of dividend announcement to share prices. In this literature review, a number of theories pertaining to the relationship of dividend announcement and stock returns have been documented.

According to Urooj and Nousheen [14], dividend announcements do not affect share price significantly around dividend announcement day. This is opposite to the generally accepted trend and this is due to the inclusion of all types of dividend announcements in their tested sample. Their research also concludes that returns become negative 1 day before positive dividend announcement and it may be led by some insiders' news or less than expectation dividend announcement. However, in case of negative announcements, the result shows significant negative returns on the

day of announcement and this shows that negative dividend announcements generally cause people to believe that the company is not doing well.

In earlier studies, Bayezid and Tanbir [3], investigate whether dividend announcements suggest any information to the market and resulting an impact to the share price. Their findings suggest that there is no strong evidence that stock prices react significantly to the announcement of the dividend. The possible reason is the existence of insider trading, which also leads to asymmetric information in the market. Insider trading is assumed to have private information, thus the outsiders tend to imitate the insiders' buying or selling decisions. Therefore, asymmetric information will subsequently give the wrong information to the shareholders and any positive information related to the dividend will also become an ineffective device in the market.

In contrast, there is some evidence that suggests a very strong effect of dividend declaration on the stock return and sensitivity to price movement too. Bessler and Nohel [4], in their studies on the valuation effects of dividends and omissions by US commercial banks show that the banks experience significant negative abnormal return around the announcement date. In addition, it also stated that negative market reaction is much stronger than that documented for other unfavourable bank events.

Empirical studies on the effect of stock prices toward dividend announcements were also found in many developed markets. Dasilas and Leventis [8], using a sample of the Greek stock market for the period 2000–2004, found a statistically significant market reaction on the dividend announcement day. Their research also supports the dividend signaling hypothesis where dividend increases induce a significant positive price reaction while dividend cuts lead to a significant negative stock price reaction.

Other empirical evidence provided by Chen et al. [7], reexamines the stock price reaction to dividend announcements, using the sample of cash dividend changes from China-listed A-share stocks. Findings in their study show that cash dividend changes have a substantial influence on share prices and respond positively to both cash dividend increases and cash dividend cuts. However, the results only half support the signaling theory. Both positive and negative announcements lead to increases in the share prices.

The following research results support the assertion that dividend changes should be followed by stock price changes in the same direction. Baharuddin et al. [2], in their study of capital market reaction to combination of dividend and earnings announcement in the Malaysian Stock Exchange found that higher dividend announcements resulted in positive abnormal returns and lower dividend announcements resulted in negative abnormal returns, while unchanged dividend payment earned normal returns. Thus, their study concluded that dividend and earning announcements play a vital role and give signals of changes in the future prospects of the firm.

A similar line of study was conducted on the Romanian market. Man Ana-Maria [12] look into the stock market reaction using evidence on listed companies on Bucharest Stock Exchange (BSE). The results show that the announcement of a stock dividend is associated with a positive stock market reaction and the outcome is in

line with other empirical studies from other emerging countries such as Finland, China, Turkey, Denmark, etc.

Jais et al. [11] provide a similar argument. In their paper they examine the effect of stock market reaction to the announcement of dividends in the Kuala Lumpur Stock Exchange (KLSE); the results indicate that the dividend increase announcement is greeted positively by the stock market whereas the dividend decrease announcements give a negative sign, but not statistically significant.

Akbar and Habib [1] demonstrate that the reaction of stock prices to cash dividend announcements is statistically insignificant. For the 41 day window, the returns are mostly negative and it might be attributed to the tax effect of cash dividends.

Relevant studies by Fauzia et al. [9] focusing on oil and gas sector found that share prices do not respond positively to the dividend announcement. Research reveals that dividend announcements and share prices have a weak and negative association with one another. She also concludes that if a company is earning negative average abnormal returns before dividend announcements, investors will perceive a continuous same direction even after the announcement has been made.

In a more recent paper, Waseem et al. [15] examined the effect of dividend policy stability on the performance of the banking sector listed on the Amman Exchange. They conclude that the control of central banks (the Central Bank of Jordan) over the commercial banks in Jordan lead to the restriction and the willingness of the banks to distribute cash profits only in accordance with the liquidity ratios set out by the central bank.

25.3 Data and Methodology

This study aims to investigate the effect of dividend announcement on share prices for listed private commercial banks in Bursa Malaysia. Adapting the methodology proposed by Brown and Warner [6], event study is used to explore stock returns around the dividend announcement date.

An event study is a statistical method, which examines the effect of some events or set of events on the value of assets. In addition, it can also be applied to measure the economic substance of an information release or event under the theory of market efficiency.

Data collection consists of the dividend announcement date of eight local banks in Malaysia in the year 2011 from Bursa Malaysia. In order to be accurate on testing market efficiency, data collection will be on a daily basis instead of being based on monthly data. The smallest feasible interval is essential in determining the effect of the dividend announcement. Standard Event Study Technique, a model suggested by Brown and Warner [6] is applied in this research.

Based on the standard event window methodology, it defines day '0' as the event day for a given security. For each security, a maximum of 141 daily return observations for the period around the announcement date starting at day -120 and ending at day +10 relative to the event. 'Estimation Period' is designated applying the first

Table 25.1 Lists of banks and the announcement date

No.	Name of bank	Date of announcement
1	Affin Bank Berhad	18 November 2011
2	Ambank (M) Berhad	16 November 2011
3	Alliance Bank Malaysia Berhad	31 May 2011
4	CIMB Bank Berhad	23 August 2011
5	Hong Leong Bank Berhad	30 September 2011
6	Malayan Banking Berhad	15 November 2011
7	Public Bank Berhad	25 July 2011
8	RHB Bank Berhad	6 April 2011

110 days in this period (-120 through -10). The 'event period' is followed by remaining 21 days (-10 to +10).

The announcement dates of the banks are obtained from Bursa Malaysia database (refer Table 25.1)

The daily return of each bank for 141 days has been computed. Market returns for the same event window are also calculated. Equation 25.1 for computing returns from share prices and KLCI is as follows:

$$Return = \frac{P_t - P_{t-1}}{P_{t-1}} \tag{25.1}$$

where

P_t = today's price

P_{t-1} = yesterday's price

In order to avoid the need to estimate parameters outside the long event window, the estimation of abnormal return, $AR_{i,t}$ applies the Market-Adjusted Return Model for each day of event window is measured. This model will also avoid the complications of a small sample and infrequent trading associated with stock price under study. The coefficients of α_i and β_i are estimated by regressing observed rates of return for a time period prior to the 'event period'. Equation 25.2 is the market adjusted abnormal.

$$AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i R_m) \tag{25.2}$$

where

$AR_{i,t}$ = Abnormal returns

$R_{i,t}$ = returns on stock i on the event day t

R_{mt} = market returns proxies by the Kuala Lumpur Composite Index (KLCI) prices on event day t

Next, the average abnormal return (AAR) for all the banks in the sample for each day of the event period is computed. Averaging the abnormal return for all the banks will reduce the other events which might occur at the same time of the study

Table 25.2 Abnormal return of 21 days event window

Average	t-Statistic	Event date
-0.2369	-0.5015	-10
-0.5205	-1.5992	-9
0.6566	1.0966	-8
0.0318	0.0719	-7
-0.6242	-1.5968	-6
0.2150	1.1213	-5
0.2685	0.7278	-4
-0.1471	-0.3165	-3
-0.4769	-1.3400	-2
-0.1984	-0.4264	-1
0.2434	1.0127	0
0.2999	0.5816	1
-0.8013	-1.3740	2
-0.9150	-1.7929	3
-0.2002	-0.9591	4
0.0535	0.3548	5
0.3753	1.3254	6
0.5653	1.3507	7
0.2994	0.3794	8
-0.2501	-0.2985	9
0.3779	1.0001	10

period, thus minimizing the bias of the result. Equation 25.3 is the AAR and can be computed based on the formula below.

$$AAR = \frac{1}{n} \sum_{i=1}^n AR_{i,t} \tag{25.3}$$

Where

AAR_t = average abnormal returns on day t

$AR_{i,t}$ = abnormal return of each bank on day t

t-test is then employed in order to identify the significance level of $AR_{i,t}$ and determines the standardized average abnormal returns (AAR_t). Table 25.1 is the list of eight local banks and the dividend announcement date for the year 2011.

25.4 Analysis and Findings

The market model is applied in order to estimate the normal expected return whereby the return of each of the stocks is regressed against the returns of the market index (KLCI).

Table 25.2 shows the abnormal return of share prices of commercial banks in Malaysia for a 21-day period surrounding the dividend announcements in Bursa

Table 25.3 One Sample Test

One-Sample Test	Test value = 0	
	t	Sig. (2-tailed)
-10	-0.501	0.631
-9	-1.599	0.154
-8	1.097	0.309
-7	0.072	0.945
-6	-1.597	0.154
-5	1.121	0.299
-4	0.728	0.490
-3	-0.317	0.761
-2	-1.340	0.222
-1	-0.426	0.683
0	1.013	0.345
1	0.582	0.579
2	-1.374	0.212
3	-1.793	0.116
4	-0.959	0.369
5	-0.355	0.733
6	1.325	0.227
7	1.351	0.219
8	0.379	0.716
9	-0.299	0.774
10	1.000	0.351

Malaysia. It shows a mixture insignificant positive and negative trends of AARs in between the event period, meaning no specific pattern could be identified.

Individual share prices for different banks shows different reactions to dividend announcement. The table shows that dividend announcements do not affect share prices significantly around dividend announcement day and to the rest of the 21-day event window (-10 to +10). 37.5% (three banks, i.e. Hong Leong Bank, Public Bank and Arab Malaysian Bank) of the banks in the sample earning negative abnormal returns and the rest showing a positive abnormal return on the announcement day.

Table 25.3 shows the overall result of share price reaction towards dividend announcement to eight banks in Malaysia surrounding the 21-day event window. There are no significant changes in share prices surrounding the announcement period. On the announcement day or day 0, the AAR for all eight banks show an insignificant positive figure of 0.2434 and the corresponding t-value is 1.0127. The small gain on AAR explains that the market does not fully react to dividend announcement and same goes to day +1 where the increase is only 0.2999. On average, abnormal return of the banks showed an insignificant negative trend towards day +2, +3 and +4 consecutively.

This study leads to the evidence that share prices have no significant response to the dividend announcement, and it is proven by the statistical significant test which aligned to the result. Based on parametric pooled t-test, p-value is greater than 5%

level of significance (refer Table 25.3). Therefore, this study failed to reject the null hypothesis. It means that the dividend announcements do not have any significant impact on stock prices movement of the eight local banks listed in Bursa Malaysia for the year 2011.

25.5 Conclusion and Recommendation

Dividend announcements are one of the significant corporate events on which many academic studies have been done throughout the whole industry to examine the impact of it. This research attempts to examine whether there is any impact on share prices towards dividend announcement in the market.

Most of the empirical study proved that there is a relationship between share price and dividend announcement. However, in most of the preceding research, financial institutions are excluded with the argument that they are unique because they are highly regulated and highly leveraged. According to Slovin et al. [13], most of the time, banks are either treated separately in a particular study or they are the subjects of a separate study Horwitz et al. [10]. Therefore, if banks are unique, then it is acceptable to expect that bank share prices react differently to announcements of dividend.

Although there is abundant theoretical and empirical research on the relationship of share price and dividend announcement, this study tries to focus on the banking sector in Malaysia and analyse whether it has the same direction as the study done in Dhaka Stock Exchange [3] which also focuses on commercial banks.

The study based on the 21-day event window proved that share price has no significant response to the dividend announcement. The hypotheses are tested by measuring the average abnormal return for the 21-day event window, that is 10 days before and 10 days after the dividend announcement. Based on the t-test, results show a diversified trend in share prices before and after the announcement day.

In line with the results of prior literature, dividend announcements have no significant effect to the share prices in banking industry in Bursa Malaysia. The most probable reason for such outcomes is the bank regulation and policies applied by the bank.

The findings strongly support our null hypothesis and present no strong evidence that share prices react significantly on dividend announcement in the banking industry. Thus, our study provides added empirical evidence to support the fact that dividend announcements will have no impact on share prices in banking sector consistent with empirical research done by Bayezid and Tanbir [3].

However, the findings of this study may be insufficient to representing the overall response of the banks in Malaysia since the research is only applied to eight local banks into consideration. Furthermore, the process of analysing the price reaction is based on daily data in event studies, which involves a number of potentially important issues such as biased and inconsistent results.

As in this study eight samples of banks may not reflect the whole population of the banks in Malaysia, future research should be directed to examine the impact of

dividend announcements to share price in the banking sector consisting all commercial banks (local and foreign ownership) and Islamic Bank in Malaysia. Thus, more samples are needed to better represent the response of share price in the market due to dividend announcement. The time horizon of the study is suggested to be increased over a period of few years' data instead of 1-year period only to ensure the accuracy of the result and to avoid bias.

25.6 Copyright Forms

You must submit the IEEE Electronic Copyright Form (ECF) as described in your author-kit message. This form must be submitted in order to publish your paper.

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Chapter 26

The Surrogacy Saga

J. Sheela and Daleeler Kaur

Abstract Advancement in science and technology never fails to create milestones. In the current era of advanced science and technology, the impossible, unimaginable or unthinkable is achievable. It has been made possible for a woman not only to have sexual intercourse without getting pregnant but also to get impregnated without sexual intercourse. One such development is the utilization of in vitro fertilization (IVF) evolution in gestational surrogacy. In a surrogacy arrangement, a woman known as the ‘surrogate mother’ consents to bear a child for a childless couple. The surrogate mother is impregnated either by artificial insemination or IVF. After carrying the child for 40 weeks and delivering the child thereafter, the child is handed into the custody of the childless couple. The surrogate’s ties or bonds with the child end upon the delivery of the child. However, as simple as it sounds, surrogacy arrangements kindle the interference of the law, especially when disorder disrupts the social norms of the public sphere. Women are offering to be surrogate mothers for money through agencies and medical centres. Hence, agencies are flourishing to offer surrogacy services as it seems to be a money-spinning business. As a result, surrogacy arrangements have reached a disturbing state of commodification warranting legislative interference. Countries around the world should not be procrastinating on legislative measures to regulate surrogacy arrangements on the basis that it is against one’s moral, cultural or religious values. Instead, countries all over the world should take proactive measures to come to a united stand such as a global treaty to regulate surrogacy arrangements.

Keywords Surrogacy · Gestational surrogacy · Global treaty · In vitro fertilization

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26.1 Introduction

The advent of in vitro fertilization (IVF) has brought hope to the procreation process, especially to those who were unable to procreate through the normal process of procreation i.e. coital reproduction. In the old days, when a woman was incapable of producing children i.e. barren, usually a close family member stepped in voluntarily to give birth to a child for the sole purpose of giving the child to the childless couple. This noble arrangement was done rather discreetly without any expectation of monetary consideration and such a child has no genetic link with the childless couple.

The current development, however, is the usage of IVF with surrogates; women availing themselves to be impregnated with the zygote of a childless couple or donors or the surrogate and the husband from the childless couple. No sexual intercourse is involved. The procedure under IVF is done by combining sperm and an ovum in a petri dish where fertilization occurs. The ovum and the sperm used for fertilization can be that of the childless couple or from donors. Once the zygote is formed, this zygote is placed into the fallopian tube or the uterus of the surrogate. If the ovum or sperm are from donors and the surrogate is used solely for the purpose of gestation, the surrogacy is known as gestational surrogacy. If the surrogate is inseminated with the sperm of the husband from the childless couple, then this process is known as traditional surrogacy. The surrogate goes through the process of getting impregnated, carrying and nurturing the child for the gestation period of 40 weeks. This is followed by giving birth to the child and handing it over to the childless couple in return for money. Once the child is handed over to the childless couple, the services rendered by the surrogate come to an end, upon which the surrogate's ties are severed altogether from the child. The process of 'motherhood' for monetary consideration in a surrogacy arrangement is, thus, confined to conceiving, gestating, giving birth and giving up the child once it is born. For this reason, the surrogacy arrangement has been described as 'renting of the womb' or 'outsourcing pregnancy' services. This very nature of the scientific method of procreation regardless of traditional or gestational surrogacy arrangements have created a furore the world over, which has warranted regulative intervention.

26.1.1 *Development of Regulative and Judicial Intervention*

Surrogacy, no doubt, in the perspective of science and technology is one of the methods which can be utilized by infertile couples to have a child of their own. However, countries around the world are procrastinating to regulate surrogacy arrangements for it is said to distort the sacrosanct of family-hood; it is against the social culture and religion of the society. The act of surrogacy would be considered immoral in any society because marriage and family-hood is sacred. The reason why couples go through a solemnized wedding is to prove that they are not cohabiting but living as husband and wife in the eyes of the law, public and religion. The

child they bear is to be legitimate. The child is conceived through the natural union of husband and wife. Otherwise, the woman would be regarded as dissolute and the child she bears as illegitimate. In the eyes of the public, cohabiting and childbearing without a solemnized marriage is a misdemeanour, and in any religion, this act is considered to be sinful. Marriage, the union between husband and wife, and the process of procreation are deemed to be sacred, personal and private. Surrogacy, however, is considered to be secular. In a surrogacy arrangement, the surrogate mother is not legally married to the sperm donor, and in most circumstances, she does not know the identity of the sperm donor. The child she bears in this circumstance would be known as a 'bastard'! If the surrogate mother gets impregnated through total surrogacy, the child she carries would still be considered as out of wedlock. Her willingness to go through surrogacy may be noble where she genuinely wants to help the childless couple, but the sin and perception of the public would be daunting. The surrogate's standing may be metamorphosed to a lady of disrepute.

Surrogacy in the lenses of religion, be it in Islam, Catholicism, Buddhism or Hinduism, is considered to be unnatural and not to be condoned as it threatens the sanctity of a traditional family unit. Matters dealing with family-hood, especially marriage and procreation, are the matters which most people hold in deep convictions based on moral and religious values. The unification of a man and a woman is considered personal and sacred. The procreation process is based on the solemnized oath of permanency between a man and a woman to be together till death do them part. Surrogacy, however, distorts the traditional convictions of procreation and family formation. It also distorts strong human values that could render a surrogacy contract to be immoral or against public policy. Nonetheless, the turmoils of surrogacy arrangements, ranging from the child's welfare and ethical considerations to the exploitation of women has led to legislative or judicial intervention.

For example, in the USA, in re *Baby M*, 537 A.2d 1227, 1234, 109 N.J.396, 411 (1988), the validity of a traditional surrogacy contract was questioned. The surrogacy contract provided \$ 10,000 as a fee for the surrogate's services. After the child was born, however, the surrogate refused to hand over the child to the commissioning parents. The commissioning parents sued for specific performance of the contract. The court declared the surrogate to be the legal mother of the child and gave custody of the child to one of the commissioning parents, i.e. the husband, but denied the rights of his wife because of the fact that she had no genetic link!

In *Doe v Doe* 710 A.2D 1297 (Conn.1998), the problem was not with the surrogacy contract. The problem arose when the commissioning parents divorced. The husband claimed full ownership of the child and asserted that his wife did not have any right over the child because there was no genetic link. Before the final decision by the court, as there were no proper laws governing surrogacy contracts, the court actually considered whether the 14-year-old child should be surrendered to the surrogate even though the surrogate had disclaimed all rights to the child. Finally, taking into account the best interest of the child, the court held that the wife should have custody of the child because of her genetic link with the child.

While the USA deals surrogacy cases on an ad hoc basis, Britain and Israel, for example, take a more moderate regulative approach. For example, in Britain, in the

Baby Cotton Case (1985) Fam.846, an American couple entered into a traditional surrogacy arrangement with a British woman. The surrogate complied with the contract. The case created a furore in Britain because, firstly, the surrogate contract was for monetary consideration. Secondly, the British government was aghast that an American surrogacy organization was recruiting surrogates from Britain. This case led to the Surrogacy Arrangement Act 1985. The Act forbids gestational surrogacy and sanctions third parties engaged in the surrogacy arrangement. However, it allows private surrogacy arrangements which do not involve monetary consideration.

In Israel, the Israeli Surrogate Motherhood Agreements law allows commercial surrogacy agreements provided the sperm is provided by the commissioning parent, i.e. the intended father. Parentage is granted to the commissioning parents upon the delivery of the child. The surrogate is denied any parental rights over the child and the surrogate cannot retract her consent to the surrogacy arrangement. Countries such as France, Germany, Norway and France, however, ban surrogacy arrangements for monetary consideration. In France, surrogacy arrangements are illegal. In Germany, those who violate the reproductive technology laws are subject to a prison term or fine. In Victoria, Australia, the Infertility Medical Procedures Act 1984 declares the surrogacy contract to be void and imposes criminal penalties on those who solicit participation in surrogacy arrangements.

In most ASEAN countries, however, surrogacy arrangement is still a grey area. There is no legislation for surrogacy arrangements. Countries with no laws on surrogacy arrangement, such as India, for example, rely on guidelines, which has no legal effect. In India, guidelines were deemed necessary because India thrives on fertility tourism. The *Baby Manjhi case* [2008] INSC 1656 (29 September 2008), however, landmarked the importance of legislative interference for surrogacy arrangements. This case involved a custody battle for the child upon the divorce of commissioning parents, but before the child was born. The issue was as to whether the biological father from Japan as a single man should be permitted to adopt the child under Indian law. Indian law forbids adoption by single parent. This case sparked the drafting of The Assisted Reproductive Technology (regulation) Bill 2008 which is waiting to be enacted.

In Malaysia, the National Council of Islamic Religious Affairs fatwa committee had, in 2008, passed a ruling that surrogacy was forbidden in Islam because surrogacy distorts the traditional convictions of procreation and family formation. It also distorts strong human values that could render a surrogacy contract to be immoral or against public policy. Hence, a surrogacy agreement is rendered void ab initio.

The stand taken by these countries indicate that some form of regulation is needed if surrogacy is to be condoned. Regulation would avoid pitfalls such as, the child's welfare, the rights of the commissioning parents, the risks that a surrogate may encounter or the adoption process. On the issue of morality, moral doldrums are inevitable in surrogacy arrangements. The practice of medical surrogacy, however, should not be ignored as it is one of the viable options for infertile couples to have a child, especially when a woman does not have a uterus, has had cervical cancer or has undergone several miscarriages. Legislative interference, therefore, would be necessary to allow enforceability of surrogacy arrangements which explicitly lays

down the varied interest of all the parties involved in the surrogacy arrangement and giving it due recognition under the law. Legislative interference would also discourage underground surrogacy arrangements or any other malefic practices. More so, it would consecrate the society from blurring surrogacy as morally reprehensible. Law and morality can be said to be intertwined because it has been stated that, ‘All laws, whether prescriptive or prohibitive, legislate morality. All laws, regardless of their content or their intent, arise from a system of values, from a belief that some things are right and others wrong, that some things are good and others bad, that some things are better and others worse. What a bridle is to the horse, law is to human nature. And what law is to human nature, morality is to law. Law helps regulate the people; morality helps regulate the law’. Hence, matters concerning humankind cannot be brushed aside on the grounds of immorality. Due to the fact that surrogacy is regarded morally reprehensible, there is an urgent call for some form of regulative measure.

26.1.2 International Development

Medical tourism is attracting childless couples to travel from their home country to other countries to seek surrogacy arrangements, the targeted countries being third-world countries because of lower wage structures for surrogacy arrangements where poor and illiterate women from rural areas are hired for surrogacy arrangements. To prevent malefic surrogacy practices and to protect the parties involved in surrogacy arrangement, conventions and declarations have evolved at the international forefront.

These conventions and declarations are not specific to surrogacy arrangements though it has been acknowledged that surrogacy arrangements involving cross border transactions need to be regulated. For example, these conventions and declarations merely acknowledge that:

- It is a woman’s right to procreate (International Labor Organization’s Tripartite Declaration of Principles Concerning Multilateral Enterprises and Social Policy, Nov 16, 1977 I.L.M).
- Surrogate mothers should be paid for their services (Declaration Concerning the Aims and Purposes of the International Labor Organisation 285 (1970).
- Adoption process should not be manipulated; agencies dealing with surrogacy should be monitored (The Hague Conference).

Conventions and declarations merely acknowledging surrogacy arrangements are not going to be sufficient. Surrogacy agreements cannot be treated the same as or equated with an ordinary commercial contract because a surrogacy agreement does not involve tangible goods, but a child. It is an agreement which involves a child yet to be born. The child cannot be treated as a lien of the commissioning parents. In the *Baby Doe* case (1983), the child conceived by surrogacy was disclaimed by both the surrogate mother and the commissioning parents because the child was born

deformed. The child was born with a condition termed as microcephaly, where the baby's head is abnormally small and it often turns out to be mentally retarded. This is similar to rejecting goods because they are not of merchantable quality!

Surrogacy is an agreement which deals with human emotions and desperation of wanting a child. A surrogate contract is not an agreement of sale of goods where a baby yet to be born is sold, nor is it a contract of personal service where gestational services are rendered. The law must impose compulsory standard terms that spells out or articulates the duties, responsibilities and the pecuniary consideration between the surrogate mother and the commissioning parents to avoid misunderstandings in the future. The enforceability and validity of the agreement must be regulated by a statute independent of domestic commercial laws. A global stand on surrogacy is imminent, i.e. a global treaty.

The treaty should voice a unanimous stand on surrogacy arrangements. The concern, however, should not be whether the surrogacy arrangement is with or without monetary consideration or whether the arrangement is gestational surrogacy or traditional surrogacy. Regardless of the nature or characteristics of the surrogacy arrangement, the general safeguards that need to be considered are as follows:

- Adoption
- Custody of the child in the event of divorce
- Child's welfare
- Terms in the surrogacy contract
- Exploitation of women
- Conflict of law issues
- Agencies role and limitation in dealing with surrogacy

Evolving complexities of surrogacy arrangements, evident from the many cases that have arisen around the world, indicate that surrogacy arrangements are open for potential abuse. Hence, countries around the world should regulate the emerging market of surrogacy instead of procrastinating on moral, religious or cultural reasons.

26.2 Conclusion

Surrogacy arrangement with or without monetary consideration has become a procreation alternative for childless couples. Though opined to be morally reprehensible, it gives hope to childless couples to have children, especially to procreate with genetic links. At a national level, though certain countries are procrastinating about the acceptability of surrogacy arrangements, some other countries have accepted and regulated surrogacy agreements to safeguard the welfare of the parties involved in surrogacy arrangements, as well as to gain some control over third party involvement such as agencies arranging cross-border surrogacy availability. Any trade carried out at an international level, even more so if it involves women and children, warrants national and global safeguards. A global treaty to regulate surrogacy arrangements should be the way forward.

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Chapter 27

Understanding Behavior of Users in Delivering and Receiving Entertainment News via Accessing Web Portals

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Abstract A widening gap between information haves and have nots have put forth the importance of information accessibility particularly among Internet users. Web portals are an integral part of the Internet and over the years it is quickly becoming an important tool in delivering and receiving news. Its user-friendly, educational, flexible, convenient and speedy nature has made web portals a hit among those who are always on the move. In fact, web portals are steadily replacing newspapers and magazines in reporting entertainment news. As informational access to web portals is increasingly important, it is pertinent to examine web portal usage among individuals in news gathering activities. Thus, a qualitative study employing interview methods is undertaken involving 25 respondents to get insights on the behavior of web portal users in delivering and receiving entertainment and “infotainment” news from various web portals. The findings showed positive correlation between perceived ease of use and the level of web portal usage as the informants seemed to prefer to deliver and receive entertainment news via new technology.

Keywords Communication · Behavior · Entertainment news · Web portals

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27.1 Introduction

Since its conception, electronics, computers and communications have progressively developed into the comprehensive calculation, processing and data storing component as we know it today. Cable and wave infrastructures have enabled great quantities of information to be disseminated everywhere and reach a larger audience.

The Internet, in particular, has become a prime means of communication in the last decade. The explosive growth of the Internet has been far faster than the growth of any other communication medium—faster than the spread of the telephone, radio, television or even cellular phones.

Internet portals often act gatekeepers to the Internet. Users may begin their sessions on the Internet by visiting a portal and obtain information such as news, weather or stock quotes. They may move on to browse products or even make purchases only after the Web sites of interest have been located through the search process. Portals also provide many personal communication services in the form of emails, message boards, etc. As most of these services are free-of-charge, it is not surprising that portals are some of the most visited sites on the Internet.

Effective communication helps develop capacity for continuing improvement and new technology has brought this capability to greater heights. Conventional forms of information transfer involve physical contact, wherein newspapers and magazines are bought and transmitted tangibly between two people. Now, gone are the days where entertainment news is published in the newspapers or magazines with a delay in news value and timelines. Now, through computer-mediated communication, accessing entertainment news is only a click away.

The Internet, particularly in the form of web portals, is becoming a vital and compassing force to the public. By accessing entertainment news through web portals, they can lower their expenses on entertainment magazines and subsequently decrease the usage of paper, which leads to a healthier and greener environment.

27.2 Research Question(s)

This study will explore the usage of web portals by trying to answer a number of research questions as listed below:

1. What are the primary purposes of web portals' usage in the entertainment industry?
2. What are the levels of accessibility of portals' usage in the entertainment industry?
3. Do the web portals give effective approach in receiving local and international entertainment news?

27.3 Research Objective(s)

This study embarks on the following objectives:

1. To determine the primary purpose of web portals usage in the entertainment industry
2. To identify the levels or accessibility of entertainment portals usage
3. To identify the effectiveness of web portals approach in delivering and receiving local and international entertainment news

27.4 Literature Review

27.4.1 *History of Web Portal*

By the end of the twentieth century, web portals became hot commodities. Proliferation of web browsers during this time triggered a competitive urge for companies to build or acquire a portal to have a piece of the Internet market. Web portals gained special attention for it was, for many users, the starting point of their web browsers. For example, Netscape became a part of America Online, the Walt Disney Company launched Go.com, and Excite and @Home became a part of AT&T. Lycos was said to be a good target for other media companies such as CBS.

This portal frenzy, with rivalry among “old media” companies to outdo each other for Internet properties; faded out with the dotcom slow demise in 2000 and 2001. Disney pulled the plug on Go.com, Excite went bankrupt and its remains were sold to iWon.com. However, portal sites such as Yahoo remained to thrive.

Web portals function as link pages, presenting information from diverse sources in a unified manner. Its distributed application, different numbers and types of middleware and software is designed to provide services from a number of different sources. Friend [6], Paul [11], Garison [7] and Houston [9] pointed out that online news research, database analysis and other forms of computer-assisted reporting (CAR) are available to news organizations. Garison [8] also stated that newspapers often move to online services as a first-step into computer-assisted reporting (CAR) because this requires minimal tools and expenses.

Through web portals, respondents are able to contact their sources and exchange information effectively. One advantage often noted is that it is easier to acquire specific information that is stored in the web portals’ archives. According to Callahan [2], the timesaving and quality-enhancing implications of web portal use are seemingly endless in the field of communication.

Maier (2000) found that more than half the newspapers represented in his study of computer-assisted reporting newsroom trainers used web portals in 1999, marking the second largest use of computer-based news gathering resources. Web portals have, in effect, replaced newspapers and magazines. They are faster, more reliable, personalized and do not require paper.

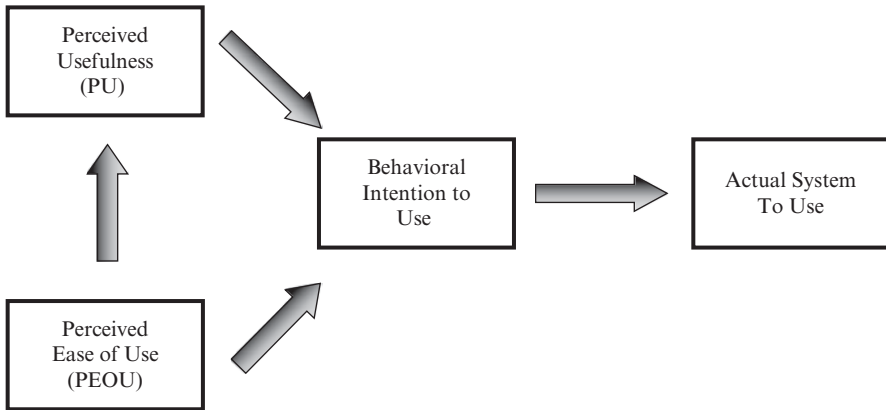


Fig. 27.1 Technology acceptance model

27.5 Theoretical Framework

27.5.1 Technology Acceptance Model (TAM)

Fred Davis developed the Technology Acceptance Model (TAM) in 1989 and according to Gefen (2002), it is one of the most widely used technology models predicting information technology adoption. TAM theorizes that actual computer usage is determined by the person's attitude toward using the system and perceived usefulness. The attitude toward computer is also jointly determined by perceived usefulness and perceived ease of use as shown in Fig. 27.1.

The Technology Acceptance Model (TAM) emphasizes that users' perceptions on "how-useful-is-it-to-use" are powerful factors that influence the adoption of technology and rare fundamental determinants of user acceptance. The model defines two perceptions by users of technology that have an impact on their adoption thereof. These two perceptions combined will create a favorable or unfavorable disposition for the individual toward using a particular technology.

1. Perceived Usefulness (PU): according to Davis [5], PU relates to the degree to which an individual believes that using a particular Information System would enhance his or her job performance. Davis' definition follows from the definition of the word "useful"—capable of being used advantageously. It reflects the extrinsic characteristics of the technology itself, such as task efficiency and task effectiveness.
2. Perceived Ease of Use (PEOU): according to Davis [5], PEOU relates to the intrinsic characteristics of the technology, such as ease of use, easy to use learn and flexibility. In other words, the degree to which an individual believes that using a particular Information System will be free of effort. Davis' definition follows from the definition of the word "ease"—freedom from difficult or great effort.

27.6 Methodology

27.6.1 Description of Methodology

27.6.1.1 Research Approach

This research falls under the exploratory study category as defined by Sekaran and Bougie (2010) as very little or almost inexistent information about the situation at hand or regarding these problems being solved previously are available.

Since the area of study is still precarious in literature, researchers have limited understanding of the evolution of entertainment news accessibility through web portals. This constraint forced researchers to seek a methodology to identify with this area of interest. Utilizing the qualitative approach, the study undertakes a qualitative data collection method via interviews and focus group discussions.

27.6.1.2 Sampling Method and Size

The convenience sampling method is applied to select the informants from the sampling frame. According to Wimmer and Dominick [13], convenience sampling is a collection of readily accessible subjects of study. The questions are asked in the in-depth interviews.

27.6.1.3 Research Instrument Design

In-depth interviews are used as the research instrument to collect the required data as it helps to reduce the researchers' inconsistency in detailing and documenting their observation.

The personal interview session is conducted to clarify the information obtained from the interview questions. The questions revolve primarily on the informant's own personal experience in accessing various web portals to deliver and receive entertainment news. The instruments are divided into several sections to ease the process of information gathering.

27.6.1.4 Data Collection Plan

A total of 25 informants are selected for the in-depth interview. The questions are asked interpersonally between informants and researchers.

27.6.1.5 Variables

The dependent variable in this study is web portals' usage level. Meanwhile, the independent variables are knowledge of web portals, perceived usefulness and perceived ease of use as shown in the conceptual framework in Fig. 27.2.

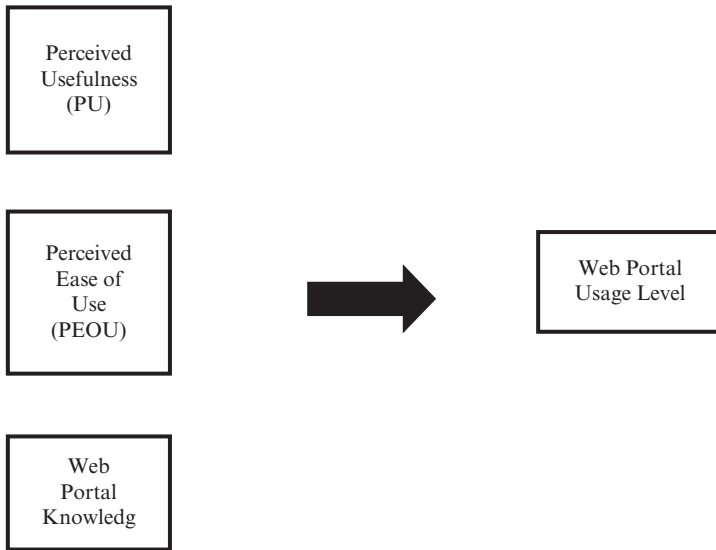


Fig. 27.2 Conceptual framework

27.7 Data Analysis

The in-depth interviews discussed the understanding behavior of users in delivering and receiving entertainment news using web portals. The questions focused on the perception of web portals, level of usage, web portals' concern and the knowledge of web portals usage in improving the quality of leading entertainment web portals.

27.7.1 *The Level of Web Portals Usage in Delivering and Receiving Entertainment News*

27.7.1.1 Frequent Uses of Web Portals

As web portals are a considerably new medium in this new technology, informants were asked on how frequently they make use of web portals in delivering and receiving entertainment news.

As shown in Table 27.1, the most prevailing purpose of accessing web portals in delivering and receiving entertainment news is to be updated with entertainment news and gossips. Informants are very interested in being updated with current local and international entertainment news which included celebrities' relationship, marriage, divorce, death, latest movies or albums or even crime stories. Moreover, the informants used web portals to update themselves about the latest fashion trends particularly on red carpet styles and to have an exclusive peek into celebrities' closets and fashion collection.

Table 27.1 Frequent use of web portals

Frequent use	Response
Entertainment updates	“I browse to entertainment web portals every day to gain information on all updated entertainment news”
Fashion updates	“I make use of what I’ve read on entertainment web portals every day to update with fashion news in my styling job because there are always new updates daily”
Gossiping	“Definitely I’ll make use of the gossips that I have read from various web portals in my conversation with friends to spice up our discussions”

Table 27.2 Web portals’ concern

Concern	Response
Originality	“I am concerned on the originality of the stories base on the facts and evidence. They must be truth and not rumors for sensational purposes”
Privacy	“I am concerned on celebrities’ privacy. Personal pictures should not be exploiting by media. When it is been posted on portals, it can easily spread out and be manipulated by irresponsible individuals”
Censorship	“I am concerned on the interactive communication where comments are given to certain issues. There must be a censorship or editing process by the administrator on nasty words unsuitable to be published. Although it is an entertainment portal, a particular guideline and code of ethics still need to be followed”
Virus security	“I am very concerned about the server. That’s why firewall is extremely important. Pop ups are also a hassle are when surfing the net”
Downloads	“I am concerned on downloading pictures and videos according to the act in order to prevent piracy problem”

With the latest updates on celebrity news and gossips, informants make frequent use of the content to spice up their conversations with friends.

27.7.1.2 Informants’ Concern on the Uses of Web Portals

During the Q&A session, informants were asked on their concern on using web portals in receiving and delivering entertainment news. The informants’ concerns on web portals usage are shown in Table 27.2.

The top concern the informants have is the availability of factual and reliable content from web portals. It must be original and true. All contents, especially photos, require a privacy policy to avoid being misused by irresponsible individuals. If the content was taken from other sources, credit should be given to avoid manipulation and spread of the content in other web portals.

It is understood that web portals are interactive in nature; therefore immediate feedbacks and comments are expected. Hence, it must be secured in terms of censorship. Comments and feedbacks must be monitored by the administrator to curtail

Table 27.3 Perceived usefulness of web portals

“The most interesting usage of web portals is timely. Not delayed. Therefore people get the information as soonest as possible compared to print media”

“It is quicker in gaining entertainment news where news been posted as soon as the incident happened (celebrities death, divorce or live red carpet coverage) compared to printed medium where we have to wait for the next day for the news to appear on paper and maybe a week or month to be viewed in magazine”

“Speedy. That will be the main advantage of using web portals as newsgathering tools in entertainment industry. All content are fresh and hot! That’s what people want! ”

nasty comments from being posted. The findings also showed informants expressing their concern on virus security and server speed when downloading visual ads or music.

27.7.2 Perceptions Towards the Usage of Web Portals in Delivering and Receiving Entertainment News

Overall, all informants agree that the fast speed of web portals make it easy to use and very accessible in delivering and receiving entertainment news.

27.7.2.1 Perceived Usefulness (PU) of Web Portals

In terms of perceived usefulness (PU), informants agree that web portals enhance their effectiveness in gathering information and increase their knowledge on entertainment industry, supporting the studies by Davis [5] and Taylor and Todd [12] that an uncomplicated system will increase intention to use as opposed to a system that is less easy to use (Table 27.3).

A majority of the informants agree that they were able to get information immediately because web portals are quicker in reporting entertainment news compared to print. It also gives immediate reports on the latest updates and feedback as well as interactive comments. Informants were able to access web portals at anytime, anywhere. It is likely that the informants find web portals system easier to use and simultaneously time saving.

The data also showed that communication with friends was enhanced through web portal usage and it has helped the informants improve their knowledge on the industry as well.

27.7.2.2 Perceived Ease of Use (PEOU)

When it comes to perceived ease of use (PEOU), the study indicates that the informants found it easy to access web portal applications as shown in Table 27.4.

Table 27.4 Perceived ease of use

“Fast speed server and high resolution of images/ videos will encourage me to stay on the web”
“Easy to access even via mobile and plus, it is free”
“It is interactive. So, it is a positive way of delivering and receiving entertainment news where people are allowed to give comments and from the feedback or responds, a better change could be made (celebrities are more alert on the comments posted by the public)”

In terms of accessibility, a majority of the informants were able to access entertainment web portals from their offices as well homes.

Using web portals incurs no cost, thus the informants can save their money. Having simple access to entertainment news via their WAP mobiles while on the move is indeed a great time-saver.

Likewise, interactive activities through comments, hits and blogs on web portals help educate viewers on education–entertainment. This is a communication strategy for social change in line with the transition to new technology. As pointed by Yin and Venkatesh (1999), an individual who has a strong sense of capability in dealing with computers is more likely to accept new technology.

27.7.3 Relationship Between Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Web Portal Knowledge and Level of Web Portal Usage.

The findings show a significance relationship between web portals users’ perceived usefulness and their level of web portals usage. Based on Guildford’s rule of thumb, there is a positive correlation between the perceived usefulness and the level of usage. This supports Davis’ [5] definition of perceived usefulness which states that the degree to which an individual believes that using a particular system would enhance their job performance. According to Technology Acceptance Model (TAM), if a user perceives a specific technology as useful, they will believe in a positive use–performance relationship.

Since effort is a finite resource, a user is likely to accept an application when the user perceives it as easier to use than another (Rander and Rotchild 1975). Philips et al (1994) further defines perceived usefulness as the perspective adopter’s subjective probability that applying the new technology from foreign sources will be beneficial to his personal and/or the adopting company’s well-being. This means the user has a perception of how useful the technology is in receiving information. This also includes the decreasing time for seeking information, more efficiency and accuracy.

Web portals knowledge posed as another important indicator to the level of web portals usage. The correlation analysis showed a positive correlation between the two variables. Guilford’s rule of thumb also indicated a positive but almost negligible relationship. This positive correlation also indicates that there is a statistically significant linear relationship between these two groups, such as the more

knowledgeable they are in using web portals, the more frequent they will use it. This supports Hill et al. (1987), who stressed that computer self-efficacy is an important determinant of an individual's decision to use computer technology.

This shows that web portals usage is more influenced by the knowledge that the users have. Adequate knowledge is needed to ensure that application is fully utilized in delivering and receiving entertainment news. Past research on knowledge, particularly computer self-efficacy indicated significant positive relationship between computer efficacy and computer usage [1, 4, 10]. Personal computers represent a complex and somewhat troublesome technology, requiring considerable skill and extensive training to operate successfully. Self-efficacy is essential to overcome the fear many novice users experience. Compeau and Higgins [3] empirically verified the relationship between computer self-efficacy and computer use.

The correlation analysis between the perceived ease of use (PEOU) and the level of web portals usage showed that positive correlation. It can be concluded that the perceived ease-of-use do influence the respondents' level of web portal usage.

These findings support Davis' [5] definition on the perceived ease of use wherein the degree to which an individual believes that using the site will contribute to reaching a particular objective. Davis (1993), Davis and Venkatesh (1996) says that if users are not willing to accept the information system, it will not bring full benefits to them. As such, if the informants, although finding web portals is easy, they will not benefit on it if it is underutilized. Perhaps full research can look into this aspect.

27.8 Summary

Web portals have established themselves as communication tools but remain somewhat unproven in a professional environment. Nevertheless, the public is beginning to understand its uses in information distribution as well as information gathering, although the comprehensive usage of web portals in-depth remains unclear.

This study aimed at gaining an insight into the usage of web portals as a news gathering tool and focused on the purpose of web portals usage, the level of web portals usage, web portals perception and knowledge as well as concerns of web portals among the informants. It is apparent from this study that there is a wide range of uses and levels of use among the informants. It shows that a majority of the informants are responsive of the usage of web portals and there are still a number of informants still in the learning process of using the web portals and its various applications.

The main purpose of the informants' access to entertainment web portals is to get latest or current entertainment news as quickly as they can. They can also get an immediate response to the comments and feedback. The most important purpose of using web portals is that they deliver news faster than print medium, easily to access via the web or mobile, not to mention it is all free.

With transitions in new technologies, informants are also exposed to the new media in delivering and receiving information especially entertainment news. In addition, it is also an effort to support the 'save the earth' campaign where less paper is being used when they shift to an online system.

Most of the informants make use of web portals as an entertaining medium in delivering and receiving entertainment news. From the sensational e-news and gossip, they help spice up their daily conversations. These informants frequently access to entertainment web portals at home, at the office or even anywhere via their mobile as the web portal updates news faster with no buffering.

27.8.1 *Web Portal Concerns*

There is a wide range of legitimate concerns on the use of web portals in an entertainment context. The concerns they expressed are mostly dealing with the quality of the information obtained, with great emphasis put on the factuality and reliability of those information. They also put forward their trepidations on the ethics of news reporting, the originality of content, photo privacy policy, and security and plagiarism in web portals. Moreover, they agonize on possibilities of downloading viruses or worms that may cause interruptions during downloading sessions. Nevertheless, the informants were least worried or unaware that the time spent reading the web portals that may interfere with their work tasks.

27.8.2 *Web Portal Perception*

Informants find web portals easy to use, and they can easily be accessed from the office or from home. Now, they can even access it via their mobile phones. It is generally believed that a straightforward system will increase the intention to use as opposed to a system that is less facilitating [5, 12].

In terms of perceived usefulness, informants are found to be able to control their work when using web portals, which in turn increases their work productivity. Time saving is another factor that was highlighted by the respondents. This is in line with the perceived usefulness defined as the degree to which an individual believes that using the site will contribute to reaching particular objective [5]. The findings also showed significant relationship between users' perceived usefulness and their level of web portals usage.

The findings also showed a significant positive correlation between perceived usefulness and the level of web portals usage, and between the informants' web portals knowledge and the level of web portals usage. The result also showed a positive relationship between perceived ease of use and the level of web portals usage.

27.9 Conclusion

The continuing expansion of global telecommunications networks, further advances can be expected in electronic links. Soon, web portals will be a pervasive communication medium, one that will complement a number of existing communication channels.

This research shows that web portals are indeed effective instruments in delivering and receiving entertainment news. This is due having easy access to web portals. In addition, attractive web portals with a creative layout and comprehensive information encourage viewers to choose it compared to other medium as entertainment preferences.

There is a positive relationship between skills or knowledge and accessibility towards entertainment web portals effectiveness. With new technological changes, informants are aware of the transitions and are well-equipped with IT knowledge. Besides, web portals are a much more preferable medium in delivering and receiving entertainment news due to its quick nature and interesting layout filled with of colors and pictures. Yet, this is not the only factor that influences its effectiveness. Therefore, it is quite clear that technical factors do play an important role in determining the effectiveness of available entertainment web portals.

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Chapter 28

Wife Battering—A Malaysian Perspective

Daleeer Kaur Randawar and Sheela Jayabalan

Abstract The problem of wife battering is not a new one. Many cases of wife battering are never detected and some are not even reported. Since this offence happens within the walls of a home, between a husband and wife, it is usually viewed as ‘private family matter’. Hence, at times these problems are just swept under the carpet. This article discusses the general perspective of wife battering in Malaysia. A brief demographic study on wife battering cases involving wife battering is discussed in addressing a general introductory background understanding of the study. This chapter will explain the general application of the law offering battered wife protection from the abuser in the form of protective orders and some of the general weaknesses in these orders.

Keywords Wife battering · Domestic violence · Protection

28.1 Introduction

In Malaysia, the term Domestic Violence is commonly used to refer to violence against women within a family. Tragically the perpetrator, the abuser or the offender is the husband of a woman, i.e. the man whom she is supposed to be closest to and trusts the most in a relationship. Violence within the family unit is not something new and has existed since the beginning of society. Many consider the beating of a wife or child as a male prerogative, right or privilege and by extension not a crime at all. Often some women consider this act as a way to instill family honour. This is quite a norm in most families and is regarded as a social acceptance and therefore more important than to redress the wrongs inflicted on a woman’s mind and body.

Family can be considered as a place of refuge from stress and strains of the outside world. This may be true for some but sometimes the home can also be a very dangerous and unsafe place for women and children. Battered women often stay put in the confines of their horrible lives because they have nowhere to go or

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have no means of sustaining themselves. Therefore, the cycle of violence goes on and the abusive man continues beating, abusing, threatening and mentally torturing the woman.

28.2 The Incidence of Violence

In Malaysia, the issue of wife battering is common. There are a number of reports on wife battering and domestic violence in particular. Reports of such incidences are published in the media such as newspapers and magazines and are broadcasted over radio and television.¹

Statistics of recent years show an increasing number of domestic violence cases reported to the police. In 2002, 2,755 cases were reported to the police and this number increased to 3,093 in 2005. In 2006 it increased to 3,264 cases and increased again to 3,756 cases in 2007 [7]. Out of these domestic violence cases reported in 2002, 1,700 cases involved wives being beaten by their husbands. In 2005, there were 1,825 cases of wife battering. In the following year, 1,850 cases of wife battering were reported and in 2007 the number of wives beaten by their husbands increased to 2,205 [7].

Data was collected from the Magistrate courts, in which files from Petaling Jaya and Shah Alam courts were chosen [9]. Out of the 156 files that were studied from both courts, it was found, that the victims ranged from 21–67 years of age. Consequently, it was observed from the study that the highest numbers of victims range from 35 to 44 years of age. This represents 72 (46.2%) victims out of a total of 156 victims. This clearly indicates that women from the age group of 35–44 years are more prone to violence inflicted by their husbands. The highest risk group consists of women who are usually married and settled during this period of age. This corresponds with a research conducted by Rohana Ariffin and Rachel Samuel [3], that

¹ Many cases of wife battering and even domestic violence were reported by media, especially the newspapers. For further details see Zulkifli Abdul Rahman, Elizabeth Looi & Florence A. Samy, 'Shahrizat: Family violence still a serious problem', *The Star*, 2006, 13 April, p. 16; Zanifah Md. Nor, 'Kes Keganasan Rumah Tangga Makin Serius', *Utusan Malaysia*, 1997, 3 February, p. 19; Sariha Mohd Ali, 'Suami cederakan isteri dengan seterika panas', *Berita Harian*, 2003, 1 April, p. 14; Joseph Masilamany, 'The wealthy who beat up their wives', *The Sun*, 2002, 22 August, p. 6; Hizreen Kamal, 'Be strong, mothers told', *New Straits Times*, 2000, 28 August; Mimi Syed Yusof, 'Don't tolerate abuse, women told', *New Straits Times*, 2002, 18 August; Rosmah Dain, 'Keganasan rumah tangga: Masalah peribadi antara punca', *Utusan Malaysia*, 2003, 18 Jun; Zulkiflee Bakar, 'Tidak serasi... isteri dituduh tidak siuman', *Utusan Malaysia*, 2001, 5 June; Hussain Said 'Bakar rumah, bunuh diri selepas bertengkar', *Berita Harian*, 2003, 19 Mac; Mohd Amin Jalil, 'Kes dera wanita, budak perlu diberi perhatian', *Berita Harian*, 2003, 25 Februari; Zulkifli Abdullah, 'Suami bakar isteri minta cerai', *Utusan Malaysia*, 2003, 19 Mac; 'Girl, 18, claims hubby threw acid on her', *The Star*, 2004, 16 June, p. 10; 'Suami pasang radio ketika rotan isteri', *Berita Harian*, 2006, 12 Jun; 'Wanita dipukul, digigit suami di rumah madu', *Berita Harian*, 2006, 3 Januari; 'Man who slashed wife for dyeing hair jailed', *New Straits Times*, 2004, 7 September; 'Keganasan rumah tangga semakin membimbangkan', *Berita Harian*, 2003, 30 June.

also reinforced the fact that the most vulnerable women were those in the age group of 30–40 and domestic violence peaked after 10–15 years of marriage.

Based on the 156 files studied, the victims of domestic violence come from various occupational backgrounds. Study revealed that a large number of victims were either housewives (42 victims, 26.9%) or private sector employees (41 victims, 26.3%) who held posts at the administrative levels in the company. The other victims were either private sector employees (29 victims, 18.6%) who were holding managerial positions in the company, self employed (18 victims, 11.5%) or civil servants (16 victims, 10.3%). Only a minimum number were labourers (10 victims, 6.4%). The findings suggest that a woman's profession or career is not a deterrent to the occurrence of violence within a home. It makes no difference to a woman who is victim of domestic violence whether she is a housewife or a career woman.

The data from the files identified various causes of wife battering. The data obtained reflects interesting patterns as to the causes of wife battering. Study revealed that a large number of abusive husbands were short tempered (59 cases 37.8%). Infidelity among the abusers showed 32 cases (20.5%). This is followed by 28 cases (17.9%) of abusers with financial problems and 24 cases (15.4%) of abusers who were alcoholics. Other factors such as jealousy, gambling and drug abuse among the perpetrators reflected 14 cases (9%), 8 cases (5.1%) and 6 cases (3.8%) of wife battering respectively. The data indicates various causes of wife battering. Characteristics of the husband as being short tempered appears to be one major factor for causing the violence. Despite this, other external factors also contribute to domestic violence. Moreover, all these reasons are inter-related as contributory factors as they cause violence to occur within a home. These external factors are also attributed to the characteristics of a husband. These findings support the study done by Robert J. Powers, Irwin L. Kutash [8] and Jerry P. Flanzer [5], that indicated substance abuse such as use of alcohol and drugs as the reason for abuse between partners. This is true as the addiction towards drugs and alcohol inhibits and stultifies a person's temporary mental state of mind. As a result, it impairs a person's ability to function rationally. Personality traits such as anger, anxiety and being stressed tend to predominate and these negative feelings encourage domestic violence.

28.3 The Legal Framework

In Malaysia, to curb this problem, the Domestic Violence Act 1994 (Act No. 521) was passed in early 1994 by the Malaysian Parliament. The aim of this act is to help victims in domestic violence cases. This act offers battered women protection from the abuser in the form of protective orders and provides for compensation and counselling to be made available to them.

The DVA was passed on 24 June 1994 and was gazetted on 7 July 1994 [6]. The implementation took place on 1 June 1996 (226/96). This Act was specially implemented in order to provide necessary protection to victims of domestic violence. The battered wife, who is usually the victim, can now initiate legal proceedings against her abusive husband.

The Domestic Violence Act 1994 was finally amended and gazetted on 9 February 2012. Desirable and much welcomed amendments addressed the outcry of many concerned parties involving domestic violence. Many crucial issues have been looked into and incorporated into the new amendments of the Domestic Violence Act such as focusing on the expanded definition of domestic violence, allowing the Act to be read together with the Penal Code or any written law involving offences relating to domestic violence and by making it possible that an Interim Protection Order (IPO) be made by way of an application to the court.

This Act was designed to grant both civil and criminal remedies for the survivors or victims of domestic violence, irrespective of race, religion, culture and background. Since this Act provides both civil and criminal remedies to the victims, it works as a supplement to the procedure under the Criminal Procedure Code [4]. This Act is drafted by deriving elements of Criminal Law as the Act is to be read together with the Penal Code. This Act does not list down new crimes but provides extra protection for the safety of the victims. If the perpetrator commits any crime under the Penal Code and if it affects a person or property or any family members and not any general person then he/she can be taken to court and be charged [4].

The Domestic Violence Act 1994 (DVA) is a federal law, and according to Section 1(2) of the Domestic Violence Act 1994 applicable to all persons in Malaysia. The Act is divided into five parts. Part (I) of the DVA contains preliminary matters and sets out the definitions of certain terms in the Act including the term Domestic Violence. Part (II) of the DVA explains the provisions in respect of protection orders and part (III) identifies provisions on compensation and counselling. Part (IV) of the DVA contains provisions relating to the procedures on interim protection orders and protection orders and finally Part (V) lists down provisions on miscellaneous matters.

28.3.1 Interim Protection Order

A battered wife may apply to the court for an IPO, prohibiting the husband from inflicting violence against her during the pendency of investigation. The word ‘during the pendency of investigation’ indicates that the IPO may be issued while police are carrying out their investigations [1]. In the case of *Ngieng Shiat Yen v Ten Jit Hing (2001) 1 MLJ 289*, the court held that an IPO may only be issued by the court if there is pending investigation by the police following an investigation of domestic violence. An IPO will cease upon the completion of investigations or when a criminal proceeding relating to the commission of an offence involving domestic violence is instituted against the husband as mentioned in Section 4(4)(a)(b) Domestic Violence Act 1994. This indicates that the IPO will be in force and will be effective during the entire duration of the investigation. This explains that the IPO operates as a temporary injunction to restrain the commission of a domestic violence act by the husband or to restrain others incited into committing domestic violence against the victim. As a consequence of this, if the accused is acquitted, the battered wife is left exposed to further battering and abuse.

The granting of an IPO can be seen in the case of *Ngieng Shiat Yen v T'en Jit Hing (2001) 1 MLJ 289*, where the appellant applied for an IPO via an ex parte application to the Magistrate. The appellant married the respondent in 1986 and the respondent abused her the following year. The wife was kicked and beaten throughout the marriage and she sustained injuries. The Magistrate granted an order in terms of the prayer sought by the appellant, that is, the respondent be restrained from using any violence against her or making personal contact with her. The Magistrate also granted exclusive occupation of the shared residence to the appellant. The respondent, upon service of the order, applied to set aside the order. The learned Magistrate set aside the order on the grounds that a protection order under Sections 4, 5, 6 of the DVA could only be granted if and only where there are police investigations pending or proceedings involving a complaint of domestic violence. The appellant appealed, but the court dismissed the appeal for non-compliance of procedural law.

28.3.2 Protection Order

The Protection Order (PO) may be granted by the court in proceedings involving a complaint of domestic violence. According to Section 5(1)(a)(b)(c) Domestic Violence Act 1994, the court may grant a protection order restraining the abuser from inflicting domestic violence against the complainant, child and against the incapacitated adult.

The PO granted under Section 5 Domestic Violence Act 1994 may include certain orders under Section 6 Domestic Violence Act which provide varied forms of protection for the victims. In order to eliminate the fear of danger in a victim, the courts may invoke the order to exclude the abuser from the shared residence regardless whether the shared residence is solely owned or leased by the abuser [Section 6(1)(a) Domestic Violence Act]. This denotes that an abuser who exclusively owned the property can be excluded out of the home. This protects and allows the victim to live in a peaceful home. This can be further seen in the case of *Jayakumari A/P Arul Pragasam v Suriya Narayanan A/L V Ramanathan (1996) 4 MLJ 421* in which the respondent husband was ordered by the court to vacate the matrimonial home and not to enter therein until further order. In this case, the petitioner claimed that the respondent was a habitual gambler and an alcoholic which lead him to be an irresponsible husband and father. This also caused frequent quarrels culminating to a stage where she could no longer tolerate his behaviour. The petitioner was assaulted by the respondent who also used foul and abusive language on her solicitors when the solicitors issued the respondent a letter exploring the possibility for an agreement to present a joint petition for divorce by mutual consent. The petitioner claimed that things got worse when the respondent threatened to kill her and told the children to vacate the house for a few days as there would be a funeral. Out of fear, the petitioner left the house with her mother and children. The petitioner sought relief from the court that the respondent, his servants or agents be restrained from molesting, harassing, threatening, abusing, assaulting or in any way disturbing her; and that the respondent be ordered to vacate the matrimonial home and not to enter

therein until further order. The court secured a consent from the respondent with regards to non-molestation and harassment and granted the relief to evict the husband from the matrimonial home.

The court held that the factors or principles to be considered in a claim to evict a husband from a matrimonial home were whether such an order was intended for the protection of the wife and in considering this, the conduct of the parties as well as their position and interest, including the children (if any) must be taken into account. It is only when the conduct of the husband is extremely outrageous and that it is impossible for both the parties to live together, that such an application is granted. Hence, looking at the facts of the present case, it was obvious that the conduct of the respondent was outrageous that an application to evict the husband from the matrimonial home could be granted by the court. It was impossible for the petitioner to live under the same roof as the respondent.

However, if a suitable alternative residence is found for the victim, the court shall not make the exclusion order nor shall revoke order granted [Domestic Violence Act 1994, Section 6(4)(a) and (b)]. This issue was debated at the National Assembly Malaysia, Debate on Domestic Violence Bill 1994, Second and Third Reading, *Penyata Rasmi Dewan Rakyat*, Eighth Parliament, Fourth Session, 12th May 1994, DR.12.5.94, p. 260. It was explained by the then Minister of National Unity and Social Development, Datuk Napsiah Omar that this is necessary as sometimes the house in which the victim is living in belongs to the abuser. Therefore, in order to provide protection to the protected person, it becomes necessary to remove them from the house which in fact belongs to the abuser. If this is so, the provision on the PO is defeated as the perpetrator of the violence who should be punished or removed from the shared residence continues to enjoy the comfort of his home while the victim has to be displaced even if she jointly owns the home [2].

A prohibition or restraining order shall also be granted prohibiting the husband from entering the wife and children's place of residence as mentioned in Section 6(1)(b)(i)(ii)(iii)(iv)(v) Domestic Violence Act 1994. This prohibition is extended to the victim's place residence, place of employment or school or institution. Going near any protected person at a distance of at least 50 m or any distance the court think reasonable and making any personal contact with the victim is also prohibited. Illustration for the use of PO in the form of an injunction can be seen in the case of *Jennifer Patricia a/p Thomas v Calvin Martin a/l Victor David*. The plaintiff wife and the defendant husband encountered problems with their marriage in January 2004 after which the husband denied the wife entry to the matrimonial home. However, on March 2004, the wife moved into the house while the husband was away overseas on duty as a Malaysian Airlines (MAS) air steward traveling on long haul flights. The wife attended to the housekeeping, cooking, cleaning and took care of the children. The plaintiff applied for the defendant to be restrained from molesting the plaintiff and the children until further order or final disposal of this action, that the defendant be restrained from approaching the plaintiff and the children within a distance of 100 ft. until further order or final disposal of this action and that the defendant be disallowed from entering the matrimonial home occupied by the plaintiff until further order or final disposal of this action.

The husband in this case had objected to the wife's prayer for injunction against molestation on the ground that there was no pending matrimonial proceeding for divorce or judicial separation. However, the court was in favour of the wife and granted an injunction against molestation on the basis that there was procedural step taken by the wife in order to obtain a certificate from the conciliatory body under Section 106 of the Land Registration Act (LRA). This is sufficient to trigger off the invocation of the LRA as it constitutes the pendency of matrimonial proceedings and so that gives liberty to the wife to apply for the injunction against molestation under Section 103 of the LRA.

In some situations during the rage of violent beating and abuse, some victims may leave the house without bringing along important personal belongings. In such a situation, according to Section 6(1)(c) Domestic Violence Act 1994 the victim may get the order from the court to enter the residence accompanied by an enforcement officer for the purpose of collecting the personal belongings.

The court may also order the abuser not to have communication by any means with the victim, as explained in Section 6(1)(d) Domestic Violence Act 1994. The purpose of the above provision is to prevent the abuser from communicating abusively and threatening the victim into fear. A battered wife may also get an order from the court, according to Section 6(1)(e) Domestic Violence Act 1994, to continue using the vehicle which she has used previously in her marriage. Such an order is to prevent dispute which normally escalates after the conflict and to give the battered wife mobility. In some cases difficulty might occur if the particular vehicle is on an installment plan which is being paid regularly by the abuser. The abuser may default on the payments causing the vehicle to be repossessed by the financial institution.

All these orders will only be effective for a period not exceeding 12 months from the date of the commencement of the order as explained in the last paragraph of Section 6(f) Domestic Violence Act 1994. However, these orders may be extended for a longer period exceeding 12 months only from the date of the expiration of the original order if necessary, for the protection and personal safety of the protected person or persons, provided that the extension of an order under this paragraph shall not be made more than once [Domestic Violence Act 1994, Section 6(2)(b) and proviso]. In the case of *Jennifer Patricia Thomas v Calvin Martin Victor David (2005) 6 MLJ 728*, the courts granted the ouster order for a period of 12 months from the date hereof with liberty to apply for extension for another 12 months. This indicates that on the whole only a maximum of 2 year protection is provided for the battered wife. The battered wife may face difficulty if the violent husband, who is extremely vindictive, retaliates by being vengeful to cause more harm to the wife.

An extended PO can be obtained only if there are proceedings involving a complaint of domestic violence. This is especially so if the accused is charged with a crime that is committed under the circumstances that falls within the definition of domestic violence [2]. Such provisions make the situation worse because these provisions would deny women the options to protect themselves without sending their husbands to jail [2].

Granting of a PO, will be done during the trial of a criminal offence within the definition of domestic violence and such offence must be compoundable or bailable under the Criminal Procedure Code as explained in Section 13(a) or (b) of the Domestic Violence Act 1994. This provision explains that upon the completion of police investigation, if the accused is charged with any offence which falls under the definition of domestic violence, the court may issue a PO. The PO will be granted during the trial of a criminal offence and may also be granted at any stage of the proceeding if the accused has been released on bail. This PO can be granted to the complainant, a child and an incapacitated adult. An IPO may be sought pending investigations by the police following an information relating to the commission of an offence involving domestic violence as explained in Section 12 of the Domestic Violence Act. The scope of the PO is wider than the IPO due to the additional provisions attached to the order.

28.4 Conclusion

As discussed, the Domestic Violence Act is meant to provide temporary protection for the battered wife pending further proceedings either in criminal law or torts or both. By having specific laws, victims can seek redress based on the available remedies under the DVA itself although other related laws may be taken into account. It has been consistently proven that the issue of domestic violence has always involved power and control, wherein the whole dynamics of sociology is actually about stereotyping men and women explicitly or subconsciously. This gender stereotyping has led men to abuse their power and to practice inequality and discrimination that results in violence. A micro systemic view of family power shows coercive power is the power base of men, as we live in a patriarchal society.

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Chapter 29

YAP signature in Kelantan Malay and Jawa Malay subethnic groups in Peninsular Malaysia

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Abstract Malay subethnic group in Peninsular Malaysia has a rich culture and tradition including historical knowledge and cultural heritage, which might be reflected in the current genetic makeup of its population. The genetic polymorphism of the Y chromosome at DYS 287 Y *Alu* Polymorphism (YAP) locus in Kelantan Malay and Jawa Malay subethnic groups in Peninsular Malaysia was analyzed. A total of 157 buccal cells from healthy unrelated males (115 Kelantan Malays and 42 Jawa Malays) from different regions of Peninsular Malaysia were scanned for the DYS 287 Y *Alu* locus from the genomic DNA. The PCR products were separated on 2% agarose gel and visualized under UV light. It shows that Kelantan Malay and Jawa Malay subethnic groups are completely absent for the DYS 287 Y *Alu* Polymorphism. This study has provided the information on the distribution of DYS 287 Y *Alu* Polymorphism in Kelantan Malay and Jawa Malay sub-ethnic groups in Peninsular Malaysia. Further study will be taken up on more sample in Peninsular Malaysia to determine more DYS 287 Y *Alu* Polymorphism status.

Keywords Y *Alu* polymorphism (YAP) · DYS 287 · FTA · PCR · Malay subethnic groups

Penanda YAP dalam subetnik Melayu Kelantan dan Melayu Jawa di Semenanjung Malaysia

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29.1 Introduction

Human Y chromosome is a useful marker for human population genetic studies and has been recognized [1–3]. The nonrecombining portion of human Y chromosomes has special feature as a single haploid and involves father-to-son transmission only. As a consequence, the DNA sequence on the Y chromosome preserves a unique record of mutational events that occurred in previous generations. Therefore, polymorphisms in this region were proposed as tools for male-specific gene flow investigation and for reconstructing paternal history [4].

One of the most useful and widely studied was Y-linked polymorphisms as known as name is Y *Alu* Polymorphism (YAP) element. YAP element (DYS 287 locus) is referred to the *Alu* insertion (~300 bp) which present at a specific site on the long arm of the Y chromosome, Yq11 [5]. This element is stable and originated almost 65 years ago as a component in human DNA [6]. This type of marker has been shown to be valuable for human population studies.

The Kelantan Malays, who are aboriginal to the State of Kelantan Darul Naim, have a close relationship with the population of the North Peninsular Malaysia, especially Pattani Malays in Thailand [7]. Geographically, linguistically, and historically the land of the Kelantan is more closely related to Siam (Thailand). Kelantan Malays are more easily found in the state of Kelantan Darul Naim which located in the northernmost of East Peninsular Malaysia.

From the last decades of the nineteenth century through the beginning of the Second World War, a large migration of Javanese peoples was seen from Java Islands [8] to the southern states of Malaya, nowadays Peninsular Malaysia, especially in Selangor Darul Ehsan and Johor Darul Takzim. At that time, conditions in the rural Java Islands were difficult enough to provide a solid push for temporary and permanent emigration in the search for a better life in other places [9]. Today the Javanese was integrated with Malay people in Malaysia, but still retain a strong consciousness of their Javanese origin.

Kelantan Malays and Jawa Malays have their own traditions, dialect and accent, histories, cultures, foods, and places of settlement. These differences between Kelantan Malays and Jawa Malays are well maintained because these subethnic groups live in all parts of the Peninsular Malaysia.

This study was on the insertion and deletion of *DYS 287* element in the Kelantan Malay and Jawa Malay subethnic groups in Peninsular Malaysia. There has to be yet any research carried out in Peninsular Malaysia involving Malay subethnic groups, especially the Kelantan Malays and Jawa Malays, as inferred from *DYS 287 Y Alu* Polymorphism. A recent study only focused on Bidayuh ethnics of Sarawak population which was conducted by [10] and also research done by [11] where the study focused on the Kadazan-Dusun population from East Malaysia. From this study, it shows that Bidayuh and Kadazan-Dusun show a small percentage of the insertion *DYS 287 YAP*.

29.2 Materials and Methods

29.2.1 Subpopulation Samples

Ethical approval and written permission from each volunteer was obtained from the UiTM Research Ethics Committee of UiTM Shah Alam. Buccal cells were collected from 157 healthy, nonrelated volunteers and randomly selected for this study.

The first Malay subethnic group comprised of 115 healthy local residents of Kelantan Malay which were recruited from ten various districts (Jajahans) of the Kelantan Darul Naim state. The second group comprised of 42 Jawa Malays who were selected from the states of Johor Darul Takzim (22) and Selangor Darul Ehsan (20) (see Fig. 29.1, for location of the Kelantan Malay and Jawa Malay subethnic groups).

The volunteers were interviewed to ascertain their family history, and their family must be pure from at least three generations (Figs. 29.2 and 29.3). Those with unknown family history, mixed marriages, and consanguineous marriage were excluded from this study. Before donating a sample, each volunteer was required to read and sign the consent form. In favor of precise data acquisition, information about each volunteer's background was required to be filled using a questionnaire. Volunteers were asked information on place of birth, ancestry of parents and grandparents, and also current addresses.

29.2.2 Sample Collection

Sample collection began with vigorously swabbing a sterile foam tipped applicator (Whatman, Germany) side-by-side on the inside cheek for about 1 min. The sterile foam tipped applicator was transferred to indicating FTA mini card (Whatman, Germany) and the color of the indicating FTA mini card changed from pink to white, which indicated the presence of samples. Indicating FTA Mini Cards with whole buccal cell deposits were dried and stored at room temperature, and were ready for further use.

29.2.3 Washing FTA Cards

A 2 mm (1/8 inch) disc—the desired sample spot—was punched out by using the 2.00 mm Harris Micro-Punch® Tool (Whatman, Germany). Each disc was placed into the PCR amplification tube. An amount of 200 μ L of FTA Purification Reagent (Whatman, UK) was added to each PCR amplification tube and incubated for 5 min at room temperature. Next, all spent FTA purification was removed and discarded using a pipette. After that, the PCR amplification tubes were added with 200 μ L of TE (10 mM Tris, 0.1 mM EDTA) buffer and incubated again for 5 min at



Fig. 29.1 Map of the geographical distribution indicating the origin of Kelantan Malay and Jawa Malay individuals used in this study(sampling locations are indicated by circles)

Fig. 29.2 A pedigree chart for ethnicity of an example of a male representative through an inclusion factor of three generations of pure Kelantan Malay (KM) subethnic group ancestry. Squares designate males and circles represent females. Parents are connected by a horizontal line, and vertical lines lead to their offspring

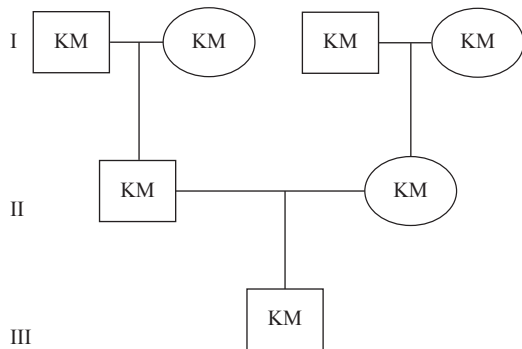


Fig. 29.3 A pedigree chart for ethnicity of an example of a male representative through inclusion factor of three generations of pure Kelantan Malay (KM) subethnic group ancestry. *Squares* designate males and *circles* represent females. Parents are connected by a *horizontal line*, and *vertical lines* lead to their offspring

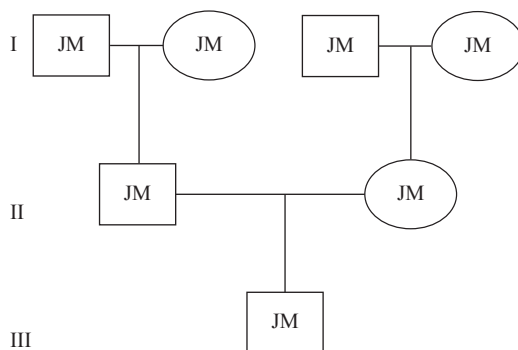


Table 29.1 Primer sets for PCR amplification of DYS 287 locus

Name	Sequence (5'-3')	Expected product size (bp)	Adapted from
DYS 287 For	CA, GG,G, AA,GA, TA,A, GA,A, TA	YAP+ :455bp	[5]
DYS 287 Rev	AC, TG,CT, AA,A, GG.GG.AT, GG,AT	YAP- :150bp	

room temperature. All TE buffer spent was removed and discarded using a pipette. Finally, the FTA disc was allowed to dry at room temperature for about 1 h and the FTA card disc was ready for PCR amplification.

29.2.4 PCR Amplification

A complete list of the specific oligonucleotide primers are shown in Table 29.1. PCR reaction was carried out in BIOER XP Cyclor (Bioer, China). Amplification of each Y *Alu* Polymorphism was performed in 25 μ L reaction using 2 mm FTA card disc, 10 \times optimizes DyNAzymes buffer, 20 mM dNTPs (Solis BioDyne), 10 mM oligonucleotide primer (AITbiotech Pte. Ltd., Singapore), DyNAzyme II DNA polymerase and double distilled water.

Each sample was subjected to an initial denaturation of 1 min at 94 $^{\circ}$ C followed by 35 amplification cycles of denaturation at 94 $^{\circ}$ C for 15 s, annealing temperature for 30 s, followed by extension at 72 $^{\circ}$ for 30 s. After the final extension at 72 $^{\circ}$ C for 10 min, the samples were kept at 4 $^{\circ}$ C until the end of electrophoresis set. An 8 μ L DNA was electrophoresed on 2% (w/v) agarose gel containing 1.3 μ L Gold ViewTM Nucleic Acid Stain (Lonza, USA) at 100 V for about 70 min. PCR product was directly visualized using Alpha Imager[®] EC (Alpha Innotech, USA), according to the manufacturer's instruction and molecular weight was determined using 100 bp DNA ladder (Solis BioDyne, Estonia).

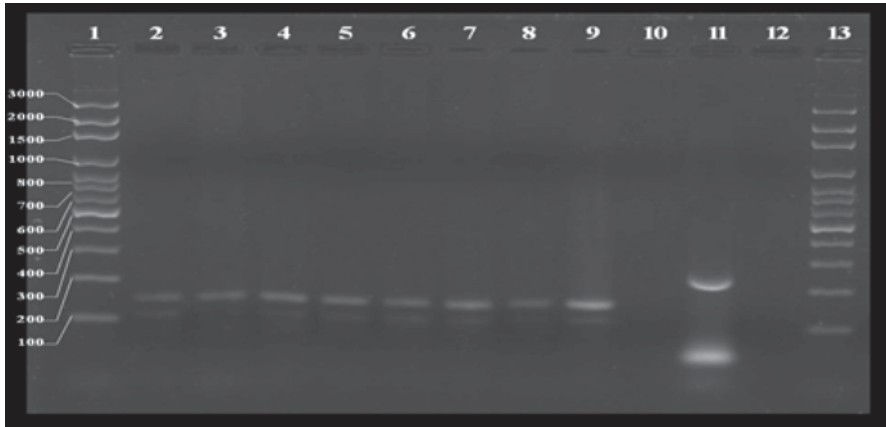


Fig. 29.4 Photograph of a 2% (w/v) agarose gel containing the PCR products of Kelantan Malays YAP-, PCR negative control, PCR positive control and DYS 287 control. Lanes from extreme left: 1 100 bp DNA ladder, 2 Kelantan Malays 53, 3 Kelantan Malays 54, 4 Kelantan Malays 55, 5 Kelantan Malays 59, 6 Kelantan Malays 61, 7 Kelantan Malays 62, 8 Kelantan Malays 107, 9 Kelantan Malays 108, 10 PCR negative control, 11 PCR positive control, 12 DYS 287 control, 13 100 bp DNA ladder

29.3 Results and Discussion

Figure 29.4, illustrated the photograph of 2% (w/v) agarose gel containing the PCR product of Kelantan Malays while Fig. 29.5, illustrated the photograph of 2% (w/v) agarose gel containing the PCR product of Jawa Malays. After screening, the results showed that both Kelantan Malays and Jawa Malays are completely absent for DYS 287 Y *Alu* Polymorphisms by having a PCR product of 150 bp. This indicates that their father did not inherit DYS 287 Y *Alu* Polymorphisms from their common ancestor because *Alu* insertion polymorphism is identical by descent [12].

The presence of positive control band indicates the successful of PCR meanwhile the absence of a negative control indicates that the PCR is free from contamination. DYS287 control which is female's sample showed no amplification of DYS 287 Y *Alu* polymorphic element; the female genome does not contain the Y chromosome because it is a single haploid entity that is passed only from father to son [13].

Table 29.2 represents the distribution of the YAP element in Kelantan Malays and Jawa Malays. Both Kelantan Malays and Jawa Malays show lack of YAP+.

A previous study on DYS 287 Y *Alu* Polymorphism was carried out in East Malaysia, involving Kadazan-Dusun and Bidayuh ethnic population [10, 11]. Results showed small percentage of YAP+ in Kadazan-Dusun and Bidayuh, 2% and 14%, respectively. Based on the historical viewpoint on the origin and migration pattern of the Malay-Indonesia Archipelago, the story began on or near the island of Taiwan, officially the Republic of China, the homeland of the Proto-Austronesian speakers and now commonly called Malayo-Polynesian [14, 15]. The Proto-Austronesian people were inhabitants the island of Taiwan between 4,000 and 3,000 BCE

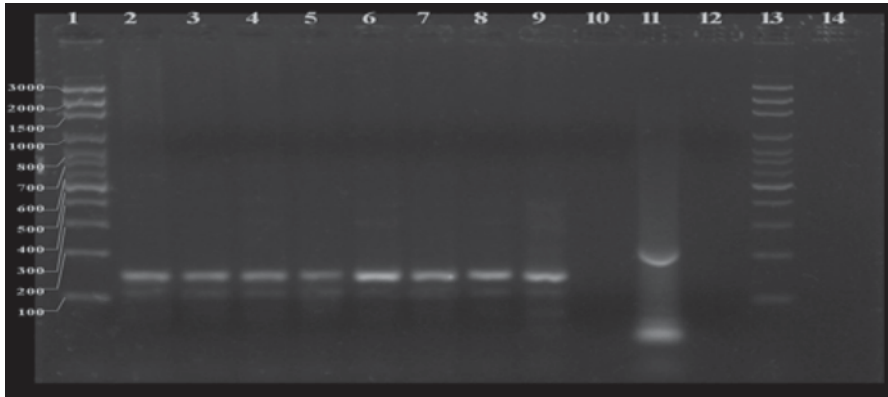


Fig. 29.5 Photograph of a 2% (w/v) agarose gel containing the PCR products of Jawa Malay YAP-, PCR negative control, PCR positive control and DYS 287 control. Lanes from extreme left: 1 100 bp DNA ladder, 2 Jawa Malays 4, 3 Jawa Malays 7, 4 Jawa Malays 9, 5 Jawa Malays 10, 6 Jawa Malays 15, 7 Jawa Malays 16, 8 Jawa Malays 17, 9 Jawa Malays 18, 10 PCR negative control, 11 PCR positive control, 12 DYS 287 control, 13 100 bp DNA ladder, 14 No sample DNA

Table 29.2 Distribution of YAP element in Kelantan Malay and Jawa Malay sub-ethnic groups

Allele (bp)	Kelantan Malays (<i>N</i> =115)		Jawa Malays (<i>N</i> =42)	
	Number observed	%	Number observed	%
YAP+	0	0.0	0	0.0
YAP-	115	100%	42	100%

N number of individuals

[14]. Some of Proto-Austronesian speakers began to move toward the northern half of Borneo, Sulawesi, Central Java and Eastern Indonesia through the Philippines archipelago between 2,500 and 1,500 BCE [14, 15]. Between 1,500 and 500 BCE the second migration, took place southward into Borneo, the western half of Java, westward to Sumatera, the Malay Peninsula across the Straits of Malacca and the migrants finally settled in the central part of Vietnam [14]. This means that both of the genetic and historical data on the origin Malay subethnic groups, Bidayuh and Kadazan-Dusun might come from descendents of the same population.

In this study we also observed that there are some similarities between YAP deletion in the Kelantan Malay and Jawa Malay subethnic groups with a study that have been conducted by Andaya [15] and Hammer et al. [16] which shows that YAP insertion was not found in any Taiwanese population samples. According to historical records, residents of the Indo-Malaysian Archipelago are descendents of the group that migrated from Taiwan. The absence of YAP in Kelantan Malays and Jawa Malays might indicate that they are descended from prehistoric Taiwanese migrants.

The study by using mitochondria DNA (mtDNA) showed that the Kelantan Malays possess a high number of Mongoloid markers. They also suggested that the Kelantan Malays have a closer relationship with Jawa Malays, which might be due to the historical background between Kelantan and the Kingdom of Majapahit years

ago [17]. Furthermore, research carried out using Human Leukocyte Antigen (HLA) polymorphism indicated that the possibility of the Kelantan Malay sub-ethnic group to retain the Proto-Malay lineage is better than other Malay subethnic groups [18]. However in this study, we can see that there is a slight discrepancy, where the Kelantan Malay subethnic group's lack of YAP insertion as compared to previous report conducted by Edinur et al. [19] only 4.3% of YAP insertion in Mongol ethnic groups in Mongolian population. Besides that, a study conducted in the Malaysian population showed YAP insertion was completely absent, but the author did not report the origin of samples used in the study, since Malaysia is populated by Malays, Chinese, Indians, and other Indigenous races [16, 20].

A broad study of YAP signature has been done in several Asian populations. In South Asian populations, a study on YAP element among Ahmadiyya Muslim ethnics from Qadian District of Punjab, Pakistan, showed absence of YAP+ [22] while a study done by Chandrasekar et al. [23] discovered that sample from Lachungpa populations in Northeast India have the highest frequency of YAP (65%) among South Asian populations. In addition, a study conducted by Deka et al. [24], Quintana-Murci et al. [25], and Al-Zahery et al. [26] in all Middle Eastern Muslim populations or Western Asians, Iraqi and Lebanese populations have the highest YAP insertion (17%), followed by Palestinians (14%) only.

Interestingly, polymorphism at the YAP loci element in East Asia showed that Japanese and Tibetan populations have the highest frequency of YAP insertion but absent in Korean and Taiwan populations [16, 27]. Research done by Shi et al. [21] focused on the polymorphism of the Y chromosome at YAP locus among 25 ethnic groups in Yunnan, China, which showed that Primi have the highest YAP+ frequency because they are related to the Tibetans in the Muli Tibetan Autonomous County and Yanyuan in Sichuan [28]. Meanwhile a study in Central Asia in Jewish-Uzbekistan populations, found that 13% of subjects have YAP insertion and another study showed the YAP element to be absent in most northern Asian populations [20, 29].

In Southeast Asians, studies conducted by Hammer et al. [16] and Tajima et al. [20], could not find any frequency of YAP+ (Cambodians, Laotians, Indonesians, Filipinos, and Vietnamese) except in one sample belongs to a Thai male [30]. Previous study done by Bravi et al. [31] also showed lacking of YAP+ element among Southeast Asian populations (3 Cambodians, 7 Laotians, 12 Filipinos, 1 Thai, and 3 Vietnamese).

The frequencies of YAP insertion element diverge greatly among human populations based on the different geographically locations [5, 16]. YAP insertion chromosomes (YAP+) appeared significantly at high frequency (>30%) in Japanese, Tibetans, and several African populations followed by intermediate frequency (11–25%) in Western Eurasian populations and appeared at low frequency (<10%) in several Asian and Oceanian populations [5, 23, 27]. The frequency of YAP insertion is a gradual decline from West to East Asia based on geographical distribution. Besides that the YAP insertion also varies among the ethnic groups in different living places.

The lack percentage of YAP+ found in Kelantan Malay and Jawa Malay sub-ethnic groups suggest that the probability of the population admixture having taken

place many years ago. An inclusion factor of three generation of pure ancestry used in this study was not strong enough to serve as a genetic code control in Kelantan Malay and Jawa Malay subethnic groups. Thus, increasing the inclusion factor up to five generations of pure ancestry is recommended for the study of the YAP element in Kelantan Malay and Jawa Malay subethnic groups.

The results obtained in this study were supported by studies conducted by Hammer [5] and Tajima et al. [20], which concluded that most Asian populations' lack of the YAP+ with the exceptions of the Japanese, Tibetans, and some other populations in Asia. At this moment, it is too early to conclude why the YAP element has this characteristics distributed high around Africa, Western Asia, Central Asia and Eastern Asia. The absence of DYS 287 Y *Alu* Polymorphism found in Kelantan Malay and Jawa Malay subethnic groups suggest that there are no paternal lineages with African and Japanese populations.

Further studies to examine more Malay subethnic groups and other polymorphic loci will be carried out for a better understanding on the pattern of DYS 287 Y *Alu* Polymorphisms in the Peninsular Malaysia.

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Chapter 30

Trust in Business Relationships of Retailers and Suppliers

Zainah Abdullah and Rosidah Musa

Abstract This chapter examines the factors contributing to trust in business relationships of retailers and suppliers in the distributive trade. The influence of incentive alignment on trust remains underresearched in the distributive trade of a country. The chapter addresses this gap in the literature. Data were collected from a survey sample of 232 retailers and suppliers in Klang Valley, Malaysia. Data analysis was conducted using correlation analysis, regression analysis, one-way analysis of variance (ANOVA) and independent sample T-test. Regression analysis illustrates that shared values and incentive alignment significantly influenced the level of trust of the retailers and suppliers. However, information sharing did not influence the retailers' and suppliers' level of trust. The results from one-way ANOVA suggest that there was a significant difference in perceived trust according to the duration of business relationships with key trading partners. This significant difference in the perceived level of trust was only found between the 3–5-year and more than 5-year duration of business relationships with key trading partners. The 3–5-year duration of business relationships showed a significantly higher mean compared to the more than 5-year duration of business. The result from the independent sample T-test shows that there was no significant difference in perceived trust according to the gender of business ownership of the retailers and suppliers.

Keywords Trust · Shared values · Information sharing · Incentive alignment

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30.1 Introduction

The distributive trade, which comprises wholesale and retail trade, has contributed significantly to the Malaysian economy. In order to enhance the performance of the distributive trade in facing the challenges of globalization, liberalization, and more demanding consumer preferences, an efficient supply chain management (SCM) is crucial. This is important to ensure price stability of essential goods [1]. A growth rate of 8.3% per year, contributing 15.1% to the gross domestic product (GDP) in 2015, is expected from distributive trade during the 10th Malaysia Plan [1]. To achieve this target, internal and external integration are necessary in SCM [2]. However, lack of trust and information sharing, and different goals and priorities are barriers to supply chain relationships [3].

These barriers must be overcome, as quality information flows and transparency are required for successful supply chain collaboration between supply chain members [4, 5]. This is possible only when all supply chain partners are willing to share information [6]. Information sharing may reduce the bullwhip effect of SCM [7, 8] which contributes to accurate demand forecast by the suppliers. This will enable the suppliers to accurately fulfill the requirements of the retailers generating mutual gains and savings [9]. However, Gunasekaran and Subramaniam [10] discovered that lack of integration between supply chain partners is a result of not being able to visualize the possible benefits of collaboration.

Despite prevalent literature on trust, there is still limited empirical validation on the antecedents of trust [11] and how incentive alignment contributes to trust [10] in business relationships of the suppliers and retailers in the Malaysian distributive trade context. In view of this, there is a need to explicitly examine the factors contributing to trust in business relationships of the suppliers and retailers in the Malaysian distributive trade context. This may contribute to empirical evidence supporting the underlying factors leading to trust and successful SCM integration and collaborative practices. Thus, the research questions for this study are: (1) How do shared values, information sharing, and incentive alignment affect trust? (2) Is there any significant difference in perceived trust based on gender? (3) Is there any significant difference in trust according to the duration of business relationships with key trading partners?

This study attempts to answer these research questions through the development of a research framework after reviewing the existing literature. The focus of this study is to identify the factors that lead to trust development in business relationships of the suppliers and retailers in the Klang Valley distributive trade context.

30.2 Review of Literature

According to Schurr and Ozanne [12], trust is “the belief that a party’s word or promise is reliable and that a party will fulfill his/her obligations in an exchange relationship.” The degree of commitment and the partner firm’s specific asset

investments directly and significantly impact the level of trust. Incentive alignment refers to the degree to which chain members share costs, risks, and benefits [13]. Common belief about behaviors, goals, and policies is the concept of shared values [14]. Firms that share complementary business processes are able to resolve incentive misalignment which will reduce risks associated with demand uncertainty [15]. Supply chain collaboration helps firms to reduce operating costs [16] and the end result will benefit the customers.

However, decision-making uncertainty has a negative influence on trust [17]. Trust is negotiated through openness in communication. Thus, the sharing of vital information between and among supply chain partners will minimize uncertainty and misunderstandings [18] which, in turn, would improve the level of trust [17]. Information sharing reflects an act of capturing and disseminating timely, relevant information for decision makers to plan and control supply chain operations [13].

The following hypotheses are thus suggested:

- H1: There is a significant positive relationship between shared values and trust.
- H2: There is a significant positive relationship between information sharing and trust.
- H3: There is a significant positive relationship between incentive alignment and trust.
- H4: There is a difference in perceived trust according to the gender of the respondents.
- H5: There is a difference in perceived trust according to the duration of business relations with key trading partners.

Figure 30.1 shows the hypothesized conceptual framework of the relationships among variables: shared values, information sharing, incentive alignment, and trust.

30.3 Methodology

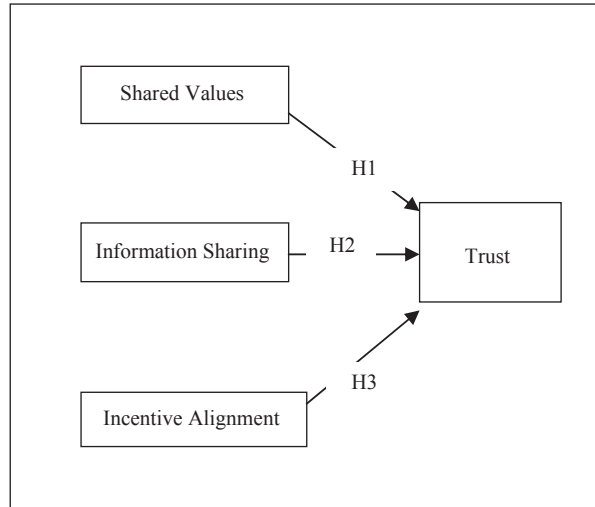
30.3.1 Instrument Development

A questionnaire survey was chosen to get the data needed to test the hypotheses displayed in the conceptual model. Pertinent items were identified to operationalize the constructs in the research model. All items of the survey instrument were adapted from the literature. The items were rephrased accordingly to align with the business relationships of the retailers and suppliers. The 7-point Likert scale, ranging from “Strongly disagree” (1) to “Strongly agree” (7), was used to measure the variables.

30.3.1.1 Pretest and Pilot Test

A pretest was performed with few academic researchers on a questionnaire consisting of 37 items of the survey instrument for improvement in content, wording,

Fig. 30.1 A conceptual framework of trust determinants



clarity, and relevance of the questionnaire. Then the questionnaires were distributed to several suppliers and retailers as a pilot study. The responses suggested that the questionnaire needed to be translated from English to Malay language as the majority of the respondents preferred to answer the questionnaire in Malay. The responses suggested that all statements were retained.

30.3.1.2 Data Collection

The data used to test the hypotheses were collected from both the supplier and retailer perspectives. The suppliers are distributors and wholesalers in various locations in Klang Valley. Data from a survey sample were used to assess the instrument's validity and reliability. In total, 235 questionnaires were returned. Only 232 usable responses were analyzed for this research, which comprised 116 female respondents and 116 male respondents (see Table 30.1).

30.4 Findings and Analysis

30.4.1 Respondent Characteristics

Table 30.1 provides a summary of the demographic and characteristic profiles of participating firms. The majority of the respondents were retailers (68.5%) and the majority of owner ethnicity was Malay (75.4%). The Chinese and Indian respondents comprised 19.4 and 3.4%, respectively. Most respondents had more than 5 years of business relationships with their key trading partners (59.5%).

Table 30.1 Respondent characteristics

Respondent characteristics	No. of firms	Percentage
<i>Type of suppliers and retailers</i>		
Wholesaler	19	8.2
Distributor	54	23.3
Retailer	159	68.5
Total	232	100.0
<i>Owner ethnicity</i>		
Malay	175	75.4
Chinese	45	19.4
Indian	8	3.4
Others	4	1.7
Total	232	100.0
<i>Gender</i>		
Male	116	50.0
Female	116	50.0
Total	232	100.0
<i>Years of establishment</i>		
1970–1979	1	0.4
1980–1989	13	5.6
1990–2000	74	31.9
2001–2010	127	54.7
2011–2012	17	7.3
Total	232	100.0
<i>Years of business with key trading partners</i>		
Less than 1 year	15	6.5
1–3 years	28	12.1
3–5 years	51	22.0
More than 5 years	138	59.5
Total	232	100.0

30.4.2 Factor Analysis

The study developed hypotheses to investigate the relationships between the constructs, namely shared values, information sharing, and incentive alignment which are critical to maintain the level of trust among suppliers and retailers in the retail industry. Before conducting further analysis, the data were checked for sampling adequacy to ensure that factor analysis can be conducted with the data. It was suggested that 0.5 or higher loadings for each factor in factor analysis are required with the sample size of around 100 [19]. Kaiser-Meyer-Olkin (KMO) statistics determines sampling adequacy and the value should be 0.6 or above so that data are suitable for factor analysis. The results from this study indicated that the KMO values were 0.795 and 0.873, which suggest that factor analysis can be conducted (see Table 30.2). The factor analysis results showed the loadings of all items were above the cutoff value of 0.5 stating that discriminant validity of the instrument had

Table 30.2 Factor analysis results

Variables	KMO measures of sampling adequacy	Initial eigenvalues	Percentage of total variance explained
Shared values	0.795	3.544	50.499
Incentive alignment		1.506	
Information sharing.	0.873	4.351	47.917
Trust		1.399	

Table 30.3 Mean, standard deviation, number of items, and Cronbach's alpha of the variables

Variables	Mean value	Standard deviation	No. of items	Cronbach's alpha
Shared values	5.17	0.69	5	0.714
Information sharing	4.91	0.74	7	0.823
Incentive alignment	4.89	0.81	5	0.777
Trust	4.98	0.69	5	0.701

All the variables were measured based on a 7-point Likert scale

been demonstrated. Principal components analysis was employed using varimax rotation on the four variables. The result of factor analysis showed that all factor loadings were above the cutoff value ranging between the lowest loading of 0.565 and the highest loading of 0.777. The Bartlett's test of sphericity was significant at the 0.001 level, implying overall significance of the correlation matrix.

A test for normality using normal probability plots indicated that the data were suitable for multivariate analysis.

30.4.3 Reliability Analysis

The reliability of the questionnaire was measured by Cronbach's alpha on the variables, namely shared values, information sharing, incentive alignments, and trust to establish the internal consistency values [20]. According to Sekaran and Pallant [20, 21], reliability coefficients in the range of 0.70 are acceptable, while those above 0.80 are good. The reliability analysis for all the constructs showed the Cronbach's alpha values range from 0.701 to 0.823 exceeding the recommended cutoff point of 0.70. This demonstrates that all the research variables were internally consistent and had acceptable reliability values (Table 30.3).

A summary of the descriptive statistics (mean and standard deviation) of the variables and Cronbach's alpha coefficients is shown in Table 30.3.

Table 30.4 Pearson product-moment correlations between measures of trust

Variables	SV	IS	IA	T
Shared values (SV)	1			
Information sharing (IS)	0.510*	1		
Incentive alignment (IA)	0.410*	0.657*	1	
Trust (T)	0.456*	0.495*	0.582*	1

* $p < 0.01$ **Table 30.5** Multiple regression results for independent variables and dependent variables

Variables	Standardized coefficient (β)	t values	Significance
Shared values	0.233	3.883	0.001*
Information sharing	0.100	1.374	0.171
Incentive alignment	0.421	6.130	0.001*
$R^2=0.400$		Adjusted $R^2=0.393$	
F value	50.759	Significance=0.001	

* $p < 0.001$

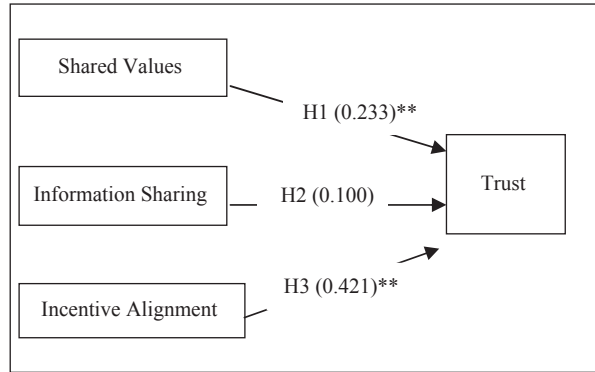
30.4.4 Correlation Analysis

This research first used correlation analysis to explore the associations between the constructs and then regression analysis to further explore how these constructs influence the level of trust. The relationship between measures of trust was assessed using the Pearson product-moment correlation coefficient. The correlation coefficients among the variables afford some initial support for the hypotheses (Table 30.4). The results indicated that shared values, information sharing, and incentive alignment were all positively and significantly associated with trust ($r=0.456, p<0.001$; $r=0.495, p<0.001$; $r=0.582, p<0.001$; respectively). Incentive alignment had the highest correlation with trust, which was interpreted as large correlation [21] while shared values and information sharing were interpreted as medium correlation with trust.

30.4.5 Regression Analysis

Multiple regression analysis was used to examine how shared values, information sharing, and incentive alignment variables affect trust (see Table 30.5). The model was significant (F value=50.759, $p<0.001$). The R^2 of 0.400 indicates that 40.0% of the variance in the level of trust between suppliers and retailers can be explained by the three independent variables: shared values, information sharing, and incentive alignment. Table 30.5 illustrates that only two variables, shared values and

Fig. 30.2 Results of the conceptual framework of trust determinants ($*p < 0.001$)



incentive alignment, had significant positive influence on the level of trust as perceived by the suppliers and retailers as the t value is greater than 1.0 and significant at the 0.001 level [21]. The strongest predictor of trust was incentive alignment ($\beta=0.421$) followed by shared values ($\beta=0.233$). Consequently, hypotheses 1 and 3 were supported by the data. Even though information sharing was positively correlated to trust, the regression analysis result of this study showed that information sharing was not a predictor of trust. It has to be rejected as an antecedent of trust. This is due to the regression analysis results which revealed that the impact of information sharing on trust is insignificant ($p=0.171$, $p > 0.05$). Thus, hypothesis 2 was rejected.

Results of the conceptual framework are shown in Fig. 30.2.

30.4.6 Independent Sample T-Test Analysis

Independent sample T-test analysis between gender and trust was performed to determine whether there was any significant difference between the gender of business ownership and the perceptions on trust in business relationships. The analysis indicates that there was no significant difference in the scores for perception on trust between male and female business owners in Klang Valley: male (mean=5.05, standard deviation=0.75) and female (mean=4.92, standard deviation=0.62), t value=1.448, the probability of error $p=0.149$ (see Table 30.6). Since the p value was more than the cutoff level of 0.05, this suggests that there was no significant difference between the mean of the female and male sample population and this would disprove hypothesis 4.

30.4.7 One-Way Analysis of Variance (ANOVA)

A one-way between group analysis of variance was performed to explore the impact of duration of business with key trading partners on the perception of trust. Subjects

Table 30.6 Independent sample t-test: comparison of perceived trust between male and female business owners

Gender	Perceived trust		<i>t</i> value	Significance
	Mean	Standard deviation		
Male	5.05	0.75	1.448	0.149
Female	4.92	0.62		

Table 30.7 Tukey HSD tests for differences among duration of business with key trading partners and trust (Dependent variable: trust)

Duration of business with key trading partners (I)	Duration of business with key trading partners (J)	Mean difference (I-J)	Standard error	Significance
Less than (<) 1 year	1-3 years	-0.06381	0.21687	0.991
	3-5 years	-0.37725	0.19908	0.233
	5 years	-0.00087	0.18427	1.000
1-3 years	1 year	0.06381	0.21687	0.991
	3-5 years	-0.31345	0.15942	0.204
	5 years	0.06294	0.14048	0.970
3-5 years	1 year	0.37725	0.19908	0.233
	1-3 years	0.31345	0.15942	0.204
	5 years	0.37639(*)	0.11107	0.005*
More than (>) 5 years	1 year	0.00087	0.18427	1.000
	1-3 years	-0.06294	0.14048	0.970
	3-5 years	-0.37639(*)	0.11107	0.005*

* $p < 0.05$

were divided into four groups according to their number of years of business with key trading partners (group 1: less than 1 year, group 2: 1-3 years, group 3: 3-5 years, group 4: more than 5 years). There was a statistically significant main effect of the duration of business with key trading partners ($F(3, 231) = 3.951, p = 0.009$). Thus, hypothesis 5 was supported. The result suggests that there was a difference in perceived trust according to the duration of business with key trading partners. Post-hoc comparisons using the Tukey HSD test were used to investigate specific differences in the duration of business with key trading partners and their perceptions on trust (Table 30.7). The Tukey HSD test indicated a specific difference between the 3-5 years and more than 5 years of business with key trading partners' respondents (mean difference 0.37639, $p = 0.005$) in their perceptions on trust. The Tukey HSD test indicated that the mean score for the 3-5 years of business with key trading partners (mean = 5.27, standard deviation = 0.83) was significantly different from the group of more than 5 years of business with key trading partners (mean = 4.89, standard deviation = 0.64). Therefore, the results revealed that the perception of trust was higher for the group of 3-5 years of business relationships with key trading partners.

The summary of the hypotheses results is shown in Table 30.8.

Table 30.8 Summary of hypotheses results

	Hypothesis	Conclusion
H1	There is a significant positive relationship between shared values and trust	Supported
H2	There is a significant positive relationship between information sharing and trust	Not supported
H3	There is a significant positive relationship between incentive alignment and trust	Supported
H4	There is a difference in perceived trust according to gender of the respondents	Not supported
H5	There is a difference in perceived trust according to the duration of business with key trading partners	Supported

30.5 Discussion and Conclusion

Trust between supply chain partners is important in collaborative business operations. This study should be viewed as preliminary rather than conclusive. However, it is worth noting that only the paths loadings from shared values and incentive alignment to the trust construct were significant while information sharing was not. Based on this evidence, the retailers and suppliers in this study perceived that information sharing was not critical in influencing trust for business relations. This result contradicts studies by Kwon and Suh [17], which found that information sharing could improve trust. A possible explanation can be the low level of technology utilization in business operations of retailers and suppliers [22] whereby they do not view information sharing as a predictor to trust in a business relationship. Tan, Chong, Lin, and Eze [23] also noted that small and medium enterprises (SMEs) in Malaysia have not adopted information and communication technology (ICT) in their businesses. This is consistent with earlier findings by Ainin and Nooriswati [24] and Saleh and Ndubisi [25] which revealed that e-commerce practices among SMEs are still very rare. This is similar to findings by Harland, Caldwell, Powell, and Zheng [26] which showed that the adoption of e-business in supply chains has been slow, particularly in SMEs. The following factors may explain the low adoption of e-business in sharing information by SMEs: (1) There is resistance to e-commerce adoption by SMEs [27], (2) lack of awareness, knowledge, and also skills [24, 25], and (3) the SMEs only plan to invest in e-business if dominant downstream customers force them [26].

The results of this study also revealed that there was no significant difference in perceived trust according to the gender of business ownership. However, duration of business with key trading partners made significant difference in perceived trust of the suppliers and retailers. The results revealed that the perception of trust was higher for the group of 3–5 years of business relationships with key trading partners as compared to the group of more than 3–5 years. This result may be explained by the facts that:

1. Conflicts may exist in business collaborations as companies operate with different goals, norms, and values. Conflicts in communication may lead to subsequent termination of business collaboration [28].
2. Supply chain alliances may fail due to fear of opportunistic behavior of their trading partners and consequently they will not share important information with their partners [29].
3. Malaysian retailers perceive that the suppliers are more in control of the distribution channels [30]. Once relational norms develop in a channel relationship, this increases the use of either coercive or noncoercive influence of the suppliers which negatively impacts the relationship [31] between the trading partners.

The results of this study can be utilized by suppliers and retailers as a reference point to improve their understanding of trust in business relationships. The results suggest that suppliers and retailers should properly manage incentive alignment between trading partners, i.e., to design proper incentives that can motivate trading partners to support interdependent business processes between them [32]. This may promote trust in business relationships which can enhance collaborative decision making between suppliers and retailers. The trust-building concept that has been developed and validated by the research model can be applied by both practitioners and researchers on the subject of trust in any management discipline.

It is recommended that future research should examine why information sharing does not influence trust and to further identify the antecedents of information sharing in business relationships between suppliers and retailers. The identification of factors contributing to information sharing will facilitate the implementation of supply chain integration initiatives towards business performance improvement. Expanding the model in terms of constructs and sample size would be highly recommended. The authors conclude with considerations for future data analysis to use structural equation modeling (SEM) to analyze the relationships among variables.

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Chapter 31

Success Factors of Implementing Green Building in Malaysia

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Abstract Green building is an outcome of a design which focuses on energy efficiency, thus reducing building impacts on human health and the environment during the building's lifecycle. Modern building shows little regard for environmental and social impact over its entire life. Realizing this, a paradigm shift to build green buildings is needed. The Malaysian development commitment towards green building is still at an infancy stage. Therefore, the objective of this study is to identify the critical success factors (CSFs) for the implementation of green building in Malaysia. The policies and incentives that are supported by the government in promoting, encouraging, and emphasizing green building were determined. Literature review was conducted to derive the key factors of green building implementation. Various variables from different authors were summarized based on the frequency of occurrence. Seventeen variables of CSFs of implementation green building were obtained from this study. The variables were supported by structured interview and comparative of five green buildings in Kuala Lumpur and Putrajaya as case studies. The findings were used to establish the CSFs that determine the best practice for implementation of green building in Malaysia.

Keywords Success factors · Green building · Energy efficiency · Malaysia

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31.1 Introduction

Buildings have significant impacts upon the environment through the way they are planned, designed, operated, and demolished. The building sector represent 40% of the world's energy consumption and contribute to one-third of global greenhouse gas (GHG) emissions [1]. As the environmental impacts of building activity become more obvious, green building moves forward and gains its momentum. Researchers [1, 2] found that the impact of buildings on energy consumption, environment, and human health were reduced as green building brings together a vast array of practices and techniques.

Designed to minimize their impact on the wider environment and surrounding community, a green building is energy and water efficient, sited to take advantage of existing trees and transportation options, and uses materials that are recycled, recyclable, and nontoxic [3].

Issues of sustainability and green building have been highlighted in the Malaysian Construction Industry Master Plan (2005–2015) as being of significant importance for the Malaysian construction industry. The Malaysian government is also committed in addressing sustainability issues. Realizing this, the Malaysian government launched the Green Building Mission in March 2007 in order to increase the level of awareness, promote, and consolidate efforts in achieving sustainable buildings. Besides, the launch of the Green Building Index (GBI) in 2009 provides an opportunity to measure, rate, and certify “greenness” in buildings. For a building to be green, it is vital for the environment impact of all its constituent part and design decisions to be evaluated [4].

31.2 Aim of this Study

The aim of this research is to provide an overview of green building growth and opportunity in Malaysia.

31.3 Objectives of this Study

The objectives of this study are:

- a. To identify the critical success factors (CSFs) for the implementation of green building in Malaysia
- b. To establish the CSFs that determine the best practice for implementation of green building in Malaysia

31.4 Problem Statement

Modern building practices show little regard for energy efficiency and environmental or social impact of the built environment over its entire life cycle. This indiscriminate use of natural resources thus puts pressure on the ecosystem. Buildings greatly consume natural resources; building constructions create huge quantities of waste material, and building operations contribute extensively to environmental pollution [5]. Apart from this, poor patterns of building design lead to congestion and inefficient use of land, resulting in greater energy consumption, loss of productivity, polluted runoff to surface water and wastewater treatment systems, loss of agricultural lands, fragmented habitats, and fiscal stress to local communities. The United Nations Environment Program (UNEP) [6] reported that on a worldwide basis 30–40% of all primary energy is used in buildings.

The key to moving forward of going green is challenging and all parties, including the government, owners, designers, and contractors would need to embrace the concept to make it work. The main concern is that not many developers and designers are willing to go the extra mile, but instead subscribed to the conventional method of construction despite the introduction and government initiatives on green buildings.

There is limited research investigating the issues and success elements on green implementation. Most research and papers are published on reduction of gas emission through green building, energy saving, green procurement, and others. A baseline study regarding the factors that contribute to the issue, success elements, and government participation in implementation of green construction will lead us to know the acceptance level of green construction. The highest CSFs that will be obtained from the findings can generate appropriate recommendations to mitigate such negative impacts on green construction.

31.5 Literature Review

The United States Green Building Council (USGBC) explains green building design and construction as intended “to significantly reduce or eliminate the negative impact of buildings on the environment and on the building occupants.” The term green building refers to the quality and characteristics of actual structure created using the principles and methodologies of sustainable construction. Green building can be defined as healthy facilities designed and built in a resource-effective manner, using ecologically based principles [7]. Similarly ecological design, ecologically sustainable design, and green design are terms that describe the application of sustainable principles to building design.

Stated differently by Smith et al. [8], green building is a method of constructing buildings that minimize the use of nonrenewable energy, produce less pollution,

cost fewer energy dollars to operate, and improve the health and safety of the people who live and work in them. Ritu [5] stated that green building is also known as sustainable building and proposes practices and techniques to reduce and eliminate the impact of buildings on the environment and human health.

Brian Edwards [9] emphasized that green building does not require any architectural style which looks visually green. The main focus of green building is to provide benefits to the occupants which include less expensive to heat and cool, greater comfort, healthier which is particularly important for children, greater durability, and less maintenance. Yan Ji and Stellios [10] found that green building development requires close cooperation of the design team, the architects, the engineers, the surveyors, and the client at all project stages. The green building practice evolves and complements the conventional building design concerns of economy, utility, durability, and comfort. Retno et al. [11] underline that green building provides financial benefits that conventional buildings do not, including cost savings from reduced energy, water, and waste; furthermore cost savings because of lower procedure, maintenance costs, improved occupants productivity, and health. Careful selection of environmentally sustainable building materials is the easiest way to begin incorporating sustainable design principles in buildings [12].

In the Malaysian context, the GBI makes aware that the need of green building is because of:

1. Green buildings are designed to save energy and resources, recycle materials, and minimize the emission of toxic substances throughout their life cycle.
2. Green buildings harmonize with the local climate, traditions, culture, and the surrounding environment.
3. Green buildings are able to sustain and improve the quality of human life while maintaining the capacity of the ecosystem at local and global levels.
4. Green buildings make efficient use of resources, have significant operational savings, and increase workplace productivity.
5. Building green sends the right message about a company or organization—that it is well run, responsible, and committed to the future.

The government recognizes that one of the most effective ways to encourage Malaysians to embrace the green agenda is to get the private sector to lead the way [13].

31.6 Methodology

Document review and interviews were carried out to provide the basic raw data for deriving an organization's success factors (SFs). The information is formed into statements that represent the activities that key managers should be performing. These statements are analyzed and placed into affinity groupings from which the SFs are derived (Fig. 31.1).

The goal of the SFs method is to tap the knowledge and intuition of the organization's managers. The SFs method is a way to harvest the factors from a review and



Fig. 31.1 a LEO Building, Putrajaya. b GTower. c DIGI Technology Operation Centre, Shah Alam. d GreenTech Malaysia, Bangi. e Diamond Building, Putrajaya

analysis of the goals and objectives of key management personnel in the organization. They are also shaped by talking with key management personnel about what is important in their specific domain and discussing the barriers they encounter in achieving their goals and objectives.

31.7 Results and Discussion

A critical success factor (CSF) is derived from goals and objectives of the organizations where certain factors and processes have to be in place. The higher rated key factors for green building execution based on literature review of nine authors are presented in Table 31.1.

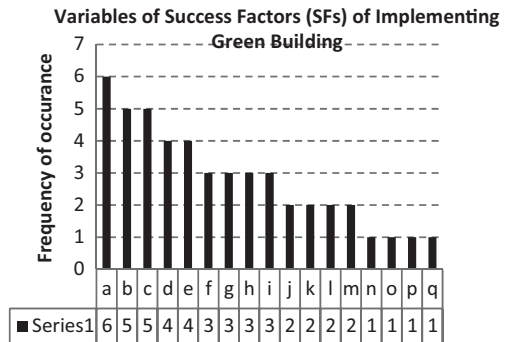
Based on the findings, 17 variables of CSFs that are listed have been selected. The analysis of the parameters/variables is shown in Fig. 31.2.

The priority rankings are as follows:

Table 31.1 Variables of success factors in Implementing Green Building

Item	Variables
a	Effective execution throughout the project’s phases
b	Determination of goals
c	Project team commitment
d	Establishment owners project requirement
e	Customer satisfaction determine time frame
f	Integration of idea and information
g	Competency of team builder/staff
h	Project benefit
i	Product quality
j	Early decision and objective
k	Allocation of budget/cost efficient
l	Incentives
m	Risk management
n	Determine time frame
o	Business planning and marketing
p	Leadership
q	Partnership

Fig. 31.2 Key factors for green building execution



FACTOR 1: Effective execution throughout the project’s phases The first dimension is the concern about the execution of green building projects for long-term sustainability. The fact is that execution is one of the least attended managerial capabilities. Based on the interview, the managers feel that for a long-term vision they will get their return of investment (ROI) and plus with saving. The interviewee also stated that they need to prepare a business proposal for being justified and management approved. With the increasing awareness of unprecedented global warming and scarcity of natural resources, sustainable construction has become important within the performance improvement agenda.

FACTOR 2: Determination of goals At the very start of the project, green design goals have to be discussed, correlated to the owner’s objectives and criteria, agreed to, and in fact embraced by the extended project team. As these goals are defined, they are included in the owner’s project requirement (OPR) document. Most respondents accept that goals towards sustainability are an extremely important factor.

One of the goals may be to achieve the environmental goals at the same or similar capital cost. The finding from the case study shows that the GreenTech building serves as a pilot project that provides a platform for the proof of concept in driving forward the goals of the Malaysian building industry in the subject of sustainable building design. Other than that, the critical approach towards the GreenTech building is the holistic design involving all consultants, led by the architect, and working together in order to achieve the client's zero energy vision.

FACTOR 3: Project team commitment One of the first tasks in a sustainable/green design project is forming the project team and the commissioning team. This team should include the design team leader (often the architect), the owner, the design engineers, and the operations staff. Much of the project team's successful functioning depends not just on having ideas about what should go into the project but on being able to analyze the ideas quickly and accurately for their impact. Besides them, an expanded project team for a sustainable/green design with commissioning would also include (from the case study): the energy analyst, the environmental design consultant, the commissioning authority, and the energy consultant. The sustainable project team must be intimately familiar with energy and daylight analysis modeling tools and able to provide feedback on ideas expressed reasonably quickly.

FACTOR 4: Establishment of the owner's project requirement (OPR) Owners must ensure the need and objective of the project. The OPRs are the foundation for both the commissioning process and for defining the objectives and criteria that will guide the project delivery team. The OPR document is a written document that details the functional requirements of a project and the expectations of how it will be used and operated. This includes project and design goals, measurable performance criteria, budgets, schedules, success criteria, and supporting information.

FACTOR 5: Customer satisfaction The final dimension comprises criteria on the "building providing best value" and "client satisfaction with the finished product," which are considered as the penultimate aim of any building project. It is essential to understand that the customer is divided into two, namely, the internal and external customer. Here, the client (internal) should define what value means to them by ascertaining the relative importance of these criteria, and then the best value solution is selected by matching the client's assessment and the performance of different alternatives. This will deliver best value and satisfaction to the client.

The user satisfaction of the building is confirmed by the interviewee in terms of higher productivity of the staff. The external user is also satisfied with the product (green building) because less energy consumption is required and low utility billings have to be paid. All of the interviewees feel that the advantage of green building is greater. Further discussion about green building advantages is described in the next section.

The five dimensions of highest rated CSFs for implementation green building should assist the project team in their decision-making process at the conceptual design stage by providing a simple list of performance dimensions to be considered. The discussion to select appropriate green features should occur at a project meeting where team members are allowed to communicate, discuss, and rethink their ideas.

Table 31.2 Respondent classification

No	Respondent code	Organization name	Position
1	R1	KeTTHA	Energy manager
2	R2	GreenTech	Building manager
3	R3	Energy commission	Facilities manager
4	R4	DIGI TOC building	Business environment manager
5	R5	GTower	Research and development

It may regard the assessment as subjective and therefore lacking precise measurements for consistent comparison for an owner decision.

Interview sessions and discussions with relevant parties were conducted to obtain the necessary data on the involvement and commitment of building industry towards the implementation of green building. The expert panels were interviewed based on case study buildings to seek their opinions, criteria adopted by their organizations, and feedbacks on the level of green building progress in Malaysia and to get a general perceived attitude towards green building developments. They were asked to provide views on the major key factors that led to the low number of green building projects in Malaysia. The findings from interviews were used to support CSFs derived from various researchers.

The target groups included a range of positions from supervisors to the board of directors. The researcher indicates the respondents as per Table 31.2.

The interview was divided into three sections;

- a. Green building
- b. CSFs
- c. Government policies and incentives

31.7.1 Section A: Green Building

The intent of this first section was to obtain an idea of the respondent on the information of the green building and to determine their point of view on green building and the current emergence of green building in Malaysia.

Question 1A: What is your opinion/definition about green building? Most of the respondents agreed that green building is all about energy efficiency. R1 and R3 stated that green building is to increase the efficiency use of resource while reducing the building impact on human health and the environment during the building's lifecycle, from the design stage, construction, operation, maintenance until demolition. Added by R4, a lot of people do not know that cement, which is the major material used in the building construction, is one of the highest carbons-emitting industry. R4 and R5 were very committed in going green through the intensive green program such as Deep Green. R1 and R2 also focused on the impact of green building on human health and natural environment. They felt that green building

can help in protecting the occupant's health and improve the employee's productivity, while reducing waste, pollution, and environmental degradation.

Question 2A: How do you feel about the current emergence of green building? All of the respondents are aware of the emergence of green building in the market. R1 feels that the physical impact is not really seen because it must go through a certification system. In Malaysia, we only have the GBI. It required high cost to get the certification because the GBI is developed by the private sector. From R4's point of view, a green building always has higher value, and the emergence of green building is currently the trend moving forward for property developers. R4 added that caring for the earth is a social responsibility of all parties. So the emergence of green building is a positive development.

Question 3A: Is the green building philosophy really practiced as science or is it just another marketing gimmick? R1 believes that even though, from one point of view, the emergence of green building is seen as marketing gimmick, GBI Sdn Bhd do make aware about their professionalism; they have to act professionally and maintain the professional ethic. R1 supports the development of GBI Sdn Bhd from 2009 until now and said that we need to promote our local rating tools system. Other rating tools than GBI are supported. R2 and R3 think that the emergence of green building is a sign of increasing awareness among Malaysian developers to deal with climate change. R5 said that "There was a time when being green was fashionable. The developers are initially apprehensive about constructing green buildings as the cost of construction is easily 18 to 20% higher." R4 advised that environmental companies should look at their carbon footprint and not just do things for their external public relation by actually getting their house in order.

31.7.2 Section B: Success Factors (SFs)

The objective of this section is to identify CSFs apply by each manager for their respective building to be green. It is concurrent with this research which is to identify the CSFs for the implementation of green building in Malaysia. The respondents were asked about the benefit and challenge of their buildings. The significance of the question is to know their views about the development of green building.

Question 1B: What are the key success factors for a green building in your organization? All respondents agree that commitment of the staff in the organization in terms of attitude is important for a successful implementation of green building. The awareness on energy saving and recycling material becomes a habit for the staff and the entire organization. The other SFs of the respondent's buildings are the green features adopted at the building. R5 said that the initial design of the building and the selection of a strategic site location is an important factor. R2 said that the GreenTech building serves as a pilot project that provides a platform for the proof of concept in driving forward the goals of the Malaysian building industry in the subject of sustainable building design.

The critical approach towards the GreenTech building is also the holistic design involving all consultants, led by the architect, and working together in order to achieve the client's zero energy vision. The determination of it was built in order to achieve a better sustainable, low energy built environment by improving energy and water efficiency, indoor environmental quality, green planting, lowering heat transmission, and using environmentally friendly material throughout the building. Other than that, the building has been designed to achieve a Grade A++ rating (for achieving an international "environment-friendly" standard from Singapore's Building and Construction Authority Green Mark GOLD certification (provisional)). Effective execution throughout the project's phases can ensure the success of green building.

Question 2B: What are the advantages of being green? There are a lot of advantages being green, said R4. It is because their organization has been certified with ISO4001 by the Standards and Industrial Research Institute of Malaysia (SIRIM). It gives them international assurance that they are actually doing a deep green thing and not doing basics. As a huge Telco network across Asia, they can reduce energy consumption, provide greener environment, and also reduce their operational cost by changing the whole network. R2 agreed that green building is able to improve staff productivity, driven by the improvements in indoor air quality, better lighting, thermal comfort, and an improved innovation in the work environment. The benefits of going green said to outweigh the costs in the long run as green buildings can command a premium on rentals and capital values. The tenant will also pay less utility bills in case of implementation of the green features.

Question 3B: The general perception is that the green buildings are expensive. What is your comment? R1 agreed with the statement that green building is expensive initially if the owners go for high performance green building (HPGB). From the wider angle, R1 said that green building does not need high performance, for example, warehouses (not for cold storage) just used natural lighting and do not have to use an air conditioner. Proper planning is needed in order to avoid huge damages of natural resources in developing green building. Most of the respondents said that the setting of the capital expenditure is higher, but in the long run the operation expenditure gives saving to the owner. R5 added that there is a myth that green building costs more, they see it (the initial cost) as an investment rather than a cost. This is in line with their group (Goldis) corporate social responsibility. Being green does not necessarily mean spending more money, but spending more time and effort to rethink the process.

Question 4B: What was the toughest decision in the green building project? R2 believes that the challenges of the adoption of green building are the lack of skill and capacity, overlapping of roles among the government agencies, slow industry follows through on government programs, lack of research and innovation, and cost versus benefits in terms of implementation of green technology. The main challenge for R4 is the specification of business certification because the investment of green building involves up-front additional investment. The advance payment that

DIGI TOC put in was about US\$ 8 million just for the green features, so they had to work out the business certification. Going green has been an exciting challenge and adventure for R5 as it involves not only the hardware but also the software as well. Goldis Berhad initially wanted to build an energy-efficient building, and they were advised to just “go green” instead. The effect of this was that the initial cost of glass used was the triple cost of the air-conditioning system, and the cost of lighting went up as well.

Question 5B: Is it possible to convert an existing building to a green building? All respondents agreed that the existing building can be retrofit to become a green building, based on the allocation. R3 said that retrofitting an existing building is a solution to climate change. Retrofitting an older building is preferable to avoid the waste associated with demolition and conserved embodied energy within the building. R4 has already retrofitted its existing office with green features but has yet to apply the green building certification. R2 believes that it is good to convert/retrofit the building because it can have a significant impact on the bottom line, with improved energy efficiency and reduced water usage resulting in operational saving.

31.7.3 Section C: Government Policies and Incentives

This section identifies the level of the respondent’s satisfaction with the incentive given by the government. The perception, the added value, and the possible improvement have to be determined.

Question 1C: What are your views on Malaysia’s current tax incentives for green building? All of the respondents give a full support to the incentives provided by the government. The current incentive by the government is a good initiative, but not fully utilized by the industry (R1). From their opinion, the initiative shows the government’s commitment to the green agenda. These initiatives also give rise to many business opportunities. The incentives are given to encourage the adoption of the GBI.

Question 2C: Are we doing enough to encourage the other sector to go green? There are different views from all the interviewees; R1 and R2 think that the incentive is enough to support a green building development. R3 said that the current tax incentives in Malaysia are not sufficiently attractive as compared to those given in other countries. R4 thinks that the Malaysian government is very focused on few sectors such as biomass, biogas, and solar, but other sectors are not being explored. A lot of technologies such as the ocean thermal energy conversion in Sabah and also alternatives for cement can be explored. R5 feels that the incentives lack the bite and should be extended to the developers who are the major players in the market.

Question 3C: What more can be done to enhance the existing green tax incentives? R3 believes that the government has actively taken initiative to promote the

adoption of green technology as a part of sustainable development. In the long run, the construction industry should not rely on the incentives, but they should facilitate more on the supply of the green technology. Meanwhile, R5 said that the taxes given are not available for property developers recently, and R5 hopes that they should receive incentives to encourage them to develop green development.

Question 4C: How to enhance the tax incentives for green buildings? R1 thinks that the current incentive is sufficient enough but not fully utilized. Parties such as the Ministry of Industrial Development (MIDA), the Ministry of International Trade and Industry (MITI), the Ministry of Energy, Green Technology, and Water (MEGTW), and many more are involved to improve the current incentive from the government. Improvement towards green technology incentives needs to be analyzed because green technology plays an increasingly important role, as suggested by R3. R4 added that the incentive programs for retrofitting buildings need to be identified.

31.8 Conclusion

This study has identified that effective execution throughout the project's phases should be the most important factor for the preparation of green specifications. From the factor analysis, four other factors also emerge as important SFs, including "determination of goals," "project team commitment," as well as "establishment owners project requirement" and "customer satisfaction."

The respondents highlighted that effective execution throughout the project's phases is most essential in main streaming green building as it requires changing commitment from all parties. Clear objective and desired goals will provide better understanding of sustainability issues to support implementations. The need for a definition of sustainability and sustainable building in the regional context was highlighted by many authors. The respondents expressed the need for more participation from not only the professionals but also the public in this issue.

It is important to recognize that the benefit of green buildings is more likely to occur when the buildings and organizations are treated as an integrated system from the start. However, many important stakeholders in the Malaysian construction industry are not really aware of the benefit of sustainable buildings, and naturally resistant to change. Hence, the greatest barrier for implementation is the up-front cost for sustainable design.

The observation shows that the majority of sustainable building projects in Malaysia are "special" and cutting-edge rather than the "norm." The sophisticated nature of the projects involved only major organizations/corporations and those with the resources and capability to undertake such major projects. A continuous program to encourage more green building development is needed. It is seen that the green building movement has started to gain momentum, and there is an increase in awareness on sustainable building and construction in Malaysia, however, not across the whole spectrum of the industry.

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Chapter 32

Determining the Selection Criteria for Expatriates: Through the Eyes of Malaysian HR Practitioners

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Abstract Careful selection is needed to ensure the success of international assignments. Therefore, this research was conducted to determine the selection criteria for expatriates to perform international assignments. A qualitative approach was used with the purpose of investigating the opinions of four Malaysian human resource managerial personnel regarding the selection criteria. The research instruments used were semi-structured and open-ended interview questions that were prepared prior to the interview. The findings revealed that the most important selection criteria are professional expertise, adaptability to new culture, flexibility, attitude and motivation, as well as tolerance and open-mindedness. It is hoped that these findings would assist organizations in choosing the right candidates to carry out international assignments.

Keywords Selection criteria · Expatriates · International assignments

32.1 Introduction

Organizations must globalize or they die [1]. This phrase perfectly portrays the twenty-first century economy. For many companies to survive today means that they must expand overseas. The saturated home market, growing foreign demand, and increasing competition due to globalization have triggered the decision of companies to search for opportunities abroad and to expand internationally.

Global or international human resource management (IHRM) is the utilization of human resources to accomplish organizational objectives regardless of geographic boundaries [1]. It has a similar integrated system as the domestic human resource (HR) management, which includes the functions of global staffing, global HR

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development, global compensation and benefits, global safety and health, and global employee and labour relations. These functional areas are very much interrelated to ensure successful management of expatriates. With the expansion in the numbers of expatriates who spend at least some years of their careers overseas, the management of expatriates, their recruitment, selection, training and career development, expatriate adjustment and repatriation have therefore become the issues of concern for personnel officers and academics interested in global business and management [2]. Consequently, these will also be the aims of this research in order to contribute to the understanding of expatriate management in the Malaysian context.

An expatriate is an employee who is sent to work overseas for a certain time in the firm's subsidiary to complete certain tasks or achieve organizational goals [3]. According to the Immigration Department of Malaysia, foreign expatriates are those foreigners who are qualified to fill in a key post, executive post, or a non-executive post—for the reasons of safeguarding their company's interests and investment, of determining their company's policies, supervising staff, and providing technical or specific skills [4]. These issues in expatriate management and adjustment greatly influence the outcomes of international assignments. Therefore, finding the right people with the right skills at the right time and inducing them to stay for the period of the assignment in foreign countries to accomplish the organizational goals are challenging tasks for the HR personnel.

Expatriate planning, recruitment, selection, training, adjustment, performance, compensation, and repatriation are vital concerns in the field of expatriate management. Without essential knowledge in this field, companies would rather not employ expatriates even though they know the benefits gained through the utilization of expatriates. Proper expatriate planning, recruitment, and selection are necessary in order to ensure the successful adjustment and performance of the expatriates in implementing their assignments. These functions are interrelated to enhance the successful implementation of global strategies. Therefore, this research was carried out to determine the selection criteria for expatriates to perform international assignments.

32.2 Recruitment and Selection Practices

Recruitment is the process of attracting individuals on a well-timed basis, in adequate numbers, and with suitable qualifications and encouraging them to apply for a job within the organization [1]. Meanwhile, selection is the process of choosing those who have relevant qualifications to fill existing or projected job openings [5].

Brewster and Harris have categorized selection procedures into four different kinds of systems which are the open/formal system, open/informal system, closed/formal system, and closed/informal system [6]. In brief, the open selection procedure advertises the vacant job positions and interviews qualified candidates, then a decision based on agreement among the selectors is made; the closed selection procedure is based on the direct choice or nomination of suitable candidates and

Table 32.1 Harris and Brewster’s typology of international manager selection systems. (Source: Adopted from Brewster and Harris 1999; Streling 2008)

	Formal	Informal
Open	Clearly defined criteria	Less defined criteria
	Clearly defined measures	Less defined measures
	Training for selectors	Limited training for selectors
	Open advertising of vacancy (internal/external)	No panel of discussions
	Panel discussions	Open advertising of vacancy Recommendations
Closed	Clearly defined criteria	Selectors’ individual preferences determine criteria and measures
	Clearly defined measures	No panel discussions
	Training for selectors	Nominations only (networking/reputation)
	Panel discussions	
	Nominations only (networking/reputation)	

the level of formality represents the existence of formal and informal selections systems within the organization (Table 32.1) [7].

The open/formal system has a higher level of objective achievement due to the systematic and consistent assessment of candidates, the closed/formal system is lacking in contact with the candidates and some suitable candidates may be disregarded [6]. Besides that, open/informal and closed/informal systems are prone to bias selection decisions because an assessment is often made before any proper interview with the candidates due to their reputation and closed/informal systems have inconsistent and incoherent selection criteria [7].

However, it is also possible to find different companies with different corporation strategies adopting the same staffing strategy. This approach adapts the conventional framework of antagonistic pressures of international integration and local alteration into a critical target of analysis, where individual managers of a firm are used as the essential reference units [8]. Managers play important roles in determining the types of international assignments and expatriate selection strategies. The decision made is irrelevant to the pre-determined theories or organizational structures.

The trend of international management has changed in the direction of the ‘process’ approach, where internationalization and global competition are perceived as cognitive processes or mental constructs shared by the ‘dominant logic’ of the organization [8]. Furthermore, companies continuously work on the environment through their managers or directors and deduce and attribute meaning to their actions [8].

This approach suggested that decision-makers develop rational strategies based on their mental constructs, logic, and knowledge rather than the complete objective analysis of the environment [8]. Therefore, staffing strategies and selection

criteria depend on the decision-makers to determine the staffing policies based on their own cognition and judgement, knowledge, rational, and values. Flexibility is emphasised to ensure the competitive advantage gained when facing a changing and uncertain environment.

Managers should always remember that the main purpose of the selection process is to choose individuals who will stay for the length of their international assignments and achieve the strategic and tactical purposes of their assignments [9]. The selection criteria would predict the expatriate success. Several researches and articles have revealed some of the common expatriate selection criteria used in most of the organizations: for instance, adaptability to new culture, intercultural interaction, professional expertise, flexibility, previous international work experience, language skills, marital status or family situation, managerial talents, attitude and motivation, tolerance and open-mindedness, and empathy towards local culture [10–13].

Though technical competence and professional expertise are important criteria to select expatriates, these criteria are not the factors that ensure successful cross-cultural adjustment. In reality, assignment failure and premature return are in general caused by unsuccessful cross-cultural adjustment of the assignees and their families rather than insufficient technical or professional skills [9].

Deficiencies in language skills and expertise related to the assignment's purpose were factors liable to induce assignment failure and diminish return of investment [11]. Besides that, selecting candidates who did not exhibit relational abilities or failing to consider a spouse's ability to adapt to the situation in a foreign country could deteriorate performance and adjustment [11].

Research indicated that all the selection criteria are largely constructs of the international HR department; in fact, line managers were the ones who made the decisions on expatriate selection [14]. At all times, they simply ignore the criteria advocated by the HR department and make decisions in a less structured manner. It is mostly the mixture of self-initiated assignments and a "who-can-do-the-job-best" approach.

32.3 Methodology

A qualitative research approach was utilized in this research. This study aimed to determine the selection criteria for expatriates to perform international assignments in Malaysia. The informants of this research were the HR managers or HR representatives of corporations. Four companies, which are located in Kuala Lumpur and Kuching, had been selected due to accessibility for the researcher and because Kuala Lumpur is one of the most developed areas in Malaysia; therefore, it was easier to identify suitable companies for this research. In this study, the purposive sampling method was used to identify the informants, thus the sample sizes may not be predetermined prior to data collection, and it depends on the resources and time available, as well as the research objectives [15].

The research instruments used were semi-structured and open-ended interview questions that were prepared prior to the interview. To enhance the reliability of the data, a sound recorder was utilized to record the interview session whenever it was permitted by the informants. Notes were taken in keyword form to ensure important content of the interview was jotted down for recollection and data analysis. The interview sessions were recorded with the approval of the informants. The duration of the interview taken was about 45 min to 1.5 h.

After the interview, the sound recording was played and replayed to transcribe the interview session where the exact reproduction of the interview, with all the words, sounds, and silences, was coded. Descriptive narratives of the notes were composed and questions to be followed up were identified [15]. Then the content of each interview was summarized and passed back to the selected contact person in each company to check for factual errors. Subsequently, the constant comparative or grounded theory method was used to analyze the data by reading the transcription and identifying the key points, and by comparing the contents of some interviews in order to determine the trend and enhance understanding on the content. Codes were compared to find consistencies and differences [16].

Consistencies of codes revealed categories and therefore demanded categorizing of the specific events, in due course, category saturated when no new codes related to it were formed [16]. Any discrepancies between the interview data were noted. Microsoft Word was used to save and organize the appointment and interview data. Then, the contents were reformulated with words that are more theoretical and compared to the literature reviews. Differences, trends, and coherence in the content were analyzed to produce the full report of the interview content.

32.4 Findings and Discussion

In this research, four informants were obtained from two different states in Malaysia, two from Kuala Lumpur and two from Kuching. To protect the privacy of informants in this research, they are named informant 1 from company 1, informant 2 from company 2, informant 3 from company 3, and informant 4 from company 4. They are all Malaysians who are currently holding managerial positions in multinational companies' HR departments. Table 32.2 is the summary of their demographic backgrounds and interview details.

32.4.1 *Criteria for Recruiting and Selecting Expatriates*

The main purpose of the selection process is to choose individuals who will stay for the length of their international assignments and achieve the strategic and tactical purposes of their assignments [9]. A mismatch between job and employee can significantly diminish the effectiveness of other human resources' performance [17].

Table 32.2 Informants' demographic details

	Informant 1	Informant 2	Informant 3	Informant 4
Gender	Male	Male	Male	Female
Nationality	Malaysian	Malaysian	Malaysian	Malaysian
Race	Chinese	Chinese	Malay	Chinese
Age range	51 and above	31–40	51 and above	41–50
Education level	Master's	Master's	Bachelor	Master's
Profession	Asia HR director	Rewards manager	Senior HR manager	Assistant HR manager
Years of involvement in expatriate management	6–10	1–5	21 and above	Indirect involvement

Findings have shown that different companies have different selection procedures and strategies. Three companies have shown the adoption of open selection procedures where the job openings are posted on their intranet [7]. Besides that, they utilize formal and informal procedures in the companies where certain candidates are nominated or recommended by the line manager or senior management based on their competency and expertise. Japanese companies tend to utilize closed/formal selection procedures where the top management exercise their authority in deciding the selection of candidates without much consultation with the candidates themselves [7].

Three companies have revealed that expatriation is mainly the internal movement of employees within the same company; they neither recruit and select candidates from outside nor outsource the recruitment and selection of expatriates to external agencies. For these companies, expatriates are mostly selected from among the existing employees whose performance they already know about through the record of accomplishment and talent management.

One of the common reasons for internal recruitment is that the organizations intend to develop and promote their internal staff for succession planning. The other reasons are that the organization aims to minimize the costs and wants to enable them to understand overseas culture. These findings are consistent with extant literature which shows that expatriation is the most expensive staffing strategy for multinational corporations (MNCs), yet it is a means for the organization to develop global competencies and increase the organization's understanding of global operations [18]. Internal transfers of competence necessitate the international relocation of employees to impart company norms or expertise, to set up activities, to educate, and to learn [19].

In addition, Japanese companies tend more to utilize parent-country nationals (PCNs) in their international assignments as compared to American companies [19] for employees' career development and to enable managerial control. Informants mentioned that to be able to prove themselves capable of being promoted after expatriation is the main concern of Japanese expatriates.

On the other hand, findings have also revealed that companies that employ PCNs as well as third-country nationals (TCNs) have strong justifications to acquire the

professional expertise to fill in positions such as engineering and technical positions. Operational needs tend not to advocate the use of TCNs, and most organizations use them on the grounds of special professional qualifications [19].

Dissimilar types of assignments require different selection criteria as the main concern. Findings have shown that informants have not achieved consensus in relation to the ranking of selection criteria that they will look at because senior management of companies establish their global strategies and competitive values to match with the nature of their products and markets, reflecting the reality that every business is dissimilar and therefore has diverse human resources deployment needs [19].

The most common selection criteria among the informants are professional expertise, adaptability to new culture, flexibility, attitude and motivation, as well as tolerance and open-mindedness. These findings are in line with the findings from extant literature that mentioned that professional expertise and the expatriate's ability to adapt to the local environment are the most important factors that induce successfulness of assignments [9].

The professional expertise shows the expatriate's hard skills, for instance technical capability or business knowledge that is required to handle the job requirements during international assignments such as setting up business activities, transferring knowledge and technology, as well as training and educating local employees. This is important for performing the task and achieving the main goal of the international assignment. Adaptability to the new culture is the soft skill that is required to enable the expatriate to adjust effectively to the foreign culture and to facilitate their stay for the period of the assignment in the host country [20].

In many cases, the expatriates have not been working in the country of assignment before except for preliminary pre-assignment visits prior to the actual assignment [18]; thus, three informants have agreed that previous international work experience is not an important criterion and by this deviated from the extant literature which mentioned that prior international experience is one of the selection criteria that is widely used [10–13].

One informant expressed a different opinion from the others. He pointed out that they did not have to worry about the adaptability of the expatriates towards the local culture, intercultural interaction with locals, as well as the empathy towards local culture when the candidates had had previous international experience. This factor might alleviate the future adjustment for the expatriate [18].

In view of the fact that previous international experience is used to measure and identify whether a candidate is open-minded, likes to work overseas, and would not face difficulty in adjusting to local culture, this previous experience could become a not so important criterion once the employer or HR have already known whether the internal candidate is fit, adaptable, flexible, and able to interact with people through daily work performance and evaluation. However, when a candidate is selected externally, looking at previous international experience appears to be sensible since the company is not familiar with the candidate personally and at work.

Most of the informants mentioned that for Western expatriates who relocate to Malaysia, language skills are not important as they will work in an international

multinational company; therefore, English is the medium of communication, and most of the Malaysians are able to communicate in English. Hence, knowledge of local languages would be an added advantage but not a demand. The consequence of lacking host language proficiency has strategic and operational implications as it confines the multinational's ability to monitor competitors and processes of important information [21]. One informant mentioned that to overcome the language barrier, interpreters or translators could be hired.

All informants in this research have shown consensus that age, gender, and marital status are not the main selection criteria for expatriates. American companies strictly apply the equal employment opportunity in selecting expatriates; thus, age, gender, and marital status are not the main concern for these companies. However, informants mentioned that, generally, personal problems are the factor that induces expatriation failure. Thus, during the interview, the hiring manager and HR manager would find out more about the family and personal life of the candidate because by the time they call the person for the interview that person would already have the qualifications and experience [7].

Informants have the same opinion as Streling, namely, that expatriates are working in countries that are foreign to them and thus need to be fast paced, adaptable, flexible to learn and adapt to the new culture, as well as interact with the locals and stay with them [7]. Expatriates must be motivated persons to accomplish the task and face the new situation. The tasks they perform at their home office or country might not be the same as the once they will perform in the host office or country; thus, they must have the tolerance, flexibility, and open-mindedness for the uncertainty [10–13].

These criteria are affecting the expatriate success or failure to some extent; however, not all the informants rated these criteria as important since it is difficult to measure whether candidates possess these criteria or not. Besides that, most of the informants have mentioned that managerial talents depend on the job positions the candidates apply for. Thus, it is crucial to evaluate and alter expatriate selection criteria due to the dynamic environment of global business as well as to the types of assignments and their purposes (Fig. 32.1) [7].

32.5 Conclusion

People are the key assets in the organizations. There is an increasing acknowledgement that the successful implementation of global assignments and strategies depends on effective IHRM, especially management of expatriates [10]. Thus, recruiting and selecting the right candidates are the major concerns in international assignments despite the fact that it is expensive. The benefits gained from expatriation include success implementation of the international assignment, achievement of business goals and fulfilment of business and technical needs, development of employees and prospective successors, as well as gaining an in-depth view of the local market, business, culture, and demands, which shows consistency with the extant literature.

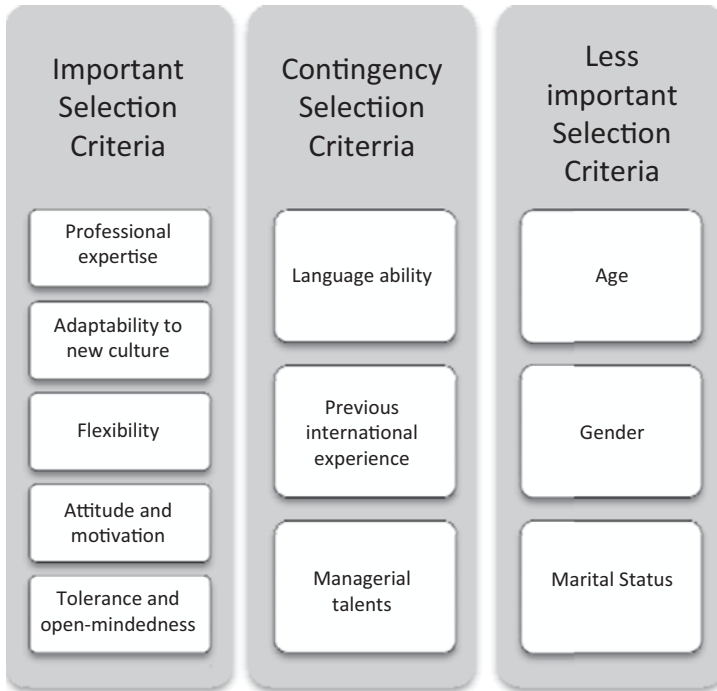


Fig. 32.1 Summary of expatriate selection criteria

The suggestions to the practitioners include that they should try to trust and develop the local employees to manage the subsidiaries and transfer the knowledge, skills, and expertise to the local employees. A careful and comprehensive selection process could reduce the chances of assignment failure, thus companies should always link the selection criteria to the cultural and environmental adjustment aspects.

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Chapter 33

Roles and Tasks for Malaysian Entry Level Construction Managers

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Abstract This study aimed to identify the roles and tasks performed by Malaysian entry level construction managers. Entry level construction managers refer to the construction management fresh graduates. A total of 67 construction practitioners represent the contractors (grade 5–7) participated in this study. This study employed a 360° survey. Data were collected using a 5 likert scale questionnaire. This study used an inferential research design. The Rasch model was adopted in analyzing the data. The results from this study determined the roles and tasks that need to be performed by entry level construction managers. The results show that entry level construction managers were not required to perform the senior construction manager’s roles and tasks. It can be claimed that the industry does not have a high expectation from their new employees. It is suggested that industries and academia need to improve their collaboration in bridging the requirement gaps.

Keywords Roles and tasks · Entry level construction managers

33.1 Introduction

As most of the developing countries are still in the early stages of development, construction plays a major role as a driving force behind a country’s development. It is sometimes referred to as an engine for growth [1]. Construction can be defined as process-based work that is performed at an unfixed location by a temporary alliance among multiple organizations [2]. The construction of a building or infrastructure involves first an assembly of people, a definition of process, and creation of a site-specific work space [3]. The construction phase is important because most of the project budget is expended during construction [4].

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The work environment and culture of a construction project are unique compared to most working conditions. An atypical construction project consists of a group of people, normally from several organizations, that are hired and assigned to a project to build the facilities [4]. The major parties in a construction project include the project owner, architect, design consultant, professional quantity surveyor, general contractor, subcontractors, and suppliers [5].

The construction contractor is responsible for the performance of all work in accordance with the contract documents that have been prepared by the designer [4]. The general contractor is the construction company which is employed by the project owner to execute and complete the project [5]. According to Abu Bakar (1993), as cited in [1], most of the local construction companies in Malaysia are still struggling with the basic factors of success that determined their internal strength.

The key to a successful construction project is properly skilled construction managers [2, 5]. These individuals possess the ability to recognize the degree of uncertainty at any point in the execution of the project and to manage the efforts of others to achieve clearly defined objectives that result in successful completion of the final product [4].

Construction managers cannot achieve everything on their own efforts alone [6]. As a construction manager, there is a need to harness the positive skills sufficient to get along with others and implement the project with the rest of the project team until its successful completion and achieving set goals and objectives [7]. Shirazi and Hampson (1998) and Guthrie (1994), cited in [6], suggest that construction managers generally lack the managerial knowledge and skills to enable them to perform at their optimum, lacking communication skills (verbal and written), an inability to relate to others, a lack of understanding for other employees, a lack of ability to manage and facilitate others working in the same organization.

The unique structure of the construction industry and its rapid changes in technological development [8] coupled with the challenges of global competitiveness and changing regulatory requirement [6] have created the need for highly educated and competent construction management graduates. This belief stems from the conviction that success of construction projects are significantly contributed in part by the competence of construction managers.

The higher education sector has a significant role to play in responding to the predicted skills shortage for the construction sector, and there is evidence which shows that retention of graduates in the industry and application to build an environment degree are falling [9]. Several authors have highlighted that part from course content relevant to job-related situations; there is the need for an appropriate teaching approach that bridges the perceived gap between formal academic instruction and on-the-job training [10].

Problems in Malaysian construction management education arise when there is a difference between the expectations of industry and graduates from construction management education. Graduates are often expected to perform according to specific targets that are not necessarily compatible with the skills gained from the course [11]. On the other hand, the value of a course to an organization may not be the same. Therefore, this research focused on the entry level construction managers (construction management graduates). This research identifies the roles and tasks for construction managers; furthermore, it determines the roles and tasks for

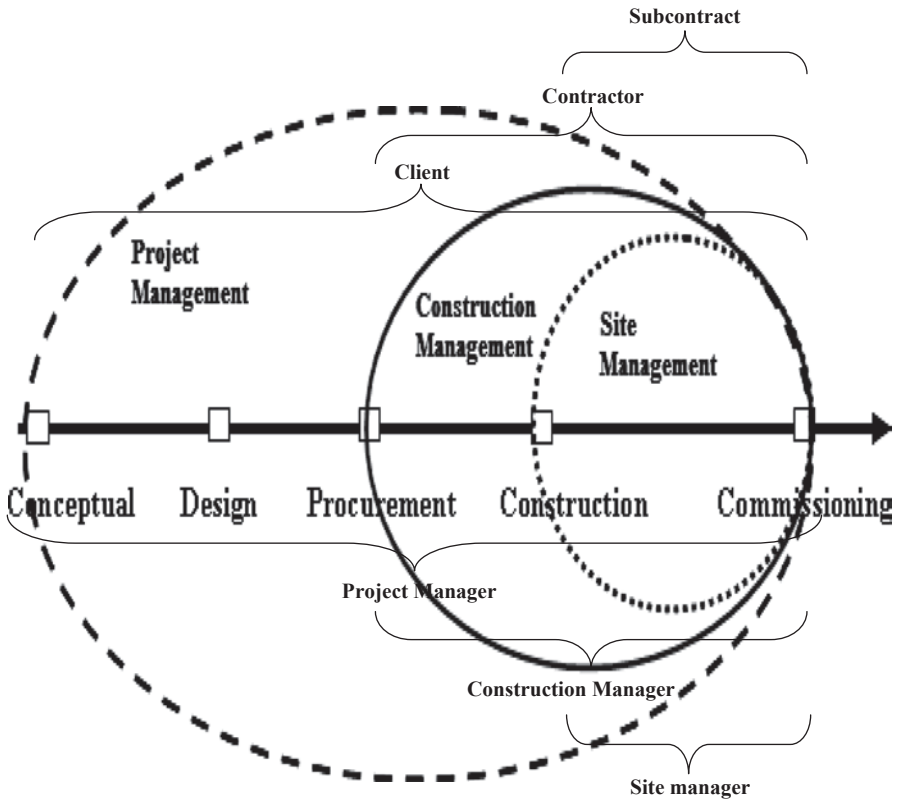


Fig. 33.1 Construction project life cycle. (Adapted from Hassan 2005)

entry level construction managers. This research helps in explaining the perception among academia about the industry’s requirement.

33.1.1 Project Life Cycle

The work environment and culture of a construction project are unique compared to most working conditions. It is within this influence that the management of the construction project takes place. Managers in charge of the project need to be continually sensitive and able to respond to the array of activities taking place within the surrounding of the construction project.

One of the characteristics of a project is the definite beginning and definite end which mark a clear time frame for the work [5]. The project life cycle defines the phases that connect the beginning of a project to its end [12]. In principle, there is no single model for a project life cycle. The life cycles of different industry projects may vary with their size, complexity, and characteristics. There is much literature regarding the process of project life cycle. Figure 33.1 shows the construction project life cycle.

33.1.1.1 Project Management

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements [12]. The term project management is sometimes used to describe an organizational or managerial approach to the management of project and some ongoing operation, which can be defined as project that is also referred to as “management by project.” In the case of construction, project management is handled by the developer. It means that the developer owns the project. It starts with the conceptual phase and finishes with commissioning or handing over the project to the customer.

33.1.1.2 Construction Management

Construction management starts with tendering and finishes with handing over the project. Construction management involves in coordination and supervision of the construction process including planning the sequences of works, administration of the construction site, materials delivery, making sure that all works are done accordingly onsite, decision making which pertains works on-site, and so forth, from the tendering-awarded stage through final construction, making sure that the project gets done on time and within the budget [2].

Construction management is a phase in which the contractor will take over the project, and the progress of construction will be reported to the project manager (superintendent officer/representative of developer).

33.1.1.3 Site Management

In order to complete the project, the contractor will hire subcontractors. These subcontractors will report all the progress to the construction manager. The site management phase starts with the construction and finishes with the commissioning.

33.1.2 Construction Managers

The term of project manager is widely used in the construction industry. Some will name the construction manager a project manager and vice versa. Project managers have different roles or scopes of work or services depending on whom they represent, but the principles and fundamentals of project management, as enshrined in the Project Management Body of Knowledge (PMBOK) manual, are applicable to each of three categories [12]:

1. Project manager representing the clients (public/government) and private sectors (developers, investors, land owners)
2. Project manager representing the designer (architect, engineer, etc.)
3. Project manager representing the contractors (traditional, turnkey, design and build, BOT, etc.)

In this study, each project manager will be labeled with a different name as their roles and tasks are based on the project life cycle (see Fig. 33.1). However, this research focused only on the project manager representing the contractor.

1. The project manager representing the contractor, who is responsible for the whole project starting from the inception until the handing over, will be named project manager.
2. The project manager representing the contractor, who is responsible for the project starting with the tendering until the handing over, will be named construction manager.
3. The project manager representing the contractor, who is responsible for the project starting from the construction until the handing over, will be named site manager.

The construction manager, in this research, focused on the project manager, construction manager, and site manager representing the contractor. Construction managers are important persons in managing construction projects [2]. One of the successful critical factors of the project are properly skilled construction managers. To achieve the project as set out by the construction contract, construction project managers need the ability to manage the project well and have the right generic competency to control, support, motivate, and lead the team.

33.1.3 Construction Managers' Roles and Tasks

Construction managers' roles and tasks are centered on managing construction resources, the achievement of project objectives, administrative as well as sundry duties, and their responsibilities to the third parties [2]. Workers with strong technical, managerial, and organizational skills are necessary for the future, and this industry must compete with other industries for such people [3]. Mat Isa [2] and Gould and Joyce [3] stress that construction managers require the ability to interact effectively with people, manage information to work efficiently, and are able to communicate, motivate, and lead individuals and groups.

Given the range of possible approaches available, investigations about the roles and tasks of construction managers within the construction industry were varied. This research adapted the framework of construction managers' roles and tasks by Mat Isa [2]. In the first place, the framework was developed by Farrel (1999) to identify the site managers' roles and tasks. Mat Isa [2] adapted Farrel's framework and validated the framework for construction managers in Malaysia. This research takes a step further by adding new elements from PMBOK, Construction Industry Development Board (CIDB, National Competency Standard), and survey questionnaires to this framework.

33.1.4 Objective of the Study

This study aimed to determine the roles and tasks performed by entry level construction managers in Malaysia.

33.2 Methodology

As elaborated in Sect. 33.1.3, this research first identified the roles and tasks for construction managers. This framework was used as a guideline to determine the entry level construction managers' roles and tasks.

This study used an inferential research design. The Rasch model was adopted in analyzing the data. Data were obtained through the administration of questionnaires for contractors (grade 5–7) in Klang Valley.

33.2.1 Samples

This study employed a cluster sampling technique. In this research, 2679 contractors grade 5–7, registered with CIDB Malaysia in Klang Valley, were chosen as sample. Four hundred questionnaires were distributed in 6 month; however, only 94 replies were received from the respondents. From 94 respondents ($n=94$), only 67 respondents ($n=67$) were fit and valid for the Rasch model. The respondents were chosen from the contractors' grade 5–7. In this research, the contractors' grade 5–7 was chosen due to the establishment, and most of them employed construction management graduates rather than contractor grade 1–4. This study used a 360° survey; therefore, respondents come from construction managers and people who worked with entry level construction managers (people who are able to assess entry level construction managers) [14].

33.2.2 Instrumentation

This study adapted the roles and tasks' framework of Siti Sarah [2] and was modified with a literature review analysis and a survey. The forms distributed to the respondents were written in English and contained the following parts:

- a. Demographic
- b. Role and task for entry level construction managers

All the variables were ranked on the 5-point Likert scale of 1: never, 2: rarely, 3: sometime, 4: most of the time, and 5: always. After analyzed by the Rasch model, the level of respondents' expectation was measured by logit shown in Table 33.1.

33.2.3 Reliability of Instruments

Aziz [15] suggested that the item measure reliability value must be greater than 0.67. In this study, an item measure reliability value for the variables is 0.84 which is beyond the value of reliability needed. Therefore, the instrument used is able to measure the industries' requirement on roles and tasks for entry level construction managers.

Table 33.1 Category of logit

Logit	Interpretation
-2.52 to -1.27	Always
-1.26 to -0.01	Most of the time
0-1.25	Sometime
1.26-2.51	Never

33.3 Result

33.3.1 *The Respondents' Profile*

The purpose of this part is to gain a demographic profile of the respondents. All of the industries' practitioners represented the contractors' grade 5–7. The result from Table 33.1 shows that most of the respondents were owners (CEOs), technicians, clerks of work, accountants, engineers, and quantity surveyors (represented others). Among the respondents, most of them come from the contractors' grade 5 (28) and 7 (26).

33.3.2 *Roles and Tasks for Entry Level Construction Managers*

The Rasch model was used in analyzing the roles and tasks for entry level construction managers' data. An item map with a new logit value was determined (see Table 33.1) through this process. Variable maps present a visual representation of person and item distributions using a hierarchy to display the item response patterns. The items that are the easiest to endorse fall towards the bottom of the hierarchy, and items that are most difficult to endorse are represented towards the top of the item hierarchy [15]. The distance between the items in the hierarchy illustrate how the items are functioning in relation to one another. As explained by Azis [15], the logit scale is an interval scale, meaning that the distances between the logits are of equal size.

Part B was constructed to determine the roles and tasks performed by entry level construction managers. This framework was adapted from Mat Isa [2] which was developed for construction managers and improved with literature review analysis and a survey which specifically focused on entry level construction managers' roles and tasks required by the industry.

There are 4 construct consist 17 elements of roles and tasks for performed by Malaysian construction managers. From 17 roles and tasks performed by construction managers, only eight roles and tasks are required by industries for entry level construction managers. Based on the item map (see Table 33.2), 8 roles and tasks were the easiest endorsing items by contractors (below logit 0). Items which fall below logit 0 (see Table 33.2) were accepted to the framework of the entry level construction managers' roles and tasks.

Table 33.2 Characteristics of the respondents

	Frequency
<i>Position</i>	
Project manager	15
Construction manager	2
Site manager	2
Site supervisor	9
Others	39
<i>Contractor grade</i>	
G5	28
G6	13
G7	26

33.4 Discussion and Conclusion

The results of this study indicate the roles and tasks needed to be performed by entry level construction managers. From 17 variables, only 8 variables were rated most of the time by the industries. The result shows that entry level construction managers were not expected to manage the whole construction project, and more likely they were appointed as an assistant through the project because only 8 roles and tasks were performed by them rather than 17 roles and tasks which were done by senior construction managers.

It means that entry level construction managers were not responsible to perform all the roles and tasks performed by senior construction managers. It shows that industries were not highly demanding on the students’ performance and do not expect students to perform what senior construction managers do. Industries require entry level construction managers to manage staff, be responsible to client, clerk of work, and design team, and administer the preconstruction. Entry level construction managers were required to focus on achieving the construction objectives which are time, quality, cost, health and safety, and risk (see Table 33.3).

It is suggested that the collaboration between industries and universities needs to be improved to bridge the gaps between the industries’ requirement and academia’s perception towards the reality of the working environment for the entry level construction managers (construction manager graduates).

From the result, further study will be carried out in identifying the gaps between industries’ requirement and students’ perception on the roles and tasks performed by entry level construction managers (see Table 33.4). The findings also provided some significant basics in developing the generic competency for entry level construction managers.

Table 33.3 Roles and tasks performed by entry level construction managers

Roles and tasks	Entry level construction manager
	Logit
<i>Staff (CR 2.1)</i> (Visiting consultants, site/trade foreman, trainees, site supervisors)	-0.76 Most of the time
<i>Material (CR2.2)</i> (Take-off, schedule and requisition, supplier liaison, weekly records, site use, stock checks, storage of materials)	0.26 Sometime
<i>Labor (CR2.3)</i> (Recruitment, dismissal, inter-site liaison/transfer, supervision, direction and motivation, weekly and monthly records, approval of wages, preparation of working sketches)	0.42 Sometime
<i>Plant (CR2.4)</i> (Schedules and requisitions, supplier liaison and correspondence, weekly hire records and time sheets, site use and control, maintenance of contractor's plants and equipment)	0.14 Sometime
<i>Sub-contractor (CR2.5)</i> (Assist tendering and selection process, issue information/variations, co-ordination, liaison or works, meeting, initiate general correspondence, monitor progress, administer quotations, claims and payments, site measurements etc.)	0.07 Sometime
<i>Third parties (TP3.1)</i> (Public, local authorities, police, etc.)	1.39 Never
<i>Contractor (TP 3.2)</i> (Service departments, contracts manager, etc)	0.06 Sometime
<i>Client, clerk of work and design team (TP3.3)</i> (Query list, variations, day work sheets, confirm verbal instructions, co-ordination, liaison of works, meetings, initiate general correspondence, reports)	-0.24 Most of the time
<i>Time (PO4.1)</i> (Long/medium/short term programmes, monitoring and recording progress, schedules for information requirements, planning and progress meetings)	-0.69 Most of the time

Table 33.3 (continued)

Roles and tasks	Entry level construction manager Logit
<i>Quality (PO4.2)</i> (Prepare and check snag list, supervision, recording of tests, record performance, and quality administration)	-0.77
<i>Cost/money (PO4.3)</i> (Appraisals, weekly and monthly cost control, assist valuation, claims and payments)	-0.30
<i>Health and safety (PO4.4)</i> (Risk assessment, site safety audits, health and safety equipments, health and safety records/audits, health and safety administration)	-0.30
<i>Risk (PO4.5)</i> (Risk assessment, risk management plan, project change methodology, compile project change, recommended preventive and correct action)	-0.13
<i>Survey work (S5.1)</i> (Site setting out, lines and levels, datum's, benchmarks, signage)	0.74
<i>Administrative (S5.2)</i> (Site dairies, check drawings, maintain all site records, filing and correspondences)	0.36
<i>Pre-construction (S5.3)</i> (Survey existing site condition, Site photograph, design temporary site layout, master programme, forecasting and scheduling resources, requirements for meetings, scheduling for temporary buildings and site mobilisation)	-0.34
<i>Post-construction (S5.4)</i> (Handling over, perform contract close-out, performance report and evaluation)	0.08

Most of the time

Most of the time

Most of the time

Most of the time

Sometime

Sometime

Most of the time

Sometime

Table 33.4 Gaps between construction manager and entry level construction manager roles and tasks

Roles and Tasks	Construction Managers	Entry Level Construction Manager
Staff (CR 2.1) (Visiting consultants, site/trade foreman, trainees, site supervisors)	/	/
Material (CR2.2) (Take-off, schedule & requisition, Supplier liaison, weekly records, site use, stock checks, storage of materials)	/	
Labor (CR2.3) (Recruitment, dismissal, inter-site liaison/transfer, supervision, direction & motivation, weekly and monthly records, approval of wages, preparation of working sketches)	/	
Plant (CR2.4) (Schedules and requisitions, supplier liaison and correspondence, weekly hire records and time sheets, site use and control, maintenance of contractor's plants & equipment)	/	
Sub-Contractor (CR2.5) (Assist tendering and selection process, issue information/variations, co-ordination, liaison or works, meeting, initiate general correspondence, monitor progress, administer quotations, claims and payments, site measurements etc.)	/	
Third Parties (TP3.1) (Public, Local Authorities, Police, etc.)	/	
Contractor (TP 3.2) (Service Departments, Contracts Manager, etc)	/	
Client, Clerk of Work & Design Team (TP3.3) (Query list, variations, day work sheets, confirm verbal instructions, co-ordination, liaison of works, meetings, initiate general correspondence, reports)	/	/
Time (PO4.1) (Long/medium/short term programmes, monitoring & recording progress, schedules for information requirements, planning & progress meetings)	/	/
Quality (PO4.2) (Prepare & check snag list, supervision, recording of tests, record performance, and quality administration)	/	/

Table 33.4 (continued)

Cost / Money (PO4.3) (Appraisals, weekly & monthly cost control, assist valuation, claims & payments)	/	/
Health & Safety (PO4.4) (Risk assessment, site safety audits, health & safety equipments, health & safety records/audits, health & safety administration)	/	/
Risk (PO4.5) (Risk assessment, risk management plan, project change methodology, compile project change, recommended preventive and correct action)	/	/
Survey Work (S5.1) (Site setting out, lines & levels, datum's, benchmarks, signage)	/	
Administrative (S5.2) (Site dairies, check drawings, maintain all site records, filing & correspondences)	/	
Pre-Construction (S5.3) (Survey existing site condition, Site photograph, design temporary site layout, master programme, forecasting & scheduling resources, requirements for meetings, scheduling for meetings, planning for temporary buildings & site mobilisation)	/	/
Post-Construction (S5.4) (Handling over, perform contract close-out, performance report and evaluation)	/	

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Chapter 34

Crowdsourcing and Cloud Computing: Outsourcing and Backsourcing Alternatives for e-Government Services

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Abstract Many public agencies in Malaysia have automated their services in line with the government's push for e-society as well as to provoke e-participation among the rakyat (citizens). Furthermore, in tandem with future e-government service offerings, public agencies will have inadequate budget, lesser-skilled staff, and limited-capability computer hardware and software to cater to the advanced demands of the e-savvy people. While acknowledging these shortcomings, federal agencies are better equipped to adapt to the situation unlike their peers from the state and local government agencies. With budget being the main impediment, crowdsourcing and cloud computing should be considered as the alternatives to enhance e-government services. Hence, the objective of this chapter is to provide descriptive insights into these alternatives through literature reviews and the outcome of a pilot study among public agencies in the city of Shah Alam, Selangor. Implications from the findings will provide discerning information for the relevant public agencies to consider crowdsourcing and cloud computing in improving their e-government services and not to rely on outsourcing and backsourcing of vendors and suppliers. Through this method, government data will be kept safe and confidential at all times.

Keywords Outsourcing · Backsourcing · Contracts · Electronic government · Crowdsourcing · Cloud sourcing

34.1 Introduction

In today's knowledge-driven economy, information and communication technologies (ICTs) are major enablers in all sectors particularly in government departments. According to Heeks [1], in the public sector or government sector, information systems have been playing a critical role in recent years. Although ICTs are generally not involved in creating competitive advantage, they are now viewed as primary

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mechanisms for creating a more efficient and better service organization [2]. All the same, the governments in developing countries, for example, are aware of the benefits of implementing e-government to enhance technology-driven economies [3, 4], hence, the need to ensure that each ministry and various units are equipped with adequate ICT peripherals to deliver their respective services online [5]. In Malaysia, for instance, all offices within the three tiers of government are provided with ICT equipment. Realistically, priority for high-end equipment is given to certain federal or central agencies. Again, within the many federal offices, which should get the best and latest ICT hardware and software, it depends on how important that department is to the government's machinery. Furthermore, with the provision of computers, government-to-government (G2G) and government-to-citizen (G2C) transactions would be more economical in terms of time, speed, and accuracy of data [5].

One specific service of G2G and G2C is that by the Malaysian Department of Insolvency (Mdi). Mdi is the government agency in charge of the national administration and regulation of insolvency in Malaysia. There are six divisions in Mdi, but the focus of this study is on the foremost core division, the bankruptcy division. Many legal and administrative processes are involved before declaring an individual or an organization as being bankrupt. One mistake in the process flow is enough to incur the wrath of the stakeholders. To limit human errors, computerizing and automating the processes and other administrative matters are crucial to Mdi's key performance indicators. Henceforth, the objective of this chapter is to provide descriptive insights into these alternatives through literature reviews and the outcome of a pilot study among public agencies in the city of Shah Alam, Selangor. It is important to note that this preliminary study will provide the foundation and impetus for the next level, that is, for the actual study; the objective of that research is to determine the success rate of outsource e-government projects by the Mdi.

34.2 Background of the Study

Over the past decade, Malaysia has conceived and implemented many programs intended to launch the government online services in tandem with the knowledge era [5]. The electronic government (e-government) flagship, launched in 1997, has drastically improved the internal operations and public service delivery of the government with online services becoming the ubiquitous norm in Malaysia. In addition, e-government has improved information flow and processes within the government departments through speed, accessibility, and quality of policy development, coordination, and enforcement [6]. The significant increase of computer usage in Malaysia was seen in 1996 with the government's introduction of many initiatives to facilitate the integration of ICT in public services. Concurrently, Malaysia launched the Multimedia Super Corridor (MSC) to improve the socioeconomic status of the citizens and the nation [5]. By having a digitally literate society, this will raise national productivity and make Malaysia the ICT hub of Southeast Asia.

Nevertheless, the launching of the electronic government (e-government) flagship in 1997 was the beginning of the government transformation odyssey. The transformation to modernize and enhance public services was the consistent annual agenda for Malaysia in order to achieve a developing nation status by the year 2020. Simultaneously, e-government will enhance the convenience and quality of interaction between the stakeholders of the nation. Putting Malaysia on the right path to higher and better development status is the government's continuous priority. This has been done by developing relevant policies that align with intellectual property rights and other international ICT standards. With six remaining years towards attaining Vision 2020, the long-term aspirations of a sustainable society, productivity-driven growth through technology, innovative-thinking workforce, and participation and contribution in global economy, Malaysia will indeed be a force to contend with throughout the rest of the twenty-first century.

34.3 Problem Statement

Outsourcing is one way to strengthen the public agency to deliver their services [6, 7]. This situation will enable the government to achieve the listed projects in the Tenth Malaysia Plan (2011–2015) effectively, efficiently, and ultimately and concede with the citizen's satisfaction. In the Tenth Malaysia Plan, the government will also increase outsourcing of noncore government functions. This is one of the initiatives by the government to focus on policy and strategy formulation and regulatory and core operating functions [5]. With rapid economic development in the country, the role of the Mdi is becoming more complex and challenging. In the Tenth Malaysia Plan, the government emphasizes on the insolvency aptly handled by the Mdi. Within the federal ministries, none of the public agencies in Malaysia have experiences with outsourcing projects lasting more than 16 years [7]. On average, most public agencies in Malaysia were engaged with outsourcing projects within a span of 6–10 years and as is the norm, public agencies have to struggle with issues and challenges in managing successful outsource projects [8]. Otherwise, all the plans will fail and efforts made by the government will go to waste as exemplified and reported by the attorney general's office on the eROSE (Registry of Societies Electronic System) project [9]. Nevertheless, implementation issues exist with most system implementations including outsourced ones. There are many reasons for the dissatisfaction of outsource projects such as poor structure, relationship, and delivery problems, behavioral aspects of the client, the service provider or vendor, and lack of innovation by both parties [8]. Nevertheless, the poor e-service delivery has received criticisms from the Malaysian public and political oppositions; therefore, assessment of civil services' strengths and weaknesses have to be continuously evaluated and improved. Many IT outsourcing decision makers are finding themselves under even more pressure to deliver short-term cost savings, while simultaneously improving support for the business [10]. Relating this to the

issue at hand, e-insolvency is part of the e-government online service offered by the MdI. However, the e-service was handled by two appointed service providers which are MyEG Services Berhad and Konsortium Multimedia Swasta Sdn Bhd. By outsourcing the service, the question that arose is, “Why does the MdI not run their own e-service instead of contracting it out to two private companies?”

34.4 Literature Review

34.4.1 *About the Malaysia Department of Insolvency*

With rapid economic developments in the country, the role of MdI is becoming more complex and challenging. The government agency’s main responsibilities are to administer bankruptcy cases and bankrupts’ affairs, administer the winding-up companies, and administration of deregistered associations and trade unions [11]. In addition, MdI’s other core activities are asset discovery, asset realization, debt ascertainment, and creditor payment distribution [11]. The impacts of insolvency matters affect the achievement of the Tenth Malaysia Plan (2011–2015) and other critical national agenda. Therefore, in order to provide the best services, all divisions within the MdI will need to improve their services by providing accurate, speedy, and quality information. Although policy development and enforcement towards relevant Malaysians are important strategies for the MdI, the pressing matter is in delivering day-to-day services. In tandem with other federal ministries, the MdI needs to enhance their efforts in support of Vision 2020, the Government Transformation Plan (GTP), the Economic Transformation Plan (ETP), and the National Key Result Areas (NKRA).

Since the scope of the actual case study research will be on the MdI, it is to the reader’s advantage to know more about MdI’s background. As previously described, MdI’s main services were outsourced to a vendor; MyEG Services Berhad or MyEG [11]. The role of MyEG is specific, that is, to focus on improving the e-insolvency service offerings. MyEG was incorporated in Malaysia as a private company on 17 February 2000. Formerly, MyEG Services was known as IT Marvel Sdn Bhd before a rebranding to MyEG Dot Com on 13 October 2001. Through the MyEG portal, troubleshooting of the e-insolvency system is done by them, leaving the MdI to accept the “polished” system once the contract with MyEG expires. Meanwhile, it is common for the system to have technical glitches such as network disruption, heavy internet traffic, etc. [4, 12]. For an online service to be graded as successful, those problems should not occur regularly, particularly if it involves payment transactions. Nonetheless, from previous literature and research, there are risks and barriers in the e-government service [7, 13]. Most of the research focused on international perspectives of global outsourcing and offshoring [8]. However, there is lack of extensive research on public sector outsourcing issues in Malaysia. Therefore, this research is necessary to provide the empirical evidence for better outsourcing contracts in the future.

34.4.2 E-Government Adoption in Malaysia

After the launching of the MSC in 1996, Malaysia has increased the adoption of technology and other technological advancements in government services particularly through the online services channel [5]. E-government is an initiative by the government to interact with citizens and ensure that the services offered are citizen centric [1]. This initiative will bring the government closer to the *rakyat* (citizen) in line with Prime Minister Najib's motto of "citizen first, performance now." Besides, this will facilitate working individuals who are pressed by time and other personal restrictions. E-government applications do not focus on G2C aspects only but vice versa. E-government also deals with government-to-business (G2B), government-to-employee (G2E), and G2G aspects too.

By providing e-government services, the *rakyat*'s contributions in the form of income tax will be used wisely through this tangible output. Moreover, the enrichment of information transfer denotes an increase in e-participation which will later result in other suitable and unbiased online services such as e-voting. With this transformation, e-government will put Malaysia one level above other developing countries in this region besides the benchmark nation, Singapore [14]. As it stands, the success of Malaysia's e-government initiative has been recognized by other nations particularly in the Middle East. In fact, the Saudi Arabian government has invited Malaysia to be the consultant for their country's e-government project [5, 7]. Currently, the level of Internet usage in Malaysia has positively affected e-government users, and various surveys conducted by the relevant ministries have shown significant increase in citizen e-participation [15]. So far, the most successful is income tax filing or e-filing, renewals of road taxes, downloading of various forms, and satisfactory responses to e-complaints [16]. E-government has proven to be efficient and effective in e-service delivery; thus, harnessing technological innovation would further put Malaysia in the forefront of a successful and sustained economy.

Nonetheless, Heeks [1] pointed out that most e-government projects failed before implementation. Taking heed of that, the Mdl management should ensure that any systems implemented are piloted prior to actual rollout. Consequently, even though e-government may simplify certain processes and workflows, there are still weaknesses that have to be determined and highlighted to contain expenses budgeted for the project. For example, the government agency has to recognize the opportunity cost of separate systems and processes that duplicate information gathering as well as the high costs involved in providing multiple entry points for online services [17]. Bearing in mind Gubbin's [17] opinion, "Overall, e-government is a massive wastage of financial, human and political resources, and an inability to deliver the potential gains from e-government to its beneficiaries. This despite an estimated global spend on IT by government (excluding public sector health, education and utilities) of some US\$ 3 trillion during the decade of the 2000s" [17].

34.4.3 *Cloud Computing*

Cloud computing is an internet-based technology through which information is stored in servers and provided as a service on demand to clients [18]. In defining cloud computing, many academic research experts have their own interpretation on the matter. Cloud computing refers to the applications of services over the Internet and the hardware and systems software in the data centers [19]. Thus, cloud computing has been seen as a new innovation where licensed software and hardware serve as a platform for virtual service which is subscribed to and from the vendors at low cost, but is secure and dependable. In other words, this includes storage capacity, processing power and business applications which characterize an innovative style of computing [20, 21, 27]. Further, Horrigan [20] claimed that easy accessibility is the advantage for this emerging computing paradigm where data and applications reside in cyberspace but are ubiquitously available through web-connected devices. Hence, cloud computing allows accesses to authenticated files, data, programs, and third party services from the web browser via Internet [29].

As such, the ICT industry has resulted in changes to major outsourcing strategies by various organizations globally. Cloud computing provides higher-quality solutions by better leveraging advanced virtualization and storage [22]. This will help the unprecedented data growth or at least control the costs. The foremost benefits of cloud computing will solve the problems by minimizing the operational costs [21]. However, the cloud sourcing is just about cost saving but to obtain quality of services. Cloud sourcing offers the tasks of buying, receiving, paying for, and installing hardware and software, patch management, change management, monitoring, and troubleshooting [20]. Since cloud computing is still new in Malaysia's ICT industry, issues are bound to occur. There are few challenges to be aware as to ensure a smooth transition to these changes [19]. The challenges are security, data protection, public versus private, existing contract restrictions, trustee, complexity, bandwidth, migration, and change [23]. Security is the most important challenge of all as data stored is being shared through a cloud environment, thus requiring complete trust. Besides, many of the larger cloud computing providers use US data centers for the storage of their data (data protection) [20]. At the advance level, there are two ways to use the cloud computing; public and private clouds [22]. Public clouds are low cost and easily accessible while private clouds are where a business buys a secure and reliable repository [22]. Most of the large organizations outsource already some aspects of their corporate IT functions unless existing suppliers offer cloud computing systems. Anyhow, the change to cloud computing takes time because it requires a while for the staff to fully understand the cloud computing process and usage. The vendor or supplier in this new cloud computing services can be divided into three categories [24]:

a. **Traditional IT outsourcing suppliers**

The major global IT organizations are developing the existing outsourcing models to cope with the demand for cloud computing services.

b. Large scale cloud specialists

Some of the companies (vendors) offer cloud computing systems in the form of infrastructure and applications services and have the scale and credibility to become major competitors in the IT outsourcing.

c. New entrants

There are multiple smaller specialist organizations which are able to offer a range of services designed around the cloud computing model, offering low-cost and high-service models and often targeted at specific industries or business functionalities.

As is the norm for new technologies, cloud computers are not without challenges; one of which is system integration. For example, the vendors have to integrate a service into the existing system which requires skills in system and service [10]. The quality and reliability to access the networks and bandwidth must achieve 99.9% of service reliability as to guarantee the service provided [24]. Although the data transfer from one cloud-based storage system to another may be the difficult part, organizations should not fear the dangers of lock in and should favor service providers which allow them to switch the services [24]. As cloud computing is a new mechanism in the IT system, there are many impacts which will give either positive or negative results, such as, the cost structure, business creation, macroeconomic performance, job creation in industries, job allocation in ICT sectors and public finance.

34.5 Research Methodology

The research method employed is based on the following.

34.5.1 Research Design

The research design for this study is cross-sectional. This is appropriate as a cross-sectional function is a study in which various segments of a population are sampled at a single point in time [25], that is, the mean and the population are being sampled and evaluated at a single point of time. Furthermore, this design supports the small scope of this study, which is one specific government agency, the MdI. Within the agency, the section targeted is the personal bankruptcy division.

34.5.2 Research Objective

The objective of this research is to determine the impediments of the e-government implementation at the MdI in Malaysia. Currently, the MdI has one e-government

service known as e-insolvency. However, the agency does not run the e-service; instead, it is handled by two private companies. Why cannot the Mdi administer its own service? Hence, the study is timely as the Mdi needs to offer more than one e-government service and at the same time handle it rather than outsourcing the service.

34.5.3 *Scope of Research*

This research was conducted in the area of ICT outsourcing in government agencies with a specific focus on the Mdi. Since the Mdi has 22 branches in Malaysia, it is not possible to collect data at all the branches. However, the total staff population at the Mdi is 1156 people. To get the information more precisely, the only department which has knowledge about the ICT outsourcing is the IT department based at the Putrajaya headquarters. The role of the IT department is to handle, control, and maintain the e-service system (e-insolvency) throughout Malaysia.

34.5.4 *Sampling Technique*

For this study, the stratified random sampling and purposive sampling techniques are employed. The former is apt in order to identify the locations of Mdi's in Malaysia. Then, the latter, which is purposive sampling, is required to identify the respondents for this study [25]. The respondents or units of analysis would comprise the officers working in the bankruptcy unit of both locations.

34.5.5 *Instrument*

The data collection method for this study is primary data. According to Sekaran (2010), qualitative approach is the technique that should be used to analyze a mass group and provide significant information to answer hypotheses. Prior to the actual data collection, the instrument will be tested for reliability and validity of constructs [25]. Apart from the individuals who provide information through interviews, the survey part was done from February 2013 to April 2013. Interviews were semi-structured and were guided by a set of general themes focusing on issues regarding outsourcing services. We also asked interviewees to relate their views on major problems in outsourcing of e-government services at the Mdi. Interviews involved bottom management to top management in the IT department. Interviews would typically take about 10–15 min for each staff. Research diaries were maintained to record the interviewee's interpretations, thoughts, and feelings during the course of the inquiry. The interviews were transcribed and coded manually, using categories in the emergent table to guide the analysis.

34.6 Implications and Conclusion

The identification of impediments to MdI's other e-government services would ensure continued success for the government agency. Literature has shown that the weaknesses of e-government implementation are related to politics and economics factors, thus, impacting the performance of the online services and the agency or department itself. However, the future of e-government is still looking good [12], but a hybrid approach should be envisaged by the government [11]. This study is valuable to other government entities even though the focus of this study is on the MdI. In the earlier stage, the study begins with a pilot study. The pilot study is taken in the InfoTech Department at the unit Financial Accounting Information System (FAIS). Three members of the staff were taken as respondents.

In the InfoTech Department of the Universiti Teknologi MARA (UiTM), system outsourcing was done to ensure effective and efficient utilization of resources. One outsourced project is FAIS which has now been back sourced to UiTM. Based on knowledge and understanding of outsourcing, the first respondent claimed that the outsourcing project was implemented and completed by the company. The department allocated more than RM 50,000 for such a system. Besides, the vendor (service provider) will impose charge due to complaints. Although the system was expensive, it was worth for such a system. The vendor will also manage the quality of the system as the system will be upgraded frequently because of the complaints of customers (department). The InfoTech outsourced the hardware and software from the vendor. This contract takes 4–6 years for such systems. The activities and operations to be outsourced to the service provider are system development and security control. However, the system that the vendor provides does not satisfy users (staff and students). The foremost outsourcing risks that the department bears are that the project is incomplete and the transfer of technology (TOT) is not done properly.

Concurrently, the department will address some issues regarding outsourcing. Such issues are addressed through joint venture projects and projects properly documented. To control this problem, the vendor will update the system every month. However, if some issues occur, the department will inform the vendor to improve the system. Primary, the internal administration of the department will be in charge of the security administration and the system access functions. Often, the department will communicate with the vendor through phone calls. This medium seems to be the best way to get closer to the vendor. If there is a complaint, the vendor will take immediate action to propose a solution. Before complaints were made, the department obtained a report from the technical team regarding the security issues. The customer (staff and students) was authenticated by a process or system, whereby checked from reposing. To implement the outsourcing project, the management needs to provide training to the staff. However, the training was conducted by the management. The cost of training is borne by the management itself because it will cover the consultation cost (consultant). After training, the staff is able to use the system. Normally, most of the staff will take 1–3 months to cater the system.

Another respondent of the staff in InfoTech at the unit FAIS has been interviewed as to see the acceptance of the system. This is the first in research before depth analysis. Based on the level of understanding and knowledge of the second respondent, the respondent claimed that the system in FAIS does the joint venture. This means that the system used by the unit FAIS was partially whereby the department joined with the service provider to develop and implement the system.

Based on work experience, the respondent claimed that the department has allocated about RM 30,000–50,000 for the system. The service provider will impose charge to each complaint. Hence, the cost of the system looks worth as the system will be updated regularly. The service provider will upgrade the system. This upgrade will also increase the quality of the system. The unit FAIS does a partial of the outsourcing contract. The department outsourced hardware and software from the vendor. This contract takes 1–3 years to implement the system. The activities and operations to be outsourced to the service provider are maintaining the current system and updating all the data available manually to the system. It is the same as with the first respondent; even though the system keeps on being updated, the service of the system still failed to reach the satisfaction of the customer. Usually, when some problems occur, the department will go through and make complaints to the vendor by phone calls. However, if the vendor comes to the office for monthly maintaining the system, the department will complain directly (face to face). Basically, the vendor will give a positive feedback to the department. The vendor will take 3 days to propose a solution for the problem. To implement the outsourcing project, the management needs to provide training to the staff. However, according to the respondent, the training was conducted by the vendor as they are responsible for this. The cost of training is borne by the management itself because it will cover the consultation cost (consultant). After the training, the staff is able to use the system. Normally, most of the staff will take more than 6 months to cater the system.

34.6.1 Recommendation

Based on this study and previous studies, many suggestions have been recommended in order to improve and find other alternatives for the outsourcing project.

34.6.1.1 Recommendation 1: Backsourcing

Many outsourcings failed because the vendor provides the system, but the staff of the organization failed to use the system. So, in order to improve the system, other systems that were developed by the internal staff were implemented. Backsourcing is a new phenomenon in the IT function. Many people define backsourcing differently. According to Matthews [19], backsourcing can be defined as an outsource function brought back in-house. This means that the organizations or the government agencies must deliver the same service that has been outsourced effectively. Backsourcing is also known as insourcing or back in-house. This means that IT

backsourcing is the term of the IT where pulling back in-house (that have been outsourced before) activities as outsourcing contracts expire or terminate [19]. This definition explains that the active back-sourcing of in-house activities or operations are considered twice before extending, renewing, or re-negotiating the contracts.

34.6.1.2 Recommendation 2: Cloud computing

Cloud computing is an Internet-based technology through which information is stored in servers and provided as a service on demand to clients. Cloud computing is an innovative IT-based business which attracts the attention of academicians, for research in different dimension. Cloud computing is fairly new in public sector ICT management, especially for developing nations, where most systems are benchmarked against other successful developed nations's e-government initiatives. To reiterate the previous convictions, public administration areas that are impacted by these new changes include cost structure, business creation, macroeconomic performance, jobs creation and allocations in ICT industries and public sector accounting [6, 8, 12, 19].

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Chapter 35

The Influence of Governance Mechanisms and Fraud Incidences on Perceived Ethical Culture in Malaysian Companies

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Abstract The importance of ethical culture concerns with the choices exercised by the workers in the organizations in terms of decisions and actions. There are no standard definitions for ethical decisions and actions, but some choices are considered to be ethical by virtue of the goodness meted out for the society at large. Businesses that are managed in an ethical manner are much more likely to be characterized by a positive ethical culture of good governance, internal control, and risk management. These are critical components for governance mechanisms. There are minimal past studies that have examined the influence of various types of governance mechanisms towards ethical culture. Furthermore, apart from governance mechanisms, fraud incidences could have influenced the level of ethical practices adopted in an organization. Hence, this chapter will study the influence of internal controls, corporate governance, risk management, and firm's fraud practices towards ethical culture in Malaysian companies. The findings of this study is hoped to offer some interesting feedbacks to Malaysian companies in formulating their ethical policies and strategies.

Keywords Ethical · Culture · Governance · Fraud · Risk management · Internal controls

35.1 Introduction

The term ethical culture has been defined as an organization's policies, practices, and decision making incorporating the values of honesty, trust, and fairness in business dealings [1]. Work ethics "are the criteria and principles that govern the behavior of an individual or group, is associated with the subject of ethics questions related to what is wrong and what is right, and moral duties of the individual" [2]. There are two differing views regarding the ethical culture. The first school argues

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that the business should be ethical because it is good for the profitability of the business while the second school of thought perceives being ethical as the acceptable moral practice [3]. The primary view argues that without ethics the business might lose out due to public humiliation, business losses as well as hefty fines from the authorities [4]. Therefore, the profitability objective should also be in line with the organization's conforming to the regulation and society's acceptable code of conduct [5]. The second group proposes that becoming ethical in business' daily transaction is the right thing to do instead of becoming profitable. This group argues that the organization needs to be more judgmental in determining what is right and what is wrong in the business transaction in terms of the moral perspective [6].

In an era of global capitalism, business organizations have to strive for greater efficiency to compete and achieve higher profit levels in pursuit of profit maximization; thus, the conduct of good governance, internal controls, risk management, and perceived fraud incidences are the utmost concerns. The relationship of good governance, internal controls, risk management, and perceived fraud incidences with business' ethical culture needs considerable attention. Such interest might be attributed to the belief that ethical culture facilitates the employees' attitudes towards work and the organization where they work. Ethical culture, which is normally associated with religious beliefs, has been assumed to promote organizational commitment. In fact, when codes of ethics are effectively applied, the results will have a positive impact on organizational commitment [7].

In response to the ethical issue that occurred in Malaysian companies, KPMG has conducted a survey which provided evidence that a significant number of respondents believe that fraud is a major problem for businesses in Malaysia [8]. Approximately 61% of the respondents expect the level of fraud to increase over the next 2 years. In addition, 89% believe that the trend of fraud as well as financial statements fraud will significantly rise as a result of the economic crisis which took place in 2008. The value of fraud reported in the survey period was RM 63.95 million. Not all respondents disclosed information on the number of fraud incidences or the value of fraud detected (15% of the 85 respondents who said that they were victims of fraud were unsure of the number of incidences whereas 53% were unsure of the value of financial losses due to fraud). The frequency of fraud incidences will bring down the ethical culture of the company.

Although ethics encompass broad areas, there are four dimensions that the study intends to focus upon. The study is trying to determine whether good governance, internal controls, risk management, and perceived fraud incidences influence organizations' ethical culture.

35.2 Literature Review

The code of ethics usually cover broad areas such as handling suppliers, anticompetitive practices, bribery and corruption, environmental issues, the safety of product as well as the impact on local societies [9]. The problem for organizations is to balance one's profit interests against the needs of the employees, consumers, and

special interest groups. Thus, the study of ethics and its effect have gained significant interest because of the importance for companies to be established with the objectives of building public trust, conduct dealings, and the need to understand the ethical aspects of governance.

A series of worldwide financial information frauds involving Enron, WorldCom, Arthur Andersen, Qwest, and Sunbeam highlighted the increasing proliferation of ethics scandals and corruption of management at the workplace. A study described the situation in Malaysian business' context of the "mini-Enrons" whereby the manipulation of financial statements was rampant in the case of Megan Media Holdings, Wimemes Corp. Berhad, and Transmile Group Berhad [10].

Under such circumstances, corporations may sometimes tend to ignore important aspects of doing business. Human predicament may result in the exercise of fraud and corruption incidences where corporate work ethic may be overlooked. In this case, both the financial and practical arguments mentioned above reflect a naive view of ethics and business in which ethics naturally emerges from a profit-oriented business. There are both weak and strong argumentations on the subject. As a signal to the public that the company conducts itself with integrity and honesty, some writers suggested that the company should implement a code of ethics [11–13]. It was argued that the link between ethical organizational practices and competitive advantage is increasingly becoming apparent. It was confirmed that organizations that exhibit ethical behavior in terms of the triple bottom line, namely, socially, economically, and environmentally are less likely to negatively surprise shareholders and are less likely to suffer [14].

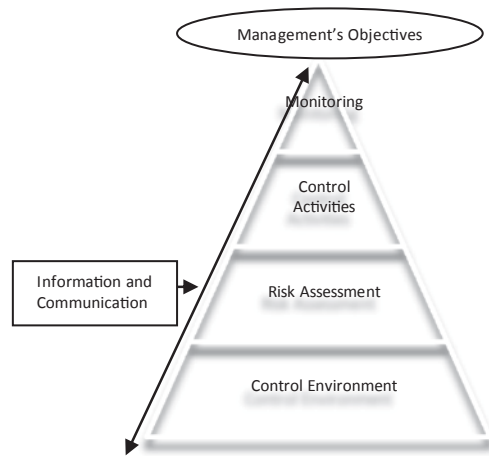
35.2.1 Good Governance

Corporate governance is a term that describes how well the corporate management works for shareholders. It has been extended to explain the relationship between the management and other stakeholders or corporate participants, including creditors, employees, customers, and society in general. Corporate governance is the "entire culture that sets and monitors behavioral expectations intended to deter the perpetrators of fraud" [15].

Good governance practice means that the corporate management has demonstrated its responsibility to protect the interest of shareholders and other stakeholders such as customers and employees. Good governance principles require the organization's board of directors, or an equivalent oversight body, to ensure a higher level of ethical behavior in the organizations, regardless of its status. Good governance describes how well the corporate management serves the shareholders and other stakeholders.

Corporate governance has many ethical implications, but a corporate management team with higher ethical sensitivity will implement better governance practices generally [16]. Meanwhile, the way in which a company treats its stakeholders reflects its ethical standards. It is therefore to be expected that companies for whom ethics is a priority will be sensitive to its stakeholders. This moral sensitivity will be

Fig. 35.1 The Committee of Sponsoring Organizations of the Treadway Commission (COSO) internal controls framework



reflected in the identification of stakeholders as well as in the manner in which they are being engaged by the company [17].

35.2.2 *Internal Controls*

Internal controls are broadly defined as a process, affected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the effectiveness and efficiency of operations, reliability of financial reporting, and compliance with certain laws and regulations. There is no doubt that having strong internal controls across all units or areas of any business organization improves and reduces errors and fraud cases. As such, it is argued that employee fraud is most likely to occur if internal controls are not rightly placed. So it is imperative that people work and operate on ethical principles, and it is appropriate to expect such consistency in the behavior of the employees.

Internal controls consist of five interrelated components. These are derived from the way the management runs a business and are integrated with the management process. Although the components apply to all entities, it may be different the way they implement the controls for small and large entities. Small entities may have less stringent internal controls but yet still effective internal controls. The five components of internal controls prescribed by The Committee of Sponsoring Organizations of the Treadway Commission (COSO), as shown in Fig. 35.1, are control environment, risk assessment, control activities, monitoring and information, and communication.

Even the most ethical and well-intentioned senior managers would face challenges in determining how to best control and demonstrate the managerial integrity in their organizations [18]. A tool they typically employ to respond to this challenge is through the internal controls. A study also acknowledges that conventional

internal controls have been proved and will continue to be inadequate means of providing assurance that illegal and unethical practices are not occurring within an organization [18].

35.2.3 Risk Management

The topic of risk management is so important due to the uncertainties of the economy that organizations are now forced to redefine the role of risk management and its functions. In the financial institutions, for example, banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. However, in the field of ethics and risk management, both need each other. As such, ethics is a critical component to the effective management of the risk management approach and essential to the long-term success of any organization. In an organization whose employees act ethically, everyone who works for that organization eventually will manage his/her risks well [19].

Risk management is based on the respect for others' rights and freedoms: rights to be safe from preventable danger or harm, freedoms to act as they choose without undue restrictions. Both ethics and risk management foster the respect for others, either for neighbors, employees, customers, fellow users of a good or service, or simply fellow occupants of our planet, all sharing the same rights to be safe, independent, and hopefully happy and productive. Respect for others, whoever they may be, inseparably links risk management and ethics [20].

35.2.4 Fraud Incidence

Fraud is a broad legal concept that normally refers to an intentional act committed to fasten an unfair or unlawful gain. It is nearly impossible to provide a comprehensive definition of fraud. According to the Central Bank of Malaysia, fraud is a crime as it is involved in an intentional act of deception for the purpose of personal gain. Generally, fraud can be defined as a practice of deceit, trickery, or sharp to gain personal benefit.

The damaging impact of fraud upon organizations, economy, and society makes it essential to fight against it. Fraud cases among corporations are a topic that has been attracting attention from many parties such as regulators, auditors, and the public. Fraud is a worldwide phenomenon that ruins the profitability, reputability, and legitimacy of organizations wherever it occurs [17].

The use of incentive systems, irresponsible attitudes of management, and possible opportunities to commit fraud are often associated with higher fraud risk assessments. Auditors perceived that fraud-inducing systems and possible opportunities for fraudulent reporting as provided by the governance and accounting control environment are only important at the lower fraud propensity. They believe that ethical management attitude and management dishonesty as the most important indicators

of fraud occurrence. Previous studies have found the association of weak corporate governance, low quality of financial reporting controls, weak internal controls, and financial statement fraud [21–23].

35.3 Research Methodology

This study used a questionnaire as a tool to obtain feedbacks from respondents. Items measuring these activities were largely derived from the paper of Shanmugam et al. [24] and the document of the Chartered Institute of Management Accountants (CIMA) [25]. A detailed survey instrument was self-developed through the literature review, and mix and match approach was used to adapt wherever necessary to collect information, based on the perception of the effectiveness of monitoring mechanisms towards fraud incidences in the companies. The primary issue in the questionnaire development is that it should adequately capture all the information needed to answer the study's research questions [26].

The sample are the Malaysian companies categorized under the small and medium enterprises (SME) which comprise micro, small, and medium establishments. From the 355 surveys distributed to the companies concerned, only 71 respondents managed to answer the survey. Therefore, the response rate is 20%.

The hypotheses that are tested in this chapter are as follows:

- H1: Good governance has a significant relationship with the ethical culture in Malaysian companies.
- H2: Internal controls have a significant relationship with the ethical culture in Malaysian companies.
- H3: Risk management has a significant relationship with the ethical culture in Malaysian companies.
- H4: Perceived fraud incidences have a significant relationship with the ethical culture in Malaysian companies.

35.4 Data Analysis

Descriptive analysis involved frequency and cross tabulation to determine the percentage of ethics according to each level of establishments. The correlation analysis method is a technique to see the nature, direction, and significance of the bivariate relationship (i.e., the relationship between two variables). A Pearson correlation matrix provides the information that indicates the direction, strength, and significance of the bivariate relationship among the variables in this study. A simple correlation is a statistical measure of the covariation of or association between two variables [27, 28]. Furthermore, the correlation analysis method is used in order to describe the relationship and strength between two variables [29].

Correlation analysis was conducted in answering the other objective of this study, for example, to examine the relationship between governance monitoring mechanisms and the fraud incidences towards ethics. Regression analysis is used to predict the value of a dependent variable based on the value of at least one independent variable whereas it clarifies the impact of changes in an independent variable on the dependent variable [30]. This study will be focused on the independent variables of governance, internal controls, risk management, and perceived fraud practice which will have an influence on the ethical culture of the company.

The regression analysis technique is used for measuring linear relationships between two or more variables which is between a dependent and an independent variable [31]. Multiple regression analysis is one of the regression analyses that allows several independent variables in the same type of regression equation and predicts a single dependent variable. Furthermore, a separate regression coefficient is calculated for each independent variable that describes its relationship with the dependent variable and finally evaluates the relative influence of several independent variables on the dependent variable [31]. Regression analysis was conducted in answering the objective of this study, which is to identify the element of monitoring mechanisms that influence the most of the fraud incidences. The dependent variable is related to one or more independent variables. The regression model can be used to describe, predict, and control the variable of interest on the basis of the independent variables.

35.5 Research Findings and Discussion

35.5.1 *Test of Normality*

A variety of tests of normality have been developed by various statisticians. A test of normality is conducted to ensure that all the data used in this study are normally distributed. For the purpose of this study, skewness and kurtosis are used to test the normality of the data. Skewness is a measure of symmetry, or more specific the lack of symmetry. Data distribution is symmetric if it looks the same to the left and right of the center point. Kurtosis is a measure of whether the data are peaked or flat relative to a normal distribution.

For an exact normal distribution, the skewness is 0. A distribution of data that is skewed to the means that it has positive skewness and a distribution of data that is skewed to the left has a negative skewness. Distribution of data is considered as normal if the skewness is between 1 and -1 . Table 35.1 shows that the distribution of data in this study is normal since the skewness is between 0.380 and -0.701 .

Kurtosis gives a measure of the thickness in the tails of a probability density function. For a standard normal distribution of data, the kurtosis is 0. Positive kurtosis indicates a “peaked” distribution and negative kurtosis indicates a „flat” distribution. Distribution of data is considered normal for kurtosis that falls between

Table 35.1 Skewness and kurtosis

	N	Skewness		Kurtosis	
		Statistic	Error	Std. statistic	Std. error
AVE_GG	71	-0.701	0.285	-0.149	0.563
AVE_IC	71	-0.746	0.285	0.063	0.563
AVE_RM	71	-0.762	0.285	0.137	0.563
AVE_FI	71	0.380	0.285	-0.922	0.563
AVE_EP	71	-0.900	0.285	1.338	0.563
Valid N	71				

AVE_EC average ethical culture, *AVE_GG* average good governance, *AVE_IC* average internal controls, *AVE_RM* average risk management, *AVE_FI* average fraud incidences

Table 35.2 Reliability test

Reliability coefficients	Cronbach's alpha	Standardized item alpha	No of items
Good governance	0.862	0.863	5
Internal control	0.889	0.888	7
Risk management	0.895	0.904	7
Fraud incidents	0.954	0.954	9

3 and -3. Table 35.1 shows that the distribution of data is normal since the kurtosis is between 1.338 and -0.149.

35.5.2 Reliability Analysis

Reliability concerns the extent to which an experiment, test, or any measuring procedure yields consistent results on a repeated field [32]. Reliability refers to the fact that a scale should consistently reflect the construct it is measuring. One of the ways to measure the reliability of the measurement used is by using Cronbach's alpha [30]. The value for Cronbach's alpha can range from 0 to 1. An acceptable Cronbach's alpha should be above 0.70 [19].

From Table 35.2, the Cronbach's alpha for good governance items is 0.862, risk management items is 0.895, fraud incidences items is 0.954, and internal control items is 0.889. All of the figures indicate that all of the items are positively contributing to the overall reliability since they are higher than 0.70, and this indicates good reliability.

35.5.3 Correlation Analysis

Table 35.3 shows the Pearson correlation for the variables used in this study. The coefficients' value that is greater than 0.08 indicates that the two variables are highly correlated and redundant in explaining the dependent variables which caused

Table 35.3 Correlation analysis

	AVE_EP	AVE_GG	AVE_IC	AVE_RM	AVE_FII
AVE_EP	1	0.319 ^b	0.544 ^b	0.641 ^b	0.241 ^a
AVE_GG		1	0.480 ^b	0.440 ^b	-0.097
AVE_IC			1	0.496 ^b	-0.027
AVE_RM				1	0.136
AVE_FI					1

AVE_EC average ethical culture, *AVE_GG* average good governance, *AVE_IC* average internal controls, *AVE_RM* average risk management, *AVE_FI* average fraud incidences

^a Correlation is significant at the 0.05 level (one-tailed)

^b Correlation is significant at the 0.01 level (one-tailed)

the multicollinearity problem. Table 35.1 shows that the correlation between the variables is low and not highly related to each other since the value is below 0.08. It indicates that there is no serious multicollinearity problem, and none of the variables is being rejected in this study.

35.5.4 Regression Analysis

Table 35.4 shows the multiple regressions to examine if the independent variable is significantly related with the ethical culture in Malaysian companies.

From the results, the regression model is significant at 5% ($F=17.383, p=0.000$). The adjusted R^2 indicates the percentage of independent variables that can explain the dependent variables. From the results, adjusted R^2 of 0.484 indicates that 48.4% of the variation in the ethical culture can be explained by the independent variables, namely, good governance, risk management, fraud incidences, and internal controls. The Durbin Watson statistics was 1.814 which was close to 2 indicating that the correlation of the residual did not appear to be a problem. The multicollinearity problem exists when the VIF is greater than 10. Table 35.4 shows that all the VIF for the variables are below 10; therefore, no multicollinearity problem exists.

Hypothesis H1 predicted that good governance has a significant relationship with the ethical culture in an organization. Table 35.4 shows that there is a significant relationship between good governance and ethical culture in an organization with the p -value of 0.002. It explained that ethical culture in an organization is influenced by its governance. This shows that the implementation of good governance in an organization may help in developing an ethical culture in an organization. Therefore, H1 is supported.

Hypothesis H2 proposed that internal controls in an organization have a significant relationship with the ethical culture in an organization. However, from Table 35.4, the p -value of 0.807 indicates that there is no significant relationship between internal controls and ethical culture in an organization. Therefore, H2 is rejected.

Hypothesis H3 predicted that risk management has a significant relationship with the ethical culture in an organization. Table 35.4 provides evidence to that

Table 35.4 Regression analysis

Variables	Standardized coefficients	Std. error	t-stat	p-value	VIF
Constant		0.803	-0.674	0.503	
AVE_GG	0.332	0.128	3.158	0.002**	1.499
AVE_IC	-0.025	0.133	-0.245	0.807	1.429
AVE_RM	0.184	0.063	2.088	0.041*	1.055
AVE_FI	0.462	0.130	4.409	0.000**	1.489
	R		=	0.716	
	R ² (Adjusted R ²)		=	0.513 (0.484)	
	F-statistic		=	17.383	
	(p-value)		=	(0.000)	
	Durbin Watson statistic			1.814	

AVE_EC average ethical culture, *AVE_GG* average good governance, *AVE_IC* average internal controls, *AVE_RM* average risk management, *AVE_FI* average fraud incidences

*Significant at 0.05 level

**Significant at 0.01 level

with the *p*-value of 0.041. The result indicates that risk management has influenced the ethical culture in the organization. This shows that managing its risk properly may contribute to the ethical culture in an organization. Therefore, H3 is supported.

Hypothesis H4 suggested that fraud incidences have a significant relationship with the ethical culture in an organization. From Table 35.4, it shows that fraud incidences have a significant relationship with the *p*-value of 0.000. This shows that fraud incidences may influence the ethical culture in the organization. Therefore, H4 is supported.

35.6 Conclusion and Implications

It is hoped that this chapter could help to identify the level of a company’s awareness on ethics. If this issue is ignored, it may badly affect the performance of a company as well as hamper its growth. Consequently, the root of the problem which contributes to the insolvency of companies will not be uncovered, and the businesses are unaware that they are repeating the same mistakes over their business’ life cycle. The findings of this study will also draw a basis and a starting point for reference for other researchers, or be practiced by organizations. In other words, this study is able to enhance the understanding of the public at large and, more specifically, the owners of companies about ethics and how to tackle the issue accordingly.

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Chapter 36

CSR Practices and Customer Loyalty: The Mediating Role of Corporate Image

Nor Irwani Abdul Rahman and Nik Ramli Nik Abdul Rashid

Abstract Fostering loyal customers is frequently said to be the single most important driver of organizations' long-term financial investment, which can lead to increase sales and market share, lower costs, and higher prices. Marketing experts have always emphasized the influence of corporate image as a strategically important variable from which customer loyalty could be fostered. The purpose of this study is to empirically investigate to which extent corporate image and thus customer loyalty could be achieved through the implementation of strategic corporate social responsibility (CSR) initiatives. Through exploratory factor analysis three pertinent areas of CSR have been determined, namely, environment, community, and customer. Multiple regression analysis carried out confirmed the positive influence of CSR initiatives over corporate image and eventually customer loyalty. Finally, this study further strengthens the belief that companies with their eye on their "triple-bottom-line" (customers, community, and environment) are bound to eventually outperform their less fastidious competitors.

Keywords Corporate social responsibility · Customer loyalty · Corporate image · Customer · Community · Environment

36.1 Introduction

Loyalty increases the action of repeat purchase by customers; thus, it would increase the profitability of the organization for a long-term period [1–3]. Various studies have been done to investigate the antecedents that underlie the loyalty customers have for a product or brand [4–6]. Some of the factors that previous researchers have identified as predictors of customer loyalty include service quality [7], effectiveness of loyalty programs [8], consumer trust [9], brand personality [10], and others. Quite recently, studies have suggested that an organization's commitment to corporate social responsibility (CSR) initiatives seems to also enhance customer loyalty [11–13]. This present study would follow through these efforts by selecting three major dimensions of CSR—*customer*, *community*, and *environment*—while

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at the same time exploring the mediating role of corporate image between these customers' perceptions toward CSR initiatives and their enduring loyalty for a particular brand.

36.2 Literature Review

36.2.1 Customer Loyalty

Customer loyalty is frequently said to be a crucial driver in determining positive growth for business entities [14–16]. Some scholars even suggest that loyalty is much more needed than the customers' satisfaction [17, 18]. In their article, Kandamouly and Suhartanto concluded that loyalty could be a very effective business strategy for ensuring business survival when operating in a highly saturated market [19]. Some indicators of customer loyalty include being an unofficial spokesperson to near relatives and friends, recommending them to buy and consume the product, or spread positive news about their experience of consuming the same product [18, 20, 21]. Recent studies have also shown that word-of-mouth (WOM) represents a strategic marketing tool to attract and sustain new customers [22].

36.2.2 Corporate Social Responsibility

As one of the earliest CSR pioneer, Carroll had introduced four dimensions of CSR which are economic, legal, ethical, and philanthropy [23]. After the emergence of Carroll's CSR pyramid, researchers started to adapt and enhance his ideas by adding different dimensions which they felt to be more relevant to their own research purpose. While there are no hard rules for researchers to decide on the correct dimensions to be adopted into their study, the choice of dimensions will depend on several technical factors such as types of population, background of the industry, or the current economic situation [24]. For the purpose of this study, three dimension of CSR practices have been selected which are *customer*, *community*, and *environment*. The following section discusses each dimension of the CSR adopted in this study.

36.2.2.1 Customer

An excellent customer experience is a core element for most successful firms [23, 25, 26]. Businesses must show their concern and responsibility toward their customers. For example, firms should provide a complete product or service information for customers, guarantee of products or services, and some other things that could make customers feel satisfied when consuming those products and services.

36.2.2.2 Community

Community refers to a social unit larger than a household that shares common values and has social cohesion [27–30]. Community could be consisting of a potential customer, a nongovernment organization, the nearest competitor, or the customer of the product itself. Recently, since the advent of the Internet, the concept of community has a less geographical limitation, as people can now gather virtually in an online community and share common interests regardless of their physical location.

36.2.2.3 Environment

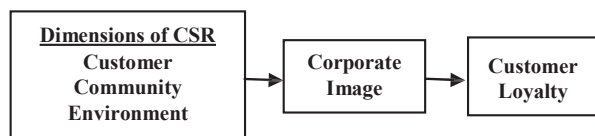
Generally, consumers are more willing to purchase from companies that show higher commitment to environmental protection. In fact, some would demonstrate their commitment by purchasing high-quality green products at a higher price [21, 25, 29, 31]. However, being concerned for the environment does not just mean selling environment-friendly products, but it would encompass the underlying corporate culture, policy, and practices.

36.2.3 Corporate Image

Pomeroy and Dolnicar [32, p. 396] defined corporate image as “the totality of a stakeholder’s perceptions of the way an organization presents itself, either deliberately or accidentally.” A positive corporate image is proven to contribute and enhance the customer’s trust toward the firm’s products or services [33]. Justification about the importance of the corporate image has also been proven through how the customers have been treated during dealing with the organization because the final result of the positive image totally depends on the customers’ evaluation [34–36]. In this study, the corporate image is being examined as a mediator, and it would further explore the relationship between CSR’s dimension and customer loyalty.

36.2.4 Conceptual Framework (Fig. 36.1)

Fig. 36.1 The conceptual framework



36.3 Methodology

A well-known local retail company was chosen for this study, after which a purposive sampling technique was employed involving its customers from its many outlets. Initially, 500 questionnaires were distributed; however, only 392 (78%) were returned and used for data analyses. The majority of the respondents are customers with the retail membership card where 58% have been a member for between 4–6 years and 12% have, in fact, been a member for the past 12 years. Thus, it could be positively assumed that the majority is very familiar with the firm's activities (including the CSR initiatives) where most of them are updated in its online bulletin. Most of the respondents are self-employed, employees from the government and from the private sector. The questionnaire was originally constructed in English and was translated back-to-back into the Malay language. All of the items used to measure the variables in this study use the 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

36.4 Data Analysis and Findings

36.4.1 Goodness of Measures

The procedures for testing the goodness of measures must be utilized prior to any analysis; the techniques for testing the goodness of measures as suggested by Sekaran and Bougie [37] were followed. These included the factor and reliability analysis. The results of the factor and reliability analysis for all the variables in the research model are presented in Table 36.1.

The reliability test (Cronbach alpha) for customer loyalty and corporate image is 0.919 and 0.834, respectively. The result of the factor analysis for CSR also shows strong construct validity where all the three dimensions are distinctly confirmed.

After the test of goodness of measure showed a positive outcome, we would then proceed with testing the theoretical framework using multiple regression analysis (Statistical Product and Service Solutions, SPSS). Of course, all assumptions that are prerequisites for this analysis, such as normality, multicollinearity, treatment for outliers, and others are all taken into account before the test is carried out. The outcomes of the multiple regression analysis are shown in Table 36.2.

Following are some conclusions that we can make based on the outcome of the multiple regression analysis.

- a. The multiple regression model is significant at $p < 0.05$. This means that all the three dimensions have a strong influence on the corporate image and loyalty. $R^2 = 0.60$ which means that the independent variables (IVs) could explain 60% of the variance in the dependent variable (DV).

Table 36.1 Factor analysis and reliability test

Factor loading	1	2	3
<i>(Factor 1) CSR-customer</i>			
CSR-customer1	0.179	0.098	0.855
CSR-customer2	0.170	0.106	0.801
CSR-customer3	0.219	0.090	0.846
<i>(Factor 1) GSR-community</i>			
CSR-community1	0.174	0.858	0.023
CSR-community2	0.170	0.888	0.165
CSR-community3	0.054	0.826	0.159
<i>(Factor 1) CSR-environment</i>			
CSR-environment1	0.783	0.255	0.170
CSR-environment2	0.857	0.143	0.098
CSR-environment3	0.869	0.100	0.208
CSR-environment4	0.801	0.023	0.239
Eigen values	4.32	1.77	1.44
Percentage of variance	29.14	23.54	22.79
Kaiser-Meyer-Olkin	0.867		
Bartlett's test of sphericity	0.000 (sig.)		
<i>Extraction method: PCA/Viramax rotation</i>			
Reliability	0.85	0.87	0.91

Table 36.2 Multiple regression analysis

Independent variables	Dependent variables	
	Customer loyalty	Corporate image
CSR (customer)	0.395**	0.378**
CSR (community)	0.132*	0.141*
CSR (environment)	0.315**	0.345**
R ²	0.436	0.457
Adjusted R ³	0.426	0.447
F change	41.799	45.447

Significant levels: *p** < 0.05; ***p* < 0.01

b. Individually, all three dimensions of the CSR have significant relationship with the DV where the *customer* (β : 0.395 and 0.378) has the strongest influence, followed by the *environment* (β : 0.315 and 0.345) and the *community* (β : 0.132 and 0.141). As could be seen, the regression analysis produces consistent results (as for the influence of all three IVs on both variables).

Lastly, we have also carried out the multiple regression analysis to test the existence of a mediator effect as postulated in the theoretical framework. To carry out this, we have strictly followed the guidelines provided by Sekaran and Bougie [37, 38]. A full-mediator variable exists when the relationship between the IV (CSR dimen-

Table 36.3 Hierarchical multiple regression analysis

Standardize Beta			
Dependent variable	Independent variables	Step 1	Step 2
Customer loyalty	CSR (customer)	0.395**	0.229*
	CSR (community)	0.132*	0.071
	CSR (environment)	0.315**	0.164*
<i>Mediator</i> : Corporate image			0.437**
R^2		0.436	0.54
Adjusted R^2		0.426	0.529
F change		41.799	36.291

Significant levels: * $p < 0.05$; ** $p < 0.01$

sions) and DV (customer loyalty) becomes not significant after the inclusion of the intervening variable. However, if the relationship between IVs and DV is still significant, there is only a partial mediating effect.

Table 36.3 shows the outcome of the hierarchical multiple regression analysis that is used to test the mediating effects. As could be observed, the corporate image has a role of a partial mediator between CSR dimensions (i.e., *customer* and *environment*) and customer loyalty. This means that on its own both of these CSR dimensions would be strong enough to influence the customer loyalty. The corporate image has a slight role in this particular relationship.

However, the relationship between CSR *community* and customer loyalty is dependent entirely on the strength of the corporate image. Only when the CSR initiatives could promote a positive image of the firm, there will be a customer loyalty. The corporate image, in this case, plays the role of a full mediator.

36.5 Conclusions

This study has strengthened the importance of the *triple bottom line* business philosophy. A phrase, first coined by John Elkington, where he argues that companies should be preparing three different (and quite separate) bottom lines. The first is corporate profit—the bottom line of the profit and loss account. This is where a business needs to be highly responsive to the needs of its customers. Try to understand the *pain* of the customers and be innovative enough to provide its relief. And this is not just about providing the core or physical level of products or services, but also anything that is augmented to it and enhances the customer's *total buying experience*. The empirical data from this research have shown that the business' concern for the customer's total buying experience is the strongest influence on the customer loyalty. Strategic competitive advantage no longer lies in the physical aspects of the product but in the so called *nonbusiness* aspects of the business. This might be in the form of extended warranty, store ambiance, full product information disclosure, shopper's safety and security, and other comparable *CSR-customer* dimensions. The result of this study showed that this dimension is also the most important compared to the other two.

The second is the bottom line of a company's people account—a measure in some shape or form of how an organization has carried out its obligation as a responsible corporate citizen. Acts of philanthropy toward a certain humanitarian cause, health, education, and participation in other nation building programs have shown to ignite sense identification and loyalty among customers. However, as shown in the data analysis, this influence can only be strong if it contributes to the positive image of the business organization. As corporate image has its roots in corporate communication, the effort to construct a positive image need to be carried out in a systematic manner. The image is not limited to highlighting the virtuous aspects of its social contribution, but also the lofty values that are embraced by the organization, but certainly its leaders and employees.

The third is the bottom line of the company's planet account—a measure of how environmentally responsible it has been. The environment has always been the most integral component of the CSR. Scholars have, in fact, developed a theoretical foundation for the comprehensive and holistic concept of *environmental CSR*. Some mention it as the companies extra effort of integrating environmental concerns in their business operations and in their interaction with their stakeholders. Rahman and Post carried out an excellent study compiling different perspectives of e-CSR by scholars throughout the years [31]. The findings from this study confirm the positive influence of the *environment* dimension of the CSR on the corporate image and customer loyalty. We suggest that future studies explore this particular aspect of the CSR more intensely, taking into consideration the emergent knowledge that has been gathered about e-CSR.

36.6 Appendix

36.6.1 Questionnaire Items

36.6.1.1 CSR Customer

- I believe this company always ensures that their customers get accurate and complete information about the (content) products.
- I believe this company always places customer satisfaction with the products offered.
- I believe this company always ensures the best quality products to customers.

36.6.1.2 CSR Community

- I support the company's efforts to contribute to the financial contributions to charitable organizations (e.g., orphanages, single mothers).
- I support the company's efforts to encourage their employees/staff in voluntary work.

- I support the company's efforts to involve with the campaign and charity activity organized by NGOs and the government.

36.6.1.3 CSR Environment

- I support the company's efforts to keep legacy products based on ancient traditions.
- I support the company to provide eco-friendly products to their customers.
- I support the company to ensure the cleanliness and environmental quality.
- I support the company to ensure production processes that do not pollute the environment.

36.6.1.4 Customer Loyalty

- I would keep buying products from this company.
- I will not switch to other products although it would be cheaper than the products offered from this company.
- Whenever I could, I would try to convince others about the advantages of the products from this company.
- While there are other companies offering similar products, I will choose the product from this company.
- I would encourage family and friends to buy products from this company.

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Chapter 37

Skills Retention in Basic Offshore Safety and Emergency Training (B.O.S.E.T)

Mohamad Fahmi Bin Hussin, Bin Wang, Suhaila Subahir, N. N. Ismail and Ramani Hipnie

Abstract This chapter investigates the basic offshore safety and emergency training (B.O.S.E.T) skills retention phenomena among offshore professionals. To identify B.O.S.E.T skills retention, the researchers developed a role-play scenario test which is based on brace positions and heat escape lessening posture (H.E.L.P). The test was conducted over a period of 6 months with 38 offshore professionals. Analysis of the test data suggests that B.O.S.E.T skills retention depreciate with time at a rate of 24% within the first 6 months. Skills level was estimated to be at 70% within 9 months from the initial B.O.S.E.T training. Further forecast analysis suggests that the B.O.S.E.T skills level will be at 50% by the end of 3 years. The research postulates that the current B.O.S.E.T refresher system maybe sufficed to ensure that B.O.S.E.T skills is sustained at an acceptable level within the 3 years period.

Keywords Skills retention · Offshore safety · Training · B.O.S.E.T

37.1 Introduction

In the offshore industry, accidents are inevitable. When offshore accidents occur, the situation becomes worse as any form of rescue or help may take more time and effort to arrive. By this virtue, it is critical for offshore workers to be trained with the necessary skills to respond in offshore emergency situations and calamities. The basic offshore safety and emergency training (B.O.S.E.T) introduces offshore workers to all these necessary skills. In the offshore industry, the B.O.S.E.T is a compulsory safety training module for every offshore worker. A potential candidate

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is required to produce an offshore medical certificate as proof that he/she is fit and healthy before enrolling into the B.O.S.E.T course. The offshore medical certificate is only valid for 2 years and is awarded after physical tests have been conducted by doctors. These physical tests include urine check for protein and sugar, body mass index (BMI), lung capacity check, blood pressure and pulse check, hearing test, and eye vision test. One may enroll into the B.O.S.E.T course once the medical certificate is obtained.

In the B.O.S.E.T course, trainees are taught theoretical safety knowledge and practical offshore survival skills. B.O.S.E.T certificates are awarded to the trainees who have successfully completed the B.O.S.E.T course. The B.O.S.E.T certificate serves as a “passport” to work offshore, and it validates an offshore worker for 3 years although some countries such as the UK have started to validate the certificate for 4 years. Offshore workers are required to renew their “passport” by enrolling into a B.O.S.E.T refresher course, after the period of 3 or 4 years.

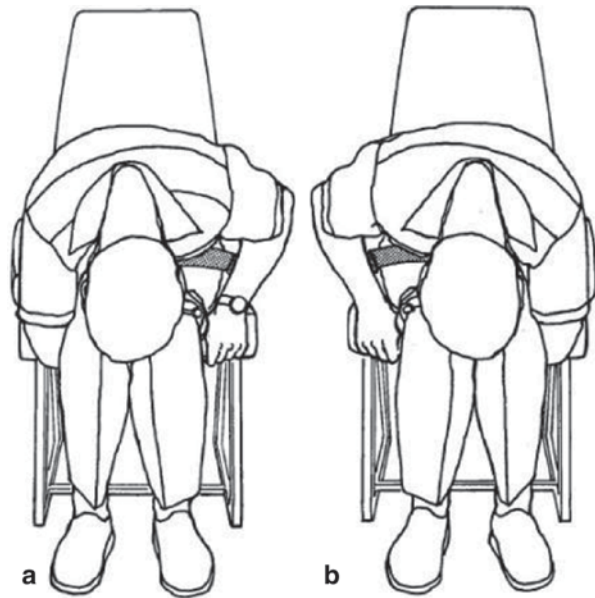
One of the fundamental inquiries raised by the research is whether there are scientific evidences to prove that offshore workers were able to retain B.O.S.E.T skills learned within a 36 or 48 months period, being the current maximum allowed period between two training sessions professionals need to attend. The researchers had investigated with a number of offshore safety consultants to verify the availability of retention researches in B.O.S.E.T. It was uncertain whether B.O.S.E.T retention researches had been done previously. However, all parties have unanimously acknowledged the importance for such a research for the offshore industry. The urgency for this research arises from the critical need for detailed B.O.S.E.T skills retention modeling among offshore professionals. Thus, this research in B.O.S.E.T skills retention could significantly provide critical and useful information to improve the current B.O.S.E.T refresher system. In addition, the research would contribute towards the enhancement of the standard of professional safety, including its significant contribution towards raising safety awareness among offshore professionals.

37.2 Literature Review

37.2.1 B.O.S.E.T Skill: The Brace Position

According to Rice and Greear [1], the most common death factor in a survivable helicopter accident is due to injury. It was stated in [2] that 40% of deaths from their research cases were due to drowning while Glancy and Desjardins [3] reported that 55% of helicopter-ditching deaths were caused by drowning. A report of 234 helicopter incidents between 1963 and 1975 by Cunningham [4] suggests that there is a 66% survival rate for those who are without H.U.E.T training while a 91.5% survival rate for those who had gone through the H.U.E.T training. Furthermore, Clifford [5] looked at civilian helicopter ditching worldwide from 1971 to 1992 for 98

Fig. 37.1 Brace position for two point harness [9]. **a** For exit to the right or forward. **b** For exit to the left or forward



helicopter incidents with 902 members of the crew and passengers being involved, of whom 338 died. They concluded that the survival rate for helicopter ditching is 62.5%. This is similar to the research carried out by Taber and McCabe [6] whereby the research looked at worldwide civilian helicopter ditching from 1971 to 2005. A total of 511 helicopter accidents were studied, of which 2,478 members of the crew and passengers were involved. It was concluded that the civilian helicopter survival rate is at 66%.

With all these statistics in mind, adopting good crash positions is critical and can increase survival rates [2, 7]. There are five key points for adopting a good crash position [7, 8]:

- a. Reducing the strike to the arms, legs, and head in the cabin content
- b. Stabilizing the crew and passengers in seats and minimizing disorientation during and after the crash
- c. For underwater escape, minimizing the body area to the inrushing water which may result in disorientation
- d. Minimizing body area for flying debris target
- e. Providing good physical references for the escape route and exit

This position minimizes the body area exposed to flying debris. In addition to that, gripping the edge of the seat provides stability and balance to the crew during the crash. The researcher was trained by a panel of B.O.S.E.T experts on what to observe for brace positions (Fig. 37.1) for the skills test. This is to ensure that the researcher is able to determine between a correct and an incorrect brace position posture when administering the skills test.

Fig. 37.2 Heat escape lessening posture (H.E.L.P) [10]. The H.E.L.P for an individual and a group



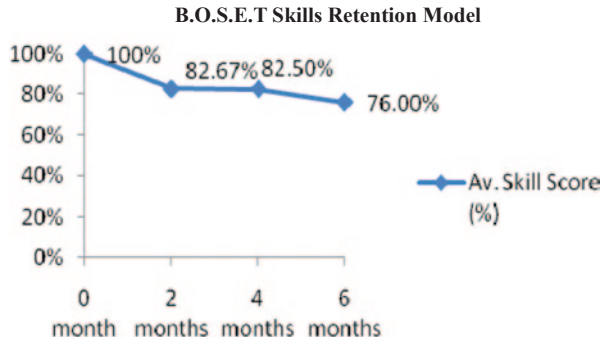
37.2.2 *B.O.S.E.T Skills: Heat Escaping Lessening Posture*

The heat escape lessening posture (H.E.L.P) is a posture that helps to minimize heat loss in the body once in the sea water. When the body temperature drops to below 35°C, the function and metabolism of various body organs (kidney, heart, etc.) starts to alter, and this is called hypothermia. Pro-long exposure to a hypothermia state can cause death [12]. The H.E.L.P posture was developed as means to minimize the effects of hypothermia when in sea water. The H.E.L.P posture is divided into two types: individual H.E.L.P and group H.E.L.P. For individual H.E.L.P, the legs are positioned together close to the chest while being hugged using ones' arm. In a group H.E.L.P, people would huddle together in a position shown in Fig. 37.2.

37.3 Methodology

The skills test has five scenarios, of which four are H.U.E.T scenarios and one is the sea survival scenario. There was a huge amount of effort put into the development of the B.O.S.E.T skills test by CONSIST B.O.S.E.T trainers. The census of using the brace position and the H.E.L.P in the skills test is that these skills are vital for survival in an offshore incident. For example, Bohemier [2] and Brooks [9] explained that the brace position can increase ones' survivability if performed correctly in a helicopter emergency. Similarly to that, Golden and Tipton [12] mentioned that the H.E.L.P reduces the chance of hypothermia if stranded in the cold sea water. Therefore, the brace position and the H.E.L.P are important skills in the B.O.S.E.T course.

Fig. 37.3 B.O.S.E.T skills retention model



For every correct position of each of the monitored body parts, one mark is given to the participant's score. No time limit was set for the sea survival scenario. Since there is only one sea survival scenario in the skills test, of which five body parts are observed, the maximum score that can be achieved in the sea survival skills test is five. With the sea survival test yielding in five marks and the HUET test yielding 20 marks, each participant can score a maximum of 25 marks per skills test.

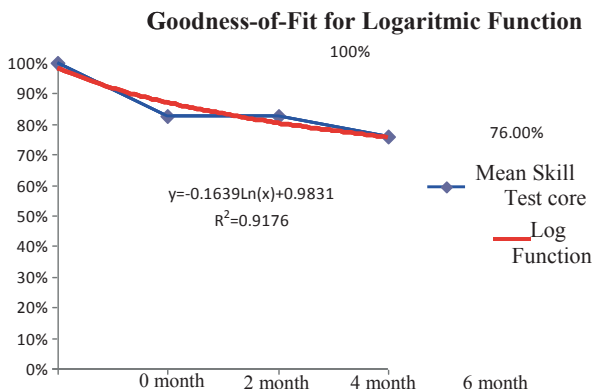
For a two points harness, the recommended crash position is shown in Fig. 37.1. According to Brooks et al. [8], helicopter crew members are able to protect themselves against the gushing of water.

37.4 Result and Discussion

According to B.O.S.E.T experts, it is the responsibility of the training providers to ensure that trainees are 100% competent in B.O.S.E.T knowledge and skills, upon receiving their B.O.S.E.T certificate. To identify the competency level, B.O.S.E.T trainers must evaluate the trainees during the training. The trainers would judge whether a trainee is competent enough to be awarded a B.O.S.E.T certificate so as to be allowed to work offshore. By this virtue, the research assumes that participants who are given a B.O.S.E.T certificate have achieved 100% skills competency upon the completion of the training course.

The numbers of participants within the period of 6 months are 2, 9, 8, 8, 6, and 5 participants. Figure 37.3 illustrates the mean skills test score in which it represents the B.O.S.E.T skills retention level among offshore professionals. The research assumed that the skill level is 100% upon completing the B.O.S.E.T course. Two months after the initial B.O.S.E.T training, the research recorded the mean skills level at 82.67%. The depreciation rate between 2 and 4 months was at 0.17%. Six months after the B.O.S.E.T training, the research determined that the mean skills level was at 76.00%. The research estimates that the B.O.S.E.T skills level depreciates 24.00% within the first 6 months.

Fig. 37.4 Goodness of fit for logarithmic function



From the B.O.S.E.T skill retention model, the research work identifies the function that best fits the model for evaluation (Lee 2004; Rubin and Wenzel 1996; Anderson and Schooler 1991). Lee (2004) and Rubin and Wenzel (1996) have both tested retention curves against mathematical functions such as linear, exponential, and logarithmic functions. Rubin and Wenzel (1996) used goodness of fit of various degrees of R^2 as an indicator to identify the retention function. Identifying the skills retention function enables the research to estimate B.O.S.E.T skills level through extrapolation.

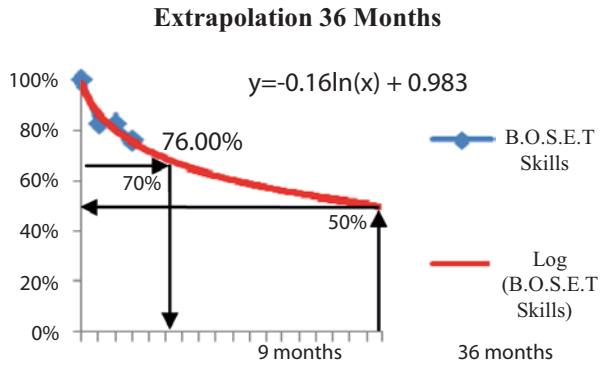
The skills retention curve was tested against three functions, namely, linear, exponential, and logarithmic. The linear function yields the R^2 value of 0.8207. The exponential function exhibits a better fit to the B.O.S.E.T skills retention model as compared to the linear function, with the R^2 value of 0.8392. However, the logarithmic function exhibits the closest fit to the B.O.S.E.T skills retention model (Fig. 37.4) with the R^2 value of 0.9176; hence, the researcher concludes that the B.O.S.E.T skills retention model fits best to that of the logarithmic function.

The formula for the B.O.S.E.T skills retention function is given by

$$y = -0.1639 \ln(x) + 0.9831 \tag{1}$$

From the logarithmic formula, the researcher was able to estimate the skills level for 36 months (3 years) by using the extrapolation method. The extrapolation to 36 months means a sixfold estimation of the original result (6 months). Some may argue that this excessive extrapolation may result in errors, inaccuracy, and incorrect deductions since the skills function is nonlinear. However, to the researcher’s best knowledge, there are no other means on forecasting the skills function at 36 months; hence, it was deemed acceptable to use this method for forecasting purposes. The extrapolated skills retention function adheres to an assumption that there is no intervention within the 36 months. In other words, the extrapolated skills retention function does not consider interventions (such as safety briefing) which may affect skills retention. Safety briefing video is an example of intervention which may affect B.O.S.E.T skills retention. The extrapolation of the B.O.S.E.T skills model to 36 months is demonstrated in Fig. 37.5.

Fig. 37.5 Extrapolation of skills retention to 36 months



From Fig. 37.5, the researcher has estimated that skills retention drops to 70% at roughly 9 months after the initial training. If the skills competence benchmark level is set at 70% (FAA 2008), this would indicate that offshore professionals should enroll into a B.O.S.E.T refresher course every 9 months. If the skills competence benchmark level was set at 50%, the current 3 years B.O.S.E.T refresher system is considered sufficient. Currently, the offshore industry does not have a benchmark for skill competence, and this statement was echoed by a leading safety expert from Step Change in Safety. However, it is the opinion of safety experts’ professionals that the 50% skill competence benchmark is considered acceptable, hence suggesting that the current 3 year refresher system is sufficient.

Despite this, the question remains whether there is a need to define the parameters for the B.O.S.E.T skills competence. Since there is no known benchmark for competence, how can the offshore industry identify those that are skillfully enough and those who are not? If there is a skills competence benchmark accepted, surely it must be standardized throughout the whole offshore industry. Several B.O.S.E.T experts and safety experts have acknowledged this existing deficiency.

37.5 Conclusion

The results presented indicate that B.O.S.E.T skills do depreciate with time. Within 6 months after the initial training, it is estimated that there was a 24% gradual decrease in the skills level. The skills level was estimated to be at 70% within 9 months from the initial training. Further forecast analysis suggests that the B.O.S.E.T skills level will be at 50% by the end of 3 years. The researcher had consulted a leading safety expert, and he was convinced that the results may be true in reality. However, he also noted that this research did not consider the intervention factor (such as safety briefing and offshore trainings) which may considerably improve the B.O.S.E.T skills retention. The research would benefit much if these factors were taken into consideration.

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Chapter 38

The Views of Ibn Qayyim al-Jawziyyah on the Religious Rights of Non-Muslims in Ahkam Ahl al-Dhimmah

Masthurhah Ismail, Muhammad Sufi Mohd Yusoff, Mazlah Yaacob, Juriah Mohd Amin and Noraini Johari

Abstract The right to one's religion is an important issue in Islamic politics. It has been acknowledged over the ages that Islam recognizes the liberty of choice of religion of non-Muslims residing in an Islamic state. This, however, does not construe to absolute freedom in the way that non-Muslims understand it since Islam has outlined specific rules and procedures by which they are bound as prevention to excesses of such freedom. The focus of this research is on the views of Ibn al-Qayyim al-Jawziyyah on the religious rights of non-Muslims which he addressed in his writings compiled in Ahkam Ahl al-Dhimmah. This research can be classified as library research. It has been specifically designed using two main methods namely the data collection method and data analysis methods which include the historical method, content analysis method and biography analysis. A result of this research found that the views of Ibn al-Qayyim al-Jawziyyah are not so different from other scholars' views. In fact, the similarities occur more often than the differences. This circumstance happened because the methodologies used by Ibn al-Qayyim al-Jawziyyah are also used by other scholars. However, there are also some differences in the issue especially to indicate the application of *maslahah* towards the contemporary issues. Generally, it can be concluded that the religious rights of non-Muslims are guaranteed because the scholars' views are based on guided methods and not merely on their unguided opinions.

Keywords Islam · Politics · Freedom · Rights · Non-Muslims

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38.1 Introduction

Islam is a religion that recognizes the non-Muslims' religious rights and freedom. Non-Muslims are allowed to practice their religions in any way that they want to the extent that Islam calls them *Ahl al-Dhimmah* (persons being under Islamic protection) [1]. The people's freedom rights are not only reserved for Muslims; non-Muslims are also guaranteed their freedom rights in an Islamic country. This research will elaborate on how far Islam allocated the religious rights and freedom to non-Muslims in Islamic countries according to Ibn Qayyim al-Jawziyyah's views and will identify the similarities and differences between Ibn Qayyim al-Jawziyyah's views and other Islamic *ulamas* in their *ijtihad* pertaining to non-Muslims' religious rights.

38.2 Research Background

Ahkam Ahl al-Dhimmah is a book written by the renowned Islamic scholar Sheikh Shamsuddin Abi 'Abdillah Muhammad Ibn Abi Bakr who is more popularly known as Ibn Qayyim al-Jawziyyah. This *ulama's* book is the main focus of this study as the researcher noticed that various studies have been carried out on his great work but none has so far studied his views on non-Muslims' religious rights in the book. Additionally, the content of *Ahkam Ahl al-Dhimmah* which only focused on specific legislation pertaining to non-Muslims has inspired this study. In an Islamic country, the citizens are not only confined to Muslims but include non-Muslims as well.

At present, there exists a plethora of studies written by renowned Islamic scholars of various disciplines. Some of these include thoughts of the *ulamas* in their books and methods of writing their books. Although studies on numerous writers' thoughts have been produced by various researchers, not all books and *ulama* have been studied, among which is the *Ahkam Ahl al-Dhimmah* written by Ibn Qayyim al-Jawziyyah.

This study pertains to the views of Ibn Qayyim al-Jawziyyah on the religious rights of non-Muslims in his writing *Ahkam Ahl al-Dhimmah*. The choice of this book as the focus of the study was not merely because such a study has never been conducted but more because Ibn Qayyim al-Jawziyyah is a renowned Muslim scholar [2] whereby his views have been elevated as references by the majority of Muslims the world over and have been the subject of various debates. Ibn Qayyim al-Jawziyyah was also a fierce opponent of blind *taqlid* in matters of *usul* and has always preached for the Salaf Madh'hab and freedom of *ijtihad* in matters of *furuq*. He had practiced extreme care in the selection of *hadith*; nevertheless a number of his *fiqh ijtihad* were based on weak *hadiths*. All these factors have contributed to this study being carried out.

It is common for books written on matters of *fiqh* to be influenced by the field expertise of the *ulama* writing them. Ibn Qayyim al-Jawziyyah was an expert on knowledge of *hadiths* and had exercised extreme care in *hadith* selection but he

also wrote books on various fields including on *fiqh*; in fact, this book (*Ahl al-Dhimmah*) elaborated on *fiqh* for non-Muslims residing in Muslim countries. He is a follower of the Hanbali Madh'hab but was not fanatical to his *madh'hab*.

Contemporary political and social environments in Islamic countries have led to increased interaction between Muslims and their non-Muslim compatriots giving rise to issues such as pig rearing, ethics for non-Muslims entering *masjids*, reading of the Qur'an, leadership issues, limits for Muslims and their non-Muslim siblings, places of worship, burial grounds and other issues pertaining to non-Muslims. All these matters need to be given due attention as changes of the time and locations demand that contemporary *ulama* become aware of the methods employed by past *ulama* in issuing their *ijtihad*s to ensure their views will guide and become the basis for contemporary of *fiqh*.

38.3 Literature Review

Shams al-Din Abu Abdullah Muhammad Ibn Abu Bakr, known as Ibn al-Qayyim al-Jawziyyah, was born in Damascus on the 7 Safar 691 AH (29 January 1292 CE) and died there on 23 Rajab 751 AH (26 September 1350 CE). Ibn Kathir nicknamed Ibn Qayyim al-Jawziyyah as Imam al-Jawziyyah to commemorate his tenure as imam at Madrassa al-Jawziyyah as well as for being the son of its founder [3]. His exemplary personality became an example to his followers and got manifested in their personalities and commitment to the pursuit of knowledge; some of the notable ones were Ibn Kathir and Ibn Rejab. Ibn Hajar al-Asqalani and Ibn 'Imad al-Hambali [4] said this about him:

He was a man of great knowledge, an expert in differences of opinion and the Salaf madh'habs, loved Ibn Taimiyyah to the extent that he will not do anything contrary to Ibn Taimiyyah's words. Always helping, learning and spreading knowledge learned from his teacher.

His moral behaviour was also attested by his follower Ibn Kathir by saying:

He was always consumed with the pursuit of knowledge during the day or night; he prayed and read the Qur'an religiously.

Such excellent personality has earned Ibn Qayyim al-Jawziyyah respect and accolades to the extent that most *ulama* have said that he was among the *sufis* with the nickname "*Al Sufi al Kabir*". Ibn Qayyim al-Jawziyyah succeeded in moulding his followers' personalities resulting in a great number of them emerging as respectable *ulama*, such as Ibn Kathir, Ibn Rejab and various others. Testimonies of other *ulama* have also proven that he was an *alim* of integrity.

According to Dr. Iwadullah, there were three Ibn Qayyims, namely Ibn Qayyim al-Jawziyyah, Ibn Qayyim al-Jawzi and Ibn Qayyim al-Misri. He warned that it is wrong for any writer to mention Ibn Qayyim in generalized terms as Ibn Qayyim al-Jawzi's real name was Abu al-Farj Abd Rahman Ibn al-Jawzi al-Hanbali who died in Baghdad in 597 H. He wrote *Daf'u al-Syubhah al-Tasyhbih, Al-Mugni*; a book on Hadith *Jami' al-Masanid* and Tafsir Zad al-Masir. Meanwhile, Ibn Qayyim

al-Misri's real name was Bahauddin Ali Ibn Isa Ibn Sulaiman al-Tha'labi al-Misri, a revered *alim* in the field of *hadith* who died in Egypt in the month of Zulkaedah 710 H [5].

Ibn Qayyim al-Jawziyyah prolifically wrote intellectual books on various titles such that his children took a long time to dispose of his books after his death. His works became major references especially in the fields of *fiqh*, *usul*, *tafsir*, *hadith*, *tasawwuf*, philosophy, Islamic calendar, teachings of Islam and others.

Ibn Qayyim was an expert in the field of *hadith*. He studied at a *madrassah* specifying in the field of *hadith* and under the tutelage of distinguished *ulama* of *hadith* such as Imam Dzahabi. There was only one such *madrassah* specifying in *hadith* and founded by such a distinguished *ulama* in Damascus then. Other than that there was the *Ummu Saleh Madrassah* whose Sheikh was Sharishi who upon his death in 718 H, was replaced by Imam Dzahabi. Ibn Qayyim learnt *hadith* during Sharishi's tenure the same way he studied *hadith* with Ibn Taimiyyah. Ibn Taimiyyah was the *Dar al-Hadis al-Sakhriyyah* Sheikh which was the second *madrassah* specifying in the field of *hadith* in Damascus. Other *madrassahs* then were for example *Dar al-Hadis al-Dahiriyyah*, *Madrassah al-Nafisiyyah* and *Dar al-Hadis al-Asyrafiiyyah* [6].

The *Ahkam Ahl al-Dhimmah* is a detailed and probably the most precise medieval study on the status of non-Muslims in Islamic law [7]. There are two volumes in modern printed editions of the *Ahkam*. These are: Ibn Qayyim al-Jawziyyah, *Ahkam Ahl al-Dhimmah*; ed. Subhi al-Saleh (1961), Damascus: 'Maktabah Jami'. Reprinted in 1981, 1983 and 1984 in Beirut: Dar al-Ilmi li al-Malayin; ed. Taha Abd. Rauf Saad (1995), Beirut: Dar al-Kutub al-Ilmiyah; eds. Yusof Ibn Ahmad al-Bakri and Sakir Ibn Tawfiq al-Aruri (1997), Dammam: Ramadi lil Nasr; ed. Adil Sa'd (2004), Maktabat Nizar Mustafa al-Baz: Mecca.

The researcher has found a few past studies on Ibn Qayyim al-Jawziyyah's thoughts, namely:

1. *Konsep Tawhid dan Sifat-sifat Allah menurut Ibn Qayyim al-Jawziyyah* written by Taqiyuddin, 2000. This researcher documented on the extent of Ibn Qayyim's thoughts on the concept of *tawheed* and Allah's attributes and tried to find points of similarities and differences between him and the other *ulama* [8].
2. *Pemikiran Teologi Ibn Qayyim al-Jawziyyah: Analisis Penafsiran Ibn Qayyim al-Jawziyyah Terhadap Ayat-ayat al-Quran Berkait Masalah Teologi* by Abdul Kholid. On the attributes of God, Ibn Qayyim al-Jawziyyah's views leaned towards those of Asy'ariyah's. On matters of God's powers and absolute will and on matters of faith, he was more inclined towards Maturidy Samarkand's views. This is because Ibn Qayyim al-Jawziyyah is a proponent of *ijtihad* and he opposed strict adherence to *maddhab*. However, a large part of Ibn Qayyim al-Jawziyyah's theological thoughts and views had similarities with rational Islamic theological schools of thoughts as opposed to traditional Islamic theological schools of thoughts. Ibn Qayyim al-Jawziyyah's habit of *ijtihad* in religious matters was his strength in developing his religious thoughts [9].
3. *Al-Din al-Qayyim On Taqlid and Ijtihad: A Refutation of Ibn Qayyim al-Jawziyyah's Arguments against Taqlid* by Mawlana Habib Ahmad al-Kiranawi. This book is a translation of *al-Din al-Qayyim* by the late Indian

scholar Mawlana Habib Ahmad al-Kiranawi published together with a number of his other writings under the title *Fawa'id fi 'Ulum al-Fiqh. Al-Din al-Qayyim* was written to refute Shaykh Ibn Qayyim al-Jawziyyah's arguments against *taqlid* from his *I'lam al-Muwaqq'iin* which completely denounced *taqlid* and provided details of the latest proofs. Here, Ibn Qayyim al-Jawziyyah classified *taqlid* into three categories: obligatory *taqlid*, permissible *taqlid* and prohibited *taqlid*. Although no elaboration was made on each category, it is understood from his discussions that these categories referred to *taqlid* of the narrators from Allah's Messenger (Allah bless him and grant him peace). *Taqlid* of witnesses in testimonies and *taqlid* of the reporters of narrations with (its) conditions he defined as obligatory *taqlid*, *taqlid* of an *alim* of one more learned than himself in which no clear text is manifest as permissible *taqlid*, and he described *taqlid* of an *alim* in which a clear text is found as prohibited *taqlid* [10].

4. *Economic Thought of Ibn Qayyim al-Jawziyyah* by Abdul Azim Islahi (1984), King Abdulaziz University Press; Digital composition for web by Syed Anwar Mehmood (2009), Islamic Economics Research Centre, King Abdulaziz University: Saudi Arabia. In this paper, the author discussed in depth Ibn Qayyim al-Jawziyyah's economic views, related them to his time and compared these views with those of his contemporaries [11].

Other studies on him are:

1. *Ibn Qayyim al-Jawziyyah 'Asruhu wa Manhajuhu wa 'Arauhu fi al-Fiqh wa al-'Aqid wa al-Tasawwuf* by Abdul azim Abdul Salam Syarafuddin [12]
2. *Hayatul Imam Ibn Qayyim al-Jawziyyah* by Muslim al-Ganami [13]
3. *Ibn Qayyim al-Jawziyyah: Dirasah Maudu'iyah Tahliliyah Tarbawiyah* by Abd Rahman al-Nahlawi
4. *Ibn Qayyim min Atharihi al-'Ilmiyah* by Ahmad Mahmud al-Baqari [14]
5. *Ibn Qayyim al-Jawziyyah wa Mauqifuhu min al-Ta'fikir al-Islamiy* by 'Iwadullah Jaz Hijazi
6. *Al-Siyasah al-Syar'iyah 'Inda al-Imam Ibn Qayyim al-Jawziyyah* by Jamilah Abdul Qadir [15]

Books and writings on non-Muslim rights have been written by post-Ibn Qayyim al-Jawziyyah *ulama*. Among them are:

1. Abdul Karim Zaidan in his book *Huquq al-Afrad Fi Dar al-Islam* [16]. His work analyzed the political and general rights of all individuals in a country. He covered these rights in detail and only touched briefly on the rights to conviction and worship.
2. Dr. Yusof al Qardawi elaborated extensively on *Ahl al-Dhimma* rights in his work *Ghair al muslim fi al mujtama' al Islami*. His commentary on 'the freedom to embrace any belief and worship' declared the freedom for any person to adhere to his religion or *madh'hab*; he will not be forced to embrace any other belief or to embrace Islam. On their rights to celebrate their religious festivals, he was of the opinion that non-Muslims cannot perform their religious rituals and manifest signs of the crucifix in Muslim villages. They have to consider

their Muslim neighbours. They were forbidden from selling liquor and pork in Muslim villages, they were also forbidden from opening bars (places to drink alcohol) or to bring them into Muslim villages even for their specific purposes. The reasons Islam forbids all these are to prevent wickedness and to stop the roots of slander (*fitna*) [17].

3. *Ahkam Dhimmiyyin wa al musta'minin fi Dar al Islam* written by Abdul Karim Zaidan also commented at length on the rights to practice religion for non-Muslims. The writer had almost similar views to other *ulama* such as Dr. Yusof al Qardawi and Ibn Qayyim al Jawziyyah, the gist of which was that Islam has maintained the freedom to practice religion for all mankind and Islam does not force man to embrace Islam even though Islam preaches to them to approach Islam. *Da'wah* towards Islam and forcing to embrace Islam preaches a deeper understanding of Islam among non muslims so that they will accept Islam. *Da'wah* is a mandatory order while force is forbidden. The Islamic method on *Ahl al Dhimmah* is the "إنكرهه و ماد يزن" approach. Their rights to religion are guaranteed as religious rights fall under general rights. Incidental rights to the non-Muslim religious rights are their freedom to erect houses of worship and celebrate their religious festivals [18].
4. Abu al 'Ala al Maududi debated on the non-Muslim rights in an Islamic country in his book *Huquq Ahl al Dhimmah fi al Daulah al Islamiyyah*. His writings veered towards criminal laws for non-Muslims. His writings relied mainly on the socioeconomic environment in Palestine [19].

38.4 Methodology

Methodology is an important element in research study to understand the object of research. According to the Islamic perspective, methodology is the study of principles and guidelines that regulate the acquisition of knowledge, and it involves the acceptance or rejection of proposition as part of the body of knowledge in a particular field [20].

38.4.1 Research Design

Research design is the frame work for controlling the collection of the required data accurately and economically [21]. It is used for the purpose of obtaining data needed to test hypotheses or answer research questions [22]. Research design for this study based on the research objective that will clarify how far Islam allocated the religious rights and freedom to non-Muslims in Islamic countries according to Ibn Qayyim al-Jawziyyah's views and to identify the similarities and differences between Ibn Qayyim al-Jawziyyah's views and other Islamic *ulama* in their *ijtihad* pertaining to non-Muslims religious rights.

All citations of the *Ahkam* in the present study refer to the Taha Abd Rauf Saad edition. Based on these objectives, the development of the methods will be done. This research can be classified as qualitative research. It has been specifically designed using two main methods, namely the data collection method and data analysis methods which include the historical method, content analysis method and biography analysis.

38.4.2 Data Collection

Data collection consists of primary data and secondary data. Primary data is information analysed and collected from the book being studied, *Ahkam Ahl al-Dhimmah*. Secondary data comprise materials collated from *fiqh usul* books, history books and other related *fiqh* books.

38.4.3 Data Analysis Technique

1. Content analysis is the systematic analysis of the content. The researcher analyses the book author's topics of discussion to clarify the writer's thoughts and views such as starting with which topic and sources used, etc.
2. The comparative method analyses data by comparing various differing data or theories to decide on a conclusion. This method is able to analyse differences and similarities in *ijtihad* between Ibn Qayyim al-Jawziyyah's views and other Islamic *ulama* in their *ijtihad* pertaining to non-Muslims' religious rights.

38.5 Research Outcome

It is clear that legislation is based on governmental decisions and included as the terms of a contract. If they are called terms of a contract, all involved parties are bound by the contract. Should anyone contravene the terms, there is a possibility that the contract is null and void or the government will take action on them. After close scrutiny of the other *ulama* and Ibn Qayyim's views on the religious rights of non-Muslims, the researchers have concluded that there are four critical matters pertaining to it [23]:

1. The *ulama* have classified an Islamic country into three categories before they came up with their *fatwa* (legal rulings): firstly, an Islamic country founded by Muslims such as Basrah, Kufah and Wasit; secondly, an Islamic country founded by Muslims through wars; and thirdly, an Islamic country founded by Muslims through peace.

2. The *fatwa* issued by these *ulama* are relevant with the contract or agreement made with the non-Muslims; regardless whether the terms on religious rights are enshrined in the contract or not and whether they comprise mutual agreement between them and the Islamic government. Some *ulama* have determined two main terms on non-Muslims residing in Islamic countries: firstly, terms that may immediately nullify the contract, and secondly, terms that only require disciplinary actions. The decision which term to implement is subject to the government's discretion.
3. In deciding the guidelines and terms of the agreement, the government has full power and is responsible in deciding to allow religious rights to non-Muslims and at the same time the government is duty bound to uphold the sanctity and elevated status of the Islamic faith as well as to guarantee the physical and emotional well-being of the Muslim citizens.
4. The current scenario also influenced the *fatwa* issued by these *ulama* such that these *fatwa* bordered on *syadid* whereas they are meant to guarantee the Muslims' positions and faith.

The decrees arrived at do not mean that Islam is against religious freedom; in fact, religious rights are allowed subject to certain terms and conditions. This is done to prevent unrest or slander due to disruption of the Muslims' and other faiths' peace of mind. As such, allowing full freedom in their own areas is much better and will guarantee higher mutual security and calm.

38.5.1 Jurisdiction in Comparison with Other Ulama's Views

Careful analysis of Ibn Qayyim's views on non-Muslims' religious rights in contrast with the other *ulama's* views has brought us to conclude as follows:

38.5.1.1 The Right to Propagate Religion

Ibn Qayyim maintained that *Ahl al Dhimmah* be prohibited from proselytizing their religion to non-Muslims and to the Muslim proselytes. These are considered as indirect contravention of the *Dhimmi* contract and can be categorized as waging war on Allah and Rasulullah S.A.W. (p.b.u.h). His views concurred with those unanimously agreed by the Shafie, Maliki and Hanbali madh'habs but differ from those of Imam Sharafudin Yahya al Nawawi who opined that if it was not a term of the *Dhimmi* contract, any action on the contrary will not render the contract null and void. Preventing their congregation from converting to the Islamic faith is considered equal to propagating and proselytizing religion.

38.5.1.2 The Right to Practice Religion

Ibn Qayyim is in concurrence with the Hanafi, Shafie and Hanbali madh'hab in the matter of sounding bells, openly displaying the crucifix, consumption of alcohol and swine and raising their voices in citing their holy books and practicing their religious rituals. These are only allowed in their houses of worship and their places of settlement. Hanbali took a harder stand by requiring the government to enforce prohibition of open display. There was a slight difference between the above views and those issued by Dr. Abdul Karim Zaidan. Although Dr. Abdul Karim concurred with Ibn Qayyim's and the other ulama's views who unanimously agreed that *Ahl al Dhimmah* are prohibited from openly displaying their religious rituals except in their places of worship and within their settlement areas only; he maintains that in future the government may have to show tolerance by allowing them to display their religious rituals on Muslim soil provided such displays are free from fitna (slander) and do not lead to mayhem. In the matter of displaying and participating in their religious festivals, Ibn Qayyim concurred with the ulama majority that the non-Muslims are prohibited from displaying their religious festivals and the Muslims are prohibited from assisting and participating in celebrating their festivals.

38.5.1.3 The Right to Erect Houses of Worship

Ibn Qayyim concurred with the *ulama* majority that the construction of new churches in Islamic countries is not allowed unless under certain limited circumstances and in countries founded through peace. In this situation, Ibn Qayyim insisted on making it mandatory on the government to consider the effects on and the sanctity of the Islamic faith.

Ibn Qayyim's views differ from those of Sheikh Sulaiman al Jarrah who was adamant that the non-Muslims are expressly forbidden from erecting their houses of worship regardless whether in countries founded through peace or war as these can be termed as 'Helping each other in sin and going against prohibitions'. Meanwhile, Dr. Abdul Karim Zaidan tends to go with the Zaidiyyah's views that the erection of new houses of worship in countries founded by Muslims is allowed provided this is approved by the government; and Abi al Qasim al Maliki proposed that new construction of non-Muslim houses of worship is allowed in Islamic countries founded through war.

The view on allowing maintenance of houses of worship and refurbishment of houses of worship receives unanimous agreement among the ulama majority. Ibn Qayyim concurs with this view except when the house of worship is totally damaged; then it is not allowed to be rebuilt as this is deemed to equal constructing a new house of worship.

In the matter of constructing new houses of worship, the researchers conclude that there are firmer *ulama* than Ibn Qayyim al Jawziyyah vis a vis Sheikh Sulaiman al Jarrah's views. Meanwhile Dr. Abdul Karim Zaidan displays a more flexible stance by considering current circumstances and shows foresight in his views although he does not stray far from the views agreed by the *ulama* majority.

38.6 Conclusion

In conclusion, Ibn Qayyim possesses a strong fighting spirit in defending the Islamic faith. To him, it is crucial that the ummah be firm in defending the holy religion of Islam. Hence, he has always maintained that it was mandatory that the government made decisions pertaining to religious rights by taking into consideration the Muslim ummah's physical and emotional wellbeing. This firm stance is a cautionary step to ensure non-Muslims do not become disrespectful in their interaction with Muslims. The researchers agree with Ibn Qayyim al Jawziyyah's views that prioritized the Muslim ummah's well being and the sanctity of the Islamic faith and display a cautionary stand towards the non-Muslims. He also does not want the history of their uncivilized treatment of the Muslims to repeat itself.

Every *fuqaha's* view must not be sidelined, but in their implementation we will come across various *darurah* situations that require us to be more open-minded and display *tasamuh* based on the *siyasaḥ syariyyah* method and based on *maslahah*. Nevertheless, this must not be an excuse to delay the implementation of any legislation and guidelines that are clearly beneficial to society. This is especially critical when the existing canonical provisions do not fulfil Islamic requirements and are incapable of overcoming the problems we face. Clearly, Allah's laws are the best for us to implement for the good of the masses besides the wisdom and firm stand of the Islamic government manoeuvring the country's politics and governance.

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Chapter 39

Development of Conceptual Framework for Assessing the Effectiveness and Impact of Industrialised Building System (IBS) Training on Contractors

Mashanim Mahazir

Abstract Accuracy in industrialised building system (IBS) installation is vital; therefore, a comprehensive training model is needed to ensure that Malaysian contractors embrace the system. Purpose, methodology and approach are based on the combination of literature review and questionnaire surveys. This paper will explore the effectiveness and impact of IBS training on contractors. A quantitative research approach was adopted through questionnaire surveys. The analysis method is mainly derived from descriptive analysis. Findings obtained from the research identify the importance of IBS training, its effectiveness and ways to improve it. Therefore, a conceptual framework based on validated and proven factors is developed. The conceptual framework is developed to ensure a ready pool of highly skilled workers, and contractors can be derived instead of assisting the companies and the government to come out with a comprehensive training programme, thus, increasing the quality of construction in Malaysia.

Keywords Industrialised building system (IBS) · Training · Contractors

39.1 Introduction

The construction industry contributed 3.5% of the nation gross domestic product (GDP) for the past 5 years. After the Construction Industry Development Board (CIDB) was incorporated, the industrialised building system (IBS) strategic plan was launched in 1999 to promote the use of IBS in construction for both public and private projects. The CIDB [1] stated that the main objectives of incorporating the IBS strategic plan was to achieve quality, faster completion, fewer site workers and

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to change from the conventional construction method to new construction technology. However, short supplies of highly skilled workers may retard the rigorous effort of the implementation of the IBS in Malaysia. Poorly trained unskilled workers became the cause of low adaptation of the IBS whereby assembly and erection of IBS require highly skilled workers. Accuracy in the IBS component installation is vital. Due to a shortage of highly skilled workers, it becomes a major challenge for the contractors in Malaysia to embrace the system.

The increasingly dynamic environment of construction and stiff competition require the IBS contractors to develop comprehensive training in order to compete faster than competitors. It is becoming increasingly difficult to ignore the importance of training to produce more highly skilled workers. The CIDB [2] mentioned that effective training and development practices which move parallel with motivation factor will create impacts on the organization's project performance. Therefore, a comprehensive training model is needed in order for IBS contractors to come out with a ready pool of highly skilled workers to ensure quality, efficient, competent and sustainable IBS industry in the Malaysian construction sector. A conceptual framework will be developed by considering the effectiveness and impact of IBS training on contractors. Motivational factors to encourage the contractor to attend the training program that has been outlined also need to be taken into consideration. In the CIDB [2], both training and motivation need to move concurrently in order to sustain the momentum of 70% IBS content in public sector projects and 55% IBS content for private projects by the year 2015 through highly skilled contractors.

39.2 Problem Statement and Objectives of the Research

The IBS is proven to increase construction quality, cost-effectiveness and productivity, shorten construction duration, reduce the reliance on foreign labour and wastage. However, the stated elements are difficult to achieve without specific, effective and efficient training. Lack of training, knowledge and skills in the IBS became one of the causes of Malaysian contractors' refusal to embrace the IBS in their undertaken projects. The IBS requires a high level of technique and precision; lack of skills will lead to a low-quality installation, causing the desired level of quality in not being achieved. Inaccurate assembly and installation will increase the maintenance cost after the construction is completed.

Poor workmanship will lead to problems related to joining and tolerances due to water seepage. Rework resultant from wrong or inaccurate installation will increase the installation time and daily wages to be paid to the workers, thus leading to wastage. Most of the IBS contractors involved in the IBS suffered from poor productivity and financial performance. This is due to the delivery, thus affecting productivity of the project. Moreover, no specific instruction was given by authorities in making training compulsory for the IBS contractors, making some of them prefer perfunctory action rather than taking proactive action towards increasing their skills. There

is no specific framework for assessing training, motivation effectiveness and impact carried out in Malaysia so far. This study will shed new light on the contractors on how to measure the effectiveness and impact of the IBS training that has been carried out or can be used as reference.

The objectives of the research are:

1. To identify the effectiveness and impact of the IBS training on contractors
2. To develop a conceptual framework in assessing the effectiveness and impact of the IBS training on contractors

39.3 Background of Training and Development

Garavan et al. [3] stated that in general, training is a systematic and well-organized process to develop new skills, enhance knowledge, abilities and attitude in achieving desired performance. On the other hand, Tabasi et al. [4] and Akdere [5] have considered training a systematic process to improve individual and organizational job performances. As for the IBS implementation in Malaysia, instead of high construction cost that became the major barrier, lack of knowledge and a skilled workforce restrict the adaptation of the system. The lack of knowledge and a skilled workforce shows that comprehensive training is needed in order to improve the IBS adaptation by the contractors. In detail, percentages of barriers to the IBS are presented in Fig. 39.1.

Based on the survey done by the CIDB in the quarter year 2013, 86.2% of contractors agreed that the training conducted helped in completing their projects. Table 39.1 shows the effectiveness of the IBS training for contractors conducted by the CIDB. To support the significant needs of training, Table 39.2 summarizes the importance of the IBS training on contractors.

39.4 Research Investigation

39.4.1 Research Sample

To conduct the research, 100 samples were chosen and only 47 usable samples collected. The highest respondents are Site Supervisor (34%) which cater more than a half of the respondents followed by Contractor Quantity Surveyor (27.7%) and Project Manager (14.9%). Refer to Fig. 39.2. Most of the respondents are relevant to the survey, which is also a positive sign of the research conducted. As shown in Fig. 39.3, 38% of the respondents had 0–5 years' experience in the construction industry while 36% of them had more than 10 years' experience. This is a good indicator that respondents are highly qualified to answer the questionnaire.

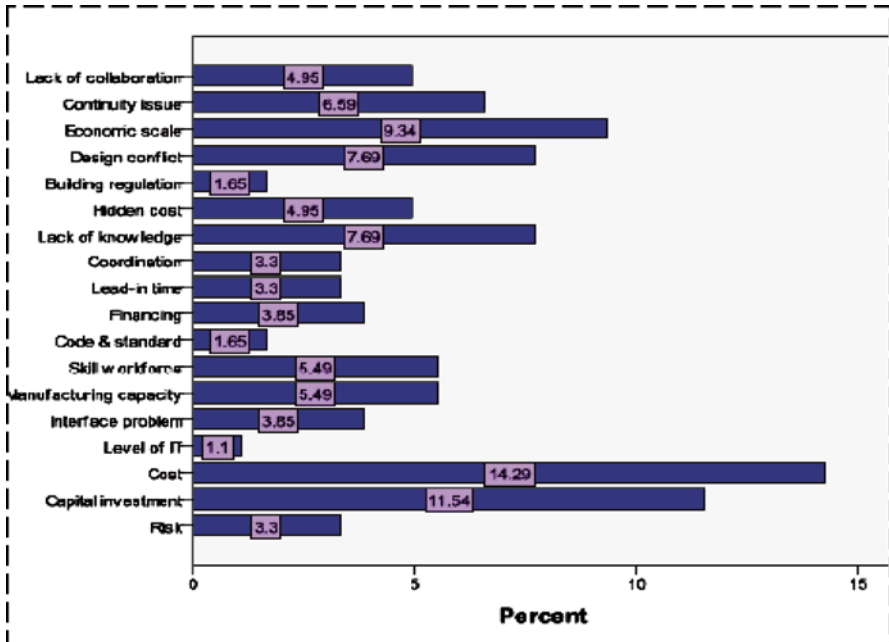


Fig. 39.1 Barriers to the IBS

Table 39.1 The effectiveness of the IBS training for contractors

Respondent’s answer	Frequency	Percentage (%)
Yes	25	86.2
No	4	13.8
Total	29	100

39.4.2 Research Method

The literature review conducted for the research is mainly to determine the importance of the IBS training on contractors. A literature review is used to further explain, summarize, assess and ensure the information integrity and clarity. The findings are obtained through industry questionnaire surveys and other secondary data. The quantitative research approach is used to conduct the research. The analysis method derived mainly from a descriptive analysis. A total of 100 questionnaires were posed to the IBS contractors registered with the CIDB, ranging from contractor G4–G7. A total of 47 usable or around 47% of the total sample responded; the surveys are analysed using the SPSS software.

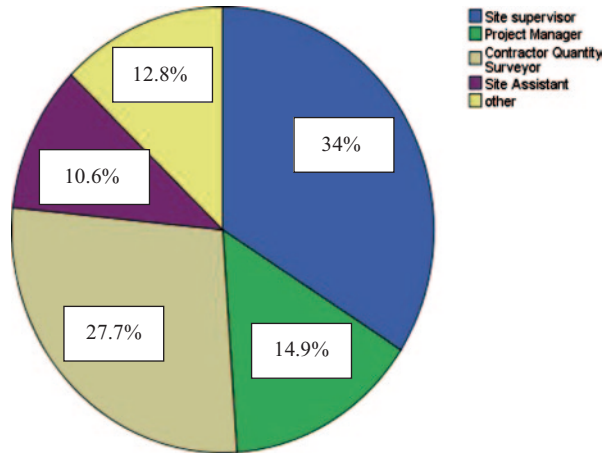
Table 39.2 The importance of the IBS training

No	Researchers	Statement supporting the importance of IBS training
1.	Construction Research Institute of Malaysia (CREAM) [6–10]	<p>Training and development are critical to IBS</p> <p>Training and awareness are very important to change the conventional method to IBS</p> <p>Role from government is needed in establishing training program specifically for IBS</p> <p>Comprehensive training scheme will improve good implementation in project management</p> <p>Continuous training for staff to adapt to change</p> <p>Stakeholders agreed training is very important in IBS</p> <p>To ensure critical success factor, competent and knowledgeable professionals in IBS are needed</p> <p>Skilled labour which derived from quality training becomes critical success factor of offsite</p> <p>Specific training related to integration, coordination and assembly is required due to different project methods and roles</p> <p>Proper training and exposure to small and medium companies about efficient technologies to embrace IBS</p>
2.	Yahya and Shafie [11]	Trainer needs more career direction and clear career path before they complete the training
3.	A. Majid, Azhari Azman, S. Zakaria, Yahya, Zaini, S. Ahamad and Hanafi [12]	<p>High construction precision is required in fully pre-fabricated construction system therefore, skilled workers are needed in IBS</p> <p>Encouraging the generating partners in the industry to assist in training</p>
4.	Kamar, Alshawi and Hamid [13]	<p>Training offered currently for new worker still inadequate to coop the market demand</p> <p>Malaysia needs more training and professional development so that IBS can be adopted successfully</p> <p>In ensuring successful adoption in IBS, training and professional development is important</p>

39.4.3 Research Findings

Based on the result of the survey adopted from the CIDB [14], all factors are processed to generate the descriptive analysis. Information in Table 39.3 shows that the service provided, related to teaching, is well scored, and the highest position based on the mean score of 4.35 while practical training provided sufficiently was at the lowest position with 3.74 mean score. These factors are considered relevant. In order to validate the factors, Cronbach's alpha is used to prove the validity. The Cronbach's alpha obtained 0.967, which is higher than 0.65, and proved that these questions are valid and that the result is reliable. The result is shown in Table 39.4.

Fig. 39.2 Respondents’ designation



There were nine factors in improving the IBS adopted from the CIDB, but only five were related to the IBS training. The factors are shown in Table 39.5. To validate these factors, Cronbach’s alpha is used to prove the validity, and these factors are considered relevant and will be used to develop a conceptual framework. Cronbach’s alpha obtained 0.954 which is higher than 0.65 and proved that the questions are valid and that the result is reliable. The result is shown in Table 39.6.

39.4.4 Development of Conceptual Framework

In developing the conceptual framework, several theoretical models by previous researchers related to training and motivation are analysed. One of the theoretical frameworks for training and motivation was developed by Tabassi, Ramli and Abu Bakar. Figure 39.4 depicts the theoretical frameworks of the study by Tabassi and Bakar [15]. This theoretical framework is used to show the relationship between training and motivation with project performance. The theoretical framework is used as a reference to develop the conceptual framework for the IBS training. By considering the nine factors of training effectiveness and five factors in improving the IBS training, a conceptual framework of the IBS training is developed. All factors used to develop a conceptual framework were validated using Cronbach’s alpha and were proved to be relevant.

The conceptual framework consists of three variables. The first variable is an independent variable. It consists of factors that can be measured and will not be influenced by other variables, but it has the capability to influence or change other variables. Training effectiveness in the IBS acts as a standalone variable. The second variable used to develop this conceptual framework is a moderating variable. Factors in improving the IBS training will act as a moderator towards training effectiveness, thus, will improve the contractor’s skills and knowledge. The third vari-

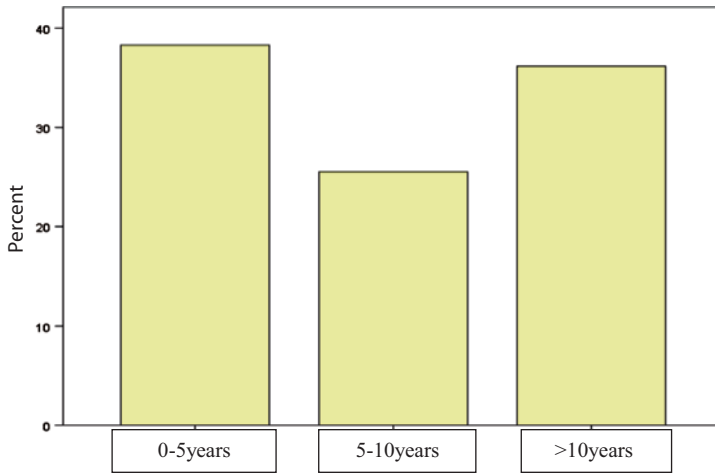


Fig. 39.3 Respondents' experience in the construction industry

Table 39.3 Training effectiveness

Training effectiveness	Mean score
Service provided related to teaching is good	4.35
Training conducted by professional trainers	4.29
Training conducted with good accommodation/facilities	4.19
Training conducted with adequate and appropriate syllabus	4.16
Skills learned helped the trainee	4.06
Theoretical training provided adequately	4.03
Training term provided adequately	4.00
Training period provided adequately	3.90
Practical training provided sufficiently	3.74

Table 39.4 Reliability statistics of training effectiveness

Reliability statistics		
Cronbach's alpha	Cronbach's alpha based on standardised items	N of items
0.967	0.969	9

Table 39.5 Factors improving the IBS training

Improving IBS training	Mean score
Better incentives	4.51
Better training modules	4.37
IBS contractor documenting good practices	4.34
Awareness program	4.34
Online training modules	4.03

Table 39.6 Reliability statistics of improving IBS training

Reliability statistics		
Cronbach's alpha	Cronbach's alpha based on standardised items	N of items
0.954	0.963	5

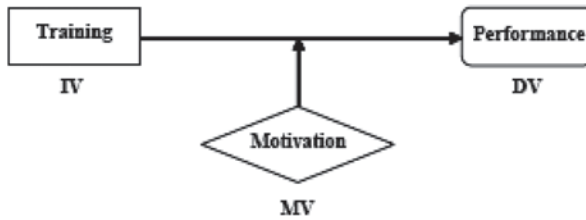


Fig. 39.4 The theoretical framework of the study by Tabassi, Ramli and Abu Bakar. The theoretical relationship between training (independent variable, *IV*) and motivation (moderate variable, *MV*) with project performance (dependent variable, *DV*)

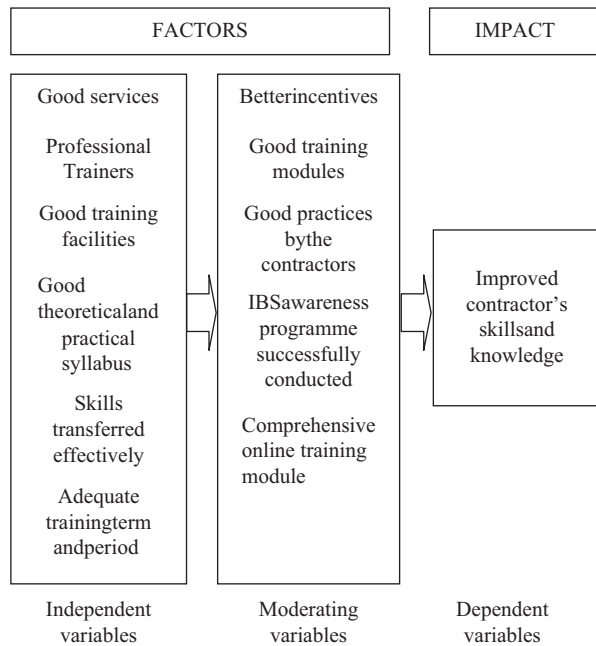
able is a dependent variable: the result of improved contractor’s skills and knowledge derived from effective and improved IBS training. Therefore, the conceptual framework as depicted in Fig. 39.5 can be used as a guide to assess the contractor’s skills and knowledge.

39.5 Discussion

This study highlights the factors that were used to develop the conceptual framework for assessing the effectiveness and impact of the IBS training on contractors. A total of 47% of the respondents took part in the survey that was used for further quantitative analysis. The results derived from descriptive analysis which was proved valid. There are nine factors identified as training effectiveness. The mean scores of the effectiveness are tabulated in Table 39.3. Reliability statistics to validate and prove the factors are shown in Table 39.4. The obtained Cronbach’s alpha is 0.967 which is higher than 0.65. Five factors in improving the IBS training are obtained, and the mean scores are tabulated in Table 39.5. The factors are validated to prove the reliability. Reliability statistics obtained is 0.954, and the result is proved reliable. The reliability statistics are shown in Table 39.6. After considering the nine factors to improve training effectiveness, these factors are then categorized as independent variables in the framework. Some of the factors which fall under the same category are combined to ease the understanding of the framework. All five factors in improving the IBS training are categorized under moderating variables.

Finally, good and effective delivery by trainers with proper training facilities in adequate training periods, accompanied with better training incentives, good prac-

Fig. 39.5 The conceptual framework for assessing effectiveness and impact of the IBS training on contractors



tices, successfully conducted IBS awareness and comprehensive online training module, will give a strong impact to the contractors in improving their skills and knowledge. All factors of training effectiveness and factors in improving IBS training are used to develop the conceptual framework depicted in Fig. 39.5.

39.6 Conclusions and Recommendations

The IBS is not new in the Malaysian construction industry. Undeniably, the IBS will change the perception of construction industry that has been labelled as dirty, dangerous and difficult. Quality assurance, faster completion and fewer site workers became the major concerns why the IBS is introduced. Lack of contractors embracing the system is due to the lack of technical skills and knowledge attained by the contractors. However, lack of knowledge still becomes a major barrier for adaptation of the IBS.

The rigorous plan and action to improve the contractor's awareness, skills and knowledge through comprehensive training is critically vital. Involvement of private organization working hand in hand with the government in improving the training programme, training modules and incentive to motivate more contractors to enhance their technical skills and knowledge is welcome. Attractive incentives to lure the contractors to adapt the IBS in their projects' needs are needed.

Making it compulsory for all public projects and compulsory to fast-track private projects will improve the implementation.

More seminars, colloquia and workshops need to be conducted to create awareness among contractors. Special syllabus-pertaining IBS should be emphasised in both public and private education institutions in order to create awareness at an early stage. More research towards improving training effectiveness and impact on contractors are needed to transform Malaysia to a country that implies the IBS fully in 2015.

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Chapter 40

The Belief of an Application of Kokka Wood as Accessories in the Muslim Community

Marsitah Ramli

Abstract This research explores how kokka wood can give an impact to the community of Muslims who came from Malaysia, India, China and the mauled with animism belief when kokka wood is applied as an accessory. Kokka wood might be unacquainted to certain societies, but kokka wood history existed in the ancient time period. When people start assuming about kokka wood, they would think of animism belief. However, it was a wretched thing when Muslims were too agitated with this kind of belief. As a researcher opinion, kokka wood might be well known if the application of kokka wood were exposed in a variety of accessories. Otherwise, it is to help people identify the pro and cons of it. Hence, the Muslim people will know it well. It aims to help people understand about the rumours and the belief that kokka wood is prohibited in the context of Islam. The Islam community in Malaysia are mostly bargaining kokka wood because of the advantages. Recognizing the application of kokka wood as accessories today makes Muslim people recognize the value of kokka wood.

Keywords Kokka wood · Muslim community · Belief · Accessories

40.1 Introduction

Kokka wood might be unaware to us, but it is popular for someone who loves unique or weird things. What is exactly kokka wood? It can be well known as gopher wood or “Kayu Kokka”. Kokka wood is a high quality wood that has been used since the ancient time period. It is believed that it has been used to make Noah’s Ark. Kokka wood has its own advantages and secrets that people believe in by God. Most of the advantages and secrets that people believe in today are that it can be used as a remedy, healer and protector, especially when it can be applied

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in the form of beads and rings. Kokka wood has higher prices and values from time to time. Kokka wood is achieved from trees in the virgin forest of kokka in the Arab world, which is in Turkey, Nigeria, Iran, Egypt and Afghanistan. Kokka is a tree from forests that are perennial (annual) and in wild life. As of today, there are several efforts from Arab countries to plant kokka trees as an agricultural industry in order to supply kokka wood that has found a place in the market world today. However, kokka wood was available in the market which was mostly taken from the fruit of the kokka wood. As we believe, kokka wood has many advantages since time immemorial and has been used by the prophets as evidence of the power of God and the protection of human remedy. Kokka wood is believed to repel evil spirits, prevent from magic, protect themselves from enemy atrocities and more. This is what we call belief. It is desirable if the selling of kokka wood is today widespread and beyond control. It cannot be denied that few of the dealers had taken it for granted and had made up stories that are not making any sense about kokka wood's benefits. It just causes people to be confused and misguided. And, it also makes faith misappropriate just because they did not have a right explanation and clear understanding about the exact used definitions. Kokka wood has also been used by Prophet Muhammad SAW as beads or "tasbih". Meanwhile, kokka wood has a high quality compared to other woods in this world. Kokka wood has a variety of colours which are dark red, chocolate or brown, yellowish and black. The most popular accessories that already have been made by kokka wood today are rings and beads. Experimental and descriptive research methods were used in this research. Critical observations of the materials, tools, equipment and the technique were paramount in this research. Interviews were also conducted to complete the facts collected. Included are the perceptions from Ustaz or Ulama', Malay jewellery shops and Muslim bookstores.

40.1.1 The Impression of Kokka Wood Application

When we talk or state something about our belief, it is actually an important thing to discuss. Most of the people just take it as an easy thing in their daily life. In addition, when it includes our region, the problems will get more attention. Religion is somewhat that is indeed a sensitive matter to discuss about because not all of the society will accept the truth.

As I have stated before, most of the Muslim community highly belief that kokka wood will give them a good benefit to their lives. Perhaps, with Allah's SWT permission, all of the consequences will end. However, most people know about kokka wood based on the use of *tasbih* in Muslims' daily life. Other than that, the ring also used kokka wood as gemstones. The problems will come out if *tasbih*, ring, bangles or bracelet, Kokka now being hunted by the Malaysian public. It can be found in stores that sell religious books, *tasbih*, rings, bangles or bracelet, cassettes in various forms such as pendants, eye rings and even creams and oils. If this kind of things or accessories were not available today, perhaps the Muslim community would never know about Kokka wood.

Other than that, the problems occur when a few of the scholars used their specializations for the treatment of people's illnesses. They used their understanding of kokka wood to make people believe what the greatest of kokka wood is. However, if with Allah's SWT permission, their illnesses will remedy. People need to change their belief that if their illnesses preserve it is obviously not because of the kokka wood, but with Allah's SWT permission.

These wood sellers, whether consciously or not, have committed a fraud when mentioning kokka wood as being the same as the wood of Noah's Ark (though no one has ever found the ark, any empty claims shall not apply) in order to convince buyers with prowess while no Hadith calls it this way, and also there are no scientific studies that can be applied in this case. When the truth is found about selling this wood, it will fall into the category of lies in sales. The prophet said:

Means: Indeed traders are those mischievous, companions asked: "O Messenger of Allah, Allah has forbidden the sale and purchase", the Prophet replied: "Even, but traders (who fujjar or bad) they often swear (about the greatness of goods sold) and they are therefore sinful, even when they speak (during the promotion) they are always lying." (Narrated by Al-Hakim, sohih isnaads pursuant to the terms of Al-Bukhari & Muslim: Al-Baihaqi) [1]

As for today, the selling of kokka wood accessories in Malaysia can be easily found even in the small market. Other than accessories, as a researcher stated before, kokka wood is also popular with a stick that has been used by prophet Musa AS in the ancient time period. A few of the markets will sell their sticks, and it is stated that the sticks are made out of kokka wood, even though there is no evidence for this.

The price is also one of the problems. The sellers will mark up the price for someone who really wants just to own the kokka wood. Back to the belief issue, people will ignore the expensive price of kokka wood and buy it just because they believe in the advantages of kokka wood.

Kokka wood also makes the Muslim community believe in spirit. They say that they will be able to see the evil spirits around themselves. In addition, they say that kokka wood can prevent them of being possessed by the evil spirits. However, what can be stated is that kokka wood is just a tree that has its own benefit. Not more than that. As observed in many sites, kokka wood is one of the nature's woods that fill this globe with their own compensations.

Most of the people talk about kokka wood as of its nutrition and its miracle that can be healing, healer and protector. Other than that, there exists a strange story that obviously wants to make business going well, or else can be seen as a trap of the devils in the form of delusion. The aim is not just to mislead a faithful person, but it can make them neglect to be dependent and pray to Allah SWT.

40.2 The Belief of an Application of Kokka Wood as Accessories in Muslims

Kokka wood has a variety of colours which are dark red, chocolate or brown, yellowish and black. Kokka wood can be found in Turkey, Egypt, Iran and Nigeria. This wood also owns a special aroma and is always greasy. Its shape is hard and

Fig. 40.1 Kokka wood tree.
(Photo: hairilnazlan.com)



shines like gemstone. The fruit of the tree that is high can achieve tens of meters and will never fall before the tree reaches an age of 40 years.

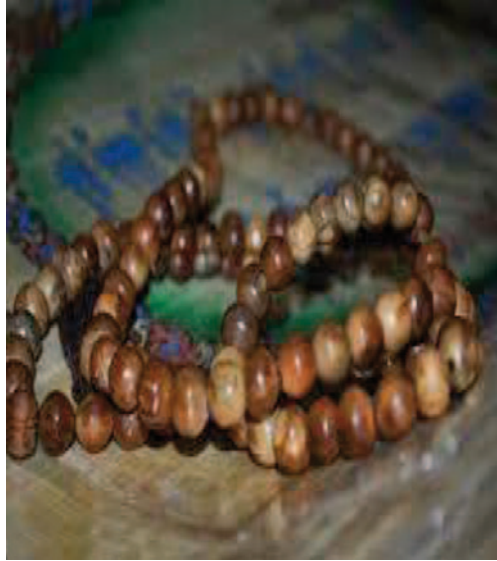
The kokka tree is forest vegetation which is perennial in nature and lives in the wild. Nevertheless, there has been made some effort from Arab countries to plant the kokka tree as one of the agricultural industry where kokka wood gets a place in the world market today. Conversely, kokka wood that has been in the market today is mostly taken from the kokka woody fruit (Fig. 40.1).

Kokka wood has a lot of advantages since time immemorial, and today it can be used by the prophets as being approved by Allah's SWT jurisdiction. Allah SWT will give a fortification and bidder to humans. Kokka wood is believed to be able to dispel evil spirits, prevent from witchery and protect ourselves from the enemy's ruthlessness and so on. Because of the popularity, humans believed in the kokka wood advantages. Kokka wood is well known today.

Those who believe in the kokka wood advantages are Muslim people, Malay Muslim people, Indian Muslims and Chinese Muslims. Muslim people currently are so fast to believe the story or the background of kokka wood. They even do not make any research, yet still believe in the advantages of kokka wood. As Muslims, we should not believe this kind of stories and buy or find it because of the advantages only. But today, Muslim people are the most who buy and wear this kokka wood. Because of that believe, kokka wood becomes popular, and they believe that kokka wood will offer them great things.

A few problems will come out when people keep finding kokka wood when they only look at the advantages. One of the problems which will come out is when the kokka wood cannot give them the advantages as they believed. What will happen to the Muslim's faith? Thus, as Muslims, we should not believe this kind of stories

Fig. 40.2 Beading or *tasbih* made from kokka wood. (Photo: kembarasufi.fotopages.com)



and buy or find it because of the advantages only. These beliefs are completely hazardous to the Muslim’s faith and a destructive belief. It can also be regarded as “Syirik”.

Syirik in Islam means putting something that is the rights of God for His special or part of those rights on the other from God. Among those rights is the right of God to create, administer and provide sustenance.

When people keep talking about kokka wood, accessories are the foremost thing why Muslim people will accept kokka wood. The types of the accessories are rings, bracelets or bangles and necklaces. Other than that, kokka wood is also used for *tasbih* which is for Muslims praise to Allah SWT after prayer. As referred to (Fig. 40.2), the figure of beading or *tasbih* made from kokka wood by kembarasufi.fotopages.com.

40.2.1 The Significance of Belief concerning Kokka Wood and Its Environmental Values

According to Roger [3], The Employment Equality (Religion or Belief) Regulations 2003 prohibit discriminatory treatment in the workplace on the grounds of religion or belief—with belief stated to include “any religious or philosophical belief”. But the regulations do not define what constitutes a philosophical belief. The Employment Appeal Tribunal identified five key characteristics a philosophical belief must have if it is to be protected. It must be, which is genuinely held, not an opinion or viewpoint, related to a substantial aspect of human life and behaviour, cogent, serious, cohesive and important, with a similar status to a religious belief and worthy of respect in a democratic society, without conflicting with the fundamental rights of others.

According to Robert [4], belief is a central focus of enquiry in the philosophy of religion and indeed in the field of religion itself. No one conception of belief is central in all these cases, and sometimes the term “belief” is used where “faith” or “acceptance” would better express what is intended. This paper sketches the major concepts in the philosophy of religion that are expressed by these three terms. In doing so, it distinguishes propositional belief (belief that) from both objection belief (believing something to have a property) and, more importantly, belief in (a trusting attitude that is illustrated by at least many paradigm cases of belief in God). Faith is shown to have a similar complexity, and even propositional faith divides into importantly different categories. Acceptance differs from both belief and faith in that at least one kind of acceptance is behavioural in a way neither of the other two elements is. Acceptance of a proposition, it is argued, does not entail believing it, nor does believing entail acceptance in any distinctive sense of the latter term. In characterizing these three notions (and related ones), the paper provides some basic materials important both for understanding a person’s religious position and for appraising its rationality. The nature of religious faith and some of the conditions for its rationality, including some deriving from elements of an ethics of belief, are explored in some detail.

According to Ko [5], sustainable development presents an opportunity to improve brand differentiation and corporate image especially in the light of the fact that consumers of luxury products are increasingly aware of social and environmental issues. Ko [5] argues that luxury product manufacturers can no longer rely uniquely on their brand name and the intrinsic quality or rarity of their products; they must now convey humane and environmental values in order to establish a lasting relationship with consumers. In line with this idea, consumers of luxury products have recently extended their quality expectations to the social and environmental dimensions [6].

40.2.2 The Implication of Belief concerning Kokka Wood and Its Environmental Values as Accessories

- What can be discussed with this statement is that Muslims should not obsess with the rumours of the kokka wood as being beneficial. It is prohibited in Islam’s commandments.
 - Muslims should believe in God’s planning, instead of rumours.
 - Believing without evidence is mistaken.
- Kokka wood is made out of tree wood which can give nutrition and help for production of varieties of accessories (Fig. 40.3).

40.2.3 Value and Quality of Kokka Wood as a Prestige Bracelet

Not only for making beads or *tasbih*, sticks, rings or pendants as accessories, prestige bracelets can be made out of kokka wood as well. The definition of prestige, as we understand it, is the honour achieved. It must have its own dignity. Thus,

Fig. 40.3 Kokka wood's internal appearance after being trimmed. (Photo: terasmunggaltokayoh.blogspot.com [7])



kokka wood itself has its own advantages in terms of healthiness. What does it look like when kokka wood is used making a prestige bracelet? According to Doughty [8], in Mette T. Jensen's artwork, the top of tree bangles demonstrates how wood can be bent and formed. The silver is used as a connection and to contrast with the wood. The surface is finished with several layers of oil and wax (Fig. 40.4).

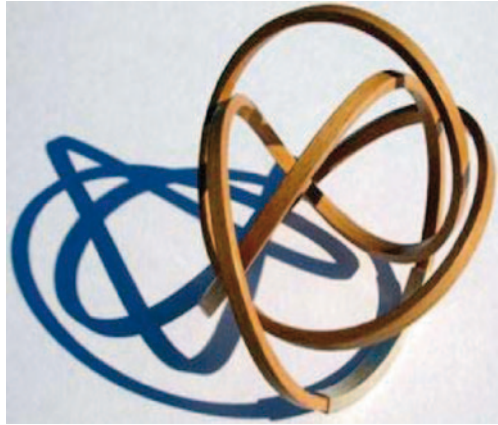
Bracelets are today one of the greatest jewellery accessories that can be performed in many ways. Instead of using gold or silver, bracelets or other jewellery accessories can be designed by using wood tree. Kokka wood has its own unique features like other trees. Kokka wood can give an impact or variety in making prestige bracelets. Perhaps, it also can be sold in the market with a high value. Besides that, it also can sustain the environment value since kokka wood is the healthiest tree and gives benefits in terms of healthiness to the wearer.

40.3 Conclusion

What can we discuss about this issue is that the belief of an application of kokka wood as accessories in the Muslim community today can damage their faith as true Muslims. Accessories are just accessories. Kokka wood is just kokka wood. Not more than that. But today's perception of kokka wood is slightly different. They still belief that kokka wood can give them a good benefit in their life instead of just wearing it as accessories.

Most of them have stated that kokka wood has many advantages since time immemorial and has been used by the prophets as evidence of the power of God and

Fig. 40.4 Bracelet is formed and bent by using tree wood; design by Mette T. Jensen's. (Photo: www.kathlibbertjewellery.co.uk [9])



the protection of human remedy. Kokka wood is believed to repel evil spirits, prevent from magic, protect themselves from enemies' atrocities and more. Other than that, they believe that kokka wood can make bodies healthy, clear the vision, make a radiant face, make the sustenance living in and avoid living out and finally, can enable us to understand and remember.

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Chapter 41

A Qualitative Study on the Determinants of Islamic Credit Card Ownership and Usage

Imani Mokhtar, Ismah Osman, Fatimah Setapa and Shah Rizal Zambahari

Abstract This qualitative study explores the factors influencing the ownership and usage of Islamic credit cards. Data were gathered based on semi-structured interviews that were conducted with seven lecturers of Business Management faculty of Universiti Teknologi MARA (UiTM). Two themes have been identified as the main factors influencing the respondents to own an Islamic credit card—respondents' religious awareness as well as *shariah* compliance attributes of the Islamic credit cards. On the other hand, a total of five themes have been identified as the prominent factors influencing the usage of Islamic credit card that include convenience, sense of security, online payment or internet shopping, promotional factors and impulsive buying. The results of this study offer certain important managerial implications for the policy makers, finance institutions and the authorities that issue and take controls of the credit card activities.

Keywords Qualitative study · Islamic credit card · Ownership · Usage · Shariah compliance

41.1 Introduction

Credit cards are one of the important means of payments in today's society. It is undoubtedly one of the convenient payment tools, which enables credit card holders to make payments without using cash. According to [1], a credit card is a plastic payment card that promotes the concept of buy now and pay later. Mitchell and Mickel [2] also considered credit cards as a source of money which gives the customers the opportunity to delay their payments. Durkin [3] further explained that credit card holders used their credit cards because of their convenience and revolving credit characteristics.

Currently, there are two categories of credit cards circulated in Malaysia, namely, conventional and Islamic credit cards [4]. Even though the nature of the cards is similar, there are some special features embedded in Islamic credit cards as opposed to conventional ones. According to [5], it is clear that Islamic credit cards are in line

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with Islamic practices that prohibit the imposition of interest (*riba*) and uncertainty to its holders. Besides that, Islamic credit cards should be used to finance only the permissible (*halal*) transactions and must not be used for forbidden (*haram*) transactions.

In this context, Amin [4] explained several main differences between Islamic and conventional credit cards. First, Islamic credit cards do not involve compounding interest factor, whereby, there is no interest charged on the principal and subsequent interest thereon. Instead, there will be a fixed profit rate imposed by the Islamic credit card issuer on the amount due or the total transactions that have been made for that specific month. Second, Islamic credit cards should be transacted on *halal* type of transactions only. Third, Islamic credit card transactions should employ *shariah*-based principles, namely *bay al-inah* in which elements of usury which are applied on loan transactions will be eliminated.

41.2 Objective of the Study

Islam permits the use of credit cards as long as it does not contravene the *shariah* principles. It is one of the alternatives nowadays for people who are looking for an Islamic product that is *shariah*-compliant. The significant difference between Islamic credit cards in relation to conventional credit cards is the special features embedded in Islamic credit cards. Thus, this study intends to discover the determining factors that influence the ownership and usage of Islamic credit cards from the cardholders' point of view and their own experiences. In addition, the individual's social surrounding has received less attention and is presumed to have little effect on his/her personal financial planning. In this regard, lecturers from Faculty of Business Management, UiTM, are the respondents for this study, whereby their perceptions on the factors influencing the ownership and usage of the Islamic credit cards were examined by using semi-structured interviews.

41.3 Literature Review

The existing literature review on credit cards and Islamic credit cards will be addressed in this section.

Barker and Sekerkaya [6] studied the attitudes of 400 Turkish card holders and non-cardholders towards credit cards. The study showed that credit card ownership was significantly influenced by the level of education, occupation and marital status. The results revealed that the cardholders' primary reason for holding a credit card is more due to convenience factors rather than its attributes. Convenience becomes the main reason as it enables to ease payments and reduces the risk of carrying cash. Likewise, Meidan and Davo [7] conducted a study relating to the selection criteria of credit and charge cards in Greece. They found out that there

are five distinguishing factors which determine the credit card selection criteria. Convenience of use is marked as the major determinant while sense of security is the second main factor for holding a credit card.

The third important factor includes free commission on joining or no annual fee. Additionally, the other two factors viewed as as important criteria for the cardholders are an indication of prestige and international acceptability. Abdul-Muhmin and Umar [8] also carried out a study in Saudi Arabia pertaining to credit card ownership and usage behaviour. The demographic factor and consumers' attitudes towards debt were emphasized in relation to consumers' ownership and usage attitudes towards credit cards. Results showed that males are less likely to own credit cards compared to female Saudis, and the former are very selective in terms of card usage. The study also analysed some credit card attributes and found that international acceptability and usage convenience were highly valued attributes perceived by the cardholders.

Another study by Khare et al. [9] was conducted in six main cities in India to investigate the determinants that influenced credit card usage. Even though it was found that the use of credit cards in India is still limited, credit card holders indicate that usage is the main predictor of credit card ownership. In relation to this convenience, attributes of the credit cards are ranked the second main factor. Credit card holders also indicate that possessing a credit card will add to their sense of fulfilment. For Indian customers, ownership and usage of credit cards are considered as a status symbol indicating that they have accomplished better lifestyle and higher position in life.

A similar study was conducted by Gan et al. [10] in Singapore. This study proved that convenience and protection dominate the credit card selection criteria compared to other factors, such as economy and flexibility. Besides that, the reputation of the card was ranked as the least important to influence credit card selection. It is found that better-educated people, high-income earners, married and elderly card holders appreciate the convenience and protection factors of credit cards rather than its economic promotional factor. On the other hand, male consumers emphasized the economic factor more than the promotional factor, which is valued more by female customers.

Şafakli [11] also found out that convenience and safety were the major motivating factors in influencing credit card usage and ownership in North Cyprus. The study was conducted using factor analysis and has categorized five factors, which are the motivating factors in owning and using a credit card. The five factors can be categorized and ranked as convenience, easiness and safety, socialization and modernization, satisfaction of needs and also telephone and internet shopping. Additionally, in investigating the attributes of credit card selection in Pakistan, a study concluded that convenience, economical use and sense of security are the important credit card attributes that have been considered by the customers [12].

Phau and Woo [13] attempted to understand the young Australian's attitude towards money and credit card usage by focusing on the tendencies of impulsive on-line shopping. The results show that these young Australians are also more frequent credit card users and they are considered as bargain hunters. Besides that, Norum

[14], in his study on 7,342 college students, further supports that credit card usage is significantly associated with impulsive buying behaviours.

In Malaysia, a study was conducted to explore the different attributes that influence the attitudes of the active and inactive credit card holders [15]. Their results showed that among the major factors driving the usage of credit cards are long interest-free periods, wide acceptance, higher credit limit and image of the bank. Besides, advertising and other promotional activities are additional factors that lead to an increase in credit card usage level. It is also found in the study that the credit card holders prefer to use credit cards because of convenience in the event that they did not carry any cash.

Another study was carried out to examine Malaysian consumers' attitude and spending behaviour using credit cards [16]. They found out that the only factor that appears to influence consumers' attitude on credit card usage is the dimension of lifestyle. This is highly associated with improvement of Malaysians' standard of living, whereby they prefer to buy products that suit their lifestyle and satisfaction. The study also leads to a conclusion that Malaysian consumers consider credit cards as a necessity, which is used for convenience purposes. Hence, in this sense, self-esteem does not influence consumers' attitudes in using credit cards.

In search for the attitudes of the cardholders towards conventional and Islamic credit cards, Hussin [17], in her study focused on the credit card selection criteria and their impact. She concluded that Malaysian credit card holders ranked protection and convenience as the major factors in their selection criteria whilst reputation is considered as least important. Besides, the ethnicity and religion values are highly related with the ownership of the credit card type. Specifically, this study shows that in terms of selection attributes, a religious factor was found to be more influential for Islamic credit card holders. The religious commitments of the Islamic credit card holders are also higher as compared to conventional credit card holders.

Ahmad [18] attempted to understand the behaviour and spending patterns of Islamic credit card holders by examining the impact of demographics as well as cardholders' attitudes towards debt. Employing questionnaires, the results of this study proved that there is a positive significant relationship between spending pattern and Islamic credit card users. Another factor which has been identified to significantly contribute to credit card usage is the customer preference towards Islamic credit card as to fulfill religious obligation. One of the factors that is emphasized by Islamic credit card holders is the charity activity done by the issuer of Islamic credit cards, where it implies that the issuer has promoted good deeds which are in line with Islamic practices.

Another study to investigate the relationship between Islamic credit cards and religious factors was conducted by [19]. The study has tested the significant relationship between *shariah*-based credit card ownership and the religiosity index. The religiosity index which is evaluated in terms of three main components, which include *tawhid*, belief in the articles of *Iman* and application of the five pillars of Islam. The results show that there is a positive relationship between this religiosity index and conventional credit card ownership. Thus, it concluded that religiosity is not the main contributing factor towards Islamic credit card ownership.

Amin [4] explored the factors that influence the probability of the usage intention of the Islamic credit cards from 354 Malaysian bank customers. Religion, knowledge of Islamic credit cards, recommendation by family and friends, marital status as well as age and education level were identified as the factors influencing the usage intention of Islamic credit cards. In this study, it was found that religion is the most dominant factor that significantly influenced the use of an Islamic credit card.

41.4 Research Methodology

41.4.1 Data Collection

In-depth or semi-structured interviews have been engaged as the basis to collect the data for this study. According to [20], in-depth interviews can be conducted to give a ‘rich description’ of the issues being discussed. Thus, the advantage of in-depth interviews is to discover respondents’ views and perceptions in supporting them, to illustrate complex interactions and elaborate the issues discussed without considering pre-existing notions. In addition, a purposive sampling method was employed in the process of selecting suitable respondents to be interviewed. One of the benefits of adopting purposive sampling is to give researchers a better selection of respondents, thus minimizing the bias which may be included in pre-existing groups [21]. In relation to this study, the main criteria that have been decided in considering the eligibility of the respondents depend on the possession of the Islamic credit cards.

In-depth interviews with seven respondents, who are the lecturers from Faculty of Business Management, UiTM, were conducted with the criteria that they owned at least one Islamic credit card. Respondents were given the consent letter in order to notify them prior to the interview. Interview questions were also attached to enable the respondents to acknowledge the issues to be discussed. All the responses from the respondents during the interviews were audio-taped. The detailed profiles of the respondents are shown in Table 41.1.

41.4.2 Data Analysis

A qualitative research methodology is used as the framework for this study to enable an in-depth investigation of the related issues being studied. In relation to this, the qualitative method will enable the researchers to uncover and discover the perception and views of credit card holders related to the key features attracting them to own Islamic credit cards and the main contributing factors influencing the usage of such credit cards. The data that have been gathered from the respondents were individually transcribed and verified. Since the respondents answered interview questions in both English and Malay, the recording and the field notes were transcribed using both languages. However, at the analyzing stage, the conversation

Table 41.1 Detailed profiles of the respondents

Respondent and profiles	Age (years)	Gender	Marital status	Units of Islamic credit cards owned
1	47	Male	Single	1
2	39	Male	Single	1
3	40	Female	Married	1
4	44	Female	Married	1
5	58	Female	Married	2
6	35	Male	Married	1
7	39	Female	Married	1

with the respondents was translated into English. The researchers went through the field notes to look for significant statements and then coded it based on the issues that have been discussed. After that, those various codes were evaluated to identify their similarities and differences before sorting them into their categories. Lastly, these different categories were classified into different themes.

41.5 Findings

This section will discuss in detail all the findings that have been collected and are divided into two main parts. The first part will discuss the reasons influencing credit card holders to own an Islamic credit card. On the other hand, the second part will explain the usage of Islamic credit cards.

41.5.1 *Reasons for Choosing an Islamic Credit Card*

No consistent differentiation was observed from the respondents in determining the reasons for choosing an Islamic credit card. They did not conceptually differentiate the key features that influence them in selecting the Islamic credit card. However, the reported themes below are the result of the combination of responses given by the respondents.

41.5.1.1 **Theme 1: Religious Awareness**

During the interview, it was obvious that the most frequently cited theme was the respondents' self-awareness in following the religious commitment. Respondents 1, 3, 5, 6 and 7 mentioned that they will avoid being associated with non-Islamic

elements or activities. As a good believer, it is their responsibility to uphold Islamic practice and tenets at all times. Their responses were as follows:

to me, as a Muslim I need to have an Islamic credit card, basically because of that religiosity factor
 I choose an Islamic credit card instead of conventional credit card because it is my duty as a religion believer
 since I have an alternative now, therefore I must choose the Islamic credit card... I am really concern about the religion aspects... choosing the Islamic credit card has fulfilled her obligations to be a good Muslim

41.5.1.2 Theme 2: *Shariah* Compliance

The second most frequently cited theme is the element of *shariah* compliance embedded in the Islamic credit cards. This Islamic credit card's *shariah* compliance principle, namely, prohibition of interest (*riba*), is the main factor for these respondents to choose the credit cards. Respondents 2, 3 and 4 seem to show a preference in using Islamic credit cards because of the existence of the *shariah* compliance element in the credit card:

I try hard to get everything which is shariah compliant... since we already have alternatives, I choose the Islamic credit cards over the conventional ones because I am sure that the Islamic credit card is according to shariah guidelines and principles
 I choose Islamic credit card because it does not involve the imposition of *riba*. I know that conventional credit cards involve *riba* which is not allowed or considered as haram in Islam

Besides that, the same respondent also realized the absence of interest elements in Islamic credit cards as opposed to conventional credit card. The responses include:

That is why I am interested in this type of credit cards... the issuers charge what they call as service fees, not interest. Furthermore, if I pay on time I will not be charged any compounding interest. I have to pay whatever amount that I use
 interest is not charged on the Islamic credit card, but there are some service charges imposed by the issuer... that charge is much lower compared to the interest rate on conventional credit card
 So I am not worried about the compounding interest... for the Islamic credit cards, what I know is that they will charge some service fees as a penalty instead of interest. Then part of the money will be donated, the banks will not put it as their income which can be considered as charity under their corporate social responsibility

41.5.2 Usage of Islamic Credit Cards

Usage of Islamic credit cards is highly related to the motives of holding the credit cards perceived by the credit card holders. A total of five themes have been identified from the interviews done with the respondents.

41.5.2.1 Theme 1: Convenience

The most frequently cited theme regarding the usage pattern of the Islamic credit cards is related to convenience purposes. Some of the respondents prefer to use credit cards instead of carrying cash. This will minimize the risk of carrying cash which has been revealed by respondent 5:

I do not need to bring my cash ... I will use credit card to purchase of my groceries. It is easy for me to pay instead of paying by cash

Respondent 2 also explained that credit card is convenient to use in case he does not bring enough cash.

...credit card is very useful for me especially when I go for shopping and I did not bring enough cash with me... Lately I use credit card because I do not want to bring extra cash along with me

On the other hand, respondent 4 normally used her credit card to avoid hassle of queuing whenever making any transactions or payments. She also mentioned that credit card is convenient to use in such circumstances.

...I want a fast service so that I do not have to queue at the counter when I want to fill in my petrol. Therefore, I prefer to use my credit cards...

41.5.2.2 Theme 2: Sense of Security

The second theme most commonly reported is coded as sense of security. The Islamic credit card is used as a protection for any unexpected events or circumstances. Respondents 1 and 6 stated that they use credit cards only during emergency cases. Their responses are:

I do not really use my credit card... only once in a while... I only use in case of emergency, for example if I need to pay medical bills or when I need to repair my car
I usually use the credit card for emergency purpose only... For example I use my credit card when travelling abroad... I need to use my credit card if any unexpected problems occur

Besides that, respondent 7 also uses her credit card as a means of backup in facing any unexpected situation especially when it involves relatively a huge amount of money.

credit card is very important for me especially when it involves large amount of payment... it is for precautionary purposes which I refer it as emergency cases
I always monitor the usage of my credit card and usually it will involve those necessary transactions only. For example, I use my credit card to pay the hospital bills...

41.5.2.3 Theme 3: Online Payment or Internet Shopping

Online payment as well as internet shopping are ranked third in terms of the usage pattern of Islamic credit cards. The credit cards are used in making online payments

or shopping through internet. Respondents 3, 6 and 7 actively use their credit cards for online transactions and payments. Their responses include the following:

I use my credit card transaction when I need to buy things online... I like to buy things from the internet. Besides that sometimes I need to pay for online flight tickets, booking hotel using the credit card

Credit card is very important for me... I will use my credit card for particularly to make online payment

41.5.2.4 Theme 4: Promotional Factors

Another cited theme for Islamic credit card usage is promotional factors. Respondents 1 and 3 use their credit cards in order to enjoy special benefits or privileges provided by the credit card issuer such as special promotions as well as arrangement of monthly installment payments. Among their responses are:

One more reasons why I use credit card is because of the promotion offered by the credit card issuer... For example I enjoy collecting redemption points whenever I use my credit card... Later I can buy some products offered through those redemptions points that I have collected

another main reason why I use my Islamic credit card is because of certain attractive offers provided by the bank... for example now if I pay using my credit card for RM 1000 and above, the bank will give me RM 50 cash back, which will be credited into my credit card account later

Relate to one of my experience... I bought a vacuum cleaner that costs RM 6,000 because the bank is giving me the facility of using my credit card through a 24-months installment payments

41.5.2.5 Theme 5: Impulsive Buying

One of the respondents mentioned that she uses her credit card for luxury purposes, particularly to buy unintended expensive products. She mentioned:

Sometimes I use my credit card for my luxury needs... the credit card eventually encourages me to spend... For example, at first I do not have the intention of buying a new fitness machine because it is expensive... However, after considering the benefits of the machine as explained by the salesperson I decided to buy the machine using my credit card...

41.6 Discussion

In this study, respondents were interviewed to explore their perceptions and views pertaining to Islamic credit cards from their own experiences. Several factors can be derived as the determinants that influence credit card holders to own an Islamic credit card. The factors can be classified as credit card holders' religious awareness as well as the *shariah* compliance attributes of the Islamic credit cards.

It is noted that respondents show high levels of commitment in adhering to the Islamic guidelines and principles. Their preference in using Islamic credit cards is strengthened by the existence of Islamic credit cards which are offered by many credit card issuers nowadays. A similar finding was reported by Amin [4], who found out that religion is the most dominant factor which significantly influenced the probability of usage intention of the Islamic credit card. In this regard, Shahwan et al. [19] also found similar results when exploring the relationship between Islamic credit cards and the religious factor. It was proved that there is a significant relationship between credit card ownership and religiosity index which was measured by the components of *tawhid*, belief in the articles of *Iman* and application of the five pillars of Islam. A similar finding is also indicated by Hussin [17], who proved religious values to be highly related to the ownership of the credit card type. The religious factor was found to be more influential for Islamic credit card holders when selecting the credit card types.

Next, another prominent factor that leads the credit card holders to choose the Islamic credit card as opposed to conventional credit cards is the element of *shariah* compliance embedded in it. This Islamic credit card's *shariah* compliance principle, namely prohibition of interest or *riba*, is the main reason that influences the respondents to choose Islamic credit cards. This means that Islamic credit cards can be used for only *halal* type of transactions which is governed by *bay al-inah* principles, which eliminates the element of *riba*. The respondents also mentioned that the absence of compounding interest also influenced them to choose the Islamic credit card. They also highlighted that one of the unique features of Islamic credit cards is that the money collected from late payment charges instead of interest shall be channeled for charity. The amount collected shall act as a source of funds by the credit card issuer as part of his corporate social responsibility. This is supported by Ahmad [18], who states that the Islamic credit card issuer also fulfilled the religious obligation on behalf of the credit card holders by way of carrying out charity activities.

On the other hand, each respondent has his or her own reasons to use the Islamic credit cards. From the responses received, the usage of the Islamic credit cards is significantly influenced by convenience, sense of security, internet shopping or online payment, promotional factors and impulsive buying. The majority of the respondents use their credit cards due to their convenience factor. The popularity of convenience factors as the main influence on credit card usage has been confirmed in [7–10, 12, 16, 22].

Respondents also consider Islamic credit cards to be convenient to them because they do not have to hold so much cash during their shopping. A similar finding was mentioned by Şafakli [11], who relates the convenient use of credit cards in case of a cashless situation as the main contributing factor for using the credit card. It is supported by Ramayah et al. [15], who found out that using credit cards is more convenient in the event that they do not hold enough cash. Moreover, Barker and Sekerkaya [6], in their study, confirm that using credit cards can also reduce the risk of carrying cash.

The other factor influencing the usage of credit cards is the sense of security. Most of the respondents use their credit card only when the need arises. They use it in case of emergency or unexpected situations. Hence, by having the credit card with them, they feel secure and have the sense of being financially protected. Similar findings were reported in the studies done by Khare et al. [9, 10, 12]. It was explained that credit card holders use their credit cards as protection and as a means of security in case certain unexpected circumstances happen. Besides, [7] also proved that consumers considered credit card is useful, particularly in emergency situations.

Next, according to the respondents, they use their credit cards to make online payments such as for internet shopping and hotel and airline bookings. In making such payments, the credit card is considered as a necessity by them because other types of payment are not viable. Findings derived by [11] also showed that internet shopping is one of the main contributing factors that leads to credit card use.

The other reasons mentioned by the respondents in their Islamic credit card usage are the promotional factors. The respondents are attracted to use their credit cards to avail privileges or promotions offered by the credit card issuers. Among the promotions offered are cash rebates, charge-free installments and loyalty points gained from their transactions. These are the factors that encourage credit card users to use their credit cards. A similar finding is shown by Ramayah et al. [15], which indicates that advertising and other promotional activities are also factors that can stimulate credit card usage level.

The last factor influencing Islamic credit card holders in their credit card usage is the impulsive buying factor. In this situation, the respondents said that they tend to make an expensive unplanned purchase using their credit cards. This is also found by Phau and Woo [13, 14] who showed that impulsive buying significantly influenced the credit card usage.

Hence, the results of this study offer certain important managerial implications for the policymakers, financial institutions and the authorities that issue and take control of credit card activities, particularly pertaining to factors influencing the ownership and usage of these Islamic credit cards. For instance, credit card providers should place more promotional activities towards enhancing customers' awareness as well as attracting potential customers based on the *shariah* compliance attributes of these Islamic credit cards.

41.7 Conclusion

From this qualitative study, it is found that respondents' religious awareness and *shariah* compliance elements are the driving factors that influence credit card holders to choose Islamic credit cards over conventional ones. On the other hand, convenience, a sense of security, online payment or internet shopping, promotional factors and impulsive buying are the main factors that influence the usage of the Islamic credit cards. For future studies, it is suggested that different types of respondents and a larger sample should be used to ascertain the findings of this study. Future studies

may use a different and richer set of factors such as the demographic, economic and other determining factors that can have an impact on the Islamic credit card ownership and usage. Future studies can also be done on different perspectives, such as to determine the level of awareness of the society on the benefits that can be derived from the ownership and usage of the Islamic credit cards.

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Chapter 42

Integration of Malay Motifs into Jewelry Design Toward Exclusive Products

H. Z. Hashim, Noor Adila Mohd Rajili and Nazirah Mohamad Ba'ai

Abstract It has been noted that the motifs portrayed in Malay decoration especially in jewelry are known by their practices and strong beliefs in traditional customs and teachings. Therefore, the motifs applied in jewelry (particularly floral pattern) in symbolizing the Malay identity have a potential to preserve culture and heritage. These motifs can be produced not only locally but also to other nations. However, embedding process of various techniques and concepts, identified in jewelry design, explore the potential of new ideas together with an artistic statement in jewelry making (Hashim, *Integrated of Malay motifs in cyclic stone (CS) formation through added value jewellery design concept*, 2011). In conjunction with this belief, the main aim of this study is to incorporate the potential motif in identifying the existing Malay motifs that apparently exist in traditional Malay art decoration that relates to jewelry design. By doing this, the findings will provide the effectiveness level of the existing motifs and identify the potential new approaches that can be introduced to other countries. In line with this, the design concept of jewelry is able to portray the originality of identity without the Western influence.

Keywords Malay motif · Jewelry design · Distinctive product

42.1 Introduction

Motifs play a significant part in jewelry design because they appeal to the conscious or subconscious. They carry with them their own history and bring a wealth of associations that invariably enrich the jewelry forms which they adorn. From the thesis *An Effectiveness of Malay Motif Particularly Floral Pattern in Jewellery Design*,
















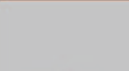

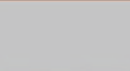
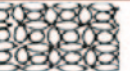


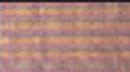

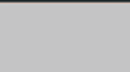











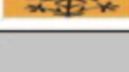


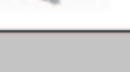






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Table 42.1 Selected motifs in traditional Malay decorative

MOTIFS	TRADITIONAL MALAY DECORATIVE				
	Batik	Songket	Wood carving	Metal art	Ceramic
<i>Awan Larat</i>					
<i>Pucuk Rebung</i>					
<i>Sutar Kacang</i>					
<i>Bunga Cengkih</i>					
<i>Bunga Telapak</i>					
<i>Bunga Teratai</i>					
<i>Buah Mangga</i>					
<i>Buah Cermat</i>					
<i>Tampuk Manggis</i>					

2006, *awan larat* and a certain flower are identified to be applied into jewelry design [1]. The selection of *awan larat* as the core of Malay motifs is “made on a basis of its midsread uses covering every aspect of traditional Malay decoration.” [2]. This section focuses on identifying the first variable included in the usage of Malay motifs in Malay traditional decoration, specific to floral pattern derived from *batik*, *songket*, woodcarving, metal art, and ceramic (Table 42.1). Second variable is about jewelry designs which consist of the types of jewelry and concept in designing jewelry.

Table 42.2 Instruments and objectives to identify usage of *awan larat* and floral pattern in jewelry design

Instruments	Objectives	Information needed	Respondents
<i>1st stage</i>			
Questionnaire	1. To get random information 2. User preference		1. Jewelers 2. Designers 3. Tourists 4. Craftsmen 5. Consumers 6. Lecturers and professionals 7. Students
Interview	1. To analyze concept and criteria of <i>awan larat</i> 2. To know the effectiveness of using <i>awan larat</i> motif in jewelry design	1. Usefulness of <i>aman larat</i> and floral pattern in jewelry decorative 2. Effectiveness in using Malay motif to symbolize Malay jewelry	1. Jewelers 2. Designers
<i>2nd stage</i>			
Observation (jewelry shops)	To identify usage of Malay motif <i>awan larat</i> and flower in jewelry design (for the future)	1. To know typical motifs in designing jewelry 2. Exposure knowledge and historical of motif concept	1. Jewelers 2. Designers 3. Tourists 4. Craftsmen 5. Consumers

Data gathered from the research instrument were examined to determine the potential Malay motifs particularly for floral pattern in jewelry design which was most frequently used. Items related to usefulness and effectiveness are analyzed. These data were analyzed to discover common opinions regarding an understanding of motifs that are apparent in the traditional Malay decorative in relation to jewelry design.

42.2 Statistical Instruments

A few instruments are used to get the feedback from the respondents about the progressing research. Although there are many instruments to collect the data, only three are considered most important. They are questionnaires, interviews, and observations. For the questionnaire, respondents are grouped according to their occupation field (Table 42.2).

42.3 Analysis

During the process of identifying what the respondents want and need, it is observed that good moral values are most noticeable. It is also noted that the general focus in choosing a jewelry design is on the decoration design and motifs (Table 42.3).

42.4 Results

This research showed that *awan larat* motif and the three types of flower which were *Bunga Jawa*, *Bunga Mawar*, and *Bunga Melur* have been identified as potential motifs to recognize Malay jewelry. In producing a quality product, the important things to be developed are the techniques and criteria in making jewelry. To produce the prototype, techniques like repousse, chasing, and piercing will be used to maintain the old technique which is still being used in silver craft in Kelantan. A majority of the respondents were not too familiar in the terminologies which were used in jewelry making.

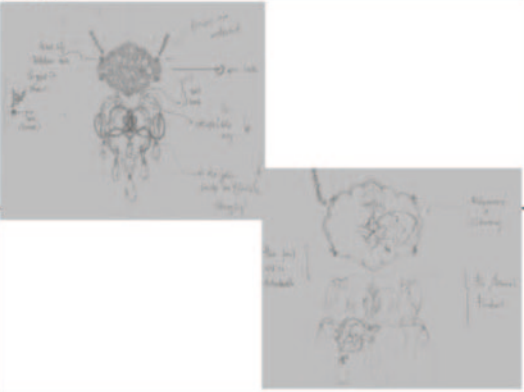

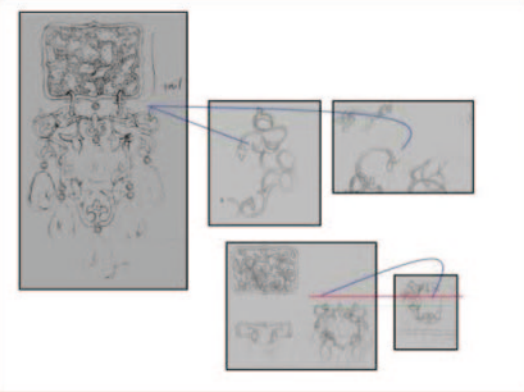
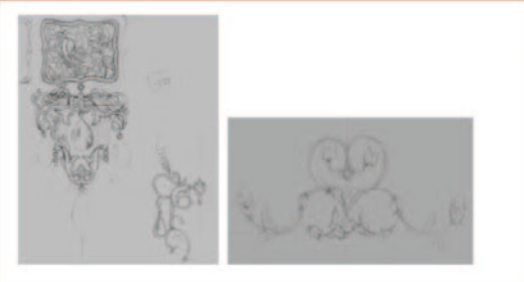
The main focus of the prototype is described as *awan larat* motif, which is the main layout of the concept structure of the design. It means that floral pattern is built up to support or as a decoration of the *awan larat* and traditional concepts. The basic shape of the design is derived from the “heart shape” to symbolize the sentiment of love, affection, and feelings of devotion, which are practically endured as the emotion itself. Symbolically youthful and optimistic, the heart shape has managed to remain a firm favorite as a motif (Fig. 42.1). Finally, this research was fully designed with the purpose of providing general information regarding the effectiveness of *awan larat* and floral pattern in jewelry design.

42.5 Discussion

Based on findings in previous research, the following recommendations are made for further research in the area of using Malay motifs in contemporary concept of design [3]. As a result, an effort to produce Malay motifs in jewelry design can be introduced by promoting costume jewelry along with Malay motifs.

Furthermore, written in Journal of Institute for Diamonds and Jewellery, 2011, design viewed is usually more accurate than the form of art [4]. There is a vast difference between design and art. Art is considered as nature’s gift while design results from the creativity of man. Related to the quotation, for a successful jewelry designer it is not enough to just have knowledge about drawing. Practical knowledge is also required to help convert it into design and create his/her own style of jewelry.

Table 42.3 Representation of the relationship between motif and design on the jewelry

No.	Analysis	Description
1.		<p>- <i>awan larat</i> and certain flower are identified to be applied into jewellery design.</p> <p>- To establish a framework of using <i>awan larat</i> as a traditional art decoration that is developed for the contemporary jewellery design.</p>
2.		<p>- Floral pattern is build up to support or as a decoration of the <i>awan larat</i> and traditional concept is remain in designing jewellery.</p>
3.		<p>- The design and pattern, apart from showcasing the rich and diversified heritage and also highlight the techniques and criteria in the fabrication.</p>
4.		<p>- By identifying the different energetic factors within these two motifs (<i>awan larat</i> and floral patten), the framework</p>

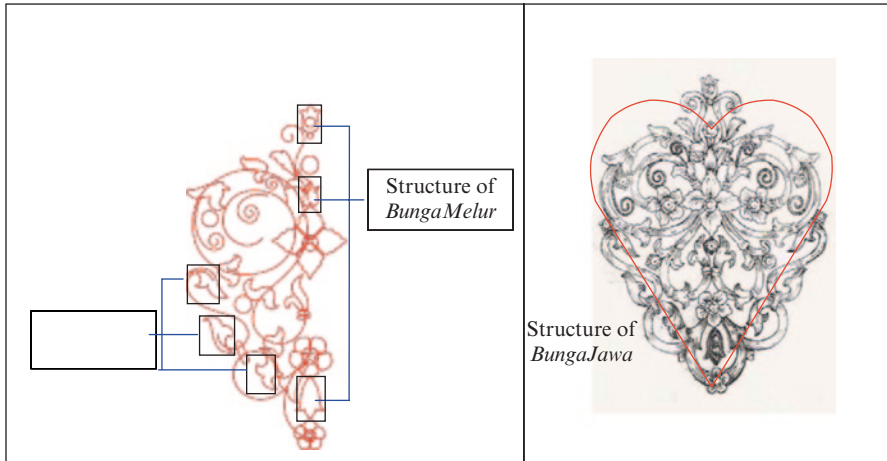


Fig. 42.1 The process and idea development of *Bunga Melur* and *Bunga Jawa* motif (left) a symmetrical composition of flowing leaves and floral pattern (*Bunga Jawa*, *Bunga Mawar*, and *Bunga Melur*) (right) in layout of *awan larat*

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Chapter 43

The Eco-Technology of British Colonial Buildings: The ‘Western’ and ‘Eastern’ Architectural Elements of Crag Hotel and Woodside Cottage, Penang Hill

Abu Bakar Abd Raub, Esmawee Endut and Ahmadreza Saberi

Abstract Penang Hill is the oldest tropical hill station in Malaysia created by the British East India Company in the late eighteenth century. The hill station initially catered to Europeans seeking health meditation, relaxation, and amusement. There are many British buildings built in Penang Hill during the colonial era. There are several renowned government properties such as: Bel Retiro, Convalescent, Edge-cliff, Gate House, Woodside, Fern Hill, Crag Hotel, Richmond, South View, and Engineer’s Quarters. These buildings, together with the Post Office building, the Police Station, Bellevue Hotel, and other public conveniences reflect the existence of a British community during their occupation in Malaya. Many of these buildings have interesting features and were constructed mainly in masonry construction that reflects the characteristics of British architecture. However, as much as they wanted to replicate the architectural features of their homeland, there are a number of changes that have been made to suit the local climatic conditions of Malaysia. Thus, there are sets of eco-technology considerations of these buildings namely: (1) the ‘western’ elements (stonewall masonry, upper timber floor, grand hardwood timber staircase, chimney, fireplace, symmetrical building facade, small vertical window panes, and masonry archway) and (2) the ‘eastern’ elements (wide verandahs, high ceiling, doors with high level openings, deep overhang with support structure, and shaded temperature zone). This paper intends to emphasize all the similarities and the differences existed in the British buildings of Penang Hill. It is important for the tourist and the local people alike to be able to differentiate between the elements that are similar to the British architectural style and the elements that have been altered to suit to the local tropical climate. Hopefully, this

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paper will be a source of reference to understand the transformation process of the British buildings in Penang Hill.

Keywords Masonry constructions · Eco-technology · ‘Western’ elements · ‘Eastern’ elements · Transformation process

43.1 Introduction

Penang Hill was the first hill station of its kind in the British Empire and was established by the British East India Company in the late eighteenth century [1]. Initially, it was a resort for social places that Europeans often frequented for health, relaxation, and fun. Later, British bungalows were built exclusively along the natural terrain uphill to imitate their homeland with cool breeze, architecture, and landscape.

Penang Hill is situated on the beautiful island of Penang and at the altitude of 760 m above sea level. It is popular as a holiday retreat in Malaysia and the main attraction is a collection of colonial bungalows at staggered elevations, spectacular views, and the lovely natural landscape. The main access to the peak is via the Penang Hill Railway¹ and the ‘jeep track’ uphill from the entrance of Penang Botanic Gardens.

There are about 45 colonial buildings (mostly residential) ranging from Hill Railway middle-station to upper-station in Penang Hill. Many of these buildings were built by amateur architects, military engineers, or employees of Public Works Departments and many were given names reminiscent of England or of lovingly remembered flora.

It is important to note that the influence of British architecture in Penang Hill has undergone through a process of assimilation with the local styles and adaptation to the local climatic conditions [2]. This paper attempts to identify the elements that ‘remain’ (western) and the elements that have ‘changed’ (eastern) in response to the local setting. With that effort, one could have a better appreciation on the changes made to the ‘western’ style of British architecture in Penang Hill, and the reasons for the changes will be discussed.

43.2 Literature Review

In general, British architecture consists of an eclectic mixture of architectural styles dated from Roman to twenty-first centuries. Many of the British colonial buildings, especially bungalows of hill stations in Malaysia, were commonly influenced by the romantic ideals permeating the middle-class in Britain for detached bungalows and the revival in the late nineteenth and early twentieth centuries [3, 4].

¹ Sometime known as ‘Mountain train’ or ‘Funicular railway’ and inaugurated on 21 October 1923.

Identifiable features of British architecture are:

1. *Masonry stonewalls*—Natural stone that has been quarried and cut accordingly for wall construction, very long lasting and durable [5]
2. *Timber flooring on upper floor*—The floor finish on the upper floors for double-storey residential colonial buildings is usually constructed in timber [6]
3. *Masonry chimney*—A vertical flue structure to discharge rising smoke from the fireplaces to above roof outside. Normally constructed with exposed bricks, plastered or complete with chimney pot/hood [7]
4. *Masonry fireplace*—An opening at the base of a chimney in which a fire may be built to heat the room. Commonly constructed of bricks and mortar with ornamentation at the surrounding edges [7]
5. *Symmetrical building*—The façade of the buildings exhibit symmetry
6. *Small windowpanes*—The window leaf is sub-divided into small rectangular shapes expressed or arranged vertically
7. *Arch type openings*—A basic architectural structure built over an opening either exposed bricks or plastered

43.3 Methodology

The research methodology adopted is qualitative. Data are collected from primary and secondary sources. Primary data are obtained from selected case studies and secondary data are collected from literature review. Content analysis is done to the secondary data, while comparative analysis is done to the primary data. A conclusion is drawn based on the results of analyses and discussions [8, 9].

43.3.1 Selected Case Studies

The Initial stage of the research involved an inventory survey on the site of Penang Hill. Key buildings have been identified based on architectural merits, information from local residents and the local plan prepared by Penang local authority. The selected buildings for case studies are Crag Hotel² [1, 10] and Woodside Cottage.³

² Crag Hotel was one of the earliest hilltop homes in Penang (formerly known as ‘The Crag’). It was originally a bungalow built by a Scot before it was turned into a hotel in 1929. It was run for a time by the Sarkies brothers, who also managed the seaside E&O Hotel and Singapore’s heritage Raffles Hotel. It is interesting to note that Crag Hotel is located on a boulder.

³ Woodside Cottage is locally known as Woodside. The word ‘Cottage’ is added in this writing to acknowledge it as a residential building. The Woodside was once used as a government rest house. It is interesting to note that Woodside has a large compound that can accommodate the local residents to play football.

Fig. 43.1 *Crag Hotel* (1895)—Located at a slope and overlooking the landscape. It is part of a complex with many single-storey buildings surrounding it. Some of these buildings were used as institutional buildings, workers' quarters, and other purposes [11]



Fig. 43.2 *Woodside Cottage*—was once used as government rest house. It is a large residential building made of masonry. Some of the interesting features are chimney, fireplace, verandah, masonry archway, door with high level opening, and timber staircase. The façade of the building exhibits symmetry



43.3.1.1 Case Study 1: Crag Hotel (Fig. 43.1)

43.3.1.2 Case Study 2: Woodside Cottage (Fig. 43.2)

43.4 Analysis of the Western Elements

43.4.1 *Crag Hotel*

Crag Hotel has several architectural features which reflect the western influence. The features can be listed as follows:

1. Steel roof structure
2. Stone baluster
3. Timber staircase
4. Timber floor joist

One of the most unique characters of Crag Hotel is that the roof was constructed using a steel structure. This technology was popular in Europe during the Industrial Revolution and was evident in many western buildings, such as the Crystal Palace and the Eiffel Tower. Stone balusters are used extensively in this building along the parameter corridor and the grand staircase on top of the boulder leading to the main entrance. The timber staircase is another interesting character in this building using hardwood and painted in black. The main area on the upper floor uses timber floorboards supported by closely arranged timber floor joists.

43.4.2 Woodside Cottage

Western architectural elements for Woodside Cottage can be listed as follows:

1. Stone baluster
2. Timber staircase
3. Timber joist
4. Masonry fireplace
5. Masonry chimney
6. Masonry archway
7. Masonry wall construction

Stone balusters of Woodside Cottage can be found at the rear upper floor balcony in the form of decorative classical design. At the centre of the house there is a grand hardwood timber staircase painted in black. It is an important feature that links the ground floor and the upper floor. The floor finish for the upper floor is made of timber supported by hardwood timber joist. Another important western character of this house is the provision of fireplace at the living room area and a very tall chimney to allow the fumes from the fireplace to escape. Both the fireplace and the chimney are made of masonry construction. The overall construction of the cottage is made of exposed regular natural stone blocks. The use of stone blocks can be seen at the archways and external walls (Fig. 43.3).

43.5 Analysis of the Eastern Elements

In contrast to the western elements, both buildings have several architectural features which are applied specifically to suit with the local climatic conditions of Malaysia.

Some of the identified features are as follows:



Fig. 43.3 The architectural elements of Crag Hotel: 1 timber floor boards and hardwood timber floor joists, 2 wide verandah, 3 vertical narrow window panes, 4 steel structure, 5 stone baluster, 6 hardwood timber staircase

43.5.1 *Crag Hotel*

1. Wide verandah
2. Louvers at openings
3. Terra-cotta floor tiles
4. Deep overhang with structural support
5. Shaded temperature zone
6. Volumetric space (high ceiling)

One of the special characters of Crag Hotel is the provision of wide verandah along the parameter of the building. Louvers are used at wall openings and doors. The floor finish for the verandah is terra-cotta floor tiles. These floor tiles are suitable for use in Malaysian climate because of the thermal and sound properties. The verandah has a deep overhang with structural support, thus, creating a shaded temperature zone. The internal spaces have a sloping ceiling which creates a volumetric space on the upper floor. The average floor to ceiling height on the lower floor is relatively high and together with the introduction of louvers at wall openings will ensure good process of natural ventilation [12].



Fig. 43.4 The architectural elements of Woodside Cottage: 1 the hardwood timber staircase, 2 the wide verandah, 3 the masonry archway, 4 the fireplace, 5 high floor to ceiling heights, 6 volumetric space and a door with high level opening

43.5.2 *Woodside Cottage*

1. Wide verandah (ground and upper floor)
2. Interlocking clay roof tiles
3. Connection to servant quarters
4. Terracotta floor tiles
5. Deep overhang with structural support
6. Shaded temperature zone
7. High floor to ceiling height

For Woodside Cottage, the wide verandah is a reoccurring feature at both floor levels. The roof is made of imported interlocking clay tiles which again have good

thermal and sound properties and it is suitable for the local weather. Another character for Woodside Cottage is that it has a detached servant's quarters and it is linked to the main house by a covered corridor (without walls). The floor for the ground floor is made of terracotta clay tiles. The first floor has a balcony at both ends. The balconies are covered with deep overhangs and supported by columns. These areas are considered as 'shaded temperature zone' where the temperature is slightly lower than the outdoor temperature. The balcony (semi-enclosed space) also ensures that the exterior walls and openings are not fully exposed to the direct penetration of sunlight. It is noticeable that both levels have high floor to ceiling height and this feature facilitates good process of natural ventilation (Fig. 43.4).

43.6 Conclusion

From the study, it is evident that the British colonial buildings in Penang Hill are not fully making reference to the British architectural style of Great Britain. From the author's observation and analysis, there are some elements which are constant and some that have been changed to suit with the local climatic conditions of Malaysia. It is interesting to note that the western and eastern architectural elements seem to synchronize with each other and create a synergy between the ecological and technological advancement of that particular era and well-suited to the setting of Penang Hill.

One of the unique characteristics of colonial buildings in highland areas is the provision of the chimney and fireplace in the living area. The fireplace is used for heating up the rooms because of the cooler weather conditions compared to the lowland areas. It is noticeable that the function of the chimney in lowlands is different from those in the highlands where it is provided in the kitchen area for the purpose of smoke emission.

This study has indicated that British colonial buildings on Penang Hill have retained some of their original characteristics and also made some adjustments onto the building as a response to the local climatic conditions of Malaysia.

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Chapter 44

Transfer of Development Right (TDR) as a Tool in Heritage Building Conservation in Kuala Lumpur

Robiah Abdul Rashid, Ahmad Sharim Abdullah, Elma Dewiyana Ismail, and Mohamad Nidzam Rahmat

Abstract Heritage buildings are significant forms and elements of a city. Preservation of these buildings is important for its historical values and knowledge for future generations. In the developing country like Malaysia, particularly in the city of Kuala Lumpur, where rapid development is progressing, these heritage buildings are facing the threat of being demolished. The existence of legislations, the latest being the G. O. Malaysia, National Heritage Act 2005 (Act 645), 2011, seems not to be effective in curbing the demolition of these kinds of structures. The legislation has succeeded in preserving government-owned buildings but not the private-owned buildings. There are imbalances between the economic development and the heritage preservation. It is believed that the lack of awareness of the buildings' significance, the lack of incentive to encourage conservation, and the lack of options the heritage building owners could choose in developing their sites contribute to the factor of the disappearing of these invaluable urban fabrics. The aim of this chapter is to study the transfer development rights (TDR) potential which might be used for heritage buildings in Kuala Lumpur. This chapter dwells into the problem by seeking information on awareness and feedbacks in regard to heritage matters from the people involved in the city planning and development as well as the heritage building owners. Subsequently, the study looks into the transfer of development rights (TDR), an incentive program, as a tool used in conservation of heritage buildings. All information was obtained through questionnaires requiring respondent's opinions and feedbacks to the related matters. It is suggested that the TDR program can be utilized by the heritage building owners as an option to balance the economic and preservation needs and thus, preserving the heritage and historical building in Kuala Lumpur.

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Keywords Conservation · Heritage · Historic cities · Regeneration · Development right

44.1 Introduction

The city of Kuala Lumpur, Malaysia, has developed from being an initial tin-mining settlement in 1880s to a modern developed city of twenty-first century. This evolution marked the achievement of the city dwellers, with the rise of many skyscrapers as a benchmark. With the tremendous economic growth, especially during the 1980s, Kuala Lumpur could not resist from being developed. Most of the newly constructed buildings speak in the universal language that makes them not much different from buildings in other parts of the world. The trend of property development by the building owners has increased in which the economic factor acts as the driven force. The potential of getting big revenues by developing the land resulted with the old buildings been demolished to make ways for new developments. These trends are irresistible that made the building owners eager to be part of the contributors in building the nation in the name of modernization.

The risk of losing the potential income has put the owners not to retain their building in its original forms. The intention of the owners to develop the original heritage buildings, or shophouses in particular, subject to the approval by the local planning authority, to multi-stories development is somehow in line with the driven economic factors as well as the desire to get rid of the old, festering piece of architecture. Unaware and unthinkable by the owners, they have used their rights to develop the properties. It is this right, known as the development right that could be used as a means to preserve the heritage properties. Despite that the conservation of old buildings in Kuala Lumpur is important to retain the characteristics of Kuala Lumpur city, the complexity of modern new building designs seems not to reflect the true characters of Kuala Lumpur historically.

44.2 Objectives

The objective of this paper is to identify the essential elements of a transfer development rights (TDR) program that can be used in our country and to study the suitability of the program in the Kuala Lumpur context.

44.3 Problem Identification

The city of Kuala Lumpur has many historical buildings with architectural significance. These buildings are worth to be preserved because of their association with the local history. However, with the current economic and development

circumstances, in conjunction with the lack of people's awareness of the historic building significance [1], Kuala Lumpur is slowly experiencing the disappearance of heritage buildings and neighborhoods. The rate of city's development is so rapid that the owners of the buildings would not want to be left behind economically and financially. The extreme land prices and property values would create the opportunities for the historic building owners to make profit.

The government intervention is one of the ways that could be used to safeguard the heritage-built forms. The involvement of the government or authorities can be in the form of rules and regulations in relation to the development and demolition of the heritage structures, offering incentives measures, and providing funding for heritage sites maintenance and restoration [2]. While the rules and regulations and funding are normal in the realm of preservation, the incentive could offer some attractive measure.

There are many ways in which the authority has been used to encourage the preservation of the heritage building by the owners. The approval for redevelopment, rehabilitation, and further adaptive reuse has been practiced in the effort to safeguard the heritage items. The Malaysian government intervention on the conservation of historical buildings can be categorized as follows:

44.3.1 Legislations

Legislations such as The Town and Country Planning Act (Act 176) [3], The Local Authority Act (Act 172) [4], and the previous Antiquities Act 1976 [5] helped to control and enhance the conservation efforts. In addition to that, the Control of Rent Act (1966), which was repealed in 1997, was introduced to safeguard the existence and proper maintenance of these buildings. The current National Heritage Act 2005 (Act 645) [6] superseded the Antiquities Act 1976 [5], covers extensively on the heritage matters, and is expected to be the "guardian" on any tangible and intangible heritage. According to this act, the Heritage Commissioner has the power to proclaim any site to be a heritage site (National Heritage Act 2005) [6].

This will help in preserving historical buildings that are considered to be a heritage. Nonetheless, the issue of imbalance between the economy and the conservation faced by the owners still arise, despite of the legislations being implemented.

44.3.2 Incentive Programs—Transfer Development Right (TDR)

Incentive can be developed into a program that encourages the preservation of heritage building. Since many of the heritage items occupy the lands with the potential for redevelopment, with the high cost for restoration of historical buildings, incentive could offer the landowners and developers financially attractive program for rehabilitation and redevelopment [7].

One of the incentives that could be used in the heritage buildings conservation is known as transfer development right (TDR). This incentive has been used in many countries around the world—used as incentives for rehabilitation and conservation of heritage building made possible, thus encouraged people to protect the architectural significance of their buildings. TDR is drawn from the rights that the owner of a land has. Land ownership is frequently portrayed as including a “bundle” of rights that collectively “run with and can be separated from the land” [8]. TDR is a way to separate the value of the potential development from the value of the property itself. It is a variation that allows private landowners to buy and sell their development rights to each other, rather than to a government agency or a land trust [9].

TDR is different from other types of conservation tools as it focuses on the principle that a right to develop is separate from other property’s right [9]. The development right can be separated permanently from the land or site [8]. This right can also be bought, sold, donated, or otherwise transferred [10]. It can then be sold, separate and apart from the underlying land parcel from which it has been severed [8]. In return, the restrictions on real estate’s development right will be logged down in a conservation easement [10]. The TDR of one site can be transferred or sold to another person. Generally, all the rights are transferred to the purchaser when a property is sold. TDR programs, however, permit the landowners to detach and sell the right to develop the land from their other property right [11].

In the context of Kuala Lumpur city, the implementation of TDR is possible with the provision stipulated under the Federal Territory (Planning) Act 1982 or Act 267. The use of TDR could offer a workable solution to some conservation issues. The conservation of a building often seems uneconomical since the practice will involve public spending. However, the earnings from the sales of TDR could be used for conservation purposes like preservation, maintenance, or improvement of the historic heritage buildings. This will relieve the burden of public spending while at the same time encourage the private owners to upkeep their lots [2]. TDR could sustain the heritage without too much financial burden to the community [12].

Not having an incentive program that can compensate the economic factors has left the owners of the old buildings with no choice other than to develop their premises instead of preserving their old buildings. As an alternative, an incentive program that would attract the owners of the heritage built-forms to keep and maintain the premises, without burdening them financially, should be devised.

44.4 Methodology and Criteria Establishment

To ensure the objective of the paper is achieved, criteria concerning the methodology has been established. The criteria would provide a framework for the purpose of study. The criteria are set on the type of respondents chosen, the typology of the building, and the location of the heritage property. The type of respondents selected is to be those involved in the planning and development of the city. These include, but not limited to, the authority of the city, namely Kuala Lumpur Municipal

Council, National Heritage Department, Non-government organization (NGO) such as Malaysia Heritage Body, professional consultants such as architects, planners, building surveyors, engineers, and valuers. It will also try to include the owners of those heritage buildings and developers.

There are many types of heritage buildings in Kuala Lumpur—Mansion, schools, shophouses, public and government buildings are some of the heritage buildings that occupy the city. While most of the heritage buildings are owned by either big corporate or government body, the shophouses are mainly owned by the privates. Hence, this study emphasizes more on the shophouses since this type of buildings is one being the target for redevelopment. However, other types are not put aside totally. Most of the heritage buildings are located within the old city area, which happens to be the prime area currently. The buildings are scattered, encompassing the Stadium Merdeka up to the Jalan Sultan Ismail. The shophouses are the main types of building within this region, dated as old as 1900. As for the study, only a portion of the area is identified, which still has the heritage identity and character.

44.4.1 Questionnaire Outline

Semi-structured questionnaire were used when collecting the data from the parties involved. The questionnaires were posed to the people in the authority and those involved in the planning and developing projects, as well as to the owners and the developers of the heritage buildings. The questions were divided based on several variables as follows:

- a. Heritage legislation
- b. Planning issues
- c. The building significance
- d. Conservation incentive
- e. TDR program

Data from combination of both the open and close ended question of the semi-structured questionnaire were gathered and analyzed using quantitative methods.

44.4.2 Sampling Selections

For the purpose of this study, 60 numbers or respondents were identified from the group, which consisted of the people who were directly involved in the related research subject which are the city planning authority, NGOs, professional consultant, owners, and developers of the heritage buildings. Two despondences from the same occupation were selected for the validity of the study. Due to the nature of research constraint, out of 60 questionnaires that were given out, only 26 numbers were returned and analyzed.

44.5 Results

44.5.1 *Heritage Legislation*

This section deals with the awareness of respondents on the heritage legislation existence in Malaysia particularly Kuala Lumpur. From the 26 despondences' feedback, 21 (80.8%) of the respondents were aware of the availability of National Heritage Act 2005 legislation pertaining to heritage.

However, 14 (53.8%) respondents felt that there are weaknesses in the current legislation, 7 (26.9%) thought that there are no weaknesses while 5 (19.2%) were clueless. In the result of sufficiency of the current legislation, based on the data analyzed, respondents have a high level of awareness in regards to heritage legislation but lack of information on the implementation.

44.5.2 *Planning Issues*

This variable dwelled on the perception on the planning matters. From the result it shows that 17 (65.4%) respondents thought that the Kuala Lumpur structure plan (KLSP), 2020 and Kuala Lumpur development control plan (KLDCP) 2008 will help in protecting the heritage buildings, 4 (15.4%) respondents thought that the protection of heritage buildings did not have any relations with KLSP and KLDCP, while another 5 (19.2%) respondents have no knowledge on this matter. It further showed that 11 (42.3%) respondents stated that the current guideline by Kuala Lumpur City Hall (Dewan Bandaraya Kuala Lumpur—DBKL) helps in conservation effort, 9 (34.6%) stated that not much conservation efforts have been supported by DBKL while 6(23.1%) said they do not know anything about this.

On the issues of "Development Right," 12 (46.2%) respondents replied "Yes," 7 (26.9%) answered "No" while 7 (26.9%) stated "No idea." Subsequence to the question "if there is no of development right," 12 (46.2%) respondents opined that plot ration could be considered as development right, 4 (15.4%) respondents disagreed, and 10 (38.5%) respondents stated that they have no idea. Based on data analyzed, most of the respondents satisfy with the current planning system in protecting the heritage buildings. However, they also agree that the system could always be improved.

44.5.3 *Building Significance*

Building significance is a simple concept where its purpose is to help identify and assess the attributes which make a place of value to us and to our society. An understanding of it is, therefore, basic to any planning process. Once the significance of a building is understood, informed policy decisions can be made which will enable

that significance to be retained, revealed or, at least, impaired as little as possible. On the question of criteria for categorizing buildings as heritage, the respondents have given answers that can be summarized as in case summaries. The criteria could be grouped into the age factor of a building (23 (88.5%) respondents), architectural factor (23 (88.5%) respondents), technology factor (6 (23.1%) respondents), and cultural factors (20 (76.9%) respondents).

In replying to the questions of demolition of heritage buildings and replace with new buildings with heritage character, 15 respondents (57.7%) thought that it is acceptable while 11 (42.3%) were of the view that shophouses could be considered as heritage, the opinion of the respondents. Most of the respondents agreed that these shophouses could be regarded as heritage buildings. Based on the data analyzed, most respondents indicate age and architectural factors as the main criteria for heritage building categorization. The opinion on redevelopment of heritage building would be more on the disfavour side. Most of the respondents agreed that shophouses be regarded as heritage buildings.

44.5.4 Conservation Incentives

Local government may provide assistance to help conserve local cultural heritage places. Types of incentives include direct financial assistance such as grants and funds, facilities assistance such as tax waiver and tax reduction, and also a free provision of parking spaces to each building owners. In this section, respondents will be asked on their awareness toward the incentives provision for heritage buildings. On the incentive matters, 17 (65.4%) respondents claimed that they know about the incentive offered, 3 (11.5%) did not know, and 6 (23.1%) said that they know nothing about the heritage incentives. The type of incentives offered as perceived by the respondents is summarized. The majority of these incentives have been around for more than 5 years. Most of the respondents agreed that there are incentives to encourage conservation efforts.

Asked whether the current incentive helped in the conservation efforts, most of the respondents were not sure (13 respondents or 50%), 4 (15.4%) thought 50/50 (what do you mean by 50/50—uncertain?), 3 (11.5%) thought successful, and 1 (3.8%) thought not successful. On the acceptance by the owners, majority (14 respondents or 53.8%) were not sure while others (8 respondents or 30.8%) thought the incentive plan was helpful. Almost all the respondents (24 respondents or 92.3%) agreed that there is need for other type of incentives. The result showed that there is a consensus that the current incentives are inadequate (14 respondents or 53.8%) while 7 (26.9%) others on the split.

Based on the data analyzed, most of the respondents agreed that there are incentives available for the conservation of heritage building. However, the successful rates in conservation and acceptance from the owners were unknown. Majority of the respondents agree for other incentives and the currently available are insufficient.

44.5.5 Transfer of Development Right (TDR) Program

The results from questionnaires show that majority of the respondents have heard of the TDR program out of which 17 (65.4%) are familiar with this program whereas 9 (34.6%) do not know about its existence. The majority of respondents (14 respondents or 53.8%) view that TDR is a fair concept while 8 (30.8%) respondents thought it is good and 3 (11.5%) respondents thought it is excellent. However, one (3.8%) respondent thought that it was a bad idea.

When asked whether there were instances of TDR concept or similar happenings in the country, two (7.7%) respondents agreed, while nine (34.6%) respondents did not, and majority (15 respondents or 57.7%) had no idea (NO IDEA COULD BE CHANGE TO—DO NOT KNOW ABOUT THIS MATTER etc). With the availability of TDR, this could affect the redevelopment scenario of heritage buildings, particularly the shophouses. With government incentives, 7 (26.9%) respondents thought that owners would proceed to develop the buildings, 8 (30.8%) thought that the buildings would be maintained while 11 (42.3%) said it depends on situations.

On the transaction of development right, majority of the respondents (14 respondents or 53.8%) prefer that it must be done through statutory body and others (9 respondents or 34.6%) thought it should be done through open markets. 3 (11.5%) respondents showed no idea (replace no idea—sound of nice). Almost all the respondents (23 or 88.5%) thought that TDR would be a good conservation tool in preserving heritage building, and 3 (11.5%) respondents thought otherwise. Twenty-two (84.6%) respondents felt TDR creates fairness to the parties involved and four (15.4%) did not think so.

Twelve (46.2%) respondents stated that the TDR would be a successful program, three (11.5%) disagreed and eleven (42.3%) had no idea. On the question “Should the program exist?” majority (20 or 76.9% respondents) said that they would support and participate, 3 (11.5%) said they would not, and 3 (11.5%) could not decide. On the statement that TDR could become a conservation tool in protecting the heritage buildings in Kuala Lumpur, most of the respondents agreed. The result showed that respondents agreed that TDR is an incentive to encourage preservation of heritage buildings.

Based on the data analyzed, most of the respondents have heard about TDR and thought it would be a fair program. Majority agreed that the program is unknown in the country. The possibility that the owners will develop their heritage buildings is high if the TDR option is made available. Most of the respondents would like the transaction be monitored by statutory body. Majority of the respondents agreed TDR is fair, acceptable, and will get support from the people. Therefore, it could be used as a tool or incentive to encourage preservation.

44.6 Conclusion

The subject of TDR from the study can be summarized into the following:

1. Based on the study, it shows that the program, although complex in implementation, could help in the effort to preserve and conserve lots of heritage and historic buildings.
2. The existence of such incentive program as TDR could help in curbing the further demolition of heritage and historical buildings. In lieu of modernization, it is an addition to the authority's current conservation tools.
3. The success of any program could not be achieved unless the people involved in the subject have a deep understanding and awareness of the program. From the study it is shown that the program is being accepted and improved over the years when people get to know it better. The awareness about the program has to be propagated extensively to gain people support.
4. The TDR program could become a fair solution to the building owners. The restoration of the historical buildings could be financed by the developers who bought the TDR rather than the government funds.
5. Finally, from the study, it can be concluded that the TDR program is possible to be used as a tool in the effort to conserve and protect the leftover of the heritage and historical buildings in Kuala Lumpur.

The in-depth study, however, needs to be done to further explore the potential of TDR and the implementation of the program in the context of Kuala Lumpur city. This program should not be rigid and could be further modified to suit the needs. The TDR program could also be introduced in other cities and towns in Malaysia with heritage and historical buildings, in the effort of preserving the country's heritage.

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Chapter 45

Adaptive Re-Use of Heritage Buildings in Malaysia—A Case Study of Penaga Hotel in Penang

Robiah Abdul Rashid, Elma Dewiyana Ismail and Ahmad Sharim Abdullah

Abstract Adaptive re-use of heritage buildings is a form of strategy towards conservation of cultural heritage, as it extends the building's life and avoids demolition waste, encourages reuse of the embodied energy and also provides significant social and economic benefits to the society. Thus, it embraces the different dimensions of sustainability. Therefore, the objective of this paper is to identify the challenges and constraints of the adaptive re-use of heritage building. The data collection was based on conservation works that had been done at Penaga Hotel, Penang. The findings were used to provide information and guidance for adaptive re-use of buildings consistent with the goals of heritage preservation and sustainable design.

Keywords Sustainable design · Heritage buildings · Adaptive re-use

45.1 Introduction

Built heritage is a vital piece of our past. According to National Heritage Department [1], there are 194 gazetted heritage sites in Malaysia which consist of archaeology sites and burial grounds to houses, churches, forts, schools and offices. Built heritage is a significant resource that plays an important role in the economic, cultural and environmental sustainability of our rural areas, towns and cities. Many heritage buildings were designed to last centuries and reusing them reduces the need for new construction. This saves energy and resources, and retains the identity and

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character of the communities. The labor-intensive process of rehabilitating older heritage buildings supports local businesses, creates jobs and keeps wages in a community. One cannot build a way to sustainability by tearing down what they already have. Although some old buildings may be less energy efficient than some newer ones, retrofits can be done to make the heritage buildings more efficient. Retaining existing elements of old buildings and seeking to improve their energy performance is a heritage conservation principle that makes sense for the planet and the economy.

Altering existing buildings for new functions is not a new phenomenon; in the past, buildings that were structurally secure have been adapted to fit changed needs or new functions without questions or theoretical reflections. For example, during the Renaissance period, monuments from ancient times were transformed for new uses.

During the French Revolution, religious buildings were transformed for industrial functions or military uses after they had been confiscated and sold [2]. These interventions, however, were done in a pragmatic way and in many cases without heritage preservation as an intention. Instead, the driving force behind these examples of 're-use' was functional and financial, in essence [3].

Today, however, working with existing buildings, repairing and restoring them for continued use has become a creative and fascinating challenge within the architectural discipline [3, 4]. The process of wholeheartedly altering a building is often called 'adaptive re-use' [5]. In contemporary conservation theory and practice, adaptive re-use is considered to be an important strategy towards conservation of cultural heritage [6].

45.2 Aim of Study

To provide information and guidance for adaptive re-use of buildings consistent with the goals of heritage preservation and sustainable design.

45.3 Objectives of Study

The objective of this chapter is to identify the challenges and constraints of adaptive re-use of heritage building.

45.4 Problem Statement

The reality of climate change has prompted to the urgency in the reduction of carbon emissions and the planning of low carbon cities. The construction of new buildings consumes significant amounts of raw materials and energy, and generates high carbon emissions. Buildings are responsible for more than 40% of global energy

use, and produce one third of global greenhouse gas emissions [7]. Construction and building account for approximately 136 million t of waste annually, nearly half of which is from demolition [8]. Given the above figures, the building sector also has great potential for significantly reducing carbon emissions.

Buildings are concentrated in urban areas, which should therefore be the focus of efforts to reduce building related carbon emissions. In particular, heritage buildings constitute a significant portion of the entire building stock all over the world and it is not possible to preserve them all intact. In the UK, only an additional 1.5% is added to the existing building stock each year, and there are approximately 372,000 listed building entries [9]. New South Wales in Australia has 20,000 listed buildings [10], China has 67,750 county, state and municipal level listed heritage places [11], Hong Kong has 94 declared monuments and 1,444 proposed graded historic buildings [12], and Malaysia has 244 registered heritage and 226 national heritage consists of buildings, sites, monuments and objects [1].

Adaptive re-use of heritage buildings is a form of sustainable urban regeneration, as it extends the building's life and avoids demolition waste, encourages reuse of the embodied energy and also provides significant social and economic benefits to the society [13]. Thus, it embraces the different dimensions of sustainability. However, the debates over which sustainability factors are keyed, and how to address them in practice, remain unsolved.

The construction of new buildings consumes significant amounts of raw materials and land assets that might be better used for other functions. This consumption of land and materials can be reduced when adaptive re-use of existing buildings is allowed to replace the demolition/reconstruction. Adaptive re-use can also facilitate the preservation of heritage structures that might otherwise fall into disrepair and decay, and eventually be demolished.

The resulting adaptive re-use of existing structures must incorporate principles of heritage and sustainable design. Current research is advocating on incorporating green environmental design into the adaptive re-use of buildings [14, 15]. In that context, this study attempts to formulate design principles which will help to integrate concepts of sustainability into the adaptive re-use of historical buildings in a way that will enhance the built environment while preserving the nation's cultural endowment.

45.5 Literature Review

Adaptive re-use has become an integral strategy to ameliorate the financial, environmental and social performance of buildings [16]. The Department of Environment and Heritage [17] defines adaptive re-use as 'a process that changes a disused or ineffective item into a new item that can be used for a different purpose'. Continual demand for new and improved operational and sustainability performance will invariably require the demolition of existing buildings, particularly as land availability becomes scarce. Yet, it has been estimated that buildings that require demolition account for only 0.5–1% of the existing stock with the remainder having

a further 30–50 years of life [18, 19]. In fact, Shah and Kumar [20] proffer that in the case of significant public buildings their life could extend in excess of 80 years. With the life of buildings being extended, adaptive re-use will play a pivotal role in meeting the increasing demand for facilities and regeneration of the built environment [16, 21].

The shift to building re-use and adaptation has become an increasing trend within the built environment [22–24]. In many cases, increasing the life of a building through re-use can lower material, transport and energy consumption and pollution and thus make a significant contribution to sustainability [25–27]. There is a ubiquitous convergence of researchers that adaptation can make a significant contribution to the sustainability of existing buildings [21, 28, 29]. There is also a growing perception that it is cheaper to convert old buildings to new uses than to demolish and rebuild [17, 30].

Buildings are generally demolished because they no longer have any value [31]. In most cases it is the market that sets this value, even though such an assessment may be based on incomplete information with no consideration given towards externalities. Douglas [25] maintains that there is considerable value attached to retaining style and character and the so-called ‘solid build qualities of buildings’. According to Ball [30], it is generally preferable to repair a building than replace it because the value of the location and quality of a new building is not necessarily better than the old one. In contrast, adapted building will not completely match a new building in terms of performance, but the shortfall should be balanced against gains in social value.

Adaptive re-use strategies are preferable to demolition if the objectives of environmental sustainability and reduced energy consumption are also to be met [32]. The central issues are that a static internal environment that cannot be easily adapted is wasteful in terms of sustainability and not warranted in terms of the needs of the occupants. The more flexible a building is the quicker and easier to adapt, which represents a saving in the time and productivity lost during office churn [33].

45.6 Methodology

The objective of the study was to obtain the challenges and constraints of integrating sustainable design principles into the adaptive re-use of heritage building. This study was based on conservation works at Penaga Hotel, Penang. Penaga Hotel consists of three different blocks that previously were the pre-war shop houses (Fig. 45.1). One of the blocks that faces Hutton road (Fig. 45.2) consist of four-storey boutique hotel with lift and 32 rooms, the one that faces Transfer road (Fig. 45.3) consist of three-storey boutique hotel with 8 rooms and the block that faces Clarke street (Fig. 45.4) consist of 5 units wall-up, two-storey residential serviced townhouse. Besides that, Hotel Penaga also implemented conversion process to certain space to become library, spa, swimming pool, café and others. The garden was the backlane



Fig. 45.1 Masterplan of Hotel Penaga



Fig. 45.2 Hutton road before and after rehabilitation works

(Fig. 45.5), the library was a motorbike repair shop, the swimming pool was a row of toilets, the spa was a kitchen for a nearby restaurant (Hotelpenaga 2009).

45.7 Results and Discussion

Converting and changing of use of an existing building requires that the building is subjected to present by-laws and requirements. They include physical, structural, fire suppression and security requirements, among others.



Fig. 45.3 Transfer road before and after rehabilitation works



Fig. 45.4 Clarke road before and after rehabilitation works



Fig. 45.5 Back lane that converted to 'Landscape'

45.7.1 Owner's Requirements

In order to understand the development of this hotel, the owners wanted to turn the shops into a boutique hotel, not a backpacker's accommodation. It is to be done without destroying the heritage character of the buildings while turning its function into something of a contemporary use and life style. Its aim is to create an authentic heritage experience of the old Georgetown. As the owners are also advocates of sustainable development, the hotel is to be conserved with sustainable building designs and features.

On the financial side, the new development must be economically viable. By merely restoring the old buildings and renting them out, the returns are too low compared to the restoration cost, which is usually high to begin with. In order to achieve this, the use of the building must be changed and floor area must be increased. In this case it was decided that it will be a boutique hotel.

45.7.2 Hotel Functional Requirements

The facilities required are rooms, a restaurant, a bar, a spa and a swimming pool. The support facilities required are rooms such as manager's room, administration office, concierge, housekeeping room, security room and reception. The existing rooms and spaces are not sufficient to cater for the new requirement.

In order to be economically viable, the hotel need to have as many units as possible and the final number of unit managed to be provided was 45. This was achieved by adding more floors, up to the limit of height restriction and new building set back. Five double-storey units were incorporated in the Jalan Clarke block called the Clarke Terrace House (traditional terrace houses). Eight units on two floors in the Jalan Transfer block were designed and called the Transfer Suites (suites). Thirty two units of rooms were incorporated in the Jalan Hutton block called the Hutton Rooms (deluxe rooms). The Hutton Rooms are made disabled-friendly with the addition of a new lift within the main lobby area.

45.7.3 Challenges and Constraints in the Adaptive Re-Use Effort

45.7.3.1 Factor 1: Additional Floors and Building Set Back

To increase floor area, the owner intends to add two more floors to the block on Jalan Hutton and one more floor to the block on Jalan Transfer. The building regulation says that the maximum height the building can go is 16 m and the new additions must be set back 3 m behind the existing building line. In order to comply with this requirement, the blocks on both Jalan Hutton and Jalan Transfer are set back 3 m from the existing building line and are kept at the maximum 16 m in height (Fig. 45.6).

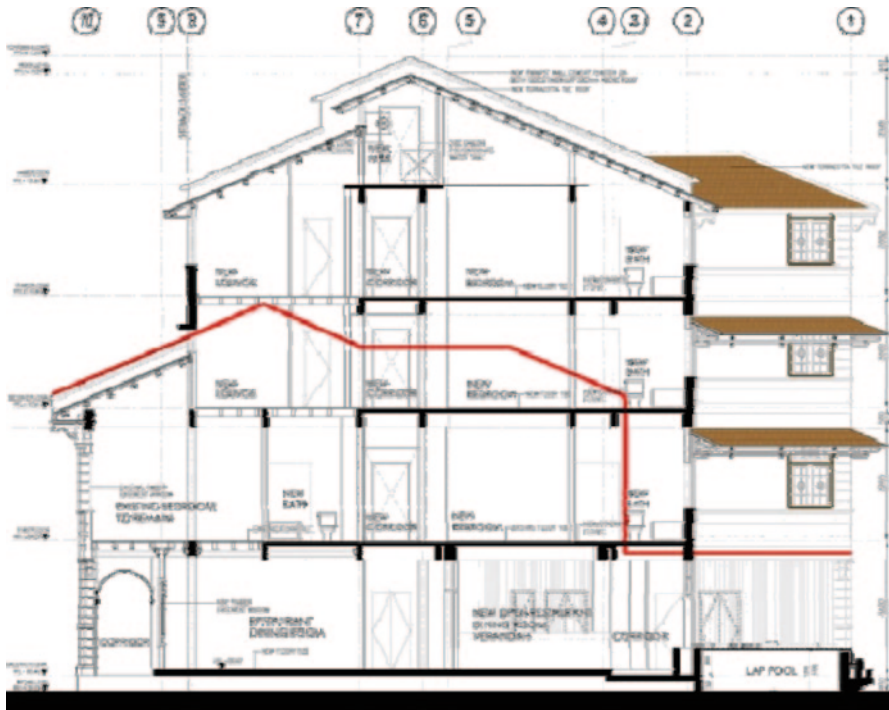


Fig. 45.6 3 m building set back from original building line for Jalan Hutton

45.7.3.2 Factor 2: New Structure

The works on the new development requires some additional works such as the additional floors, additional floor areas, additional staircases and a new swimming pool. These works requires new foundations and footings. Bakau piles were used due to the soil conditions (Figs. 45.7 and 45.8). Work had to be done carefully as not to disturb the existing structures which are all located in a very compact space.

45.7.3.3 Factor 3: Fire Fighting Requirement from Fire and Rescue Department

As with any new building, this new conserved building must comply with the fire fighting requirement of Fire and Rescue Department. Some of the new requirements include the fire-rated doors to accommodation rooms, additional staircases for the Jalan Transfer block and redesigning of existing timber staircase due to non-compliance of design.

The fire-rated doors were installed in compliance with regulations on sleeping accommodations and for fire compartmentation purposes. The additional staircases



Fig. 45.7 Bakau piles and piling frame



Fig. 45.8 Bakau piles piled and cut and steel rebar and footing formwork

for the Jalan Transfer block is due the additional floors added (Figs. 45.9 and 45.10), while the redesigning of the existing timber staircase is due to the excessive incline of the flight (Fig. 45.11). The original staircase was designed when there was no guideline whereas the new staircase is designed at a gentler incline to meet the present building by-law (Fig. 45.12).

45.7.3.4 Factor 4: Safety and Security

Converting the shophouses into a hotel requires careful thought and consideration. The need for privacy and security is important for the hotel patrons at ground floor especially those facing the 5-ft way at the main road. The same situation also applies to the backlanes. However, the backlane 'lanescape' area is more secluded and



Fig. 45.9 Staircase under construction and staircase completed

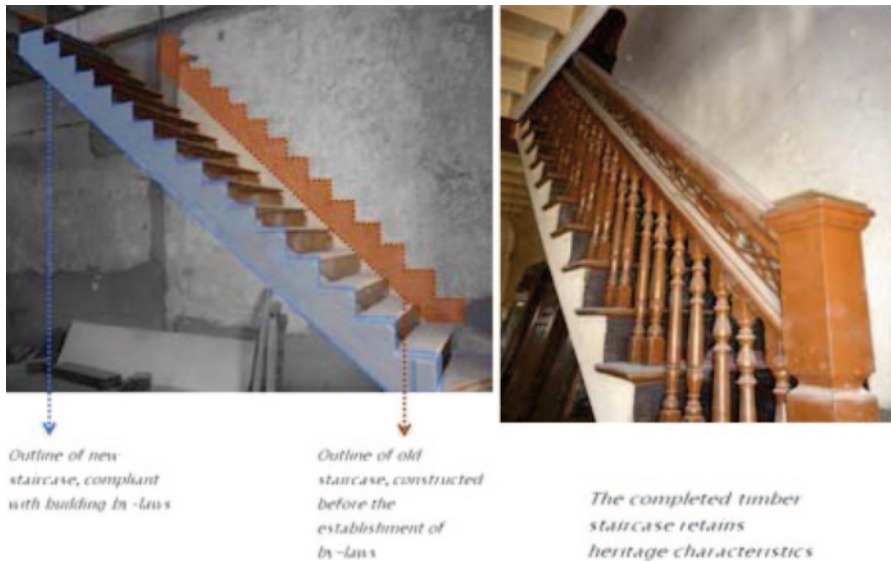


Fig. 45.10 Comparison between the old and new stairs

less exposed to the public. A level of privacy was attained by having planter boxes at the edge of the walk way facing the roads (Fig. 45.13). Open roller shutters were installed at the top opening of the colonnade so that they can be used at night. These measures did not go well with the local authorities who insisted that the 5-ft walkway is a public zone. The owner managed to convince the authorities that the plants add to the ‘greening’ of the hotel.



Fig. 45.11 Comparison between old and new wall

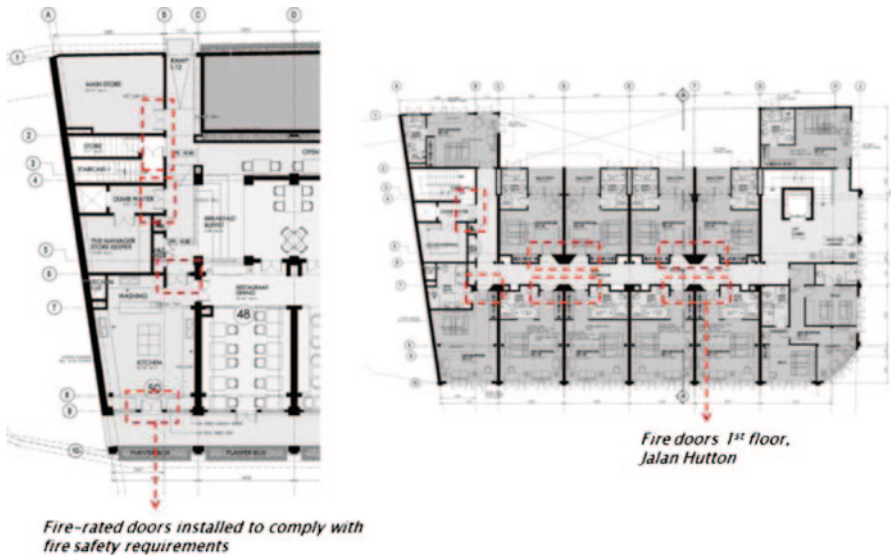


Fig. 45.12 Example of location of new fire doors

45.7.3.5 Factor 5: Other Authority Requirement: Tenaga Nasional Berhad (TNB)

One of the requirements of TNB is to have a room for their equipment. This room needs to be on the ground floor and face outside, thus taking away prime space from the already limited ground floor. The designers managed to accommodate the room at the Jalan Hutton block and have it facing the back lane (Fig. 45.14).



Fig. 45.13 Planter boxes at 5-ft way of Clarke terrace house

Fig. 45.14 TNB room under construction



45.7.3.6 Factor 6: Tight Working Space

As there are new works to be done on existing buildings, in order not to damage the existing structures, works especially those using big and heavy machines need to be done carefully as the working areas available is limited and very tight (Fig. 45.15). Careful planning is needed for this purpose.



Fig. 45.15 Examples of tight working space

45.8 Conclusion

The study has identified that Judging from the work involved, it can be said that adaptive reuse in conservation projects can be a very demanding effort and requires a high level of commitment to complete. This is due to the fact that changing of use of an old building entails among others, complying with present building by-laws and regulations (e.g. building set back, height limit, public back lane and 5-ft way issues), physical and structural limitations, adding facilities to meet functional needs (e.g. lift, swimming pool, garden etc.), finding building element replacement (e.g. roof tiles, floor tiles, furniture, doors etc.) and unforeseen constructional issues (e.g. tight working space).

The understanding of this aspect is important as this development can be made as a case study on whether this kind of development can be a good choice for adaptive reuse of heritage building.

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Chapter 46

Factors Driving Change in Management Accounting Practices: Malaysian Survey Evidence

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Abstract Using survey questionnaire, this study aims to examine changes in management accounting practices, specifically management accountants' roles, and tools and techniques adopted over specified periods within companies in Malaysia. Factors driving those changes were also investigated. The findings revealed that the management accountant's role has expanded beyond its conventional boundary. In addition, the changes in management accountants' roles and the tools and techniques used can be attributed to the factors driving the change. It was apparent that the most important factors that caused the change were core competency aims, changing work patterns/attitudes and broader scope of accountability. Thus, top management can exhibit substantial confidence in enhancing business performance that can be made by a better understanding of the change drivers, empowering management accountants, and adopting innovative techniques.

Keywords Management accountants' roles · Management accounting tools and techniques · Management accounting change · Factors driving change · Survey method

46.1 Introduction

Management accounting is concerned with the provisions and use of accounting information to managers within organizations [1]. The purpose is to provide them with a basis to make informed business decisions and enable them to equip management and control functions effectively. Management accounting is regarded as an essential part in any company's activities. Management accounting information will enable internal users to make decisions effectively and contribute to the improvement of the efficiency and effectiveness of existing operations. Management

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accounting has evolved from focusing on cost determination and financial control to creation of value through effective use of resources [2]; thus, the roles of management accountants have also changed in line with the changes in management accounting techniques. The management accounting changes comprise of different stages and this variety demonstrates that change is not a uniform phenomenon. Therefore, without an understanding of how management accounting practices have changed, its development will not be better understood. Thus, this study seeks to examine factors that drive changes in management accounting practices in companies in Malaysia, specifically in relation to management accountants' roles and management accounting tools and techniques.

The remainder of this paper is organized as follows. The next section provides the literature review. Section 3 covers the research methodology. Section 4 deliberates on the research findings. The final section provides the concluding comments.

46.2 Literature Review

46.2.1 Management Accountants' Role

Management accountancy is a profession that involves partnering in management's decision-making, devising, planning, and performance management systems, and provides expertise in financial reporting and control in order to assist management in the formulation and implementation of an organization's strategy [3]. According to Kariyawasam [4], management accountants, whether in the private or public sector are closely involved in supporting, planning, controlling, directing, communicating, and coordinating the organizational decision-making activities. Managers of an organization are commonly the "customers" of the management accountant as far as management accounting information is concerned [5]. Thus, it is important for management accountants to continuously equip themselves in order to fulfill the managers' needs and requirements in an organization [4]. The vital role of the management accountant was believed to be an information provider at both management and staff levels, and participants of planning and control activities [6]. However, nowadays much of the role has been shifted more towards supporting the manager's decision and anticipating the information needs [7]. They also play the role of leading the agenda in business strategies and thinking ahead for the business future [8].

46.2.2 Management Accounting Tools and Techniques

Management accounting tools and techniques have changed and evolved over the years. According to International Federation of Accountants [2], the use of man-

agement accounting techniques has evolved from focusing on cost determination and financial control in Stage 1 to information for planning and control in Stage 2. This was then followed by focusing on reduction of waste of resources in business processes in Stage 3 and creation of value through effective resource use in the final stage. Thus, to endure and flourish, management accountants should begin to use more innovative tools and shift from the operational level to strategic level [9]. The emergence of new advanced manufacturing technologies demand for more proactive management accountants, who are now expecting to become part of management team within a business activity [10]. Burns and Scapens [11] believed individuals must be prepared to take any changes in traditional ways of doing accounting and ready to accept exciting challenges ahead. This is because, management accounting has made a quantum leap in recent years [12].

46.2.3 Factors Driving Change

It is clearly stated that management accounting profession should adapt to the recent changes in order to be relevant and competitive in the future. Generally, there are several factors which may influence the transformation to the current state of the management accounting profession. Based on a study conducted by Sulaiman et al. [13] in Malaysia, there were two main categories to trigger changes in management accounting namely external factors and organizational factors, and its internal operations. External factors consist of the impact of market competition and emphasize of new non-financial performance indicators. This leads to the changes in customers' behavior due to globalization and there was also a link between financial accounting requirements and regulations with management accounting practices. Internal operations factors include core competencies or management style within the organization and introduction of modern production technologies that may influence the management accounting function in the organization. Organizational factors were related to changes in organizational ownership such as acquisition or merger, organizational restructuring such as decentralization, hierarchical structure, downsizing and outsourcing, and the enhancement of corporate governance. Changes in the business environment often lead to changes in how organizations do their business, and how they operate and manage. This may indirectly influence the management accountants' roles and tasks, since management accountants play a vital role in providing information to facilitate and support the effectiveness of business operations and management [14]. Rapid changes in business environment such as globalization of markets, intensifying competition, and advances in information and production technologies are major factors contributing to the revolutions in management accounting in recent years [14]. Therefore, it is hypothesized that:

- H₁ Factors have a significant influence on management accountants' roles
- H₂ Factors have a significant influence on management accounting tools and techniques

46.3 Research Method

This study adopted the postal survey method in the collection of data. The aim of the questionnaire survey was to examine the perception of management accountants on their roles and management accounting tools and techniques used in their companies within two specified periods, from 2008 to 2012 and from 2013 to 2017. The perception of management accountants on the level of agreement of their roles over the past and next 5 years was measured using a five-point scale that ranged from “Strongly Disagree” (1) to “Strongly Agree” (5). Respondents were also required to determine the importance of factors that drive changes in their roles and the techniques used based on a five-point scale ranging from “Not Important” (1) to “Most Important” (5). The sample for this study is restricted to registered members with the Chartered Institute of Management Accountants (CIMA) Malaysia Division. A draft survey instrument was developed based on [15, 16] and other related literature review (e.g., [11, 17, 18]). The draft questionnaire was pre-tested face-to-face on a small group of academics and accountants prior to distribution and postage. Several constructive comments were received and minor changes were made accordingly. As the members list is kept confidential, CIMA Malaysia Division administered the mailing of the questionnaires. Through CIMA Malaysia, a general reminder was emailed to all members, which eventually resulted in a response rate of 4.7% (100/2130).

46.4 Findings

46.4.1 *Descriptive Analysis*

46.4.1.1 Respondents Background

Registered members with CIMA Malaysia Division held various job titles. They were involved in various areas such as auditing, information technology, risk management, operation, consultancy, business development, financial analyst, marketing, lecturing, and commercial controller. The majority of them held managerial positions relative to accounting positions with a considerable minority becoming corporate leaders. Table 46.1 indicates that 71% of the CIMA members held managerial positions; 18% of them are currently in the upper management level. The result suggests that management accountants were capable of reaching the top level of corporate management who were responsible for the health and performance of the organization.

Table 46.2 presents the results relating to the length of service of respondents with their current companies. The result indicates that about 34% of the respondents had been with the same companies for less than 5 years, followed by approximately 32% who had been with the same companies for between 5 and 10 years.

Table 46.1 Management hierarchy

	Frequency	Percentage	Valid percentage	Cumulative percentage
Top management	18	18.0	18.0	18.0
Middle management	7	7.0	7.0	25.0
Low level management	46	46.0	46.0	71.0
Non-managerial	27	27.0	27.0	98.0
No response	2	2.0	2.0	100.0
Total	100	100.0	100.0	

Table 46.2 Length of service

Years	Frequency	Percentage	Valid percentage	Cumulative percentage
<5	33	33.0	33.7	33.7
5 to 10	31	31.0	31.6	65.3
>10 to 15	14	14.0	14.3	79.6
>15 to 20	10	10.0	10.2	89.8
>20	10	10.0	10.2	100.0
Total	98	98.0	100.0	
No response	2	2.0		
Total	100	100.0		

However, there were 10 registered members who had been employed with the same company for more than 20 years. The results indicated that a large proportion (66%) of the respondents had been with the current company for 5 years or more.

46.4.1.2 Company's Background

Table 46.3 indicates that about 21% of the respondents were employed by companies involved in consumer products. This was followed by approximately 12 and 11% respectively, from trading/services and industrial products. However, almost one-third of the respondents were employed by companies under "other" grouping such as government, aviation, insurance, oil and gas, and education.

Table 46.4 presents the result in terms of size of the company. About 51% of the respondents came from small-size companies with total employees below 300. Meanwhile, about 25% of them were employed by large-size companies with total employees exceeding 1,200.

46.4.1.3 Management Accounting Staff

Table 46.5 reveals that the company size distribution influences management accounting staffing levels. Only 22% of companies in the sample had more than five qualified management accounting staff.

Table 46.3 Type of industry

	Frequency	Percentage	Valid percentage	Cumulative percentage
Consumer products	21	21.0	21.2	21.2
Industrial products	11	11.0	11.1	32.3
Construction	6	6.0	6.1	38.4
Trading/Services	12	12.0	12.1	50.5
Infrastructure	1	1.0	1.0	51.5
Finance	6	6.0	6.1	57.6
Hotels	1	1.0	1.0	58.6
Properties	5	5.0	5.1	63.6
Plantation	4	4.0	4.0	67.7
Mining	1	1.0	1.0	68.7
Other	31	31.0	31.3	100.0
Total	99	99.0	100.0	
No response	1	1.0		
Total	100	100.0		

Table 46.4 Total employees

	Frequency	Percentage	Valid percentage	Cumulative percentage
<300	50	50.0	51.0	51.0
300–600	12	12.0	12.2	63.3
601–900	8	8.0	8.2	71.4
901–1200	4	4.0	4.1	75.5
>1200	24	24.0	24.5	100.0
Total	98	98.0	100.0	
No response	2	2.0		
Total	100	100.0		

Table 46.6 shows that most of management accountants in various companies were all in a centralized location, with other members of the finance function (68%). This was followed by about 16% of companies with their management accountants located in various departments within the company.

46.4.1.4 Management Accountants' Role

Table 46.7 reveals that the most important roles of management accountants over the past years were as financial analyst, business analyst, and consultant. The result indicates that even over the past years, management accountants' role has expanded beyond the conventional boundary of being scorekeepers and number crunchers.

In essence, by 2017, the results showed that becoming financial controller, future-oriented, and business planner were highly expected of management accountants. In addition, it was apparent that management accountants are required to play a significant role at the strategic level and overall business level in the future years.

Table 46.5 Number of qualified management accountant

	Frequency	Percentage	Valid percentage	Cumulative percentage
<5	60	60.0	77.9	77.9
5–10	6	6.0	7.8	85.7
11–15	1	1.0	1.3	87.0
16–20	2	2.0	2.6	89.6
>20	8	8.0	10.4	100.0
Total	77	77.0	100.0	
No response	23	23.0		
Total	100	100.0		

Table 46.6 Physical location of management accountant

	Frequency	Percentage	Valid percentage	Cumulative percentage
All in centralized location	67	67.0	68.4	68.4
All in decentralized location	16	16.0	16.3	84.7
More than half in centralized location	10	10.0	10.2	94.9
More than half in decentralized location	5	5.0	5.1	100.0
Total	98	98.0	100.0	
No response	2	2.0		
Total	100	100.0		

Table 46.7 Comparison of top ten management accountants roles

2008–2012	2013–2017
Financial analyst	Financial controller
Business analyst	Future-oriented/Pro-active/“All rounder” personnel
Consultant	Business/budget planner and Leader/manager of staff
Business partner	Strategy formulator
Corporate police	Business performance evaluator
Business advocate	Relevant and timely information provider
Change agent	Interpreter presenter of management accounting information and business advisor
Scorekeeper	Financial analyst
Number cruncher	Risk analyst and value creator

46.4.1.5 Management Accounting Tools and Technique

Table 46.8 shows that strategic management accounting continues to remain important in the period 2013–2017 (ranks 3 to 1). The result also indicates that two new tools have been included in the future period top rankings: Activity-Based Costing (rank 7) and Activity-Based Management (rank 10). However, standard costing and target costing have been dropped from the top ranking list. Specifically, there was a significant increase in the future period ranking for balanced scorecard (from rank 8 to 3). Nevertheless, the remaining top tools in the past period are still perceived to be top ranked tools by 2017.

Table 46.8 Comparison of top ten past and future management accounting tools and techniques

2008–2012	2013–2017
Budget	Strategic management accounting
Variance analysis	Budget
Strategic management accounting	Balanced scorecard
Ratio analysis	Variance analysis
Cost volume profit analysis	Ratio analysis
Rolling forecast	Rolling forecast
Standard costing	Activity-based costing
Balanced scorecard	Cost volume profit analysis
Target costing	Total quality management
Total quality management	Activity based management

Table 46.9 Top ten factors driving change

Change Drivers	Frequency	Percentage
Core competency aims (OF)	74	74.0
Changing work patterns/attitudes (OF)	74	74.0
Broader scope of accountability (OF)	71	71.0
Corporate governance (OF)	69	69.0
Organizational restructuring (OF)	69	69.0
Intense competition (EF)	68	68.0
New management style (OF)	66	66.0
Information technology (OF)	66	66.0
Globalization/internalization (EF)	60	60.0
Customer orientated activities (EF)	59	59.0
Quality orientated activities (OF)	54	54.0
External reporting requirement (EF)	47	47.0
Alliances expansion (EF)	45	45.4

46.4.1.6 Factors Driving Change

There were 23 factors used in the questionnaire to measure changes in management accountants' roles and management accounting tools and techniques. Table 46.9 presents the ten most important factors perceived to drive the change in management accountants' roles and management accounting tools and techniques adopted by Malaysian companies. The result indicated that 74% of the respondents had equally ranked both core competency aims and changing work patterns and attitudes as the key drivers for management accountants' tasks and skills and management accounting tools changes. This was followed by 71 and 69% of the respondents, respectively, choosing broader scope of accountability and both corporate governance and organizational restructuring. Further to that, 68% of the respondents viewed the intense competition that drove the change in management accounting practice within various companies. However, the external reporting requirement and alliances expansion were perceived as the eighth (47%) and ninth (45%) most important change drivers. It was apparent also that these top factors can be grouped into

Table 46.10 Simple linear regression tests of factors driving change influence towards roles

Roles = $b_0 + b_1 \text{Factors} + \varepsilon_i$				
Expected sign	b_0	b_1	Model p value	Adjusted R^2
$n=100$	75.887 (0.000)	0.334 (0.000)	(0.000)	0.178
$b_0 = \text{Constant}; b_1 = b_1 \text{Factors} + \varepsilon_i \text{Roles} = 75.887 + 0.334 \text{Factors}$				

Table 46.11 Simple linear regression tests of factors driving change influence towards tools and techniques

Tools and techniques = $b_0 + b_1 \text{Factors} + \varepsilon_i$				
Expected sign	b_0	b_1	Model p -value	Adjusted R^2
$n=100$	26.579 (0.000)	0.612 (0.000)	(0.000)	0.393
$b_0 = \text{Constant}; b_1 = b_1 \text{Factors} + \varepsilon_i \text{Tools and techniques} = 26.579 + 0.612 \text{Factors}$				

either external factors (EF) or organizational factors (OF), however, as indicated in Table 46.9, most of the significant change drivers can be linked to factors within the company.

46.4.2 Results of Simple Regression Analysis

46.4.2.1 Investigation on Influence of Factors Driving Change towards Management Accountants' Role

Table 46.10 presents the result of the simple regression analysis carried out to investigate how much factors that drive change influence management accountants' roles in various companies. In assessing how good the overall model was, the results revealed that the model was significant (p value = 0.000) at 5% level. In addition to testing for the significant of the model, the coefficient of multiple determination Adjusted R^2 value was also sought. The result indicated that 17.8% of the variation in management accountant roles was accounted for by the factors that drive change. Therefore, H_1 is accepted.

46.4.2.2 Investigation on Influence of Factors Driving Change towards Management Accounting Tools and Techniques

Table 46.11 tabulates the result of the simple regression analysis carried out to investigate how much factors that drive change influence the management accounting tools and techniques used by companies. The result showed that the factors and the overall regression model was significant (p value = 0.000) at 5% level and the coefficient of multiple determination, Adjusted R^2 revealed a value of 0.393 suggesting that 39.3% of the variation in management accounting tools and techniques used

by companies can be explained by the factors that drive the change. Therefore, H_2 is accepted.

In summary, the results from the regression analysis indicated that factors that drive change provided significant distinctive contribution to the change in management accountants' roles and management accounting tools and techniques adopted in various companies.

46.5 Conclusion

The present study has examined the factors that led to changes in management accountants' roles as well as its tools and techniques based on the views of management accountants in Malaysian companies during two recent 5-year periods. Hence, this study was carried out with the aim of providing evidence on contemporary management accounting change in Malaysia. The survey findings revealed that management accountants' roles are dynamic as they changed to meet with the changing needs of their companies. They continue to remain relevant with greater focus on formulating and implementing strategies towards enhancing organizational performance, creating values for various stakeholders and effectively managing risk. It was apparent that management accountants' role has expanded beyond their conventional boundary and continues to evolve over time. In addition, with strategic management accounting expected to gain prominence in the latter period, respondents' strongly viewed that major change in management accounting practice in Malaysia will indeed become the vital support, which management accountants can easily provide to achieve successful implementation of both business and corporate strategies.

The findings from the present study indicated that changes in management accounting practices in relation to management accountants' roles and, the tools and techniques adopted can be attributed to the factors driving the change. It is clear that both external environmental factors and organizational factors have significantly influenced the management accountant's roles and management accounting tools and techniques adopted. Several most prominent external environmental factors discovered were intense competition, globalization, and customer-orientated activities. Companies have shifted their focus towards meeting or exceeding customers' needs and their core activities due to intense competition and globalization. These factors gave rise to new tools adopted and more involvement of management accountants as well as the increased in the level of skills expected from them. Meanwhile, the crucial organizational change drivers found included core competency aims, changing work patterns and attitudes, broader scope of accountability, corporate governance and organizational restructuring. Thus, these organizational factors also have led organizations to use innovative techniques alongside the traditional ones, and management accountants performing new tasks over the recent period. This situation caused management accountants' role to change too in order to meet with organizations' new demands. Thus, the finding from the present study complements prior studies by Paulsson and Goretzki et al. [19, 20], who also found that the role of

management accountants has changed from a bean counter role to a business partner role. Paulsson [19] stated that one common explanation for this development is the organizational factor, specifically the introduction of new management tools.

Therefore, the implication of the study is that top management of organizations can exhibit substantial confidence in enhancing business performance that can be made by a better understanding of the change drivers, empowering management accountants and adopting innovative techniques. It is also pertinent to ensure that ongoing professional training and education reflect the demands to be expected of Malaysian management accountants in the ever-changing business environment. Moreover, management accounting is an area of accounting which generates information for managers and plays an important part in the strategic process within an organization [21].

The limitations associated with the survey method used included the low response rate, sample size, and generalization issue. The sample selected is limited to Malaysian registered CIMA members.

Several potential areas for future research are suggested. Future studies can be conducted to examine which factors specifically influence the change in management accounting in Malaysia. In addition, a case study method can also be used to enable an in-depth understanding of factors driving the change in management accounting practices in Malaysian companies. Thus, an understanding of the overall phenomena in its natural settings ensures a deeper explanatory power to the investigation.

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Chapter 47

Punctuated Governmental Regulatory Requirements in Islamic Finance Industry

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Abstract This paper discusses the issues concerning Shari'ah compliance function of Islamic financial institutions in Malaysia and highlights the reaction of the institutions on the recent announcement of Shari'ah Governance Framework from the Central Bank of Malaysia. From a qualitative data analysis, it was found that the participants welcome any frameworks from the Central Bank to strengthen Shari'ah compliance function in the organization. Nevertheless, there was resistance to change where several issues occurred in the process to comply with the regulatory frameworks.

Keywords Shari'ah governance framework · Shari'ah compliance function · Islamic finance · Regulatory

47.1 Introduction

Financial crises made it necessary for the Islamic financial institutions (IFIs) to be properly regulated and supervised to ensure stability in the financial system. IFIs have distinguished features as compared to conventional financial institutions. The whole operation must fulfill regulatory standards and Shari'ah's requirements. Shari'ah is a set of rules acting as a backbone of Islam. The sources of Shari'ah are *Al-Quran* (the book of Allah), *hadith* (the saying of the Prophet) and *sunnah* (the practice of the Prophet). IFIs need to control the noncompliance of Shari'ah principles and the possibility of fraud, to maintain their reputation and to secure the benefit of mankind both in this world and the next. In order to ensure that these IFIs to carry out their activities in accordance with the rules and regulations and proper adherence to Shari'ah, a robust Shari'ah compliance function is necessary.

The IFI industry in Malaysia is governed by the Central Bank of Malaysia (CBM) and the Securities Commission of Malaysia (SC). Islamic Financial Services Board (IFSB) standards are being adopted in Malaysia and some are being used as guidance to arrive at Malaysia's set of standards in the area of governance, capital and risk management. Proactive steps and the development of regulatory requirements

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and guidelines provided by the CBM also make a conducive environment for the IFI industry to grow. Examples of guidelines are: Guidelines on Corporate Governance for Licensed Islamic Banks and Guidelines on Shari'ah Governance Framework for Islamic Financial Institutions (SGF). The regulatory framework for IFIs includes the Islamic Banking Act, the Takaful Act, BAFIA 1984, the Securities Commission Act 1993, the Capital Market Service Act and the Central Bank of Malaysia (Amendment) Act 2003. Recently, the Malaysian government introduced Financial Services Act (FSA) and Islamic Financial Services Act 2013 (IFSA) to promote better legal and regulatory principles in accordance with Shari'ah's precepts. The supervisory function of the CBM is to ensure IFIs to resolve issues of disputes or agreements and the challenges that exist.

The purpose of this study is to discuss reactions of IFIs, specifically Islamic banking, on the recent Shari'ah Governance Framework (SGF) announced by CBM. The SGF's purposes are to provide comprehensive guidance to IFIs on the Shari'ah Governance structures, processes and arrangements, and to ensure Shari'ah compliance in all activities and business operations. The framework took effect on 1 January 2011 and IFIs were given 6 months from the effective date to comply with all the requirements. There are several functions highlighted in the framework that is Shari'ah risk management control function, Shari'ah review function, Shari'ah research function and Shari'ah audit function [1]. This is a proactive step taken by the CBM to cope with rapid growth of Islamic finance in Malaysia due to financial crisis, globalization and liberalization, increasing complaints and demand from customers. This is also to compete globally in achieving target to be the indisputable global hub for Islamic banking and finance. This article focuses only on Shari'ah compliance function.

47.2 Literature Review

In Malaysia, where centralized Shari'ah governance structure is being practiced, most IFIs indicate that there are a comprehensive set of rules and regulations concerning the Shari'ah governance [2]. The existing frameworks in Malaysia are the CBM's SGF, IFSB Guiding principles and AAOIFI Standards. The two-tier Shari'ah governance structure in Malaysia consists of two vital components: the Shari'ah advisory body at CBM and an internal Shari'ah Committee formed in each respective IFI. This Shari'ah governance mechanism is required to meet the requirements of the Shari'ah compliant in all aspects of business transactions and operations. This is to uphold the principle of social justice and *Maqasid al Shari'ah* (MAS) or the objective or intent of Shari'ah [3, 4].

In a fully regulated industry, IFIs must comply with all the statutory and legal requirements. Two important laws and guidelines are Central Bank of Malaysia Act 2009 and the SGF. Related guidelines to the SGF are: Guidelines on Corporate Governance for Licensed Islamic Banks, Guidelines on Directorship for Takaful Operators, Guidelines on Financial Reporting for Licensed Islamic Banks, Guidelines on

Internal Audit Function of Licensed Institutions, Guidelines on Introduction of New Products, Guidelines on Introductions of New Products for Insurance Companies and Takaful, Guidelines on Outsourcing of Islamic Banking Operations and Guidelines on Outsourcing for Takaful Operators. These are the mechanisms to ensure Shari'ah compliance as the main objective of IFIs.

The different features of IFIs make it beneficial to study on their reaction on the development of regulation. This is because of the unique characteristics of IFIs and the salient features of Islamic finance. There are five basic Shari'ah principles in financial transactions. This includes prohibition of *riba* (in excess or usury), application of *al-bay* (trading and commerce), avoidance of *gharar* (uncertainty or ambiguity), prohibition of *maisir* (gambling) and prohibition of engaging in the production of prohibited commodities [3]. Those who are involved in Islamic finance must adhere to these basic principles.

Furthermore, Islamic financial products should contain more *masalih* (benefits) and less or no *madarah* (harm). This is essential in the objective or intent of Shari'ah of Islamic finance. MAS is the realization of benefit to the people, concerning their affairs both in this world and the hereafter. It is generally held that the Shari'ah in all of its parts aims at securing a benefit for the people or protecting them from corruption and evil. MAS prohibits acquiring wealth in unlawful means, which leads to social inequality and waste [5].

The Quran explained the main MAS when it declares, “*And we have sent you (O Muhammad s.a.w.) not but as a mercy for the alamin (mankind, jinns and all that exists)*”. (Al Anbiya': 107)

MAS in Islamic finance involves product development through Shari'ah, *fiqh* and *ijtihad*. It is different from the conventional financial practices in products, operations, legal requirements, tax and accounting treatments. It is a challenge for IFIs to design a product or service that follows Islamic teaching and is at the same time competitive, profitable and viable in the long run [7]. Failing to understand the MAS and its application to modern *muamalah* transactions lead to potential abuse of MAS to justify certain contracts which in fact are contradictory to the Shari'ah texts and principles.

The person involved in Shari'ah compliance function should be proficient in applying auditing standards and procedures as well as proficient in Islamic Legal Maxims and *Usul Fiqh* relating to Islamic banking products and operations [8]. In addition they should also be aware of the evolutionary change of Islamic financial system in the early medieval period and as it exists now, not only in the variety of institutions but also in the modes of financing [9]. The Shari'ah compliance function must change and develop to be able to cope with the change and development of Islamic finance.

It is noted that in addition to technology, regulatory changes also have an affect on organizations. The effects can either be by limitation or expansion [10]. Industries that are often subject to regulation by governing bodies include airlines, banks and public utilities are often regulated by governing bodies because of the nature of their respective industries. In the banking industry, the intent is to provide a mechanism for supervision and control risk-taking by individual banks [11]. In order to

understand the affect of regulation on the behaviour of organizations, it is important to look on how the organization responds to the regulatory change [10].

Government agencies are limited in their influence where forces in the field may obstruct or impede the impact of the government [12]. Institutional literature has implicitly assumed that the change driven by the state is relatively easy to accomplish because of the direct effect of policies on firms (see, for instance, DiMaggio and Powell) [6, 12]. However, previous research noted that ‘legal requirements do not always ensure adoptions’ [13].

Many studies have been done on the reaction of an organization in a fully regulated industry. However, less research is done specifically in the IFI industry. With the rapid development of Islamic finance, it is beneficial to study how organizations respond towards the change of regulation.

47.3 Research Method

The overall objective of this study is to understand the Shari’ah compliance function of the Islamic banking industry and specifically, to study how the function responds to the announcement of SGF by CBM. In depth, semistructured interviews were conducted with participants closely involved in the Shari’ah compliance function of Islamic banks and have been in the industry before and after the announcement of SGF 2011. All interviews were conducted at their natural setting and controls have been taken not to restrict any new emerging issues. Transcriptions of the interview have been prepared. In addition, data were also collected using open ended questionnaires sent through emails. Participants include the Head of Shari’ah Audit Department, Head of Internal Audit Department, Senior Managers of Shari’ah Department and Members of Shari’ah Committee of Islamic banks. Atlas.ti has been used as a tool to manage all the data from the transcriptions and emails.

47.4 Findings and Discussions

This section will discuss the reaction of Islamic banks on the announcement of the recent framework by CBM. It has been found that all participants agree that SGF announcements are welcomed by the industry players as it assists Islamic banks on their Shari’ah governance development. They also believe the SGF will strengthen the Shari’ah compliance function in the banks. The head of the Shari’ah audit department stated that:

We are very positive with the new development and any guidelines issued by CBM. We are actually waiting for any guidelines to be announced. If there’s isn’t any guideline, it will become a disadvantage for us in the industry. We cannot do it alone. With guidelines, everybody has to do it. So everybody are playing on the same field

The participants also believe that the SGF shows the government's support for the development of Islamic banking industries as it is the first framework on Shari'ah governance. They think that the framework is adequate to show general principles of Shari'ah governance framework. The explanation of key functions' role and responsibility are well defined by CBM. The head of the Internal Audit Department stated that:

We believe the SGF is the most comprehensive framework at this moment and its preparation has taken into consideration the best practices as well as the standards issued by standard setting bodies such as AAOIFI, IFSB and Basel

Participants from two full-fledged Islamic banks stated that the framework acted as a symbol of Islamic banking existence and showed its difference from the conventional banks. The framework can also be used as an enforcement mechanism from the higher level of management to the lower level of management. Organizational inertia will eventually be confronted by change from outside the organization. Institutional theory states that organizations will change under pressures from the environment [14]. As one of the participants mentioned:

SGF is coming from the Central Bank. Whether the bank like it or not, it should be there. If you do not comply, CBM will take action

A few other participants also welcomed the framework as a sign of Islamic banking's existence and to highlight the unique characteristics of Islamic banking's structure in the dual banking system in Malaysia. Apart from a positive response on the announcement of SGF, participants also raised their concerns on the need for a new framework, as Islamic banks are already in a highly regulated environment. As one of the Senior Managers mentioned:

Islamic banking is nothing more than doing the banking practice the Shari'ah compliant way. The key word is "banking". There is no need for additional requirements for corporate governance. IFIs are regulated companies. The corporate governance and all the regulations governing the conducts of the IFIs are there to safeguard the IFIs' good governance. Shari'ah governance framework should not interfere with the existing corporate governance of the IFIs. It should be dedicated to give guidance on matters that are strictly Shari'ah in nature. The issues in the above provision have been dealt with by the existing corporate governance

Participants also highlighted the issues of additional work that needs to be done in order to comply with the framework. For example the Head of the Shari'ah department of one Islamic bank said that it is a challenge to fulfill all the requirements stipulated in the framework such as having a minimum of five Shari'ah Committee members, adequate internal Shari'ah officers and implementing Shari'ah review and also Shari'ah audit functions.

A Senior Manager of another bank also agreed with the statement and state that:

The issue is not with the introduction of a set of rules governing Shari'ah management of IFIs. The issue is with the lack of proper research into practical issues facing the IFIs and what is best to assist them to carry out their Islamic banking and business in compliance with Shari'ah. The theoretical approach of the SGF is not really of assistance. This, given the fact that Islamic banking practitioners are already having additional requirements to meet, more intensive documentation, more time for the administration of underlying transactions, and many more that are not found under the conventional practice

The Islamic banks (and other IFIs) generally welcomed the good intention of CBM. However, the SGF has posed so many issues and left so many questions unanswered. Apart from that, CBM has made a new imposition that is considered severe, e.g. the minimum composition of the Shari'ah Committee has been increased from 3 to 5 members. A reality check will show that finding candidates for appointments onto the Shari'ah Committee is a very challenging task. Even though the SGF allows for non Shari'ah scholars to be appointed onto the Shari'ah Committee, the majority of the members must be with Shari'ah background. The SGF stipulates that a member with no Shari'ah background must have the necessary expertise or experience in Islamic banking practice.

This shows a sign of resistance to change by the institution that is being influenced by the availability of resources. Gallo [11] argued that organizational response to exogenous shock is being influenced by the resource profile of the organization.

The next section will discuss the Shari'ah compliance function after the announcement of the framework. The participants argue that the compliance framework has already been founded and practiced by IFIs. It began at the moment when the banks got involved with the development of Islamic products and services. However, there is an issue on whether there is any need for new guidelines in addition to the existing ones. This was raised by one of the participants by saying:

The establishment of various functions in the IFIs is based on corporate governance as well as business requirements. As a general principle, IFIs should not be differentiated from the conventional financial institutions in terms of regulatory supervision and impositions. In this instance, a new initiative is required to comply with the above provision. This would involve a major exercise. Further, the new set of policies and procedures established would entail new deliverables and new inter-divisional interactions and arrangements. Consequently, by default, this would just enhance the bureaucratic processes in the "communication arrangement among the various functions" within the IFIs. When this happens, there bound to be delays in what used to be the normal communication between departments and divisions. This would also mean delays in the Shari'ah approval processes

Despite various responses to SGF, efforts have been made by the Islamic banks to comply with all the requirements. A gap analysis was done and changes were made such as the empowerment of Shari'ah committee, roles, functions, organizational structures and operations.

Participants also mentioned about whether there is any mechanism to seek exemptions from complying with certain undoable requirements. For example, banks are still struggling to comply with the requirements to have the minimum composition of five members for their Shari'ah committees. They also recommended that the CBM should issue new frameworks after a thorough research has been done by a team of Islamic banking experts. Any concept introduced in a regulation issued by CBM as a regulator must be well defined.

It can be concluded that, any frameworks or guidelines issued by the CBM are welcomed by the Islamic banks as a reference and enforcement mechanism in the institution, in order to ensure Shari'ah compliant. However, it is being hoped that thorough research has been done, taking in consideration the Islamic banking expert's opinion, in order to ease IFIs to comply with all the requirements. This includes taking in consideration the availability of resources in the industry.

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Chapter 48

Exploring the Relationship Between Leadership Style, Knowledge Management Practices, and Innovative Behavior

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Abstract In today's highly competitive marketplace, organizations have realized the importance of innovative behavior of employees. They believe creativity and innovation provide greater benefits in dealing with challenges of globalized economy. Although previous studies have given great attention to the innovative behavior of employees, less emphasis has been placed on sustaining this element. The practice and sustenance of innovative behaviors was not substantially discussed in previous literature. Past researchers also have discussed factors to sustain innovative activities in the organization. One of the main factors is leaders' role. Leadership style is crucial in organizations to boost innovation performance. It is, therefore, imperative to investigate these leadership practices and most importantly understand how these variables can influence the practices and sustainability of innovation in organizations. Another main factor besides leaders' role which is believed to have an influence towards employees' innovative behavior is knowledge management practices. Knowledge management practices are able to enhance innovation in an organization Industries should, therefore, build a culture in which knowledge is valued across their business. Many organizations realized the importance of knowledge management practices but not many are willing to invest in it. This investigates practices and issues of knowledge management in organizations. The instrument used for data collection is a survey questionnaire responded by 84 employees working in private organizations in Shah Alam. Data was analyzed using Pearson Product Moment Correlation Coefficient and results indicate that transformational and transactional leaders have positive relationships with innovative behavior. This means that to boost innovativeness, leaders must able to demonstrate and practices transformational and transactional leadership styles. Knowledge responsiveness was found to be more important for organizations when responding to customer needs. The findings of this study assist managers in identifying and using the appropriate leadership styles, and thus contribute towards increased innovative behavior among employees.

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Keywords Leadership style · Transformation leadership · Transaction leadership · Laissez-faire · Knowledge management practices · Innovative behavior · Malaysia

48.1 Introduction

Innovation, according to Krstić and Petrović [1] and Milford [2], is a process by which value is created for customers through public and private organizations that transform new knowledge and technologies into profitable products and services for national and global markets. A high rate of innovation in turn contributes to more intellectual capital, market creation, economic growth, job creation, wealth, and a higher standard of living. Similarly, other researchers define innovation as the process of creating something new in the organization [3]. Innovation includes fostering creativity, supporting research and development and experimentation, developing new processes, introducing new products and services, and technological leadership. Likewise, Lin and Chen [4] say that innovation is both creating and bringing new technologies, new products, new services, new marketing ideas, new systems, and new ways of operating into profitable use. The innovative behavior of employees is key to increasing innovative performance in the organization.

However, the issue with innovation is in the measuring of successful innovation. According to Kerr and Fu [5], measures of innovative success vary by company and industry and have suggested measuring innovation in terms of patent creation and research and development. For example, in measuring innovation some companies create patent after patent and boast of their innovative capabilities while other companies may measure innovation according to the amount of money spent on research and development, which directly correlates with the amount of innovative products, processes and services. However, O'Regan et al. [6] believe that innovation has nothing to do with how many R&D dollars the organization has or how many patents have been registered, but is related to the employees that the organization has and how it leads employees to be innovative.

To increase innovation, organizations need to focus on the variables that are believed to be able to increase innovative behavior of employees. According to Krstić and Petrović [1], Rahim et al. [7], Liao [8], and Wang [9], it is undeniable that the effectiveness of knowledge management implementation enhances innovativeness, effectiveness, and efficiency.

Besides knowledge management, organizations must also focus on how to increase the innovative behavior of employees through appropriate leadership styles. Leaders and their styles of leadership and behavior with followers or subordinates and resources are believed to influence the performance of an organization. According to Bass [10] leadership is defined as the ability to influence and develop individuals and teams to achieve goals that have been set by the organization. This research focuses on the transformational leadership, transactional leadership, and laissez-faire leadership styles.

Transformational leadership style in this research is defined as superior leadership performance that occurs when leaders broaden and elevate the interests of their employees and inspire followers to look beyond their own self-interest, whereas transactional leadership helps followers identify what must be done to accomplish organizations' desired goals and objectives [10]. In other words, transactional leaders provide tangible or intangible support and all forms of resources to followers in exchange for their efforts and performance, specify rules of the game, and set and maintain standards. Transactional leadership employs a series of rewards including pay increases and promotions, or punishment including disciplinary actions and job termination. The transactional leaders might not be successful when they could not control the rewards or punishments, or when the employees do not want the reward or act out of fear to avoid punishment. According to Bambalee et al. [11] liberal leadership style among all leadership styles is laissez-faire leadership. It is a leadership style in which the leader provides little or no direction and gives employees as much freedom as possible. Though, laissez-faire leadership might look like a weak style of leadership, the approach could be effective when employees are highly skilled, experienced, and educated [11]. With regard to the type of leadership style, this study selected three types of significant leadership style which are transformational leaders, transactional leaders, and laissez-faire leaders to determine which leadership style is preferred to increase innovative behavior among employees in Malaysian organizations.

48.2 Literature Review

Javed et al. [12] have conducted similar studies as depicted in Table 48.1. This table shows that the most popular leadership style used is transformational and transactional. Therefore, this study explored these two leadership styles in Malaysian organizations. It can be concluded that according to study done by [12], 43.3 % of researchers have selected transformation and transaction leadership style as essential variables need to be studied. Moreover, [12] also said that transformational and transactional style approached involves in motivating and enhancing the morale of employees through reward system.

Organizations who aim to become more innovative should capitalize on their employees' ability to be innovative. As stated earlier, this study focuses on the innovative behavior of employees and the role leaders play in enabling and enhancing such behavior. The ability of employees to innovate may be defined by a variety of factors, and can be put into practice in different ways. However, there is a need to have a strong support to shape employee innovative behavior. It is about letting the employee use his cognitive abilities, taking actions that support his creativity, but this is not possible in the work environment without the support and involvement of the leadership [13]. Consequently, to initiate innovations, leaders can encourage employees to generate ideas by engaging in behaviors to explore opportunities, identify performance gaps or produce solutions for problems. However,

Table 48.1 Frequency and percentage of research areas (Leadership Style) done by researchers [12]

No.	Leadership style area	Frequencies	Percentages
1	Transformational and transactional style	13	43.3
2	Task oriented leadership styles	6	20
3	Charismatic leadership style	5	16.6
4	Contingent reward leadership	2	6.67
5	Laissez-faire leadership styles	2	6.67
6	Autocratic leadership style	2	6.67
7	Polycentric leadership styles	1	3.34
8	Machiavellian and bureaucratic styles	1	3.34
9	Synergistic leadership style	1	3.34
10	Ethnocentric leadership style	1	3.34
11	Expansionist leadership style	1	3.34
12	Pygmalion leadership style	1	3.34

without a good information system and knowledge, employees are unable to boost innovative behaviors. Knowledge management is crucial because it emphasizes the importance of innovative organizational culture, where innovation, creativity, and learning from mistakes are appreciated. Knowledge management helps create tools, platforms, and processes for creation, sharing, and transfer of tacit knowledge in organizations. Additionally, tacit knowledge is very important for the development of innovation capability [1].

48.3 Methodology

A correlational study is a quantitative method of research which is used to determine if there is a relationship or covariation between the two variables. The instrument used for this study was adapted from Darroch [14], Bass and Avolio [15], and Hackman and Oldham [16]. However, the questionnaire required some modifications to render it more appropriate to the context of this study. The questionnaire consisted of four sections in which Section A was to obtain information regarding demographic of respondents, Section B was to collect information about knowledge management practices, Section C obtained information regarding employees' innovative behavior, and Section D was regarding leadership style preference. The instruments were adapted from Darroch [14], innovative behavior [15], and leadership style [16]. A five-point Likert scale was used ranging from strongly disagree (1) to strongly agree (5). The population for this study was executive officers who worked in the private organizations located in Shah Alam. The list of industries in Shah Alam was obtained from the Shah Alam City Council's websites (MBSA). This website provides a listing of 4784 private organizations which are registered with the MBSA. Due to constraints, the sampling technique chosen for this study was convenience sampling. Convenience sampling is a nonprobability sampling method. This study employs this sampling method because the population is so large that it is impossible to include every individual.

Table 48.2 Cronbach's alpha scores for the knowledge management, innovative behavior, and leadership style items

Variables	No. of items	Reliability coefficient (Cronbach's alpha) (<i>n</i> = 84)
<i>Knowledge management</i>		
Knowledge acquisition (KA)	11	0.85
Knowledge dissemination (KD)	14	0.86
Knowledge responsiveness (KR)	9	0.87
<i>Innovative behavior</i>		
Innovative behavior	8	0.89
<i>Leadership style</i>		
Transformational leadership	5	0.94
Transaction leadership	6	0.86
Laissez faire	4	0.83

Distribution of questionnaires was self-administered by the researchers; the respondents were given a time frame of 2 weeks to complete the questionnaires. A follow-up call was conducted to remind them of the due date for collecting questionnaires. The total numbers of questionnaires successfully collected was only 84 from 300 questionnaires distributed. Exploratory data analysis (EDA) was conducted on the data and the results met the basic assumptions of normality and linearity. Cronbach's alpha coefficients were calculated to test the reliability of items and the result indicated acceptable value as shown in Table 48.2 (0.83–0.94). The values indicate that the instrument was reliable because none of the results scored below 0.6. Pearson correlation and regression were used to obtain the answers for the research questions.

48.4 Findings and Discussion

The findings indicate that knowledge management practices, and leadership role are positively related to innovative behavior among employees in the private sector. Below is the discussion of the research objectives.

48.4.1 *Practices of Knowledge Management Strategies in Private Organizations*

To identify the most important item, the data was analyzed for mean scores and standard deviation, and ranked in descending order. The findings indicate that knowledge management practices in private organizations shows knowledge responsiveness is most important activities for the organization. Knowledge responsiveness performance is moderately higher than knowledge acquisition and knowledge dissemination. Table 48.3 shows the results of mean score and standard deviation

Table 48.3 Mean score of knowledge management practices ($N=84$)

	Mean statistic	SD statistic
KR	3.6827	0.54679
KA	3.5494	0.53593
KD	3.4331	0.50832

for knowledge management practices. The highest mean scores is knowledge responsiveness (mean=3.68, SD=0.54). It is significantly the most important activity to the organization. This was followed by knowledge acquisition (mean=3.54, SD=0.53) and knowledge dissemination (mean=3.43, SD=0.50). The result has similarity with another research done by Darroch and McNaughton [17] which showed that knowledge acquisition and responsiveness to knowledge are more important in the organizations than knowledge dissemination.

48.4.2 The Relationship Between Knowledge Management Practices and Innovative Behavior

H1: There is a positive relationship between knowledge management practices and innovative behavior of employees

The assumptions for all the requirements for correlation analysis were met. Pearson correlation is used to describe the strength and direction of linear relationships between two variables [18]. Results indicated that there is a positive relationship between knowledge management practices and innovative behavior of employees in the organizations.

Table 48.4 shows that there is a moderate positive relationship between these two variables ($r=0.554, p<0.05$). The result proves that there is a significant positive relationship between Knowledge Management Practices (KMP) and innovative behavior (IB). The result appeared to support the fact that the more KM was utilized in the organization the more it would increase IB.

48.4.3 The Relationship Between Leadership Style and Innovative Behavior in Private Organization

H2: There is a positive relationship between leadership style and innovative behavior of employee

Table 48.5 depicts the results of correlation between leadership style and innovative behavior. The correlation coefficient value was positive ($r=0.386, p<0.05$) indicating a weak positive relationship between transformational leadership style and innovative behavior. The second type of leadership style (transactional) also indicated a weak positive relationship with innovative behavior ($r=0.358, p<0.05$). The correlation for the third leadership style, that is laissez-faire style ($r=0.326, p<0.05$) also indicated a weak positive relationship with innovative behavior.

Table 48.4 Correlation between knowledge management and innovative behavior ($n=84$)

		KMP	IB
KMP	Pearson correlation	1	0.554**
	Sig. (2-tailed)		0.000
	Sum of squares and cross-products	18.549	10.998
	Covariance	0.223	0.133

** Correlation is significant at the 0.01 level (2-tailed).

Table 48.5 Correlation between leadership style and innovative behavior ($n=84$)

Leadership style	Innovative behavior (r value)
Transformational	0.386**
Transactional	0.358**
Laissez-faire	0.326**

** Correlation is significant at the 0.01 level (2-tailed).

Although the positive correlation between transformational leadership and innovative behavior were explored, different specific leadership behaviors had different effects on innovative behavior to employees. Bass and Avolio [19] stated that transformational leadership and transactional leadership had been both viewed as effective and positive forms of leadership styles, and laissez-faire leaders were seen as passive people who leave everything on their subordinate to get on with their work.

48.5 Discussion and Conclusion

The most significant implication that has emerged from the study is the conclusion that leaders in organization should place more emphasis on knowledge management practices especially in developing strategies in embedded innovative behavior toward employees. Leadership style in preferences to be selected to increased innovative behavior is transformational leader followed by transactional and lastly laissez-faire. These findings suggest organizations closer to the top global companies, considering that the tendencies in leadership styles point to the need for a new generation of leaders who will be essentially different from the traditional manager. The leaders will increasingly be expected to conquer the context in which the organization functions. To all those who are studying leadership issues, this finding serves as a motivation and an argument for application of the most efficient leadership style, so that the human potential would be used best by activating and developing the capabilities of every individual, and thus increasing the flexibility and adaptive capabilities of an organization.

For future studies, it is suggested that specifics on the differences among various types of innovation and their knowledge needs be studied. This research has measured innovative behavior in terms of process. Future studies could focus on various other innovation types and innovative behavior such as technical, product and administrative innovations.

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Chapter 49

Office Environment and Office Productivity Relationship: An Empirical Study

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Abstract This paper discusses the empirical study of the impact of the office environment on office productivity from the perspective of the occupiers of a service organization in Malaysia that deals with processing of claims from their clients. The office environments were operationalized into behavioral and physical and Herzberg two-factor theory and distractive-conflict theory were used to support the relationship of office environment and office productivity. Based on a census study of all its employees, it confirmed previous findings that the behavioral environment has positive significant impact on office productivity. However the study only partially confirms the impact of physical environment on office productivity.

Keywords Office productivity · Office environment · Behavioral environment · Physical environment · Interactive · Distractive

49.1 Introduction

The service sector continues to be one of the driving forces of Malaysia's economic growth. It was reported in 2012 that 45.2% of total employment is from the service sector (excluding government services) [11]. With such a high contribution to the nation, productivity becomes an important factor. Productivity is normally associated with output over input. However in service sector particularly those who worked mainly in the office, that simple calculation may not apply. Haynes [4] and Leblebici [7] had found that office productivity is affected by office environment. It was further identified that office environments are represented by behavioral and physical environments. Since the service sector in Malaysia plays a significant role in its economic growth, this paper will examine whether the office environment in a service organization in Malaysia dealing with claims from its clients has any impact on its office productivity as described by Haynes [4] and Leblebici [7].

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49.2 Literature

Herzberg two-factor theory was used as the underpinning theory since it discussed hygiene as a source of reducing job dissatisfaction. The theory suggested that job dissatisfaction occurs when hygiene is low. It should be noted that the theory suggests that improving hygiene will reduce job dissatisfaction but will not increase job satisfaction. The hygiene being referred to included working conditions besides company policies, rate of pay, and job security to name a few components [6].

Distraction-conflict theory was used besides Herzberg two-factor theory since the former theory is able to explain the performance in individuals that are affected by the presence of others in performing the task at hand. An individual is said to be at a conflict between paying attention to the task and the person they are interacting with. This is considered the distraction. According to the theory, an individual can experience either an emotional reaction that facilitates the work process or vice versa. The presence of others which is a distraction can affect the performance of the primary task [12].

49.2.1 Office Productivity

The productivity of employees in the organization or workplace is measured by the output produced in the daily task [1]. However in cases where quantitative or traditional productivity measurements are not applicable, subjective productivity may be used based on personnel's subjective assessment [5].

49.2.2 Office Environment

Haynes [4] found that dynamic elements of the office environment have positive and negative influences on self-assessed productivity. He categorized office environments as interactive and distractive. His study found that behavioral and physical environments do have an impact on office productivity. Leblebici [7] further confirmed Haynes' [4] findings when a study was carried out at a foreign private bank in Turkey. It was found that office environment does have impact on office productivity. Hameed and Amjad's [2] study also found that environment in the workplace is one of the factors that contribute to productivity.

Behavioral environment is defined as "the perceived environment; the impression people have of their environment which is the basis for decision-making..." [9]. Haynes [3] has operationalized it as interaction and distraction. Interaction is defined as the ability of office workers to interact at both work and social levels. Haynes [4] found that interaction is linked to office layout as it can be seen as an enabler of interaction with the positioning of colleagues, equipment, and refreshments. Distractions on the other hand are the interruptions, crowding, and noise that

may disrupt the office environment [3] that is the function of office layout [4]. Leblebici [7] found that behavioral environment has greater impact on office productivity. The challenge for managers is to make the best use of the interaction component and minimize distraction components [10]. Thus the hypotheses are:

H1: Behavioral environment has positive significant impact on office environment.

H1a: Interactive environment has a positive significant relationship to office environment.

H1b: Distractive environment has a positive significant relationship to office environment.

Haynes [4] operationalized the physical environment as office layout and comfort. Office layout refers to the informal meeting areas, formal meeting areas, quiet areas, personal storage, and work areas—desk and circulation space. He found that comfort has significant impact on office environment than office layout. According to McGuire [8], to achieve the high level of employees' commitment, organizations must ensure that the physical environment is conducive to organizational needs, facilitating interaction and privacy, formality, and informality, functionally and cross-disciplinarily. Thus it is hypothesized that:

H2: Physical environment has positive significant impact on office environment.

H2a: Office layout has positive significant relationship to office productivity.

H2b: Comfort has a positive significant relationship to office productivity.

49.3 Methodology

49.3.1 Research Design

An empirical study was employed to understand the relationship between office environment and office productivity. The research was carried out in a noncontrived setting with individual as the unit of analysis. A cross-sectional study was undertaken for this study. Using census study the entire population of 250 employees were given the survey form.

49.3.2 Data Collection

A set of structured questionnaires was distributed to all the employees of the company. A drop-and-collect method was used to distribute the survey form. However due to low rates of return, the survey questions were later personally administered to the respondents. Out of 250 questionnaires that have been distributed, a total of 213 responses were obtained from the employees. From the 213 responses, 10 questionnaires were discarded due to incomplete information. The final response rate was 81%.

49.3.3 Measurement

The survey had six sections that comprised of Section A, B, C, D, E, and F. Section A covered demographic structure while the other five sections reflected the dependent and independent variables of the survey. All items used the Likert scale of 1 (strongly disagree) to 5 (strongly agree). A total of 44 items was used that was adapted from Hameed and Amjad [2]. Eight items were for Sections B, C, and E while 10 items were for Sections D and F.

49.3.4 Data Analysis

The data collected was analyzed using SPSS for descriptive analysis, frequency distribution, factor analysis, reliability analysis, descriptive statistic, and multiple linear regressions.

49.4 Findings

Based on the data collected, the total number of respondents who participated in this survey was 203, comprising 139 female and 64 male staff, that is, 68% and 31.5%, respectively. Most of the respondents' ages were within the range of 21–30 years. For education level, the high number of respondents were those with Degree level which is 98 respondents representing 48.3%, followed by Diploma with 8 respondents representing 42.4%. For the income level, 52.7% of respondents' salary was below RM 1500 and 30.5% income within the range of RM 1501–2000. Most of the respondents were Malay (94.6%). It was further found that 64.5% of the respondents were single. The figures can be seen in Table 49.1.

Factor analysis with varimax rotation was carried out to confirm the existence and relevance of the existing variables. The factor analysis was performed on behavioral environment and physical environment. The results are as shown in Tables 49.2 and 49.3, respectively. For Table 49.2 the factor analysis resulted in a four-factor solution. However two factors were removed since the loading for all items was low. The eigenvalues of the remaining two factors were greater than one and the total variance explained was 36.26%. The kaiser-meyer-olkin (KMO) measure of sampling adequacy was 0.758, indicating sufficient intercorrelations, while the Bartlett's Test of Sphericity was significant. The antiimage correlation matrix revealed that all the measures of sampling adequacy (MSA) were well above acceptance level of 0.5 after one of the items had been deleted due to the result of the MSA lower than the acceptance level of 0.5. The first five items loaded in factor 1, while four items loaded in factor 2. Four items were removed since it did not load in any factor. Factor 1 is interaction while factor 2 is distraction. For Table 49.3,

Table 49.1 Demographic profile

Demographic	Frequency	Percentage
<i>Gender</i>		
Male	64	31.5%
Female	139	68.5%
<i>Age</i>		
Below 20	1	0.5%
Between 21–30	160	78.8%
Between 31–40	34	16.7%
Above 41 years old	8	3.9%
<i>Education level</i>		
SPM	15	7.4%
Diploma	86	42.4%
Degree	98	48.3%
Others (please specify)	3	1.5%
Missing	1	0.5%
<i>Income level</i>		
Below RM 1500	107	52.7%
RM 1501–2000	62	30.5%
RM 2001–3000	20	9.9%
RM 3001 and above	14	6.9%
<i>Race</i>		
Malay	192	94.6%
Chinese	2	1.0%
Indian	8	3.9%
Others (please specify)	1	0.5%
<i>Marital status</i>		
Single	131	64.5%
Married	71	35.0%
Divorce	1	0.5%
<i>Health condition</i>		
Good	195	96.5%
Moderate	7	3.4%
Missing	1	0.5%

the results were a five-factor solution with one factor removed, since it has low loadings for all items. The eigenvalues for the remaining four factors were greater than 1.0 and the total variance explained was 54.85% of the total variance.

KMO measure of sampling adequacy was 0.778 indicating sufficient intercorrelations while the Bartlett's test of sphericity was significant. The antiimage correlation matrix revealed that all the measures of sampling adequacy (MSA) were well above acceptance level of 0.5. The first six items were loaded in factor 1; two items were loaded in factors 2, 3, and 4, respectively. Four items were removed because of weak loading. The two additional construct were identified besides the original two. The original construct were office layout and comfort that were

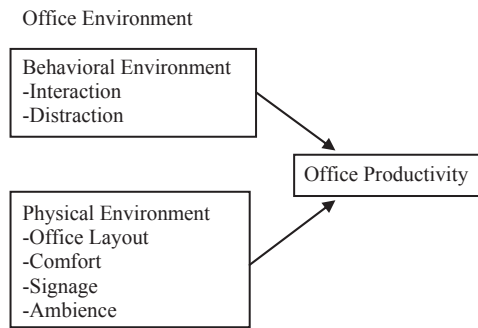
Table 49.2 Results of factor analysis for behavioral environment

Item	Components	
	Interaction	Distraction
Office is open enough to see colleagues	<i>0.806</i>	0.056
Able to share information	<i>0.766</i>	-0.001
Easy to interact with colleagues	<i>0.746</i>	-0.011
Conversation with colleagues is effective	<i>0.684</i>	-0.137
Easy to reach my supervisor	<i>0.601</i>	-0.001
Working environment too noisy	0.106	<i>0.678</i>
Able to work in quiet working environment	-0.092	<i>0.537</i>
Usually interrupted by my colleagues	-0.058	<i>0.737</i>
Place of workstation is crowded	0.022	<i>0.591</i>
Eigenvalue	3.553	1.886
Percentage variance (36.26%)	23.690	12.576

Table 49.3 Results of factor analysis for physical environment

Item	Components			
	Office layout	Signage	Comfort	Ambience
Furniture arrangement is conducive	<i>0.645</i>	0.167	0.075	-0.002
Satisfied with amount of space for storage	<i>0.719</i>	0.070	0.082	0.233
Office furniture is comfortable	<i>0.825</i>	0.124	0.154	0.129
Satisfied with desk circulation	<i>0.841</i>	0.146	0.038	-0.095
Satisfied with current office layout	<i>0.859</i>	0.192	0.061	-0.059
Complete daily task easily due to overall office environment	<i>0.558</i>	0.031	0.330	0.365
There is no signage	0.245	<i>0.835</i>	-0.127	-0.043
There is no labeling	0.265	<i>0.867</i>	-0.150	0.026
Office provided with air conditioner	0.182	-0.315	<i>0.730</i>	-0.057
Workspace provided with efficient lighting	0.102	-0.011	<i>0.827</i>	0.075
Ample amount of natural light	-0.015	0.049	-0.115	<i>0.728</i>
Atmosphere of office delightful	0.117	0.059	0.396	<i>0.699</i>
Eigenvalue	5.531	1.969	1.275	1.100
Percentage variance (54.85%)	30.727	10.938	7.081	6.108

Fig. 49.1 New theoretical framework



represented by factor 1 and factor 3, respectively. The new constructs were named signage and ambience and they were represented by factor 2 and factor 4. Thus physical environment was operationalized into office layout, signage, comfort, and ambience. The new theoretical framework is as stated in Fig. 49.1.)

Two new hypotheses were added to hypothesis 2. They were

H2c: Signage has a positive significant relationship to office productivity

H2d: Ambience has a positive significant relationship to office productivity

To ensure that the factors were consistent and reliable, Cronbach’s alpha was calculated for each factor. Interaction, distraction, office layout, signage, comfort, ambience, and office productivity had Cronbach’s alpha of 0.809, 0.533, 0.868, 0.906, 0.624, 0.408, and 0.869, respectively with no items deleted. All of the factors had high internal reliability, except distraction and ambience. The Cronbach’s alpha was 0.533 and 0.408, respectively. An explanation of such low Cronbach’s alpha could be that these factors has less number of items loading onto it, since most of the factors that have more items are loaded on to the factors that have high Cronbach’s alpha.

Based on the descriptive analysis in Table 49.4, comfort has the highest mean among the independent variables followed by interaction and distraction. The least score is signage.

Multiple linear regression was used to identify the better predictor variables that explained the dependent variable. The summary in Table 49.5 shows the value of standardized beta, *F* value, *R*², and adjusted *R*². The *R*² value is 0.238 which indicates that 23.8% of the variance in the dependent variable is explained by the independent variables. It was found that a behavioral environment represented by interaction and distraction has a positive significant relationship on office productivity. Thus hypothesis 1, 1a, and 1b were accepted. However under physical environment only comfort had the positive significant relationship to office environment. Therefore hypothesis 2 is partially accepted while hypotheses 2a, 2c, and 2d were rejected. It should be noted that the result for office layout is similar to that of previous study in that office layout has a negative influence on office productivity.

Table 49.4 Summary of descriptive statistic of the variables

Variables	Mean	Standard deviation
Behavioral environment (interaction)	3.74	0.55
Behavioral environment (distraction)	3.30	0.60
Physical environment (office layout)	2.90	0.69
Physical environment (signage)	2.70	0.80
Physical environment (comfort)	3.80	0.60
Physical environment (ambience)	3.14	0.67
Office productivity	3.80	0.54

All items used a five-point Likert scale (1—strongly disagree and 5—strongly agreed)

Table 49.5 Summary of multiple linear regressions of six predictors

	Office productivity
<i>Office environment</i>	
Behavioral environment (interaction)	0.267***
Behavioral environment (distraction)	0.275***
Physical environment (office layout)	-0.111
Physical environment (comfort)	0.244***
Physical environment (signage)	-0.007
Physical environment (ambience)	-0.142
<i>F</i> value	10.207
<i>R</i> ²	0.238
Adjusted <i>R</i> ²	0.215

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

49.5 Discussions

The result from the survey showed some interesting findings. Firstly, the factors for physical environment were not maintained as two distinct factors. Two more factors resulted from factor analysis that was renamed as signage and ambience. The regression results confirmed earlier findings that behavioral environment does have an impact on productivity. Both interactive and distractive environments have positive significant relationships with office productivity. This study further found only comfort has positive significant relationship with office productivity. Office layout, signage, and ambience were found to have no impact on office productivity. In fact if management were to increase signage or ambience of the company and improve on its office layout it would only have low impact on office productivity.

This research is significant since two new factors emerged after factor analysis was done. It further improves on literature the variables to be considered under physical environment. It reaffirms distractive-conflict theory that the company needs to differentiate tasks that required interaction among employees and tasks that required concentration requiring no distraction in the execution of their work. The company needs also to address the comfort of their employees since it has a positive significant impact on the office productivity.

The findings however cannot be generalized to other companies since the survey is carried out only in one company. The reasons as to why office layout, signage, and ambience have negative impact on office productivity could not be discussed since qualitative research was not carried out. It is recommended for future study to investigate the moderating effect of demographic profiling between office environment and office productivity and also to use qualitative approach in addressing the reasons of why office environment is important in office productivity.

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Chapter 50

The Effect of Shared Values, Trust, and Commitment on Information Sharing in Business Relationships

Zainah Abdullah and Rosidah Musa

Abstract The factors influencing information sharing between supply chain members in the distributive trade remain underresearched. Thus, this paper aims to address the gap by empirically investigating the effect of shared values, trust, and commitment on information sharing in the distributive trade. The data were collected from a survey sample of 232 wholesalers, distributors, and retailers in Klang Valley, Malaysia. Data analysis was conducted using correlations analysis, regression analysis, independent sample *T* test, and one-way analysis of variance (ANOVA). Regression analysis illustrates that shared values and commitment significantly influenced the level of information sharing of the wholesaler, distributor, and the retailers with their key trading partners. However, trust did not influence information sharing among supply chain partners in this study. The result from independent sample *T* test showed that there was no significant difference in the perceived level of information sharing according to gender of business ownership between the wholesaler, distributor, retailer, and their key trading partners. The results from one-way ANOVA also suggest that there was no significant difference in the level of information sharing according to the duration of business relationships with key trading partners.

Keywords Trust · Shared values · Information sharing · Commitment

50.1 Introduction

The small retailers face closure due to lack of competitiveness to modern retailers (large-retail format operators). To enhance the competitiveness of these small retailers, the government introduced the small retailer transformation program, or

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Program Transformasi Kedai Runcit (TUKAR), in the national key economic areas (NKEAs). This program is focused on supporting at least 10% of the estimated 50,000 small retailers to modernize their business operations and remain competitive [1]. Sales of the small retailers can be improved by up to 30% by improving the operations of these retailers [1]. The small retailers will receive retail management training from selected large-format retailers in improving the layout and point-of-sales (POS) system. POS will facilitate information sharing among supply chain (SC) partners. Quality information flows and transparency are required for successful supply chain collaboration between SC partners [2, 3]. Accurate demand forecast by the suppliers will enable them to accurately fulfill the requirements of the retailers generating mutual gains and savings [4].

Adoption of information technology (IT) improves information sharing among SC partners, which in turn will improve supply chain performance [5]. Investment in IT and the willingness to share the information are needed to support SC competitiveness [6]. IT, which is perceived to be easy to use and understand by SC members, will affect the shared beliefs concerning the usefulness of IT in doing business [7]. According to Fischer [8], trust in supply chain partners can significantly improve effective communication. Trust and commitment are important factors affecting SC partnerships and communication [9].

Despite the extensive research on information sharing, factors contributing to information sharing remain unexplored [10]. In view of this, there is a need to explicitly examine the factors contributing to information sharing in business relationships. There is a lack of empirical studies on trust and commitment in influencing information sharing between SC partners [11]. Thus, this study investigates the influence of shared values, trust, and commitment on information sharing between SC partners in the distributive trade context. The distributive trade, which comprises wholesale and retail trade has contributed significantly to the Malaysian economy.

This study may contribute to empirical evidence supporting the underlying factors leading to information sharing for successful supply chain management integration and collaborative practices. Thus, the research questions for this study are: (1) how do shared values, trust, and commitment affect information sharing? (2) Is there any significant difference in the level of information sharing based on gender? (3) Is there any significant difference in the level of information sharing according to the duration of business relationships with key trading partners?

This study attempts to answer the research questions through the development of a research framework after the review of existing literature. The focus of this study is to identify the factors that lead to information sharing between SC partners in the distributive trade context.

50.2 Review of Literature

50.2.1 Information Sharing

Information sharing is an act of capturing and disseminating timely relevant information for planning and controlling of supply chain operations [12]. Information sharing can be achieved through process integration between buyers and suppliers [13]. Trust is required before SC partners are willing to share information which can facilitate communication and reduce uncertainties [9].

50.2.2 Commitment and Trust in Business Relationships

Cooperative behavior in business relationships is led by commitment and trust [14]. Trust in business exists when one party has confidence in an exchange partner's reliability and integrity [14]. According to Schurr and Ozanne [15], trust is "the belief that a party's word or promise is reliable and that a party will fulfill his/her obligations in an exchange relationship." Mutual commitment between SC partners will maintain their business relationships [14]. Trust and high levels of commitment enhance supply chain cooperation efficiency [9].

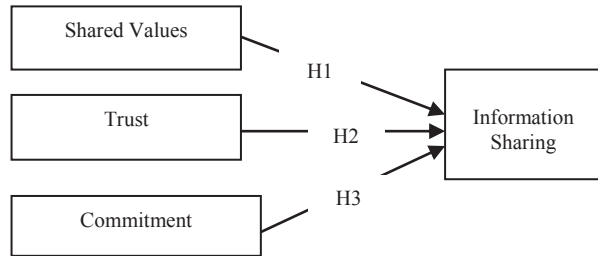
50.2.3 Shared Values

Common belief about behaviors, goals, and policies is the concept of shared values [14]. Sharing common values is associated with trust and the sharing of common values can reduce uncertainty [16]. Intraorganizational and interorganizational IT has effects on the relationship's value creation [17].

50.2.4 Gender Differences

Exchange of information is important in business relationships and material flows which have a direct impact on supply chain performance [18]. Since more women are becoming purchasing managers, gender may have potential influence on decision making in relational firm exchanges [19]. Prior studies focused on gender differences on dimensions such as organizational commitment, intention to leave, and stress [20]. It is important to study the role of gender in information sharing since there is a lack of literature on gender differences in information sharing between SC partners.

Fig. 50.1 A conceptual framework of information sharing determinants



50.2.5 Duration of Business Relations and Information Sharing

IT investments are investments for future business which provide long-term benefits rather than short-term payoffs for product and service quality [21]. A long-term business relationship is needed to justify investments in IT [17] for smooth information flow in order to optimize the material flow between SC partners.

The following hypotheses are thus suggested:

- H1. There is a significant positive relationship between shared values and information sharing.
- H2. There is a significant positive relationship between trust and information sharing.
- H3. There is a significant positive relationship between commitment and information sharing.
- H4. There is a significant difference in perceived information sharing according to gender of the respondents.
- H5. There is a significant difference in the level of information sharing according to the duration of business relations with key trading partners.

Figure 50.1 shows the hypothesized conceptual framework of the relationships among variables: shared values, trust, commitment, and information sharing.

50.3 Methodology

50.3.1 Instrument Development

A questionnaire survey was chosen to get the data needed to test the hypotheses displayed in the conceptual model. Pertinent items were identified to operationalize the constructs in the research model. The items for each construct were generated through a comprehensive literature review. Items for “shared values” were adopted from [22].

Five items were used to measure trust adapted from [17, 22, 23]. Commitment was measured by five items. These items were adapted from [22–24]. Seven items were used to measure information sharing which were adapted from [12, 22].

The items were rephrased accordingly to align with business relationships practices of wholesalers, distributors, and retailers with their key trading partners. The items were measured on 1–7 Likert scales, from “Strongly disagree” (1) to “Strongly agree” (7).

50.3.1.1 Pretest and Pilot Test

A pretest was performed with few academic researchers on the questionnaire of the survey instrument for improvement in content, wording, clarity, and relevance of the questionnaire. Then the questionnaires were distributed to several suppliers and retailers as a pilot study. The responses suggested that the questionnaire be translated from English to Malay language as the majority of the respondents preferred to answer the questionnaire in Malay language. The responses suggested that all statements were retained.

50.3.1.2 Data Collection

The data used to test the hypotheses were collected from wholesalers’, distributors’, and retailers’ perspectives of various locations in Klang Valley. Empirical data from a survey sample were used to assess the instrument’s validity and reliability. In total 235 questionnaires were returned. Only 232 usable responses were analyzed for this research, which comprised 116 female respondents and 116 male respondents (see Table 50.1).

50.4 Findings and Analysis

50.4.1 Respondent Characteristics

Table 50.1 provides a summary of the demographic and characteristic profiles of participating firms. The majority of the respondents were retailers (68.5%) while 23.3% were distributors and 8.2% were wholesalers. The majority of owner ethnicity was Malay (75.4%). The Chinese and Indian respondents comprised 19.4 and 3.4%, respectively. Most respondents have more than 5 years of business relationships with key trading partners (59.5%).

Table 50.1 Respondent characteristics

Respondent characteristics	Number of firms	Percentage
<i>Number of responses</i>		
Wholesaler	19	8.2
Distributor	54	23.3
Retailer	159	68.5
Total	232	100.0
<i>Owner ethnicity</i>		
Malay	175	75.4
Chinese	45	19.4
Indian	8	3.4
Others	4	1.7
Total	232	100.0
<i>Gender</i>		
Male	116	50.0
Female	116	50.0
Total	232	100.0
<i>Years of establishment</i>		
1970–1979	1	0.4
1980–1989	13	5.6
1990–2000	74	31.9
2001–2010	127	54.7
2011–2012	17	7.3
Total	232	100.0
<i>Years of business with key trading partners</i>		
Less than 1 year	15	6.5
1–3 years	28	12.1
3–5 years	51	22.0
More than 5 years	138	59.5
Total	232	100.0

50.4.2 Factor Analysis

Factors associated with information sharing were investigated using measures of shared values, trust, and commitments, which are vital in information sharing between the suppliers and retailers in the distributive trade. The factor analysis results showed the loadings of all items were above the cutoff value of 0.5 stating that discriminant validity of the instrument has been demonstrated. Principal component analysis was employed using varimax rotation on the four variables. The results of factor analysis indicated that the scales loading with eigenvalues greater than 1.0 and 46.78–48.72% of the total variance explained for each construct. The Kaiser–Meyer–Olkin (KMO) statistics determine sampling adequacy, and the value should be 0.6 or above so that data are suitable for factor analysis [25]. The KMO values of this study were more than the cutoff value as shown in Table 50.2: 0.718, 0.732, and 0.873. Bartlett’s test of sphericity is significant at 0.001 level, which implies overall significance of the correlation matrix.

Table 50.2 Factor analysis results

Variables	KMO measures of sampling adequacy	Initial eigenvalues	Percentage of total variance explained
Shared values	0.718	2.339	46.782
Information sharing	0.873	4.351	47.917
Trust		1.399	
Commitment	0.732	2.436	48.719

Table 50.3 Mean, standard deviation, number of items, and cronbach's alpha of the variables

Variables	Mean value	Standard deviation	Number of items	Cronbach's alpha
Shared values	5.17	0.69	5	0.714
Information sharing	4.91	0.74	7	0.823
Commitment	5.08	0.72	5	0.733
Trust	4.98	0.69	5	0.701

All the variables were measured based on a seven-point Likert scale.

50.4.3 Reliability Analysis

The reliability of the questionnaire was measured by Cronbach's alpha on the variables, namely shared values, trust, commitment, and information sharing to establish the internal consistency values [26]. Reliability coefficients in the range of 0.70 were considered to be acceptable, while those above 0.80 were considered to be good [25, 26]. The reliability analysis showed Cronbach's alpha value range from 0.701 to 0.823, exceeding the recommended cutoff point of 0.7. This demonstrates that all the research variables are internally consistent and have acceptable reliability values (Table 50.3).

Table 50.3 shows the mean values of shared values, information sharing, commitment, and trust variables: 5.17, 4.91, 5.08, and 4.98 respectively (on a scale of 1–7). The wholesalers, distributors, and retailers rated shared values as higher (5.17) compared with commitment (5.08) and trust (4.98). The level of information sharing had the lowest mean of 4.91, indicating the sharing of information between the respondents and their key trading partners had not been practiced to a great extent.

50.4.4 Correlation Analysis

The correlation analysis in Table 50.4 shows an initial test of the hypotheses. The association between measures of information sharing was assessed using Pearson product-moment correlation coefficient. The results indicated that shared values, trust, and commitment were all positively and significantly associated with information sharing ($r=0.510$, $p<0.01$; $r=0.495$, $p<0.01$; $r=0.573$, $p<0.01$,

Table 50.4 Pearson product–moment correlations between measures of information sharing

Variables	SV	T	C	IS
Shared values (SV)	1			
Trust (T)	0.456 (**)	1		
Commitment (C)	0.462 (**)	0.724 (**)	1	
Information sharing (IS)	0.510 (**)	0.495 (**)	0.573 (**)	1

Significance level: ** $p < 0.01$

Table 50.5 Multiple regression results for independent variables and dependent variable (information sharing)

Variables	Standardized coefficient (β)	<i>t</i> values	Significance
Shared values	0.297	5.074	0.001**
Trust	0.092	1.225	0.222
Commitment	0.368	4.872	0.001**
$R^2 = 0.408$		Adjusted $R^2 = 0.401$	
F value = 52.469		Significance = 0.001	

Significance level: ** $p < 0.001$

respectively). Information sharing was found to be positively related with all variables. Commitment had the highest correlation with information sharing.

50.4.5 Regression Analysis

To test the factors influencing information sharing, multiple regression analysis was conducted using shared values, trust, and commitment as independent variables and information sharing as dependent variable. The model was significant (F value = 52.469, $p < 0.001$). The R^2 of 0.408 indicates that 40.8% of the variance in information sharing between wholesalers, distributors, retailers, and their key trading partners can be explained by the three independent variables: shared values, trust, and commitment. Table 50.5 illustrates that only two variables; shared values and commitment had significant positive influence on information sharing as perceived by the respondents, as the t value is greater than 1.0 and significant at the 0.001 level [25]. The strongest predictor of information sharing was commitment ($\beta = 0.368$) and followed by shared values ($\beta = 0.297$). Consequently, H1 and H3 were supported by the data. Even though trust was positively correlated with information sharing, the regression analysis result of this study showed that trust was not a predictor of information sharing. It has to be rejected as an antecedent of information sharing. The regression analysis result revealed that the impact of information sharing on trust was insignificant ($p = 0.222$, $p > 0.05$). Thus, hypothesis 2 is rejected. Results of the conceptual framework are shown in Table 50.5 and Fig. 50.1.

Results of the conceptual framework are shown in Fig. 50.2.

Fig. 50.2 Results of the conceptual framework of information sharing determinants

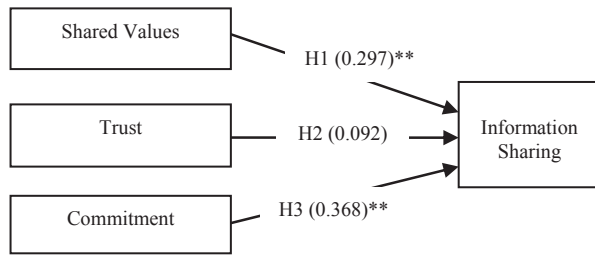


Table 50.6 Independent *T* test: Comparison of perceived information sharing between male and female business owners

Gender	Perceived information sharing			
	Mean	Standard deviation	<i>t</i> value	Significance
Male	4.89	0.77	-0.528	0.598
Female	4.94	0.72		

50.4.6 *T* Test Analysis

Independent sample *T* test analysis between gender and information sharing was performed to determine whether there was any significant difference between gender of business ownership and the perceptions on information sharing in business relationships. The analysis indicated that there was no significant difference on the scores for perception on information sharing between male and female business owners in the Klang Valley. Male (mean (*M*)=4.89, standard deviation (*SD*)=0.77) and female (*M*=4.94, *SD*=0.72), *t* value = -0.528, the probability of error, *p*=0.598 (Table 50.6). Since the *p* value is more than the cutoff level of 0.05, it suggests that there was no significant difference between the mean of the sample population. Thus hypothesis 4 is not supported.

50.4.7 One-Way Analysis of Variance (ANOVA)

A one-way between group ANOVA was performed to explore the impact of duration of business with key trading partners on the level of information sharing between the wholesaler, distributors, retailers, and their key trading partners. Subjects were divided into four groups according to their number of years of business with key trading partners (Group 1: less than one year; Group 2: 1–3 years; Group 3: 3–5 years; Group 4: more than 5 years).

ANOVA results (Table 50.7) revealed that there were no significant differences exist for the duration of business with key trading partners in information sharing, *F*(3, 231)=0.859, *p*=0.463, *p*>0.05. Thus, hypothesis 5 is not supported.

The summary of hypotheses’ results is depicted in Table 50.8.

Table 50.7 One-way ANOVA results for duration of business with key trading partners and information sharing

Duration	<i>N</i>	Mean	Standard deviation	<i>F</i> value	<i>p</i> value
Less than 1 year	15	4.89	0.69	0.859	0.463
1–3 years	28	4.87	0.72		
3–5 years	51	5.06	0.80		
More than 5 years	138	4.87	0.73		
Total	232	4.91	0.74		

Table 50.8 Summary of hypotheses' results

	Hypotheses	Conclusion
H1	There is a significant positive relationship between shared values and information sharing	Supported
H2	There is a significant positive relationship between trust and information sharing	Not supported
H3	There is a significant positive relationship between commitment and information sharing	Supported
H4	There is a significant difference in perceived information sharing according to gender of the respondents	Not supported
H5	There is a significant difference in the level of information sharing according to the duration of business relations with key trading partners	Not supported

50.5 Discussion and Conclusion

The aim of this paper was to assess the antecedents of information sharing in business relationships between supply chain partners. Five hypotheses were suggested. The results of this study showed that shared values (hypothesis 1) and commitment (hypothesis 3) positively influenced information sharing between wholesalers, distributors, retailers, and their key trading partners.

The results of this study are consistent with the findings of Demirbag, Sahadev, Kaynak, and Akgul [27] and Morgan and Hunt [14]. Demirbag et al. [27] revealed that leadership commitment had significant influence on information sharing for both the managerial and nonmanagerial staffs. Information sharing is important in the integration of supply chain management business process [28]. Morgan and Hunt [14] found that shared values are important in developing communication, trust, and commitment to eliminate conflicts in relationships. The results indicated that the influence of commitment is more important than shared values on information sharing. This suggests that management should focus on commitment with their key trading partners in order to achieve improved information sharing.

Contrary to expectations, the result showed an insignificant relationship between trust and information sharing. The result of this study contradicts the findings by Wu, Weng, and Huang [9], and Ghosh [29]. However, the result of this study is consistent with findings by Chong, Ooi, Lin, and Tang [30], which found that trust has no significant influence on the adoption of e-business in supply chain of small

and medium enterprises (SMEs). Thus, other potential antecedents of information sharing such as IT skills of business owners [31] system compatibility and availability of IT infrastructure [6], internal relationship [32], IT utilization for internal integration and communication [17] and external relationship [33] may therefore be considered.

The results from this study also revealed that there was no significant difference in information sharing according to gender of business ownership. This study contradicts with Ro [34] who found that female purchasing managers placed greater degree of importance on information pertaining to the supplier's service dependability dimensions as compared to male managers. However, Knight and Pearson [35] found that age and gender did not impact on computer use in the workplace and Yao, Rice, and Wallis [36] found that gender had no significant effect on online privacy concerns. Sonfield and Lussier [37] stated that there is a mixed conclusion regarding gender and managerial behavior, although the trend of consensus revealed that gender similarities rather than differences in entrepreneurial research. Thus, further investigations into this issue are needed.

This study also found that there was no significant difference in the level of information sharing according to the duration of business relations with key trading partners. This result differs from Yap, Soh, and Raman [38] and Raymond [39], who suggested that successful implementation of IT was positively associated with the duration of an SME IT experience. Since IT is an enabler to effective information sharing, a possible explanation for this result might be the retailers and suppliers in this study did not have the technological ability [6, 31] or they were not willing to share vital business information with their trading partners [6]. Many individuals are unwilling to share information if they perceived it may place their organizations at a competitive disadvantage [6].

The results of this study have important contributions to practitioners and researchers. The regression analysis highlights the importance of shared values and commitment in facilitating information sharing between wholesaler, distributors, retailers, and their key trading partners.

Since this study was confined to Klang Valley only, the findings from this study cannot be generalized to all firms in Malaysia. The model only explained 40.8% of the variance in information sharing between business partners. Hence future research should examine other factors besides shared values, trust, and commitment in influencing business information sharing. Expanding the model in terms of constructs and sample size would be highly recommended.

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Chapter 51

Strength Properties of Sustainable Palm Oil Fuel Ash (POFA)—Stabilized Landfill

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Abstract Laboratory investigations were carried out to establish the potential utilization of palm oil fuel ash (POFA) in stabilizing landfill soil. POFA is a waste material from the palm oil industry in Malaysia. Currently, the disposal of this ash from a burning process to heat up boilers and generate electricity is a problem for palm oil companies, and hence an environmental pollution concern. Landfill on its own and in combination with laterite clay soil was stabilized using POFA either on its own or in combination with lime or Portland cement (PC). The traditional stabilizers of lime or PC were used as controls. The main aim was to investigate the potential of utilizing POFA as sustainable stabilizer material as a partial replacement of the traditional one. Compacted cylinder test specimens were made at typical stabilizer contents and moist cured for up to 60 days prior to testing for compressive and water absorption tests. The results obtained showed that landfill soil combined with laterite clay (50:50) stabilized with 20% POFA: hydrated lime (50:50) and POFA: PC (50:50) recorded the highest values of compressive strength compared to the other compositions of stabilizers and soils. However, when the amount of POFA increased in the system the compressive strength values of the samples tended to decrease. It indicated that, high amount of POFA reduces the pozzolanic reaction and cementitious compound, which has a negative effect on soil particle bonding.

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These results suggest technological, economic, as well as environmental advantages of using POFA and similar industrial by-products to achieve sustainable infrastructure development with near-zero industrial waste.

Keywords Soil · Clay · POFA · Stabilization · Sustainability

51.1 Introduction

Soil stabilization, traditionally with cement, lime, and bitumen as a stabilizer had been used for centuries. Currently the use of these materials is slowly being replaced by the industrial waste by-products which has proven sustainable. This sustainable method of stabilization provides cost-effective methods to improve the engineering properties of problematic soils. According to Industrial Resource Council (2012), soils stabilized with industrial waste materials have been extensively tested and do not have any adverse environmental impact and consequences.

51.2 Aims and Objective of Study

The aim of this study is to investigate the potential of utilizing POFA as stabilizer in soil stabilization as a partial replacement for traditional binder lime or Portland cement (PC).

Therefore, two objectives were established to achieve the research aim: (i) to determine the potential of utilizing POFA in the stabilization of landfill soil; (ii) to access the engineering properties of stabilized soil.

51.3 Problem Statement

Most of the solid waste landfills in Malaysia are open dumping areas which comprise 25% of landfill sites in the municipal council district and 59% in the district council. The major problem triggered by open dumping is odor, and the lack of daily cover causes vermin and flies at sites [1]. Although Malaysia has a considerable number of solid waste landfill sites, it is estimated that most of these sites will be full within 2 years. When a landfill is full, it will be closed and abandoned without any development as a result of unstable soil and will have no development value. An open dumping area which has no postclosure maintenance would pose serious hazards to the surrounding communities due to differential settlement of the waste soil. Estimation of settlement for municipal solid waste is critical to successful site operation and future development. This problem could be an opportunity for other

people. A contaminated area may be reclaimed by rebuilding it a new area such as a playground, a football field, or a low-cost housing area if possible. This abandoned landfill site could be reengineered either by mechanical or chemical stabilization techniques for redevelopment [1].

As one of the biggest producers of palm oil in the world, Malaysia produced about 17.7 million t of palm oil in 2008. The palm tree plantation covered about 4,500,000 ha of Malaysian land [2]. Since the palm oil industry is continuously expanding, the production of waste from the process is also increasing, especially palm oil fuel ash (POFA), waste that is generated from the burning of empty fruit bunches, fibers, and kernels. POFA is not reusable and normally dumped as waste without profitable return [3].

In Malaysia most of the agricultural waste ends up in a landfill. This waste that possesses pozzolanic properties has potential to be used as an alternative to soil stabilization or concrete as a traditional binder.

51.4 Literature Review

One of the effective ways to treat the unsuitable soil condition is by improving the engineering properties of the soil, and this method is referred to as soil stabilization techniques. Amu and Salami [4] defined stabilization as any process by which a soil material is improved and made more stable. In general, soil stabilization is defined as a technique to improve the engineering characteristics of soil in order to improve parameters such as shear strength, compressibility, density, and hydraulic conductivity [5]. According to Guyer [6], soil stabilization is the process of blending and mixing materials with a soil to improve certain properties of the soil. The process may include the blending of soils to achieve a desired gradation or the mixing of commercially available additives that may alter the gradation, texture or plasticity, or act as a binder for cementation of the soil. Adam and Jones [7] stated that soil stabilization is the modification of soil properties by adding another material or technique to improve its durability.

Generally, there are two methods of soil stabilization: mechanical and chemical. Mechanical stabilization can be accomplished by mixing or blending soils of two or more gradations to obtain a material meeting the required specification and then spread and compacted to required densities by conventional means [6]. Das [8] stated that mechanical stabilization includes compaction, and fibrous and other nonbiodegradable reinforcement of geomaterials to improve strength. In mechanical stabilization, fibrous and other nonbiodegradable reinforcement of geomaterials can be used to improve strength.

On the other hand, chemical stabilization is a process by which hydraulic binders are introduced and intimately mixed into the soil. Hydraulic binders are defined as those that when mixed with an appropriate quantity of water will form cementitious

hydrate gels [9]. According to Das [8], chemical stabilization includes the use of chemicals as binders as means of modifying the behavior of soil. Chemical stabilization involves the formation of strong bonds between the clay minerals and other soil particles; it is therefore ineffective in granular soils. Lime stabilization is one of the common and earlier chemical stabilizations. Lime has been used as one of the traditional stabilizers for clay soil. The use of cementitious materials such as PC, hydraulic lime, and lime–pozzolana mixes as stabilizers is common in stabilization of soil and the development of construction materials. The main application of lime in relation to soil stabilization is the modification of engineering properties of the potential target material, and for use with clay soils that are difficult to stabilize with cement alone. Rogers et al. [10] reported that lime stabilization can be defined as the reaction between silica and alumina within the clay structure and lime and water to form calcium silicate hydrates, calcium–aluminate hydrates and calcium–alumino–silicate hydrates (C-S-H, C-A-H, and C-A-S-H) gels, which subsequently crystallize to bind the structure together. The reaction will be stronger in the case of high silicate content in the soil. Until the discovery of PC in the nineteenth century, lime was widely used for building construction.

PC has been used effectively in the strengthening of granular materials such as soils. It is a primary stabilizing agent, which can be used alone to bring about a cementitious action [11]. PC consists mostly of calcium silicate obtained by heating to partial fusion a predetermined and homogenous mixture of materials containing principally lime (CaO) and silica (SiO₂) with small proportions of alumina (Al₂O₃) and iron oxide (Fe₂O₃). The hydration of PC is a chemical reaction between the phases present in the cement powder and water, resulting in the formation of a number of hydration products.

51.5 Materials

51.5.1 Target Materials

- (i) Landfill soil: The landfill soil was taken at Teluk Kapas, Kuala Selangor, a municipal solid waste landfill. It was shut down in 2007 for being close to water intake points. As the solid waste decomposed, it influenced the properties of the soil. The properties of surface soil at a landfill area generally depend on type of waste being dumped on the landfill. As mentioned by Agamuthu and Khan [12], municipal solid waste is highly heterogeneous, and the composition depends on the living standard, type of housing, seasons, and country, which includes the cultural habits of individuals. Municipal solid waste includes waste from residential, commercial, institutional, and some industrial sources.
- (ii) Laterite soil is well known in Malaysia and Asian countries as a building material for more than 1000 years. It is a highly weathered material, rich in sec-

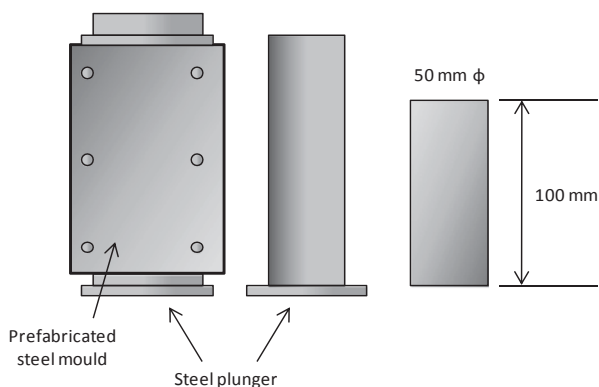
ondary oxides of iron and aluminum or both, and hence its color is reddish brown [13]. Laterite soils are formed by the rock layer breaking down, which leaches soluble ingredients of soils and leaves behind clay minerals (kaolinite), gibbsite ($\text{Al}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$), goethite (HFeO_2), lepidocrocite (FeOOH), and hematite (Fe_2O_3). According to Eisazadeh, Kassim, and Nur [14] a reddish laterite soil rich in (hydr)oxides is known as laterite clay. The iron oxides present in the soil environment coat and bind the clay particles together. The properties of laterite clays generally depend on the geographical location, extent of lateralization, and the chemical and physical composition of the parent rock.

51.5.2 Stabilizer

- (i) POFA: According to Abdullah et al. [15], palm oil fuel ash is a by-product produced in a palm oil mill. POFA generally is a product of palm oil husk and palm kernel shell, which are burned as fuel in the boiler of a palm oil mill. Generally after combustion, about 5% POFA by weight of solid wastes is produced [16]. POFA usually has variations in the tone of the color based on the carbon content in it. The color may vary from whitish gray to darker shades. Based on the previous research done Galau [17], he found that the physical characteristic of POFA is very much influenced by the operating system of the palm oil factory.
- (ii) PC: PC is composed of calcium silicates and calcium aluminates that, when combined with water, hydrate to form the cementing compounds of C-S-H and C-A-H, as well as excess calcium hydroxide. Because of the cementitious material as well as the calcium hydroxide (lime) formed, PC may be successful in stabilizing both granular and fine-grained soils, as well as aggregates and miscellaneous materials. A pozzolanic reaction between the calcium hydroxide released during hydration and soil alumina and soil silica occurs in fine-grained clay soils and is an important aspect of the stabilization of soils [18].
- (iii) Hydrated lime: Hydrated lime is created when quicklime chemically reacts with water. Hydrated lime is used extensively for the stabilization of soil, especially soil with a high clay content where its main advantage is in raising the plastic limit of the clayey soil. When added to clay soils, lime reacts with the water in the soil and reduces the soil's water content. The lime also causes ion exchange within the clay, resulting in flocculation of the clay particles. This reaction changes the soil structure and reduces the plasticity of the soil. These changes will increase soil workability and can increase the soil strength and stiffness. In the long term, calcium hydroxide in the water reacts with the silicates and aluminates (pozzolans) in the clay to form cementitious bonds that further increase the soil strength [19]. The oxide compositions of laterite clay, POFA, PC, and lime are presented in Table 51.1.

Table 51.1 Oxide composition of clay, POFA, PC, and lime

Oxide composition	Laterite clay	POFA	PC	Lime
CaO	–	11.30	64.64	74.23
P ₂ O ₅	16.71	–	–	0.08
MgO	–	3.55	2.06	0.74
CaSO ₄	–	–	–	0.12
Fe ₂ O ₃	29.40	5.73	3.36	0.17
Al ₂ O ₃	24.31	–	5.60	0.11
SiO ₂	21.55	52.50	21.28	0.14
SO ₃	3.98	0.82	2.14	–
N ₂ O	0.07	–	0.05	–
CO ₂	3.65	0.10	–	–
LOI	–	–	0.64	24.4

Fig. 51.1 Steel mould, plunger, and test specimens

51.6 Experimental Procedures

51.6.1 Specimen Preparation

For the purpose of sample preparation, it is necessary to establish the target dry density and moisture content values. Proctor compaction tests were carried out in accordance with BS 1377 (1990) Part 2 [20] in order to establish values of the maximum dry density (MDD) and optimum moisture content (OMC) for Lower Oxford Clay (LOC). From the test, the MDD value of 1.42 mg/m³ and OMC value of 24% were established. Using these parameters, the bulk density of test specimens of dimensions 50 mm diameter and 100 mm in length was established to be about 345 g (see Fig. 51.1). Allowing for about 10% material waste during the mixing operations, cylinder test specimens using different materials ingredients were calculated weight 380 g, thus maintaining the same density for all test specimens irrespective of their particular mix compositions. Strength development was established as determined by the unconfined compressive strength (UCS) at the three curing ages of 7, 28, and 60 days. Two cylinders per mix proportion were subjected to UCS test in accordance with BS 1924–2 [21] and the mean strength was determined. The mix design compositions are presented in Table 51.2.

Table 51.2 Mixed design composition of target material and stabilizer subjected to compressive strength test

Target material	Stabilizer	Ratio (%)	Dosage (%)
LFs (100%)	Lime	100	10, 20
	PC	100	10, 20
	POFA:lime	50:50	10, 20
Landfill soil	POFA:lime	70:30	10, 20
	POFA:PC	50:50	10, 20
	POFA:PC	70:30	10, 20
LFs+clay (50:50)	Lime	100	10, 20
	PC	100	10, 20
	POFA:lime	50:50	10, 20
	POFA:lime	70:30	10, 20
	POFA:lime	50:50	10, 20
	POFA:PC	70:30	10, 20

LFs landfill soil

51.7 Results

51.7.1 Unconfined Compressive Strength (UCS)

Figure 51.2a, b shows the effect of PC and lime as a traditional stabilizer on the strength development for landfill soil. The strength for stabilized specimens increases as the curing period increases. Generally higher dosage of lime or PC (20%) gives higher strength value throughout three curing periods compared with lime. At 60 days curing, both PC and lime (at 20%) recorded almost the same strength value about 145 kN/m². When landfill soil was combined with clay at 50:50 ratio (Fig. 51.2b) mixed with PC and lime at 10 and 20%, the strength is higher than when landfill is stabilized alone. A lime dosage of 10% is sufficient to boost the cementitious reaction in the soil matrix. Again, 20% dosage of stabilizer recorded higher strength at all curing periods. As with a stabilized landfill, 60 days of curing marked the highest value for both stabilizers, which was about 340 kN/m².

POFA wastes from palm oil industry were combined with PC or lime at 50:50 and 70:30 ratios, respectively, and were used as stabilizer to investigate the effect on strength properties of stabilized landfill. This is shown in Fig. 51.3a, b. At 10% dosage, both stabilizers recorded lower strength development compared with when the stabilizer dosage was increased to 20%. The combination of POFA:PC as stabilizer gives higher strength in this system compared to the POFA:lime combination. The highest strength value was recorded at 257 kN/m² at 60 days of curing. The increment of POFA ratio in the blended stabilizer from 50:50 to 70:30 did not increase the strength development of stabilized soil. The overall results of compressive strength for this composition remain lower than 50:50 blends.

Figure 51.4a, b shows the effect on strength when siliceous material clay was mixed with landfill soil at 50:50 ratio. It can be seen that the strength of the stabilized specimen increased as the curing period increased. The overall strength values recorded were higher than the system without incorporating clay. As for the previous system, 20% stabilizer dosage gives higher strength development for all curing

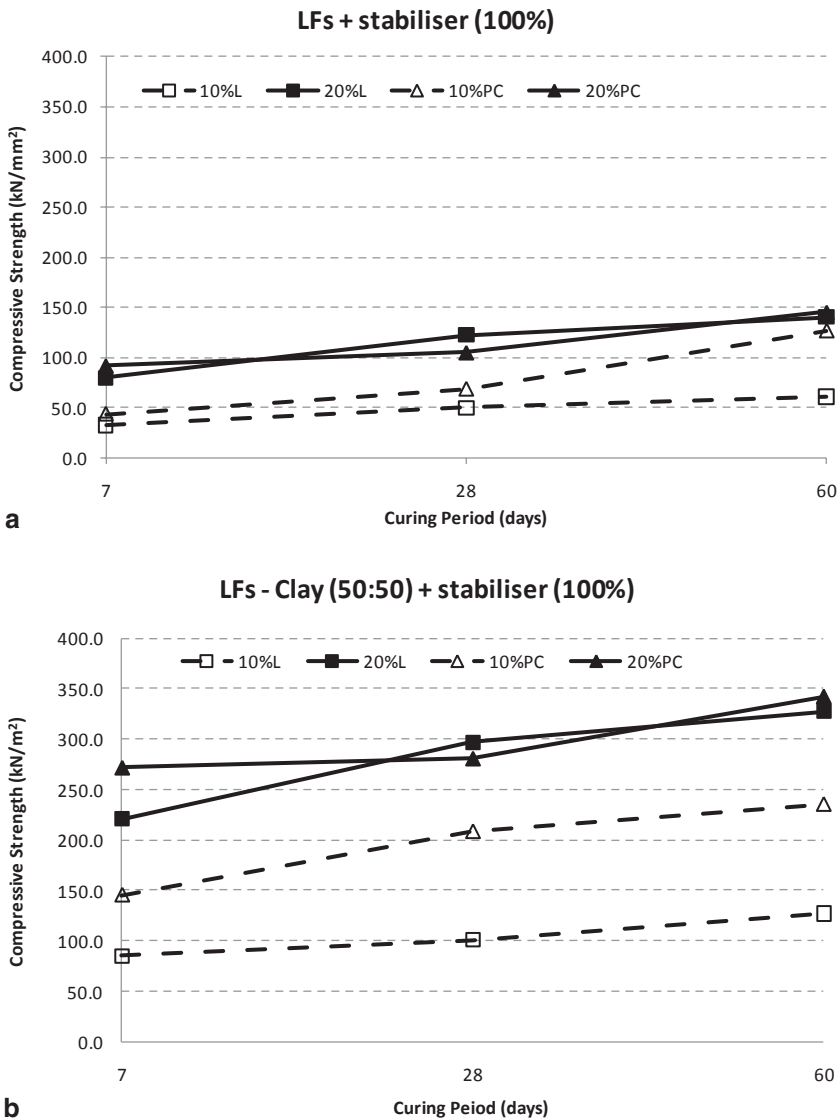


Fig. 51.2 Compressive strength for stabilized landfill soil (*LFs*) with 100% stabilizer (a) and landfill soil+clay (50:50) with 100% stabilizer (b)

periods compared to 10%. The combination of POFA and PC marked the highest strength values for both stabilizer ratios 50:50 and 70:30, but the increment percentage of POFA in the stabilizer did not compensate for the strength values. The highest strength value of 574 kN/m² were recorded with stabilized specimen with 20% dosage of POFA:PC at 60 days of curing.

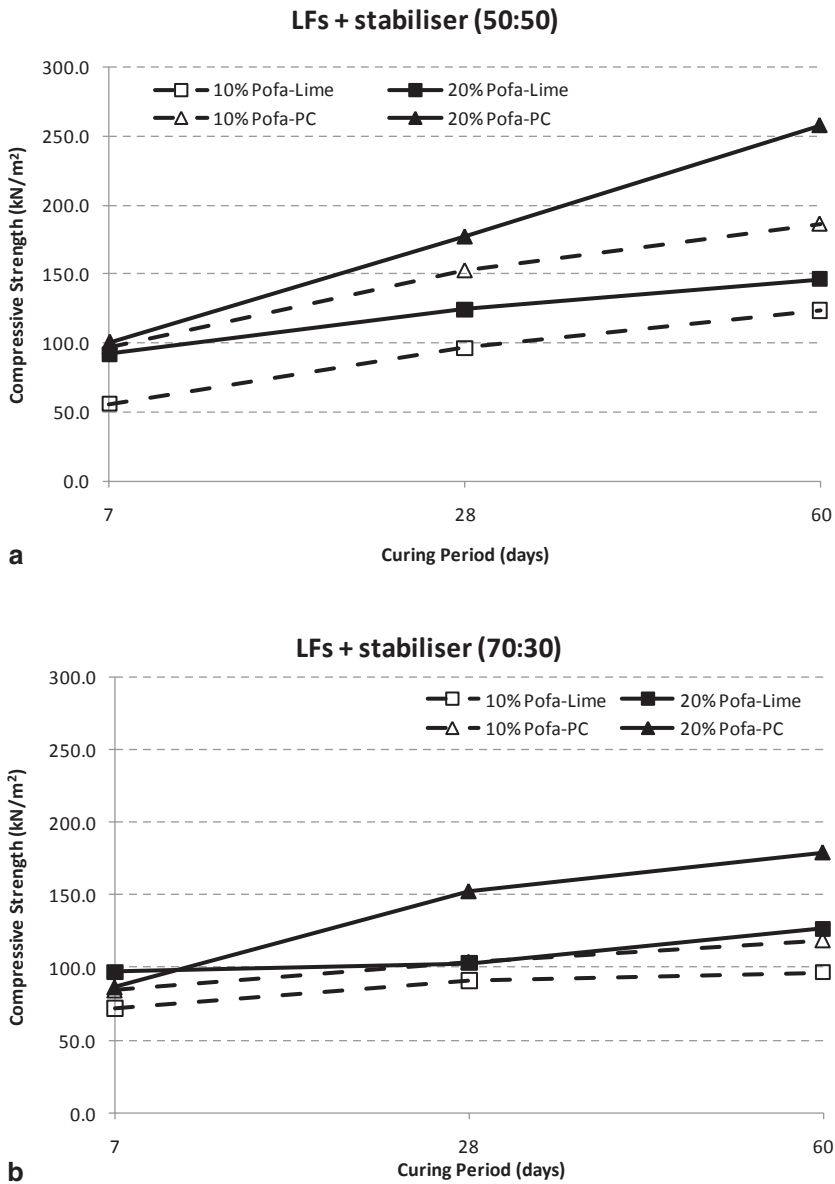


Fig. 51.3 Compressive strength for stabilized landfill soil with 50:50 stabilizer (a) and 70:30 stabilizer (b)

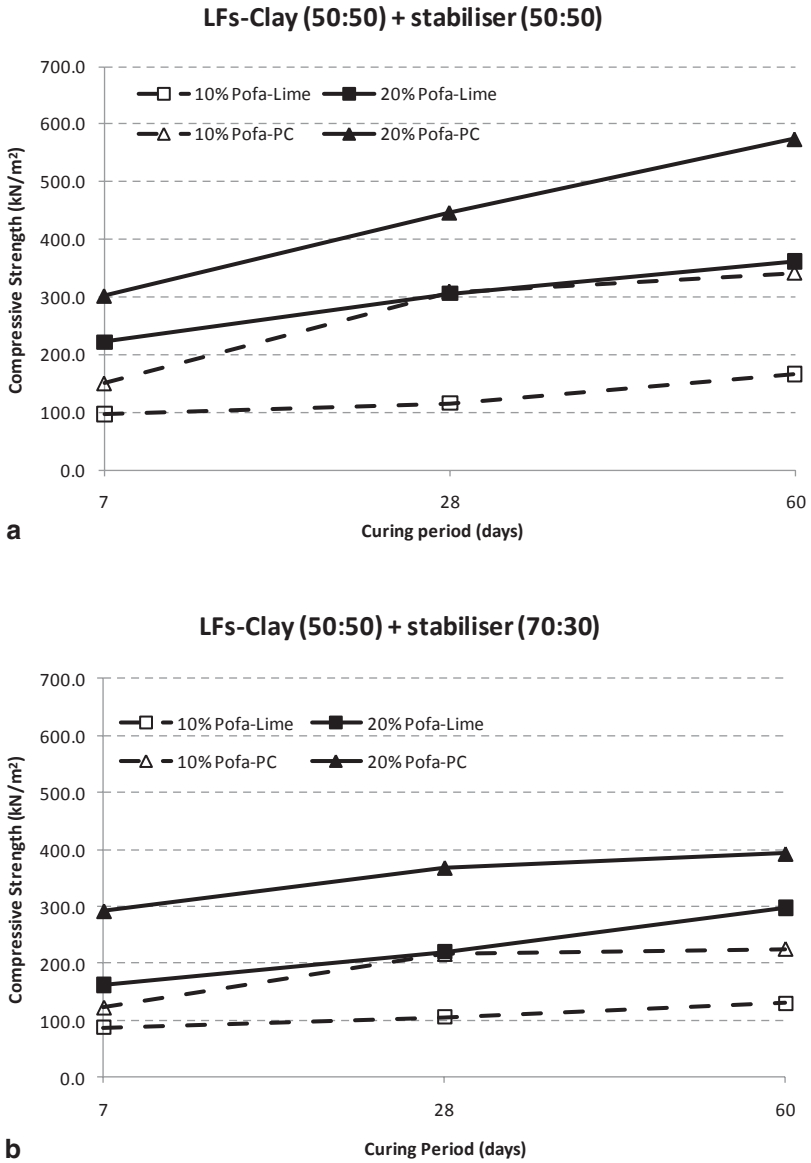


Fig. 51.4 Compressive strength for stabilized landfill soil (LFs)+clay (50:50) with 50:50 stabilizer (a) and 70:30 stabilizer (b)

51.8 Discussion and Conclusion

The combination of landfill soil and clay gives better compressive strength values compared with when landfill soil was stabilized alone. It is proved that with adding clay that contains siliceous matter, the pozzolanic reaction and cementitious

compound increased and resulted in better bonding between soil particles. When traditional binder lime/PC is added to a clay soil, it has an immediate effect on the properties of the soil as cation exchange begins to take place between the metallic ions associated with the surfaces of the clay particles and the calcium ions from the lime. The highly alkaline environment produced by the addition of lime/PC gives rise to the slow dissolution of aluminosilicate ions, which then participate in the formation of hydrated cementitious reaction products [22]. Results from the experiments showed that the compressive strength values increased when the amount of stabilizers and curing period increased. As has been proven by several researchers [23, 24] in their research, the increasing amount of cement, lime, and curing time affects the values of compressive strength of stabilized soil. When PC and lime were replaced with POFA by 50%, the strength development was continuous throughout the 60 days curing compared with when landfill soil was stabilized on its own. This is perhaps because POFA contains a large amount of silica (see Table 51.1), which has high potential to be used as a cement replacement. However, a large amount of POFA (70%) as replacement for PC or lime has retarded the strength development of stabilized soil. At 70% POFA replacement, the strength values start to decrease and the soil has lower compressive strength compared to 50% replacement. This is probably because of the amounts of cement and lime in the system being too low to perform the hydration process, which results in low cementitious behavior responsible for long-term strength gain.

Based on the laboratory results obtained, the strength-contributing property of POFA is not promising enough to be used substantially as a lime/PC replacement, but there is potential for the use of POFA as a blended binder for soil stabilization and partial replacement of cement or lime. The composition of POFA:lime (50:50) and POFA:PC (50:50) at 20% dosage recorded the highest compressive strength of stabilized soil. However, when the content of POFA exceeded that of lime and PC in the mixture, compressive strength of the specimen was decreased. The result shows that POFA is capable of replacing cement and lime in soil stabilization, but not on a large scale. The ratio of lime and PC must always be the dominant ingredient for stabilization. The reuse of POFA or similar industrial wastes could provide means to the ever-increasing demand for conservation of resources.

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