Foreign Direct Investment in Emerging Economies

Corporate strategy and investment behaviour in the Caribbean

Lou Anne A. Barclay

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The Caribbean countries of Jamaica, Barbados and Trinidad-Tobago represent excellent examples of the increasingly important role played by Foreign Direct Investment (FDI) in less developed, micro-economies. The increased dependence of these countries on FDI, however, calls to question the attractiveness of the business environment of the region to the foreign investor.

This volume examines both the investment behaviour and corporate strategies of multinationals operating in these three countries, and assesses the factors which influence the motivations, location choices and market entry mode of multinationals making investment in the Caribbean. The degree to which these are shaped by the timing of the investment decision, the type of FDI—market-seeking, resource-seeking or export-seeking—and the country of origin of the investor is also explored. By drawing on core case studies and the use of quantitative analysis, the author highlights key issues relating to corporate strategy and investment behaviour of multinational enterprises in the economies of less industrialised countries, including:

- public policy
- strategic management
- human resource development, institutional reform and infrastructural upgrading

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To my parents, Leroy and Beatrice Barclay

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Maastricht University
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Foreword

As the field of international business matures there are occasions on which major contributions can be assessed. One occurred in 1998 when Routledge published a revised and updated edition of John Dunning's classic *American Investment in British Manufacturing Industry,* first published in 1958. In those forty years the field of international business grew up, developing strong theoretical and empirical analyses of the activities of multinational enterprises. Today we can enjoy a book in the Dunning tradition–the tight theoretical and empirical insights provided by Lou Anne Barclay's *Foreign Direct Investment in Emerging Economies.*

These books are of similar stature due to the dedicated field work undertaken by the authors. Back in the 1950s, a young John Dunning undertook the first study to attempt to evaluate the contribution of foreign direct investment (FDI) to a host economy. In an unusually detailed piece of field work over a two-year period (1954–55), funded by the US Marshall Aid Plan, Dunning actually visited 115 US subsidiaries and an additional 45 US-British companies with 25 per cent or more US equity control. Another 45 firms provided information by mail. Out of a potential set of 245 US manufacturing companies in Britain, employing 100 or more workers, only 40 did not cooperate with Dunning. His final set of 205 firms accounted for between 90–95 per cent of all the workers in US-owned firms in Britain. Dunning usually conducted two visits to each firm. He obtained objective data and made an assessment of their contribution to the British economy, across its key characteristics: geographical location; size; ownership pattern; financial; administrative and managerial structure. He measured transfer of technology, from US parent to British subsidiary and he evaluated the contribution of US FDI to British economic development. He assessed the way in which US FDI affects British competition, R&D, manufacturing and managerial expertise, consumers, and the overall efficiency of the economy.

In this book, Lou Anne Barclay follows in the Dunning tradition. She includes the entire set of MNEs doing FDI in the Caribbean in her study. This amounts to 139 foreign MNEs (in Jamaica, Barbados and Trinidad and Tobago) with 25 operating in more than one of the three countries, for a total of 164 MNEs. The author sent out questionnaires, and also conducted interviews with a large number of managers and other stakeholders. Dr Barclay uses this impressive and comprehensive database to test the modern theories of FDI as they apply in the Caribbean. Of particular interest is her findings on the robust nature of internalisation theory and Dunning's eclectic paradigm. She also finds that a version of the Rugman and D'Cruz 'double diamond' model is a very useful explanation of FDI in these three Caribbean countries. This is one of the most detailed and rigorous studies published in the field of international business and it sets new standards for research work on the economics of developing nations.

In conclusion, both the Dunning and Barclay books are definitive studies of the performance of an entire set of foreign subsidiaries in a host nation. In an era of quick and dirty research articles, dissertations and papers, Dr Barclay is to be congratulated for her detailed empirical work, which is well up to the frontier-building standards set by Professor John Dunning back in the 1950s. As a result of her careful work, this book will become a major research tool for other scholars in the field of international business.

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1 Introduction

The attractiveness of developing-country locales to foreign direct investment

Since the mid-1980s, there has been a resurgence of foreign direct investment (FDI), directed by the multinational enterprise (MNE), into the economies of the developing world. Indeed, the annual growth rates of FDI inflows into these regions averaged 22 per cent during the 1985–89 period compared to a mere 3 per cent in the 1980–84 period and 13 per cent during the 1975–79 period (UNCTAD 1991). This growth in FDI inflows continued unabatedly into the 1990s with total FDI flows into the developing world soaring to a record level of US$149 billion in 1997 (UNCTAD 1998).

The majority of these flows has been concentrated in two regions: (1) South, East and South-East Asia, and (2) Latin America and the Caribbean. These regions are the largest developing-country recipients of FDI. During the years 1995–97, they accounted for approximately 86 per cent of the total developing-country FDI inflows (UNCTAD 1998: Annex Table B3). It is noteworthy that most of the FDI going into these regions is received by several core countries. China has been the principal driver in the foreign investment boom in the South, East and South-East Asia region, accounting for 55 per cent of the flows in 1997. Similarly, it is three countries–Argentina, Brazil and Mexico–which are members of the Associacion Latinomerican de Integracion (ALADI[1]) that receive the majority of FDI inflows in the Latin America and Caribbean region. These three countries accounted for 68 per cent and 62 per cent of the region's FDI inflows during the years, 1990–91 and 1997, respectively (UNCTAD 1994b: Table VII; UNCTAD 1998: Annex Table B1).

Interestingly enough, it appears that several of the smaller and less industrialised countries, which receive less flows of FDI, seem to be more dependent on these inflows. The Latin America and Caribbean region is an excellent example of this phenomenon. During the years 1990 to 1991, FDI inflows contributed to approximately 7 per cent of the gross domestic capital formation for the countries of the ALADI, 5 per cent for the Central American region and an astonishing 11 per cent for the Caribbean region[2] (UNCTAD 1994a). Indeed, the Caribbean region has become increasingly dependent on FDI for the financing of its domestic investment. This dependence is clearly seen among several of the larger economies of the region. During the five-year period 1986 to 1991, FDI contributed a mere 3 per cent of Barbados' gross fixed capital formation. However, by 1996, this figure rose to 6 per cent. In Jamaica, the figure was 7 per cent for the 1986 to 1991 period, but increased dramatically to 13 per cent by 1996. In Trinidad-Tobago, this increase was even more striking, with the ratio of FDI to gross fixed capital formation climbing from 11 per cent in the 1986 to 1991 period, to an astonishing 33 per cent by 1996. It is significant to note that the values recorded for these Caribbean countries exceed the aggregate value for developing countries. During the years 1986 to 1991, the ratio of FDI inflows to gross fixed capital formation for developing countries was an average of 3 per cent. The comparable figure for 1996 was 9 per cent (UNCTAD 1998: Annex Table B5).

Evidently, FDI, as directed by the Multinational Enterprise (MNE), is playing an increasingly important role in the economic development of the Caribbean region. This region is small. The entire English-speaking Caribbean comprises a mere 5.9 million people (United Nations 1997). Its economies are monocultural specialising in activities that are especially vulnerable to the vagaries of the international economy (tourism) or ones that have lost their growth dynamics (sugar, bauxite). The region is in economic crisis as evidenced by its disappointing economic performance over the last decade (Caribbean Commonwealth Secretariat 1988). Clearly, the renewed inflows of FDI are vitally needed in this region. With the recent implementation of the North American Free Trade Agreement (NAFTA), the issue of renewed FDI flows into these countries has become even more critical. It has been suggested that NAFTA will result in a diversion of foreign investment away from low-cost economies, notably the Caribbean, into Mexico (UNCTAD 1992:28; Gill 1993).

These issues thus beg the question as to the attractiveness of the business environment of the Caribbean to the multinational enterprise. It is this research question that this book seeks to address. To this end, its objectives are fourfold, viz.:

1 To examine the motivations for foreign direct investment undertaken in the region;
2 To explore the factors that influence the locational choices of the MNE;
3 To determine the modality of this investment; and
4 To distil the policy implications that arise from this analysis to decision-makers in the Caribbean.

Foreign direct investment, multinational enterprises and micro-economies

For almost forty years, researchers have been grappling with issues surrounding the phenomenon of the MNE and the factors that influence its behaviour in different countries. The early studies conducted on FDI sought to explain the factors that influence the initial investment decision of the firm, which was engaged primarily in market-seeking FDI in industrialised countries (Hymer 1960, 1976; Vernon 1966; Kindleberger 1969; Caves 1971, 1974). Conversely, emphasis was placed on the factors that gave rise to the MNE, per se (Buckley and Casson 1976; Dunning 1979, 1980, 1981; Rugman 1980a,b,c, 1981). Studies also focused on what were the locational attractions of both developed and developing countries, which induced foreign direct investment (Reuber *et al.* 1973; Agodo 1978; Root and Ahmed 1979; Schneider and Frey 1985; Lecraw 1991). In addition, emphasis was placed on the efficacy of a single factor, for example, investment incentives, in attracting FDI (Guisinger *et al.* 1985; Lim 1983; Wheeler and Mody 1991). Alternatively, researchers focused on the factors influencing the MNE's selection of a market entry mode (Johanson and Weidersheim-Paul 1975; Johanson and Vahlne 1977, 1990; Oman 1984; Beamish and Banks 1987; Kogut and Singh 1988; Gomes-Casseres 1990). Within the past decade, the rapid growth in export-seeking FDI has led to studies that have sought to determine the locational factors that influence this type of investment (Frobel *et al.* 1980; Rolfe and White 1992; Rolfe *et al.* 1993; Woodward and Rolfe 1993; Kumar 1994).

It is noteworthy that few of these studies examined the foreign direct investment undertaken in micro-economies, specifically the Caribbean. Indeed, most of the studies conducted on FDI in the Caribbean have emerged from the discipline of Development Economics. Thus, several inevitably focused on the inequitable relationship shared by the MNE and its host country (Mc Intyre and Watson 1970; Girvan 1970, 1971, 1987; Farrell 1979). Alternatively, a few analysed the efficacy of the strategies implemented by these countries to attract FDI (Weiss 1989; Krammer 1991; Gore 1993).

The approach adopted in this book contrasts sharply to those undertaken on FDI in the Caribbean. This is a strategy-related study that draws heavily on international business theories. This monograph has broken new ground by integrating three main areas of concern in the foreign direct investment literature. To this end, it attempts to determine the factors that influence the motivations, locational choices and market entry mode of MNEs operating in the Caribbean. Moreover, this study seeks to ascertain the extent to which these factors are influenced by the timing of the investment decision, the type of FDI (resource-seeking, market-seeking and export-seeking), the quantum of initial investment and the country of origin of the investor. Further, this work does not only examine the factors that determine the initial investment decision (Coyne 1995), it also analyses the factors that affect the firm's decision to continue operations in the Caribbean. Moreover, the analysis is not only limited to one type of investment (Woodward and Rolfe 1993; Kumar 1994), it also examines all three types of FDI. Finally, the research did not merely seek to solicit responses from managers at the headquarters (Reuber 1973; Guisinger 1985; Coyne 1995), as responses from managers located at the subsidiary were also sought.

This study draws heavily on the FDI literature in its attempts at finding answers to the research question. Fourteen hypotheses were advanced from the literature. A triangulation method was employed in the testing of these hypotheses. The fourteen hypotheses were initially tested by means of a nine-page mailed questionnaire, which was administered to 299 executives of MNEs that operate in three Caribbean countries: Jamaica, Barbados and Trinidad-Tobago. The results of the mailed questionnaire were analysed using chi-square tests. The hypotheses were further tested using a qualitative method. The objectives of using a qualitative methodology were to capture the nuances of the MNE's behaviour in the Caribbean and to gain a deeper understanding of the process of FDI as it is undertaken in the focus countries. The qualitative method used was that of the case study approach. Twelve core cases of MNEs operating in the export sectors of the three Caribbean countries were analysed.

The organisation of the book

Following this introduction, Chapter 2 introduces the three focus countries: Jamaica, Barbados and Trinidad-Tobago. It profiles the socio-economic and political conditions prevailing in these countries. This chapter also attempts to highlight the differences in the business environment of these three Caribbean countries to the foreign investor.

Chapters 3 to 5 review the literature that is relevant to the development of the fourteen hypotheses. Chapter 3 examines those theories, which seek to explain the factors motivating a firm to engage in production abroad. Chapter 4 analyses the strands of the FDI literature that attempt to elucidate where a firm is likely to locate its production and the factors that influence this decision. Chapter 5 is the last of the literature review chapters. In this chapter an analysis is undertaken of the theories that purport to explain the factors determining an MNE's selection of a market entry mode. In all three chapters, special emphasis is placed on those theories that focus on the behaviour of the MNE operating in developing countries.

Chapter 6 discusses the hypotheses that were developed in Chapters 2 to 4. In addition, it provides the rationale for the use of a triangulation method in this study. This chapter also explains the process by which the MNEs and their respondents were selected for both the mailed questionnaire survey and the case studies.

Chapters 7 to 10 present the findings of the analysis of the research data. In Chapter 7 the research findings of the quantitative study are analysed and interpreted. In addition, it compares the findings of the quantitative study with those reported by other researchers. In Chapters 8 to 10, the hypotheses, which were analysed in Chapter 7, are further tested using the case study approach. To this end, case studies are conducted of a grouping of four firms that operate in the export sectors of the three Caribbean countries. Chapter 8 is a case study of four MNEs that have made investment in Jamaica's apparel sector. In Chapter 9 a case study is made of four MNEs that operate in the information service industry of Barbados. Similarly, Chapter 10 conducts a case study of seven MNEs engaged in FDI in the natural gas sector of Trinidad-Tobago. In this case study, two of the firms examined are joint ventures: one involves three MNE partners; the other, two. In all three case studies, the industry selection is explained, case histories for the MNEs are presented and the foreign investment decision is analysed.

Chapter 11 cross-analyses the case study data. In this chapter, the foreign investment decisions made by the fifteen MNEs that operate in the focus countries are analysed with the aim of identifying patterns of similarities and differences. To this end, the factors that influence these firms' motivations for FDI, choice of location and selection of market entry mode are analysed across industry and country.

Chapter 12 is the concluding chapter. In this chapter, a comparison is done of both the quantitative and qualitative studies. The objectives of this comparative analysis are to increase the generalisability, deepen the understanding and provide fuller explanations of the factors influencing the foreign investment decisions of the MNEs that operate in the three Caribbean countries. In addition, in this chapter public policy and strategic management issues arising from this study are articulated. Further, the chapter examines the limitations of the study and identifies areas for future research.

Foreign direct investment in micro-economies: lessons learnt

One insight gained from this study is the non-applicability of several of the FDI theories to the realities of small, less-developed economies. These economies will not only include those of the Caribbean, but also the smaller economies of the Pacific, of Africa and, possibly, some of the emerging economies of Eastern Europe.

The FDI theories have been developed largely to explain the behaviour of firms originating from advanced, industrialised countries which are making investments in these countries. Thus, not surprisingly, they do not seem to fully explain the FDI process conducted in small, less-developed countries. One notable example was the failure of the monopolistic advantage theory, initially postulated by Hymer (1960), to explain the motivations for the MNE investing in the three focus countries. Nonetheless, a few of these theories appeared to adequately explain the investment behaviour and corporate strategy of the MNE engaging in FDI in the Caribbean. The most noteworthy was the 'Double Diamond' hypothesis advanced by Rugman and D'Cruz (1993) and Rugman and Verbeke (1993). This study shows that the customised 'Double Diamond' model is a powerful framework for analysing the business environment of the three Caribbean countries studied. The customised 'Double Diamond' model demonstrated the extent to which the focus countries were integrated into the global corporate strategy of the MNEs studied. In so doing, it highlighted the deficiencies of the business environment of the three countries.

The study also highlighted several issues of public policy. It illustrated the importance of the governments of the focus countries aggressively pursuing strategies to ensure that their countries develop a business environment that is more supportive of the foreign investor. It seems that the focus countries still offer the MNE what has been termed 'basic factors' by Porter (1990). These are low-cost, semi-skilled labour and a strategic location. The work suggests that investments need to be made in human resource development, infrastructural improvements and the strengthening of the institutional framework for industrialisation. Also, it appears that a nexus needs to be created between the foreign investor and the government. Moreover, it seems that the investment incentive package needs to be revised. Finally, the study suggests that support should be given for the development of the local firm.

Strategic management issues were also revealed. The work demonstrates the criticality of human resource management to firms engaging in labour-intensive activities in micro-economies. It seems that managers of these firms need to offer both financial and psychic rewards to attract and maintain a productive workforce. In addition, this work suggests that managers need to intervene in the education system to ensure that it produces workers with the requisite skills. The study also shows that the local firm does not pose a competitor threat to the MNE. Interestingly, the MNE's competitors are the other foreign firms operating in the host country. These firms may implement strategies that threaten the MNE's access to those locational assets which lured its initial investment in the Caribbean. Managers of MNEs need to adopt collaborative strategies to counteract this threat.

This work also demonstrates the absence of well-developed clusters of firms and institutions in the three focus countries. Managers are thus obliged to access supplier and related goods and services from other locations. However, in Trinidad, a nascent cluster in the gas sector appears to be emerging. Managers operating in this country should develop relationships with the firms in this cluster. In so doing, they may gain potential first-mover advantages over competitors operating in this country. Finally, this study reveals that managers need to engage in deeper dialogue with the host government. The foreign investor plays a crucial role in these micro-economies. Thus, managers of MNEs, as a collective body, could successfully agitate for changes in the business environment. Suggested changes include improvements in the education system and an upgrading of the infrastructural and institutional framework for industrialisation.

2 The Caribbean host countries

An introduction

Introduction

This chapter introduces the three Caribbean countries that are the focus of this study. In so doing, it traces the historical evolution of the Caribbean region and analyses the socio-economic and political factors affecting the three focus countries over the last two decades. This chapter also highlights the growing importance of FDI to the three Caribbean countries.

The Caribbean region: a historical and political analysis

The Caribbean region consists of an archipelago of islands stretching from the south-east tip of Florida along the Caribbean Sea to the mainland of South America, where the continental enclaves of Belize, Guyana, Suriname and French Guiana form the southern part of the region (see Figure 2.1). The Caribbean consists of sixteen independent countries, three French departments, five British colonies in varying degrees of autonomy, a US Commonwealth and a US territory, and six semi-autonomous members of the Netherlands (Knight and Palmer 1989:3–4; Kurlansky 1992:xi–xii). This study will examine the English-speaking countries that are members of the only operating trade agreement in the region, the Caribbean Common Market (CARICOM). The CARICOM countries are the only group that approximates a form of unity and co-operation in the region. The members of CARICOM are Antigua and Barbuda, the Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Montserrat, and St Kitts-Nevis, St Lucia, St Vincent, and Trinidad-Tobago. This grouping of English-speaking Caribbean countries is small: these territories boast a population of a mere 5.9 million (United Nations 1997). These countries have similar characteristics. They all possess a shared history.

England acquired these territories by settlement and conquest between the early seventeenth and eighteenth centuries. The *raison d'être* of these colonies was mercantilism–producing raw materials, including sugar for the British and European markets. It was argued that sugar production required a large labour force which the Amerindian and European immigrant

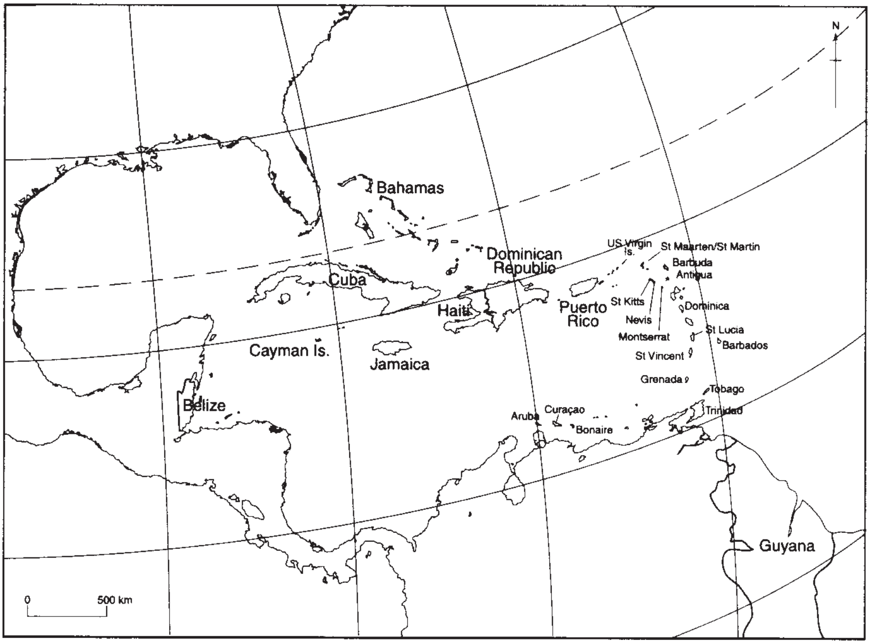

Figure 2.1 Map of the Caribbean Region.

population could not provide. Hence, African slaves were brought to work in the plantations of the British West Indies. With the emancipation of slavery in 1838, territories such as British Guyana and Trinidad still argued the need for an additional labour force. This ushered the advent of East Indian and Chinese immigrants to work on the sugar plantations (Knight and Palmer 1989:6–9; Mandle 1989:234). British colonisation remained a critical element of the history of these territories until 1962 when Jamaica and Trinidad-Tobago were granted their independence. Today, all of these countries, except for Montserrat (a British colony), are independent states.

It seems that the Caribbean countries replaced one colonial master for another. All these countries are presently within the US sphere of influence. The US is their principal export market as well as their main source of imports and foreign investment (Worrell 1987:2). Moreover, because of their strategic geographical location, these countries are also occasionally subjected to US political intervention (Knight and Palmer 1989:2–3).

Yet, the legacy of British colonisation still prevails in these territories. This can be clearly seen in their social, political and economic institutions. Their political systems are modelled on the Westminster system. In addition, their legal systems are derived from the English Common law. Moreover, the economic institution of the plantation still exists (Mandle 1989). These countries remain highly dependent on international markets. As noted earlier, they historically produced agricultural products for export to developed country markets. These markets supplied the goods needed for local production and consumption. This pattern of economic organisation still prevails among the CARICOM countries. At present, they produce a limited range of goods and services (sugar, bananas, bauxite, oil and tourism) for export, generating the foreign exchange needed to supply a wide diversity of imports (Worrell 1987:1–2). Hence, their economic growth depends crucially on exports. Not surprisingly, these countries have highly open and extremely vulnerable economies.

Most of them are classified as middle-income, less developed economies by the World Bank. They are over-shadowed by their Latin American neighbours with whom they have been coupled under the World Bank classification. Indeed, economic growth rates for the Latin American and Caribbean region during 1993, 1994 and 1995 were a recorded 3.6 per cent, 5.2 per cent and 0.4 per cent, respectively (Economic Commission for Latin American and the Caribbean 1996:68). The comparative rates for the CARICOM countries were -0.6 per cent, 2.1 per cent and 1.3 per cent (CARICOM Secretariat 1998). Moreover, FDI inflows into the Caribbean were considerably less than those to the Latin American and Caribbean region as a whole. The Caribbean accounted for a mere 2 per cent and 1 per cent of total FDI flows to the region in 1995 and 1996, respectively (UNCTAD 1998:362–363).

It is noteworthy that policy-makers in the region have sought to decrease the economic vulnerability of these economies. Thus, attempts were made at economic integration. In July 1973, the CARICOM was established. The main objectives of this trade agreement were economic integration (involving market integration, co-ordinated production and joint actions in extra-regional trade); functional co-operation in areas such as education, health, meteorology, transport and labour relations; and the co-ordination of foreign policies of member states (Group of Experts 1991:3–4).

Despite the attempts at regional integration, CARICOM is presently dominated by three core countries: Jamaica, Barbados, and Trinidad-Tobago. These three countries accounted for approximately 81 per cent, 78 per cent and 85 per cent of intra-regional trade during the years 1991, 1992, and 1993, respectively (CARICOM Secretariat 1998). Evidently, these three countries are the lead economies in CARICOM. The following sections profile their changing socio-economic conditions as well as the attendant changes in their FDI policies.

The host countries

Jamaica

Geography

Jamaica, situated 588 miles south-west of Miami, is the most northerly island of the Caribbean. With an area of 4,441 square miles, it is the largest of the three countries studied.

Economic performance

Jamaica is a market-oriented economy that is based on a system of private ownership and international trade. Its principal economic activities are: tourism, the main source of foreign exchange; bauxite/alumina, the second source of foreign exchange; manufacturing; and agriculture. In 1994, these sectors accounted for over a half of the country's Gross Domestic Product (GDP) and employment, and over 75 per cent of its foreign exchange earnings (World Bank 1995b:254).

The Jamaican economy has witnessed declining fortunes over the last twenty years. Its strong economic performance in the decade immediately preceding its independence (1962 to 1972) was reversed in subsequent years. During the years 1973 to 1987, the economy experienced severe contractions: GDP declined by 28 per cent from 1973 to 1987. Moreover, external debt increased almost fourfold from US$1,206 million to US$4,568 million. It was during this period that the government was compelled to approach the international lending agencies for financing. As part of its loan conditions, Jamaica embarked on a series of economic reforms. These included devaluation, privatisation, fiscal restraint, and trade and exchange rate liberalisation. Economic conditions have improved since the late 1980s. Real growth averaged about 6 per cent over 1988–90, but has since been below 2 per cent (see Figure 2.2(1)). In addition, since 1993, capital inflows have more than tripled (see Figure 2.2(4)).

Social conditions

Jamaica is the largest country in CARICOM. In 1997, its population was approximately 2.5 million. However, 32 per cent of this population lives below the poverty line (ibid., 252). During the years 1989 to 1994, the top 20 per cent of households in Jamaica possessed 47 per cent of the total income. Conversely, the bottom 20 per cent of households secured a mere 6 per cent (World Bank 1996a:171). Jamaica also suffers from regional disparities that have resulted in a high migration from the rural areas into the capital. These migrants form concentrations of the urban unemployed (Worrell 1987:3). However, over the last ten years, the country's unemployment rate has been declining (see Figure 2.2(3)). It moved from 25.5 per cent in 1988 to 16.2 per cent in 1995 (Planning Institute of Jamaica 1995: iv). Nonetheless, urban poverty and unemployment contribute to the country's serious crime problem. There was a total of 780 murders in 1995 alone (ibid., 23.2). The high levels of violence limit the urban poor's accessibility to the public sector services, significantly, public transport, thereby restricting their opportunities for economic and social mobility. Further, Jamaica's literacy rates are among the lowest of the focus countries. Despite universal primary and lower secondary enrolment, almost 24 per cent of the population over 15 years old is illiterate (World Bank 1996b:249).

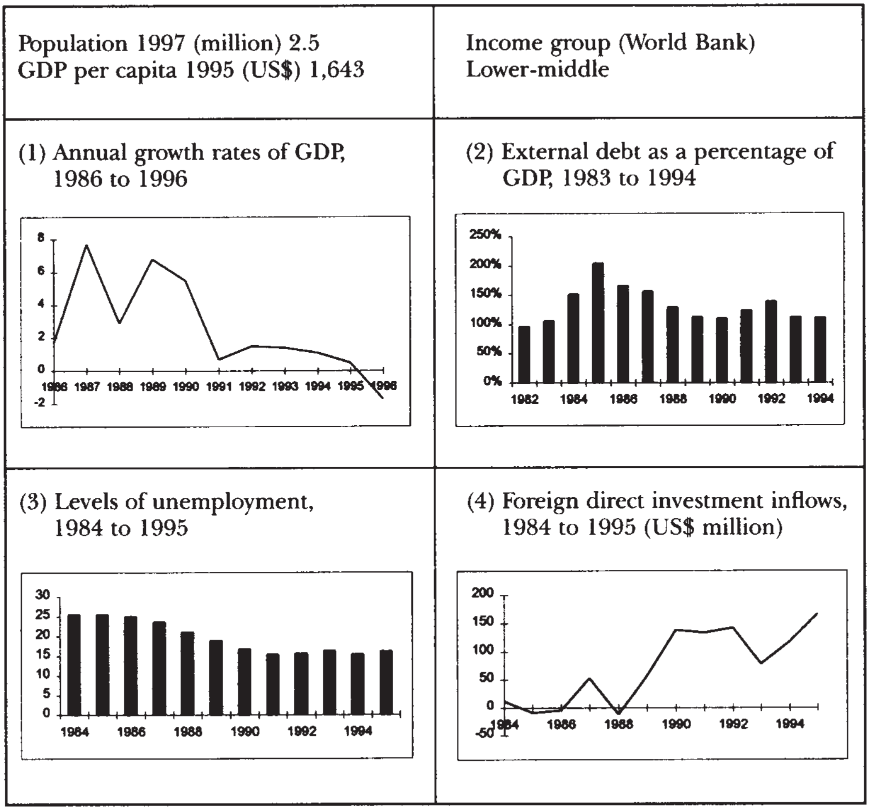

Figure 2.2 Jamaica at a glance

Sources: The National Planning Institute of Jamaica, 'Economic and Social Survey of Jamaica' (various issues); International Monetary Fund, 'Balance of Payment Statistics' (various issues); World Bank, *Trends in Developing Economies;* World Bank, *World Tables 1995.*

Receptivity to foreign direct investment

Over the past thirty years, the Jamaican government has dramatically changed its policies towards FDI. In the pre-1970 period, the government adopted conscious policies of attracting foreign investment. Foreign capital, whether attracted by the generous investment incentives offered or by the country's resources of bauxite, entered Jamaica in the pre-1970 era (Ramsaran 1985:160). The years 1972 to 1980 saw a dramatic reversal of this policy. The democratic socialism philosophy of the then ruling government had as one of its basic tenets, state control over critical sectors of the economy. Hence, in certain sectors of the economy, notably utilities, communications and mining, the foreign investor was to play a limited role. Moreover, its mode of market entry was specified to that of a joint venture (ibid., 161). Not surprisingly, during this period, there was a decrease in FDI inflows into the country. Researchers attribute this decline to the deterioration of the political and social climate of the country as well as the seemingly anti-foreign investment posture of the ruling government (Ramsaran 1985:162; Worrell 1987:42). However, in 1980 this government was voted out of office and replaced with one that adopted more conciliatory policies towards foreign investment. Hence, over the last seventeen years, there has been a return to the foreign investment policies of the pre-1970 period. The foreign investor is now viewed as one of the key elements in the regeneration of the Jamaican economy. Several measures have been adopted to lure the foreign investor into Jamaica. These include the removal of all restrictions on foreign investment; the elimination of exchange controls; the lowering of tariffs, the divestment of state assets to the foreign investor; the creation of export processing zones; and the granting of special incentives to operators in these zones. In addition, operations of the institutions mandated to stimulate industrial activity in the country have been rationalised to increase their efficiency (*Fortune,* May 1 1995; *Corporate Location,* July/August 1995).

Barbados

Geography

Barbados is the most easterly of the Caribbean islands. It lies 270 miles north-east of Venezuela, South America, and 1,200 miles south-east of Miami. The country is the smallest of the three studied. It is a mere 166 square miles.

Economic performance

Like Jamaica, Barbados is a market-oriented economy based on private ownership and international trade. Its economy is based on four key export sectors: tourism, which provides the main source of foreign exchange, economic activity and employment; offshore financial services, the second principal source of foreign exchange and economic activity; agriculture; and manufacturing. In 1994, these sectors accounted for approximately 40 per cent of the country's GDP (Central Bank of Barbados 1995: Table 12).

The Barbadian economy is one of the most stable in the Caribbean region. Its GNP per capita of US$6,560 in 1994 is the one of the highest in the comparative grouping of upper-middle-income economies (World Bank 1996b: Tables 1 and 1a). However, like the other open economies in the region, Barbados is extremely vulnerable to vagaries in the international economy. Thus, during the periods 1981 to 1982, 1984 to 1985, and again in 1990 to 1992, the country experienced economic decline (see Figure 2.3(1)). These were primarily a result of the changes in demand for its main exports: tourism, sugar and manufacturing (electronics). The corrective actions implemented by the Barbadian government, some of which were put in place through a consultative programme with the International Monetary Fund in 1991, included the introduction of new export activity, specifically telecommunications services and offshore financial services; a two-year wage freeze in the public and private sector; price controls; trade and exchange rate liberalisation; and privatisation. In addition, like Jamaica, it rationalised the operations of the institutions responsible for promoting investment in the country. Since 1992, the Barbadian economy has experienced positive growth rates arising from the successful performance of its new export sectors (telecommunications services and offshore financial services) and the recovery of the tourist industry (see Figure 2.3(1)).

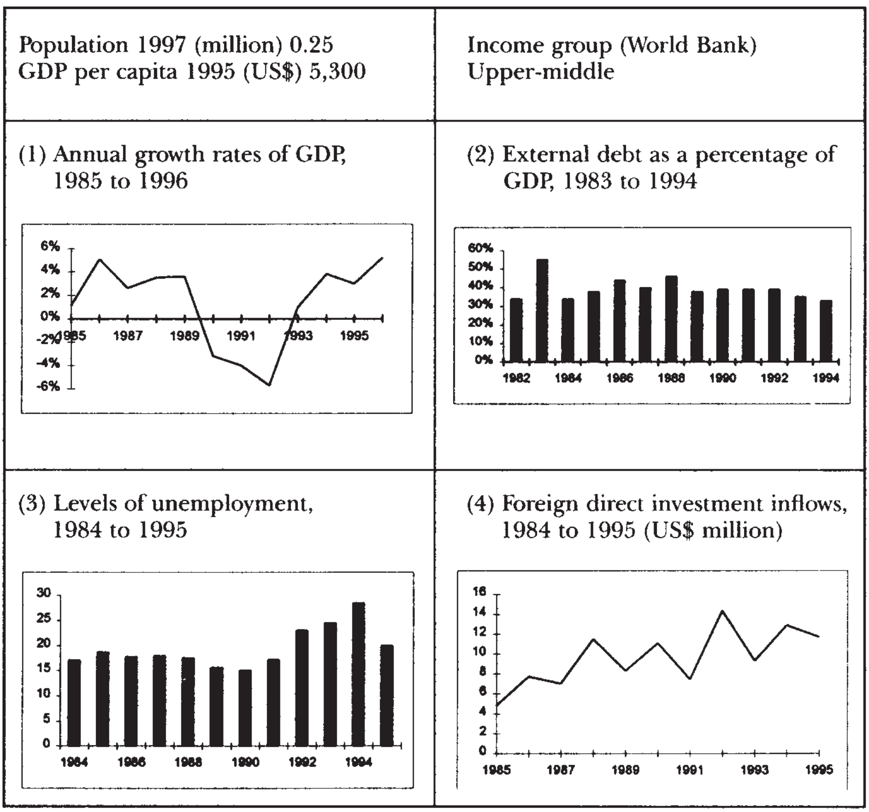

Figure 2.3 Barbados at a glance

Sources: Central Bank of Barbados, 'Annual Statistical Digest' (various issues); World Bank, *World Tables 1995;* Caribbean Development Bank 'Social and Economic Indicators 1993. Borrowing Member Countries, vol. VI, 1995'; International Monetary Fund, 'Balance of Payment Statistics' (various issues).

Social conditions

Barbados, with a population of 260,000 (1997), is the smallest of the three countries studied. However, in 1994, the country ranked first among developing countries in the United Nations' Human Development Index. This index measures education levels, life expectancy and per capita income. Indeed, Barbados' literacy rate of 97 per cent is the highest in the region. Moreover, its life expectancy of 75 years surpasses the regional average of 68 years (World Bank 1996a:28–9). Yet, Barbados' unemployment levels are among the highest in the region. In 1995, the number of unemployed represented 20 per cent of the labour force (see Figure 2.3(3)). It is noteworthy that despite these high levels of unemployment, Barbados has not experienced the social and political instability that has plagued the other focus countries.

Receptivity to FDI

Unlike the other two Caribbean countries studied, Barbados has always actively attempted to attract FDI. To this end, since its independence in 1966, it has sought to create a business environment that is conducive to foreign investment. In so doing, it developed an extensive network of roads and established a well-developed telecommunications system, reliable utility services, and excellent airport and seaport services. The country has also established a fairly generous package of investment incentives. Since 1974, Barbados has offered the foreign investor incentives available under the Fiscal Incentives Act. This Act, to which the CARICOM countries subscribe, attempts to harmonise the fiscal incentives offered throughout the region. Barbados also grants special incentives to specified activities such as export-oriented manufacturing and offshore service operations (Barbados Investment and Development Corporation, n.d.).

Trinidad-Tobago

Geography

Trinidad, an island of 1,864 square miles, lies just 10 miles off the east coast of Venezuela. Tobago, which is much smaller (116 square miles), lies 21 miles to the north-east of Trinidad. Trinidad-Tobago form one political and administrative entity.

Economic conditions

Trinidad-Tobago is an oil economy whose economic conditions mirror the world price of its major export commodity, oil. The country enjoyed unprecedented economic prosperity during the years 1974 to 1982. Indeed, its per capita income soared to US$6,600 in 1982 (World Bank 1995b:

500). During this period, the government invested heavily in state-owned, gas-intensive activities. Thus, at present, the economy is based on oil, gas and downstream petrochemical industries. However, the decline in the international oil market that began in 1982, triggered a recession in Trinidad-Tobago which lasted until 1991 (see Figure 2.4(1)). Thus, in 1989, the country, like the other two in this study, was compelled to approach the international lending agencies for financial support. As part of its loan conditions, Trinidad-Tobago implemented stabilisation and structural adjustment programmes. The main objective of these programmes was to transform the country into a more diversified, market-oriented economy led by the private sector (World Bank 1996b:508). To this end, the adjustment measures implemented included devaluation, fiscal restraint, improved tax administration, divestment of state enterprises, and trade and exchange rate liberalisation. The country also sought to rationalise the operations of its institutions mandated to stimulate industrial activity. Further, the government has identified policies to develop labour-intensive export activities. It is attempting to generate employment and growth, and minimise its external vulnerability (ibid., 510). These policies have achieved modest success. The economy of Trinidad-Tobago grew by 5 per cent and 2 per cent in 1994 and 1995, respectively (see Figure 2.4(1)).

Social conditions

Trinidad-Tobago, with a population of 1.3 million (1995), can be described as a medium-sized Caribbean country. Its literacy level of 98 per cent is one of the highest in the region. Despite its relatively high rates of literacy, the country suffers from high levels of unemployment (see Figure 2.4(3)). The numbers unemployed doubled from 10 per cent in 1982 to 20 per cent in 1992 (World Bank 1996b:501). Moreover, with the declines in oil revenues, the government is no longer able to engage in the high levels of social expenditure which were necessary to mitigate the link between poverty and unemployment. Thus, within recent years, a group of 'new poor' has emerged. This represents those members of the unemployed who have slipped below the poverty line (ibid., 501). Poverty, coupled with high youth unemployment, has resulted in increasing incidences of crime and drug abuse. However, Trinidad-Tobago still possesses many of the characteristics of an upper-middle-income developing country. Its infant mortality rates are relatively low, primary school enrolment is almost universal and child malnutrition rates are extremely low (ibid., 501; World Bank 1996a:344).

Receptivity to foreign investment

Like Jamaica, Trinidad-Tobago's policies towards the foreign investor have vacillated with its economic fortunes. In the pre-1970 period, the government adopted an 'open door policy' towards foreign investment. The

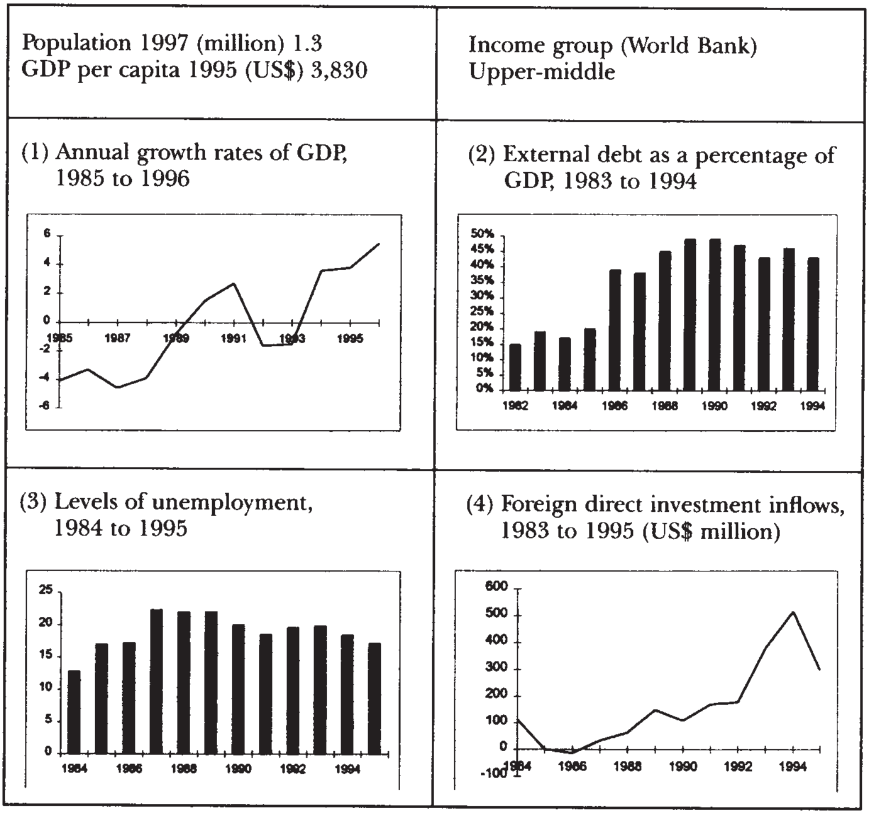

Figure 2.4 Trinidad-Tobago at a glance

Sources: Central Bank of Trinidad and Tobago, 'Annual Economic Survey' (various issues); Caribbean Development Bank 'Social and Economic Indicators 1993. Borrowing Member Countries, vol. VI, 1995'; World Bank, *World Tables 1995;* World Bank, *Trends in Developing Economies;* International Monetary Fund, 'Balance of Payment Statistics' (various issues).

country attempted to lure this investment with a system of generous investment incentives and low wages. However, by the late 1960s, the government began to espouse a philosophy of nationalisation. Further, in the early 1970s, armed with its oil windfall, the government relegated the foreign investor to the 'role of contractor or consultant or occasionally, joint venture partner' (Farrell 1987a:241). It also specified the sectors in which the foreign investor could operate and limited the forms of foreign involvement used in its key sectors (oil and natural gas) (Ramsaran 1985:147–52).

The post-1983 period, characterised by declining oil revenues, witnessed a return to the government's FDI policies of the pre-1970 era. The foreign investor was now actively courted. Moreover, no attempts were made to limit its areas of involvement or its mode of market entry. In addition, the government eliminated exchange controls, dismantled tariffs and other trade barriers, and divested state assets to foreign companies. Like its two Caribbean neighbours, it also sought to increase the efficiency of the institutions mandated to stimulate industrial activity by rationalising their operations. As Figure 2.4(4) shows, these policies have achieved modest success. Trinidad-Tobago has the highest levels of FDI inflows of the three countries studied.

Conclusions

This chapter examined the socio-economic and political factors that have affected the three focus countries over the last two decades. This broad analysis revealed that despite the various attempts at economic transformation, the focus countries still remain highly vulnerable developing economies. To a large extent, they have not managed to fully dismantle the economic institutions of British colonialism. Hence, they are presently entering the twenty-first century with patterns of economic organisation created in the seventeenth century. These three economies are still largely monocultural, specialising in the production of exports–tourism, international financial services, bauxite, oil and petrochemicals–for international markets. However, their policy-makers are presently striving to escape the quagmire of history. Under the tutelage of the international financial institutions, they are all attempting to transform their economies. One of the main objectives of these efforts is to make their business environments more attractive to the foreign investor. Using hypotheses drawn from the international business literature, the subsequent chapters will analyse the relative success of these initiatives.

3 The motivations for foreign direct investment

Introduction

The foreign investment decision process is a complex succession of acts, rather than a single, identifiable act (Aharoni 1966:4). This study seeks to examine three elements of this multidimensional, evolutionary process. They include:

1 The factors that motivate the firm to engage in production abroad
2 The factors that influence its choice of location
3 The factors that determine its international entry mode

While the above issues are by no means exhaustive, this study asserts that these are the main ones that confront strategic planners of business enterprises. Further, this analysis is not concerned with the sequencing of the decision-making process. Some researchers argue that the decision to engage in production abroad precedes the locational decision (ibid., 42–3). Conversely, it could be argued that all three decisions are determined interdependently. However, as noted earlier, this study does not attempt to determine the sequencing of the investment decision-making process. Rather, it postulates that these three elements are critical variables of the decision to engage in international production.

In the following three chapters, an attempt will be made to analyse the various FDI theories that purport to explain these three elements of the foreign investment decision process. This chapter is the first of the literature review chapters. It examines the theories that seek to explain the motivations for the firm's decision to engage in production abroad.

Theories on the motivations for foreign direct investment

Since the 1960s, theorists have been grappling with the question of why the individual business enterprise engages in international production. In the foreign direct investment (FDI) literature, four theories that attempt to explain the firm's motivations for FDI can be identified. These are namely:

1 The monopolistic advantage theory
2 The oligopolistic reaction theory
3 The internalisation theory
4 The eclectic paradigm

This chapter examines the main tenets of these four theories. In addition, where possible, the applicability of these theories to the FDI undertaken in developing economies will be discussed.

The monopolistic advantage theory

The progenitor of this explanation for international production and, indeed, of the theory of FDI, was Stephen Hymer (1960, published in 1976). In making the vital distinction between portfolio investment and FDI, he deviated from the international capital movement approach that was adopted by previous theorists.

Thus, Hymer argued that the difference between portfolio investment and direct investment lies in the issue of control. Control was defined as the investor owning more than 25 per cent of the equity of the foreign enterprise (Hymer 1976:1–2). Hymer posited that if the investor directly controls the enterprise, the investment made is considered to be direct investment, if he does not, it is portfolio. In this way, Hymer rejected the portfolio investment theory with its simplifying assumptions of a lack of risks, uncertainties and barriers to the movements of capital, as an explanation for foreign direct investment. Instead, he argued that FDI occurs in imperfectly competitive markets and adopted an industrial organisation approach to explain the process of international production.

The basic tenet of Hymer's hypothesis was that firms will engage in FDI once they have advantages, for example production technology, finance, cost, product differentiation or superior distribution networks that are not possessed by their domestic competitors. Hence, he asserted that if FDI is to occur there must be some imperfections in the goods or factor markets. Basing his argument on Bain's 1956 thesis, Hymer postulated that the possession of these advantages is a necessary condition for FDI since the foreign firm is at a disadvantage vis-à-vis the indigenous ones. The indigenous firm has knowledge of local market conditions, the legal and institutional framework for business, and local business customs that the foreign firm can only obtain at a cost Moreover, the foreign firm incurs costs from operating at a distance that are mainly the result of the difficulties of operating in an unfamiliar environment. Thus, Hymer argued that if production abroad must be profitable, the foreign-owned firm must possess certain advantages over the domestic ones. Indeed, he emphasised that the unequal ability of firms is a sufficient condition for international operations (ibid., 46).

This theme of the investing firm possessing superior advantages over its domestic competitors was echoed in the work of several other theorists. They refined and extended this hypothesis to include other sources of monopolistic advantages. Thus, Kindleberger (1969), using Hymer's work as a basis for his analysis, also rejected the hypothesis that FDI occurs in perfectly competitive markets. He posits:

> In a world of perfect competition for goods and factors, direct investment cannot exist In these conditions, domestic firms would have an advantage over foreign firms in the proximity of their operations to their decision-making centres, so that no firm could survive in foreign operations. For direct investment to thrive there must be some imperfection in markets for goods or factors.
>
> (ibid., 33)

Kindleberger details the nature of the monopolistic advantages that the foreign investor may possess over its domestic competitors. Thus, he indicates that these advantages may arise in the goods market (product differentiation, superior marketing and distribution skills); in the factors market (preferential access to capital, restricted technology and superior managerial skills); and in the ability to achieve vertical or horizontal integration. Kindleberger also states that monopolistic advantages may arise through the actions of government in the host country. In restricting imports, the government may inadvertently stimulate FDI.

Caves (1971, 1974) also embraced the notion of the firm possessing what he terms 'unique assets'. However, in his explanation of the determinants of FDI, he emphasises that this investment occurs mainly in industries characterised by oligopolistic market structures. Moreover, he clearly distinguished among the various categories of FDI: horizontal extension (a firm that is producing the same product elsewhere); vertical extension (a firm adding a stage to the production process that either comes earlier or later than its principal processing activity); and conglomerate diversification. He focuses on the first two types of investment since he argues that the latter type rarely occurs.

Caves indicates that it is the horizontally integrated firm which possesses unique assets over its local competitors. He identifies these assets to be product differentiation. According to Caves, the advantage which product differentiation conveys to the foreign producer is the difficulty that the local competitor will meet in reproducing the product since it is protected by trade marks and brand names. In addition, he extends the term 'differentiation' to include the possession of managerial, financial, and innovative skills as well as privileged access to the factors of production. In a later work, he describes this advantage as an 'intangible resource' (Caves 1982).

Empirical evidence was found to support this hypothesis. Caves notes the high degree of correlation that exists between the extent of product differentiation in an industry and the level of international production made by US firms. He states that firms in industries such as automobiles, other consumer durables and scientific instruments had more subsidiaries than those in primary metals, leather and lumber (Caves 1971:8).

However, Caves argues that the vertically extended foreign investor does not rely on the possession of these unique assets. Its motivations for international production are to avoid oligopolistic uncertainty concerning the long-term supply and pricing of its inputs as well as to erect barriers to entry against new rivals.

Several theorists have expanded on the notion that privileged access to raw materials or minerals conveys a monopolistic advantage to the investing firm. It appears that the favoured access to raw materials or minerals may be a result of the firm's control over final markets or transportation, processing (vertical integration in mining and food processing) or production of the material (mining and plantation) (Lall and Streeten 1977:26). The researchers state that once the MNE acquires such access to raw materials, it is in a powerful oligopolistic position. Under these circumstances, the industry will shift from numerous firms that are small and competitive to one characterised by a few large, vertically integrated enterprises (Kindleberger 1969:19–23).

Vernon (1966) also concurs with the notion that it is a firm's possession of monopolistic advantages over its foreign competitors that determines FDI. However, he argues that this advantage, which he identifies as the ability to innovate and produce new products, is determined by the structure of the market and the factor endowments of the home country. Thus, Vernon identifies the main types of monopolistic advantages of a firm, albeit US firms, and the factors that will result in their developing these advantages. No less important, he also identifies how the location of production will move from country to country over time. This issue will be discussed in the next chapter.

The monopolistic advantage theory was advanced by theorists from the developed world to explain the phenomenon of FDI occurring among industrialised economies. Hence, it is not surprising that several theorists argue that this theory is not an adequate explanation for the FDI undertaken in developing countries.

Hood and Young (1979) postulate that the monopolistic advantage theory fully explains the FDI made by US multinational enterprises during the post-World War II period. However, they question whether the MNE needs to possess any advantage when investing in developing countries, since it is confronted with little domestic competition. They cite the example of Japanese ventures in developing countries that are faced with few, if any, effective local competitors. Moreover, they argue that the host governments may discourage local competition to ensure that maximum economies of scale are achieved (Hood and Young 1979:67).

Alternatively, it has been suggested that the MNEs are not motivated to enter Less Developed Countries' (LDC) markets because of the limited impact that their monopolistic advantages has on domestic competition. Vachani's analysis of the product market choices of MNEs in India reveals that MNEs were discouraged from entering the LDC segments of the dentifrice and tractor industries.[1] These were the lower income segments that were more price sensitive and less susceptible to product differentiation than the developed country segments. Vachani asserts that in the lower income segment, the MNE's possession of a monopolistic advantage, which he describes as product differentiation, had little impact on competition. The products of the MNEs were highly differentiated, which made them much more expensive than the locally produced substitutes. Indeed, he argues that the LDC segment was not 'hospitable' to the products of the MNEs, hence the MNEs were deterred from entering this segment of the market (Vachani 1985:84–5).

Lall and Mohammed (1983) support Vachani's argument on the insignificant role that product differentiation plays in determining MNE's involvement in India. They, however, state that the advantages of sophisticated technology and scale are important influencing factors in motivating the MNE's entry into India. It is of interest to note that these authors also posit that the restrictive policy environment of a country may impede the MNE's use of its monopolistic advantage in international production. Thus, they revealed that because of the strict controls India imposed on foreign entry during the 1970s, little foreign involvement was found in the capital-intensive activities where the MNE was believed to possess 'special' advantages (ibid., 154).

Aswicahyono and Hill (1995) also explored the impact that a restrictive policy environment has on the MNE's use of its monopolistic advantages. The researchers also concur with the postulate that the monopolistic advantage theory does not fully explain FDI in developing countries. In examining foreign involvement in Indonesia, they argue that the MNE's use of product differentiation is limited since advertising is heavily restricted and the consumers are more price sensitive than their counterparts in the industrialised world. In addition, the researchers argue that the MNE's use of technology was not very important since the manufacturing sector in Indonesia is dominated by labour-intensive, low value-added activities (ibid., 153).

It is thus open to question whether the monopolistic advantage theory provides an appropriate explanation of the motivations for the MNE's involvement in the Caribbean. First, the Caribbean market is woefully small: the population of the English-speaking Caribbean is approximately 6 million. Thus, the notion of the MNE engaging in FDI to exercise its unique advantages of product differentiation over local competition seems unlikely. Moreover, the MNE is confronted with limited local competition. As several theorists posit, the region suffers from the lack of a dynamic entrepreneurial class (Worrell 1987:23–4). In addition, observers allude to the inefficiency of the domestic business sector that has long been cocooned from international competition by high tariff and other import restrictions (Watson 1994c:73–4). Hence, it seems unlikely that the monopolistic advantage theory will satisfactorily explain MNE activity in the Caribbean context.

The oligopolistic reaction theory

Another strand of the literature on FDI holds the view that international production is the result of a firm's strategic reaction to the anticipated behaviour of its oligopolistic competitors. Several theorists did make passing mention of this phenomenon (Aharoni 1966; Vernon 1966; Caves 1971). Yet it was Knickerbocker (1973) who examined this investment behaviour at length.

Basing his analysis on the behaviour of US manufacturing firms during the 1948 to 1967 period, Knickerbocker concludes that the risk-avoiding members of an oligopolistically structured industry will follow one another into any substantial foreign market in which one of them has set up production. In so doing, he argues that the oligopolists are protecting the exploitability abroad of the special firm-specific capabilities (technological and organisational skills) they acquire at home. Moreover, Knickerbocker argues that a rival firm's moves into a foreign market not only could threaten the corporate earnings of the other oligopolists, but also could result in it acquiring competitive assets far in excess of those it already possesses. Thus, he posits, the defensive investment undertaken by the other oligopolists serves to maintain the balance of competition within the industry.

Knickerbocker postulates that it is the firms that are 'product pioneers', that is, those which develop, mass produce and mass market a product uniquely suited to the US market, which are most likely to engage in this practice. He found that firms in highly concentrated industries producing heterogeneous products such as electrical and transport equipment, and food were the ones most likely to be engaged in this parallel investment. Knickerbocker also noted that this investment prevails in vertically integrated industries such as primary metals, paper and petroleum. In the latter industries, the oligopolists checked their rivals' attempts to secure access to low-cost, reliable, raw material supplies.

Knickerbocker's oligopolistic reaction theory holds considerable intuitive appeal as an explanation of the motivations for FDI in the primary sector as well as some segments of the manufacturing sector of developing countries. It is noteworthy that this investment behaviour, which has been described as 'follow-the-leader', was observed in the semi-conductor industries of south-east Asia and the raw material industries of several developing countries (Vernon 1983:190). Thus, it would be illuminating to determine the extent to which this theory explains the motivations for the MNE's involvement in the primary sector (bauxite, oil and natural gas) of the

Caribbean as well as those manufacturing activities that are intensive in the use of low-cost labour.

The internalisation theory

Another group of theorists sought to provide an alternative interpretation to the Hymer-Kindleberger-Caves industrial organisation approach. Indeed, they attempted to explain why the firm becomes involved in international production instead of selling its advantages to foreign competitors. Thus, there was now a switch of emphasis away from the act of FDI to the institution that is making the investment, the multinational enterprise. This is the theory of internalisation as posited by Buckley and Casson (1976); Casson (1979); Rugman (1980, 1981, 1985); and Buckley (1987).

The roots of the theory of internalisation lie in Coase (1937) who postulated that there are certain conditions when it will be more efficient for the firm to create an internal market than use the existing one. Coase's work was extended by Williamson (1975, 1981) who adopted the nomenclature of markets and hierarchies. The internalisation theory was further developed and applied to the behaviour of MNEs by McManus (1972), and later by researchers associated with the 'Reading School', such as Buckley and Casson (1976), Rugman (1980, 1981) and Hennart (1986).

The proponents of the internalisation theory posit that a firm will internalise the production of intermediate goods and services whenever their markets fail. Market failures may arise because of the absence of a futures market, the firm's inability to exercise discriminatory pricing, and information impactedness. Internalisation may also occur because of locational factors. It is likely to predominate when governments intervene in international markets through the imposition of value-added taxes or restrict capital movements. Differences in the income and profit taxes between countries would also facilitate the internalisation of markets (Buckley and Casson 1976:36–9). Thus, the firm will bring under its common governance and control those activities that were formerly linked by the market. The MNE is created when markets are internalised internationally.

Buckley and Casson also posit that the firm will engage in international production if it perceives that the net benefits of its joint ownership of domestic and foreign activities exceed those offered by the market. Moreover, it is argued that the firm will internalise markets until the costs of further internalisation outweigh the benefits (Casson 1979:46; Buckley 1983:42–3). Further, it is noted that the process of internalisation is a dynamic one. Once the MNE is established abroad, it will use its internal organisation to prevent the loss of its firm-specific advantage by maintaining control over the production and sale of final products which incorporate this firm-specific advantage (Rugman 1980b:369).

Buckley and Casson (1976) argue that industry-specific factors will result in the internalisation of markets for intermediate products that are used in certain multistage production processes. In addition, they postulate that industry-related factors will cause the internalisation of the market for knowledge. The two theorists postulate that the first type of internalisation results in the vertically integrated firm while the second type generates the horizontally integrated firm. They also state that it was the internalisation of the market for primary products that was largely responsible for the growth of the pre-World War II MNEs. They explain that the growth of the present-day MNE is fuelled by its desire to internalise the market for knowledge (ibid., 45–62).

It is noteworthy that a distinction is made between the sources of the firm's advantages that results in it becoming engaged in production abroad (Dunning and Rugman 1985). Under Hymer's analysis, the firm develops advantages that are based on structural market imperfections. These advantages, such as superior marketing ability, scale economies and knowledge advantage assist the MNE to construct entry barriers and thus increase its market power. Conversely, the proponents of the internalisation theory posit that the firm develops advantages that are of the 'Williamson-type transaction costs'. These transaction costs arise naturally or are assumed to be external to the firm. The MNE responds to them by creating an internal market. Once this internalisation is realised, the MNE possesses ownership advantages that are similar to those advanced by Hymer (ibid., 229). Indeed, this is the main difference between the theory advanced by Hymer and his followers, and those of the internalisation school.[2] Hymer perceived that the MNE could profitably create entry barriers by exercising its Bain-type advantages. By contrast, the internalisation theory postulates that these advantages are effectively deployed by the firm in response to transactional market failure. It is only when such internalisation is conducted internationally that the MNE is created.

While it is evident that the MNE bypasses the markets for intermediate products and knowledge through the process of FDI, empirical verification of this theory has proven to be very difficult, if not impossible (Hood and Young 1979:57; Agarwal 1980:754). Indeed, there are very few original field studies that aim at testing the internalisation theory (Dunning 1993a: 145). Nonetheless, this study proposes to test one hypothesis that largely arises from the internalisation theory. The internalisation theory suggests that the MNE, which internalises its intermediate markets, will be involved in intra-firm trade. This study contends that the global firm, which is involved in intra-firm trade, will select a wholly owned subsidiary as its preferred market entry mode. This issue will be explored in greater detail in Chapter 5.

The eclectic paradigm

Dunning (1979, 1980, 1993a), in his eclectic paradigm, sought to offer a general framework for determining the extent and pattern of both foreign-owned production undertaken by a country's enterprises and that of domestic production owned by foreign companies. In so doing, he synthesises three strands of the theory of FDI by arguing that it was the monopolistic (which he terms ownership-specific) advantage, together with the internalisation and locational advantages that influences a firm's decision to engage in foreign production.

Dunning states that ownership-specific advantages include assets such as natural endowments and capital. However, like several of the theorists previously discussed, he also considers ownership-specific advantages to be those intangible resources that are peculiar to a firm, for example technology, marketing or managerial skills (Dunning 1993a:77). By contrast, he posits that a firm's internalisation advantages arise from transactional market failure. These advantages are derived from the benefits that the firm gains from the common governance of its value-added activity. According to Dunning, internalisation advantages include the desire to avoid search and negotiation costs, to protect the reputation of the firm and to engage in practices such as transfer pricing and cross-subsidisation (ibid., 81).

Interestingly enough, several theorists note that these two advantages (ownership-specific and internalisation) are really internalisation advantages since any ownership-specific advantage has to be internalised in order to be effective (Rugman 1985:571; Casson 1987:34; Itaki 1991:446–50). To some extent, Dunning recognises this. He widens the definition of ownership-specific advantages to include those assets which originate from a firm's ability to co-ordinate and capture the gains from organising a diverse set of multiple, value-added, geographically dispersed cross-border activities. He also includes those that are derived from the firm's ability to capture the benefits of risk diversification. These assets are called 'transaction cost advantages' (Dunning 1993a:80). They include the benefits that the branch plants of established firms enjoy over their domestic competitors, for example favoured access to inputs or economies of scope and specialisation. In addition, transaction cost advantages include the advantages to be derived from a firm's multinationality, for example enhanced knowledge about international markets or an ability to reduce risks (ibid., 81).

Dunning argues that a firm which possesses superior ownership-specific advantages over its foreign competitors and decides to internalise them, is confronted with the decision of whether to create or use these ownership-specific advantages in a foreign location. The firm's choice of locating its foreign operations is influenced by the locational advantages of a country. Dunning notes that locational advantages are not limited to the natural resource endowments of a region. They include the cultural, legal, political and institutional environment in which a firm operates. In addition, he identifies the market structure and government's legislation and policies as being locational advantages (ibid., 77).

Dunning predicts that the more ownership-specific advantages a firm possesses over its foreign competitors, the greater is its incentive to internalise them rather than externalise their use. Furthermore, he argues that the more it is in the firm's interest to use these advantages in a foreign location, the greater is the possibility of its becoming engaged in FDI (ibid., 80). In addition, Dunning asserts that the eclectic paradigm explains all forms of international production made by MNEs in different geographical regions (ibid., 82–3). Hence, it will be useful to determine the extent to which the eclectic paradigm explains the motivations for FDI undertaken in the Caribbean.

Conclusions

Several main themes can be drawn from this analysis of the literature on the motivations for FDI. First, as Hymer and his followers posit, a firm must possess superior advantages over its foreign competitors if it is to be successfully engaged in production abroad. They argue that the possession of these advantages is necessary since the firm incurs unavoidable costs from operating in a foreign location. Other theorists, for example Vachani, and Lall and Mohammed, postulate that the monopolistic advantage theory is not applicable to the realities of the developing world. They state that the lack of effective competition, the lower income levels of the population as well as the rigid regulatory regime towards FDI, preclude the MNE's use of its unique assets.

Second, other theorists, notably Knickerbocker, state that oligopolistic firms will follow a rival's entry into a substantial foreign market in which it has established production. Empirical evidence demonstrates that this defensive investment is characteristic of highly concentrated industries producing differentiated goods as well as vertically integrated industries involved in the processing of raw materials and minerals.

Third, a group of theorists posits that the MNE would choose to engage in international production rather than sell its unique advantages to foreign firms because of transactional market failures.

Finally, Dunning emphasises that it is the firm's decision to use its ownership-specific advantages in combination with a country's locational endowments that determines FDI.

Hypotheses on the motivations for foreign direct investment in the Caribbean

Three hypotheses on the motivations for the MNE's engaging in FDI in the Caribbean may be advanced from the literature. These are the following:

1 No relationship exists between the MNE's use of its unique advantages and the presence of domestic competitors;

2 There is a positive relationship between 'follow-the-leader' investment behaviour of MNEs and the use of low-cost factors;
3 There is a positive relationship between the firm's use of its ownership-specific advantages and the locational advantages of the Caribbean.

The first hypothesis is drawn from the argument posited by Hood and Young, Vachani, Lall and Mohammed that the monopolistic advantage theory fails to adequately explain the motivations for MNE's investment in developing countries. One of the reasons cited is the lack of effective domestic competition that the MNE experiences in developing countries. It appears that this lack of effective domestic competition may also characterise the Caribbean region. As was noted earlier, the region suffers from a lack of a dynamic business class. Moreover, it appears that its market size may hinder the MNE's effective use of some of its unique advantages, for example product differentiation. Hence, it is postulated that the MNE's motivation for engaging in production in the Caribbean is not likely to be the result of its possession of superior ownership-specific advantages over the local competitors.

The second hypothesis is drawn from Knickerbocker's theory of defensive investment. It is postulated that MNEs in oligopolist industries such as oil, bauxite as well as some labour-intensive manufacturing activities, would counter their rival's entry into the Caribbean region. They will engage in FDI in this region to maintain the balance of competition in the international industry.

It is Dunning's eclectic paradigm from which the third hypothesis is drawn. It is argued that a firm would undertake investment in the Caribbean in order to combine its superior ownership-specific assets with the locational advantages of the region.

4 The location of foreign direct investment

Introduction

In this chapter, no attempt will be made to undertake an exhaustive analysis of the voluminous literature on location theory. Instead, an examination will be carried out only of those theories which seek to explain why the MNE will choose to locate production in developing countries. In addition, this analysis will also include those theories which can potentially explain the locational decision of MNEs operating in these countries.

Two distinct emphases can be identified in the location literature. The first is the theories that seek to elucidate where a firm is likely to locate its international production, and the factors that influence this decision. The second is the empirical analyses that attempt to evaluate the relative importance of those factors that have been identified as determining a firm's locational decision. The following section examines the location theories.

Theories on the location of foreign direct investment

The developing countries traditionally have been viewed as sites for locating low-cost, labour-intensive activities or securing access to natural resources. Hence, several of the location theories, which focus on developing countries, address these issues. The two theories discussed below explore the reasons for MNEs locating their factor-intensive activities in developing regions.

The international product cycle theory

Vernon (1966) sought to understand the continuous shifts in international trade and investment that had characterised the post-World War II international economy. However, in viewing international production as a sequential process, he deviated from the approach used by previous theorists. Vernon combined the microeconomic concept of the product cycle with trade theory. In so doing, he advanced a theory that purported to explain the market-seeking production of US firms in the 1960s.

Vernon argues that in the early stages of the life of a product, production is undertaken in the home country because of the need of producers to have easy access to inputs and to maintain swift communication with suppliers and competitors. At this stage, the product is highly differentiated and its demand fairly inelastic. Producers later begin to export the product to advanced countries, notably Western Europe, which have demand and supply characteristics similar to those of the US.

Gradually, the product becomes more standardised, its demand more elastic and the knowledge of its production more diffused. The expansion of foreign markets increases the attractiveness of establishing production there rather than in the home country. This investment is precipitated by the threat of the imposition of trade barriers or the anticipation of foreign competitors setting up production in these markets. Vernon argues that eventually the subsidiary would replace exports from the home country or even export back to it. Further, he postulates that at the advanced stages of standardisation, labour costs will become a critical consideration in production. Thus, the less developed countries with low-cost labour will now offer a competitive advantage as a production location.

Thus, Vernon hypothesises that production is initially located in the US, it is subsequently relocated to an advanced country, for example Western Europe, and finally to the less developed countries. In all these three stages of the product cycle, changes in demand and in the supply of technology, together with cost considerations, dictate the MNE's choice of locating foreign production.

Vernon later sought to refine this theory by emphasising the oligopolistic behaviour of MNEs. To this end, he related the three stages of the product cycle to those of the innovation-based oligopoly, the mature oligopoly and senescent oligopoly. In addition, he widened the scope of the theory to take into account other factor costs (land and material). Further, the theory was not only limited to the FDI undertaken by US firms, but also those of other industrialised countries (Vernon 1971, 1974).

In this version of the product cycle theory, Vernon maintains the assumption that innovation is driven by market forces. However, he places less emphasis on the US market as a source of new products. Instead, he argues that while innovation is labour-saving in the USA, in Europe, it is material- and land-saving, and in Japan it is both material- and space-saving. In the first phase of the product cycle, the innovation oligopolistic firm locates production in the home market in order to co-ordinate the production process with the marketing and R&D functions.

Vernon posits that when scale economies in production or marketing become critical, they would replace the innovation factor as a barrier to entry. At this stage, the industry will evolve to that of the mature oligopoly. Thus, in phase two, the MNE, protected by barriers to entry generated by economies of scale in production, transportation or marketing, will seek to engage in defensive investment. Its choice of locating foreign production is influenced by the actions of rival oligopolists. Vernon, adopting Knickerbocker's 'follow-the-leader' hypothesis, postulates that the MNE will match the moves of a rival into a foreign location to maintain industry stability (Vernon 1974:102–4).

In the final stage of the product cycle, the barriers to entry generated by scale economies will weaken: cost considerations will now become critical. Hence, the senescent oligopolist will seek to locate production in regions where factor costs are relatively low. Thus, production will be relocated to low-cost, developing countries.

Within recent times, the relevance and applicability of the product cycle theory to international trade and production have diminished (Rapp 1973; Giddy 1978). Vernon, himself, recognised this (Vernon 1979). He states that the growing similarities in income levels among industrialised countries, together with the geographic spread of the MNE, have negated some of the assumptions of this theory (ibid., 259–61). Nonetheless, he posits that the product cycle theory is still applicable to the new MNEs that have not yet acquired a network of foreign subsidiaries or experience operating abroad. Most importantly, however, he advances the view that, unequivocally, it is still a useful theory for explaining the location of FDI in developing countries.

The new international division of labour

Another group of theorists, in agreement with Vernon, argues that the MNE undertakes foreign production in developing countries because of factor cost considerations. Indeed, Frobel *et al.* (1980) state that the movement of certain industrial activities, significantly textiles and electronics, to the Third World is the result of what they term the 'new international division of labour'.

Frobel enunciates that foreign production is no longer simply an exchange of commodities between two national economies: it is governed by the new international division of labour. Enterprises in the industrial world, stimulated by cheap labour, changes in the production process that allow aspects of production to be undertaken with minimum skills, and improvements in transport and communications, are relocating certain types of manufacturing operations into the developing countries.

This fragmented production is assigned to whichever part of the world that provides the most profitable factor combinations. Moreover, this relocation of production has not only affected labour-intensive processes but also those that are dependent on the use of raw materials and energy. Activities that are a source of environmental pollution are also relocated. Interestingly, Frobel argues that even capital-intensive processes are affected (Frobel *et al.* 1980:4).

Production is only partially transferred to the developing world, however. Hence, the production units in the home and host country are vertically integrated. This results in the trade of intermediate goods between these units. This growth in intra-firm trade has captured the attention of several scholars (Sharpston 1975; Buckley and Pearse 1979; Kotabe 1989). Early research attributed the growth of intra-firm trade to cost considerations. It was postulated that in the 1970s and the early 1980s, US MNEs, threatened with global competition, relocated labour-intensive production abroad in an attempt at maintaining cost competitiveness (Moxon 1975; Kotabe 1989). This investment was defensive since firms followed competitors in investing in offshore facilities (Moxon 1975:56).

The production processes that were relocated were mainly assembly-type activity that involved the use of unskilled and semi-skilled labour. Limited training was required to perform the operations. Indeed, in some instances the requisite skills could be acquired in a mere six weeks (Sharpston 1975:105). The processes that were transferred were not only labour-intensive but also resisted automation or were those for which automation was uneconomic (Sharpston 1975:105; Moxon 1975:62).

The cost of transportation also influences the type of product relocated. Thus, products that have a high volume-to-weight ratio are selected. Moreover, 'distance' and administrative costs play a considerable role in the choice of locating offshore activity (Sharpston 1975:111–14). A country's proximity to a developed country market is a considerable advantage as evidenced by the success of the Mexican maquiladoras.

To a large extent, offshore sourcing has been facilitated by government legislation (ibid., 115–19). A classic example is the US custom legislation. Under the tariff provisions 9802.00.60 and 9802.00.80 of the US Harmonised Tariff Schedule (known as 806.30 and 807.00 of the Tariff Schedules of the United States until 1989), an importer is charged duty only on value-added abroad. It is noteworthy that these tariff provisions comprise part of the entitlements awarded to the Caribbean region under the Caribbean Basin Initiative. However, the 9802.00.60 and 9802.00.80 products are subject to duty-free entry into the USA. In addition, a Super 807 programme was enacted which sought to remove all quotas on Caribbean-produced clothing.

It is also interesting to note that Frobel attributes the acceleration in the spread of industrial production to the Third World to the establishment of free production zones in this region. Free production zones or export processing zones are either geographically defined, economic extra-territorial areas or functional states in which the enterprises produce exclusively for exports. The producers in these zones are generally offered special fiscal incentives, subsidised infrastructure provisions, duty-free imports of inputs and unlimited repatriation of profits. Labour is also promised to be cheap, easily trained and docile (Roberts 1992:2).

It is noteworthy that the growth of these zones in developing countries has been encouraged by the policy advice given by the international financial institutions: the International Monetary Fund and the World Bank (Kaplinsky

1993:1851). The Caribbean region boasts twenty-two export processing zones, the majority (five) of which are concentrated in the Dominican Republic (Pantin 1993:142). The activities performed in these zones generally exploit the comparative advantage of the region. Thus, simple, labour-intensive activities such as garment manufacture and data processing are carried out in these zones.

The 'Double Diamond' model of competitive advantage

The 'Double Diamond' model is not a location theory, per se. Indeed, it does not explicitly purport to explain the factors that influence the MNE's locational decision. Rather, its focus is on the dynamic interplay between the global corporate strategy of the firm and environments in which it operates. Nonetheless, it is believed that this model could adequately explain the locational decisions of MNEs operating in the Caribbean region. Clearly, any analysis of the global corporate strategies of firm and its enabling environments will highlight the locational endowments of these environments. Hence, it will be possible to ascertain the elements of these environments, which initially attract, and may continue to attract, the MNE's investment.

The 'Double Diamond' model has been developed in recognition of the limitations inherent in the single diamond of competitive advantage as proposed by Porter (1990). Essentially, Porter postulates that a global firm develops its sources of competitive advantage in its home country. By competitive advantage, Porter means the ability of indigenous firms to achieve international competitiveness. He details the characteristics of a favourable 'proximate' environment in his model of the determinants of national competitive advantage (Porter 1990:69–130).

In this model, Porter identifies four features of a national environment that enable firms to develop a sustainable competitive advantage. These four interacting determinants form what Porter terms a 'diamond' (see Figure 4.1). He argues that the diamond is 'a mutually reinforcing system, with each of its determinants contingent on the state of the others' (ibid., 72). The four determinants are:

1 Factor conditions: the country's factors of production including basic factors such as natural resources, unskilled and semi-skilled labour and created, advanced factors such as modern communication infrastructure and specialised research institutes.
2 Demand conditions: the nature of demand for goods and services by domestic buyers as well as the degree of sophistication of these buyers.
3 Related and supporting industries: the extent to which the domestic firms gain from the agglomeration economy effects of the presence of internationally competitive, domestic supplier and related industries.
4 Firm strategy, structure and rivalry: the context in which firms are created, organised and managed as well as the nature of inter-firm competition.

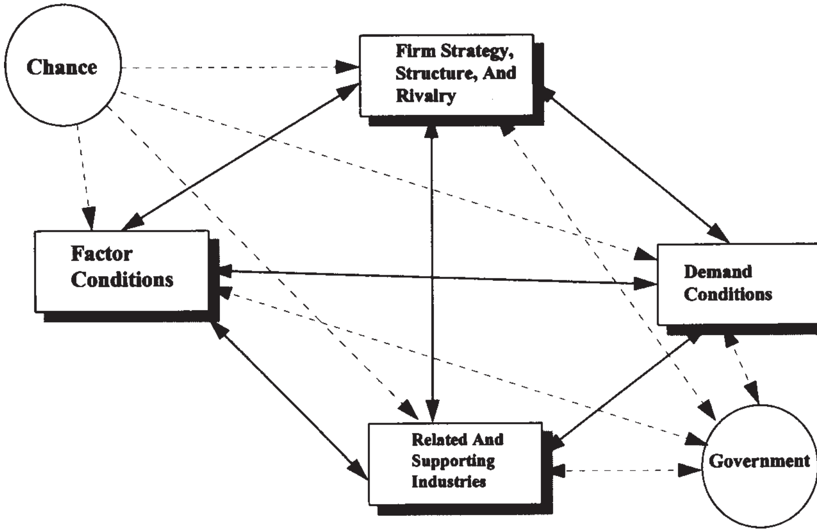

Figure 4.1 The single diamond of competitive advantage

Source: Porter (1990)

In addition, Porter identifies two external variables that affect competitiveness, but not the four direct determinants. These are chance and government. Chance events occur outside of the firms' control, for example wars or major technological discoveries. They can result in changing competitive advantage in many industries. Similarly, government, through its policies, can improve or detract from national advantage. Porter identifies policies such as anti-trust and investment in education, as influencing the development of national advantage.

Towards the 'Double Diamond' of competitive advantage

The academic merit of Porter's model is without question. However, it appears that it has limited applicability for countries that are outside of the Triad. Porter's model was constructed on an empirical analysis drawn from seven advanced industrialised economies and one advanced developing country. However, more than 90 per cent of the world's nations do not possess the economic structures, economic strength or affluence of these eight countries. Hence, the relevance, and applicability, of Porter's model to most of the countries in the world is highly questionable.

Not surprisingly, Porter's diamond of competitive advantage has provoked severe criticisms. One researcher notes that Porter failed to adequately address the manner in which the multinational activity of the global firm influences its international competitiveness (Dunning 1993b). As Dunning succinctly states:

> there is ample evidence that the technical and organisational assets of the MNEs are influenced by the configuration of the diamonds of foreign countries in which they produce, which, in turn, may impinge upon the competitiveness of their home countries.
>
> (ibid., 107–8)

Indeed, Porter emphasises that the home country is the sole source of a firm's core competitiveness (Porter 1990:599). He defines only outward investment, specifically 'follow-the-leader' investment and the FDI that results from the imposition of trade restrictions, as being critical to the creation of a competitive advantage. He perceives inward FDI as not being 'healthy' for the development of a nation's competitive advantage (ibid., 671).

Dunning (1993b), in an attempt to correct for Porter's omission of multinationality, suggests that MNE activity should be treated as a separate variable, assuming the same role in the model as those of chance and government. However, the most robust suggestion has been advanced by Rugman and D'Cruz (1993). Their approach to the treatment of the effect of multinational activity on the development of a firm's competitive advantage is compelling. This is the 'Double Diamond' model.

Rugman and D'Cruz argue that Porter's model is flawed when applied to economies that are small, open and involved in trade. These economies are highly integrated with the advanced industrialised nations. Hence, to survive in rivalry with firms of the leading nations, the businesses of these smaller economies are forced to become globally competitive. This requires them to link the 'diamond' of their home country with that of their leading trading partner. Indeed, they state that since more than 70 per cent of the sales of Canada's industrial MNEs takes place in the USA, it is the US 'diamond' that is likely to be of more relevance to these firms than their own home 'diamond' (Rugman and D' Cruz 1993:26).

It appears that Porter's view of FDI is rather dated. As noted earlier, he only envisages the global firm engaging in 'follow-the-leader' investment or tariff-jumping. Thus, he fails to take cognisance of the increasingly important role that other nations' diamonds are playing in the development of an MNE's global advantages. Figure 4.2 demonstrates some of these relationships.

As Rugman and Verbeke note, Porter's perception of the global strategies of the firm could be illustrated by quadrant 1 and 4 of Figure 4.2 (Rugman and Verbeke 1993a:74–6). In quadrant 4, the home base is the MNE's source of its core competencies. This indeed is the focus of Porter's thesis. In addition, he posits that the ultimate global strategy is when a firm shifts its home base (Porter 1990:615). This can be illustrated in quadrant 1. However, Rugman and Verbeke argue that large MNEs are becoming increasingly independent of their home base. They are selectively utilising other nations' 'diamonds' to develop international competitiveness (Rugman

		Impact of (initial) home country diamond on global competitiveness	
		Low	**High**
Impact of other nations' diamond on global competitiveness	**High**	1	3
	Low	2	4

Figure 4.2 The impact of national diamonds on global competitiveness

Source: Rugman and Verbeke (1993a)

and Verbeke 1993a:74). Quadrant 1 demonstrates the firm whose core competency is derived from its ability to co-ordinate and control geographically dispersed, value-added activities. This ability is increasingly becoming critical to the global firm's development of a sustainable competitive advantage (Dunning 1993a:80).

It is quadrant 3 of Figure 4.2 from which the 'Double Diamond' model is derived. As discussed earlier, Rugman and D'Cruz note that to be competitive, firms in small, open, trading economies need to link their national 'diamond' with that of their leading trading partner (see Figure 4.3). In this way, they would drawn upon both 'diamonds' for factors (labour, capital and infrastructure), demand (knowledge of the trends in demand), supplier and related industries (accessing internationally competitive supplier firms in both locales), and inter-firm rivalry (benchmarking themselves against their most formidable competitors). In so doing, managers of firms in small, open economies would be able to access the determinants of competitiveness in the market of their leading trading partner as well as those of their home country.

Indeed, it seems that it is the 'synergist combination' of determinants at the national as well as those at the international level that create global competitiveness (Rugman and Verbeke 1993b:287). Clearly, a multinational firm will selectively use elements of the 'diamonds' of countries in which it operates to gain global advantages. Moreover, it can be suggested that the proclivity of MNEs to tap into other national 'diamonds' will certainly increase with the present emergence of regional trading blocs such as the North America Free Trade Area (NAFTA), the European Union (EU), and the Asia Pacific Economic Co-operation (APEC).

Hence, the 'Double Diamond' model suggests that firms operating in the small, open economies of the Caribbean will link the diamond of these countries with that of their major trading partner. Conversely, this study argues that the MNE that makes investment in the Caribbean will attempt to link the 'diamond' of its home country with that of the Caribbean. Further, it is posited that any analysis of the 'Double Diamond' model for the Caribbean will reveal the locational endowments, i.e. the determinants

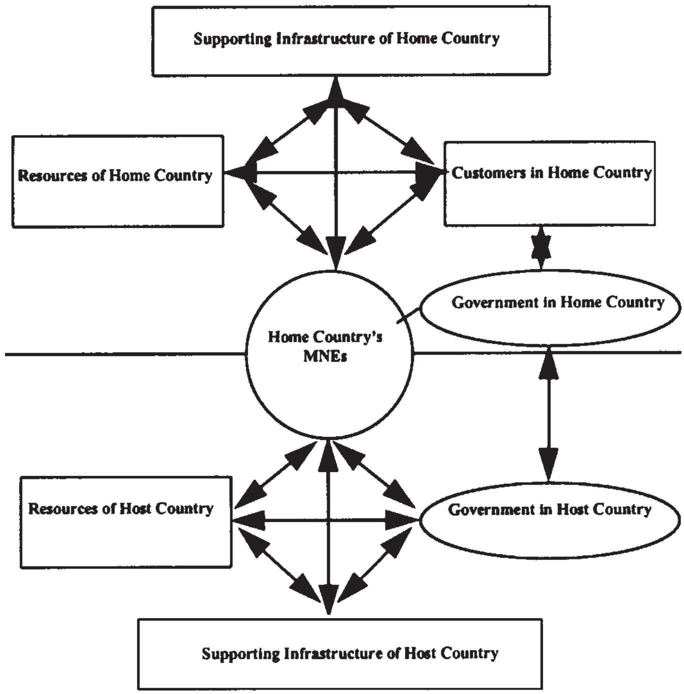

Figure 4.3 The 'Double Diamond' of competitive advantage

Source: Rugman and Verbeke (1993a)

of the Caribbean 'diamond', which the MNE uses together with those of its home country to achieve international competitiveness.

Summary

Despite the diversity in the arguments presented by the researchers discussed above, several common themes emerge from the analysis. First, all the location theorists emphasise that factor cost considerations are a critical variable in the location of production in developing countries. Indeed, Vernon and Frobel identify low-cost factors as locational assets of these countries. Frobel elaborates that it is unskilled and semi-skilled labour, which is docile and easily trained, that is a locational attraction. In addition, Frobel and Vernon have alluded to the role that raw materials play in attracting FDI into developing regions.

In addition, researchers such as Frobel and Sharpston note the important role that governments of developing countries play in influencing the inflows of FDI. Indeed, Frobel posits that it is the government's creation of free production zones that precipitated the flow of FDI into the developing world.

Finally, several researchers have emphasised the role that corporate strategy plays in the locational decision. Rugman and D'Cruz note that the MNE, to be internationally competitive, will integrate its home country 'diamond' with that of its major trading partner.

Several of the issues discussed above have formed the basis of much of the empirical analyses undertaken in the location theory literature. Some of these studies and their findings will be discussed in the following section.

The empirical analyses of the determinants of the MNE's locational choices

The empirical research conducted on the determinants of the MNE's locational decision has generally tended to adopt two approaches: a quantitative and a qualitative approach. In the following section, some of the major studies undertaken will be discussed. However, attempts will be made to limit the analysis to the literature that seeks to explore the factors that determine the MNE's decision to locate its foreign production in developing countries.

Qualitative studies

Two studies discussed in this section examine the proximate environment in which the firm operates. The other analyses one of the policy instruments that governments in developing countries implement to attract foreign investment. This is the investment incentive system.

One of the earlier studies undertaken was that of Reuber (1973). On the basis of interviews conducted with executives in North America, Europe and Japan, he sought to analyse the factors influencing firms' decision to locate their production in developing economies. The study examined two types of FDI: domestic market development and export-seeking. Reuber notes that there was no overriding factor that influenced a firm's locational decision. However, he posits that the factors, which appeared to affect, market development FDI were the size of the host country's market and the policies that are enacted to protect this market from competing imports. By contrast, export-oriented investments were lured by the availability of low-cost factor inputs, significantly skilled and unskilled labour, and basic infrastructure. Financial incentives such as tax holidays, duty remissions and accelerated depreciation on machinery and equipment were also of critical importance (Reuber *et al.* 1973:118–19).

It is noteworthy that Reuber concludes that the incentive system does have some influence over the locational decisions of firms. The incentives which are of the most significance are tariffs, quotas on competing imports, concessions on imports of inputs and tax concessions (ibid., 128). However, he reveals that the incentive system itself was inefficient since under alternate arrangements the same level of investment could have been attracted at much lower costs. One of the reasons he adduces for this inefficiency was the highly complex nature of the system that results in high transaction and administration costs. He also states that the system itself was contradictory in nature since it was possible to simultaneously find policies to enhance FDI along with those to discourage it. Moreover, he argues that because of fierce competition among developing countries to provide such incentives, many of the incentives granted cancel out each other. Hence, the incentive system simply functions to raise the rents accruing to the existing investors. It is inefficient in luring new investment (ibid., 129).

There were several factors that Reuber identified as having little impact on the investment decisions of the firms surveyed. These include the fears of political instability, devaluation, expropriation and restrictions on foreign ownership. He states that while these considerations are not unimportant, the differences among developing economies are so minimal that they have little effect on the firms' locational choices.

Another landmark study was that of Guisinger's *et al.* survey of seventy-four foreign direct investment projects (Guisinger *et al.* 1985). These projects were based in four industries that were located in ten countries. Both developed and developing countries were surveyed. Unlike Reuber, Guisinger focused solely on the investment incentives offered by governments to attract FDI. Nonetheless, he emphasises that a variety of factors influences the locational decision of a firm. Indeed, he postulates that the net incentive, the variety of the incentives, the stability of policies, the timing of incentives, investment promotion and government services in infrastructural projects all impact on a firm's locational decision (Guisinger 1986b:85). However, he states that the net incentive, which he describes as the net rate on return of all investment incentives granted, is the most important influencing factor. Moreover, like Reuber, he concludes that investment incentives are an effective mechanism for attracting foreign direct investment.

The main contribution of Guisinger's study to the location theory literature is its clarification of the investment incentives which attract the various types of FDI (Wells 1986). Indeed, Guisinger attempted to distinguish between the types of incentives offered. Two types were identified: factor-based and commodity-based incentives. Factor-based incentives are those which affect the cost of production. They include tax holidays, interest subsidies, cash grants and accelerated depreciation allowances. Conversely, commodity-based incentives affect revenues and the intermediate input costs of the factors of production. These are incentives aimed at protecting the investor from import competition. They include tariffs and quotas. In addition, Guisinger distinguishes between the markets in which FDI is oriented. He identifies three such markets: the domestic market of the host country, the regional market (e.g. the European Union) and the world export market.

Guisinger arrived at the same conclusions on investment incentives that Reuber had almost a decade earlier. Thus, Guisinger concludes that factor incentives had virtually no impact on the locational decision of firms that were engaged in market-oriented investment. By contrast, commodity-based incentives influenced this type of investment. Factor-based incentives were influential in the locational decisions of MNEs that were primarily engaged in export-oriented activities. Commodity-based incentives, however, had little impact on the investment decisions of firms involved in this activity. He further notes that factor-based incentives and, on occasion, commodity-based incentives, such as government procurement practices, affected the locational decision of firms investing in the common market (Guisinger *et al.* 1985:318–19).

Unlike Reuber, Guisinger, in his analysis of fiscal incentives, also included the performance requirements that are mandated by some countries on the investments made by MNEs. He reveals that performance requirements do influence the investment decisions of foreign firms. However, their influence varies across industries and countries. Guisinger also noted that developed countries were more likely to use factor-based incentives since their ability to offer commodity-based incentives was limited by the rules of the European Union. In contrast, performance requirements were widely used in developing countries. It appears that the requirements for their successful application—a large domestic market—exist in some of these countries.

A more recent study on the locational choices of 140 US multinationals operating in developing countries was conducted by Wallace (1990). This study sought to ascertain the critical impediments that MNEs face when investing in the developing world. The study findings reveal that the tax policy of the host country plays a critical role in the locational decision. Moreover, in contrast to Reuber, Wallace posits that country risk figures prominently in the MNE's locational choices. She states that political instability, threats of expropriation and stringent policies towards profit repatriation are serious deterrents to FDI. However, Wallace's findings on factor cost considerations were similar to those of some of the theorists discussed (Frobel, Vernon). Approximately 45 per cent of the firms surveyed, identified the availability and cost of raw materials, and significantly, trained labour, as critical factors in their locational choices.

Thus, the qualitative analyses on the locational decisions of MNEs in developing countries have supported many of the hypotheses proposed by the location theorists examined earlier. As Reuber and Wallace conclude, FDI inflows are attracted to countries that offer low-cost factor inputs. This supports the theories advanced by Vernon and Frobel. In addition, Reuber and Guisinger's finding on investment incentives was critical. Indeed, it appears that market-oriented FDI is induced by commodity-based incentives.

Conversely, export-oriented investment is lured by factor-based incentives. However, the evidence on country risk is inconclusive. Reuber and Wallace obtained conflicting results on its impact on FDI.

Many of these propositions were econometrically tested. Some of these studies will be discussed in the subsequent section.

Quantitative studies

The empirical studies discussed in the following sections explore the influence that selected locational endowments have on the firm's locational decision. The three elements analysed are investment incentives, trade restrictions and preferential trading agreements. The first two locational elements have been discussed by several of the theorists examined earlier. The second, preferential trading agreements, has been included in this analysis because of their proliferation in the Caribbean region (World Bank 1988).[1] Alternatively, other studies have attempted to ascertain the locational factors that induce specific types of FDI. Indeed, several theorists argue that the various types of FDI respond differently to the locational advantages of a host country (Woodward and Rolfe 1993; Coyne 1995). At present, many developing countries, including those of the Caribbean region, are attempting to attract export-oriented FDI (World Bank 1987a). Thus, this analysis will attempt to examine some of the seminal studies conducted on the factors influencing the locational decisions of export-seeking MNEs that operate in developing countries.

Investment incentives

Several of the quantitative studies have attempted to test the influence that investment incentives have on the firm's decision to engage in FDI in developing countries. One such study is that of Lim (1983). It is noteworthy that Lim found no support for the hypothesis that fiscal incentives (tax holidays and cost lowering incentives) are necessary to attract FDI. He argues that influence of non-tax factors (a proven record of economic performance and the presence of natural resources) play a more decisive role in the locational decision. Indeed, Lim discovered an inverse relationship between the generosity of fiscal incentives and FDI inflows. A possible explanation for this relationship was advanced by Shah and Toyne (1978). These researchers argue that countries lacking in natural resources endowments, technology and labour skills, compete fiercely for footloose manufacture investment. In their excessively generous provision of fiscal incentives, these economies compete away potential revenues from corporate taxes. They found this phenomenon to characterise small island and 'quasi-island' economies (ibid., 285).

Similar conclusions were arrived at by Wheeler and Mody (1991). They describe the manner in which foreign governments compete for

FDI with tax and other incentives as 'location tournaments'. Their analysis suggests that US firms are influenced by the agglomeration benefits, such as the infrastructure quality, the degree of industrialisation and the level of investment in their choice of locating international production. Most importantly, it is argued that for developing countries, the critical variable that influences a firm's locational decision is not tax incentives, but the presence of good quality infrastructure (ibid., 71). It appears that transfer pricing and the US tax legislation negate the benefits of tax incentives.

Loree and Guisinger (1995) also lend support to the argument that the provision of generous investment incentives does not necessarily result in increased flows of inward FDI. Indeed, it could be inferred from their analysis that it may be more beneficial for a developing country to invest in upgrading its infrastructure than to grant redundant incentives (ibid., 296).

It is noteworthy that conflicting results were obtained in the studies that examined the efficacy of investment incentives on firms' decision to engage in FDI in the Caribbean. Rolfe and White (1992), using a decision modelling approach, attempted to ascertain the importance that forty managers ascribed to selected tax incentives relative to non-tax incentives. This study analysed the initial investment decision of the managers who were involved in offshore, export-oriented investment in the Caribbean. Their findings revealed that tax incentives (tax holidays and import duty exemptions) are insufficient to attract FDI. These tax incentives are not able to overcome unfavourable non-tax factors (uncompetitive wages, dividend remittance policy and infrastructure). Moreover, the efficacy of tax incentives is diminished by the practice of transfer pricing implemented by the parent and subsidiary companies. Nonetheless, the researchers argue that in instances where the non-tax factors were generally favourable, the two tax factors influenced the locational decision. Rolfe *et al.* (1993) obtained somewhat different results. This study, however, was based on the responses of 891 managers of firms that were involved in both market-seeking and export-seeking FDI in the Caribbean. It seems that the investment incentives most preferred by the respondents were related to tax factors (tax holidays and import duty concessions) or foreign exchange controls (free repatriation of profit and dividends). It is noteworthy that exporters considered import duty concessions to be more desirable than did investors geared to the domestic market. Similarly, Coyne (1995) discovered that repatriation schemes were critical to the initial investment decision of firms involved in market-seeking, export-seeking and resource-seeking investment in Barbados, Jamaica and Trinidad-Tobago. Tax holidays and duty exemption schemes were also of importance.

Trade restrictions

As noted earlier, government's intervention in the economy could have a decisive influence on FDI inflows. One policy instrument implemented by governments of both developed and developing countries is trade restrictions.

A wealth of research has been conducted on the influence that trade restrictions have on the MNEs' locational decision. Kindleberger (1969) postulated that government's imposition of trade restrictions could inadvertently stimulate a firm to engage in FDI in the host country. Several qualitative studies support Kindleberger's hypothesis. Franko describes trade barriers as the 'main triggers' of Continental European foreign manufacturing in developing countries in the post-World War II period (Franko 1976:115). Similarly, Vernon revealed that trade barriers stimulated US MNEs to set up manufacturing facilities to produce luxury goods for the affluent minority in developing countries during the same period (Vernon 1971:53).

One of the earlier studies, which attempted to test the influence that trade restrictions have on the locational decisions of MNEs, was Horst (1972). Horst argues that foreign direct investment is the successor to foreign trade. His empirical analysis of US firms operating in Canada concluded that tariffs imposed in the host country positively influenced the propensity of US firms to establish manufacturing plants in Canada rather than export the product to the country. It is noteworthy that Orr (1975), using more disaggregated data, found no support for Horst's hypothesis. Similar conclusions were obtained in a later study conducted by Buckley and Dunning (1976). Their study found that tariffs had no influence on US firms' decision to engage in FDI in the UK.

Conversely, Lall and Siddharthan (1982) posit that trade barriers were important in stimulating non-US MNEs to set up manufacturing operations in the USA. Hollander (1984) supports this hypothesis. He states that the propensity of US firms to replace exports by FDI was higher when the host country imposes trade restrictions against the competing imports. Moreover, he notes that the increased manufacturing production by US firms in the European Economic Community (EEC) in the late 1960s was a result of the discriminatory nature of EEC tariffs (ibid., 14–15). A similar conclusion was arrived at by Scaperlanda and Balough (1983).

Conflicting results also have been found for the influence that trade restrictions have on the locational decisions of MNEs operating in developing countries. As discussed earlier, Reuber (1973) and Guisinger *et al.* (1985) found that trade restrictions against competing imports were powerful investment incentives for the market-seeking MNE. Further, Lecraw (1991) discovered that changes in the tariff rate had a positive influence on market-seeking FDI. Rolfe *et al.* (1993) support this argument. Their study revealed that the market-seeking investor moderately ranked tariff protection as his most desirable investment incentive. However, Agodo's findings on the determinants of US manufacturing investment in Africa contradict those of the previous researchers. He states that despite the high tariff rates existing in Africa, a minority of the firms indicated that trade protection played a significant role in their locational decision (Agodo 1978:102). Similarly, Coyne's analysis of MNEs operating in three Caribbean countries found that market protection was of minimal importance to the market-seeking MNE (Coyne 1995:127).

It is argued that tariffs are no longer such a powerful locational inducement (Dunning 1993a:155). Yet, the Caribbean still retains a relatively restrictive trade regime despite its present forays towards trade liberalisation (World Bank 1993a:20–5). Thus, concerns on the influential impact that trade restrictions have on FDI inflows are still relevant to this region.

Preferential trading agreements

The imposition of trade restrictions is not the only means by which governments could distort trading patterns. Governments of advanced industrial economies can also conclude trading agreements which grant preferential access to their markets to selected developing countries' exports. Indeed, the granting of preferential trade agreements was initially proposed more than three decades ago (Yannopoulos 1986:15). The objective of these agreements was to aid the economic development process of countries of the Third World. Today, several of these agreements flourish, some of which include the General System of Preferences, the Lome Convention and the Caribbean Basin Initiative.

Interestingly enough, it has been argued that the preference scheme is likely to promote foreign direct investment in the beneficiary country. Johnson posits that preferential trading schemes result in the establishment of a type of 'tariff factory' in the recipient country. Multinationals locate production in the beneficiary country to exploit the advantage of preferential access to industrial markets. In so doing, they gain a competitive edge over the sales of rivals in the domestic market of the preference-giving country (Johnson 1968:19). It is noteworthy that this process is also referred to as foreign investment diversion (Kreinin 1975:337).

Surprisingly, little research has been conducted on the influence that preferential trading agreements has on the creation of 'tariff factories' in the beneficiary country. Yannopoulos suggests that this paucity of research is likely to be a result of the failure to integrate preferential trading and geographic trade discrimination with the theory of international production. In addition, research has been hampered by the absence of adequate data (Yannopoulos 1986:27). Nevertheless, some surveys confirm the positive influence of preferential trading agreements on MNEs' locational decisions.

One of the earlier analyses that explored the relationship between preferential trading agreements and foreign investment diversion was by Kreinin (1975). He noted the impressive export performance of Greece following its association with the European Union in 1962. He attributes this growth in exports to foreign investment diversion resulting from the country's associate status (Kreinin 1975:356).

Similarly, Joekes' 1982 study of the clothing industry in Tunisia and Morocco demonstrates the influential impact that preferential trading agreements have on foreign investment in this sector. In 1970, selected industrial exports from these countries, including clothing, were granted preferential access to the EEC market. Joekes notes that the post-1970s growth of clothing exports was impressive. It is significant to note, however, that Tunisia's clothing exports outperformed those of Morocco. Joekes attributes Tunisia's superior performance to the larger number of foreign investors operating in this sector (Joekes 1982:108).

Foreign investment diversion also occurred in the Caribbean region following the enactment of the US's Caribbean Basin Initiative. It appears that FDI flows were skewed towards the garment sector. Moreover, it seems that these flows were concentrated in a few countries, notably the Dominican Republic, Costa Rica, Haiti and Jamaica (Griffith 1990:47–9).[2]

It is noteworthy that the present preferential trading agreements enjoyed by the Caribbean countries are being superseded by the regional free trade agreements concluded by the benefactor countries.[3] This is clearly demonstrated by the nullifying effects that the NAFTA is having on the CBI agreements (Gill 1993). Yet, the Caribbean region still benefits from a plethora of preferential trading agreements (World Bank 1988). It will thus be instructive to ascertain the extent to which these preferential agreements are a locational attraction to the MNEs. In addition, it will be useful to determine the role that these agreements play in the MNE's continued presence in the region.

Export-oriented FDI

Other studies have solely concentrated on the determinants of a particular type of foreign direct investment in developing countries. In one such study, Kumar (1994) attempted to analyse the factors that influenced US MNEs to engage in export-oriented FDI in forty developed and developing countries.

Kumar suggests that export-seeking investments are 'special' types of FDI which are attracted to different locational advantages than market-seeking FDI (Kumar 1994:153). He concludes that countries with low-cost labour were more successful than others in attracting this type of investment. In addition, he reveals that countries, which possessed a pool of skilled labour, quality infrastructure and industrial services, attracted export-seeking FDI. Interestingly enough, Kumar posits that economies which were relatively closed, were able to successfully lure export-seeking FDI through the establishment of export processing zones. Further, he notes that fiscal incentives and government policies were insufficient in attracting offshore investment. Moreover, it seems that countries endowed with natural resources, for example petroleum, were successful in inducing this investment.

Thus, Kumar's findings, specifically that the determinants of export-seeking FDI include low-cost labour, a fairly advanced infrastructure and the presence of natural resources, were not significantly different from those of the theorists discussed earlier. His conclusions, however, on the advantageous presence of export processing zones in otherwise closed economies were noteworthy.

Another study that also examined export-seeking FDI is significant because of its regional selection. Woodward and Rolfe (1993), using a sample of 187 firms, sought to determine the locational factors that influenced MNEs to engage in export-seeking FDI in the Caribbean.

Several of the researchers' conclusions were consistent with those of the previous study. Thus, like Kumar, they conclude that foreign investors are deterred from countries with high labour costs. High transport costs as well as political instability were also disincentives to export-oriented investment.

In addition, the two researchers posit that high levels of per capita income were an inducement for investment. Interestingly, they hypothesise that the level of per capita income was a measure of the quality of the country's infrastructure. High levels of per capita income indicated a sound infrastructure. Monetary variables also were identified as being important to attracting export-oriented investment. A devaluation of the exchange rate was perceived as having a positive influence on FDI while an increase in the inflation rate a negative one.

The prevalence of manufacturing concentration also induced export-oriented FDI. Woodward and Rolfe suggest that countries with strong manufacturing concentration are able to offer foreign investors the benefits of agglomeration economies. In addition, it is significant to note that the length of the tax holiday had a positive influence on export-oriented investment. It appears that the prevailing perception among the MNEs surveyed was that the longer the tax holiday, the more favourable was the host government's attitude towards FDI. The length of the tax holiday was also said to reflect the economic conditions of the host country. Similarly, the prevalence of profit repatriation restrictions was perceived to be a signal of the host country's negative attitude towards FDI. Like Kumar, Woodward and Rolfe also conclude that export processing zones play a role in luring foreign direct investment into developing countries.

Conclusions

It is now possible to draw some general conclusions about the factors that influence the locational choices of MNEs in developing countries.

There appears to be a consensus among theorists on the role that factor costs play in attracting FDI. As theorists such as Vernon and Frobel note, factor cost considerations play a vital role in an MNE's choice of locating international production in developing regions. This postulate was supported by the empirical studies conducted by researchers such as Kumar, Woodward and Wolfe. Generally, the factor identified is labour. Indeed, it seems that the presence of a low-cost, skilled and docile labour force is an important locational asset of developing countries.

The studies were inconclusive on the effectiveness that the investment incentive system has in attracting FDI inflows into developing regions. One group of theorists, notably, Reuber and Guisinger, agree that the efficacy of this policy instrument is dependent upon the type of FDI. Thus, they argue that market-oriented investment is induced by investment incentive policies that seek to protect the domestic market from competing imports. This hypothesis has been supported by the empirical analyses conducted by Lecraw and Rolfe *et al.* On the other hand, Reuber and Guisinger posit that export-oriented investment is attracted by those incentives that lower the cost of production. This hypothesis has been contradicted by the work of researchers such as Rolfe and White, and Kumar. What is noteworthy, however, is the argument posed by Shah and Toyne that the investment incentive system of small, developing countries is an ineffective mechanism for attracting FDI. Moreover, theorists such as Wheeler and Mody, and Loree and Guisinger emphasise the locational attractions of quality infrastructure and agglomeration economies rather than the generous provision of investment incentives.

Further, several researchers posit that government's actions have a positive influence on FDI inflows. Indeed, Frobel, Kumar, and Woodward and Rolfe argue that the government created, export processing zone is an efficient mechanism for luring FDI into otherwise unattractive regions. Alternatively, the actions of governments in advanced industrialised countries could also result in FDI inflows into the developing world. As Johnson, Yannopoulos and Joekes postulate, preferential trading agreements concluded by governments in industrialised countries are likely to promote foreign direct investment in the beneficiary developing country.

Finally, this study uses a customised version of the Rugman and D'Cruz 'Double Diamond' hypothesis. It contends that the 'Double Diamond' model could effectively identify those critical locational advantages of the Caribbean that are used by the global firm in its attempts at achieving international competitiveness.

Hypotheses on the location of foreign direct investment in the Caribbean

Six hypotheses can be drawn from this analysis of the literature on location theory. These are:

1 There is a positive relationship between the MNE and the decision to establish and continue operations in the Caribbean because of low-cost factors.
2 There is a positive relationship between the presence of export processing zones and the export-seeking MNE.

3 No relationship exists between investment incentives offered by the Caribbean governments and the MNE's decision to establish and continue operations in the Caribbean.
4 There is a positive relationship between the market-seeking MNE and trade restrictions.
5 There is a positive relationship between the export-seeking and resource-seeking MNEs and the use of preferential trading agreements.
6 There is a positive relationship between the national 'diamond' of the MNE and the 'diamond' of the Caribbean.

The first hypothesis is drawn from the arguments advanced by Vernon and Frobel that were supported by the empirical analyses conducted by Reuber, Wallace, Kumar, and Woodward and Rolfe. This study argues that factor cost considerations, specifically labour and raw materials (oil, natural gas and bauxite), are a significant locational advantage in the Caribbean.

The arguments posited by Frobel, Kumar, Woodward and Rolfe form the basis for the second hypothesis. They all note the influence that the export processing zone has in luring FDI into otherwise unattractive regions. As Pantin reveals, the Caribbean region boasts twenty-two export processing zones. Thus, it could be hypothesised that MNEs locate production in this region to take advantage of the locational benefits offered in these zones.

The third hypothesis is drawn from the theories advanced by Lim, and Toyne and Shah. These theorists all note the limited influence that the investment incentive system has in attracting FDI in the developing world. Moreover, since 1973, the countries which are members of the Caribbean Common Market (CARICOM) have all sought to harmonise the fiscal incentives that are offered to the foreign investor. Hence, most of the countries in the Caribbean region offer the foreign investor almost similar investment incentives. It could thus be argued that the investment incentive system implemented by the Caribbean countries is not an important locational attraction to the foreign investor.

The fourth hypothesis is advanced from the arguments posed by Reuber and Guisinger that were supported by empirical analyses conducted by Lecraw and Rolfe *et al.* This study argues that relatively restrictive trade regime of Caribbean is an incentive for the MNE to establish operations in the region.

The fifth hypothesis was drawn from the postulate advanced by Johnson that was supported by the empirical analyses conducted by Kreinin and Joekes. It seems that preferential trading agreements are a locational asset of the beneficiary country. As earlier discussed, selected products from the Caribbean enjoy preferential access into the markets of several advanced industrial countries. Hence, this study posits that these preferential trading agreements will positively influence the locational decisions of the resource-seeking and export-seeking investors.

The sixth hypothesis is derived from the arguments advanced by Rugman and D'Cruz, Rugman and Verbeke, and Moon, Rugman and Verbeke. These researchers postulate that the global firm will selectively use elements of the 'diamonds' of the countries in which it operates. Moreover, as Rugman and Verbeke note, business firms in small, open economies will link their national 'diamond' with the 'diamond' of their major trading partner. Thus, this study argues that the MNE operating in the Caribbean will seek to integrate the 'diamond' of their home country with that of the Caribbean. It is important to note that this hypothesis is the flip side of the original 'Double Diamond' hypothesis. Indeed, unlike the theory postulated by Rugman *et al.,* which focuses on outward FDI, the hypothesis advanced in this study, examines inward FDI.

5 The modes of foreign direct investment

Introduction

The forms of institutional involvement employed by MNEs in international markets range from spot market transactions at one extreme to hierarchical transactions at another. This diversity in the forms of foreign investment begs the question as to the factors that determine the MNE's choice of international market entry modes. This chapter seeks to examine how the literature has addressed this issue. In addition, emphasis will be placed on the theories that attempt to explain the determinants of the MNE's mode of international production in developing countries.

Theories on the modes of foreign direct investment

Transactions costs and the choice of market entry mode

The transaction cost theory, as initially postulated by Williamson (1975, 1981), is one of the theories that sought to explain the factors influencing the MNE's choice of institutional involvement. Williamson views the modern corporation, notably the MNE, as 'the product of a series of organisational innovations that have the purpose and effect of economising on transaction costs' (Williamson 1981:1537). Hence, he postulates that a firm will engage in international production when the costs of using arm's-length agreements exceed those it would incur from internalising the exchange. The transaction costs identified by Williamson were those associated with the repeated transfer of complex technology. They include all payments connected with the search by the seller for a suitable buyer, or vice versa; those of negotiating a contract as well as those incurred in monitoring the effects of the transaction so that the interests of the transactor are protected. He argues that the mode of foreign involvement utilised by the MNE will be that of a wholly owned subsidiary. This organisational form facilitates better disclosure, more efficient governance and easier agreement than arm's-length trading (ibid., 1563).

Teece (1981, 1983, 1986) elaborated on this theory. The concept of transaction costs arising from the transfer of idiosyncratic technology was now extended to include other types of proprietary knowledge. Thus, Teece identifies transaction costs to include those involved in the transfer of managerial and marketing know-how. He also considers those incurred in protecting the quality of products or services associated with low-technology, high-service industries.

In addition, a distinction was made between the horizontally and vertically integrated MNE. The former produces the same goods in plants located in different parts of the world. The vertically integrated MNE, on the other hand, is involved in the transfer of intermediate products between its geographically dispersed facilities. Teece argues that the horizontally integrated MNE emerges because of the transaction costs associated with the transfer of proprietary assets. In addition, this type of MNE results from the firm's desire to protect product or service quality. Conversely, the vertically integrated MNE is a result of the firm's attempts to avoid the transaction costs stemming from high switching costs (Teece 1983:53–7).

Another school of thought, which has adopted a perspective similar to that of the transaction cost theory, is the internalisation theory. Both of these theories view the emergence of the MNE as a response to market failure. However, their emphasis differs. The transaction cost theory focuses on the transaction as its unit of analysis while the internalisation theory emphasises the internalisation of markets (Teece 1986:23–4).

As was discussed in Chapter 3, the internalisation theory argues that a firm will internalise production when markets for intermediate products fail. The protagonists of this theory concentrate on the internalisation of markets for certain types of raw material and proprietary knowledge. According to the internalisation theory, the MNE will choose the wholly owned subsidiary as its mode of entry into international markets.

Within recent times, however, there have been modifications to these theories to allow for the pervasive spread of other institutional forms of foreign involvement. Thus, the original protagonists of the internalisation theory, Buckley and Casson, have modified the theory to include 50–50 equity joint ventures. They state that joint ventures are compromise contractual arrangements that minimise transaction costs under certain environmental constraints' (Buckley and Casson 1988:52). They posit that joint venture agreements will be concluded once there are benefits from internalising the market for intermediate goods and services traded between two firms. Buckley and Casson identify a particular type of joint venture, the 'symmetrically motivated' joint venture. In this arrangement, each partner has the same motivations for internalisation. According to Buckley and Casson, the motivations for entering a joint venture include the benefits arising from economies of scale and scope. They postulate that joint ventures also exist because of the technical complementarity between the inputs of both firms. They also argue that there are obstacles that prevent the merger of the individual firms. Buckley and Casson cite the managerial difficulties that arise in operating the resultant enterprise, the legal impediments, for example anti-trust legislation, or the restrictions on foreign acquisitions. They emphasise that joint venture arrangements need to be explained in terms of internalisation economies, the benefits arising from the merger as well as the obstacles to the merger. The authors state that the strength of the MNE's desire to enter into a joint venture is determined by the extent to which the internalisation economies are constrained by the other two factors, that is the benefits arising from the merger and the obstacles to the merger. Further, they assert that the MNE will choose to serve a market by means of a joint venture; the larger are the obstacles to the merger, the smaller are the benefits to the merger, and the smaller are the internalisation economies (relative to the two other factors) (ibid., 42).

Beamish and Banks also qualified the internalisation theory to allow for conditions under which firms will engage in joint ventures. Using the transaction cost paradigm, they argue that a successful manufacturing joint venture is established in a developing country where there is a 'spirit of mutual trust and a commitment to the long-term commercial success' of the venture (Beamish and Banks 1987:4). Success is reinforced when these attitudes are supported by organisational systems such as profit sharing and joint decision-making. Beamish and Banks posit that it is under these conditions that the MNE overcomes the transactional disabilities that cause it to bypass the market and form a wholly owned subsidiary. The foreign firm is thus able to gain the efficiency and revenue gains available from a joint venture agreement.

It is noteworthy that there are similarities between the transaction cost theory and the internalisation theory. Buckley postulates that both of these theories assume that organisations economise on transaction costs. Further, he notes that both theories need supporting assumptions for their empirical verification (Buckley 1988:131). Much of the empirical analysis conducted on these theories is derived from the assumption that the MNE economises on transaction costs. It is noteworthy that the firm, which economises on transaction costs by internalising its intermediate markets, will be engaged in intra-firm trade (Buckley and Pearse 1979). Moreover, it can be argued that the firm which is involved in intra-firm trade generally will choose a wholly owned subsidiary as its international entry mode (Caves 1982:87; Farge and Wells 1982:13–15; Dunning 1988:194).

It appears that the technological intensity of a product has a positive effect on the propensity of the firm to engage in intra-firm trade (Cho 1990). Moreover, Anderson and Gatignon (1986) propose that for highly proprietary products or processes, the firm will select modes of entry that offer greater control, such as a wholly owned subsidiary. Further, Gomes-Casseres (1989) suggests that firms with a network of subsidiaries, which are integrated into their global system, will prefer whole ownership as their mode of international involvement. He postulates that these firms will be better able to exploit the global economies of scale and scope with this foreign entry mode (ibid., 14).

Interestingly enough, Gomes-Casseres (1990) posits that if these MNEs are unable to obtain whole ownership of their subsidiaries, they may avoid investing in the restrictive countries. He further states that if the firms did proceed with the investment in such countries, they would modify the subsidiary's strategy to reduce the extent of intra-firm trade (ibid., 17). Thus, it seems that the MNE, which is involved in intra-firm trade, will select a market entry mode that allows it to exercise control over the operations of its subsidiaries. Anderson and Gatignon (1986) note that control is vital to the future of such enterprises. It influences their ability to implement strategies, co-ordinate activities and to resolve disputes. In addition, the firm is able to secure a larger share of the foreign profits if it has control (ibid., 3). Strategies that require high control normally result in the formation of a wholly owned subsidiary (Stopford and Wells 1972; Anderson and Gatignon 1986; Hill *et al.* 1990). The literature thus suggests that the firm, which is involved in intra-firm trade, will favour a high-control market entry mode, i.e. the wholly owned subsidiary.

Culture and market entry choices

Several researchers, for example, Davidson (1980), have demonstrated the propensity of MNEs to establish production in countries that are culturally similar to their home country. Yet, it was Kogut and Singh (1988) who first attempted to relate this phenomenon to the firm's selection of market entry modes.

Kogut and Singh postulate that the transaction cost theory does not sufficiently explain the MNE's selection of international entry mode. They argue that the transaction cost theory needs to be qualified by factors which stem from the institutional and cultural context (ibid., 412). Indeed, they state that cultural differences influence managers' attitudes towards the costs and uncertainty of alternative market entry modes. Further, these authors posit that it is the differences in the culture between the host and target country which influence the investing firm's selection of market entry mode. They sought to test this hypothesis by examining the influence that the cultural characteristics of a country had upon its firm's choice of entry mode into the US. The authors limited their analysis to three forms of institutional involvement: wholly owned greenfield investment, joint venture and acquisition.

Kogut and Singh argue that differences in national cultures result in different organisational and management practices as well as employee expectations. Hence, the greater the cultural distance between two countries, the greater will be the likelihood that their organisational characteristics will be different. Further, they note that firms emerging from culturally distant countries will experience greater difficulties in effectively managing a foreign acquisition than those from culturally similar countries. These difficulties arise from the differences in administrative and cultural practices, and personal characteristics between the target and investing firm (ibid., 414). Kogut and Singh thus posit that the firm's selection of an international entry mode is influenced by two cultural factors. The first is the relative cultural distance between the home country of the investing firm and the host nation. The second is the investing firm's underlying cultural attitudes towards uncertainty avoidance.

The measures of culture, deployed by Kogut and Singh, were derived from the indices designed by Hofstede. Hofstede (1983) perceived that differences in national culture varied along four dimensions. These he identified as uncertainty avoidance, individualism, tolerance of power distance and masculinity versus femininity. Scales were devised for countries along each of these four dimensions. It was these scales which were used by Kogut and Singh to test the influence of the two cultural variables (uncertainty avoidance and cultural distance) on the selection of market entry modes by foreign firms making investment in the US during the period 1981 to 1988.

Statistical testing lent strong support to the postulate that cultural differences affect the selection of market entry mode. Kogut and Singh's analysis revealed that the more culturally distant from the US is the investing firm, the greater is the likelihood of it selecting a joint venture over an acquisition. Weaker support was found for the probability of the firm choosing a greenfield investment over an acquisition. In addition, the effect of uncertainty avoidance increases the probability of a firm's choosing a joint venture and a greenfield investment over an acquisition.

It appears that cultural factors (cultural distance and uncertainty avoidance) do play an influencing role in the MNE's selection of foreign entry modes. The firm that perceives the host country to be culturally distant will likely choose a wholly owned greenfield or a joint venture over an acquisition. The investing firm seems to place greater costs and risks to managing an acquisition relative to a wholly owned greenfield investment or a joint venture. Further, the firm characterised by relatively high uncertainty avoidance in its management practices, will likely select a wholly owned greenfield or a joint venture over an acquisition. In so doing, it is attempting to avoid the potential administrative conflicts that may arise from its management of a foreign acquisition.

It is noteworthy that Padmanabhan and Cho (1996) arrived at fairly similar conclusions to those of Kogut and Singh (1988). The former study examined the factors affecting the selection of market entry mode of Japanese MNEs in thirty-six countries during the years 1969 to 1991. Unlike Kogut and Singh, Padmanabhan and Cho analysed only two international entry modes: wholly owned subsidiaries and joint ventures. They concluded that Japanese firms were more likely to select wholly owned subsidiaries in culturally distant host countries than culturally similar ones. Padmanabhan and Cho deduce that the costs and uncertainties of managing joint ventures were much greater in culturally dissimilar countries than culturally similar ones. Most importantly, they revealed that cultural dissimilarity still played a significant role in increasing the likelihood of the Japanese firms selecting a wholly owned subsidiary in non-restrictive countries. It seems that the Japanese preference for wholly owned subsidiaries in culturally dissimilar countries becomes more pronounced when they have greater latitude to choose between alternative market entry modes (Padmanabhan and Cho 1996:59).

Interestingly enough, Kogut and Singh postulate that these cultural factors may be later superseded by the firm's multinational experience (Kogut and Singh 1988:429). Indeed, it has been argued that the international experience of a firm influences its choice of market entry mode. This issue will be discussed in the following section.

International experience and market entry choices

One school of thought postulates that there is a direct relationship between a firm's selection of market entry mode and the level of its international experience (Johanson and Wiedersheim-Paul 1975; Johanson and Vahlne 1977, 1990; Welch and Luostarinen 1988; Forsgen 1989). This is the internationalisation theory. This theory sought to explain the internationalisation process of firms emerging from the small, domestic markets of the Scandinavian countries.

In this theory, the internationalisation process is viewed as a sequential affair. The firm's involvement in a foreign market develops according to an establishment chain (Johanson and Wiedersheim-Paul 1975:307). The firm, with little international experience, enters a foreign market by indirect exporting. It progresses to the establishment of a sales subsidiary and eventually to the investment in production facilities. The driving force of this internationalisation process is 'experimental market knowledge' (Johanson and Vahlne 1990:12). At each successive stage of the internationalisation process, the firm gains valuable knowledge of opportunities and problems in the market. This knowledge reduces market uncertainty. Hence, the firm makes greater resource commitments to the country as it gains experience from its operations in the market.

In addition, the theorists postulate that the MNE will initially invest in markets that are of a limited psychic distance from its home country. Psychic distance is defined as the factors that prevent the flow of information between firm and markets. They include differences in language, culture, political systems and levels of education and industrial development (Johanson and Weidersheim-Paul 1975:307). The internationalisation theory argues that an MNE's initial investment will be in markets that are similar to its home country in culture, political systems and level of industrial development. As the MNE gains international experience, it will progressively enter countries that are of a greater psychic distance from its home country.

Several researchers have supported the postulate that the MNE's level of foreign experience directly influences its selection of a market entry mode. Indeed, research conducted on US MNEs supports this theory (Davidson 1980; Loree and Guisinger 1995). Similarly, work done on the service MNEs in the Asia-Pacific region has confirmed this theory (Li 1994). In addition, the behaviour of Japanese MNEs in the US and Canada was found to be consistent with the internationalisation theory (Tan and Vertinsky 1996). Further, researchers examining the internationalisation process of selected companies also found support for the theory of internationalisation (Fina and Rugman 1996). Nonetheless, the internationalisation theory has provoked several criticisms. One researcher, using the arguments of the transaction cost theory, notes that the internationalisation theory makes the implicit assumption that the firm is producing and marketing abroad a standardised product (Rugman 1980a). Rugman argues that for licensing to be a viable option at the early stages of internationalisation, the product must be standardised. He notes that if the firm possesses unique firm-specific assets, it will be unwilling to lose these assets through premature licensing. Indeed, the licensing option will only be used when the product is mature. Alternatively, the firm will only use licensing agreements if it can successfully segment its markets (ibid., 24). Other theorists argue that the internationalisation theory is based on the investment behaviour of firms emerging from the homogenous Scandinavian bloc. This thus raises questions as to the representativeness of the research (Sullivan and Bauerschmidt 1990). Sullivan and Bauerschmidt posit that there is a possibility that nation-specific factors may moderate the internationalisation process (ibid., 28).

The internationalisation theorists admit that the simple theory of internationalisation was a satisfactory explanation for the foreign investment behaviour of firms until the mid-1970s. After this period, markets became more globalised and integrated, thus rendering the explanation of a sequential, stepwise internationalisation process inappropriate (Welch and Luostarinen 1988:50). Yet, several aspects of the theory appear to be still relevant. The literature seems to suggest that the international experience of a firm plays a decisive role in its choice of operating in foreign, culturally different markets. It appears that as multinational managers become more acculturated, they are more willing to enter into psychically distant markets (Li and Guisinger 1992:685; Loree and Guisinger 1995:294). It could further be argued that such MNEs, when not constrained by country-specific factors such as host government regulations, will seek to use the mode of a wholly owned subsidiary in these markets.

Developing countries and the new forms of foreign direct investment

Over the last two decades, there has been a discernible shift away from the MNE's use of the wholly owned subsidiary to institutional modes that involve less equity participation. Several of the theorists previously discussed have alluded to this (Stopford and Wells 1972; Beamish and Banks 1987; Buckley and Casson 1988; Gomes-Casseres 1990). This study makes special mention of these new institutional forms of foreign involvement because they are especially prevalent in developing countries (Beamish 1994:493). The emergence of the new international entry modes was a result of host government's policies during the pre-1980 period, the MNE's perception of the advantages of alternative forms of involvement and the advent of the smaller MNEs (Helleiner 1987:70). It is noteworthy that the 1980s were characterised by a period of global liberalisation with many governments removing restrictions on foreign equity. Nevertheless, these forms of foreign ownership still prevail, albeit in reduced numbers, in both developed and developing regions (Contractor 1990).

The new modes of market entry are diverse in nature. They occupy that grey area between spot market transactions and the total merger of the firm. They include such forms of foreign involvement as joint ventures where the equity does not exceed 50 per cent, licensing agreements, turnkey contracts and management contracts. It is thus questionable whether all of these new forms of foreign involvement are indeed investments. However, this study seeks only to analyse 50–50 and minority joint venture agreements. It is believed that in these forms of institutional involvement, all parties have an interest in the viability of the project as an investment.

Some of the theories that were discussed previously have attempted to explain why the firm will select these international entry modes rather than the wholly owned subsidiary. As noted earlier, Beamish and Banks (1987) modified the internalisation theory to allow for joint venture agreements. They posit that joint venture agreements prevail under conditions of mutual trust and commitment, and hedging against uncertainty. Buckley and Casson (1988) added two factors: the benefits arising from the merger and the obstacles to merger. Another theorist states that the basis for these inter-firm arrangements is collaboration. Richardson (1972) posits the prime reason for the existence of such agreements is the need for firms to co-ordinate closely complementary yet dissimilar activities. Further, other theorists perceive the choice of market entry influenced by the interaction of the transaction cost theory (what the firm wants) and the bargaining power approach (what the firm gets) (Gomes-Casseres 1990; Pan 1996).

Interestingly enough, in developing countries, the new forms of foreign involvement appear to be concentrated in specific industries. Oman (1988) reveals that in developing countries there is a proliferation of these investments in the extractive industry, specifically the petroleum industry. In the manufacturing sector, the new forms of investment are likely to be found in investment projects where the output is marketed in the domestic or regional market. There is a noticeable absence of these modes of investment in production for export (ibid., 388–91). Further, several theorists note that that these investments are likely to be found in investment projects that use relatively stable or low technologies. They are less likely to be found in technology-intensive activities (Stopford and Wells 1971:119–23; Oman 1988:390; Franko 1989:28). Alternatively, it is suggested that the new forms of investment are concentrated in the high-growth industries or in the high value-added segments of the industries of the host country. In these industries, governments clearly wield considerable bargaining power over the MNE (Oman 1988:391).

In addition, it appears that the new international entry modes tend to be used by the 'newcomer' and follower MNEs in their attempts to compete with the more established MNEs in global markets (Stopford and Wells 1971:138–41; Oman 1988:386; Franko 1989:27–9; Agarwal and Ramaswami 1992:20). In some cases, these institutional forms of foreign involvement are used as aggressive investments to penetrate or increase market share in industries that are dominated by the leading firms. Here, the firm generally offers the host country shared ownership or greater access to technology in return for exclusive access to the domestic market. In other cases, these institutional forms are used for investment that is defensive in nature. The newcomer and follower MNEs lack the financial and managerial resources needed for participation in the globalised oligopolistic rivalry that characterises many industries. Hence, in order to assume a competitive presence in critical markets, these firms share ownership with local firms in exchange for access to finance, local market knowledge and shared risks (Oman 1988:386; Franko 1989:27). It is noteworthy that the industry leaders only use these new forms of investment in highly protected, isolated markets. The output of these markets does not compete with their core activities (Oman 1988:389).

The new international entry modes also tend to be country-specific. It appears that MNEs from Japan and Europe are more likely to conclude such agreements than US MNEs (Oman 1984:81–4; Dunning 1988:173–4; Pan 1996:18). The reasons for these firms entering such agreements are related to the factors discussed above. Many of them are the 'newcomers' to the industry and thus are more willing to share equity than the industry leaders. In addition, it has been posited that the manufacturing technology that the Japanese firms transfer abroad is mature. Hence, they are willing to enter into these new forms of foreign involvement in developing countries (Dunning 1988:173).

It is important to note that the explanations for the emergence of the new forms of foreign investment accord with the existing literature. Indeed, these modes of market entry tend to be found in the lower technology sectors. As the internalisation theory posits, the forces which propel the firm to internalise production are the highest when the technology is proprietary. Hence, the firm will only conclude such investments for mature technology. Further, as Gomes-Casseres (1990) explains, the larger MNE will only concede to these modes of reduced equity when the government has strong bargaining power.

The new modes of investment, especially those in developing countries, are considered to be risky ventures (Caves 1982:81; Beamish 1988:10). Thus, they are generally concluded for activities over which the MNEs do not wish to exercise total control. It is only the smaller or new MNEs that appear to be willing to concede to forms of foreign involvement that result in reduced control. This appears to be a strategy they use to compete in the global oligopolistic markets. In addition, it appears that the conditions under which the larger MNEs are willing to concede to reduced control are when the local partner is able to contribute skills to the venture. These skills are normally its knowledge of local markets, culture and politics (Beamish 1988, 1994). The larger MNEs or the industry leaders are also involved in these reduced equity arrangements when they provide them with critically needed raw material inputs or when the host government wields considerable power (Stopford and Wells 1972; Beamish 1988; Gomes-Casseres 1990).

Conclusions

The theories analysed above reveal that the MNE's mode of market entry is dependent on several variables. The transaction cost theory and the internalisation theory posit that it is the firm's possession of proprietary assets that influences its selection of market entry mode. These theories postulate that the MNE will select the wholly owned subsidiary as its form of foreign involvement. Moreover, the theories argue that the firm, which internalises its intermediate markets, will be involved in intra-firm trade. It is further suggested that the firm, which is involved in intra-firm trade, will use a wholly owned subsidiary in foreign locations.

Alternatively, Johanson and Wiedersheim-Paul postulate that the firm with experience in international markets will seek to choose a wholly owned subsidiary as its mode of market entry. By contrast, Kogut and Singh posit that culture plays an important role in the MNE's selection of an institutional form for foreign involvement. Thus, it is argued that the MNE will use a wholly owned greenfield or a joint venture agreement instead of an acquisition in culturally distant markets.

Moreover, as Oman and Franko reveal, it is the smaller and new MNEs that tend to participate in those forms of market entry that require less equity. These MNEs used the new modes of market entry as a strategy for competing in the global oligopolistic rivalry that characterises many industries. In addition, in sectors where the governments wield considerable bargaining power, the MNE may concede to these modes of reduced equity.

Hypotheses on the modes of foreign direct investment in the Caribbean

Five hypotheses can be drawn from this analysis of the literature on the modes of foreign investment. These are:

1 There is a positive relationship between intra-firm trade and the use of a wholly owned subsidiary.
2 There is a positive relationship between the MNE with international experience and its use of a wholly owned subsidiary.
3 There is positive relationship between cultural distance and the use of wholly owned greenfield investments and joint venture agreements.
4 There is a positive relationship between the resource-seeking MNE and minority and 50–50 joint venture agreements.
5 There is a positive relationship between the government policy towards the mode of market entry used by foreign firms in the primary sector and the resource-seeking MNE.

The first hypothesis is drawn from the arguments posited by researchers such as Anderson and Gatignon and Gomes-Casseres. They argue that the firm, which possesses proprietary technology or a global network of subsidiaries, will engage in intra-firm trade. Also, it will seek to use a wholly owned subsidiary as its international entry mode. This study contends that the MNE that operates in the Caribbean will be involved in intra-firm trade for several reasons, first, the resource-seeking MNE will attempt to internalise the market for raw materials (bauxite, oil and natural gas). It does this to avoid the transaction costs stemming from high switching costs. In addition, those that possess a global network of subsidiaries will also be involved in intra-firm trade. The various inputs needed for production undertaken in the Caribbean will be sourced from the parent firm or its affiliates. It is noteworthy that the latter type of MNE possibly will be located in the export processing zones. Thus, these two types of MNEs will seek to establish wholly owned subsidiaries in the Caribbean markets. In so doing, they will be able to enjoy the global synergies arising from their geographically dispersed activities as well as maintain control over their Caribbean operations.

The second hypothesis is derived from the theory advanced by Johanson and Wiedersheim-Paul, and Johanson and Vahlne. These theorists view the internationalisation process as a sequential affair. It is the firm, which has accumulated international experience, which will establish a wholly owned subsidiary in foreign locations. Hence, it is hypothesised that the firm with considerable experience operating in foreign markets will use the wholly owned subsidiary as its market entry mode in the Caribbean.

It is Kogut and Singh's postulate from which the third hypothesis is drawn. They argue that the MNE will choose to enter culturally distant markets through the mode of wholly owned greenfield investment or joint venture agreement rather than an acquisition. Thus, this study hypothesises that the MNE from countries with cultures which are dissimilar to those of the Caribbean will select a wholly owned greenfield investment or joint venture.

The fourth hypothesis is based on the theories postulated by Oman and Franko. They argue that it is the reduced equity modes are prevalent in the extractive industries of developing countries. Thus, this study contends that these market entry modes will be used by the resource-seeking MNEs. Finally, the last hypothesis is drawn from the work done by researchers such as Oman and Gomes-Casseres. It is argued that the selection of market entry mode is a result of a dynamic interplay between the firm and the government. Hence, this study argues that Caribbean governments will influence the firm's choice of market entry mode used in the primary sector. It is assumed that the governments are able to wield considerable bargaining power over the firm's selection of market entry mode in this sector.

6 Hypotheses and methodology

Introduction

In the preceding chapters, a review was conducted of various theories which sought to explain the factors that influence the motivations of firms engaging in production abroad, their choice of location, and their selection of market entry mode. It is noteworthy that many of these theories were developed to explain the behaviour of firms that originate from advanced industrialised countries and were investing in operations in such countries. Indeed, it has been acknowledged that there is a paucity of international business research conducted on less industrialised, less developed countries or what has been quixotically described as the 'forgotten locations' by Thomas (1996). This study thus seeks to provide further clarity to the discussion of factors influencing the investment decisions and corporate strategy of MNEs in developing countries, specifically three island states in the Caribbean: Jamaica, Barbados Trinidad-Tobago. What it proposes to do is to test the relevance of the theories discussed in previous chapters to the foreign direct investment that is undertaken in these three countries. In so doing, it hopes possibly to refine the extant theories on foreign direct investment.

In this chapter, the methodologies employed to achieve the above-mentioned objectives will be discussed. This study uses a triangulation of methodologies: both quantitative and qualitative methods were used to investigate the research question. This chapter discusses the rationale for the use of a triangulation method, outlines the quantitative and qualitative techniques employed, as well as introduces the firms and the respondents that were selected to participate in this study.

The hypotheses

This study employs a hypothetico-deductive method. As noted in the preceding chapters, fourteen hypotheses were advanced from the analysis of the literature. These are as follows:

Hypotheses on the motivation for foreign direct investment in the Caribbean

H1 No relationship exists between the MNE's use of its unique advantages and the presence of domestic competitors.
H2 There is a positive relationship between 'follow-the-leader' investment behaviour of MNEs and the use of low-cost factors.
H3 There is a positive relationship between the firm's use of its unique advantages and the locational advantages of the Caribbean.

Hypotheses on the location of foreign direct investment in the Caribbean

H4 There is a positive relationship between the MNE and the decision to establish and continue operations in the Caribbean because of low-cost factors.
H5 There is a positive relationship between the export-seeking and resource-seeking MNEs and the use of preferential trading agreements.
H6 There is a positive relationship between the presence of export processing zones and the export-seeking MNE.
H7 No relationship exists between investment incentives offered by Caribbean governments and the MNE's decision to establish and continue operations in the Caribbean.
H8 There is a positive relationship between the market-seeking MNE and trade restrictions.
H9 There is a positive relationship between the national 'diamond' of the MNE and the 'diamond' of the Caribbean.

Hypotheses on the mode of foreign direct investment in the Caribbean

H10 There is a positive relationship between intra-firm trade and the use of a wholly owned subsidiary.
H11 There is a positive relationship between the MNE with international experience and its use of a wholly owned subsidiary.
H12 There is a positive relationship between cultural distance and the use of wholly owned greenfield investments and joint venture agreements.
H13 There is a positive relationship between the resource-seeking MNE and minority and 50–50 joint venture agreements.
H14 There is a positive relationship between government policy towards mode of market entry used by foreign firms in the primary sector and the resource-seeking MNE.

Choice of research method

The choice of a research method was dictated by the need to provide definitive answers to the question: *How attractive is the Caribbean environment to the MNE?* A triangulation method was believed to be the most appropriate strategy to use in the investigation of this research question.

A debate has been raging in the literature on the integrated use of quantitative and qualitative research methods within a single study. The argument against the combined use of these research methods largely has been on the grounds that they represent differing epistemological positions (Morgan and Smircich 1980; Delamont and Hamilton 1984). According to this view, each of these research methods is associated with a unique and separate paradigmatic perspective and it is these two perspectives that are in conflict (Cook and Reichardt 1979:9). Hence, the detractors of the use of a triangulation of research methodologies imply that a researcher's choice of methods of investigation is dictated by his views on the proper foundation for the study of social reality (Bryman 1989:104). Moreover, they assume that quantitative and qualitative methodologies are rigid and fixed and the choice between them is the only one to be available (Cook and Reichardt 1979:11). However, the protagonists of this approach posit that the distinction between quantitative and qualitative research is really a technical issue where the choice of research method is dictated by its suitability in providing answers to particular research questions (Cook and Reichardt 1979:16; Bryman 1989:109). Indeed, Bryman convincingly posits:

> if the research problem invites a combined approach, there is little to prevent such a strategy, other than time, money and possibly inclination.
>
> (Bryman 1989:107)

Researchers such as Harrigan (1983) have advocated the use of a triangulation of methodologies in business research. The use of a triangulation of research methods enriches the understanding of research questions since it allows for new or deeper dimensions of the issues to emerge (Jick 1979; Denzin 1989). Moreover, it is argued that this method is an effective research tool since the flaws of one method will be compensated by the strengths of another (Campbell and Fiske 1959; Denzin 1989). Also, it has been suggested that triangulation allows the researcher to be more confident of his results, helps to uncover the 'deviant' dimensions of a phenomenon, may lead to a synthesis of theories, and serves as the critical test for competing theories (Jick 1979:608). Further, the benefits of using each research methodology are gained. Quantitative research methods allow for broad-based generalisation theory-testing, and comparability of observations. Conversely, qualitative research methodologies capture the richness of the data, allow for meticulous attention to be paid to detail, and enable the researcher to study the phenomenon in its context (Harrigan 1983:399). By combining both of these research methodologies in one study, the researcher is able to secure the advantages to be derived from the use of each of these research techniques.

In this study, a 'between-method' triangulation methodology (Denzin 1989:244) was adopted. Here, two different research strategies were combined to study the research question. The results of a mailed questionnaire survey, which was administered to MNEs operating in the three Caribbean countries, were initially used to test the fourteen hypotheses advanced. The quantitative analysis of the results of this survey provided greater understanding of the issues to be addressed and provided the basis for the selection of twelve core cases for further study. The methodology of a case study approach was then used to analyse these twelve firms. Thus, both the quantitative and qualitative research methodologies were combined to produce deeper understanding of the factors that influence the motivations, locational choices and selection of market entry mode of MNEs operating in Jamaica, Barbados and Trinidad-Tobago.

The quantitative approach

The selection of a survey instrument–the mailed questionnaire

The mail questionnaire is an appropriate yet inexpensive survey instrument to use when substantial information is sought through structured questions from a large sample that is widely dispersed geographically (Sekaran 1992:220). These were the factors that influenced the selection of the mailed questionnaire as the survey instrument to be employed in the primary analysis of the study. Moreover, research has demonstrated that the mail questionnaire could be successfully administered to the industrial and commercial population of the Caribbean (Klose 1991).

A nine-page questionnaire, which consisted of three sections, was administered to executives of MNEs that operate in the three island states (see Appendixes 1 and 2). The responses to the questions were mainly placed on a likert scale; however, in a few cases, some were ranked. Essentially, there were two variants of the pretested questionnaire: one of which was sent to the headquarters of the MNEs and the other to its subsidiary in the Caribbean. There were also slight variations in the questions that were posed to firms operating in the different islands; for example, the questionnaire that was sent to firms which had operations in Trinidad-Tobago was the only one which included questions on natural gas reserves.

The selection of MNEs

There is no single source that contains a comprehensive listing of all the MNEs that presently operate in Jamaica, Barbados and Trinidad-Tobago. Hence, several secondary sources of data were utilised. These included Dun & Bradstreet: America's Leading Public and Private Companies, 1994; Dun & Bradstreet: Key British Enterprises, 1995; The Financial Times Information Limited: Major UK Companies Handbook, 1995; The Financial Times Information Limited: European Handbook, 1995; Caribbean Exporters 1993/1994; A Directory of Caribbean Exporters

1994; Trinidad and Tobago Export Development Corporation: Export Directory, 1993–1994; One Source; and Data Stream. The various trade promotion agencies of the countries studied, as well as the British Department of Trade and Industry, also provided additional data. However, in many cases the information proved to be rather dated. Thus, attempts were made to check the accuracy of the data obtained. To this end, as far as it was possible, telephone calls were made to the firms identified to confirm their presence in the countries as well as to clarify the name of the respondent, his/her address and contact numbers. In addition, research assistants were employed in Trinidad-Tobago to check the accuracy of the data that were obtained from the secondary sources. These telephone contacts helped to establish a personal relationship with some of the respondents, which proved to be advantageous during the later research stage of face-to-face interviews.

Attempts were made to obtain firms that reflect the diversity of the types of foreign direct investment that is undertaken in the three countries studied. Hence, concerted efforts were made to obtain a listing of MNEs that consisted of market-seeking, resource-seeking and export-seeking investment. Thus, the list of MNEs that was obtained was comprised of firms that ranged from fairly large global players, such as British Gas and the Amoco Oil Company, to rather small ones, such as Apparel Contractors and Tultex. This list of firms consisted of 139 MNEs originating from the United States of America, Canada, Europe (United Kingdom, France, Germany, Switzerland, Sweden and Norway) and Asia (India, Hong Kong and Korea). Twenty-five of these MNEs operated in more than one of the countries studied (see Table 6.1). Thus, the firms used in the mail survey represented, as far as could be possibly ascertained, the population of MNEs that are presently operating in the three Caribbean countries.

Table 6.1 Number of MNEs used in mail survey, by country of origin and host country

Home country	*Host country*			
	Jamaica	*Barbados*	*Trinidad-Tobago*	*Total*
United States of America	32	19	27	78
United Kingdom	19	20	19	58
Other[a]	10	7	11	28
Total	61	46	57	164[b]

Notes: [a]The category 'other' includes investment that originates from Canada, Europe (France, Germany, Switzerland, Sweden and Norway), and Asia (India, Hong Kong and Korea).
[b]The total number of enterprises is not 139 as recorded since twenty-five of the companies listed operate in more than one Caribbean country.

The selection of respondents

Attempts were made to solicit responses from executives located at both the headquarters and the subsidiary. This approach was adopted since it is believed that investment decision-making is not a one-off, static process. Indeed, Aharoni postulates:

> We do not see the decision-making process as a sequence of deliberate, logical steps, beginning with a well-defined problem and proceeding through a series of alternatives and consequences—be they exhaustive or 'sufficient'—to a final decision. The process of decision is quite often a very erratic one. Problems and perceptions of alternatives and of consequences are all redefined continuously throughout the process. The decision-maker's evaluation of various elements is continuously shifted and changed.
>
> (Aharoni 1966:30)

Thus, this study adopted the perspective that the investment decision-making process is a dynamic one which is influenced by what is occurring in the proximate environment of the home country of the MNE as well as that of its subsidiary. Hence, in order to capture the dynamism of this process, responses were sought from both the executives at the headquarters, who are responsible for the Caribbean operations, and the managers of the subsidiary. In addition, the survey instrument that was used in the mailed questionnaire survey included questions on the factors that influenced the *initial* investment decision as well as those that influence the decision to *continue* operating in the country.

The mail survey was conducted during the period March to June 1996. Mailed questionnaires were sent to a total of 299 respondents. Of these respondents, 145 were executives from US MNEs, 101 were from UK MNEs, and the remaining 53 were from MNEs that were either European, Canadian or Asian.

The qualitative approach

Clearly, the essence of an analysis of the factors that influence the behaviour of MNEs operating in the Caribbean can be captured through statistical tests. However, valuable insights into these firms' behaviour within this environment may be lost by using such methods. It is qualitative analysis that is able to capture the nuances, provide greater detail and understanding of a phenomenon (Harrigan 1983:399). Hence, in order to gain deeper insight into the factors influencing the motivations, corporate strategy and investment behaviour of MNEs operating in the three countries, a qualitative research methodology was employed.

The selection of a qualitative research method–the case study approach

The case study method appeared to be ideally suited for the further investigation of the research question. As Yin notes:

> Case studies are the preferred research strategy when 'how' or 'why' questions are asked, when the researcher has little or no control over events, and when the focus is on contemporary phenomenon within some real-life context.
>
> (Yin 1989:13)

It seems that all the elements that are necessary for the implementation of a case study approach are met by this research. As was earlier noted, the research question posed in this study is: *how* attractive is the Caribbean business environment to the MNEs? Clearly, this question is an explanatory one. It does not seek to gain insights to a mere snapshot of the Caribbean business environment. Rather, it seeks to understand the dynamic aspects of this environment and the factors influencing firms' behaviour within it. In addition, the researcher adopted an 'outsider's' perspective because of the inability to exercise control over the phenomenon being studied. Moreover, in the search for answers to this research question, a diversity of sources of information was utilised. Indeed, the unique strength of the case study method is its ability to deal with a variety of evidence (Yin 1989:20).

As Figure 6.1 demonstrates, case studies can be classified into four categories.

The type of case study that is used in this study is Type 4 of Figure 6.1. The study adopted a multiple case, embedded design. Twelve cases were selected. A grouping of four firms that operate in a sector of each of the three countries was analysed. Three of these cases were joint venture arrangements. Thus, a total of fifteen MNEs were studied. In addition, more than one unit was analysed in several of these cases.

Yin (1989) argues that sampling logic cannot be used in generalising the results from a case study. What must be done is analytical generalisation.

	Single-case designs	Multiple-case designs
Holistic (single unit of analysis)	TYPE 1	TYPE 2
Embedded (multiple unit of analysis)	TYPE 3	TYPE 4

Figure 6.1 Basic types of designs for case studies

Source: Yin (1989)

Here, theory is used as a template to compare the results of a case study. If two or more cases are shown as supporting the theory, then replication occurs. Using this replication logic, *Yin* states that in multiple-case studies, each case must be chosen so that it either predicts similar results (a literal replication) or produces contrary results but for predictable reasons (a theoretical replication) (Yin 1989:53). Thus, in this study, literal replication was implemented through the examination of the four firms within a single sector. Theoretical replication was done by the examination of the firms across the three sectors in the three countries.

The selection of sectors

The late 1980s witnessed dramatic changes occurring in several economies of the developing world. These economies were rapidly moving out of import-substitution industrialisation into export manufacturing. The emergence of export manufacturing largely has been a result of the policy advice given by the World Bank and International Monetary Fund. As part of the conditionalities for loans from these financial institutions, developing countries were 'advised' inter alia: to implement trade reforms; reduce fiscal deficits; adopt competitive exchange rates; deregulate domestic prices; rationalise investment regulations; and reform labour market regulations (World Bank 1987a). The centrepiece of this strategy was its emphasis on outward oriented growth (Balassa and Associates 1982; Bhagwati 1988).

As Chapter 2 revealed, the three Caribbean countries were not immune to these changes. Since the late 1970s, many of them have been confronted with declining revenues, high international debt, growing levels of unemployment and underemployment, and mounting fiscal deficits. The import-substitution strategy that they had been implementing during the immediate post-independence era, failed to provide a basis for self-sustained growth. Thus, 'advised' by the international financial institutions from which many sought loan financing, these countries now embraced an outward oriented strategy. In addition, attempts were made to diversify these economies away from their dependence on a limited range of primary products–sugar (Barbados), bauxite (Jamaica) and sugar and petroleum (Trinidad-Tobago). These concerns gave impetus to the development of 'new exports' during the late 1970s and early 1980s (Long 1989). To this end, export enclaves were established in the three island states examined. In addition, it was the foreign investor who was actively sought to occupy these export enclaves. Trinidad-Tobago was the only country that did not actively seek foreign investment. Awash with unprecedented oil revenues, the country's efforts at export manufacturing identified the state as the main investor. However, by the late 1980s, faced with declining oil revenues, mounting international debt, growing fiscal deficits and an intractable unemployment problem, the country had no option but to embark on a strategy of privatisation and to reverse its policy on state ownership of its designated strategic sector. Thus, the private foreign investor is now actively courted by policy-makers in this country.

Despite the attempts at export diversification, the activities undertaken in these export enclaves generally have tended to be dominated by one core activity. These activities are considered to be of strategic importance to the countries. Most importantly, however, is the fact that these activities have been heralded as the new source of economic growth. In Jamaica, this strategic activity is the apparel sector. In Trinidad-Tobago, it is the natural-gas-based sector. In Barbados, it is the information services sector. The following quotations are illuminating.

> Textiles and apparel emerged as a growth industry during the last decade. It accounts for 40% of Jamaica's exports. In 1994 exports of apparel amounted to $450 million, up from $10 million in 1980.
>
> (*Corporate Location,* July/August 1995)

> Since the mid-1970's, Natural Gas has been emerging as the country's most important resource.... The natural gas industry contributes significantly to government's revenue, national income and foreign exchange earnings.
>
> (The National Gas Company of Trinidad and Tobago, 'Natural gas in Trinidad and Tobago', n.d.)

> within recent years, the service sector has emerged as the sector capable of earning substantial foreign exchange for Barbados…the information service subsector, in particular, has emerged as one of the more dynamic growth areas, currently employing 2 per cent of the workforce and earning in excess of $60 million annually.
>
> (Government of Barbados 1993)

It is these sectors that have been selected for the case studies. The firms operating in these sectors are all targeting the export market. Hence, the investments studied in these case studies are export oriented.

The selection of firms

It has been posited that the researcher, in choosing cases for study, should lean towards those that offer the opportunity to learn (Stake 1994:243). Thus, the selection of firms for the case studies was greatly influenced by the possibilities for learning much more about the phenomenon being studied. With the exception of one company, all firms chosen for the case studies had participated in the mailed questionnaire survey. In the case of the firm that had not participated in the mailed questionnaire, knowledge of its activities was only gained when visits were made to Barbados. The company had begun its operations in the country a year earlier and thus was missed during the stage when data were collected on the MNEs operating in the Caribbean. This company's activities are higher up the value chain than those of other firms in this sector. It was the first to be involved in software development in Barbados. Thus, it was believed that the inclusion of this firm in the study would provide deeper understanding of the issues being analysed.

The selection of the firms for the case study was also determined by the possibility of gaining access to the companies. The companies that consented to participate in the mail survey were the ones from which the selection was made (see Table 6.2). The firms that agreed to participate in further interviews were used for the case studies. Moreover, as noted above, attempts were made to achieve literal replication within the sectors studied and theoretical replication across the sectors studied.

Table 6.2 The firms that were selected to participate in the case study

Subsidiary	*Size of initial investment*	*Activities*	*Parent company*	*Size of parent company*
Jamaica – The apparel sector				
1 Yoffi Industries Limited	US$100,000	Manufacture of ladies undergarments	Apparel Contractors Association Incorporated	Total sales (1996) US$25 m Total number of employees (1996) 4,000
2 Akom Corporation	*	Manufacture of casual wear	Tultex Corporation	Total sales (1996) US$636.9 m Total number of employees (1996) 6,835
3 Jamaica Needlecraft Limited	*	Manufacture of undergarments	Maidenform Worldwide Incorporated	Total Sales 1996 US$400 m Total number of employees (1996) 8,900
4 Jockey Jamaica Limited	*	Manufacture of undergarments	Jockey International Incorporated	Total sales (1994) US$22.5 m Total number of employees (1994) 5,900

Table 6.2 (continued)

Subsidiary	*Size of initial investment*	*Activities*	*Parent company*	*Size of parent company*
Barbados – The information service sector				
1 Caribbean Data Services Limited	US$3.5 m	Processing of airline ticket data, payroll and general accounting, marketing and management reporting, insurance claims processing	AMR Information Service Incorporated subsidiary of AMR Corporation	Total assets (1995) US$19,556 m Total number of employees (1995) 110,000
2 Offshore Keyboarding Corporation	*	Data entry, typesetting, data entry of technical manuscripts	Digital Imaging & Technologies Incorporated	*
3 Technotype International Incorporated	US$50,000	Typesetting for parent company	Santype International Limited	Total assets (1995) US$39 m Total number of employees (1995) 66
4 Total Technology Solutions Limited	*	Software development	The PRT Group Incorporated	Total sales (1995) US$20 m Total number of employees (1995) *
Trinidad-Tobago – The natural gas processing sector				
1 Amoco Trinidad Limited	US$245 m	Oil exploration and production of liquefied natural gas	Amoco Corporation	Total assets (1995) US$29,845 m Total number of employees (1995) 42,689
2 British Gas Trinidad Limited	US$155 m	Exploration of oil and production of liquefied natural gas	British Gas plc	Total assets (1995) US$18,290 m Total number of employees (1995) 55,382

Table 6.2 (continued)

Subsidiary	*Size of initial investment*	*Activities*	*Parent company*	*Size of parent company*
Trinidad-Tobago – The natural gas processing sector				
3 Atlantic LNG	US$1.5 bn	Production of liquefied natural gas	Cabot Corporation	Total assets (1995) US$165 m Total number of employees (1995) 4,700
4 Arcardian Trinidad Ammonia Limited	US$175 m	Production of ammonia and urea	Arcadian Corporation	Total assets (1995) US$1,271 m Total number of employees (1995) 1,293
5 Caribbean Methanol Company	US$200 m	Production of methanol	Ferrostaal AG	Total assets (1995) US$2,926 m Total number of employees (1995) 1,569
6 Caribbean Methanol Company	US$200 m	Production of methanol	CL Financial	Total assets (1994) US$1,084 m Total number of employees (1994) *
7 Caribbean Methanol Company	US$20 m	Production of methanol	Methanex	Total assets (1994) US$1,688.3 m Total number of employees (1994) *
8 Caribbean Ispat Limited	US$30 m	Production of carbon steel billets, carbon steel wire rod coils and direct reduced iron	Ispat International subsidiary of Ispat Industries Limited	Total assets (1995) US$60.5 m Total number of employees (1995) *

Source: Annual reports of the companies.
Notes: *Not available.

The selection of the respondents

Interviews were conducted with both the managers of subsidiaries and senior executives of the MNEs in the home countries. Thus, the interviewing process, which was done during the period July to November 1996, was conducted in Jamaica, Trinidad-Tobago, Barbados, North America and the United Kingdom. The managers were approached through letters and telephone calls. The managers of the subsidiaries were first interviewed. This strategy proved to be useful since they were able to furnish the researcher with the name and contact numbers of the appropriate executive of their parent company. In some instances, the managers even sought to set up the date and time for the later interviews with these executives.

Attempts were made to control for the inevitable perceptual biases that would be present in the information supplied by these managers (Huber and Power 1985; William and Mezias 1996). The informants were assured of the anonymity and confidentiality of their responses. In addition, they were apprised of the length of the interview and thus were able to allot sufficient time for the interview in their busy schedules. Moreover, where it was possible, an additional person in the organisation was sought for interview.

A questionnaire, which consisted of fourteen semi-structured questions that required open-ended responses, was employed (see Appendix 3). The questions were drawn from a refinement of the hypotheses. Several of the hypotheses were refined on the basis of the results of the mailed questionnaire survey. In the majority of cases, face-to-face interviews that were taped were conducted. However, the exigencies of finance together with the geographical dispersion of several of the North American firms, influenced the use of telephone interviews. The use of telephone interviews, which has been gaining in popularity in recent times, has the advantages of cost-efficiency and speed in data collection (Frey and Mertens 1995:4). Eight telephone interviews were conducted. These interviews averaged forty-five minutes in length. The face-to-face interviews were much longer, ranging from one hour to three hours in one instance.

The stakeholders

As was earlier stated, the business environment was viewed in a dynamic sense. Thus, interviews were sought with those policy-makers who had the mandate to institute change to this environment. A total of thirty-five such officials was interviewed. These included ministers of government, the directors of the investment promotion agencies, heads of educational institutes, the presidents of the local Chamber of Commerce and various private consultants who specialised in the sectors studied.

The data obtained from all these respondents was also complemented by secondary data. The sources of this secondary data included government reports, published economic and social data, company reports, industry reports, newspaper articles and other journalistic pieces.

Conclusions

A triangulation methodology was employed to study the research question. First, a quantitative method was implemented. This essentially involved the administration of a mailed questionnaire survey to 299 executives of MNEs that operate in Jamaica, Barbados and Trinidad-Tobago. The responses to the survey formed the basis for the selection of twelve firms that were used for the case studies. Further, the executives at both the headquarters and the subsidiaries of these twelve companies were interviewed. In addition, interviews were conducted with policy-makers who were mandated to institute changes in the business environment of the countries concerned. Moreover, secondary data, obtained from government reports, company reports, newspaper articles and other journalistic pieces, were also used. The following chapters will discuss the results of this empirical investigation.

7 Foreign direct investment in the Caribbean

A quantitative investigation

Introduction

This chapter presents the results of the quantitative study. As was discussed in the preceding chapter, the main objective of the quantitative study is to conduct a preliminary investigation into the factors that influence the motivations, locational choices and market entry mode choices of MNEs making investment in the three Caribbean countries. To this end, a mailed questionnaire survey was administered to 299 executives of MNEs that operate in these countries. The results of this mailed questionnaire survey were used to initially test the fourteen hypotheses advanced in this study.

This chapter is organised in the following manner: First, it briefly discusses the results of the mailed questionnaire survey. Second, it introduces the statistical technique that was employed to analyse the survey results. Further, this chapter analyses the results of the statistical tests and compares these results with those of the existing literature. Finally, it draws conclusions from the quantitative study and identifies issues to be explored in the subsequent qualitative analysis.

The results of the mailed questionnaire survey

The results of the mailed questionnaire survey are illustrated in Table 7.1. The usable response rate for the survey was 30 per cent, which is acceptable according to international standards (Hart 1987). As Table 7.1 reveals, the response rate for Jamaica, Barbados and Trinidad-Tobago was 24, 33 and 35 per cent, respectively. The relatively low response rate for Jamaica was especially troubling since this country had the largest number of MNEs. The potential impact of this disproportionate rate of response is that the results of the mail survey may not truly reflect the views of all of the managers who operate in Jamaica.

It is also noteworthy that the majority of the respondents were located at the headquarters. As was discussed in Chapter 6, questionnaires were sent to executives located at both the headquarters and the subsidiaries. However, a disproportionate number of responses was obtained from executives

Table 7.1 Mailed questionnaire survey response rates: total survey

	US	*UK*	*Other*	*Total*
Total number of firms mailed	**70**	**43**	**26**	**139**
Jamaica	32	19	10	61
Barbados	19	20	7	46
Trinidad-Tobago	27	19	11	57
Total number of respondents				
1 headquarters[a]	**70**	**43**	**26**	**139**
Jamaica	32	19	11	62
Barbados	19	20	7	46
Trinidad-Tobago	27	19	11	57
2 subsidiary	**75**	**58**	**27**	**160**
Jamaica	32	19	11	62
Barbados	19	20	7	46
Trinidad-Tobago	24	19	9	52
Total	**145**	**101**	**53**	**299**
Total number returned because of incorrect address				
1 headquarters	**5**	**1**	**2**	**8**
Jamaica	2	1	—	3
Barbados	3	—	—	5
Trinidad-Tobago	—	—	—	—
2 subsidiary	**3**	—	—	**3**
Jamaica	1	—	—	1
Barbados	2	—	—	2
Trinidad-Tobago	—	—	—	—
Total	**8**	**1**	—	**11**
Total number returned as inappropriate[b]				
1 headquarters	**4**	**13**	**5**	**22**
Jamaica	1	6	1	8
Barbados	0	6	—	6
Trinidad-Tobago	3	5	5	13
2 subsidiary	**5**	**8**	**2**	**15**
Jamaica	3	1	1	5
Barbados	—	5	1	6
Trinidad-Tobago	2	2	—	4
Total	**9**	**21**	**9**	**37**
Total number unreturned				
1 headquarters	**37**	**12**	**16**	**65**
Jamaica	15	3	9	27
Barbados	9	4	2	15
Trinidad-Tobago	13	5	5	23
2 subsidiary	**48**	**28**	**19**	**95**
Jamaica	21	9	11	41
Barbados	11	9	4	24
Trinidad-Tobago	16	10	4	30
Total	**85**	**28**	**35**	**160**

Table 7.1 (Continued)

	US	*UK*	*Other*	*Total*
Total number of usable responses				
1 headquarters	**28**	**18**	**5**	**51**
Jamaica	11	7	1	19
Barbados	10	8	2	20
Trinidad-Tobago	11	8	2	21
2 subsidiary	**20**	**12**	**8**	**40**
Jamaica	8	1	2	11
Barbados	4	5	1	10
Trinidad-Tobago	8	6	5	19
Total	**48**	**30**	**13**	**91**
Total Usable Response Rate	**16.1%**	**10.0%**	**4.4%**	**30.4%**
Jamaica				24.2%
Barbados				32.6%
Trinidad-Tobago				34.8%

Notes: [a]The total number in several of the columns does not tally since eleven companies operate in more than one country. The responses made by these companies have been included in the total score for each country in which they operate.

[b]This category consists of respondents who declined to participate in the survey. The reason generally given was that they were too busy. Alternatively, they failed to respond because the questionnaire was sent either to the headquarters or subsidiary to be completed.

located at the headquarters. Nonetheless, t-tests confirmed that there was no significant difference in the responses made by these two groups of respondents. Further, a relatively large number of responses was drawn from US-based MNEs. However, this merely reflects the dominance of US foreign investment in the three Caribbean countries.

The results of the mailed questionnaire were empirically tested. The following section briefly discusses the statistical technique used in the quantitative investigation.

The statistical analysis

The aim of the empirical investigation is to test the validity of the hypotheses developed in Chapters 3 to 5. To this end, chi-square (?^{2}) tests of independence were performed in order to determine if there were a statistically significant relationship between the key explanatory variables identified in the hypotheses.

Further statistical tests were conducted with the following variables: type of foreign direct investment, country of origin of the MNE, location of investment, quantum of initial investment and identity of respondents. In this instance, the key explanatory variables identified in the hypotheses were individually tested against each of these five variables. The further disaggregation of the data resulted in relatively low cell counts. It traditionally has been argued that chi-square tests are only considered to be statistically significant when the expected frequencies are greater than five (Churchill 1995:925). However, it has been posited that many of the expected frequencies could be as low as unity without affecting the test greatly (Everitt 1992:39). The latter argument is used to support the accuracy of several of the findings.

The following section discusses the results of this empirical investigation. The analysis will proceed in a sequential fashion. The key empirical results obtained from the testing of each hypothesis will be discussed. In addition, a comparison of these results with the extant literature will be undertaken.

Testing the hypotheses: results and interpretation of findings

Motivations for foreign direct investment in the Caribbean

- H1 No relationship exists between the MNE's use of its unique advantages and the presence of domestic competitors.

The results of the chi-square tests support the arguments posed by researchers such as Hood and Young (1979), and Aswicahyono and Hill (1995). Indeed, it seems that the monopolistic advantage theory does not explain the motivations for MNEs making investments in the three Caribbean countries. As Table 7.2.1 shows, except for the variables, privileged access to raw materials and marketing skills, no statistically significant relationship exists between unique advantages and domestic competitors. Thus, the research hypothesis is supported.

The tests also reveal that two of the unique advantage variables are location-specific. This finding supports the argument that the MNE judiciously employs some of its unique advantages in particular locales. Researchers have explored this phenomenon in the developed countries

Table 7.2.1 Testing hypothesis 1

Variables	*Product differ.*	*Product tech.*	*Managerial skills*	*Brand name prod.*	*Access to raw mat.*	*New technology*	*Marketing skills*	*Distr. networks*	*Access to finance*
Domestic Firms	0.169	0.539	0.957	0.961	0.047*	0.251	0.019*	0.422	0.508
Country	0.024*	0.663	0.841	0.643	0.003**	0.039*	0.386	0.881	0.639
Location	0.729	0.769	0.188	0.708	0.003**	0.004**	0.671	0.996	0.229
Type	0.002**	0.021*	0.458	0.958	0.00***	0.421	0.002**	0.535	0.009**
Quantum	0.608	0.808	0.489	0.139	0.00***	0.265	0.366	0.967	0.277
Identity	0.223	0.286	0.778	0.231	0.438	0.004**	0.00***	0.002**	0.592

Notes: 0.05*, 0.01**, 0.001***

(Caves 1974; Lall 1980). Lall (1979) and Lall and Mohammed (1983) also examined this phenomenon in the less industrialised economies of Malaysia and India. This study shows that there is a statistically significant relationship between the two variables, possession of new technology and privileged access to raw material, and the location of FDI. It appears that the MNEs are more likely to use these unique assets in Trinidad-Tobago than in the other two focus countries. Further examination of the chi-square results revealed that an overwhelming proportion of the firms making investments in Trinidad stated that privileged access to raw materials and the possession of new technology enabled them to compete effectively in this country (see Appendix 5, Tables 1–2).[1]

In addition, as Dunning (1981:48) demonstrates, it seems that the MNE's use of its unique advantage is specific to the type of FDI. The empirical analysis revealed that the resource-seeking and export-seeking MNEs were more inclined to use the unique advantages of production technology, finance and privileged access to raw materials. On the other hand, the market-seeking MNE was likely to use production differentiation and other marketing strategies in competition in the Caribbean (see Appendix 5, Tables 3–6). It is noteworthy that the latter finding contradicts the postulate that product differentiation is not used as a significant competitive strategy by MNEs in less industrialised countries (Vachani 1985; Aswicahyono and Hill 1995).

Also, it is worth noting that no statistically significant relationship exists between firm size, as measured by the quantum of its initial investment, and use of these unique advantages. The only exception is access to raw materials. Examination of the chi-square results disclosed that the larger MNEs, i.e. those whose initial investment is greater than US$20 million, are more likely than the other MNEs to use privileged access to raw materials as a competitive strategy (see Appendix 5, Table 7). Apparently, the resource-seeking MNE uses its size as a competitive strategy against the domestic firms. This proposition may be supported by the fact that the variable, privileged access to raw materials, had a statistically significant relationship with domestic competitors. Moreover, it can be suggested that this competitive strategy is employed in Trinidad-Tobago. This country had the majority of respondents who operate the larger sized firms. Furthermore, it had the largest number of respondents who are engaged in resource-seeking FDI. Hence, it may be speculated that the MNE, in competition with the domestic firms, uses its size to gain access to the country's resources, i.e. oil and natural gas.

- H2 There is a positive relationship between 'follow-the-leader' investment behaviour of MNEs and the use of low-cost factors.

The results of the chi-square tests support the arguments advanced by Knickerbocker (1973) and Vernon (1983). The MNEs making investments in the Caribbean do engage in a pattern of defensive investment behaviour. Interestingly, the factor cost variable that was significant to these MNEs is low-cost labour (see Table 7.2.2). It is noteworthy that the other factor cost variables (labour availability and productivity, and cost of natural gas) do not induce this investment behaviour.

It is important to note that there was no statistically significant relationship between the variable measuring the 'follow-the-leader' pattern of investment and the variables, country of origin of the MNE, type of FDI, quantum of initial investment and the identity of respondents. Interesting enough, a statistically significant relationship exists between the 'follow-the-leader' investment behaviour and location of investment (see Table 7.2.2). This finding confirms the research hypothesis. Indeed, the MNEs investing in the three Caribbean countries engage in a pattern of defensive investment. This investment behaviour prevails among activities requiring low-cost labour.

Table 7.2.2 Testing hypothesis 2

Variable	*Follow-the-leader investment*
Country	0.556
Location	0.008**
Type	0.078
Quantum	0.085
Identity	0.168

Tables 7.2.3 Testing hypothesis 3–The decision to establish operations

Variables	*Lab. avail.*	*Lab. prod.*	*Lab. cost*	*Nat. gas price*	*Pol. stability*	*Burcracy*	*Telecom service*	*Airline service*	*Port service*	*Proximity to US*	*Government policy*
Prod. Tech.	0.170	0.426	0.0***	0.149	0.299	0.426	0.432	0.275	0.784	0.707	0.194
Mark. Skills	0.696	0.813	0.407	0.322	0.285	0.119	0.01**	0.020*	0.529	0.025*	0.836
Man. Skills	0.141	0.978	0.286	0.077	0.992	0.659	0.129	0.082	0.500	0.815	0.066
Dist. Network	0.542	0.838	0.500	0.780	0.941	0.146	0.261	0.044*	0.054*	0.956	0.584
Brand Name Product	0.154	0.393	0.108	0.271	0.759	0.665	0.475	0.808	0.761	0.433	0.466
Finance	0.918	0.287	0.679	0.032*	0.419	0.147	0.467	0.436	0.345	0.469	0.640
Raw Material	0.639	0.895	0.01**	0.00***	0.017*	0.035*	0.442	0.729	0.401	0.201	0.106
Product Diff.	0.303	0.949	0.324	0.141	0.887	0.079	0.165	0.542	0.103	0.819	0.393
New Tech.	0.434	0.544	0.421	0.044*	0.091	0.028*	0.606	0.203	0.225	0.275	0.087

- H3 There is a positive relationship between the firm's use of its unique advantages and the locational advantage variables.

Empirical investigations that use Dunning's eclectic paradigm are limited (Dunning 1980; Kumar 1994). However, the findings of this statistical test reveal that this theory provides an adequate explanation for foreign investment behaviour in the three focus countries.

The statistical tests disclose that the MNE, in establishing its operations, will initially combine six of its firm-specific assets with selected locational endowments of the three countries. These firm-specific assets are production technology, marketing skills, the possession of distribution networks, access to finance, privileged access to raw materials, and new technology. The locational endowments favoured by the MNE are the factor cost variables, specifically, low-cost labour and competitively priced natural gas and the infrastructural support variables: political stability, efficacious bureaucracy, efficient airline, port and telecommunications services, and the country's proximity to the US market (see Table 7.2.3).

Moreover, it seems that the firm, in its continued operations in the countries, will seek to combine six firm-specific advantages with specific locational advantages (see Table 7.2.4). The firm-specific advantages favoured by the firm are production technology, marketing skills, brand name product, privileged access to raw materials, product differentiation and new technology. The locational advantages that are most attractive to

Table 7.2.4 Testing hypothesis 3–The decision to continue operations

Variables	*Lab. avail.*	*Lab. prod.*	*Lab cost*	*Nat. gas price*	*Pol. stab-ility*	*Bur-cracy*	*Tele-com service*	*Air-line service*	*Port service*	*Proxi-mity to US*	*Govern ment policy*
Product. Tech.	0.031*	0.035*	0.01**	0.629	0.241	0.683	0.595	0.104	0.839	0.353	0.386
Mar. Skills	0.399	0.972	0.540	0.051*	0.894	0.802	0.762	0.037*	0.500	0.394	0.617
Man. Skills	0.086	0.851	0.231	0.087	0.937	0.842	0.247	0.063	0.169	0.527	0.092
Distr. Network	0.365	0.977	0.684	0.409	0.165	0.611	0.797	0.136	0.262	0.975	0.516
Brand Name Prod.	0.432	0.755	0.053*	0.846	0.329	0.777	0.329	0.967	0.248	0.384	0.498
Finance	0.561	0.826	0.602	0.682	0.361	0.166	0.321	0.635	0.262	0.196	0.134
Raw Material	0.819	0.649	0.099	0.000***	0.018*	0.196	0.01**	0.512	0.079	0.073	0.743
Product Diff.	0.392	0.205	0.122	0.024*	0.887	0.378	0.173	0.072	0.106	0.269	0.822
New Tech.	0.208	0.113	0.037*	0.011**	0.057	0.541	0.536	0.037*	0.084	0.071	0.974

the firm in its continued operations in the region are the factor cost variables (labour and natural gas) and the institutional variables: political stability, efficient airline and telecommunications services.

Thus, it appears that the unique advantages used by the MNE in its operations in the three Caribbean countries are access to raw materials, possession of new technology, marketing skills, access to finance, possession of distribution networks and production technology. The locational advantages that appeal to these firms are the labour factors (cost, productivity and availability), the price of natural gas, an efficient bureaucracy, political stability, and an efficient airline, port and telecommunications service. Several of the unique advantage variables (possession of new technology, access to raw materials, access to finance and production technology) suggest that they belong to the export-seeking and resource-seeking MNEs. Thus, it can be surmised that the locational advantage variables identified are those that are associated with these kinds of MNE operations in the three countries.

The location of foreign direct investment in the Caribbean

- H4 There is a positive relationship between the resource, export- and market-seeking MNE and the decision to establish and continue operations in the Caribbean because of low-cost factors.

Chapter 4 argues that factor costs are a major consideration in the MNE's decision to locate production in less industrialised countries (Vernon 1966; Moxon 1975; Kumar 1994). This postulate has been confirmed by the empirical investigations conducted in this study. The resource, export and market-seeking MNEs are attracted to the low-cost labour and natural gas of the Caribbean (see Table 7.2.5). Thus, the research hypothesis is supported.

The MNE's initial decision to invest in the Caribbean is influenced by the cost and productivity of labour as well as the price of natural gas. These factor cost variables appear to affect the initial investment decision of the export-seeking and resource-seeking MNE. A further examination of the chi-square results demonstrated that a greater percentage of these two

Table 7.2.5 Testing hypothesis 4–The decision to establish operations

Variable	*Availability of labour*	*Labour productivity*	*Labour cost*	*Price of natural gas*
Type	0.187	0.000***	0.000***	0.000***
Country	0.989	0.379	0.033*	0.258
Location	0.306	0.047*	0.014**	0.000***
Quantum	0.219	0.165	0.007*	0.000***
Identity	0.612	0.666	0.416	0.258

Table 7.2.6 Testing hypothesis 4–The decision to continue operations

Variable	*Availability of labour*	*Labour productivity*	*Labour cost*	*Price of natural gas*
Type	0.212	0.117	0.010**	0.000***
Country	0.963	0.281	0.415	0.230
Location	0.963	0.282	0.035*	0.000***
Quantum	0.196	0.317	0.282	0.000***
Identity	0.477	0.403	0.974	0.344

types of MNEs considered low-cost, productive labour and competitively priced natural gas to be important in their decision to establish operations in the Caribbean (see Appendix 5, Tables 8–9).

It is interesting to note that there was country- and location-bias response on the influential role that the factor cost variables had on the initial investment decision. It seems that the non-British firms were more likely to be attracted by low-cost labour. Further, it appears that these firms were more inclined to invest in labour-intensive activities in Jamaica than the other two focus countries. Moreover, it seems that the MNEs whose initial investment exceeded US$10 million were more likely than others to be initially attracted to low-cost labour (see Appendix 5, Tables 10–12).

Interestingly, the tests revealed that the MNE, in its continued operations in the countries, is only influenced by the cost of labour and natural gas. Surprisingly, the productivity of labour did not play an important role in the MNE's decision to continue operations in the three Caribbean countries (see Table 7.2.6).

It is also noteworthy that the variable, 'the price of natural gas' was the only factor cost variable that had a statistically significant relationship with the quantum of initial investment variable. A possible explanation for this result lies in the fact that low-cost labour may attract the footloose type of FDI characteristic of export processing zones. These firms may be initially attracted to the region because of labour cost considerations. However, since their investment is highly mobile they may easily relocate this investment when labour costs increase (Sharpston 1975). On the other hand, a firm that invests in natural gas processing activity has sunk assets that are not easily mobile. This investment entails a higher proportion of sunk costs than that of the footloose export-seeking MNE (Coyne 1995). Hence, the continued enjoyment of competitively priced natural gas is of importance to these firms.

- H5 There is a positive relationship between the export-seeking and resource-seeking MNE and the use of preferential trading agreements.

Researchers postulate that the granting of preferential access to the markets of an advanced industrial economy stimulates the flow of FDI into the

Table 7.2.7 Testing hypothesis 5–The decision to establish operations

Variables	*807 programme*	*807-A programme*	*Lome*	*CARICOM*
Type	0.002**	0.082	0.002**	0.165
Country	0.461	0.528	0.555	0.325
Location	0.298	0.537	0.287	0.745
Quantum	0.433	0.529	0.059	0.223
Identity	0.099	0.009**	0.196	0.296

recipient country (Johnson 1968; Griffith 1990). The empirical tests conducted in this study confirmed this hypothesis. Indeed, the tests showed that a statistically significant relationship exists between the variables, Lome, the 807 and 807-A programmes, and resource-seeking and export-seeking MNEs. Thus, the research hypothesis was supported (see Table 7.2.7).

It appears that the resource-seeking and export-seeking MNE's decisions to establish operations in the Caribbean countries are influenced by the Lome and the 807 programme. The MNE's decision to continue operations in the three countries is also influenced by all three preferential trading agreements. It is interesting to note, however, that the managers at the headquarters and the subsidiary disagree as to the importance of the 807 and 807-A programmes to their initial and continued operations in the focus countries (see Table 7.2.8).

- H6 There is a positive relationship between the export processing zone and the export-seeking MNE.

Chapter 4 noted the influential role that export processing zones played in luring investment into the developing world (Sharpston 1975; Woodward and Rolfe 1993; Kumar 1994). The results of the statistical tests support this argument. Indeed, a statistically significant relationship exists between the firm's decision to establish and continue operations in the Caribbean

Table 7.2.8 Testing hypothesis 5–The decision to continue operations

Variables	*807 programme*	*807-A programme*	*Lome*	*CARICOM*
Type	0.010*	0.003**	0.001***	0.393
Country	0.691	0.528	0.555	0.325
Location	0.164	0.211	0.089	0.290
Quantum	0.732	0.643	0.076	0.158
Identity	0.010*	0.003**	0.264	0.198

Table 7.2.9 Testing hypothesis 6–The decision to establish operations

Variables	*Export processing zone*
Export-seeking MNE	0.003**
Country	0.255
Location	0.196
Quantum	0.333
Identity	0.139

Table 7.2.10 Testing hypothesis 6–The decision to continue operations

Variables	*Export processing zone*
Export-seeking MNE	0.002**
Country	0.677
Location	0.573
Quantum	0.839
Identity	0.013*

because of the presence of an EPZ and the variable, export-seeking MNE (see Tables 7.2.9–10).

However, the statistical tests revealed that there was no statistically significant relationship between EPZ and the variables, country of origin of MNE, location of FDI and the quantum of initial investment. Nonetheless, it is noteworthy that the variable 'identity of respondent' had a statistically significant relationship with the variable, 'decision to continue operations influenced by EPZ'. Indeed, there appears to be some disagreement from respondents, located both at the headquarters and the subsidiary, on the importance of the EPZ to the firm's continued operations in the three Caribbean countries.

- H7 No relationship exists between the investment incentives offered by the Caribbean governments and the MNE's decision to establish and continue operations in the Caribbean.

As Chapter 4 showed, the extant literature fails to agree on the efficacy of investment incentives in attracting FDI to the less industrialised countries. One group of scholars maintains that these incentives have little or no impact on the firm's investment behaviour in less industrialised countries (Shah and Toyne 1978; Wheeler and Mody 1991; Loree and Guisinger 1995). Others argue that they are important to the investment decision of MNEs (Woodward and Rolfe 1993; Rolfe *et al.* 1993; Coyne 1995). The findings of this study are compatible with those of the latter group. Indeed, a statistically significant relationship was found for several of the variables measuring the investment incentive package and the variable, 'type of MNE'. Thus, the research hypothesis was not supported (see Table 7.2.11).

The tests reveal that the investment incentives, which were influential in the initial investment decision of the MNEs, were tax holidays and duty free concessions. It is significant to note that little support was found for the postulate that profit and dividend repatriation schemes are crucial to the initial investment decision of MNEs operating in the Caribbean (Rolfe *et al.* 1992; Coyne 1995). Dividend repatriation schemes were only important to the initial investment decision of Asian and European firms. It seems that these MNEs were more likely than the British and American MNEs surveyed to perceive this element of the investment incentive package as critical to their initial investment decision (see Appendix 5, Table 13).

Tax holidays, together with tax relief on profits and dividends, were also associated with the type of MNE deciding to continue operations in the countries (see Table 7.2.12). These investment incentives were especially attractive to the Asian and European firms (see Appendix 5, Tables 13–15). Clearly, it is the Asian and European firms which were most attracted to the investment incentive package offered by Caribbean governments. The investment incentive package appeared to play a deciding role in their decision to establish and continue operations in the region.

Tables 7.2.11 Testing hypothesis 7–The decision to establish operations

Variable	*Tax holiday*	*Duty concessions on mach. & equipment*	*Duty concessions on raw materials*	*Repatriation of profits*	*Repatriation dividends*	*Income tax relief on dividends*
Type	0.001***	0.831	0.000***	0.146	0.504	0.059
Location	0.796	0.680	0.154	0.103	0.149	0.638
Country	0.031*	0.002**	0.190	0.277	0.022*	0.068
Quantum	0.283	0.525	0.059	0.879	0.869	0.900
Identity	0.828	0.460	0.545	0.727	0.381	0.025*

Table 7.2.12 Testing hypothesis 7–The decision to continue operations

Variable	*Tax holiday*	*Duty concess-ions on mach. & equipment*	*Duty concess-ions on raw materials*	*Repatri-ation of profits*	*Repatri-ation of dividends*	*Income tax relief on dividends*	*Income tax relief on profits*
Type	0.000***	0.157	0.172	0.207	0.703	0.000***	0.000***
Location	0.248	0.637	0.750	0.723	0.666	0.917	0.501
Country	0.053*	0.057	0.175	0.161	0.086	0.042*	0.068
Quantum	0.002**	0.577	0.507	0.608	0.137	0.212	0.761
Identity	0.601	0.258	0.393	0.388	0.100	0.213	0.395

Table 7.2.13 Testing hypothesis 8

Variables	*Tariffs*	*Import licenses*	*Import surcharges*
Market-seeking MNE	**0.459**	**0.404**	**0.492**
Country	**0.127**	**0.423**	**0.418**
Location	**0.988**	**0.481**	**0.319**
Quantum	**0.342**	**0.061**	**0.025***
Identity	**0.941**	**0.888**	**0.908**

Finally, there appears to be a relationship between firm size, as measured by the quantum of initial investment, and the decision to continue operations because of tax holidays. Interestingly, an examination of the chi-square results revealed that the larger MNEs, those whose initial investment exceeded US$20 million, were more inclined than the others to consider tax holidays to be important to their continued operations in the Caribbean (see Appendix 5, Table 16).

- H8 There is a positive relationship between the market-seeking MNE and trade restrictions.

Several researchers postulate that trade restrictions induce foreign direct investment (Reuber 1973; Guisinger 1985; Rolfe *et al.* 1993). However, the statistical tests failed to find support for this hypothesis. Indeed, the tests found that there was no statistically significant relationship between these variables measuring trade restrictions and the market-seeking MNE. Trade restrictions do not influence the investment behaviour of MNEs operating in the Caribbean. Thus, the research hypothesis was not supported (see Table 7.2.13).

Interestingly enough, however, there appears to be a positive relationship between import surcharges and quantum of initial investment. An examination of the chi-square results revealed that it was the smaller MNEs, that is those whose initial investment was less than US$20 million, which were more inclined to consider import surcharges important to their investment in the Caribbean.

It is worth noting that a similar relationship was found to exist for quotas (Rolfe *et al.* 1993). Rolfe's study revealed that the larger investors (investments in excess of US$ 1 million) gave a relatively lower ranking to quota protection than did the smaller investors (investments less than US$1 million).

- H9 There is a positive relationship between the national 'diamond' of the MNE and the 'diamond' of the Caribbean.

The 'Double Diamond' concept, as initially advanced by Rugman and D'Cruz (1993), has been tested on several industrialised developed countries and advanced developing countries.[2] The enduring characteristic of these studies was their focus on outward FDI. However, this study differs from the existing work that seeks to examine the 'Double Diamond' concept. Indeed, its focus is on inward FDI. It hypothesises that the MNE operating in the Caribbean will seek to integrate the 'diamond' of its home country with that of the Caribbean.

The empirical tests used only the US and British respondents. Firms that originated from Europe and Asia were not used since their numbers were too small: twelve. Furthermore, this group of countries was too diverse–Norway, Switzerland, Germany and India–to allow for meaningful statistical examination. In addition, the variables that were used to measure the 'diamond' were the firm-specific variables. These were production technology, marketing skills, managerial skills, distribution networks, brand name product, access to finance, privileged access to raw materials, production differentiation and new technology. Chi-square tests were conducted with these variables, and the US and British MNEs.

The test results disclosed that the determinants of the home country 'diamond' employed by US MNEs in the focus countries were product differentiation, privileged access to raw materials and new technology. Alternatively, those used by the British MNEs were privileged access to raw materials and product differentiation (see Table 7.2.14).

These three variables were tested against the elements that constituted the Caribbean 'diamond'. These were the factor cost advantage variables (labour costs, productivity and availability, and natural gas prices) and the other locational advantage variables (political stability, government committed to trade and market liberalisation policies, quality infrastructure, proximity to US market and efficient bureaucracy). It is interesting that a statistically significant relationship was found for several of the variables measuring the US and British 'diamond' and several of those measuring the 'diamond' of the Caribbean. Thus, the research hypothesis was supported (see Tables 7.2.15–16).

It appears that the US and British MNEs initially use their privileged access to raw materials, which they obtain from their operations in their home country, with several elements of the Caribbean 'diamond'. These are low-cost labour, political stability, competitively priced natural gas and efficient bureaucracy. In addition, the US MNEs initially use the new

Table 7.2.14 Testing hypothesis 9

Variables	*Prod. Diff.*	*Prod. Tech.*	*Man. Skills*	*Brand Name*	*Raw Mat.*	*New Tech.*	*Mark Skills*	*Finance*	*Distribution*
US MNE	**0.024***	**0.066**	**0.841**	**0.643**	**0.003****	**0.038***	**0.386**	**0.639**	**0.881**
British MNE	**0.034***	**0.159**	**0.844**	**0.433**	**0.002****	**0.321**	**0.431**	**0.674**	**0.551**

Table 7.2.15 The 'Double Diamond' hypothesis and the initial investment decision

Variable	*Labour avail.*	*Labour cost*	*Labour prod.*	*Prox. to US market*	*Pol. stability*	*Government policies*	*Quality infras.*	*Natural gas price*	*Bureaucracy*
Product differ.	0.303	0.324	0.949	0.819	0.751	0.822	0.622	0.141	0.079
Access to Raw mat.	0.639	0.016*	0.896	0.201	0.017*	0.743	0.486	0.000***	0.035*
New tech.	0.434	0.420	0.544	0.275	0.091	0.974	0.167	0.045*	0.029*

Table 7.2.16 The 'Double Diamond' hypothesis and the decision to continue operations

Variable	*Labour avail.*	*Labour cost*	*Labour prod.*	*Prox. to US market*	*Pol. stability*	*Government policies*	*Quality infras.*	*Natural gas price*	*Bureaucracy*
Product differ.	0.392	0.122	0.205	0.402	0.889	0.393	0.819	0.007**	0.378
Access to Raw mat.	0.819	0.099	0.649	0.015*	0.018*	0.106	0.192	0.000***	0.196
New tech.	0.208	0.037*	0.113	0.010*	0.057	0.087	0.348	0.011*	0.541

technology that is secured from their home country, with competitively priced natural gas and the efficient bureaucracy of the focus countries (see Table 7.2.15).

In their continued operations in the three Caribbean countries, the US and British MNEs seem to use their privileged access to raw material obtained in their home country with several determinants of the Caribbean 'diamond'. These are the countries' proximity to the US, political stability and competitively priced natural gas (see Table 7.2.16). Strangely enough, it appears that these two MNEs also use product differentiation together with the competitively priced natural gas of Trinidad. Finally, the US MNE employs the new technology developed in its home country together with selected determinants of the Caribbean 'diamond'. They are the factor cost variables (low-cost labour and competitively priced natural gas), the countries' proximity to the US, and efficient bureaucracy.

The modes of foreign direct investment in the Caribbean

- H10 There is a positive relationship between intra-firm trade and the use of a wholly owned subsidiary.

A wealth of literature supports the research hypothesis that a positive relationship exists between intra-firm trade and the MNE's use of a wholly owned subsidiary (Teece 1983; Gomes-Casseres 1989, 1990). However, the empirical investigations conducted in this study failed to demonstrate any statistical relationship between the variable measuring intra-firm trade and variables measuring wholly owned subsidiary. Thus, the research hypothesis was not supported.

As Table 7.2.17 shows, the key term that individually constituted the variable 'intra-firm trade' was 'more than 25 per cent of firm's local output dedicated to foreign affiliates'. The key variables that served to separately measure wholly owned subsidiary were 'new' wholly owned subsidiary and 'acquired' wholly owned subsidiary. No statistically significant relationship was found for the term measuring intra-firm trade and the variables measuring wholly owned subsidiary. Clearly, a firm's involvement in intra-firm trade does not influence its selection of a wholly owned subsidiary as its international entry mode in the Caribbean.

- H11 There is a positive relationship between the level of international experience of the MNE and the use of a wholly owned subsidiary.

Researchers have also argued that the MNE with international experience uses a wholly owned subsidiary to enter foreign markets (Johanson and Wiedersheim-Paul 1975; Johnson and Vahlne 1977; Tan and Vertinsky 1996). This theory was not supported by the empirical tests conducted in this study. The tests failed to find any statistically significant relationship between the variables measuring international experience and the variables measuring wholly owned subsidiary. Thus, the research hypothesis was not supported.

As Table 7.2.18 demonstrates, the variable, 'wholly owned subsidiary' was separately measured by the terms 'new' wholly owned subsidiary and

Table 7.2.17 Testing hypothesis 10

Variables	*More than 25 per cent of output dedicated to foreign affiliates*
New wholly owned subsidiary	0.805
Acquired wholly owned subsidiary	0.797

Table 7.2.18 Testing hypothesis 11

Variables	*More than 25 per cent of sales obtained abroad*
New wholly owned subsidiary	0.964
Acquired wholly owned subsidiary	0.900

'acquired' wholly owned subsidiary. The term that was used as a measure for the international experience of the firm was 'more than 25 per cent of firm's sales obtained in overseas markets'. There was no statistically significant relationship between the variable measuring international experience and the variables measuring wholly owned subsidiary. Thus, the tests suggest that the level of international experience of the MNE does not influence its selection of a wholly owned subsidiary as an international entry mode in the Caribbean.

- H12 There is a positive relationship between cultural distance and the use of a wholly owned greenfield investment and joint venture agreements.

As Chapter 5 notes, researchers propose that the cultural distance between the home and host country plays an important role in the MNE's selection of market entry mode (Kogut and Singh 1988; Padmanabhan and Cho 1996). The statistical tests conducted in this study found limited support for this theory. Thus, the research hypothesis was supported.

As Table 7.2.19 shows, the terms, language similarities, geographic proximity and cultural similarities individually measured cultural distance. A statistically significant relationship was only found for 'new' wholly owned subsidiary and geographic proximity. Thus, cultural distance, as measured by geographic proximity, influences the MNE's selection of a greenfield wholly owned subsidiary as its market entry mode in the Caribbean.

- H13 There is a positive relationship between the resource-seeking MNE and minority and 50–50 joint ventures.

The literature suggests that country-specific factors influence the MNE's selection of market entry mode. It has been argued that MNEs use minority and 50–50 joint venture arrangements in the primary sectors of less industrialised countries (Oman 1984; Vernon 1983; Gomes-Casseres 1990). The empirical tests conducted in this study lend support to this theory. Thus, the research hypothesis is supported.

As Table 7.2.20 demonstrates, the variables that separately constituted joint ventures were 'acquired' 50–50 joint venture, 'new' 50–50 joint venture and 'other' modes of market entry. The term 'other modes of market entry' included those forms of market entry that use less equity than that of

Table 7.2.19 Testing hypothesis 12

Variables	*Language*	*Geographic proximity*	*Cultural similarities*
New wholly owned subsidiary	0.275	0.049*	0.447
New 50–50 joint venture	0.363	0.907	.802

Table 7.2.20 Testing hypothesis 13

Variable	*Acquired 50–50 joint venture*	*New 50–50 joint venture*	*Minority joint venture*
Resource-seeking MNE	0.849	0.551	0.040 *
Country	0.846	0.846	0.211
Location	0.001***	0.290	0.748
Quantum	0.764	0.390	0.235
Identity	0.844	0.247	0.417

a 50–50 joint venture. There was a statistically significant relationship between 'other' modes of market entry and the resource-seeking MNE. Evidently, the MNE that makes investment in the primary sectors of the Caribbean is likely to use the minority joint venture arrangements as its market entry mode.

- H14 There is a positive relationship between the government policy towards mode of market entry used by foreign firms in the primary sector and the resource-seeking MNE.

Researchers such as Oman (1984, 1988) and Gomes-Casseres (1990) argue that the government in less developed countries wields considerable bargaining power over the market entry modes used by MNEs in the primary sector. This hypothesis was supported by the empirical investigations.

As Table 7.2.21 shows, the terms used to measure the influence of the Caribbean government was 'selection of mode because of policy of Caribbean government' and 'changes in mode of investment influenced by government's policy'. A statistically significant relationship was found for the variable, 'the selection of market entry mode because of policy of Caribbean government', and the resource-seeking MNE. Hence, the governments in the three focus countries do influence the market entry mode used by the MNE in the primary sector.

Table 7.2.21 Testing hypothesis 14

Variable	*Resource-seeking MNE*	*Country*	*Location*	*Quantum*	*Identity*
Selection of market entry mode influenced by government's policy.	0.029*	0.338	0.608	0.951	0.335
Changes in mode of investment influenced by government's policy	0.691	0.189	0.233	0.464	0.645

Conclusions

Empirical tests were conducted on the results of the mailed questionnaire survey. The results of these tests reveal that ten of the fourteen hypotheses advanced in Chapter 3 to 5 were supported by the statistical analysis. Further statistical testing of the hypotheses (using the variables: type of FDI, country of origin of MNE, location of investment, quantum of initial investment and identity of respondent) was instructive. Greater insights into the factors influencing the motivations of the MNE, its choice of location and mode of market entry were obtained.

First, it is significant to note that the variable, 'country of origin of MNE', failed to demonstrate a statistically significant relationship with most of the other variables tested. The few exceptions were product differentiation, access to raw material, new technology, investment incentives and the locational advantage variable–low-cost labour. It appears that the factors that motivate a firm to engage in foreign direct investment in the Caribbean, to select a location for its operations, and to choose a mode of market entry are not country-specific. Indeed, country affiliations do not seem to have a major influence on the MNE's foreign investment decisions in the Caribbean.

The tests also suggest that there is a positive relationship between the firm's size and the unique advantage, privileged access to raw materials. The statistical analysis failed to provide any meaningful explanation for this relationship.

In addition, the empirical investigations reveal that 'follow-the-leader' investment behaviour occurs in these countries. It seems that the firm, motivated by low-cost labour, engages in this pattern of investment in the Caribbean.

Further, Dunning's eclectic paradigm also provides an adequate explanation for foreign investment behaviour in the three Caribbean countries. Indeed, the statistical tests show that the MNE uses its assets of production technology, marketing skills, the possession of distribution networks, access to finance, privileged access to raw materials and new technology with the locational advantages of the focus countries. The locational advantages favoured by the resource-seeking and export-seeking MNEs that are establishing operations are low-cost labour, competitively priced natural gas, political stability, an efficient bureaucracy, a reliable telecommunications, airline and port service, and the country's proximity to the US. The locational advantage factors that influence the firm to continue using these unique advantages in its operations are the labour factors (cost, productivity and availability) and the price of natural gas, political stability, and an efficient airline and telecommunications service.

The results of the empirical investigation also confirm the theory that factor costs play a deciding role in the MNE's decision to locate production in developing countries. However, this study revealed that it was the non-

British firm that was more likely to be lured by the low-cost labour of the Caribbean. Furthermore, these firms were more likely to be attracted to invest in low-cost labour activities in Jamaica. What is noteworthy, however, is the transient role that low-cost labour plays in the MNE's decision to continue operations in these countries. It appears that the type of activity that this resource attracts is highly mobile. Hence, labour costs play a limited role in the MNE's decision to remain in operations in the countries. Interestingly, this was not the case with the resource-seeking investor. Since this investment entails a high proportion of sunk costs, the continued enjoyment of competitively priced natural gas is important to this investor.

In addition, the tests revealed that preferential trading agreements and the presence of export processing zones play an influential role in the decision to establish and continue operations in the Caribbean. However, it is significant that there was disagreement among the respondents, located at both the headquarters and subsidiary, as to the importance of these government-inspired inducements to their initial and continued operations in the focus countries.

By contrast, the findings contradict the hypothesis that profit and dividend repatriation schemes are critical to the initial investment decision. Moreover, they demonstrate that it is the Asian and European firms which are most likely to be attracted to the investment incentive package offered by Caribbean governments. It is also noteworthy that some of the theories that purport to explain the factors influencing the MNE's selection of a market entry mode were not supported by the statistical tests. It will be useful to ascertain the possible limitations of these theories when applied to the MNE's behaviour in the three Caribbean countries.

Finally, the statistical tests conducted on the customised 'Double Diamond' hypothesis proved to be statistically significant. The testing of this hypothesis is still very much preliminary. It will thus be instructive to further examine, through qualitative analysis, the extent to which this hypothesis explains the foreign investment behaviour of MNEs operating in the Caribbean.

These issues as well as the hypotheses were subjected to further empirical analysis as reported in Chapters 8 to 10.[3] Qualitative methods were implemented to fully explore the phenomenon of foreign direct investment in the three Caribbean countries. The objective of this analysis was to capture the nuances of firm's behaviour that were barely revealed in the statistical analysis. To this end, a case study methodology was employed. Twelve firms that operate in Jamaica, Barbados and Trinidad-Tobago formed the core cases. These case studies will be discussed in the following chapters.

8 Foreign direct investment in Jamaica

A case study of the apparel industry

Introduction

This chapter is a case study of four MNEs operating in the apparel industry of Jamaica. The main objective of this case study is to examine the factors that influence the foreign investment decisions of these four firms. In so doing, it analyses the factors that influence their motivations for FDI, their choice of location and their selection of market entry mode.

An examination of the foreign investment decisions of these MNEs cannot be undertaken without first exploring the economic and political factors that have given rise to foreign investment in the apparel industry of Jamaica. The subsequent section discusses this issue. This section is followed by one that introduces the four apparel MNEs which are the focus of this case study. The factors which influence the foreign investment decisions of these four firms are then analysed by means of testing the hypotheses advanced in Chapters 3 to 5. Finally, general conclusions drawn from this qualitative analysis are discussed.

The apparel industry of Jamaica

The apparel industry is one of the most important industries in Jamaica. Over the last decade, its performance has been spectacular. Indeed, Jamaica's exports of apparel products grew from a mere US$7.05 million in 1980 to US$599.3 in 1995. In 1995, this industry accounted for 33 per cent of Jamaica's total exports. It is the largest export sector in the manufacturing industry of the country. Moreover, it provides employment for approximately 35 per cent of the industrial work force (The Jamaican Garment Confederation 1996).

Apparel production comes from the 221 plants located in the country. Twenty of these plants account for 85 per cent of garment exports (ibid., 21). Most importantly, 80 per cent of the apparel produced in Jamaica are under the 807 programme. Indeed, Jamaica is presently the third largest supplier of 807 products to the US. The other two large exporters of 807 products are Mexico and the Dominican Republic.

US policy and the emergence of the apparel industry in Jamaica

The phenomenal growth of Jamaica's apparel industry during the post-1983 period was primarily a result of US development policy for the Caribbean and Central American region. In August 1983, the US government enacted the Caribbean Basin Economic Recovery Act. This legislation, which is known as the Caribbean Basin Initiative (CBI), was the US response to the growing economic, political and social instability in the region. US development policies during this period were predicated on two propositions. First, development assistance was thought to play a marginal role when compared with the foreign exchange that less developed countries are able to earn through trade. In addition, it was believed that for trade to be successful, it must be supported by private investment and aid related to commerce (Haar 1990). These are the premises that informed the establishment of the CBI.

The CBI allows for duty free access to the US market for a designated range of Caribbean products. The basic tenet of this Act lies in items 806.3 and 807 of the US Special Tariff Provisions.[1] These tariffs allow for special treatment for imports containing US components. Hence, under the CBI, designated Caribbean exports that contain 35 per cent of local value added were granted duty free status for twelve years. The CBI stipulates that 15 per cent of this value added should come from US materials. Thus, in effect, the real requirement is only 20 per cent (Deere *et al.* 1990:155–6). However, several industries, including the apparel industry, were not granted duty free status.[2] Duties are paid on the Caribbean value-added component.

The success of the CBI in surmounting the economic problems faced by the countries in the region was limited (Pelzman and Schoeffle 1988; Deere *et al.* 1990; Corbett 1992). Thus, in 1986, the US supplemented the CBI with several new programmes: one of which was its 'special access programme'. This programme increased the quotas for certain apparel imports from CBI countries. It is referred to as 807-A or Super 807. It applies to only apparel assembled in the region that is cut in the US from US-made fabric. Bilateral agreements determine the guaranteed access levels to which CBI beneficiaries can aspire. Like the 807 programme, apparel products entering the US pay duty on the Caribbean value-added component (Deere *et al.* 1990:160).

Despite the 1986 modifications that were made to the CBI, it was apparent that this initiative was an inadequate mechanism for transforming the countries of the region. Thus, attempts were made to remove some of the glaring deficiencies of the programme. This effort was known as the CBI II. Unfortunately, many of the modifications proposed were not adopted (Corbett 1992:965–6). Nonetheless, in 1990 the CBI agreement was made permanent.

It has been argued that one of the underlying objectives of the 807 programme was to reduce the competitive disadvantage of the US garment industry (Steele 1988:48). Since the mid-1970s, there has been a substantial increase in apparel imports into the US market. Most of these imports emerged from three Asian countries: Hong Kong, South Korea and Taiwan. In response to its loss of competitiveness, the US from 1982 entered into a series of bilateral trade agreements with these 'three Tigers'. These trade agreements had the effect of curtailing apparel exports from these countries (ibid., 26–9).

Despite the limitations placed on apparel exports from the 'three Tigers', apparel imports still penetrate the US market. They mainly come from two sources: China and the CBI beneficiaries. The US, for political reasons, has adopted a more lenient apparel trade policy with China than it did with the other three Asian countries (ibid., 43–4). However, its textile trade policy with the CBI countries serves a dual purpose. The US government is able to secure its strategic interests in the region by promoting the development of labour-intensive, export-oriented activity in these countries. This is very much in keeping with its trade, not aid, policy that was earlier discussed. In addition, by making it feasible for US producers to site the more labour-intensive parts of their operations offshore, the US producers are able to achieve substantial savings on their manufacturing costs. Thus, US manufacturers are able to concentrate on the capital-intensive aspects of their operations and transfer overseas those in which they suffer from a competitive disadvantage because of high labour costs (ibid., 48–9). As one researcher notes, the CBI favours the 'US retention of the highly modernised and automated "sunrise" fibre and textile industry and the outsourcing of low technology, low skill 'sunset' industries like apparel assembly' (Green 1995:67).

Indeed, the US trade policy proved to be successful in reversing the country of origin of its apparel imports. In 1990, apparel imports from South East Asia were 63 per cent of total US imports, while those from Mexico and the CBI beneficiaries were 16 per cent. By 1996 these figures were reversed. During the period January to June 1996, apparel imports from South East Asia comprised a mere 37 per cent of US total imports, while those from Mexico and the CBI beneficiaries rose to 35 per cent (King Associates 1996:3). These figures mask the fact that many of the East Asian companies, facing quota limits in their home countries, have relocated their apparel operations to the CBI countries (World Bank 1988; Deere *et al*. 1990). Since 1983, Asian firms have been locating operations in Jamaica. East Asian investment is actively sought since the companies tend to establish integrated subsidiaries that involve the full range of production requirements, rather than the component assembly operations that are characteristic of US 807 operators. The East Asian companies normally carry out cut, make and trim (CMT) operations in the host countries. Thus, their operations provide more local value-added, involve much higher levels of investment, and provide for greater possibilities for the transfer of technologies than the 807 operations (Steele 1988:121).

The outsourcing of apparel assembly under the 807 programme was enthusiastically embraced by Jamaica. By the late 1970s, the country was experiencing grave economic difficulties. During the period 1970 to 1981, its average annual rate of growth of real GNP fell by a 1.3 per cent; per capita income declined annually by 2.6 per cent; inflation rates soared to 18.5 per cent; the external debt rose from US$192 million in 1970 to US$1809 million in 1981; and by 1981, the country had foreign reserves to cover a mere six months of imports (World Bank 1987b). In 1980, the ruling regime was voted out of office and replaced with one whose political and economic philosophy was more compatible with that of the US government (Braveboy-Warner 1984). Indeed, subsequently, Jamaica was to be regarded as the model of US policy towards the region.

The ruling regime in Jamaica attempted to make the country the most advanced apparel assembly location in the region. In 1984, the government launched a major campaign to train workers and to build a complex of twenty factories to house its new investment. It managed to gain the support of the US Agency for International Development that funded pre-training courses for sewing machine operators (The Resource Centre 1984a:20). By 1996, the apparel assembly industry was firmly established in the country.

Clearly, the phenomenal growth of the apparel industry in Jamaica is a result of US policies. It is thus ironic that more recent US policies will likely result in its demise. In 1993, the North American Free Trade Agreement (NAFTA) was enacted. This agreement has considerably enhanced Mexico's locational advantages. The country now enjoys freer access to the US market than any other developing country (Rugman and Gestrin 1993). Thus, it seems that Mexico will soon be the preferred site for apparel manufacturing MNEs that are seeking free access to the US market. This prediction spells the death knell for Jamaica's apparel industry. Mexico was also a beneficiary of the US 807 and 807-A programmes. Its apparel exports, which are presently dominated by 807 production, have grown by 60 per cent since the enactment of the NAFTA (King Associates 1996:2). Conversely, Jamaica experienced a 5 per cent decline in employment in the apparel industry. In addition, during the period January to June 1996, Jamaica's apparel exports to the US declined by 11 per cent in terms of volume and 2 per cent in terms of value (ibid., Appendix I and II). Alarm bells sound on the relocation of garment companies away from the CBI beneficiaries into Mexico (Bernal 1996:A13).

It is against this background that an analysis will be done of the foreign investment decisions of four MNEs that operate in the apparel industry of Jamaica. As was noted in Chapter 6, the four firms that were used for this case study were Tultex Corporation, Maidenform Worldwide Incorporation, Jockey International Incorporation and Apparel Contractors Association Incorporated. Except for Maidenform Worldwide Incorporation, interviews were obtained from executives at both the headquarters and the subsidiary of the MNEs. In the case of Maidenform Worldwide Incorporation, only the managers of the subsidiary were interviewed.[3] The responses from these ten managers were used in this analysis. In addition, interviews were conducted with heads of various organisations and ministries in Jamaica. The information obtained from these interviews was supplemented by secondary data that included company annual reports, stockbrokers' reports and newspaper articles.

It is important to note that the four companies studied are all US owned. Attempts were made to include East Asians MNEs in this analysis. However, these firms were unwilling to participate in this exercise. They all failed to respond to the mailed questionnaire survey as well as later repeated requests for face-to-face interviews. Clearly, the failure to include East Asian MNEs in the analysis will result in some degree of bias. This analysis will only be able to capture the dynamics of FDI behaviour of MNEs originating from the USA.

The US apparel industry

The US apparel industry is composed of a multitude of small independent producers and large transnational firms that produce both textile and apparel goods.[4] Apparel assembly is highly resistant to mechanisation, the capital outlay needed to establish a factory is relatively low, and the incentive to concentrate production facilities to achieve economies of scale is small. Further, many of the firms in this industry are privately owned (Toyne *et al.* 1984:70–84; Steele 1988:6). One of the main sources of competitive advantage in this industry is low-cost, easily trained labour.

The following section gives a brief profile of the four US apparel MNEs that have made investments in Jamaica.

The four apparel multinationals in Jamaica

Tultex Corporation

Tultex Corporation is the only publicly owned company examined. The company, which was established in 1937, is vertically integrated. It owns and operates textile mills in the Carolinas and uses the fabric that is produced in these mills in its manufacturing operations. The company is one of the leading manufacturers and marketers of activewear and licensed sports apparel in the USA. Its core product line includes fleeced sweats, jersey products as well as decorated caps and jackets. It also manufactures private label products. Tultex Corporation was the largest of all four MNEs studied. Its annual sales for 1996 totalled US$636.9 million. Its total number of employees for this year was 6,835. Akom Corporation, a wholly owned subsidiary of Tultex Corporation, operates in Jamaica. This company, which was formed in 1984, is the first investment that

Tultex has made offshore. Akom Corporation, with a staff of 820, manufactures tee shirts and jersey products. It supplies 25 to 30 per cent of the total garment production of its parent company.

Maidenform Worldwide Incorporated

Maidenform Worldwide Incorporated is a fairly large player in the US apparel industry. In 1996, this 75-year-old company had estimated sales of US$400 million and 8,900 employees. The company manufactures, markets and distributes its brand name product, Maidenform bras, and private label undergarments. Maidenform Worldwide Inc. is the most internationalised company studied: it owns and operates facilities in United States, Puerto Rico, Costa Rica, Dominican Republic, Honduras, Ireland, Mexico and Jamaica. Its Jamaican subsidiary, Jamaica Needlecraft Limited, started operations in 1982. This company, which employs 1,000 persons, manufactures the entire range of the company's products.

Jockey International Incorporated

Jockey International Incorporated is the oldest of the four MNEs studied. The company was founded in 1876 in Ludington, Michigan. It is a vertically integrated apparel company. Jockey International Inc. owns and operates textile mills in North Carolina and uses the fabric produced in these mills in its manufacturing operations. Its product line includes male and female undergarments, hosiery and athletic socks. This company was one of the smaller firms studied. In 1994, its total sales were US$280 million and it employed 6,000 persons. The company has offshore facilities in Costa Rica, Honduras and Jamaica. The Jamaican operations, Jockey Jamaica Limited, was set up in 1984. Its workforce of 550 produces 'Jockey for her' underwear. This is one of the more upmarket products that the company manufactures.

Apparel Contractors Association Incorporated

Apparel Contractors Association Inc. is a subcontractor. The company, which has been in operations since 1979, manufactures apparel products for large US enterprises. Its core product is intimate apparel. It also produces baby wear and sleep wear for females. Apparel Contractors Association Inc. is the smallest of the four MNEs studied. In 1996, its annual sales totalled US$25 million. The number of employees for this year was 4,000. The company has offshore facilities in Guatemala, Colombia and Jamaica. Its Jamaican subsidiary, Yoffi Industries Limited, which was formed in 1981, was one of the first apparel assembly companies to be established in this country. Yoffi Industries has a staff of 565 that manufactures intimate apparel. It accounts for 50 per cent of the parent company's total production.

The motivations for FDI in the apparel industry of Jamaica

This study proposes that the possession of superior advantages over domestic competitors does not fully explain the motivations of firms investing in Jamaica since this study contends that the country lacks effective domestic competitors (Hood and Young 1979; Vachani 1985). It is also suggested that MNE investment in Jamaica is influenced by the earlier investment made by its competitors in the country (Knickerbocker 1973). The study also proposes that MNE investment in Jamaica is likely to be motivated by the potential synergies it could gain from using its firm-specific assets in combination with the locational endowments of the country (Dunning 1979, 1980, 1993a).

H1: The monopolistic advantage hypothesis

The monopolistic advantage theory does not appear to explain the motivations for the foreign direct investment undertaken in Jamaica by the four MNEs studied. These firms were all engaged in export-oriented production. They were involved in the manufacture of apparel products under the 807 agreement. As Steele notes, this agreement was designed to benefit the US apparel producers. The role of the CBI beneficiaries was merely to provide low-cost labour to strengthen the international competitiveness of the US apparel producers (Steele 1988:48). The four firms studied did not view the domestic apparel producers as potential competitors since they believed that these producers did not possess the resources needed to compete effectively in the global industry. It is noteworthy that since 1986, subcontracting arrangements have been made between the 807 producers and the domestic apparel firms. These arrangements were established to relieve the production pressures that the 807 producers were experiencing with meeting deadlines and international orders as well as to assist the ailing local apparel sector (Nurse 1995:212). Nonetheless, none of the four MNEs used the services of local firms for this activity. Rather, the larger companies, Maidenform Worldwide and Jockey International Inc., sub-contracted work to Apparel Contractors Association Inc.

Curiously enough, it appears that the four apparel producers studied used firm-specific advantages in competition with the other apparel MNEs that operate in Jamaica. Thus, there seems to be a strange twist to the monopolistic advantage theory. Apparently, the four MNEs invested in Jamaica because they perceived that they possessed superior advantages over the existing foreign operators. The main source of competitive advantage that Jamaica offers these companies is low-cost labour. The firm-specific advantage that was deployed to maximise Jamaica's competitive advantage was managerial skills, specifically human resource management. This firm-specific asset was used to attract and maintain a well-motivated, low-cost workforce. Three of the companies implemented several methods to improve employee-management relations. Akom Corporation, the subsidiary of Tultex Corporation, employs a disproportionate number of local managers. It has three foreign and five local managers. It has invested in and has developed its local management team. The local staff is sent on courses both in Jamaica and in its North Carolina headquarters. The company also hires consulting firms to conduct short-term training courses at its local facility. The manager at Akom Corporation cites its local management staff as its competitive strength vis-à-vis the other foreign-owned apparel producers in Jamaica. The top management of Jamaica Needlecraft Limited, the subsidiary of Maidenform Worldwide Inc., is from the Caribbean. The manager of Jamaica Needlecraft Ltd. stated that they have managed to instil discipline in their workforce. In so doing, he said that they have been able to develop an organisation that is efficient and is able to produce a quality product. He revealed that this has made the company one of the most efficient in Jamaica. While the top management at Jockey Jamaica Ltd. is from the US, they excelled at employee-management relations. Human resource management is perceived to be a critical issue at Jockey Jamaica Ltd. The company implements a mix of financial and 'psychic' rewards to motivate its employees. The management style of Jockey Jamaica Ltd. is lauded nationally and the company is often used by the national economic development agency in its investment promotion activities abroad.

Indeed, the possession of superior managerial skills was regarded as a unique advantage by the apparel MNEs. As noted earlier, the main source of competitive advantage in apparel assembly lies in the supply of low-cost labour. However, the ability to maintain high rates of productivity was seen as critical to the companies' operation in Jamaica. It seems that the parent companies clearly understand the importance of human resource management to the success of their offshore operations in Jamaica. Hence, they may hire locals to manage their subsidiary as was done at Jamaica Needlecraft Ltd. Alternatively, the company may hire a manager who has had previous experience operating in the country, as was the case of Akom Corporation and Yoffi Industries Ltd.

The importance of MNEs having superior managerial skills is heightened by the present unavailability of skilled labour in Jamaica (Krammer 1991:160). The unavailability of skilled labour in Jamaica is characteristic of a regional trend where less than 5 per cent of the Caribbean workforce has a university education (World Bank 1993b). Moreover, Jamaica experiences a tremendous loss of skilled labour through emigration: between 1980 and 1986 half of the graduates from its tertiary institutes migrated (ibid., xv).

H2: The 'follow-the-leader' hypothesis

Knickerbocker's 'follow-the-leader' investment behaviour does not appear to adequately explain what motivated these four MNEs to locate their apparel assembly operations in Jamaica. The executives at Tultex Corporation and Jockey International Inc. noted that in the mid- to late 1980s, all major competitors sought to become more globally competitive by locating their apparel assembly operations offshore. With the enactment of the CBI, the Caribbean and Central American region became popular locations for this investment. The major attractions of these countries were their proximity to the US and the availability of low-cost labour. The managers argue that during this period, all US apparel producers were moving offshore and some of the big players in the industry went to the Jamaica. The following statements are illuminating.

> We came to Jamaica about 12 years ago. Every manufacturer in the US was looking for offshore locations to manufacture more cost competitively in order to compete in the world market.
>
> All of our global competitors were locating offshore. Lots were moving to Central America and Mexico.... We came to Jamaica. This was I believe more than 12 years ago.
>
> All of our major competitors have located offshore in the Caribbean and Latin America. In 1982, we came to Jamaica.
>
> All of our competitors have been locating offshore for a while now. Many have gone to Santo Diego, Mexico and to a lesser extent, Haiti. These countries are serious competitors. We came to Jamaica. In 1981, we started production in Jamaica.

However, these managers stated that their decision to enter Jamaica was not influenced by the fact that some of their competitors already had located their offshore activity in this country. Other factors played a more important role. Two MNEs were lured into Jamaica by the promotional efforts of the country's investment promotion agency. In another firm, its president had previously operated in the country for 20 years before setting up his company. Conversely, the president of the other company was a member of a consultancy firm that was hired by the Jamaican government to develop its apparel industry. The president of this company thought that it made good business sense to invest in Jamaica. Thus, none of the firms studied, followed the other to invest in the apparel industry of Jamaica.

H3: The eclectic paradigm hypothesis

The four MNEs all implemented an export strategy. All of their higher value added, upstream activities were located in the USA (Yip 1992:104). Thus, textile production, garment design, pre-assembly operations (grading, marking and cutting), product engineering, production scheduling and monitoring were all carried out in their home country (Hoffman 1985:375–6). The activity that demanded less value-added-apparel assembly was undertaken in Jamaica.

The relocation of apparel assembly operations to countries with a low-cost workforce makes financial sense to US apparel producers. The wage levels in the apparel industry in the US are much higher than those of its competitors (Steele 1988:23). Moreover, the assembly of garments requires considerable manual manipulation of the material by sewing operators at all stages of manufacture. As noted earlier, this process has been difficult to mechanise. Thus, apparel assembly remains very labour-intensive and material handling accounts for 80 per cent of total manufacture time (Hoffman 1985:373). Jamaica also confers an additional advantage to the US apparel MNEs. This country is merely one hour and a half by air from Miami. Its close proximity to the USA is advantageous for those MNEs that have adopted 'quick response' systems.[5] In the cases of other MNEs, the cost advantages arising from Jamaica's proximity to the US are twofold: the costs of international freight are comparatively low when compared with other sources. In addition, inventories can be maintained at fairly low levels. Thus, the labour-intensive operation, apparel assembly, which is compatible with the locational endowments of Jamaica, was undertaken by the four MNEs in this country.

The MNEs studied all appeared to combine their firm-specific assets with Jamaica's locational endowments. Tultex Corporation, which is a vertically integrated apparel company, sought to integrate its core competencies in textile manufacturing, garment design, garment production, marketing and distribution with Jamaica's comparative advantage of low-cost labour and proximity to the US market. Its Jamaican operations, Akom Corporation, serve to provide the company with tremendous cost savings in labour. The parent company benefits from quality work that is undertaken relatively cheaply in Jamaica. These cost savings enable the company to effectively operate in those segments of the US garment market where price is the main determinant of competition. Moreover, Tultex Corporation, which has adopted quick response systems, has gained further cost advantages over its competitors. The product from its Jamaican operations is shipped to an agent in Miami. Some of this shipment goes to the company's headquarters in Martinsville where it is then sent to California. The implementation of quick response has alleviated the company's need to set up a central distribution point. It has been able to maintain inventories at a minimum and has gained tremendous cost savings from reducing distribution costs. As one of its executives revealed:

> Quick response systems have allowed us to eliminate the need for our producers to send the apparel product back to the headquarters for distribution. It alleviates the need for us having a distribution point. It gives us considerable cost savings.

Similarly, Jockey International Inc., which is also a vertically integrated apparel company, manages to gain tremendous synergies from the integration of its activities in the USA with its highly productive facility in Jamaica. The fabric that is used in the Jamaican operations comes from textile mills in North Carolina that are owned and operated by Jockey International Inc. The design work, merchandising and product development is undertaken in its corporate office at Wisconsin. Its Jamaican operations carry out the assembly of the garments that are designed in Wisconsin. Jockey Jamaica Limited has attained the highest internal record for efficiency. Thus, Jockey International Inc. is able to achieve tremendous cost savings from the quality work that is produced by its highly productive, low-cost Jamaican workforce. While the managers at Jockey International Inc. revealed that they had several quick response systems, these systems appear to be less developed than those at Tultex Corporation. The product manufactured in Jockey's Jamaican operations is shipped to its central distribution centre at North Carolina where it is redistributed. Hence, the company is able to achieve cost savings from its highly productive plant in Jamaica as well as minimise warehousing and distribution costs.

The competitive strengths of these vertically integrated companies arise from several sources. All the fabric produced in the companies' facilities are used in-house. This allows the companies tremendous flexibility and better operating margins. Since they do not have to time incoming fabric shipments with their cutting and sewing operations, warehousing expenses are minimised. Moreover, the fabric is manufactured on an 'as needed' basis that lowers the companies' working capital requirements (Auerbach Pollak & Richardson, Inc. 1996:5). Further, the companies are able to become more cost competitive by locating those labour-intensive segments of their operations in Jamaica. Additionally, the terms and conditions of the 807-A trade agreement facilitate the assembly of garments produced with fabric obtained from their textile mills in this country. Moreover, the adoption of quick response systems, minimises the warehousing and distribution costs. The companies also gain the advantage of speed since they can quickly respond to the needs of their customers.

Maidenform Worldwide Inc. has a less integrated production process than that of the two MNEs previously discussed. However, the parent company carries out the higher value, upstream activities of purchasing, garment design, pre-assembly (grading, marking and cutting) product engineering in the USA. The company also markets and distributes its product globally. Its Jamaican operations undertake the labour-intensive aspect of its operations: apparel assembly as well as some ancillary cutting. Labour costs play an important role since the majority of the undergarments produced by this Jamaican plant are aimed at the lower to middle segments of the market where price is the main determinant of competitive success. In addition, the close proximity of Jamaica to the US means that the finished product can be easily transported by air to the US and the company can maintain fairly low inventories. As one of its executives stated:

> The principal factors in Jamaica are its labour costs…and the location, its proximity to the US. For example, when we are short of something, we can just get on the telephone and call Maidenform's central cutting facility in Jacksonville, Florida. We can get the item tomorrow and if we need it urgently, we can even get it today. The same thing applies to our shipping with them. We can ship fairly easily. In fact, the distance is so close that we can afford to do it by air.

Conversely, it is the customers of Apparel Contractors Associates Inc. who provide the design, patterns and fabric that are necessary to produce the garment. The company then undertakes the assembly of the product offshore. Its firm-specific assets include production design, production engineering, quality control and market knowledge. The company uses these assets in combination with the low-cost labour of Jamaica to produce a competitively priced, quality product. The close proximity of Jamaica to the US is also advantageous to Apparel Contractors Associates Inc. Like Maidenform Worldwide Inc., its product is transported by air to the US. In addition, its warehousing expenses are minimised since it can maintain fairly low levels of inventories.

The choice of locating apparel production in Jamaica

This study proposes that the decision to establish and continue operations in Jamaica is influenced by the cost of labour (Vernon 1966; Sharpston 1975; Kumar 1994). In addition, it is suggested that preferential trading agreements play an important role in motivating an MNE's investment in Jamaica (Johnson 1968; Yannopoulos 1986; Griffith 1990). Moreover, it is posited that the presence of export processing zones greatly influences the decision to locate apparel assembly operations in the country (Frobel *et al.* 1980; Kaplinsky 1993; Woodward and Rolfe 1993). This study also proposes that the investment incentive package offered by the Jamaican government has no influence on the location decisions of the four MNEs (Shah and Toyne 1978; Lim 1983; Wheeler and Mody 1991). Finally, it contends that the apparel MNEs integrate elements of the US diamond with the diamond of Jamaica (Rugman and D'Cruz 1993; Rugman and Verbeke 1993a).

H4: The low-cost factor hypothesis

As was earlier emphasised, the main motivation for the apparel MNEs establishing operations in Jamaica was the availability of low-cost labour. The ten managers interviewed all emphasised that labour cost was the main factor that drove their apparel assembly operations from the USA to Jamaica. The wages offered by the firms studied ranged from US$0.77 to US$1.13 per hour. Indeed, the wage level in the apparel industry of Jamaica is fairly competitive with that of other countries (see Table 8.1).

However, the managers emphasised that while labour costs are important to their operations, productivity levels are critical, especially in the light

Table 8.1 Index of labour costs in the international clothing industry, 1992

Country	*Index (percentage) Germany=100*
United States	44
Mexico	9
Jamaica	5
Dominican Republic	3

Source: UNCTAD (1994)

of recent increases in labour costs. Indeed, one manager estimated that over the last three years, the average direct labour costs per hour rose by 38 per cent. Thus, to offset increases in labour costs, several of these firms attempted to boost productivity levels by offering productivity bonuses. In one company, when a 125 per cent level of efficiency is attained, the worker receives a 26 per cent increase in his/her hourly wage rate. In another, when a 100 per cent level of efficiency is attained, the worker receives a productivity bonus equal to a 48 per cent of his/her hourly wages.

In an attempt at boosting productivity levels, several of the companies have implemented various schemes that are aimed at improving industrial relations. Attendance bonuses are given to the workers who work for forty hours per week. These bonuses range from US$6.60 to 14.30 per week. Additionally, two of the companies offer subsidised lunches to their workers. One company has been especially innovative in its attempts at boosting worker morale and thus productivity. It hosts an annual day of festivities where its employees are celebrated. They are presented with various gifts (bicycles, refrigerators, televisions) and are feted by the top local entertainment. The company also shows weekly movies, serves free breakfast daily and hosts weekly employee-management meetings. This company has attained productivity levels of 111 per cent. The Jamaican operation is the most cost-effective facility of the MNE.

By contrast, another company complained of high rates of absenteeism, theft and worker violence. Its managers noted that the present tax system penalises the worker who attempts to increase his/her productivity. Similar claims were made by Roberts (1992:93). In Jamaica, no tax is paid on the first J$50,544 (US$1,444) of an individual's annual income. A tax rate of 25 per cent is applied to the remainder. The president of this company alleged that because the workers operate on a piece rate system, they are able to calculate how hard they must work to earn a certain level of income. Since it takes considerable effort to produce at the level where they will earn only 75 cents on every dollar, they have little incentive to increase output. The managers of the company also stated that two years ago his company derived a 20 per cent cost savings from its Jamaican operations. This cost saving has now been reversed. The company is losing an estimated US$10,000 a week from its operations in Jamaica. The following statement is illuminating:

> Up to 1992, everything was fine, productivity was high and absenteeism was much better. I do not know what is happening now in Jamaica …What can we do? We have out of 600 employees, some 550 stealing our goods. What can we do? …The rates of absenteeism and the lack of punctuality are very high. For example, on Monday, 152 workers were late and 85 absent, on Tuesday, 132 were late and 48 absent, on Wednesday, 182 were late and 48 absent, and on Thursday, 161 were late and 51 were absent. This is out of a total of 595 workers!

It is noteworthy that this company has recently introduced some of the fringe benefits that the other three MNEs use to motivate their employees.

None of the four MNEs had a unionised workforce. All the managers at the subsidiary interviewed were opposed to operating with trade unions. One manager revealed that if his employees were to become unionised, his company would leave the country. Another stated that he believed that in Third World countries unions did more harm than good to the employees. Interestingly, one manager stated that Jamaicans are the most militant people in the Caribbean. Thus, he believed that a unionised workforce would not enhance his company's competitiveness.

It is argued that low wages and a docile workforce are not the primary factors affecting the locational decisions of foreign companies. It seems that innovative job-training programmes, which produce a custom-trained workforce, are an irresistible incentive (Kanter 1995:247). Indeed, this is one of the main objectives of the Human Employment and Resource Training Trust (HEART) of Jamaica. HEART, which was established in 1982, is responsible for providing skilled workers for industry. The operations of HEART are funded by firms that operate in the country. Companies, whose annual wage bill exceeds US$4,952, pay 3 per cent of their total wage bill to this training programme. HEART operates several institutes in Jamaica that are devoted to training for the garment industry. Its two major facilities are located in the capital, Kingston, and in the west of the country, at Hanover. HEART also operates several small centres throughout the country.

The institute offers a variety of courses aimed at the garment industry. These are garment construction, machine operating, tailoring, machine embroidery, pattern making and machine mechanics. The machine operating course, trains workers for the 807 operations. Interestingly enough, the managers at the Jamaican operations of the MNEs studied were not impressed with the graduates from HEART. They all stated that this institution fails to adequately prepare the workers for the realities of the industry where speed and proficiency are essential skills. In addition, they complained about the poor work ethic of the graduates and stated that they prefer to conduct their own training.

Conversely, the directors at HEART revealed that they have trouble in recruiting students for the machine operating course. They noted that work in the 807 operations has a negative public image. It is the students who fail the entrance examinations for the garment training courses who are recruited for the machine operating course. They often require remedial classes in basic mathematics and English. The machine operating course is the lowest level of all the training courses for the garment industry that are offered by HEART. The directors of HEART added that the wages offered in this industry are not attractive. In some cases, the women employed in the 807 operations are barely able to meet their basic needs (Dunn 1994:27). In addition, the directors claimed that there have been complaints about the working conditions in the factories, particularly those owned by the Asian MNEs. Further, they noted that employment in this sector is variable since product demand is dictated by the vagaries of the fashion industry. They said that when the firms experience a fall in product demand, they reduce the numbers employed. The directors stated that these factors all contribute to the negative image of the 807 operations. Indeed, since 1987 there has been an 80 per cent decline in the numbers of graduates from the garment training programmes (see Table 8.2). Also, it has been estimated that less than 8 per cent of those who have graduated over the last six years have remained in the industry (King 1996).

Porter argues that competitive advantage achieved by low-cost labour is unsustainable (Porter 1990:79). Indeed, Jamaica's advantage in low-cost labour has been described as a 'competitive advantage of misery': it was gained through a successive series of devaluations that were implemented at the considerable social expense of its citizens (Deere *et al.* 1990:46–7). Additionally, the wage competitiveness achieved by Jamaica is not a result of a general upgrading of the skills of its workforce or even improvements in industrial efficiencies that arise from technological innovation (Watson 1994c:81). Clearly, this low-cost labour advantage is unsustainable. Hence, it is not surprising that one of the more productive MNEs studied is contemplating moving its operations to Central America or Mexico. The manager claimed that it is more cost efficient to operate in these countries.

H5: The preferential trading agreement hypothesis

As discussed earlier, the emergence of the apparel assembly industry in Jamaica was solely a result of the US development policy for the Caribbean

Table 8.2 The number of graduates from HEART's garment training programme

Year	*Number of graduates*
1987/1988	4,585
1988/1989	3,845
1991/1992	1,587
1992/1993	1,492
1993/1994	611
1994/1995	904

Source: The Planning Institute of Jamaica, Economic and Social Survey of Jamaica (various issues) and Central America. All four MNEs examined are 807 producers. In addition, all manufacture apparel goods from US-made fabric that is cut in the US. According to the terms of the 807 agreement, these companies pay a 20 per cent duty on the apparel goods that are manufactured in Jamaica and exported to the US. The executives of the four companies all emphasised that the 807 agreement is critical to their operations in Jamaica. In fact, two managers bluntly stated that if it were not for this trade agreement, their companies would not have initially invested in Jamaica.

The CBI has been criticised for failing to provide the investor with a sustainable competitive advantage over its competitors (Azel 1991:23). Sustainability is viewed as critical to the export-oriented producers, such as the 807 operators, since their main motivation for engaging in FDI is securing cost advantages over their competitors. The strategic value of this cost advantage rests on its sustainability. Sustainability exists if competitors find it difficult to replicate or imitate the sources of the firm's cost advantage (ibid., 23). It seems that Azel's assertions have proven to be correct. The enactment of the NAFTA has nullified the competitive advantage that apparel MNEs gain from operating in Jamaica. As noted earlier, the NAFTA gives foreign companies that operate in Mexico free access to the US and Canadian markets. Unlike the CBI beneficiaries, no duties are paid on apparel goods manufactured in Mexico. Moreover, Mexico is an attractive location for foreign investment in apparel assembly. This is a result of its improved investment climate, competitive wage rates, greater labour availability, proximity to the US market, and improved access to its domestic market (Glasmeier *et al.* 1993).

Not surprisingly, the four apparel producers studied all claimed that their operations in Jamaica were adversely affected by the NAFTA. The following quotations illustrate this point.

> Several companies with operations in Mexico, for example Sara Lee, now that they have NAFTA parity, are more cost effective than us. This has affected us and it will continue to affect us until we get some sort of parity here in Jamaica. In Mexico, you do not have to pay transportation costs. Forty per cent of our costs are due to duty and transportation. Moreover, you do not have to pay any duties and transportation costs are virtually nothing in Mexico. The producers in Mexico can be 40 per cent more cost efficient than we are.

> Jamaica never took NAFTA seriously…. Most of our competitors are moving to Mexico. Mexico enjoys a significant cost advantage over Jamaica. Labour costs are US$10.50 in Jamaica and US$7.00 in Mexico. The cost of electricity and rent is half that of Jamaica.

Indeed, the costs of operating in Mexico do seem to be lower than those in Jamaica (see Table 8.3). Evidently, the implementation of the NAFTA has eroded the advantages that the CBI conferred on these four MNEs

Table 8.3 A comparison of selected industrial costs in Mexico and Jamaica

Variables (US dollars)	*Jamaica*	*Mexico*[a]
Electricity rates (kilowatt per hour)	0.105	0.024
Wage rates (hourly rate)		
Skilled	n.a.	0.54–0.81
Unskilled	0.71–0.85	0.40–0.53
Rental rates of factory		
Space (square feet per annum)	4.10–4.25	2.00–4.00

Sources: [1]The Mexican Bank for Foreign Trade, 'Industrial Costs in Mexico: A Guide for Foreign Investors', 1 November 1996.
[2]Jamaica Promotions Company, 'A Description of Business Costs and Infrastructure in Jamaica', August 1996

Notes: [a]These costs are the Fripaiy industrial park location in the Merida region. The region is the same distance from the US market by air as Jamaica

which, since the mid-1980s, have located their apparel assembly operations in Jamaica. Several of the managers interviewed stated that it is imperative that Jamaica gains NAFTA parity. They were uncertain whether they would continue operating in the country if it fails to gain NAFTA parity.

H6: The export processing zone hypothesis

All four MNEs entered Jamaica in the early 1980s. To a large extent, they were lured by the promotional campaigns conducted by the country's investment promotional agencies. One of the mechanisms that was used to induce apparel MNEs into Jamaica was the creation of export processing zones (EPZs). At present, Jamaica has three EPZs: Kingston Free Zone (KFZ), Montego Bay Free Zone (MBFZ), and Garmex Free Zone. The Kingston Free Zone, established in 1976, was the first to be created in the island. This fifty-seven hectare estate is located in the industrial section of the capital city. The KPZ is situated close to a modern port that is served by major shipping lines. It is also near to one of the country's international airports. The Montego Bay Free Zone was created in 1982. It is situated at Montego Bay, the country's second city. The MBFZ occupies nine hectares with an additional twenty-eight being developed for expansion. This EPZ is near to a port and the country's second international airport. Finally, the Garmex Free Zone, established in 1987, occupies eighteen hectares. Like the Kingston Free Zone, it is situated in the industrial sections of Kingston.

Two of the MNEs studied were located in the EPZs. One was situated at the Kingston Free Trade Zone and the other at the Montego Bay Free Trade Zone. The other two firms operated outside of the EPZs. One was sited on an industrial estate several miles away from Kingston. The other was located in a rural area of the country. This company owns the land on which its operating and administrative facilities are sited. It was the only firm surveyed that owned property in Jamaica. It is noteworthy that the two apparel MNEs that decided to located in the EPZs were attempting to avoid the excessive bureaucracy and infrastructural difficulties that usually plague business operations in developing countries. On the other hand, the manager, who operated in the industrial estate, worked for several years in Jamaica before setting up his company. He did not perceive that he would gain any additional benefits from operating in an EPZ. The motivation for the MNE locating its operations in a rural area of Jamaica is unclear. It is assumed that the parent company preferred total ownership of its facilities in Jamaica. Thus, it was not willing to locate its operations in the EPZs since the factory space there is leased.

The presence of EPZs played a decisive role in the initial investment decision of two MNEs studied. However, this study also sought to ascertain what elements of the industrial infrastructure are important to the four MNEs. The results of this examination are discussed in the subsequent paragraphs.

The managers of the four MNEs believed that the quality of the industrial infrastructure in Jamaica is adequate and has improved since they initially started operations in the country. However, the major concern expressed was the escalating cost of utilities.

Indeed, the managers of the MNEs that operate in the EPZs concur that the quality of the electricity service in Jamaica is generally good, and has been improving over the past few years. It was only the manager, with operations in the rural area, who complained about an unreliable electricity supply. In fact, his company was forced to invest in a generator to ensure constant production. He revealed that there were occasions when the company was compelled to use this generator for several days at a time.

One issue on which there was consensus was the astronomical cost of electricity. A manager stated that since 1981, the cost of electricity had increased at least twofold. Another claimed that electricity costs in Jamaica are 45 per cent higher than those in other CBI countries. Further, one noted that although his company was operating at 50 per cent capacity, his monthly electricity bill was US$12,857. Several researchers support these claims (Roberts 1992:94). The policy-makers in Jamaica are aware of the relatively high cost of electricity (see Table 8.3). Over the last few years, attempts have been made to increase generating capacity: at present, the country has a generating capacity of 606 megawatts to meet a peak demand of 424 megawatts. Nevertheless, attempts at lowering the costs of this service have not been as successful. The policy-makers note that it is difficult to decrease electricity rates because of the small size of the system and the inability of the country to connect with other suppliers (to achieve economies of scale) due to its island geography (Government of Jamaica 1996:77–80). The government is presently considering proposals aimed at decreasing the cost of its electricity service. One of these proposals is the establishment of co-generating projects involving the state-owned electricity company and the large users of power in the country.

Similarly, the managers all agreed that although the telephone service was adequate, the rates were too high. Several managers at the subsidiary noted that these rates exceeded those of other CBI countries. In addition, the managers located in the EPZs protested that their rents were too high and not compatible with those in competing countries (see Table 8.3). In 1996, the rents at the KFZ were increased from US$3.50 to US$4.10 per square foot. The rates in the MBFZ are relatively higher at US$4.25 per square foot. The managers complain that their operating margins are low and the market for their products in the US is soft. Thus, they cannot pay such high rents. On the other hand, the directors of the companies that manage these EPZs stated that they have outstanding loan obligations. Moreover, they argued that the rents charged reflect the cost of the services that are provided to the investor located on the estates. The services that the KFZ and the MBFZ provide include garbage collection, landscaping, security and maintenance of buildings.

Interestingly enough, there are differences in the services enjoyed by the MNEs that are located in these two EPZs. The KFZ is located near to the country's largest port. This port, which is one of the largest in the region, is served by several major shipping lines. However, this is not the case with the MBFZ. Its port is only served by one shipping line. Thus, there is a vast disparity in the shipping rates charged at Montego Bay and Kingston. The present freight cost from the port of Kingston to Miami for a 40-foot container is US$1,000. By contrast, the comparable cost from Montego Bay to Miami is US$2,185.[6] Further, as one manager stated, the port at Montego Bay is not equipped with crane facilities. Hence, his company is forced to pay for stevedore services. In addition, the managers of the companies that use the port services all claimed that they incur additional operating costs since they need to ensure that drugs are not smuggled on board their shipments. One manager revealed that if drugs were found in any of his shipments, the resultant fines would totally bankrupt his company. Thus, these firms have instituted several measures to prevent this from occurring. In one case, the company employs two security guards to protect its cargo from being tampered with. In another, the senior management, significantly the foreign managers, are the ones who ensure that drugs are not placed on board their shipment. Evidently, these additional security measures have resulted in increased operating costs. One source estimates that these security measures add an additional 8 per cent to the costs of operating in Jamaica (King 1996). By contrast, those managers who air cargo their products to the US were satisfied with the quality of the service. They did not experience the problems of drug smuggling.

The public transportation system was identified as an infrastructural problem that has deteriorated over the last few years. This has resulted in difficulties in getting workers to work night shifts. In addition, issues of punctuality are a major source of management concern. Two managers have attempted to overcome this problem by granting bonuses to workers who manage to be consistently punctual. The government has also attempted to alleviate this problem by introducing larger buses; acquiring additional ones which are leased to the private sector; and leasing bus depots to franchise holders to enable greater control over dispatching and scheduling of buses (The Planning Institute of Jamaica 1995:13.3). These efforts, which have been limited to Kingston, have achieved minimal success.

There appeared to be some ambivalence on the issue of the quality of service provided by the country's economic development agency, Jamaica Promotions Corporation (JAMPRO).[7] One manager stated that once his company was established, he had very little use for the services of JAMPRO. He only interacts with the managers of the EPZ. By contrast, two managers stated that JAMPRO's post-investment service is limited. One said that it was not very effective in resolving the problems he experienced with duty exemptions for imported equipment. Another stated that JAMPRO is not an effective liaison between the MNEs and the government. He noted that he had to negotiate with the power companies and shipping lines without its assistance. JAMPRO admits that it has not been effective in the post-investment stage. It has recently instituted a client service promotion division with the mandate to provide 'after care services' to its clients. It is too early to evaluate the performance of this division. It must be pointed out, however, that there is no single department within JAMPRO that is completely dedicated to the needs of the apparel industry. The interests of this industry are handled by three different departments within JAMPRO. In addition, several external bodies, such as the Garment Council, and the Central American and Caribbean Textile and Apparel Council, provide oversight to this industry. There is obviously a need to integrate the functions of these diverse institutes into one body. This would not only reduce the possible duplication of functions, but also prevent the stretching of human and financial resources in this resource indigent country.

The managers interviewed also stated that the general bureaucracy in Jamaica is adequate. Many revealed that they receive a favourable service at customs. Some claimed that over the last few years, the service offered in the government departments has improved. Yet, one issue that was repeatedly discussed is the growing economic and social instability in the country. One manager stated that despite the relatively low value of the Jamaican dollar, the costs of operating in the country are high. He noted that labour is not the only operating costs that his company incurs in Jamaica. He stated that the costs of services, for example, car rentals, are prohibitive. Moreover, many complained that these services were not only costly but also inefficient. Most importantly, the managers at the subsidiary all referred to the level of crime in the country and the apparent impotence of the authorities in controlling it. They warned that these issues have a negative impact on the country's investment climate and thus on their long-term investment.

H7: The investment incentive hypothesis

There was unanimous agreement on the question of the attractiveness of the incentive package offered by the Jamaican government. The investment incentive package offered by the Jamaican government did and continues to have a positive influence on the locational decisions of these firms.

The Jamaican government offers a fairly comprehensive package of incentives. The investor who operates within its EPZs enjoys income and profits tax exemptions in perpetuity; property tax exemptions; exemption from import licensing; and duty free imports and exports of all goods. The investor does not have to operate within an EPZ to enjoy these incentives. Enterprises are granted single entity free zone status provided that their operations conform to standards governing such a designation. On the other hand, the foreign investor who operates outside of the EPZs (in a customs territory) is exempted from income and dividend taxes for up to ten years. After the expiration of the tax relief period, the investor may be granted tax credits of a maximum of 50 per cent of the income tax payable on export profits. He may carry forward unrecovered losses incurred during that period. The foreign investor also enjoys import duty exemptions on raw material and machinery (JAMPRO 1996). In addition, all foreign investors enjoy free repatriation of profits and dividends. Further, all exporters pay registration and certification fees. Those who operate in an EPZ pay an annual registration fee of US$250 per annum and a certification fee of US$30 for every US$10,000 worth of exports. By contrast, those who operate in a customs territory, who exported less than J$2 million (US$57,143) in the previous year, pay annual registration fees of J$500 (US$14.30) while those whose exports exceed J$2 million (US$57,143), pay annual registration fees of J$1,000 (US$28.60). These investors also pay a certification fee of J$25 (US$0.72) for every J$25,00 (US$714.30) worth of exports. It is noteworthy that Jamaica has a double taxation treaty with the USA.

Generally, all the managers believed that the tax holidays and duty exemptions on machinery and equipment were attractive elements of the investment incentive package. These elements were identified as necessary to their continued operations in Jamaica. Interestingly enough, the managers who operated in the customs territory believed that the cost savings derived from operating in the EPZs are negligible. One manager made the following statement.

> Our entire shipping costs will increase between US$70,00 to 80,000 if we get free zone status. In the free zone, the company has to pay a much larger visa than those out of the free zone. For exporting a product, under the tax holiday system, shipping costs about US$15.00 per container. If you are in a free zone, it is about US$400.00. What this means if we don't include a customs officer on site, it will cost

> our company about an increase of US$80,000 if we get free zone status. This is a result of the costs involved in the visa treatment of exports. This will increase the cost of doing business…. So we have to weigh that against the taxes we may pay with the loss of our tax holiday. The impact of going into a free zone is negligible.

Indeed, it appears that the export fees (registration and certification fees) which the investor pays in the EPZs are much higher than the ones charged to the investor in the customs territory. This disparity in export fees charged to the operator in the EPZ and customs territory is a result of the differences in the currencies used for the payment of these fees. The EPZ operator pays his fees in US dollars while the operator in the customs territory pays his in Jamaican dollars. Over the last decade, the Jamaican dollar has been devalued by an estimated 500 per cent (World Bank 1995a). Evidently, these devaluations have benefited the operator in the customs territory. Hence, these investors believed that there was little incentive for them to relocate their operations to the EPZs or assume the status of a single entity free zone operator.

In 1991, Jamaica removed all restrictions on the movement of foreign exchange. Thus, the managers interviewed did not identify free repatriation of profits and dividends as an important incentive. However, firms that operated in EPZs always enjoyed this incentive. Free repatriation of profits and dividends was one of the incentives used to attract the EPZ operator to Jamaica. This incentive was not made available to those who operated in the customs territory. Thus, it is surprising that the executives of the two MNEs that operated in the customs territory did not regard this incentive as important to their continued operations in Jamaica.

H9: The 'Double Diamond' hypothesis

The 'Double Diamond' hypothesis appears to be an adequate explanation for the investment behaviour of the four apparel MNEs in Jamaica. The strategic management style these firms used for their Jamaican operations can be illustrated by Quadrant 2 of Figure 8.1.

The Jamaican operations were passively incorporated into the overall corporate strategy of these four apparel MNEs. Jamaica was merely used as a source of low-cost labour that was relatively near to the companies' home country. The operations of the Jamaican subsidiary were only linked to the downstream activities of distribution and marketing. All upstream activities were carried out in the US. Furthermore, the activities undertaken in Jamaica could be easily carried out in another country, notably Mexico. Thus, Jamaica's diamond was of little relevance to the development of the core competencies of the four MNEs. Those elements of Jamaica's diamond that were significant to the four firms are demonstrated in Figure 8.2.

Figure 8.1 The role of the Jamaican operations in the corporate strategy of the apparel MNEs

Role of host country national 'diamond' on development of core competencies of apparel MNEs	Integration of Jamaican operations with other operations of the apparel MNE	
	Low	High
None	1	2
High	3	4
Diamond Network	5	6

Source: Adapted from Rugman and Verkebe (1993a)

The main elements of Jamaica's diamond that were of importance to the four apparel MNEs were low-cost labour, proximity to the US and, until recently, the 807 agreement. As noted earlier, these advantages are unsustainable. Jamaica's low-cost, productive labour force can be easily sourced in any of the CBI beneficiaries or, as is presently the case, Mexico. Mexico and several of the CBI beneficiaries, significantly the Dominican Republic, are in fact closer to the US than Jamaica. In addition, the NAFTA has nullified the benefits to be derived from locating apparel assembly operations in Jamaica.

The other elements of Jamaica's diamond are noticeably weak. The institutional framework for foreign investment appears to be inefficient. The training programme instituted by HEART for the 807 operations fails to produce graduates with the quality of skills demanded by the industry. Additionally, the services offered by JAMPRO appear to be inadequate. Despite the overwhelmingly important role that the apparel industry has played in the Jamaican economy over the last decade, JAMPRO fails to have an in-house capability that would allow it to, inter alia, effectively respond to, and anticipate the needs of, the investor; examine domestic, regional and global investment trends and disseminate this information to the domestic industry; and analyse the investment climate of competing countries. Thus, not surprisingly, JAMPRO has failed to adopt the pre-emptive measures necessary to counter the effects of the NAFTA on its domestic apparel industry.

Other elements of Jamaica's diamond are also weak. While the quality of the utility service is adequate, the costs are prohibitive. Many of the

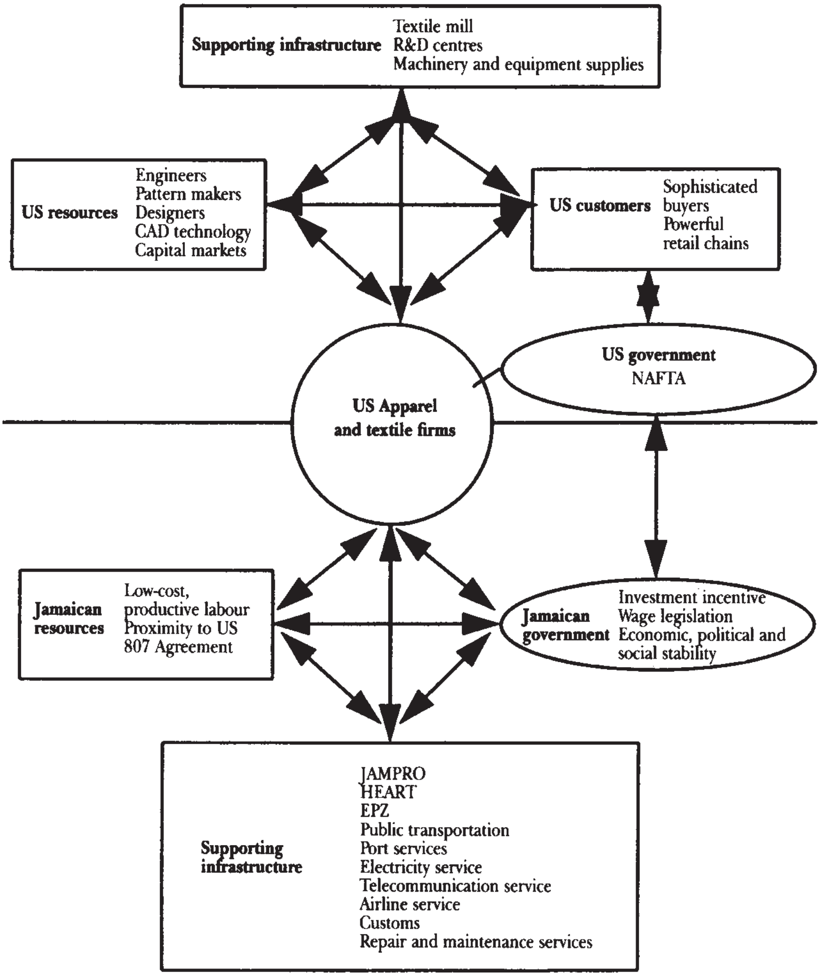

Figure 8.2 The 'Double Diamond' approach to the apparel industry of Jamaica

Source: Adapted from Rugman and Verkebe (1993a)

managers complained about the astronomical electricity rates. In addition, rental rates for factory space in the EPZs were considered to be too high. Several managers noted that the rents charged were uncompetitive. Moreover, the port services, significantly those offered at Montego Bay, were said to be inadequate. Further, managers stated that they were forced to incur additional costs to prevent the smuggling of drugs. The inadequacy of the public transportation system adversely affected worker productivity. Also, in cases where the managers attempted to counter the inefficient bus service by offering attendance bonuses, their costs of operations increased.

Interestingly, many managers revealed that the repair and maintenance service for the equipment used in the apparel sector is efficient. All managers interviewed stated that they had an in-house maintenance service that was devoted to the repair of sewing machines.

It appears that the government in Jamaica does not have a positive impact on the country's development of a sustainable competitive advantage for the apparel assembly industry. Its present tax system seems to discourage the productivity of the worker who operates under the piece rate system. In addition, its investment incentives are apparently biased to the investor who operates in the customs territory. Most importantly, however, is the present economic and social instability in the country. Jamaica's protracted economic problems have given rise to uncertainties about the political stability of the country. As the managers revealed, this situation is a serious deterrent to their long-term investment in the country.

Modes of investment used by the four apparel MNEs in Jamaica

This study suggests that the MNE involved in intra-firm trade in Jamaica will use a wholly owned subsidiary as its mode of market entry (Teece 1983; Anderson and Gatignon 1986; Gomes-Casseres 1989, 1990). It is also posited that the level of international experience of a firm influences its selection of a market entry mode. The MNE with international experience will use a wholly owned subsidiary as its international entry mode (Johanson and Wiedersheim-Paul 1975; Johanson and Vahlne 1977, 1990; Tan and Vertinsky 1996). Additionally, it is suggested that the cultural distance between the home and host country plays an important role in the MNE's selection of a market entry mode (Kogut and Singh 1988; Padmanabhan and Cho 1996).

All four MNEs studied used the wholly owned subsidiary as their mode of market entry into Jamaica. There were differing reasons for this selection of market entry mode.

H10: The intra-firm trade hypothesis

The theory advanced by researchers such as Gomes-Casseres (1989, 1990) on the relationship between intra-firm trade and the use of the wholly owned subsidiary clearly explains the factors influencing the choice of mode of investment for two MNEs studied. As noted earlier, two MNEs were vertically integrated apparel companies. The fabric that was used in their operations in Jamaica was produced in their textile mills. The managers of these firms noted that this intra-firm trade greatly influenced their choice of a wholly owned subsidiary. The two MNEs choose either subcontractors or wholly owned subsidiaries as their mode of entry into international markets. Tutlex Corporation operates a wholly owned subsidiary in Jamaica and uses subcontractors in Mexico. It also uses the subcontracting services of two apparel MNEs in Jamaica. Interestingly, Jockey's selection of market entry mode is influenced by the product manufactured. Jockey International Inc. tends to use subcontractors for its low volume products and wholly owned subsidiaries for its high volume ones.

It is noteworthy that the issue of control was paramount in both of these vertically integrated companies (Stopford and Wells 1972:113–17). The managers at Tultex Corporation revealed that their operation in Jamaica was their first offshore investment. Thus, they wanted to have total control over it. A similar sentiment was expressed by the executives at Jockey International Inc. They stated that they wanted to be able to control the operations of their Jamaican subsidiary. The following statement demonstrates the important role that control played in Jockey International's selection of a wholly owned subsidiary for its Jamaican operation.

> We are a privately owned company so when we decided to locate a segment of our operations offshore, we wanted it to be totally owned by the company. I think that the question of control was what made this form of investment most attractive to us.

However, Jockey International Inc. went a step further than Tultex Corporation. They own the land and buildings on which their Jamaican operation is located.

H11: The international experience hypothesis

Maidenform Worldwide Inc. used the mode of a wholly owned subsidiary in Jamaica. Maidenform Worldwide Inc. is the most internationalised of the companies studied. It has operations in several Central American and Caribbean countries, Ireland and Mexico. Thus, its choice of market entry mode supports the arguments advanced by such scholars as Johanson and Vahlne (1977, 1990). It appears that since the firm had considerable experience operating in other international markets, it chose the mode of a wholly owned subsidiary to enter the Jamaican market. Its executives stated that they did not perceive the benefits of using any other mode of market entry.

Apparel Contractors Association was not as internationalised as Maidenform Worldwide Inc. However, the president of the company had operated in Jamaica twenty years before establishing his company in this country. He claimed that he had sufficient knowledge of the country to choose this mode of market entry. Thus, in this case, country-familiarity played a decisive role in the selection of market entry mode (Davidson 1980).

H12: The cultural distance hypothesis

Finally, it could be argued that cultural distance played a significant role in these firms' choice of a market entry mode. The cultural distance between

Jamaica and the US is not large. Jamaica is an English-speaking country that is located a mere hour and half by air from Miami. Thus, it is possible that cultural similarities could have influenced the selection of a wholly owned greenfield investment or a joint venture. Nonetheless, none of the managers interviewed identified culture as a factor that influenced their choice of market entry mode.

Conclusions

Several of the theories identified in this study appeared to explain the motivations, locational choices, and choice of market entry mode of the four apparel MNEs operating in Jamaica. Indeed, seven of the hypotheses developed in Chapters 3 to 5 were supported by this analysis. Moreover, interesting insights were gained into the investment behaviour and corporate strategy of MNEs investing in low-skill, labour-intensive activities in a small, less developed country. These are discussed in the subsequent section.

The motivations for FDI in the apparel industry of Jamaica

The monopolistic advantage theory does not fully explain what motivated the four apparel MNEs to engage in FDI in Jamaica. What is interesting, however, is that these companies use their firm-specific asset of human resource management to compete with other apparel MNEs for access to low-cost labour in Jamaica. This finding gives a curious twist to the monopolistic advantage theory as an explanation for the investment behaviour of MNEs that are involved in export-oriented production in a less developed country. Also, it appears that the 'follow-the-leader' theory does not satisfactorily explain the investment behaviour of the four apparel MNEs. Admittedly, they all sought to locate the labour-intensive segments of their operations offshore. However, their decision to invest in Jamaica was not influenced by the actions of their competitors. It seems that Dunning's eclectic paradigm is a more likely explanation for the motivations of these MNEs to invest in Jamaica. These firms, to varying degrees, all sought to integrate their firm-specific assets with the locational endowments of the country.

The choice of locating apparel production in Jamaica

The locational theories used in this study seem to provide a clear explanation of the investment behaviour of the four apparel MNEs in Jamaica. This analysis also highlighted several other issues that are not suggested by the theories. First, low- cost labour is certainly an inducement for the export-oriented MNE. However, the productivity of this labour and the need for efficient, customised training programmes are critical. It also seems that preferential trading agreements did motivate the four MNEs to engage in FDI in Jamaica. However, it appears that the viability of these investments is now threatened by NAFTA. Additionally, the presence of an EPZ does lure investment into less developed countries. Yet the creation of EPZs is not sufficient. Infrastructural services not only must be of a high quality, but also they must be competitively priced. Moreover, institutions that are established to promote foreign investment need to operate with efficacy. Further, investment incentives do play a decisive role in attracting FDI. However, it seems that in this era of trade and financial liberalisation, the incentives that are significant to the foreign investor are tax holidays and duty free concessions on machinery and equipment. The analysis also suggests that the 'Double Diamond' hypothesis provides a satisfactory framework to explain the investment behaviour of the four apparel MNEs in Jamaica. The 'Double Diamond' framework emphasises the limited role that this country plays in the global corporate strategy of these firms.

The mode of investment used by the apparel MNEs in Jamaica

The factors that appear to influence the four apparel MNEs selection of a market entry mode were intra-firm trade and level of international experience. All the MNEs used a wholly owned subsidiary to enter Jamaica. The firms that were involved in intra-firm trade appeared to exercise high levels of control over the operations of their subsidiaries. The wholly owned subsidiary was their means of achieving this control. The MNEs, with international experience gained in foreign markets or the host country, also selected the wholly owned subsidiary. By contrast, the analysis suggests that despite the cultural similarities between Jamaica and the US, cultural distance did not influence the firms' choice of market entry mode.

These are the issues that are pertinent to MNEs making investment in low-skill, labour-intensive activities in small, developing countries. It will be instructive to ascertain the extent to which these issues are relevant to MNEs investing in higher skilled, labour-intensive operations in less developed countries. This is the subject of the following chapter.

9 Foreign direct investment in Barbados

A case study of the information service industry

Introduction

This chapter is the second of three case studies on FDI in the Caribbean. It examines the foreign investment decisions of four MNEs that operate in the information service industry of Barbados. The main objective of this study is to analyse the attractiveness of the business environment of Barbados to these four MNEs. In so doing, this chapter examines the factors that influence their motivations for engaging in FDI, their choice of location, and their selection of market entry mode.

This chapter follows a format similar to that of Chapter 8. Thus, the subsequent section discusses the economic and technological factors that have resulted in foreign investment in the information service industry of Barbados. This section is followed by one that introduces the four information service multinationals. Subsequently, an analysis of the foreign investment decisions of these four firms is made. To this end, the hypotheses advanced in Chapters 3 to 5 are tested. This chapter concludes with a discussion of the main issues derived from the qualitative investigation.

The emergence of the information service industry in Barbados

Interestingly, the emergence of the information service industry in Barbados arose from recommendations made by the international consulting firm Booz, Allen and Hamilton to the government in 1983. The late 1970s were marked by a dramatic decline in the performance of the manufacturing sector in Barbados. The rate of growth of this sector fell from 36 per cent in the 1970 to 1975 period, to 14.5 per cent in the 1976 to 1979 period. This decline continued into the first half of the 1980s with growth rates decreasing to an estimated 14 per cent (World Bank 1995a). These falling output levels were matched by decreases in the inflow of FDI. During the years 1977 to 1985, inflows of FDI into the manufacturing sector fell by an estimated 20 per cent (Codrington 1987: Table 2(a)).[1] Thus, attempts were made to identify new activities to absorb the unemployed as well as to generate new sources of foreign exchange earnings. Booz, Allen and

Hamilton identified four activities as having the greatest potential for Barbados to develop a competitive advantage in ten to fifteen years. These were electronics, medical supplies, 'up-market' garments, and information services (Nurse 1996a:5). However, it was the targeted development of the information service industry that proved to be the success story.

Within the past twelve years, the information service industry has emerged to be one of the most dynamic growth industries in Barbados. During this period, its size has increased sixfold: there are presently thirty-six companies operating in this industry. The numbers employed in this industry have risen by more than 200 per cent: it currently employs 2,845 people– approximately 2 per cent of the labour force. In 1995, this industry earned US$50 million in foreign exchange and contributed an estimated US$60 million to the country's Gross Domestic Product. The information service industry is expected to grow by 10 per cent per annum in the next decade. (Nurse 1996a). Moreover, the activities undertaken by firms in this industry have steadily moved higher up the value-added chain. In the early years, the information service industry was dominated by firms performing basic data entry activities. At present, the range of activities undertaken by firms in this industry has increased tremendously. The information services activities that are currently undertaken in the country range from the processing of airline tickets and financial information to software development. Indeed, this industry has been identified as the one that will propel Barbados into developed country status (Filder 1995:35).

Global technological changes and the birth of a new industry

Since the late 1960s, there has been a discernible trend towards the relocation and suburbanisation of what was then termed 'back office work' (Nelson 1986).[2] The forces propelling the relocation of office work from the metropolis into the suburbs were the dramatic increases in the costs of land and clerical labour. Attempts were thus made to decrease office costs and improve efficiency. Efficiency gains were realised from the fragmentation of the secretarial task into basic typing and administrative duties. Administrative activities were kept at the head office while data entry activities were relocated. Similarly, reductions in office costs were obtained by moving the data entry functions out of the metropolitan offices into suburbs and small towns (Nelson 1986:155; Posthuma 1987:25). This fragmentation of tasks that was applied intra-nationally is now being implemented internationally. Work that was previously performed in the suburbs and small towns of industrialised countries is increasingly being carried out in low-wage, developing countries.

The forces propelling these changes were twofold: the technological advances in the telecommunications industry, and the automation and computerisation of office and clerical work. Tremendous changes occurred in the international telecommunications industry in the late 1970s. Computer technologies were now applied to telecommunications. This not only resulted in a reduction in the costs of telecommunications equipment, but also an increase in the reliability and capacity of individual equipment units. One result of these developments was that telecommunications systems capable of efficiently transmitting large quantities of data emerged (Pearson and Mitter 1993:54; Saunders *et al.* 1994:37–8). In addition, several technological changes occurred in office equipment. In the 1980s, the personal computer was developed. Further, electronic links to mainframe computer systems were introduced. At the same time, the costs of office equipment decreased dramatically. One researcher stated that the real price of microcomputers fell at an average annual rate of 28 per cent between 1982 and 1988 (Braga 1996:36).

The development of the offshore information service industry was accelerated by organisational changes occurring in firms in the industrial countries. The need to achieve time and cost efficiencies has resulted in companies implementing techniques such as just-in-time systems and electronic data interchange. One result of these organisational changes was the increasing tendency of companies to outsource non-strategic activities like data entry and information processing (Schware and Hume 1996:3).

Hence, advances in telecommunications, together with the automation and computerisation of office work, and the results of organisational change, have spawned a new industry–information services. Firms are now able to disaggregate those labour-intensive aspects of their information processing activities and perform them in low-wage countries. The main factor driving firms to establish offshore information processing operations in developing countries is the availability of low-cost, relatively skilled labour. Indeed, the savings in labour costs that are obtained from establishing offshore information processing operations are tremendous. Researchers estimated that the use of offshore operations reduces the cost of data entry by more than 50 per cent (Pearson and Mitter 1993:57). Thus, firms have established offshore information processing operations in low-wage, English-speaking developing countries. Companies prefer to establish offshore information processing activity in English-speaking countries since they seek to avoid the complications of crossing language barriers (Office of Technology Assessment 1985:217).

A diversity of enterprises has taken advantage of these opportunities. Moreover, a spectrum of activities ranging from data entry at the lowest level, to software development at the highest, is performed offshore.

In the following sections, an examination will be made of the foreign investment decisions of four MNEs that operate in the information service industry of Barbados. As noted in Chapter 6, the four MNEs used in this case study were AMR Corporation, Digital Imaging & Technologies Incorporated, PRT Corporation of America and Santype International Limited. Interviews were conducted with executives at both the headquarters and subsidiaries of these MNEs. A total of ten managers were interviewed.

In addition, interviews were conducted with policy-makers, heads of ministries and government departments as well as managers of locally owned companies. The information obtained from these interviews was supplemented with data derived from company annual reports and newspaper articles.

The following section profiles the four information service multinationals.

The four information service multinationals in Barbados

AMR Corporation

AMR Corporation, which is publicly owned, is the largest of the firms studied. In 1995, this company had total assets of US$19,556 million. Its total number of employees for this year was 110,000. AMR Corporation has three main divisions: the American Airlines Group, the Sabre Group and the Management Services Group. The largest division of the Management Services Group is AMR Services. AMR Services has six main operating divisions, one of which is Data Management Services.

The Data Management Services division provides data capture and document management services to American Airlines and to companies in the insurance, financial services and transportation industries. In 1996, this US$150 million company had a staff of 5,000. Its headquarters are located at Fort Worth, Texas. It operates three offshore locations in Santo Domingo, Mexico and Barbados. The Barbadian facility, Caribbean Data Services, is the largest of the three offshore operations. In 1996, it had a staff of 1,200 persons. Caribbean Data Services was established in 1983 at a cost of an estimated US$3.5 million. The company was initially formed to process airline tickets for the American Airlines Group. However, in the late 1980s, it began processing tickets for other airlines. More recently, it has widened its range of information service activities to include the processing of health insurance claims, payroll and general accounting, as well as management reporting.

Digital Imaging & Technologies Incorporated

Digital Imaging & Technologies Incorporated was established in 1980 in Anaheim, California. The company, which is privately owned, is involved in data entry, text processing for the publishing industry and document conversion. The company has production sites in California and Texas. It is also involved in an alliance with a Chinese firm. In addition, it has three offshore locations in Mexico, Grenada and Barbados. Its Barbadian operations, Offshore Keyboarding, is the largest of the three offshore sites.

Offshore Keyboarding is a wholly owned subsidiary of Digital Imaging & Technologies Incorporated. This company was purchased from Cable & Wireless in 1992. It presently employs 450 persons. Offshore Keyboarding was initially involved in typesetting. It has recently extended its range of activities to include data entry and text processing. Text processing involves the conversion of edited manuscripts to CD-ROMs.

PRT Corporation of America

The privately owned PRT Corporation of America, which is located in New York, was established in 1989. This US$14 million firm is a computer consulting company. It offers services in strategic technology consulting, project management and staffing. Since 1989, PRT's sales volume has grown at an average annual rate of 100 per cent. In 1995, it surpassed US$20 million in sales. As a result of this rapid sales growth, in 1995 the company was ranked as the 42nd fastest growing private company in the United States (PRT Insider 1995:1). PRT has four branch offices in the US and international offices in London, India and Barbados. Its Barbadian operations, Total Technology Solutions Limited (TTSL), was established in 1995. This facility, with a staff of 110, offers services in software development and project management.

Santype International Limited and Simpson Incorporated

Santype International Limited is one of the oldest of the MNEs studied. Moreover, it is the only British company examined. It is also the only MNE studied that is involved in a joint venture with a local firm. Santype International Limited, which was incorporated in 1940, is located in Salisbury, UK. In 1995, its total assets were US$4 million and it employed sixty persons. This privately owned company is a complex typesetter. It engages in typesetting for scientific and technical books and journals. Its Barbadian operation is its first offshore operation.

Simpson Incorporated is a holding company that is located in St Michael, Barbados. This privately owned company, which was incorporated in 1972, is involved in financial services, real estate and the retail of automobiles.

Santype International Limited and Simpson Incorporated both own and operate the Barbadian company Technotype International. However, Simpson Incorporated is a minority shareholder, owning just 20 per cent of the equity of the joint venture company. Technotype International, which was established in 1994, is the smallest of the offshore operations studied. In 1996, it employed fifteen persons. Technotype International performs keyboard operations for its British parent company.

The motivations for FDI in the information service industry of Barbados

As discussed in Chapter 4, this study contends that the possession of superior advantages over domestic competitors does not motivate a firm to engage in FDI in Barbados since it argues that the country does not have effective domestic competitors (Hood and Young 1979; Vachani 1985). In addition, it is suggested that MNE investment in Barbados is influenced by the earlier investment made by its competitors in the country (Knickerbocker 1973). Further, the MNE's investment in Barbados is likely to be motivated by the synergies it can obtain from using its firm-specific assets in combination with the locational endowments of the country (Dunning 1979, 1980, 1993a).

H1: The monopolistic advantage hypothesis

It seems that these four MNEs were not motivated to locate their offshore information service activity in Barbados simply because they possessed firm-specific assets that are superior to those of the local information service companies. The firm-specific assets of the four MNEs were production technology, human resource management and marketing skills. However, these assets were not used for competition with domestic information service firms. Interestingly enough, the four MNEs did not perceive the domestic firms to be their competitors. Their competitors were global firms that had offshore facilities outside of Barbados. Indeed, the managers of Digital Imaging & Technology Incorporated (DIT) stated that their competitors have established offshore operations in Asia and other Caribbean countries, such as St Lucia, Jamaica and Grenada. Similarly, the manager of Santype International Limited revealed that his major competitors all have offshore operations in the Philippines, Indonesia and mainland China. Also, the manager of Caribbean Data Services (CDS) stated that his major competitors have established operations in Mexico. Further, the executives of PRT Corporation (PRT) revealed that none of their competitors are located in the Caribbean region. Instead, they have set up offshore operations in India, Eastern Europe and Ireland.

What is interesting, however, is that the domestically owned firms in this industry do not pose a competitive threat to these four MNEs. An overwhelming number of enterprises in the information service industry of Barbados are locally owned. Nurse reveals that domestically owned firms comprise 58 per cent of the total number of firms in this industry (Nurse 1996a:8). Thus, it is surprising that none of these firms was a source of competition to the four MNEs, especially since many of them are also engaged in export-oriented activity. Clearly, this has implications for the competitive strengths of the locally owned information service firms. Moreover, it is worth noting that the local partner of the joint venture studied was not involved in information services. Rather, its main business was the retailing of automobiles, financial services and real estate.

The investment promotion agency of Barbados, Barbados Investment and Development Corporation (BIDC), has recognised the weakness of the domestic information service companies. In 1993, it launched the programme, 'INFOTECH 2000'. This programme attempts to involve local companies in the development of the information service industry. In so doing, it seeks to find international markets for the services of the local firms. Thus, the BIDC, inter alia, attempts to match the local companies with potential foreign joint venture partners; secure subcontracting work for them; and provide incentives for these companies to participate in international trade shows. While this programme has achieved moderate success, the domestic firms in this industry are not yet internationally competitive (Nurse 1996a:31–2).

H2: The 'follow-the-leader' hypothesis

It appears that Knickerbocker's 'follow-the-leader' hypothesis does not fully explain the decisions of the four MNEs to set up operations in Barbados. As was earlier discussed, advances in the telecommunications industry, together with the automation and computerisation of office work, have resulted in firms locating the labour-intensive segments of their information service operations offshore. The main factor that drove these activities out of the home countries into developing countries was the availability of low-cost, relatively skilled labour. The four information service MNEs studied have all implemented this global strategy. However, they maintained that their decision to locate their labour-intensive activities in Barbados was not influenced by the actions of their competitors. As was discussed above, the managers stated that while their competitors have offshore operations, none of them have made investments in Barbados.

The manager of CDS stated that his company was the pioneer in the offshore processing of airline tickets. He said that the parent company, AMR Corporation, in an attempt at reducing the cost of office services, established offshore data processing operations in Barbados. He noted that their activities in Barbados were quickly imitated by competing airline companies. However, he stated that none of his competitors established operations in Barbados. Their operations are located in other developing countries, for example Mexico.

The manager of Santype also revealed that low-cost labour was the main factor influencing his decision to establish operations in Barbados. He noted that firms in the publishing industry presently are experiencing tremendous pressures to reduce operating costs. Thus, many companies are setting up offshore locations in low-wage developing countries to achieve cost competitiveness. He further stated that some companies even engage in subcontracting arrangements in low-wage locales. However, he noted that none of his competitors has established operations in Barbados.

Similarly, the managers of PRT said that several of their competitors have begun to establish offshore operations. They are all attempting to locate operations in low-wage developing countries to gain savings in labour costs. However, the managers maintained that they are the only firm in their segment of the industry that has operations in the Caribbean. Finally, the executives at DIT revealed that while all of their competitors have offshore locations, none of them has established operations in Barbados. Indeed, they stated that their decision to set up offshore operations in Barbados was not influenced by the actions of their competitors. The firm bought its offshore operations, Offshore Keyboarding, from the original owners, Cable & Wireless, in 1992. Their motivation for acquiring the company was to expand their operational base since they already had a production site in a neighbouring Caribbean country.

Evidently, the 'follow-the-leader' investment behaviour does not adequately explain what motivated these MNEs to establish operations in Barbados. These four MNEs followed their competitors offshore. However, they did not follow them into Barbados.

H3: The eclectic paradigm hypothesis

It appears that these four MNEs sought to combine their firm-specific assets with the locational advantages of Barbados. In 1983, AMR Corporation established CDS in Barbados to process the airline tickets obtained from the operations of its subsidiary company, American Airlines. AMR Corporation, in its decision to establish operations in Barbados, initially sought to combine its core competencies in production technology and human resource management with the locational advantages of the country. The locational endowments of Barbados were its low-cost, skilled labour force, its proximity to the US, and its time zone equivalence with the eastern seaboard of the US. The processing of airline tickets is a high volume operation that requires quick turnaround times. The production techniques required to undertaken this information service activity resided in AMR Corporation. The company simply transferred these techniques to its Barbadian subsidiary. In addition, the company possessed the necessary telecommunications technology needed to successfully establish and operate an offshore data processing facility. Indeed, AMR's initial investment in its offshore operations was substantial. It invested an estimated US$2 million in a satellite channel to transmit data (Posthuma 1987:34–5).

Further, because of the multinationality of its operations, AMR Corporation possessed staff who were experienced in operating in foreign locations. During the earlier years of its operations, CDS was managed by a staff of expatriates. However, recognising the importance of productivity levels to the success of its Barbadian operations, AMR Corporation sought to ensure that the managerial staff at CDS was local. The manager at CDS was drawn from the American Airlines Group. The local management successfully managed to motivate the workers to achieve high levels of productivity. In fact, within nineteen months of its operations, AMR Corporation was able to recoup its initial investment and generate profits from its Barbadian operations (ibid., 35).

The close proximity of Barbados to the US, together with its time zone equivalence to the eastern seaboard of the US, facilitated fast turnaround rates. Speed is critical to the processing of the airline tickets. CDS was able to speedily verify a passenger's airline ticket to credit card companies and other airlines. This meant that American Airlines was able to collect cash in a relatively short period. It was revealed that within three to four days of receiving the used airline ticket stub, CDS was able to relay data to American Airline's financial database in Tulsa, Oklahoma (ibid., 34). Thus, the Barbadian operations contributed tremendously to the lowering of operating costs for the American Airlines Group. As one executive of this company noted:

> The models typically show that locating in Barbados lowers our operating costs from roughly 30 to 40 per cent.

The success of CDS resulted in the AMR Corporation relocating more of its office work to its offshore facility in Barbados. CDS currently processes financial information for its parent company. It is involved in processing data for revenue accounting, on-line vendor invoices, and reservations editing for the Sabre Group.

In the late 1980s, AMR Corporation sought to introduce additional information service activities to its subsidiary in Barbados. In so doing, the company used another of its core competencies together with the locational endowments of Barbados. AMR Corporation now deployed its marketing skills in combination with the locational advantages of Barbados. It began to market the services of its Barbadian facilities to other airlines. CDS was now engaged in the processing of airline tickets for five other airlines. In addition, it processed insurance claims for five US health insurance companies. These new activities not only have increased the profitability of CDS, but also have resulted in the upgrading of the skills of its workers. The skills required for processing insurance claims are greater than those needed for processing airline tickets. The processing of airline tickets involves manipulation of data: the operator has to learn the specific code letters of various airports before typing in the relevant data. However, processing health claims is more skill-intensive. The workers are trained in medical terminology as well as different aspects of the US health policy. Moreover, this activity requires the operator to exercise judgement in deciding whether the information is complete, and if action needs to be taken based on the available information.

It is noteworthy that the introduction of new activities to CDS resulted in the improvement of the skills of its workforce. Barbados is presently viewed as the most proficient of AMR Corporation's offshore locations. An executive of AMR Corporation revealed:

> What we have found is that the Barbadian operation is a standard setter in setting up good processes.... The company there normally

> gives advice to the other subsidiaries on process establishment. When the other subsidiaries encounter difficulties in setting up a process, they normally telephone Barbados. The personnel there will normally work them through the process or they will fly to the location to provide assistance.

The corporate strategy that AMR Corporation has adopted is that of moving the lower value-added operations out of Barbados and relocating them to Mexico and Santo Domingo. Thus, the lower value-added activities that have the greatest volume are carried out in Mexico and Santo Domingo. The Barbados facility undertakes those activities that have a higher value-added and are more skill-intensive.

Interestingly enough, the Barbadian facility also serves as a site where the company undertakes activities that its clients deem to be confidential. Apparently, potential customers feel 'comfortable' with the environment of Barbados. Their concerns about the security of their sensitive data are allayed by what the manager of CDS described as the 'overall confidentiality' of the location. Thus, he noted that since clients are comfortable with the environment of Barbados, they trust CDS to do their most confidential work.

Similarly, Santype International sought to combine its firm-specific advantage of production technology with the locational advantages of Barbados. Santype International is a complex typesetter. It is involved in the typesetting of scientific and technical books and journal. The company, which has been in business for the past fifty years, was able to relocate its core competency in typesetting to its operations in Barbados. The main locational attraction of Barbados was the availability of low-cost, skilled labour. As noted earlier, firms in the publishing industry are under increasing pressure to reduce costs. Santype International was able to achieve substantial cost reductions from its operations in Barbados. The manager of Santype International noted that his company has been able to compete in an increasingly competitive industry because of its Barbadian operations. The Barbadian operations, Offshore Keyboarding, initially did the relatively simple work of origination. The workers typed manuscripts in a style that is chosen by the client. These manuscripts are typed into computers. The completed work is transmitted through the telephone lines to Santype International's office at Salisbury, UK. The entire transmission process takes a mere ten minutes. The operation in the UK undertakes the finishing work and transfers the results either to the client's printer or to a disk to be sent to the publisher.

In addition, Santype International was able to capitalise on the difference in the time zones between these two countries. Its manager revealed that time difference between the two countries was beneficial to his operations since he was able to synchronise the activities undertaken in his two production facilities. He stated that when his facility in Barbados is operating, England is asleep. However, the finished work from Barbados is transmitted to the Salisbury operations in time for the start of the workday. The manager noted that he has managed to obtain tremendous gains in efficiency from these synchronised operations.

It is noteworthy that the work carried out at Santype's offshore facility in Barbados is becoming increasingly complex. The manager of Santype revealed that the workers at Barbados are becoming more proficient. Thus, the parent company has sent them increasingly complex work. Indeed, the manager of Santype International stated that within one year, his two operations would be operating in unison. The work done in Barbados will be comparable to that undertaken in Salisbury.

Digital Imaging & Technologies Incorporated (DIT) also sought to integrate its firm-specific assets of production technology with the locational advantages of Barbados. The locational attractions of the country were its low-cost, skilled labour and its strategic geographical location. DIT is involved in data entry, text processing and data conversion. However, it only carried out data entry and text processing at its Barbadian facility, Offshore Keyboarding.

DIT undertakes data entry work for clients such as Federal Express, Xerox and Blue Cross of America. The managers of DIT described the company as a pioneer of imaging technology. This technology allows the company to accommodate data from images created by its scanners located in its offices at California and Texas. Using this system, DIT scans the data using optical character recognition techniques and transmits these images to its operations in Barbados via satellite. The operators in Barbados key in specified data from the images displayed and then transmit the completed data to the client's office in the USA. This entire operation takes less than a day. Thus, DIT is able to combine its technological mastery with the relatively cheap labour of Barbados to achieve competitiveness in an industry where price is the main determinant of competition. Offshore Keyboarding is also involved in text processing. This involves the imaging of books to CD-ROMs for libraries. As mentioned earlier, the publishing industry is under tremendous pressure to reduce costs. Thus, DIT is able to compete on the basis of price by locating its text processing operations in low-wage Barbados.

Barbados is also the site for the more skill-intensive activities undertaken by DIT. Indeed, one of its executives noted:

> Barbados has a good match of skills and complexity. Hence, we do our publishing work there. We are unable to do this type of work in Grenada, for instance, it is too complex. In Mexico, we suffer from a language problem. Barbados is the best place for this type of work.

The labour force at Barbados appears to be more proficient than that of the company's three operations in Mexico, China and the Caribbean country of Grenada. Hence, the company has located the more skill-intensive activity of text processing in Barbados. The managers said that the company is unable to undertake this type of work in Grenada and Mexico because it is too complex. Data entry activities are carried out primarily in Grenada, Mexico and China. However, Barbados with its low-cost, skilled labour is the site for text processing.

In addition, the managers of DIT stated that one of the locational attractions of Barbados is its strategic geographical location. DIT has clients in both Britain and the USA. Barbados's strategic location means that it is possible to serve both groups of clients from this country. The managers noted that the US is their main market for data entry: an activity that is characterised by quick turnaround times. Thus, the fact that Barbados is on the same time zone as the eastern seaboard of the US is advantageous to the company. Conversely, Britain is its main market for text processing. Text processing is not characterised by such fast turnaround times as data entry. Thus, DIT is able to effectively serve its British clients from its operations in Barbados since the country is only five hours behind Britain.

The managers at the PRT Corporation of America (PRT) also sought to integrate their core competencies with the locational endowments of Barbados. PRT is a computer consulting firm. Its specialises in strategic technology consulting, project management and staffing services. Its offshore operations in Barbados, Total Technology Solutions Limited (TTSL), is involved in software development and project management. It is only within recent times that PRT has acquired competencies in software development. The company has sought to develop this skill in its offshore site in Barbados. To this end, PRT recruited the former chief executive officer of Citicorp Overseas Software Limited in India to head its Barbadian operations. Thus, the core competencies that PRT sought to deploy in Barbados were its newly acquired skills in software development and marketing. The locational attractions of Barbados were its proximity to the US, its ambience and the ease of recruiting low-cost, highly skilled labour.

It is interesting to note that PRT relocated its offshore operations from India to Barbados. The manager of PRT noted that the company had experienced difficulties operating in India. These difficulties appear to have been related to concerns with the infrastructure and bureaucracy of the country as well as its geographical distance from the US. Thus, not surprisingly, the manager of PRT stated that one of the locational attractions of Barbados was its time zone equivalence with the eastern seaboard of the US. He revealed that it is easy to serve clients from Barbados since the country is easily reached from New York, where his headquarters are located, and London, which is the site of his marketing office. Further, the manager stated that the environment in Barbados is much more appealing than that of India. He said that his clients prefer to conduct business in Barbados. It appears that PRT has successfully managed to marry the country's attractions as a tourist resort with the marketing of its software services.

Moreover, PRT is able to secure low-cost, skilled labour to staff its Barbadian operations. It is noteworthy that Barbados does not possess many workers with the requisite software skills demanded by PRT. Its local university only graduates approximately thirty to forty computer science undergraduates annually. The manager of TTSL admitted that when the company decided to establish operations in Barbados, it recognised that it would not have been able to recruit the quantum of professionals it needed. However, he stated that the Barbadian government was willing to adopt a flexible policy towards its recruitment needs. To this end, the government has assisted the company by reducing the bureaucracy involved in securing work permits. Thus, TTSL is presently staffed with professionals drawn from various Caribbean countries, Nigeria, Canada and India. It is noteworthy that the Indian operations of PRT presently serve as a site for the recruitment of software engineers for its Barbadian facility.

The workers at the Barbadian operations earn less than their counterparts in the US. They use software designs that have been developed in the US and London. These software designs are programmed and tested at the Barbadian facility. The completed design is transmitted via satellite from Barbados to clients' offices in the US. Hence, TTSL is able to produce high-quality, low-cost service. This give the parent company significant cost advantages over its US competitors. As one executive of TTSL revealed:

> Our Barbadian investment is a strategic investment. Our company there has the ability to produce a high-quality, low-cost solution. This gives us a tremendous advantage over our US-based competitors.

The choice of locating information service activity in Barbados

This study contends that the decision to establish and continue operations in Barbados is influenced by the cost of labour (Vernon 1966; Moxon 1975; Sharpston 1975; Kumar 1994). It is also suggested that preferential trading agreements play an important role in motivating MNE's investment in Barbados (Johnson 1968; Joekes 1982; Griffith 1990). Moreover, it is postulated that the presence of export processing zones greatly influences the decision to locate information service activities in the country (Sharpston 1975; Frobel *et al.* 1980; Woodward and Rolfe 1993). This study also posits that the investment incentive package offered by the Barbadian government has no influence on the location decisions of the four MNEs (Shah and Toyne 1978; Agodo 1978; Wheeler and Mody 1991). Finally, it is suggested that the information service MNEs integrate elements of their home country's diamond with the diamond of Barbados (Rugman and D'Cruz 1993; Rugman and Verbeke 1993a).

H4: The low-cost factor hypothesis

The post-1980s have seen a wave of foreign investment into the information service industry of the Caribbean. The main factor driving this investment into the region is the availability of a low-cost, relatively skilled, English-speaking labour force. Indeed, all the managers emphasised that labour cost considerations played a decisive role in their decision to establish operations in Barbados. The manager of Santype International disclosed that the cost of keyboard operators in Barbados is nearly one-third that of England. Similarly, the manager of DIT stated that labour cost considerations were a major factor influencing his decision to establish operations in Barbados. Alternatively, it was revealed that the basic salary of the office worker at AMR Corporation was approximately four times that of her counterpart at CDS (Posthuma 1987:31). The PRT is a unique case. Labour cost considerations did play a critical role in its decision to establish operations in Barbados. However, much of its workforce were not Barbadians. Rather, the company has adopted a global recruitment policy. It is recruiting workers from different parts of the world. The manager of TTSL revealed that these workers earn a salary that is between 10 to 30 per cent less than that of their counterparts in the USA.

This low-cost workforce is not unionised. In none of the four MNEs studied was the workforce unionised. The comments made by several of the managers on the issue of unionisation were illuminating.

> I do not envisage a stage where unionisation would be feasible for us.
>
> Our workforce is not unionised. Our company is attractive to trade unions. However, we treat our workers right so there is no need for them to look for membership in any trade unions.
>
> Our workforce is not unionised because we just happen to be one of the best employers in Barbados.

It has been suggested that the workers in the information service industry are encouraged to think of themselves as white collar employees to pre-empt the militancy that characterises industrial workers. Moreover, the management style adopted in this industry is consensual rather conflictual (Pearson and Mitter 1993:61). In addition, some suggest that employment in the information processing industry is considered prestigious in the Caribbean. Thus, turnover rates are generally low (Office of Technology Assessment 1985:226; Posthuma 1987:48).

It is noteworthy that the cost of labour in Barbados is relatively higher than that of other developing countries. As Table 9.1 demonstrates, the wage rates in the information service industry of Barbados are the highest in the Caribbean region. Indeed, except for Ireland, the cost of labour in the information service industry of Barbados is the highest among developing countries.

Since 1977, Barbados has adopted a fixed exchange rate policy of US$1 to B$2. Unlike several of its Caribbean neighbours (Trinidad-Tobago and Jamaica), it has not used devaluation as a strategy for improving its

Table 9.1 Selected wage rates in the information processing industry, 1995 (hourly wages, as a percentage of US wage rates)

Country	*Data entry operator*	*Secretary*	*Voice operator*
Caribbean			
Barbados	29.0–32.0	55.0–57.0	—
Trinidad-Tobago	21.0	—	—
St Kitts-Nevis	20.0	26.0	23.0
Grenada	18.0–23.0	28.0	38.0
Jamaica	16.0–33.0	21.0	14.0
St Lucia	16.0–19.0	25.0–25.0	21.0
Dominica	16.0–18.0	21.0	14.0
St Vincent & Grenadines	16.0–18.0	25.0	20.0
Dominican Republic	14.0–14.0	—	—
Other Developing Countries			
Ireland	71.0–127	71.0–90.0	—
Mexico	18.0–22.0	—	—
India	11.0–17.0	—	—
Philippines	10.0–0.90	—	—
Developed Countries			
United States	100–100	100–100	100–100

Source: Adapted from Schware and Hume (1996)

economic conditions. This has resulted in its relatively high cost of labour. Interestingly, the relatively high cost of labour in Barbados has had a positive impact on developments in the information service industry. Some of the information service firms that were operating at the lower end of the industry were forced to leave the country. Their operations could not compete with those of lower cost locations such as Mexico, Dominican Republic or Jamaica. Thus, the activities that have remained in Barbados are less price sensitive, more up-market and demand greater levels of skills (Nurse 1996a:10).

As Figure 9.1 shows, information processing skills increase in value as skills or technology are added to labour. The most basic operation is data entry. Minimum skills are required to perform this activity: the operator possesses a rudimentary knowledge of English and a minimum level of computer literacy. The simple keystrokes for data entry normally are similar to those for typing. The industry standard for this operation is 10,000 keystrokes per hour. A higher level process is rules-based operations. This activity requires that the operator learn a system for keying data. An example of this type of operations is the processing of airline tickets. Activities on levels higher than that of rules-based operations require the use of technology to either simplify a task or improve quality by reducing key errors. Further, operations at a higher level may demand the

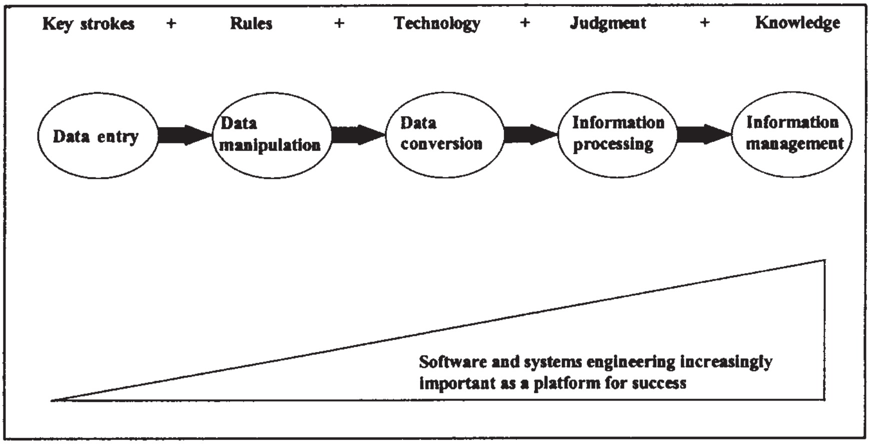

Figure 9.1 The creation of value in the information service industry

Source: Schware and Hume (1996)

use of judgement. Here, the operator may be required to decide whether the information is complete and if action needs to be taken based on its contents. An example of this type of activity is the processing of health insurance claims. At the highest level of the process is knowledge-based activities. These activities require that the operator possess the requisite knowledge for tasks such as database development or software conversion (Schware and Hume 1996:5).

The information service industry of Barbados is characterised by a mixture of the activities described above. However, there has been a discernible movement away from basic data entry activities to the higher level ones such as software development. This movement towards the higher-value, skill-intensive operations is clearly seen among the MNEs studied. Caribbean Data Services was established in 1983 to process airline tickets for its parent company, AMR Corporation. By the late 1980s, the company was involved in higher-value-added activities. It currently processes financial information for its parent company and adjudicates health claims. Data entry activities now account for only 20 per cent of its work (Filder 1995:37). Similarly, Offshore Keyboarding was initially involved in data entry and typesetting. At present, it is also converts manuscripts to CD-ROMs. Further, Technotype, the subsidiary of Santype International, originally performed the keyboard operations for its parent company. As the manager of Santype International revealed, his offshore facility is presently performing increasingly complex tasks. Finally, PRT, the most recent entry into the industry, is involved in software development. It is undertaking the highest level of the information service processes.

Evidently, the workforce employed in the information service industry of Barbados is flexible. This has implications for the levels of education and training of the country's labour force. Indeed, Barbados's literacy rate of 98 per cent is one of the highest in the developing world. Moreover, during the years 1989 to 1994, its gross enrolment ratio was 85 per cent.[3] The comparable figure for upper-middle-income countries was 59 per cent (World Bank 1996a:29). Thus, these MNEs had access to a relatively-well educated labour force. What is noteworthy, however, is that the skills of this workforce were continuously upgraded. Porter states that a competitive advantage derived from low-cost labour is easily nullified. He emphasises that the skills of this low-cost labour force need to be continuously enhanced if this competitive advantage is to be sustained (Porter 1990:79). This seems to be the case of the MNEs studied. Several implemented training schemes for their workers. The manager of CDS stated that his company provides each worker with seven days of training annually. The courses offered by CDS aim at the academic and social development of the worker. Some of these training programmes are conducted in-house. Alternatively, workers are sent abroad for training. The company presently has seven internationally accredited engineers who were trained in Dallas and Miami. Similarly, the managers of Offshore Keyboarding stated that they also offer training courses to their workers. They revealed that the majority of their workers emerge from a training school, which is located on their premises. This school, which caters to the needs of the entire industry, teaches basic data entry skills. In addition, the company sends workers abroad for training when it introduces a new technology. It is noteworthy that the BIDC supports the training programmes offered by these companies. It provides grants for the training and retraining of workers.[4] In addition, some of these MNEs have intervened in the education system to improve its quality. The manager of the CDS stated that his company was an initial sponsor of the associate degree programme offered at the local community college. It also sponsors the executive management programme at the local management development centre as well as the electronics programme offered at the local polytechnic.

Despite the high levels of literacy in the country, there appears to be a critical shortage of highly skilled personnel in the information service industry. Indeed, while Barbados has the profile of an upper-middle- to high-income country for secondary education, its enrolment ratio for tertiary schooling is much lower than the average for this group (World Bank 1993b:116–17). During the years 1985 to 1986, the tertiary enrolment ratio for Barbados was 18 per cent. The comparable figure for middle-income Latin America countries such as Brazil and Argentina was 50 per cent and 47 per cent, respectively (ibid., 116, Table 6.6). Thus, not surprisingly, the manager of Offshore Keyboarding complained of the dearth of programmers in the country. He noted that it is much easier for the offshore facility to do the necessary work at its parent company than to attempt to use the highly priced services of the local programmers. Further, the manager of PRT stated that there is a critical shortage of trained software professionals in the region. While the regional university offers degree programmes in engineering and computer sciences, it seems that its graduates may not have the requisite skills demanded by industry. It is posited that the undergraduate degree programme in computer sciences offered at the local university tends to focus on the technical rather than the business aspects of the discipline. It seems that the associated degree programme offered at the local community college provides its graduates with skills that are more relevant to the needs of the industry (Filder 1995:37; Ince 1996:5A).[5] It is noteworthy that the managers of PRT are proposing to offer a course in computer science at the local university. They perceive this to be a long-term investment in their company's future.

H5: The preferential trading agreement hypothesis

It appears that the preferential trading agreements that Barbados enjoys with the US, Europe and Canada played no role in motivating the MNEs to locate their offshore operations in the country. The managers interviewed all emphasised that their decision to establish and continue operations in Barbados was not dependent on their gaining preferential access to the markets of industrialised countries. Indeed, none of the information service activities undertaken in Barbados benefit from preferential trading agreements. The CBI, Lome and CARIBCAN do not grant preferential market access to information service activities. In addition, it seems that the Barbadian government consciously has adopted a policy of encouraging economic activity that is independent of precarious preferential trading agreements (*USA Today,* 6 August 1996:6). However, it must be pointed out that no duties are charged on the data that are re-imported from the Barbadian subsidiaries to the home countries of the parent companies. It seems that duties are not charged on the re-imported data because of the difficulties of measuring and monitoring these offshore information service activities (Office of Technology Assessment 1985:221; Pearson 1991:19).[6]

H6: The export processing zone hypothesis

The four MNEs were all located on an industrial park at Harbour View near to the capital city, Bridgetown. Barbados does not have export processing zones. It seems that its policy-makers sought to avoid the negative images associated with these zones. Thus, they prefer to call their enclaves of export-oriented activity 'industrial parks'. The site where these four MNEs are located is termed an 'information service park'. Interestingly, it appears that the four MNEs were all satisfied with the facilities offered at this information service park. They all stated that the presence of this park played a decisive role in their decision to establish operations in Barbados. However, it seems that the four foreign investors, in deciding to establish operations in Barbados, were also concerned about the quality of the general industrial infrastructure in the country. Indeed, it was these elements of the infrastructure that played a greater role in their decision to set up operations in Barbados.

The four MNEs all emphasised that they generally were satisfied with the quality of the industrial infrastructure. All stated that they found the public transportation system to be efficient. They said that their workers did not experience any difficulties in securing public transport. In addition, several concurred that the quality of the electricity service was world class. However, one manager revealed that he had to install a generator to smooth out fluctuations in the electricity supply. Yet, he emphasised that the quality of the electricity supply in Barbados was superior to that of another Caribbean country where he also operated. Further, they all were satisfied with the airline services. Barbados has daily flights to New York and Miami as well as twice-weekly flights to London and Frankfurt. Hence, the managers stated that Barbados is globally well connected and it is easy for executives from their parent company as well as clients to visit their offshore operations. Moreover, since the country is a tourist destination, it possesses several internationally renowned hotels. Additionally, most appeared to be contented with the quality of the buildings in which their operations are housed.[7] They noted that the rental rates at the industrial park were competitively priced.

It is important to note that the managers of the four MNEs emphasised that the services offered by the Barbados Investment and Development Corporation (BIDC) were excellent. One manager, whose firm has been operating in the country for the past five years, noted that the services provided by the BIDC throughout this period were invaluable. Another, who was introduced to the corporation by his local partner, stated that he was very happy with its services. One manager also stated that his company is very satisfied with the services of this organisation. In fact, he said that executives in the parent company participate in the international promotions activities hosted by BIDC in the US. Interestingly, another manager stated that one of the factors that influenced his company's decision to establish operations in Barbados was the excellent marketing strategy employed by the BIDC. He said that the company was made to feel very welcome when they first visited the country.

Indeed, one official at the BIDC stated that the organisation takes great pains to ensure that the potential investor is encouraged to establish operations in the country. She described these efforts as a 'very comprehensive, hand-holding exercise'. The corporation's marketing strategy is extensive. It arranges an itinerary for the potential investor that is sent to him for his approval. On arrival to the country, the investor is met at the airport. The BIDC also makes the necessary arrangements for his accommodation and attends all official meetings with him. In addition, the organisation assists the investor with the mandatory documentation needed to set up operations in the country. Moreover, it assists the investor in securing staff. Also, since 1992, the corporation has hosted a biannual international telecommunications service conference. Participants include *Fortune* 500 companies as well as professionals with specialities in areas such as banking, information technology and communications. In addition, the BIDC provides a comprehensive post-investment service. The BIDC is in contact with the investor on a quarterly basis during the first year of his operations. Over time, these contacts become more infrequent. However, the corporation ensures that a good rapport is maintained between itself and the investor. While its officials do not pay quarterly visits to the company's premises, they maintain telephone contact with its managers.

The managers of the four MNEs unanimously agreed that while the quality of the telecommunications service was acceptable, its costs were too high. The following comments illustrate their views on the costs of the telecommunications service in the country.

> The telecommunications rates are too high. The international dialling rates are extremely high. I have been hearing of deregulation of the market. I believe that the present situation is resulting in unnecessary high costs.
>
> The telecommunication rates were too high during the first few years of our operations. In the last eighteen months, it has improved somewhat.... The voice lines are still very expensive. I believe that this is a result of the monopoly position enjoyed by Cable & Wireless.
>
> The telecommunication infrastructure is excellent but the costs are too high. There is not too much they [the government] can do because Cable & Wireless has the monopoly for 20 years. This has come out of colonial times. The company pretty much has the entire Caribbean tied up.

Indeed, as Table 9.2 shows, the telecommunications rates for selected services in Barbados are higher than those in Jamaica and Trinidad-Tobago.

There are two telecommunications companies in Barbados: the Barbados Telephone Company (BARTEL) provides domestic services and the Barbados External Communications Limited (BET) provides international services. BARTEL is 80 per cent owned by Cable and Wireless, which also owns 85 per cent of BET. Thus, in effect, Cable & Wireless (C&W) has a monopoly over the provision of telecommunications services in Barbados. The monopoly position that C&W enjoys has been assured by the Barbadian government through various licensing agreements. These agreements provide C&W with near total control of the telecommunications system with little control left to the government (Schware and Hume 1996:27). Nonetheless, the Barbadian government, understanding the

Table 9.2 The cost of telecommunications services in several Caribbean countries, 1995 (US$)

Type of service	*Barbados*[ab]	*Jamaica*		*Trinidad and Tobago*
		Rest of Jamaica	*Jamaica Digiport at Montego Bay Free Zone*	
International direct dial (IDD) toll rates, based on 3 min. call	5.51	3.23–3.82	0.57–1.68	3.10
International 800 service	n.a.			
Rate by minute	2.00	1.14	0.19–0.56	0.05
Monthly charges	n.a.	n.a.	n.a.	40.00
Analogue private lease lines (voice grade)				
Installation charges	1,250.00	1,680.00	3,830.00	n.a.
Monthly rates	n.a.	n.a.	n.a.	316.00
Leased circuits				
T-1 half channel/month	16, 647.00	21,980.00	18,000.00	30,400.00
RT-1 full channel/month	n.a.	49,500.00	n.a.	n.a.
Installation charge	1,515.00	5,000.00	n.a.	n.a.
56 kpbs/month	2,080.00	2,800.00	1,812.00	3,800.00
Installation charge	1,263.00	1,500.00	n.a.	300.00
From New York, USA To The Caribbean[c]				
IDD toll rates based on 3 min. call	2.15–5.51	1.99–4.43	1.99–4.43	2.23–4.43
From London, UK To The Caribbean[d]				
IDD toll rates based on 3 min. call	1.44	1.44	1.44	1.44

Source: Adapted from Schware and Hume (1996)

Notes: [a]Special rates for firms in the information service industry
[b]One hour minimum for international 800 services
[c]Based on AT&T's Customnet Plan for large volume business users
[d]Based on British Telecom international rates

vital role that telecommunications pricing plays in the development of the information service industry, has sought to ensure that the rates are decreased. Thus, in 1994, there was a 50 per cent reduction in the rates of leased circuits. They are now comparable to those offered in Jamaica's Montego Bay Free Zone and to the Canadian rates in North America (ibid., 13). In addition, the telecommunications companies offer special services to the information service companies. Companies in this industry, which have more than ten employees, receive a 50 per cent discount in the rates of dedicated leased circuits.

The government is still not fully satisfied with the quality of the service provided by C&W. In many parts of the country, the existing telecommunications infrastructure consists of the Plain Old Telephone System (POTS).[8] This infrastructure is rapidly being replaced by fibre optic cables and digital systems. C&W has also invested in a second international telephone switching centre and a second earth station. It is argued that these new investments provide the state-of-the-art telecommunications technologies that are capable of supporting services such as Integrated Services Digital Networks (ISDN),[9] high-speed switched data and dial-up video conferencing (Barbados External Communications Limited, Annual Report 1995:4). Despite the recent investments made by C&W, the Barbadian government is demanding that further changes be made to the telecommunications infrastructure. They have stated that the telecommunications service in the country must be competitive on a 'first world level'. Thus, they are pressing for the introduction of the latest telecommunications technology, Asynchronous Transfer Mode (ATM).[10] Moreover, they are contemplating the introduction of 'competitive forces' into the market where the existing licensing agreements allow new technologies to be entertained.[11]

H7: The investment incentives hypothesis

There were mixed reactions on the issue of the attractiveness of the investment incentive package offered by the Barbadian government. The Barbadian government offers international business status to companies with less than 10 per cent CARICOM ownership that export all their goods and services outside of the Caribbean. Three of the MNEs studied were international business companies. These firms enjoy taxation rates of 2 1/2 per cent; full exemption from import duties on production-related equipment; full repatriation of capital, profits and dividends; subsidised office space; and training grants. The MNE that was involved in the joint venture with the local firm was not eligible for the incentives provided by the International Business Act. Moreover, since it was not involved in manufacturing, the joint venture company did not qualify for the investment incentives available under the Fiscal Incentives Act. Nonetheless, under a special arrangement with officials of the BIDC, the company enjoyed several investment incentives.[12] Thus, it had a ten-year tax holiday; duty free exemptions on production-related equipment; subsidised office space; free repatriation of capital, profits and dividends; and training grants.

There seemed to be ambivalence on the issue of the attractiveness of the investment incentives offered by the Barbadian government. One manager, who enjoyed international business status, revealed that it was the low taxes and duty free import of equipment that were important to his decision to establish operations in the country. Another also cited the low rates of taxation but, in addition, included the incentive of subsidised office space. The other manager, who also enjoyed international business status, stated that low taxes and import duty concessions played a decisive role in the initial decision to set up operations in Barbados. However, he noted that, at present, other locations offered more attractive investment incentives than Barbados. It is noteworthy that the MNE which did not have international business status maintained that duty free imports of equipment played an important role in its decision to set up operations in the country. Hence, the investment incentives that seem to be most favoured by these four MNEs were low taxes and duty free imports of equipment. What is significant, however, is that none of these firms considered free repatriation of profits, capital and dividends to be critical to their decision to establish and continue operations in Barbados.

H9: The 'Double Diamond' hypothesis

It appears that the 'Double Diamond' hypothesis clearly explains the investment behaviour of the four information service MNEs in Barbados. The strategic management style these firms used for their Barbadian operations can be illustrated by Quadrant 4 of Figure 9.2.

The Barbadian operations were increasingly becoming an integrated part of the corporate strategy of these four MNEs. Barbados was initially used as a site for the outsourcing of low-value-added, low-skill activity.

Figure 9.2 The role of the Barbadian operations in the corporate strategy of the information service MNEs

Role of host country national 'diamond' on development of core competencies of information service MNEs	Integration of Barbadian operations with other operations of the information service MNE: Low	High
None	1	2
High	3	4
Diamond Network	5	6

Source: Adapted from Rugman and Verkebe (1993a)

However, the country is no longer regarded as a location for this type of information service process. The activities carried out in Barbados have steadily moved up the vertical chain of value-added. In so doing, the Barbadian facility has become increasingly important to the parent company's global strategy. Thus, Barbados's diamond is positively impacting on the development of the core competencies of the MNEs. The elements of Barbados's diamond that were of importance to the four firms are demonstrated in Figure 9.3.

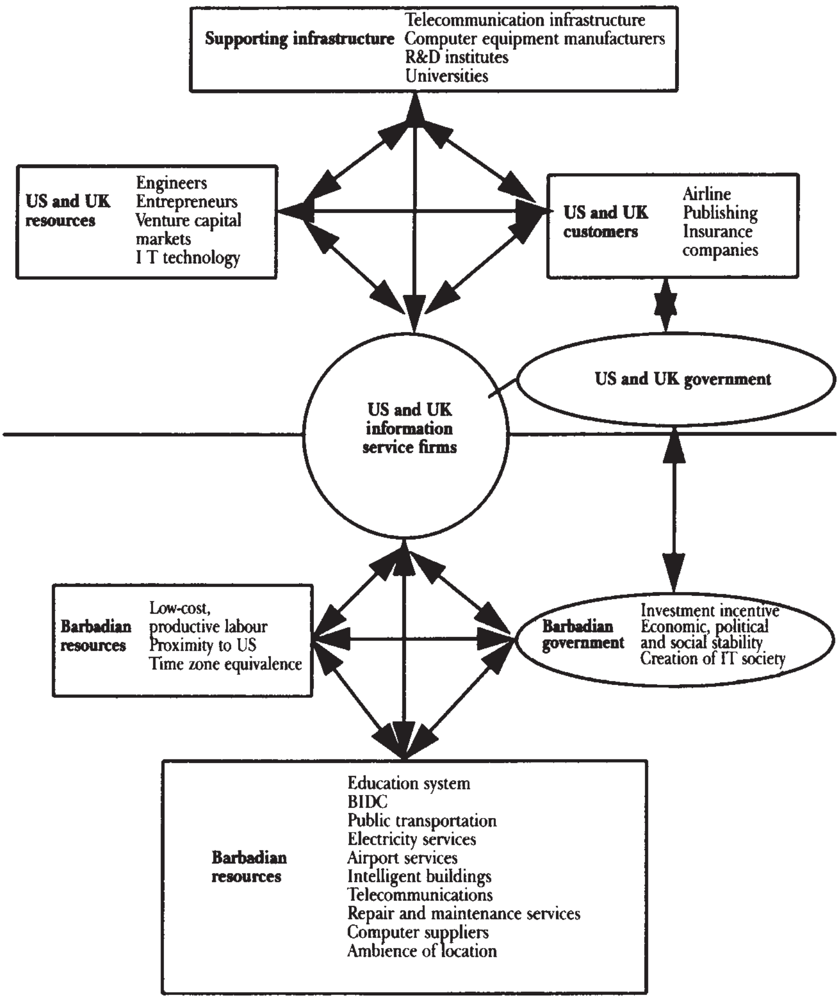

Figure 9.3 The 'Double Diamond' approach to the information service industry of Barbados.

Source: Adapted from Rugman and Verbeke (1993a)

The main elements of Barbados's diamond that were of significance to the MNEs were low-cost, skilled labour; time zone equivalence with the USA and the UK; efficient bureaucracy; and ambience of the country. Several of these factors are easily duplicated. The MNE could easily relocate its information service activity to a low-wage location that is on the same time zone as its major markets. However, what is noteworthy is that in Barbados, several of these factors were continuously upgraded. In so doing, these factors became even more critical to the international competitiveness of the four MNEs.

Barbados was initially used as a location for low-cost, semi-skilled labour. However, its relatively high wages have since precluded the relocation of low-value-added activity. Moreover, the MNEs, supported by training grants provided by the BIDC, continuously upgraded the skills of their workers. In addition, some of the MNEs have intervened in the education system to ensure that its graduates would have the requisite skills and training. Thus, the four firms were steadily relocating more of their skill-intensive information service processes to their Barbadian operations.

The other elements of Barbados's diamond were noticeably strong. Its institutional framework for foreign investment operated with efficacy. The services provided by BIDC were described as being excellent. In addition, the public transportation system, the electricity service, and airport services were all efficient. Moreover, the rental rates of the work sites were competitively priced.

There were several elements of Barbados's diamond that were weak. Telecommunications services were not competitively priced. Moreover, the local university failed to produce graduates with the skills and training demanded by operators in the higher-value-added segments of the industry. Thus, it appears that the locally trained computer scientists do not possess the requisite skills needed by firms in this industry. In addition, there seems to be an inherent bias in the investment incentive system. The firms that are owned by CARICOM nationals are not given the same incentives as foreign-owned firms. This could only accentuate the weaknesses of domestic firms in the industry. Further, it seems that the capability of the local maintenance and repair companies in this industry is limited. Indeed, few of the MNEs studied have extensively used the services of local computer suppliers and domestic maintenance and repair companies. Two of the MNEs studied used the services of their parent company for the maintenance and repair of equipment as well as for troubleshooting. One company had made limited use of the local support firms in the information service industry. However, its manager noted that there is an absence of local expertise for certain specialist skills. By contrast, another company has its own maintenance and repair department. This department is staffed by twenty highly trained professionals who are responsible for the network administration, programming and development needs of the company.

The government appears to have a positive impact on the country's development of a sustainable competitive advantage in the information service industry. Its adoption of a fixed exchange rate has forced the relocation of firms that operate in the low-value-added segments of the industry. Its flexible policy to the recruitment needs of PRT has encouraged the establishment of what is said to be the first offshore investment in software development in the region. In addition, its maintenance of economic, social and political stability has facilitated the inflow of foreign investment into this industry. This stability, coupled with the ambience of the country, has made Barbados a preferred location for information service activity. Finally, the government plans to transform the country into an 'information age society' in less than a generation (Filder 1995:35). To this end, it plans to introduce computers into schools and promote on-line applications and databases for hospitals, courts and customs (Schware and Hume 1996:13). Undoubtedly, the foreign investor is likely to benefit from these initiatives.

The modes of investment used by the four multinationals MNEs in Barbados

This study suggests that the MNE involved in intra-firm trade in Barbados will use a wholly owned subsidiary as its mode of market entry (Teece 1983; Anderson and Gatignon 1986; Gomes-Casseres 1989, 1990). It is also posited that the level of international experience of a firm influences its selection of a market entry mode. The study also contends that the MNE with international experience uses a wholly owned subsidiary as its market entry mode (Johanson and Wiedersheim-Paul 1975; Johanson and Vahlne 1977, 1990; Li 1994; Tan and Vertinsky 1996). In addition, it is suggested that the cultural distance between the home and host country plays an important role in the MNE's selection of a market entry mode (Kogut and Singh 1988; Padmanabhan and Cho 1996).

Three of the MNEs studied were wholly owned subsidiaries. The other was involved in a joint venture arrangement with a local firm. There appeared to be different reasons for their selection of a market entry mode.

H10: The intra-firm trade hypothesis

The theory advanced by researchers such as Anderson and Gatignon (1986) and Gomes-Casseres (1989, 1990) on the relationship between intra-firm trade and the firm's selection of a market entry mode has been supported by this study. The four MNEs were involved in intra-firm trade. The Barbadian operations served as the offshore information processing site for the parent company. Data were transmitted using various telecommunications modes to Barbados. These data were processed in Barbados and retransmitted either to the parent company or to its clients.

It appears that these firms' selection of a market entry mode was largely influenced by their need to exercise control over the operations of their Barbadian facility (Stopford and Wells 1972:113–19). The comments made an executive of AMR Corporation support this argument.

> I think in the first instance we wanted to have total control over the operations of the company from a fiduciary standpoint. The initial objective of Caribbean Data Services was to handle all the data processing needs for American Airlines. It was a wholly owned subsidiary that reported to the data processing and computer department of American Airlines. It was a matter of control from the very beginning.... It is a type of operations in which confidentiality is vital so we did not consider any other form of investing in Barbados.

Similarly, the managers of PRT chose the mode of a wholly owned subsidiary because they wanted to exercise control over their Barbadian operations. Indeed, they claimed that they did not perceive the need for any other form of institutional involvement in Barbados. Conversely, the managers of Digital Imaging and Technologies Incorporated stated that the Barbadian subsidiary was purchased from Cable & Wireless. They chose the mode of a wholly owned subsidiary because they wanted to have total control over the operations of their Barbadian company. Finally, it appears that Santype International, which was the smallest of the MNEs studied, was willing to concede to a form of foreign involvement that resulted in reduced control. The manager stated that it was important for the company to have a local partner who possessed knowledge of the 'local scene' (Beamish 1988, 1994). Evidently, the local partner contributed skills to this venture. As the manager of Santype revealed, the local partner knew the officials at BIDC, the government and other influential people. He thought that it would have been too difficult for them to acquire this knowledge on their own.

H11: The international experience hypothesis

It seems that the level of international experience of the companies influenced their selection of market entry mode. Three MNEs had experience operating in foreign locations before establishing operations in Barbados. DIT operated in another Caribbean country before acquiring its Barbadian subsidiary. Thus, the managers felt that they possessed the requisite knowledge of the region to operate a wholly owned subsidiary in Barbados. In this case, it appears that familiarity with the Caribbean region or 'regional experience' played a great role in influencing their selection of a wholly owned subsidiary (Davidson 1980; Li 1994). Similarly, PRT operated in India before relocating its software development facility to Barbados. The managers possessed several years of experience operating in a developing country. Thus, they selected a wholly owned subsidiary as their mode of market entry in Barbados. The AMR Corporation was the most internationalised of the companies studied. Its American Airlines Group operates in several countries of the world. Thus, it appears that AMR Corporation possessed the 'worldwide' experience needed to select a wholly owned subsidiary as its mode of market entry in Barbados (Li 1994). By contrast, Santype International had no international experience. Its Barbadian facility was the first investment it had made abroad. Thus, not surprisingly, it did not select a wholly owned subsidiary as its mode of market entry. Instead, it opted for a majority owned joint venture arrangement with a local firm. It is interesting to note that this local partner was described as an 'old family friend'.

H12: The cultural distance hypothesis

It is significant to note that none of the four MNEs stated that culture played a decisive role in their selection of a mode of market entry. The cultural distance between Barbados and the home country of these MNEs is not great. Indeed, in one instance, Barbados was a former colony of the home country of a MNE. In addition, the country is English-speaking and is located in fairly close proximity to the home countries of the four MNEs. Thus, there should be some cultural similarities between Barbados and its home country. Yet, none of the managers attributed their choice of market entry mode to cultural distance.

Conclusions

Seven of the eleven hypotheses advanced in Chapters 3 to 5 were supported by this case study. In addition, the following insights were obtained on the factors that influence the motivations, locational choices and market entry mode of MNEs investing in relatively high-skilled, labour-intensive activities in a small, developing country.

Motivations for FDI in the information service industry of Barbados

It appears that the monopolistic advantage theory does not adequately explain what motivated the four MNEs to establish operations in Barbados. These firms clearly did not view the domestic information service companies as competitors. Rather, they considered the foreign firms that had offshore investments outside of Barbados to be their competitors. Thus, they did not use their unique advantages in competition with the local firms. In addition, it appears that the 'follow-the-leader' theory does not explain what motivated the four firms to set up operations in Barbados. It seems that these four MNEs, like many in their industry, sought to achieve cost competitiveness by establishing offshore operations. Three MNEs did follow their competitors offshore. However, they did not follow them into Barbados. By contrast, it seems that Dunning's eclectic paradigm is more likely a satisfactory explanation of what motivated the four MNEs to establish and continue operations in Barbados. The firms did seek to combine their firm-specific assets (production technology and marketing skills) with the locational advantages of Barbados (spatial proximity; low-cost, skilled labour; and time zone equivalence).

The choice of locating information service activity in Barbados

It appears that the decision to establish and continue operations in Barbados was influenced by the presence of low-cost, skilled labour. However, what is noteworthy is that the skills of the labour force were continuously enhanced. This has allowed the Barbadian operations of the four MNEs to move out of low-value-added activities into higher-value-added ones. Interestingly enough, the four MNEs were not motivated to set up operations in Barbados because of the existence of preferential trading agreements. In fact, the information service activities conducted by these firms did not benefit from preferential market access. It is significant to note that the four MNEs were attracted to the country because of the presence of its industrial parks. However, several elements of its infrastructure appeared to be critical to their decision to continue operations in the country. The cost and quality of its telecommunications service are a notable example. The study further suggests that there appears to be some ambivalence on the attractiveness of the investment incentives. The preferred incentives appear to be low taxes and duty exemptions on equipment. It is also important to note that the repatriation of profits and dividends had no influence on the investment decision. Furthermore, this analysis suggests that the 'Double Diamond' hypothesis seems to explain the factors influencing the locational choices of these four MNEs. It reveals that the Barbadian subsidiary is increasingly playing a critical role in the operations of these four MNEs.

The mode of investment used by the information service MNEs in Barbados

Two theories appear to explain the factors influencing the firms' selection of a market entry mode in Barbados. The theories postulated by researchers such as Gomes-Casseres (1989, 1990) seem to explain the firms' selection of a wholly owned subsidiary. All four MNEs were involved in intra-firm trade. However, three of them wanted to exercise total control over their Barbadian operations. Hence, they selected the mode of a wholly owned subsidiary to enter the country. The other company, which was smallest of the MNEs studied, chose the mode of a majority owned joint venture. It was willing to concede to a market entry mode that gave it reduced control in order to acquire knowledge of the local culture and politics. In addition, the study suggests that the level of international experience of the companies seems to have influenced their selection of a market entry mode. The MNEs with accumulated experience operating abroad used a wholly owned subsidiary as their market entry mode in Barbados. Conversely, the MNE that did not have any international experience selected a joint venture arrangement. Interestingly enough, while there does not seem to be any great cultural dissimilarities between Barbados and the home country of the MNEs, none of the managers cited culture as influencing their selection of a market entry mode. It appears that cultural distance did not influence these firms' selection of an international entry mode.

This chapter, together with the preceding one, has analysed the factors influencing the foreign investment decisions of MNEs involved in labour-intensive activities. However, as noted in Chapter 4, low-cost labour is not the only factor that induces foreign investment into less developed countries. Another inducement is competitively priced raw materials. This is the subject of the final case study. The following chapter explores foreign investment decisions of firms that are lured into a small, developing country because of its competitively priced natural gas.

10 Foreign direct investment in Trinidad-Tobago

A case study of the natural gas sector

Introduction

This chapter is the last of the three case studies on foreign direct investment in the Caribbean. It examines the foreign investment decisions of seven MNEs that operate in the natural gas sector of Trinidad-Tobago. To this end, this case study analyses the factors that influence their motivations for engaging in FDI, their choice of location, and their selection of market entry mode.

This chapter is organised in the same manner as the two preceding chapters. The following section explores the economic factors that resulted in the foreign investment in the natural gas sector of Trinidad-Tobago. This section is followed by an introduction to the seven MNEs studied. The third section analyses the foreign investment decisions of these seven MNEs by testing the fourteen hypotheses advanced in Chapters 3 to 5. This chapter concludes with a discussion of the key issues that emerge from the qualitative analysis.

The emergence of the natural gas sector in Trinidad-Tobago

Trinidad-Tobago, like other oil exporters, experienced unprecedented windfalls in 1973 to 1974 and again in 1979 to 1980. The years 1973 to 1982 were indeed halcyon days for this country. Its gross domestic product increased sixfold from US$1,309 million in 1973 to US$8,140 million in 1982. Per capita income soared from US$1,190 in 1973 to an astonishing US$6,450 in 1982. Its foreign reserves leapt from a mere US$47 million in 1973 to a phenomenal US$3,080 in 1982 (World Bank 1994:672–3). Interestingly, the decade preceding these oil-boom years was marked by growing economic and social instability caused by declining oil revenues. Thus, awash with oil windfalls, the government sought to place its economy on the path of self-sustaining growth. Not surprisingly, one of its main objectives was to wean the economy away from its dependence on oil.

In the early 1970s, Trinidad-Tobago was a classic example of an oil dependent economy. Its non-oil tradables, agriculture and manufacturing accounted for only 22.7 per cent of non-mining GDP as opposed to the norm of 42 per cent for countries at comparable levels of per capita income (Auty and Gelb 1986:1163). Moreover, its economy was dualistic. In 1973, agriculture accounted for one-sixteenth of the value-added per worker in oil refining and one-fifth that of chemicals. In addition, the salaries of the workers employed in the oil industry, who were less than 4 per cent of the labour force, were almost seven times those of non-oil workers (ibid., 1163). Hence, the government sought to accelerate industrial diversification out of oil. In so doing, it attempted to monetarise the country's abundant gas reserves. To this end, the government used a substantial proportion of its oil windfall to develop industries that were intensive in the use of natural gas. As Table 10.1 demonstrates, the government developed five gas-based projects. These gas-based activities were all export oriented. Moreover, all of these companies were located on the specially built industrial estate, the Point Lisas Industrial Estate.

The government also adopted a strategy of state ownership of what it deemed to be the 'commanding heights' of the economy. Hence, the majority of these new enterprises in the gas sector were totally state owned. Great hopes were pinned on these gas-intensive projects. Not only were they to wean the economy away from its dependence on oil, but also they were to place Trinidad-Tobago firmly on the path of self-sustaining growth. Unfortunately, the gas-based projects failed to achieve these expectations. By 1983, the country fell into a recession that lasted for seven years. The GDP in 1990 was approximately 20 per cent less than that of 1982. Per capita income declined by an average of 5 per cent per annum between

Table 10.1 The gas-based projects developed by the Trinidad-Tobago government during the oil boom period[a]

Company	*Activity*	*Ownership*	*Costs*
The Iron and Steel Company of T&T (ISCOTT)	Iron and steel	100% GOTT[a]	US$350 million
Trinidad and Tobago Nitrogen Company (TRINGEN)	Nitrogen	51% GOTT 49% W.R. Grace	US$111.4 million
Trinidad and Tobago Urea Company (TTUC)	Urea	100% GOTT	US$117.1 million
Trinidad and Tobago Methanol Company (TTMC)	Methanol	100% GOTT	US$179.2 million
Fertilisers of Trinidad and Tobago Limited (FERTRIN)	Ammonia	51% GOTT 49% Amoco	US$350 million

Source: Farrell (1987b)

Notes: [a]Government of Trinidad and Tobago

1982 and 1990. The country's foreign reserves plummeted from US$3,080 million in 1982 to a mere US$492 million in 1990. The numbers unemployed escalated from 9.9 per cent in 1982 to 20 per cent in 1990. Additionally, in 1990, the external debt rose to an astronomical US$ 2,508.3 million (World Bank 1994:672–4). This economic situation was caused by the collapse of the international oil market, the decline in domestic oil production, and economic mismanagement (Auty and Gelb 1986:1166–9; Ramsaran 1993:220). Moreover, the highly touted gas-intensive activities failed to replace oil as the major source of foreign exchange earnings.[1] Hence, in 1989, the government of Trinidad-Tobago was compelled to approach the international lending agencies for financing.

As part of the loan conditionalities, Trinidad-Tobago entered into stabilisation and structural adjustment programmes. Under these programmes, the government, in a complete volte-face, departed from its previous economic policies. Hence, it inter alia liberalised trade and foreign exchange markets; divested state assets, including the newer enterprises in the natural gas sector; and implemented policies to attract private foreign investment. The state no longer assumed an active role in the economic development of the country. Rather, its role was redefined as one of policy-maker and regulator. It was the private sector that was now given the task of economic transformation.

At present, Trinidad-Tobago is described as one of the most sought-after locations for energy-related activities in the Western hemisphere. International investors are encouraged to acquire existing energy-based industries or establish greenfield investments (Renwick 1995:7). Indeed, foreign investment in its energy sector is estimated to soar to US$4 billion in the next three years (James 1997:16). The main factor driving this investment is the availability of low-cost natural gas. Trinidad's proven gas reserves are estimated to be 10.09 trillion cubic feet (The Economist Intelligence Unit 1995:15).

It is against this background that an examination will be done of the foreign investment decisions of seven MNEs that operate in the natural gas sector of Trinidad-Tobago. As was noted in Chapter 6, the seven MNEs used for this case study were Cabot Corporation, British Gas plc, Amoco Corporation, Arcadian Corporation, Ferrostaal AG, Methanex Corporation, and the Ispat Group of Companies. In the case of Arcadian Corporation and the Ispat Group of Companies, interviews were conducted with managers located at both the headquarters and subsidiaries of the MNEs. The other six firms were partners in joint venture agreements. In these cases, interviews were conducted with executives representing each partner in the joint venture. Thus, a total of eleven managers were interviewed. Interviews were also conducted with government ministers, heads of government bodies, and managers of locally owned companies. Additional information was obtained from company annual reports, stockbrokers' reports and journalistic articles. The following section profiles these seven firms.

The multinationals that operate in the natural gas sector of Trinidad-Tobago

Atlantic LNG Company of Trinidad and Tobago

Atlantic LNG Company of Trinidad and Tobago is a joint venture arrangement comprising four companies. These are Cabot Corporation, British Gas plc, Amoco Corporation and the National Gas Company of Trinidad and Tobago. The other shareholder is Repsol, a subsidiary of Enagas. This company owns a 20 per cent stake in Atlantic LNG. Repsol was not included in this case study. Unfortunately, difficulties were experienced in contacting its managers for interviews. The Atlantic LNG Company of Trinidad and Tobago was incorporated in June 1996. The LNG plant is presently under construction. It is scheduled to be commissioned in 1999.

Cabot Corporation

Cabot Corporation is a 114-year-old global manufacturing organisation with speciality chemicals and energy businesses. This publicly owned company is located in Boston, USA. In 1995, its total assets were US$1,654 million and it employed 4,100 people in twenty-two countries. Cabot Corporation has two main divisions: the Speciality Chemicals and Materials Group, and the Energy Group. The Energy Group has two operating businesses, one of which is Cabot LNG.

Cabot LNG Corporation was founded in 1969. This company is involved in the transportation of liquefied natural gas to meet the specialised needs of gas and electric utilities, independent power producers, and industry. In 1995, its sales were an estimated US$343 million. Its total number of employees was seventy-two. This company owns 10 per cent of the equity of Atlantic LNG, a liquefied natural gas (LNG) export facility in Trinidad-Tobago.

British Gas plc

British Gas is a leading gas company with interests in over forty countries. Its activities range from exploration and production to gas transmission, domestic utilisation and power generation. In 1994, the company had a total asset base of US$39,750 million.

British Gas Trinidad was established in 1989. This company is involved in the exploration and production of oil and natural gas. The company is also a 26 per cent shareholder in the liquefied natural gas (LNG) company, Atlantic LNG Company of Trinidad and Tobago.

Amoco Corporation

Amoco Corporation and its consolidated subsidiaries form a large integrated petroleum and chemical enterprise. In 1995, the total assets of this public company were US$29,845 million. In this year, it employed 42,689 workers. The company, which is located in Chicago, is one of the most internationalised of the MNEs studied. It not only operates in the North America, but also in Europe, West Africa, Australia, China, South America and Trinidad. Amoco Corporation is comprised of three main divisions: Amoco Production Company, Amoco Oil Company and Amoco Company.

Amoco Trinidad Oil Company is a wholly owned subsidiary of Amoco Production Company. This company, which was established in 1961, is involved in the exploration and production of oil. It is presently the largest producer of oil and natural gas in Trinidad-Tobago, accounting for 50 per cent of the total domestic oil production and approximately 75 per cent of total gas production. Amoco Trinidad Oil Company, which employed 400 persons in 1995, is also a major shareholder in the first LNG plant in the country. It owns a 34 per cent stake in the Atlantic LNG Company of Trinidad and Tobago.

National Gas Company of Trinidad and Tobago

The National Gas Company of Trinidad and Tobago was formed in 1972. This state-owned company was initially involved in the purchase, transportation and sale of natural gas in the country. In 1992, its activities were expanded to include evaluating investment proposals and developing natural gas-based projects; advising the government on investment incentives for the downstream industries in the energy sector; and promoting the country as a location for gas-based investments. In 1995, the company's activities were further increased. It presently owns a 10 per cent share in the Atlantic LNG Company of Trinidad and Tobago.

Arcadian Corporation

Arcadian Corporation is the largest producer and marketer of nitrogen fertilisers and nitrogen chemicals in the Western hemisphere. In 1995, its total assets were US$1,270 and it employed 1,293 persons. This publicly owned company operates plants in the USA. Its operation in Trinidad is its first international venture. In 1993, Arcadian Corporation acquired 100 per cent shareholdings in Fertilisers of Trinidad and Tobago (Fertrin) and Trinidad and Tobago Urea Company (TTUC) for US$175 million. Fertrin manufactured and marketed ammonia and carbon dioxide while TTUC manufactured and marketed urea. The Arcadian Corporation merged the operations of these two companies and renamed the resulting entity, Arcadian Trinidad Limited. Arcadian Trinidad Limited is located on the Point Lisas Industrial Estate. It presently employs 350 persons.

Caribbean Methanol Company Limited

Caribbean Methanol Company is a joint venture agreement between three companies. They are Ferrostaal AG, Methanex Corporation and C L

Financial. This company, which is located on the Point Lisas Industrial Estate, was established in 1993.

Ferrostaal AG

Ferrostaal AG, which was formed in 1930, is a publicly owned company with headquarters in Essen, Germany. It is a subsidiary of the MAN AG Group of Germany. The MAN Group is one of the largest manufacturing and engineering companies in Europe. In 1996, this company had an asset base of US$7,891 million and 57,648 employees.

Ferrostaal AG is involved in activities related to the planning, supplying, erecting and financing of turnkey installations. It also exports finished and semi-finished steel products, plant, machinery and other equipment. In 1996, this company had a total asset base of US$2,539 million and employed 1,581 persons. Ferrostaal owns 25 per cent of the equity in the joint venture company, Caribbean Methanol Company Limited.

Methanex Corporation

Methanex Corporation is the world's largest methanol producer, with a worldwide production, marketing and distribution capability. Indeed, it is estimated that this company controls 40 per cent of the methanol traded internationally (Midland Walwyn Capital Incorporated, 18 April 1997:3). Methanex, with headquarters in Calgary, had a total asset base of US$1,744 million in 1995. This company is fairly well internationalised: it owns production facilities in Canada, the US, Chile and Trinidad. Methanex Corporation owns 10 per cent equity in the Caribbean Methanol Company. It is solely responsible for the marketing of the output of this joint venture company.

C L Financial Limited

C L Financial Limited is the holding company of the Colonial Life Insurance Group of companies. This company, with headquarters in Port-of-Spain, Trinidad is the only privately owned, domestic firm studied. In 1994, its total asset base was US$1,084 million. C L Financial is fairly internationalised. The company has sixty subsidiaries located throughout the Caribbean, North and South America, and Europe. C L Financial has expanded beyond its insurance origins into a diversified range of activities. It is involved in banking and finance; property development; trading and distribution; communications; forestry and agriculture; and energy and manufacturing. The Caribbean Methanol Company is one of its subsidiaries. C L Financial owns 64.9 per cent of the equity of this company.

Ispat Group of Companies

Unlike the other three companies discussed previously, the Ispat Group of Companies is not involved in the production of gas-based products. Its core business is the production of iron and steel. However, the iron and steel production is an energy-intensive process. In Trinidad-Tobago, natural gas is the only source of energy. Hence, for all practical purposes, Ispat's activities in Trinidad-Tobago can be considered to be gas-intensive.

The Ispat Group of Companies is located in Calcutta, India. In 1996, this privately owned company had a total asset base of US$6,000 million and employed 45,000 persons. It has two main operating divisions: Ispat Industries and Ispat International. Ispat International was formed in 1976 in Jakarta, Indonesia. Ispat International, with headquarters in London, is a global steel company. It has operations in Mexico, Germany, Ireland, Kazakhstan, Canada, the USA and Trinidad-Tobago. With an annual production of more than 12.5 million metric tons, this company has been ranked the fourteenth largest steel producer in the world (CARISPAT NEWS, January-March 1996:2).

In 1988, Ispat International signed a ten-year lease for US$10.84 million a year to manage the ailing state-owned iron and steel company. Under the terms and conditions of this lease, Ispat International had the option to buy the company after five years. Indeed, in 1994, Ispat International purchased the state-owned iron and steel company for US$70.5 million. The company, whose total assets in 1994 were valued at US$101.4 million, has been renamed Caribbean Ispat Limited (CIL).

The motivations for FDI in the natural gas sector of Trinidad-Tobago

As was discussed in Chapter 4, this study suggests that the possession of superior advantages over domestic competitors does not motivate a firm to engage in FDI in Trinidad-Tobago since it contends that the country does not have effective domestic competitors (Hood and Young 1979; Vachani 1985). The study also posits that MNE investment in Trinidad-Tobago is influenced by the earlier investment made by its competitors in the country (Knickerbocker 1973). Further, this analysis contends that an MNE's investment in Trinidad-Tobago is likely to be motivated by the synergies it could gain from using its firm-specific assets in combination with the locational endowments of the country (Dunning 1979, 1980, 1993a).

H1: The monopolistic advantage hypothesis

It seems that the monopolistic advantage hypothesis does not adequately explain what motivated these seven MNEs to engage in FDI in Trinidad. It is worth noting that none of these MNEs perceived the domestic firms to be their competitors. Thus, while they did use their monopolistic advantages in Trinidad, they did not use them in competition with locally owned firms. It appears that their competitors were foreign firms which, in some cases, operated in the country.

It is significant to note that the MNEs that bought privatised state-owned companies used selected monopolistic advantages to compete with foreign firms that were also seeking to acquire the state-owned enterprises. Arcadian Corporation purchased the privatised urea and methanol companies. Its managers stated that the monopolistic advantage, which they deployed in Trinidad, was access to finance. Arcadian Corporation was able to expedite the financing arrangements for the purchase of the privatised companies much more speedily than its competitors. One of its managers claimed that this was their major 'selling point' with the cash-strapped Trinidadian government. Conversely, the managers of Ispat International stated that they were able to use their monopolistic advantage in production technology to compete with firms that were also attempting to acquire the iron and steel company. Ispat's core competency lies in production technology. Its managers stated that Ispat has a wealth of experience operating mini mills similar to the one in Trinidad. The technology used in the Trinidadian steel mill is direct reduced iron.[2] Ispat has mastered this technology in its operations at home and abroad. This technological mastery has given the company tremendous leverage over its competitors. Hence, Ispat was able to successfully manage the steel mill when other competitors such as Voest-Alpine Industries of Austria and Hamburger Stahlwereke of Germany were unable to do so[3]. Indeed, the managers admitted that their fast turnaround of the state-owned steel mill so impressed the Trinidad government, that they allowed them to buy the iron and steel company.

By contrast, two MNEs appear to use their monopolistic advantage in production technology to compete with each other. Ironically, they were both partners in the same joint venture company. They were competing for control over the supply of main feedstock, natural gas, to the LNG company. Amoco Trinidad Company is sole supplier of natural gas to Atlantic LNG, eclipsing British Gas Trinidad Company which had hoped to be co-supplier. The managers of Amoco Trinidad Company stated that one of monopolistic advantages deployed in Trinidad was production technology. They said that the company possesses a synergy of technologies developed by Amoco internationally. Some of these technologies are used in their operations in Trinidad. Thus, the managers revealed that they used a new drilling technique called horizontal drilling in one of their oil fields. They claimed that it was the first time that this technique was used in Trinidad. Hence, in early 1995, Amoco discovered sufficient recoverable gas reserves to satisfy the demands of the LNG plant over a twenty-year contract life span. British Gas, by contrast, found no gas in its exploration well (The Economist Intelligence Unit 1995:15).

It is noteworthy that the other MNEs used selected monopolistic advantages in their Trinidadian operations. However, these monopolistic advantages were not used for competition with foreign or local firms operating in the country. Instead, they were used in a manner that sought to increase the overall profitability of their Trinidadian operations. Thus, Atlantic LNG stands to benefit from the marketing expertise deployed by Cabot LNG Corporation. This MNE intends to market 60 per cent of the plant's output to the US and Europe. Similarly, the operations of Caribbean Methanol Company gain from the synergies arising from the use of Methanex's marketing skills, together with Ferrostaal's purchasing skills and its ability to access finance. Methanex Corporation is one of the largest marketers of methanol internationally. It is also solely responsible for marketing the methanol produced by the joint venture company. In addition, Ferrostaal, which is a subsidiary of the MAN Group, used its significant purchasing power to procure equipment at very favourable prices for the methanol plant. It also arranged the loan financing for the project.

H2: The 'follow-the-leader' hypothesis

It appears that the 'follow-the-leader' hypothesis does not fully explain the motivations for all seven MNEs engaging in FDI in Trinidad. Indeed, the managers all stated that their investment in Trinidad was not influenced by the earlier investments made by competitors. Moreover, some of the managers noted that their competitors did not have operations in Trinidad-Tobago. The foreign joint venture partners of Caribbean Methanol Company (CMC) stated that their investment in Trinidad was not influenced by the earlier actions of their competitors. The manager of Ferrostaal revealed that his company's business is building industrial plants, not methanol production. Hence, his competitors are engineering companies. He noted that none of his competitors has entered into methanol production. Similarly, the manager of Methanex stated that his firm's decision to enter into methanol production in Trinidad was not influenced by the actions of his competitors. It seems that not many of his competitors operate in the Caribbean region.

In the same vein, the managers of Ispat and Arcadian emphasised that their decision to buy the divested state companies was not influenced by earlier investments made by their competitors in the country. The manager of Ispat noted that none of his competitors operate in Trinidad. Rather, they have made investments in Latin America. In addition, the manager of Arcadian Corporation stated that his decision to acquire the privatised assets of the ammonia and urea companies was not influenced by the actions of his competitors. He revealed that the decision to enter Trinidad was influenced by the parent company's desire to become internationalised.

Similarly, the foreign joint venture partners of Atlantic LNG concurred that their decision to establish operations in Trinidad was not influenced by the earlier investments made by competitors. The manager of Cabot LNG said that none of his competitors operate in the Caribbean. Additionally, the managers of British Gas Trinidad Company stated that the government, in an attempt at reducing the monopoly position enjoyed by Amoco Corporation, actively encouraged the company to invest in Trinidad. Thus, the company's decision to establish operations in Trinidad was not influenced by the actions of its competitors. Alternatively, the managers of Amoco admitted that they were the first oil company to enter the country in the post-independence era.

Interestingly enough, it appears that the decision of the two oil and gas companies to become involved in the LNG project was a result of their oligopolistic rivalry. Amoco and British Gas are keen competitors in the Trinidadian market. Indeed, Amoco fought vigorously to keep British Gas out of Trinidad by offering incremental gas at a very favourable price to the National Gas Company (*Trinidad Guardian,* 18 October 1993:7). Not surprisingly, both sought to pre-empt the other's control over the LNG project. As was earlier mentioned, they actively sought to become gas suppliers to the plant. Hence, to a large extent, their investment in the LNG project can be characterised as 'follow-the-leader' (Vernon 1983:196–8). However, it is unclear which company followed the other into this LNG investment. What is evident is that neither one would have allowed the other to invest in this project without its involvement.

H3: The eclectic paradigm hypothesis

Dunning's eclectic theory seems to explain the decision of these seven MNEs to establish and continue operations in Trinidad. These seven MNEs sought to combine their firm-specific assets with the locational advantages of the country. In 1993, Arcadian Corporation acquired the divested assets of the ammonia and urea companies. These assets consisted of one ammonia plant and one urea producing facility. In establishing operations in Trinidad, the managers of Arcadian sought to combine their core competency in marketing with the locational attractions of the country. The main locational advantages of Trinidad were its low-cost natural gas and its strategic location. The managers noted that natural gas in Trinidad is competitively priced. This allows Arcadian to compete in an industry characterised by increases in the number of suppliers and the production capabilities of existing plants.

Arcadian's Trinidadian facilities are the largest of all its ammonia and urea operations. As Table 10.2 shows, they account for one-quarter of the company's total ammonia and urea production. With the acquisition of the Trinidadian facilities, Arcadian's total capacity presently exceeds 300,000 tons. This expansion in output enables Arcadian to strengthen

Table 10.2 Total plant capacities in Arcadian Corporation, January 1996 (thousands of short tons)

Plant	*Ammonia*	*Urea*
Geismar, USA	425 (13.5%)	400 (16.3%)
Augusta, USA	545 (17.3%)	415 (16.9%)
Woodstock, USA	350 (11.1%)	415 (16.9%)
LaPlatte, USA	195 (6.2%)	160 (6.5%)
Clinton, USA	260 (8.3%)	70 (2.8%)
Lima, USA	530 (16.8%)	408 (16.6%)
Trinidad	840 (26.7%)	590 (24%)
Total Production	3145 (100%)	2458 (100%)

Source: Company reports

its competitiveness since it achieves scale economies in the production of ammonia and urea.

The benefits of Trinidad's strategic location are twofold. The ammonia from its Trinidadian operations provides feedstock for Arcadian's US nitrogen plants and is a major source of granular urea fertiliser. Thus, the close proximity of the Trinidadian plants to east and south USA allows for the expeditious shipment of their output to Arcadian's nitrogen plants in Louisiana and North Carolina. Moreover, Trinidad's strategic position offers excellent potential for expanding Arcadian's sales in Latin America, Europe and Africa (Arcadian Corporation, 1995 Annual Report: 7).

Similarly, Ispat International sought to combine its firm-specific assets with the locational endowments of the country. Ispat International has adopted a strategy of buying ailing, state-owned iron and steel companies at relatively low prices and transforming them into profit-making entities (Business Week, 13 May 1996:19). The core competencies that Ispat deployed in Trinidad were production technology and marketing skills. Trinidad's locational advantages were its low-cost natural gas and strategic location. The manager of Caribbean Ispat Limited (CIL) revealed that the company's strength lies in production technology. Ispat International has years of experience in the steel-making industry. It has mastered the technology needed to successfully operate mini mills with electric arc furnaces. These mills use direct reduced iron ore (DRI) as their feedstock.[4] Ispat is a pioneer of the DRI process (CARISPAT NEWS, January–March 1996:2). All of its plants use this technology. Hence, the company was able to deploy its core competency in the DRI process in its Trinidadian operations. Not surprisingly, Ispat was able to achieve a phenomenal turnaround in the performance of the mill. Within three months of its takeover, CIL was able to double production levels (*Trinidad Express,* 24 November 1994:4). Ispat complemented its efficient use of the DRI process with heavy investments in the upgrade and repair of its Trinidadian facilities. Indeed, during 1984 to 1994 the company invested US$60 million in capital upgrades to these facilities (*Trinidad Express,* 25 August 1996:3). This tremendously increased the performance efficiency of the plants (see Figure 10.1). At present, its Trinidadian facilities operate at 120 per cent beyond rated capacity. In addition, CIL is the first steel company in the world to achieve ISO 9002 registration (ibid., 3).

Ispat was not only able to achieve operational efficiency, its Trinidadian operation was also cost efficient. The production of iron and steel is an extremely energy-intensive process. In Trinidad-Tobago, natural gas is used to generate electricity. Hence, Trinidad's low-cost natural gas positively influences the cost of electricity. This is how Ispat has been able to achieve cost efficiency in its Trinidadian operations. Its cost-efficient Trinidadian operations have enabled it to compete in an industry experiencing declines in steel prices and increases in iron ore prices (CARISPAT NEWS, January–March 1996:4).

Additionally, the managers of Ispat stated that Trinidad enjoys a strategic location. The country is strategically positioned to the sources of raw materials, as well as the global markets for the finished products. CIL sources its direct reduced iron from Venezuela and Brazil. It also exports iron and steel products to the Far East, Central America, Latin America and the Middle East.

The foreign partners of the joint venture companies also sought to combine their firm-specific assets with the locational endowments of the country. Ferrostaal's firm-specific assets were access to finance and purchasing skills. One of its managers stated that the locational advantages of

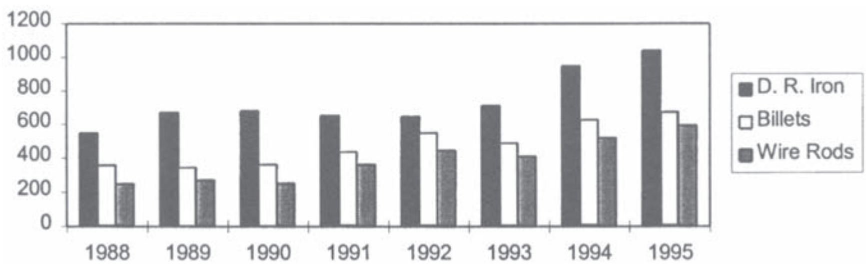

Figure 10.1 Production levels at Caribbean Ispat, 1988 to 1995 (thousands of tonnes)

Source: Central Bank of Trinidad and Tobago (1992, 1995)

Trinidad were its cheap natural gas and its proximity to the major methanol markets. Ferrostaal's access to finance in Germany enabled it to arrange the loan financing needed for the establishment of the joint venture company. It also used its core competency in the procurement of equipment to supply industrial machinery at very favourable prices for the construction of the methanol plant. The company continues to use its core competency in equipment procurement in Trinidad. It supplies needed equipment and provides engineering assistance to the methanol plant. In addition, the manager stated that one of Trinidad's locational assets is its proximity to the US. He noted that Trinidad is closer to the US than any other gas-rich, developing country. Thus, the company could easily export methanol to the US.

Similarly, a manager at Methanex stated that Trinidad's locational endowments were its large proven reserves of natural gas and its proximity to the most of the major markets in the world. The core competency that Methanex used in Trinidad was its marketing skills. It appears that Methanex, in an attempt at improving its global market position, sought to combine its core competency in marketing with the country's identified locational assets. Methanex enjoys a take or pay contract with the Caribbean Methanol Company for the 500,000 metric tons of methanol initially produced by the company. It presently has the first option to offtake the plant's increased production volume of 100,000 metric tons per annum. Its manager stated that the critical issue in the company's investment in CMC was flexibility in supply and logistics. He stated:

> We wanted to juggle our supply chain to take advantage of supply discontinuities. Trinidad, with its strategic logistics, was an excellent source of supply. It is logistically advantaged.

The foreign joint venture partners of Atlantic LNG also sought to combine their core competencies with the locational advantages of Trinidad. Hence, the manager of Cabot LNG stated that the main locational endowments of Trinidad were its proven natural gas reserves and its proximity to the eastern seaboard of the US. The core competencies used by Cabot LNG in the country were its project development capabilities and marketing skills. The manager said that Cabot LNG was the first MNE to be allowed to develop a LNG plant in Trinidad. He revealed that since the early 1970s, major petroleum companies such as Amoco, Texaco and Tenneco attempted to develop LNG projects in the country. However, the Trinidadian government was unwilling to consent to their proposals. It seems that Cabot's success was due to the nature of its proposed project. It was market driven. The company was the major buyer of the offtake of the LNG plant. Since the previously proposed projects were producer driven, the government was wary about their marketability (*The LNG Observer,* Winter 1993/4:22). Cabot LNG also combined its core competency in marketing with the locational endowments of the country. Cabot will market 60 per cent of Atlantic LNG's 300 million cubic feet per day output. These shipments will be transported from Trinidad to Boston on a company-owned LNG carrier. They will enter a LNG terminal that is owned and operated by Cabot LNG. This company owns the only offshore terminal for LNG in the north-east US. Thus, it has total control over LNG access to this market. Further, Cabot is expanding its marketing reach in north-east US by connecting its import facility with the Tennessee pipeline. This pipeline covers a major portion of the US north-east market (*World Gas Intelligence,* 9 February 1996:10).

Similarly, British Gas combined its core competency in production technology with the locational endowments of Trinidad. The locational advantage used by British Gas was the country's abundant gas reserves. The manager of British Gas Trinidad noted that the parent company possesses extensive knowledge of the technology needed to produce LNG. Thus, it was able to deploy this core competency in Trinidad. Indeed, the parent company has relocated several of its personnel to the local LNG project.

The managers of Amoco Trinidad also stated that the country's locational advantage was its proven gas reserves. The core competencies that this MNE deployed in Trinidad were production technology and managerial skills. Amoco Trinidad is sole supplier of gas for the first tranche of the LNG plant. It will provide 450 million cubic feet of gas per day for an initial contract period of twenty years. The company has a wealth of expertise operating in Trinidad. Moreover, as was noted earlier, it is able to access technologies developed by its parent company. These production technologies are used for gas exploration in Trinidad. In addition, the managers revealed that Amoco possesses proprietary techniques for managing major projects. One such technique is the Amoco Common Process'. This is a method that the parent company has developed for implementing long-term investment projects. The Amoco Common Process consists of a series of pre-defined steps that identify what processes need to be done at each stage of project implementation. This management technique is currently being used in the LNG project. Hence, Amoco has combined this proprietary management technique with Trinidad's abundant gas reserves to develop its LNG plant.

Interestingly, the managers of both British Gas and Amoco Corporation stated that the LNG project in Trinidad was a strategic investment. Amoco Corporation appears to be changing its corporate strategy. The company has decided to move further up the value-added chain to the sale of natural gas. The managers of both companies stated that executives in the parent company are avidly observing the development of the LNG project in Trinidad. These companies apparently are attempting to acquire the technologies needed for the development of greenfield LNG projects. It appears that they are seeking to replicate these technologies in other gas-rich, developing countries. The gas market has been deregulated in many industrialised countries. Thus, tremendous opportunities exist for these companies to transport LNG from gas-rich, developing countries to major markets in the industrialised world.

The choice of locating gas intensive activity in Trinidad-Tobago

This study posits that the decision to establish and continue operations in Trinidad is influenced by the cost of natural gas (Frobel 1980; Dunning 1988; Wallace 1990). In addition, it is suggested that preferential trading agreements play an important role in motivating MNE's investment in Trinidad-Tobago (Johnson 1968; Joekes 1982; Yannopoulos 1986; Griffith 1990). Further, this study contends that the presence of export processing zones greatly influences the decision to locate gas-intensive activities in the country (Frobel 1980; Woodward and Rolfe 1993). The study also postulates that the investment incentive package offered by the Trinidadian government has no influence on the locational decisions of the seven MNEs (Shah and Toyne 1978; Wheeler and Mody 1991; Loree and Guisinger 1995). Finally, it posits that these seven MNEs integrate elements of their home country's diamond with the diamond of Trinidad (Rugman and D'Cruz 1993; Rugman and Verbeke 1993a).

H4: The low-cost factor hypothesis

It appears that the cost and availability of natural gas greatly influenced these firms' decision to establish and continue operations in Trinidad-Tobago. The products produced by six of these MNEs are commodities. Thus, cost considerations are the key driver in the industries in which they operate. Clearly, operating costs play a great role in determining the competitiveness of these MNEs. The cost of the feedstock, natural gas, is one of their major operating costs. Hence, to a large extent, their decision to locate gas-intensive activity in a country is determined by the price of its natural gas. Indeed, the executives of the MNEs studied stated that the cost and availability of natural gas were the major factors influencing their decision to locate operations in Trinidad.

As was earlier discussed, the state-owned National Gas Company (NGC) is mandated to purchase, transport and sell natural gas to domestic consumers. This company determines the gas prices offered to the foreign investor. The gas contracts that the NGC initially offered to foreign firms consisted of a fixed gas price that mirrored the upstream price. This gas pricing system was changed after 1989. Apparently, the downturn which occurred in the ammonia industry in the 1980s, together with the attendant losses suffered by producers, prompted a revision in the NGC's gas pricing regime (*Nitrogen,* March–April 1995:24). Since 1989, NGC's gas pricing system has become more market oriented. The price of gas offered to the MNE varies with the market price for its product. Hence, when the product market price is depressed, the natural gas price automatically declines. Conversely, when the product market prices increases, natural gas price rises. This gas pricing regime allows the producer operating in Trinidad to make a profit even in depressed market conditions.

Each producer, including those who produce the same product, has a separate gas contract that is negotiated when the project is coming on stream. The gas contract is normally for five years (ibid., 20). Trinidad-Tobago was the first country to implement this gas pricing regime. Within recent times, however, other gas-rich countries, for example Venezuela, have imitated this pricing system.

Several of the MNEs stated that the gas pricing regime implemented by the NGC was extremely important to their decision to establish operations in Trinidad-Tobago. One executive noted:

> Natural gas comprises 70 per cent of the cost of ammonia so the price of natural gas was very critical to our decision to invest in Trinidad. The country is an attractive environment for gas. The price of gas and the gas contract are the most important factors for us here. The gas contracts offers us some profit protection.

Similarly, the foreign joint venture partners of Caribbean Methanol Company agreed that the price of natural gas was important to their decision to establish and continue operating in Trinidad. It is noteworthy that the manager of Ferrostaal stated that the gas pricing system implemented by the NGC played a crucial role in the company's attempts to secure financing for the methanol plant. He noted that this unique pricing system made it very easy for the company to obtain the requisite financing.

By contrast, the manager of Caribbean Ispat Limited (CIL) stated that natural gas contributes a small proportion of its total production costs. CIL is a large consumer of electricity: it consumes one-quarter of the total electricity generated in the country. However, the cost of electricity is dependent on natural gas prices. Thus, the price of natural gas is important to the operations of CIL.

It is significant to note that the NGC is not the gas supplier for the LNG plant. As was earlier discussed, Amoco Trinidad Oil Company is the main supplier of natural gas to this project. It seems that financial considerations forced the NGC to concede the gas supply function to Amoco.[5] Thus, the foreign firms involved in this venture are not beneficiaries of the NGC's gas pricing regime. Nonetheless, it appears that the gas price system adopted by Amoco is similar to the one offered by the NGC. The gas price charged to Atlantic LNG is tied to the world market price for LNG.[6] The foreign partners of this joint venture, like the other four MNEs studied, emphasised that the price of natural gas was crucial to their decision to establish LNG operations in Trinidad.

H5: The preferential trading agreement hypothesis

It appears that the preferential trading agreements Trinidad-Tobago enjoys with the US, Canada and Europe do not fully explain these firms' decision to establish and continue operations in the country. Several of these MNEs benefited from the Lome and CBI agreements. However, their managers emphasised that while these preferential agreements are important to the firm, they did not play a major role in their decision to establish operations in the country. The manager of Ispat stated that the company benefits from both the CBI and Lome agreements. He revealed that Lome is not very significant to his Trinidadian operations since there is presently surplus capacity in Europe. However, he stated that the CBI is very important to his activities in Trinidad. Nevertheless, he said that his decision to continue operations in the country is not influenced by the existence of the CBI. Similarly, the manager of Arcadian Corporation stated that Lome is not important to his Trinidadian operations since its product is not exported to Europe. Further, he revealed that the company does not benefit from the CBI. Interestingly enough, he stated that the CBI does not give his company any additional marketing advantage since the output produced in Trinidad is sent directly to the parent company in the US. Alternatively, the managers of Atlantic LNG noted that the company does not benefit from the preferential trading agreements enjoyed by Trinidad. Their decision to establish and continue operations in the country was not influenced by the existence of these agreements. By contrast, the managers of Caribbean Methanol Company stated that their product enjoys the preferential market access accorded by the CBI and Lome agreements. They noted that these agreements give their product a competitive edge in the US and European markets. However, they emphasised that their decision to continue operations in Trinidad was not influenced by these preferential trading agreements.

H6: The export processing zone hypothesis

Trinidad-Tobago, in the mid-1970s to mid-1980s, did not seek to attract FDI through the creation of export processing zones. What the policy-makers did was to establish a well-developed industrial estate, the Point Lisas Industrial Estate. This 800 hectare industrial estate is located 25 miles south of the capital city, Port-of-Spain. It has well-developed road networks, a captive port, excellent telecommunications services and is fed with natural gas from two pipelines. This estate was built to house the gas-intensive activities developed during Trinidad's oil-boom years. Thus, three of the companies studied were located on the Point Lisas Industrial Estate. The other was located in south Trinidad. The presence of the Point Lisas Industrial Estate played an important role in attracting four of these MNEs to establish operations in Trinidad. Yet it appears that the quality of the general infrastructure was also important to their investment decision.

While the managers believed that the infrastructure in the country was adequate, several expressed dissatisfaction with the quality of service offered by several of the utility companies. A few stated that the electricity supply was unreliable. A reliable supply of electricity is critical to the operations of these companies. As one manager stated:

> Whenever there is a power failure, there was one yesterday, the plant shuts down and it takes two to three days for it to be restarted. It is not like a light switch, which one turns on after the electricity is resumed. These plants, because of their technical complexity, will need several days before they can be re-started after a power failure.... Another problem is that these plants operate using very high temperatures and pressures, so when the power goes, the process has to shut down. It is difficult to move from an atmospheric pressure of 1500 degrees in a minute. It must be done in several hours. Generally, when you have a power failure, it shuts the plant down. So from the time when you lose production to the time when you can regain production, it is a minimum of two days.

It is significant to note that the state-owned electricity company was partially divested in 1994. The government now owns 51 per cent of the shares of the new company. The remaining equity is divided between two US corporations: Amoco and Southern Electric. The partial divestment of the electricity company has resulted in an injection of US$35.9 million for plant refurbishment and maintenance; an availability of expertise in power plant operations; the transfer of technology in power analysis and design; and the training of personnel (Republic of Trinidad and Tobago 1996:18). Several managers attested that the quality of the electricity service has improved since the divestment. Additionally, one company is working with the local electricity service company to improve the quality of its service. This company is investing US$2.5 million in the improvement of electrical lines.

Several managers believed that while water rates were internationally competitive, its supply was unreliable. Most of these plants are process operations. They convert natural gas under extremely high temperatures to products such as ammonia and methanol. These plants use considerable volumes of water for cooling and generating steam. Hence, a reliable supply of water is vital to their operations. The managers stated that they have never been forced to shut down operations because of an insufficiency in the water supply. However, they all expressed concern over the ability of the state-owned water company to maintain or improve its service with the present rapid industrialisation occurring in the country.[7] One manager estimated that the new plants coming on stream will result in a 30 to 40 per cent increase in water demand. He noted that there have not yet been any attempts to increase the water supply. It is worth noting that one

MNE is working with the local water company to improve the reliability of its service. In addition, in 1996, the government secured a World Bank rehabilitation loan to finance the restructuring of the state-owned water company (Republic of Trinidad and Tobago 1996:23).

There are four international airlines and one national airline operating in Trinidad. The country is serviced by four weekly flights to Canada (Toronto), two weekly flights to Europe (Frankfurt and London) and four weekly flights to the US (Miami and New York). Several of the managers stated that the present airline services were inadequate. One noted that there are only two airlines (one international and the national airline) that fly out of Trinidad into Europe. Moreover, he said that the services of the national airline were unreliable. Hence, he frequently experienced difficulties in securing airline services to Trinidad. This sentiment was echoed by another manager who was based at the headquarters. He stated that it takes him one and half days to get to Trinidad.

Most of the managers believed that the port services were adequate. The port at the Point Lisas Industrial Estate was built to satisfy the specialised shipping needs of its tenants. As Table 10.3 shows, the port is designed to handle two types of activity. Specialised bulk handling operations are undertaken at the ISPAT docks and the Savonetta Piers. In addition, dedicated facilities exist for the handling of steel, ammonia, methanol, base oil and lube oil. At the ISPAT docks is a marine terminal, which is used for

Table 10.3 The specialised bulk terminals of the port at the Point Lisas Industrial Estate

	Dock length[a]	*Maximum draft*[b]	*Maximum LOA*[c]	*Facilities*
Savonetta Pier No. 1 (north)	115 m	7 m		Handling of base oil for Lube Oil Plant
Savonetta Pier No. 1 (south)	220 m	11.6 m	240 m	
Savonetta Pier No. 2 (south)	312 m	11.6 m	180 m	Specialised installation for loading methanol
ISPAT Dock	470 m	11.6 m		Specialised installation for discharge of bulk iron ore and loading direct reduced Iron. Maximum rate – 1,200 tonnes per hour
NUCOR Terminal		11.67 m	254 m	Iron carbide dock

Source: Charter International (1995)

Notes: [a]Dock length is the length of the dock where the ship goes into berth
[b]Maximum draft is the depth of water needed for a ship to safely enter the harbour
[c]Maximum LOA is the length of the side of the vessel entering the dock

the import of iron ore and the export of iron and steel products. The Savonetta Pier has specialised facilities for the handling of anhydrous ammonia, urea and methanol.

The managers believed that the facilities at the Point Lisas Industrial Estate were world class. However, this estate presently has reached full capacity. Thus, the most recent gas-intensive investment was initially relocated to a new site in south Trinidad. The initial site chosen was at the newly created La Brea Industrial Estate. However, the proposed industrial estate was 'littered with old oil and gas wells' which needed to be filled in before construction could begin (The Economist Intelligence Unit 1995:15). Moreover, its topography features were considered to be unsuitable for the construction of industrial plants (*Carib-Latin Energy Consultant,* January– February 1996:27). Thus, the project was relocated to an alternative site further down the west coast at Point Fortin, near to an oil refinery. This area has a benign marine environment, a substantial infrastructure and possesses a workforce experienced in plant construction and operations (ibid., 27). The managers noted that they are presently working with the relevant state companies to undertake the requisite improvements in the road networks, water and electric supply in this location.

It is significant to note that all managers stated that the bureaucracy in Trinidad was efficient. These companies deal directly with the government ministries, such as the Ministry of Finance. All of the managers interviewed stated that they were satisfied with the quality of service provided by the bureaucracy in Trinidad-Tobago. The following quotations are illuminating.

> Despite the change in government, the climate still remains very business-friendly. The government has been very aggressive in trying to encourage industries in the country.
>
> The government system, that is the bureaucracy, is good. Decisions concerning industrial development are made quickly.
>
> If one compares Trinidad to other countries, one must say that decisions are made very quickly here.
>
> Trinidad is blessed with low levels of bureaucracy. The government of Trinidad and the environment is very industry supportive. The country has an industry-supportive bureaucracy.
>
> The bureaucracy is Trinidad is better than in most places. We are satisfied with the services we receive from the ministries.

The bureaucracy in Trinidad appears to operate with efficacy. However, there seems to be a lack of co-ordination in the activities of the institutions mandated to stimulate industrial development in the country.

There are several institutions that are responsible for stimulating industrial development in Trinidad. As was earlier discussed, the National Gas Company (NGC) is mandated to promote investment in the gas-based industries.

Also, the Point Lisas Port Development Corporation Limited (Plipdeco) is responsible for the management of the Point Lisas Industrial Estate. To this end, it carries out the requisite maintenance of the industrial estate; engages in cargo handling activities at the port; and undertakes the management of the harbour. The Tourism and Industrial Development Corporation (TIDCO) is another organisation mandated to stimulate industrial activity in the country. It is responsible for the development of the non-oil sector and administers the investment incentives offered to the investor.

It is noteworthy that there appears to be little co-ordination of activity among these organisations. The NGC operates in isolation of the activities of Plipdeco and TIDCO. In some cases, this results in duplication of activities. Thus, both Plipdeco and the NGC market the country as a site for gas-intensive activities. To this end, both Plipdeco and the NGC individually attempted to expand the infrastructural facilities offered to the foreign investor. The NGC's efforts resulted in its unsuccessful creation of an industrial estate at La Bea. Ironically, Plipdeco's attempts were more fruitful. It recently acquired land neighbouring the Point Lisas Industrial Estate. Similarly, TIDCO's activities aimed at stimulating the development of the non-oil sector are not conducted in concert with the NGC's efforts of developing the natural gas sector. Thus, these two organisations fail to capture the synergies that could arise from a joint marketing strategy. One activity that has been adversely affected by this lack of co-ordination is the development of the locally owned firm in the natural gas sector. It appears that none of these institutions aggressively attempts to enhance the development of these firms.

H7: The investment incentive hypothesis

The investment incentive package offered by the Trinidad-Tobago government played an important role in the decision of these seven MNEs to establish and continue operations in the country. The government offers tax holidays of a maximum of ten years to highly capital-intensive enterprises. Capital-intensive enterprises are those with capital investment of a minimum of US$8 million. These capital-intensive enterprises are also exempted from the payment of value-added taxes. In addition, the country offers import duty concessions on plant, equipment, raw material and intermediate goods. Further, firms enjoy free repatriation of profits and dividends. Moreover, enterprises are granted an initial allowance of 50 per cent of their capital cost of plant and machinery. Also, firms that export outside of CARICOM are entitled to an allowance for their export sales. Finally, Trinidad enjoys double taxation treaties with Canada, Germany, United Kingdom and the US (Price Waterhouse 1995:35–44).

The preferred investment incentives were tax holidays and duty concessions on plant, equipment, raw material and intermediate goods. The manager of Atlantic LNG stated that the most important investment incentives were tax holidays, duty free importation of machinery and equipment, and exemptions of withholding tax on dividends.[8] Similarly, the manager of Arcadian noted that tax holidays were important to the decision to establish operations in Trinidad. He revealed that his company benefits from the double taxation treaty that Trinidad enjoys with the US since the tax rates in Trinidad are much lower than those in the US. The managers of Caribbean Methanol Company also agreed that tax holidays were important to the decision to establish operations in Trinidad. They noted that the waiver of withholding tax on dividends and duty exemptions on equipment were also important to their investment decision. Conversely, Ispat does not benefit from tax holidays. However, the favoured investment incentives were import duty exemptions on raw materials and the export allowance. The latter incentive was especially important to the company's decision to continue operations in the country since it exports more than 85 per cent of its output. It is important to note that none of these firms cited free repatriation of profits and dividends as influencing their decision to establish and continue operations in Trinidad. Trinidad-Tobago only liberalised its foreign exchange markets in 1993. Yet, none of these firms perceived this investment incentive to be important to their operations in Trinidad.

H9: The 'Double Diamond' hypothesis

The 'Double Diamond' hypothesis clearly explains the factors influencing the locational decisions of the seven MNEs operating in Trinidad's natural gas sector. The strategic management style these firms adopted for their Trinidadian operations can be illustrated by Quadrant 4 of Figure 10.2.

Figure 10.2 The role of the Trinidadian operations in the corporate strategy of the gas-intensive MNEs

Role of host country national 'diamond' on development of core competencies of gas-intensive MNEs	Integration of Trinidadian operations with other operations of the gas-intensive MNEs	
	Low	High
None	1	2
High	3	4
Diamond Network	5	6

Source: Adapted from Rugman and Verkebe (1993a)

The Trinidadian operations were an integral part of the corporate strategy of the seven MNEs studied. Trinidad was initially viewed as a location for low-cost, gas-intensive activities. Indeed, the NGC's unique gas pricing regime was a considerable locational inducement. However, the investments made by the MNEs studied are extremely capital intensive. These investments have a high proportion of sunk costs, which prevents the MNEs from freely relocating their operations to other gas-intensive locales. Not withstanding these sunk costs, many of these firms expressed a desire to continue, and even expand, their operations in Trinidad. As Figure 10.3

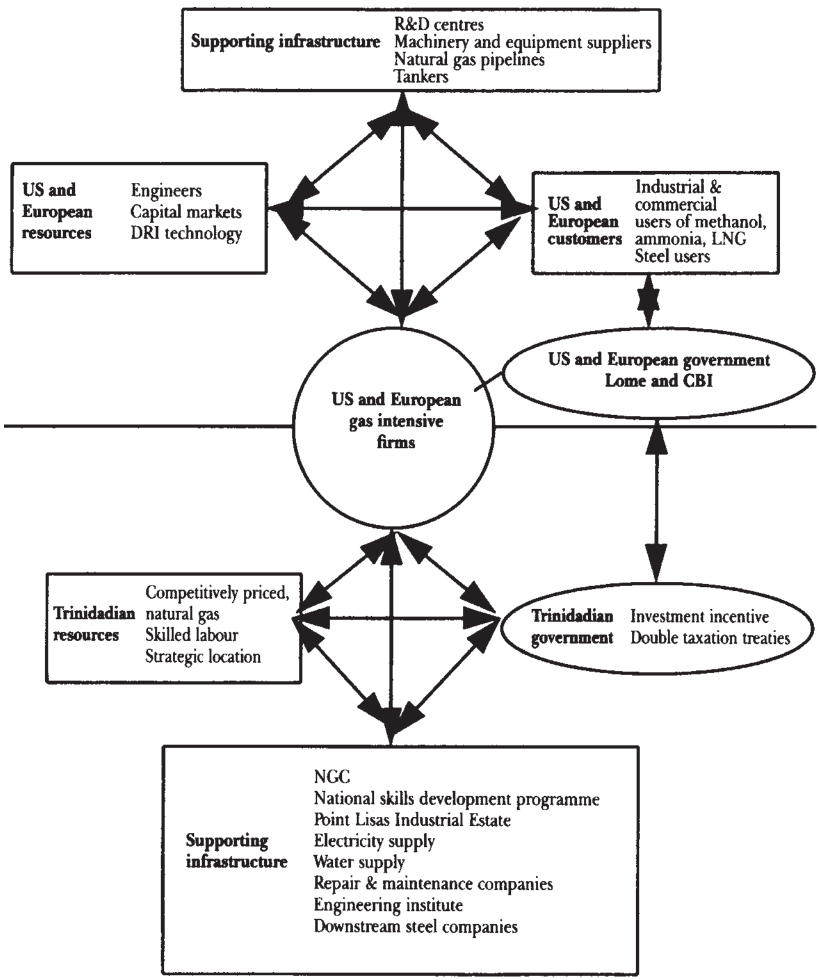

Figure 10.3 The 'Double Diamond' approach to the natural gas industry of Trinidad-Tobago.

Source: Adapted from Rugman and Verbeke (1993a)

demonstrates, several elements of the Trinidadian diamond were impacting positively on the development of the core competencies of the seven MNEs. These elements will be discussed in the following section.

As discussed above, Trinidad was initially perceived as a low-cost location for gas-intensive activities. However, the NGC has adopted an innovative gas pricing mechanism that allows the MNEs to remain profitable even under depressed industry conditions. This gas pricing system has impacted favourably on the foreign investment decisions of the companies studied. Many MNEs attributed it to their decision to establish and continue operations in Trinidad. In addition, Trinidad enjoys a strategic geographic location. Most of the major markets are easily accessed from this country. However, the advantages provided by an innovative pricing system and a strategic geographic location are not sustainable. They are easily imitated by competing locations. Indeed, Trinidad's most formidable competitor, neighbouring Venezuela, which also enjoys the same strategic geographic advantage, has implemented this pricing system.

Trinidad has not only relied on an innovative gas pricing system and its strategic geographic location to attract gas-intensive foreign investment. Its labour force is highly skilled. It possesses a labour force that seems to have mastered the technologies needed to operate plants with process operations. Indeed, two companies studied (Arcadian Trinidad Limited and Caribbean Methanol Company) were totally operated and managed by locals. Moreover, several of these companies, notably Caribbean Ispat Limited and Arcadian Trinidad Limited, have adopted comprehensive training schemes. The training programmes implemented by Arcadian Trinidad Limited is worthy of mention. This firm has structured training programmes for all categories of its workforce.[9] It offers a two-year engineering training programme. The recruits for this programme are drawn from the local university. The company also offers a five-year training programme for process operators. The trainees are normally graduates of the process operator course offered at the local technical school. In addition, the company sends its managerial staff to its corporate headquarters for training. It also uses the services of the local management centre for the training of its executives.

The training schemes offered by these companies are complemented by a structured skills development programme introduced by the government. This is the National Skills Development Programme. This programme was a response to the growing shortage of skilled workers in the energy sector as well as the inadequacy of the existing training programmes offered at the local technical institutes.[10] The National Skills Development Programme is based on the apprenticeship system practised in Germany. The accreditation and certification for this programme is under the German national system. Fitz Werner of Germany, a sister company of Ferrostaal, is supplier of technical assistance, training and equipment for this programme. A local organisation, the Metal Industries Company, is the implementing agency. The areas earmarked for development include metals and electrical engineering, and advanced technology. This programme intends to graduate approximately 1,100 persons annually. It also seeks to provide continuous training for workers employed in the energy sector. To this end, it plans to offer part-time evening classes and specialised seminars to an estimated 4,000 persons (*Gasco News,* July 1995:15).

Further, it seems that the policy-makers understood the importance of increasing linkages between the business sector and the technical institutes (World Bank 1993b:xxvi; Kanter 1995:261–6). The National Skills Development Programme relies heavily on the support and the initiative of the private sector. At present, foreign companies investing in the country's natural gas sector are mandated to invest in the development of the skills of the labour force. Thus, one of the conditions of the Atlantic LNG investment was its development of a US$8 million training centre.

It is also noteworthy that the NGC has sought to deepen its ties with the local university. In 1994, the Faculty of Engineering established the Engineering Institute. The NGC provided the initial funding needed to establish this institute (*Gasco News,* December 1994:5). The Engineering Institute uses the resources of the Faculty of Engineering for industry-related research and development, training and projects (ibid., 2–5). One of the MNEs studied has successfully used the services of this institute. In addition, one MNE utilised the services of the local industrial research institute. It designed an environment management system for this company.

Some of the MNEs stated that they use the services of local maintenance and repair firms. Indeed, Plipdeco is mandated to stimulate the development of local firms, which provide support to the gas-intensive MNEs. The Point Lisas Industrial Estate houses approximately fifteen large petrochemical plants. However, it also has seventy-five firms engaged in service-type activities for these companies. The services offered by these companies range from instrumentation for the maintenance and repair of electronic equipment to janitorial services. The government has also sought to stimulate the development of these firms. To this end, one of its conditions for the development of the LNG project is that the foreign joint venture partners spend US$100 million on the services of local companies. These MNEs are thus using the services of local companies during the construction phase of the project. They also intend to use local companies for some of the routine maintenance work when the plant is operational.[11]

Downstream activities have emerged from the foreign investments. There are approximately fifteen local firms engaged in the downstream steel industry. These firms are engaged in a myriad of activities including the production of electrodes, nails, commercial fasteners and merchant items. All obtain their raw material from the Caribbean Ispat Limited (CIL). Ispat appears to encourage the development of this local industry. The company, through its involvement in the local Chamber of Industry and

Commerce, has suggested possible activities for the development of the downstream steel industry (Westerfield-Duke 1996:29).

However, there were elements of Trinidad's diamond that were noticeably weak. The facilities offered at the Point Lisas Industrial Estate were described as world class. Yet, the development of this industrial estate highlights the limitations of the government's strategy of developing industrial enclaves without undertaking the necessary improvements in the general infrastructure. As noted earlier, several managers complained that the water and electricity services were inefficient. In addition, some stated that the airline services were inadequate. Furthermore, the MNEs that located gas-intensive activity outside of the Point Lisas Industrial Estate are forced to make considerable investments in improving the quality of roads, and the electricity and water supply in this location. In addition, while the bureaucracy appears to operate with efficacy, there seems to be a lack of co-ordination in the activities of the organisations mandated to stimulate industrial activity in the country. This lack of co-ordination could only result in a duplication of activity and a needless waste of resources.

Nevertheless, the Trinidad government still has had a fairly positive impact on the national diamond. Its investment incentive system plays an important role in attracting foreign investment. Moreover, through its establishment of the National Skills Development programme, it is seeking to provide the calibre and quantum of workers demanded by the natural gas sector.

Modes of market entry used in the natural gas sector of Trinidad-Tobago

This study suggests that the MNE involved in intra-firm trade in Trinidad-Tobago will use a wholly owned subsidiary as its mode of market entry (Teece 1983; Anderson and Gatignon 1986; Gomes-Casseres 1989, 1990). It is also posited that the level of international experience of a firm influences its selection of a market entry mode. The study contends that the MNE with international experience uses a wholly owned subsidiary as its market entry mode (Johanson and Wiedersheim-Paul 1975; Johanson and Vahlne 1977, 1990; Li 1994; Tan and Vertinsky 1996). In addition, it argues that the cultural distance between the home and host country plays an important role in the MNE's selection of a market entry mode (Kogut and Singh 1988; Padmanabhan and Cho 1996). Further, it posits that there is a positive relationship between the resource-seeking MNE and its use of minority and 50–50 joint ventures (Oman 1984, 1988; Franko 1989). Finally, the study posits that the Trinidadian government plays a critical role over the MNE's selection of a market entry mode in the natural gas sector (Oman 1984, 1988; Franko 1989; Gomes-Casseres 1990).

H10: The intra-firm trade hypothesis

Only one MNE studied was involved in intra-firm trade. This was Arcadian Corporation. As was previously mentioned, the ammonia produced by its Trinidadian operations was sent to its US nitrogen plants for further processing. This company used a wholly owned subsidiary as its mode of market entry in Trinidad. However, the issue of control was not mentioned as influencing its market entry mode choice.

Two MNEs studied marketed the output produced by their Trinidadian operations. This activity was not considered to be intra-firm trade.[12] Hence, the intra- firm hypothesis has limited applicability as an explanation for the entry mode choices the MNEs studied.

H11: The international experience hypothesis

Many of the MNEs studied possessed a wealth of experience operating in foreign markets. Yet these firms did not use a wholly owned subsidiary as their mode of entry into Trinidad. Amoco Corporation, British Gas plc, Cabot Corporation, and, to some extent, Ferrostaal and Methanex, are highly internationalised companies. They possess what has been termed ‘worldwide experience’ (Li 1994). However, their mode of entry used in Trinidad was a minority joint venture. It appears that the quantum of initial investment demanded by the Trinidadian venture influenced their choice of market entry mode (Stopford and Wells 1972:118; Vernon 1983:202; Gomes-Casseres 1990:12). The Atlantic LNG project, which is jointly owned by Amoco Corporation, British Gas plc, Cabot Corporation, Enagas and the NGC, is a US$1,000 million investment (*World Gas Intelligence* February 1996:10). Evidently, this project was too costly for any of these firms to enter this investment alone. In contrast, Arcadian Corporation, the least internationalised of the firms studied, used the mode of a wholly owned subsidiary to enter Trinidad. The Trinidadian investment was the first that Arcadian Corporation had made abroad. Its manager stated that this investment was ‘too attractive’ to share with another company. Clearly, Arcadian’s implementation of a strategy of internationalisation outweighed any concerns that its managers may have had about their lack of worldwide and country experience.

H12: The cultural distance hypothesis

It is unclear whether the cultural distance between Trinidad-Tobago and the home countries of the MNEs influenced their selection of market entry mode. These firms used a variety of market entry modes in Trinidad. Two MNEs acquired the privatised assets of state-owned companies, while five were involved in minority joint ventures. It is thus remarkable that none of the managers cited the cultural dissimilarities between their home country and Trinidad as influencing the selection of international entry mode. Indeed, for several of the MNEs studied, the cultural distance between their home country and Trinidad was not large. Amoco Corporation, Cabot Corporation and Arcadian Corporation are US-owned. Moreover, the home country of British Gas is the UK. Indeed, Trinidad-Tobago is a former colony of the UK. Hence, there are few cultural dissimilarities between Trinidad and the home countries of these MNEs. Trinidad is English-speaking and lies in fairly close proximity to the US. However, with the exception of Arcadian Corporation, all choose the mode of greenfield, minority joint ventures.

Curiously enough, the MNE whose home country seemed to be culturally dissimilar from Trinidad selected a wholly owned acquisition as its international market entry mode. The cultural distance between Ispat, an Indian company, and Trinidad is fairly large. However, Ispat's Trinidadian operation is a wholly owned by the parent company.[13] By contrast, it seemed that cultural distance may have influenced Ferrostaal's selection of a market entry mode. Ferrostaal, which is a German company, used a minority-owned joint venture to engage in methanol production in Trinidad. Its manager stated that his parent company always enters foreign markets with a local partner. Apparently, the local partner, CL Financial, provided Ferrostaal with knowledge of the local economy, politics and culture (Beamish 1988, 1994). In addition, CL Financial provided production technology since Ferrostaal's core business was not methanol production.

H13: The reduced equity modes in the primary sector hypothesis

It is clear that most of these firms, which were all resource-seeking, selected the mode of minority joint ventures in the natural gas sector. Interestingly enough, the reasons for these firms' use of minority joint ventures does not appear to be consistent with the explanations advanced by the extant literature. Indeed, they were not using low-technology in their operations in Trinidad (Oman 1984; Franko 1989). Moreover, several were not newcomers to the industry (Stopford and Wells 1971; Oman 1984, 1988; Franko 1989; Agarwal and Ramaswami 1992). In fact, several of them, notably British Gas plc, Methanex and Amoco, were industry leaders. In addition, this reduced equity mode was not country-specific (Oman 1984; Dunning 1988; Pan 1996). Not only European firms used minority joint venture agreements. Several US MNEs, such as Cabot LNG and Amoco, also selected this form of foreign involvement. The main reason for these firms' use of minority joint ventures in the natural gas sector appears to be finance. As noted earlier, many of these investments were heavily capital intensive. Thus, the firms were forced to conclude these agreements in order to become involved in what many considered to be a strategic investment.

H14: The role of government hypothesis

The Trinidadian government played a critical role in these firms' selection of market entry mode used in its strategic sector. Interestingly, the government's intervention was not in the manner as postulated by Oman (1988). These firms' investment in the natural gas sector was a response to a change in the government's policy towards state ownership of this sector. As was earlier discussed, it was only in the late 1980s that the government reversed its policy on state ownership of the 'commanding heights' of the economy. The state's role is presently limited to facilitating and regulating industrial activity. Most importantly, the government also relaxed its policy on foreign, wholly owned subsidiaries in the natural gas sector. To this end, it privatised several of the state-owned companies in this sector. Indeed, two of the MNEs studied acquired the privatised assets of state-owned companies and established wholly owned subsidiaries. The other MNEs developed greenfield investments. These investments were actively courted by the NGC. It is interesting to note that that the NGC only became involved in one of the companies studied at the request of its foreign joint venture partners (*LNG Observer,* Winter 1993:23). These foreign investments are welcomed by the government since it is seeking to monetarise its natural gas reserves. Faced with a deteriorating economic situation, it is thus vulnerable to the MNE's demands (Gomes-Casseres 1990:15). Hence, it exercised no control over the market entry modes used by these seven MNEs to enter Trinidad-Tobago.

Conclusions

Eight of the thirteen hypotheses were fully supported by this case study. Most importantly, this qualitative analysis also provided rich detail on the factors that influence the resource-seeking MNE's motivations for engaging in foreign investment, its locational choice and its market entry mode choices in the natural gas sector of Trinidad-Tobago. These issues will be discussed in the following section.

The motivations for FDI in the gas sector of Trinidad-Tobago

It seems that the monopolistic advantage hypothesis does not fully explain what motivated these seven firms to establish gas-intensive activities in Trinidad. These firms did not use their monopolistic advantages to compete with local firms. In fact, they did not perceive the domestic firms to be their competitors. It is noteworthy, however, that two MNEs used their monopolistic advantage in production technology to compete with each other. Further, it appears that the 'follow-the-leader' hypothesis does not fully explain the motivations for all seven firms to establish operations in Trinidad. However, two MNEs appeared to be engaged in oligopolistic rivalry. They seemed to have followed each other into a strategic LNG investment. It is noteworthy that Dunning's eclectic paradigm appears to be a more likely explanation for the decision of these seven MNEs to establish and to continue operations in Trinidad. These firms all sought to combine their core competencies (production technology and marketing skills) with the locational advantages (competitively priced natural gas and strategic location) of the country.

The choice of locating gas-intensive activity in Trinidad-Tobago

The presence of low-cost natural gas played an important role in the decision of the seven MNEs to establish and continue operations in Trinidad. It is significant to note that the innovative gas pricing system implemented by the NGC has been influential in sustaining this investment. Also, it seems that these seven MNEs were not motivated to establish and continue operations in Trinidad because of the preferential trading agreements the country enjoys with the USA, Europe and Canada. While several MNEs benefited from these trading agreements, none stated that they played an important role in their decision to establish and continue operations in Trinidad. In addition, while Trinidad-Tobago does not have EPZs, it did establish an industrial enclave at the Point Lisas Industrial Estate. As several managers emphasised, this estate has played an important role in their decision to establish operations in the country. Nonetheless, there were several factors in the general infrastructure that were deficient. The most notable ones were the reliability of the supply of water and electricity. The airline service was also considered to be inadequate. Further, this study suggests that the investment incentives offered by the Trinidad government played an important role in these firms' decision to establish operations in the country. The preferred incentives appear to be tax holidays and duty free imports of raw material and equipment. Finally, the 'Double Diamond' hypothesis seems to explain the factors influencing these seven MNEs decision to establish and continue operations in Trinidad-Tobago. The 'Double Diamond' framework revealed the integral role that Trinidad plays in the corporate strategies of the seven MNEs.

The modes of market entry used in the natural sector of Trinidad-Tobago

It is significant to note that a few market entry mode theories were supported by this analysis. There was only one firm involved in intra-firm trade in this case study. It chose a wholly owned subsidiary to enter Trinidad-Tobago. Yet its reasons for this choice of market entry mode cannot be attributed to control over an integrated production. Further, the firms, which possess international experience, did not select a wholly owned subsidiary to enter Trinidad-Tobago. Instead, they formed minority joint venture arrangements. It seems that the costs of their Trinidadian investment preclude their selection of a wholly owned subsidiary. In addition, cultural distance was not an influential factor in most of these seven firms' choice of a market entry mode. The only exception was Ferrostaal, which entered a joint venture arrangement with a local and a foreign partner. Further, five of these firms used minority joint ventures in the natural gas sector. Their reasons for selecting this market entry mode appear to be financial. Finally, these firms' selection of a market entry mode was indeed influenced by the policy of the Trinidadian government. Faced with declining oil reserves and the need to monetarise its gas reserves, the government was vulnerable to the demands of the MNEs. Hence, it exercised no control over their choice of market entry mode.

11 Foreign direct investment in the Caribbean

A cross-industry case study analysis

Introduction

In the three preceding chapters, case studies were done of MNEs making investment in the strategic industries of the three focus countries. This chapter will now conduct a cross-industry analysis of the foreign investment decisions made by these fifteen MNEs. To this end, it analyses the factors that affect their motivations for FDI, their choice of location and their selection of market entry mode. The main objectives of this chapter are to increase the generalisability, deepen the understanding and provide fuller explanations of the factors influencing the foreign investment decisions of these fifteen MNEs (Miles and Huberman 1994:172–3). It should be noted, however, that the generalisability of this cross-industry analysis is limited by the differences in the industries and countries studied.

The motivations for FDI in Jamaica, Barbados, and Trinidad-Tobago

As Table 11.1 demonstrates, several of the hypotheses advanced on the motivations for FDI in the three Caribbean countries were supported by the three case studies. Indeed, it seems that Dunning's eclectic paradigm satisfactorily explains the motivations for FDI in Jamaica, Barbados and Trinidad-Tobago. In addition, to some extent, the hypothesis advanced from the monopolistic advantage theory was supported by the case studies. The analysis also appears to suggest that the hypothesis developed from Knickerbocker's 'follow-the-leader' theory does not explain the motivations for FDI in the three Caribbean countries studied.

H1: The monopolistic advantage hypothesis

The hypothesis, which was developed from Hymer's monopolistic advantage theory, states that no relationship exists between the MNE's use of its unique advantage and the presence of domestic competitors. This hypothesis was supported by the analysis. The fifteen MNEs studied did not

Table 11.1 The results of the testing of the hypotheses on motivations for FDI in the Caribbean

Hypothesis	*Jamaica apparel sector*	*Barbados information services sector*	*Trinidad-Tobago natural gas sector*
No relationship exists between the MNE's use of its unique advantages and the presence of domestic competitors	?	✓	?
There is a positive relationship between 'follow-the-leader' investment behaviour of MNEs and the use of low-cost factors	×	×	?
There is a positive relationship between the firm's use of its unique advantages and the locational advantage variables	✓	✓	✓

Key: √=supported ×=not supported ?=uncertain

perceive the local firms to be their competitors. Although there were locally owned firms operating in the three industries examined, none of them was a source of competition to the MNEs studied. It appears that the local firms in the Caribbean are not internationally competitive (Worrell 1987; Watson 1990). Indeed, in Barbados the domestic firms in the information service industry outnumbered the foreign firms (Nurse 1996a:8). Yet none of them posed a competitive threat to the four MNEs that operated in the information service industry of Barbados.

Interestingly, it seems that in two of the industries examined, MNEs used their firm-specific assets to compete with other MNEs. In the apparel industry of Jamaica, the four MNEs studied used their firm-specific asset of human resource management to compete with other apparel MNEs. As was discussed in Chapter 8, the main source of competitive advantage in the apparel industry is low-cost labour. Thus, the main motivation for the four apparel MNEs investing in Jamaica was its relatively low-cost labour. However, the idiosyncratic characteristics of the Jamaican labour force meant that productivity rates were critical to the operations of these firms. Moreover, there was a paucity of workers with managerial skills in the country (Krammer 1991:160; World Bank 1993b:xxv). Thus, the four MNEs studied were compelled to use their firm-specific asset of human resource management to compete with one another for access to low-cost labour in Jamaica. They were all seeking to attract and maintain a well motivated, low-cost workforce.

Alternatively, three MNEs operating in the natural gas sector of Trinidad-Tobago used their firm-specific assets to compete with other foreign firms in this sector. The firm-specific asset that was mainly used in competition was production technology. Ispat International used its unique advantage in the direct reduced iron production process to compete with other MNEs that also were seeking to acquire the privatised iron and steel company. Relatedly, Amoco Corporation and British Gas plc used firm-specific assets to compete with each other. They were competing for control over the LNG investment in Trinidad. These MNEs perceived this investment to be strategic. Thus, they both sought to be gas suppliers to the LNG plant. To this end, they used their firm-specific asset in gas exploration to compete with each other for control over the investment.

Hence, the monopolistic advantage theory as posited by Hymer (1976) is not applicable to the three Caribbean countries studied. These countries simply do not possess locally owned firms that are internationally competitive. However, it seems that this theory can be used to explain the investment behaviour of some of the MNEs involved in export-oriented production in these countries. Several of the MNEs engaged in FDI in Jamaica and Trinidad-Tobago because they perceived that they possessed superior advantages (human resources management and production technology) over existing MNE competitors.

H2: The 'follow-the-leader' hypothesis

The 'follow-the-leader' theory does not appear to explain the investment behaviour of most of the MNEs studied. The eight MNEs that operated in Jamaica and Barbados sought to become more globally competitive by locating their labour-intensive processes in countries with low-cost labour. The offshore investment in the apparel industry of Jamaica was facilitated by the enactment of the CBI. In Barbados, the catalysts were the technological advances in the telecommunications industry together with the automation and computerisation of office work. It appears that many of the firms in the apparel and information service industries implemented this global strategy (Posthuma 1987; Pearson and Mitter 1993). However, most did not relocate operations to Jamaica and Barbados. Indeed, the managers of these eight MNEs stated that while they followed their competitors offshore, they did not follow them into these two countries. Offshore investments in the apparel and information service industries were made throughout the Caribbean and Latin American region. These investments were not confined to Jamaica and Barbados.

It is thus questionable whether the 'follow-the-leader' theory could be used as an explanation for the investment behaviour of firms operating in small, developing countries. In 1995, the size of the labour force of Barbados and Jamaica was 126,000 and 1,150,000, respectively. Hence, the possibilities of MNEs following their competitors to invest in labour-intensive activities in each of these two countries appear to be remote. Neither Jamaica nor Barbados possesses the labour force to satisfy the manpower requirements of these firms.

Nonetheless, this theory seems to explain the investment behaviour of two MNEs operating in the natural gas sector of Trinidad-Tobago. These two firms, which were rivals in the domestic gas market, competed for control over the first LNG investment made in this country. To this end, they both sought to become gas suppliers to the LNG plant. Only one was successful. However, both are presently joint venture partners in the LNG company. It appears that the LNG investment was considered to be strategic. Hence, neither gas company would have allowed the other to invest in this project without its involvement.

It seems that Knickerbocker's 'follow-the-leader' theory may explain the investment behaviour of some firms in the natural resource sector (Vernon 1983:202). However, it does not appear to explain the motivations for MNEs investing in labour-intensive activities in small, developing countries.

H3 The eclectic paradigm hypothesis

The eclectic paradigm appears to explain what motivated the fifteen MNEs to engage in FDI in the three Caribbean countries studied. These firms sought to combine selected firm-specific assets with the locational endowments of these countries. It is significant that most of these MNEs tended to use the same firm-specific assets in combination with similar locational advantages of the countries (see Figure 11.1).

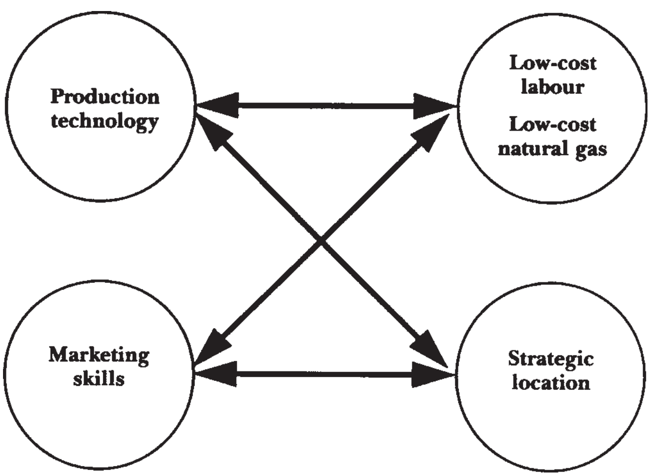

Figure 11.1 The application of the eclectic paradigm to Jamaica, Barbados and Trinidad-Tobago

As Figure 11.1 shows, the fifteen MNEs tended to combine their core competencies in production technology and marketing with the factor variables (low-cost labour and natural gas) and the strategic location of the three Caribbean countries. In general, the objective of their operations in these three countries was to achieve cost competitiveness.

Indeed, in Jamaica, the four apparel MNEs, to varying degrees, integrated their core competencies in textile manufacture, garment design, product engineering, marketing and distributing with the low-cost, semi-skilled labour and strategic location of the country. Most of the apparel produced in Jamaica is directed to the middle segments of the US market (Steele 1988:10). This was also the case with the four MNEs studied. Their apparel products were aimed at the lower to middle segments of the market where price is the main determinant of competition. Thus, the low-cost labour of Jamaica played a critical role in these firms' cost competitiveness. Moreover, Jamaica's close proximity to the US meant that these MNEs could maintain fairly low levels of inventories and thus reduce warehousing expenses. In addition, they gained the advantage of speed since they could quickly respond to the needs of the customer. Further, Jamaica's proximity to the US allowed for the implementation of 'quick response' systems. These systems were used by two of the MNEs studied.

Similarly, the four information service MNEs in Barbados combined their core competencies in production technology (data conversion, information processing, software development) and marketing with the low-cost, skilled labour force of the country. These firms emerged from industries such as the airlines, publishing and software development. However, they all sought to achieve cost savings by relocating their labour-intensive activities to relatively low-wage Barbados. Further, Barbados's close proximity to the US, together with its time zone equivalence to the eastern seaboard of the US, facilitated quick turnaround times.

The seven MNEs in Trinidad-Tobago, in varying degrees, sought to combine their core competencies in production technology (direct reduced iron process, gas exploration) and marketing with the competitively priced natural gas of the country. As was discussed in Chapter 10, the products produced by most of these firms are commodities. Thus, price is the main determinant of competition in the markets in which they operate. Trinidad's competitively priced natural gas allowed the firms to achieve cost competitiveness. Moreover, its strategic location allowed the seven MNEs to easily access most of the major global markets.

Interestingly, the application of Dunning's eclectic paradigm to FDI undertaken in these three Caribbean countries has unintentionally highlighted their limited success in progressing to the development of 'advanced factors' (Porter 1990:77–80). These countries still offer the MNEs 'basic factors' of low-cost, semi-skilled labour, natural resources (natural gas) and location. They have achieved limited success in developing advanced factors such as a highly educated work force (World Bank 1993b).

The choice of locating FDI in Jamaica, Barbados and Trinidad-Tobago

As Table 11.2 shows, most of the hypotheses that were advanced from the location literature were supported by the three case studies. Overwhelming support was found for the hypotheses drawn from the 'Double Diamond' and the low-cost factor arguments. Conversely, the hypothesis advanced from the theories on the investment incentives was not supported by the qualitative analysis. Furthermore, there was limited evidence that EPZs play an important role in attracting FDI into the three Caribbean countries. Finally, there was mixed support on the issue of the attractiveness of preferential trading agreements on the initial investment decision as well as the decision to continue operations in these countries.

Table 11.2 The results of the testing of the hypotheses on the locational choices for FDI in the Caribbean

Hypothesis	*Jamaica apparel sector*	*Barbados information services sector*	*Trinidad-Tobago natural gas sector*
There is a positive relationship between the MNE and the decision to establish and continue operations because of low-cost factors	✓	✓	✓
There is a positive relationship between the MNE and its use of preferential trading agreements	✓	×	?
There is a positive relationship between the presence of an EPZ and the export-seeking MNE	✓	?	?
No relationship exists between the investment incentives offered by the Caribbean governments and the MNE's decision to establish and continue operations in the Caribbean	×	×	×
There is a positive relationship between the MNE's use of its home country's 'diamond' and the 'diamond' of the Caribbean	✓	✓	✓

Key: √=supported ×=not supported ?=uncertain

H4: The low-cost factors hypothesis

As noted earlier, the competitive advantage that these three Caribbean countries offered to the fifteen MNEs studied was based on low-cost factors. Indeed, Jamaica was regarded as a site for low-cost, semi-skilled labour. Similarly, Barbados was perceived as a location for low-cost, skilled labour. Conversely, Trinidad was viewed as a location for competitively priced natural gas. These three countries all have adopted policies for the development of their low-cost factors. In so doing, they have greatly influenced the international competitiveness of the fifteen MNEs studied. Moreover, these policies impacted on the sustainability of the countries' competitive advantage.

The four apparel MNEs invested in Jamaica because of the availability of low-cost labour. However, while labour costs were important to the operations of these firms, productivity levels were crucial. Hence, most of these MNEs implemented financial and psychic incentives to improve worker morale and thus increase productivity. It is worth noting that the institute, the Human Employment and Resource Training Trust (HEART), whose operations are funded by firms operating in the country, offer training programmes to workers in industry. It appears that the programme designed to produce workers for the apparel industry was ineffective. The managers of the four apparel MNEs studied complained that the HEART graduates do not possess the skills and work attitude required by industry. Interestingly, work in the 807-A operations has a negative public image. Moreover, it seems that it is the students who fail to achieve the requisite qualifications for matriculation into the training courses for the garment industry, who are recruited into the 807-A training programme. In addition, it appears that Jamaica's competitive advantage in low-cost labour was not achieved through the continuous upgrading of the skills of its workforce. Rather, it was gained through a series of currency devaluations. This competitive advantage is thus unsustainable. Not surprisingly, apparel MNEs operating in this country are easily induced to relocate their 'footloose' investment to more favourable locations, notably Mexico.

By contrast, Barbados's implementation of a fixed exchange rate has influenced its labour costs. As Chapter 9 revealed, Barbados's wage rates in the information service industry are the highest in the Caribbean. These relatively high wages have forced the relocation of the lower value-added information service activity out of the country. The activities that have remained in Barbados are less price sensitive and more skill intensive. However, the Barbadian government did not only rely on exchange rate policy to increase its competitiveness. It also sought to upgrade its stock of basic factors. The four information service MNEs were actively encouraged to improve the skills of their workforce. To this end, the Barbados Investment and Development Corporation (BIDC) offered grants for the training and retraining of workers. In addition, the companies that operated in this industry were allowed to intervene in the education system to improve its quality. It is noteworthy that while Barbados's stock of basic factors appears to be well developed, its stock of advanced factors seems to be limited. Several managers complained of the dearth of skilled workers in the information service industry. Moreover, the local university does not appear to be producing computer science graduates with the skills demanded by industry. Clearly, Barbados's successful progression to the higher-value-added activities of the information service industry is dependent on its developing a labour force with the requisite specialised skills.

Trinidad's competitive advantage lies in its competitively priced natural gas. This country has adopted an innovative gas pricing regime. In so doing, it has sought to differentiate itself from other gas-rich locations offering a similar competitive advantage. This gas pricing regime allows the gas-intensive MNEs to remain profitable in depressed market conditions. Most managers of the MNEs studied stated that the gas pricing system offered in Trinidad was important to their decision to establish and continue operations in the country. Yet, the competitive advantage that Trinidad derives from this pricing system is fleeting. It is easily supplanted by competing locales. It is worth mentioning that gas-rich Venezuela, which neighbours Trinidad-Tobago, has recently implemented this pricing system.

H5: The preferential trading agreement hypothesis

The preferential trading agreement hypothesis partly explains the motivations for FDI in two of the three Caribbean countries studied. It is noteworthy that the four MNEs that operated in the information service industry of Barbados did not benefit from preferential market access. In fact, their services were not subjected to duty charges in export markets. It seems that the difficulties of measuring and monitoring these information service activities deter the imposition of duty charges (Office of Technology Assessment 1985:221; Pearson 1991:19). By contrast, the MNEs in the apparel industry of Jamaica, and most of the MNEs in the natural gas sector of Trinidad-Tobago, benefited from the preferential trading agreements that these countries enjoy with the US and Europe. It is significant that the CBI agreement was critical to the four apparel firms' decision to establish operations in Jamaica. As was discussed in Chapter 8, the four MNEs studied were all 807 producers. They manufacture apparel goods from US fabric that is cut in the US. According to the terms of the 807 agreement, these MNEs pay a 20 per cent duty on the apparel goods manufactured in Jamaica and exported to the US. Interestingly, while the CBI agreement was vital to the firms' initial investment decision, it is not important to their decision to continue operations in Jamaica. The viability of the four firms' continued operations in Jamaica is presently threatened by the NAFTA.

Conversely, two of the four companies studied in Trinidad enjoyed preferential access to the US and European markets. Yet, none stated that these preferential trading agreements were important to their decision to establish and continue operations in Trinidad. The investments made by the seven MNEs in Trinidad-Tobago were highly capital intensive. Indeed, the investment in the LNG plant was a recorded US$1,000 million (*World Gas Intelligence* 1996:10). These investments thus have a high proportion of sunk costs. Hence, these MNEs, unlike their counterparts in the apparel industry of Jamaica, cannot easily relocate their operations when existing preferential trading agreements are nullified. It is because of these sunk costs that preferential trading agreements were not critical to the firms' decision to establish and continue operations in Trinidad-Tobago. Herein lies the major difference in the influence that preferential trading agreements have on the foreign investment decisions of MNEs operating in Jamaica and Trinidad-Tobago. The investments made by the apparel MNEs in Jamaica were not capital intensive (Toyne *et al*. 1984; Steele 1988). Thus, it is fairly easy for these four MNEs to relocate their operations to a more favourable location, notably Mexico, when the preferential trading agreements are revoked. As discussed above, it is difficult for MNEs to adopt this strategy in the natural gas sector of Trinidad-Tobago. Hence, preferential trading agreements played a less important role in these firms' decision to establish and continue operations in the country.

H6: The export processing zone hypothesis

Interestingly, only one of the three countries actually established export processing zones (EPZs). This was Jamaica, which had three EPZs. The other two countries also possessed enclaves for export-oriented industrial activity. However, these enclaves were not termed EPZs. Instead, Barbados marketed its enclave as an industrial park, while Trinidad's was termed an industrial estate. Nevertheless, all the managers of the fifteen MNEs studied stated that their decision to establish operations in the countries was influenced by the presence of these 'zones'.

It is important to note that while these industrial enclaves played an important role in the initial investment decision, the decision to continue operations in the countries studied was very often influenced by the quality of the general infrastructure. This was clearly seen in Jamaica. As discussed in Chapter 8, the managers of the four apparel MNEs complained about the escalating cost of utilities. The costs of electricity and telephone services were described as astronomical. In addition, the manager whose operations were located outside of the EPZ, in a rural part of the country, stated that these services were inadequate. The public transportation was also considered to be inefficient. This adversely affected worker productivity. Moreover, the MNEs that used the services of the local ports incurred an increased operating expense. They were compelled to employ security guards to prevent the smuggling of drugs on board their apparel shipments. The inefficiency of the general infrastructure, together with the economic and social instability in the country, adversely influenced the managers' decision to continue operations in Jamaica.

The quality of the general infrastructure in Trinidad-Tobago was also questionable. The managers of the seven MNEs studied complained that the electricity service was unreliable. Nonetheless, they stated that its quality has marginally improved since the partial divestment of the state-owned electricity company in 1994. In addition, these managers said that the services of the state-owned water supply company were ineffective. They all voiced concerns about its ability to meet the increasing demands on its service in the light of the recent increase in the number of firms operating in the natural gas sector. Moreover, the present airline service in Trinidad appears to be inadequate. Several managers stated that they experienced difficulties in securing flights to the country.

By contrast, the quality of the general infrastructure of Barbados was described as being world class. The managers of the four MNEs studied stated that the public transportation system and the electricity and airline services were efficient. Their only source of complaint was the relatively high telecommunications costs. It is noteworthy that the Barbadian government is presently attempting to reduce telecommunications costs as well as to introduce state-of-the-art telecommunications technology.

Clearly, the strategy of developing enclaves for export-oriented activity as implemented by Jamaica and Trinidad-Tobago is flawed. The limitations of establishing industrial enclaves without making the requisite investment in infrastructural improvements are evident. It seems that the sustainability of FDI inflows is dependent on the governments making concomitant investments in improving the general infrastructure. Interestingly, Barbados appears to have successfully adopted this strategy.

Another element of the general infrastructure examined was bureaucracy. It is noteworthy that the managers of the MNEs studied, who invested in Barbados and Trinidad-Tobago, stated that the bureaucracy in these countries operated with efficacy. The managers of the four information service MNEs in Barbados emphasised that the service offered by the Barbados Investment Development Corporation (BIDC) during the ore-investment and post-investment stages was excellent. Similarly, the managers of the seven gas-intensive MNEs in Trinidad stated that the services of the local government ministries were efficient. However, this was not the experience of the four apparel MNEs of Jamaica. The managers of these MNEs noted that the Jamaican Promotion Corporation (JAMPRO)'s post-investment service was limited. Moreover, there appears to be a lack of co-ordination of activity among the diverse institutes and departments established to promote the apparel industry in Jamaica. This lack of co-ordination of activity also characterised the institutions mandated to stimulate industrial development in Trinidad-Tobago. One result of their failure to co-ordinate activity is the lack of attention paid to the development of domestic firms in the natural gas sector. Interestingly enough, it seems that Barbados has successfully managed to overcome these problems. It has adopted a 'country-team' approach towards the development of its information service industry. This approach co-opts the services of the relevant ministries (Foreign Affairs, Foreign Trade and International Business, and Industry and Commerce), the BIDC and other government organisations in the promotion of this industry. In this way, there is a shared understanding among all relevant policy-makers of the strategies that Barbados is implementing for the development of this industry. Hence, Barbados is able to maximise the use of its resources (human and financial), improve the co-ordination of promotional activities and reduce the incidences of duplication of functions.[1]

H7: The investment incentives hypothesis

It seems that the argument advanced by theorists such as Shah and Toyne (1978) were not supported by this qualitative analysis. Investment incentives played an important role in the fifteen firms' decision to establish and continue operations in the Caribbean countries. It is noteworthy that the preferred investment incentives seemed to be low taxes or tax holidays, and duty concessions on industry-related imports. It is significant that the free repatriation of profits and dividends did not appear to have any influence on the locational decisions of these firms. All three countries liberalised their foreign exchange markets in the early 1990s. Four of the MNEs were operational before this liberalisation and thus did not benefit from this investment incentive. Yet, none cited free repatriation of profits and dividends as influencing their locational decisions. This finding strongly contradicts those advanced by researchers such as Rolfe *et al.* (1993), Woodward and Rolfe (1993) and Coyne (1995). One possible explanation for this finding is that this investment incentive has become so ubiquitous in this region that it no longer influences the locational decision.

It is important to note that there are biases in the investment incentive package offered by two of these countries. In Barbados, companies owned by CARICOM nationals and locals enjoy less generous investment incentives than the foreign investor. In Jamaica, the EPZ operators pay higher export fees than those in the customs territory. In addition, the local apparel investor in Jamaica does not receive the same investment incentives as the foreign investor (Nurse 1995:201–4). These biases in the investment incentives system have had a negative influence on the development of the domestic firm in the industries studied. This was clearly seen in Barbados where the locally owned information service firms are not internationally competitive.

H9: The 'Double Diamond' hypothesis

The application of the 'Double Diamond' hypothesis to the three Caribbean countries provided a comprehensive framework for analysing the factors that influence the foreign investment decisions of the fifteen MNEs studied (see Figure 11.2). The testing of this hypothesis clearly demonstrated the role that these three countries play in the global corporate strategy of the fifteen MNEs. Moreover, it highlighted the extent to which these MNEs used elements of the countries' enabling environment for the development of their core competencies. In so doing, it illustrated the deficiencies in the three countries' business environment for FDI.

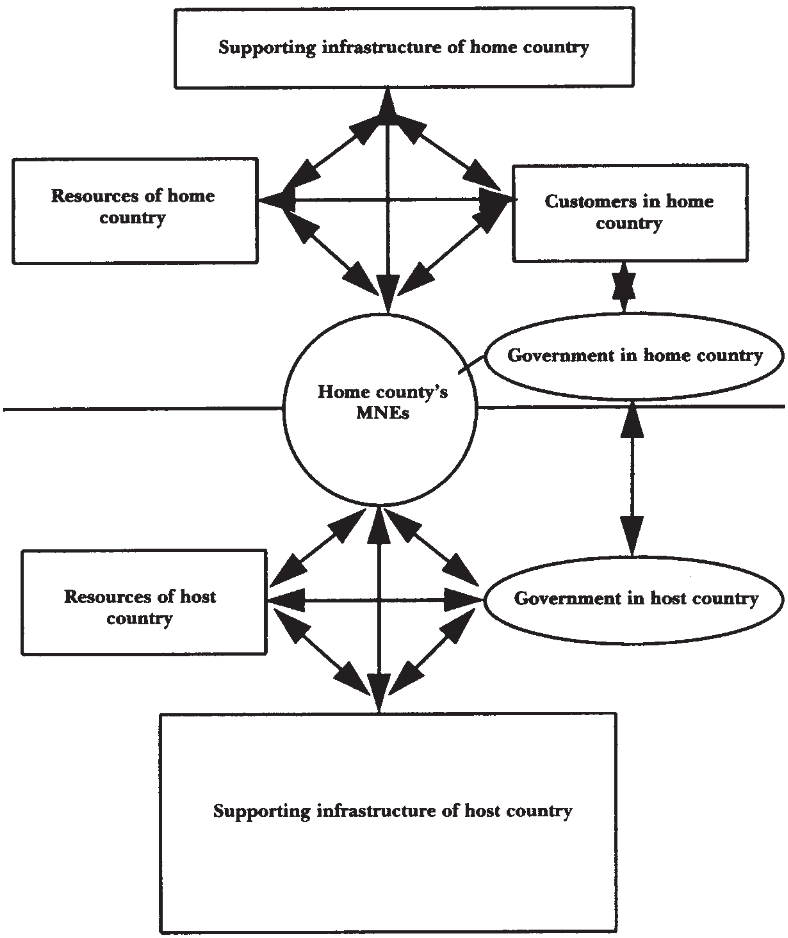

Figure 11.2 The 'Double Diamond' approach to selected industries in Jamaica, Barbados and Trinidad-Tobago

Source: Adapted from Rugman and Verbeke (1993a)

As Figure 11.2 demonstrates, the fifteen MNEs sought to integrate elements of their home countries' diamond to the diamond of the three Caribbean countries. It is important to note that the level of integration varied among the countries studied. Jamaica appeared to be passively incorporated into the global corporate strategy of the four apparel MNEs. The comparative advantage that Jamaica offered to these four firms was insubstantial. Its low-cost, semi-skilled labour force and strategic location could be easily obtained in another low-wage developing country that enjoyed close proximity to the US. Moreover, the elements in Jamaica's enabling environment provided very little to the development of the core competencies of these four apparel MNEs. Its institutional framework for industrialisation, notably HEART and JAMPRO, failed to operate with efficacy. In addition, its industrial infrastructure appeared to be inadequate: the utilities rates were considered to be astronomical, the rental rates for factory space were prohibitive, the public transport service was inefficient, and the port service at the Montego Bay Free Zone was inadequate. Further, the government did very little to enhance the country's diamond. The social and political instability in the country was a serious deterrent to the long-term investment plans of the four apparel MNEs studied. All in all, Jamaica's diamond was weakly integrated into the US diamond of the four apparel MNEs.

By contrast, Barbados was increasingly becoming fully integrated into the global operations of the four information service MNEs studied. The country was originally a location for low-cost, skilled labour. However, its relatively high wages prompted the introduction of higher-value-added information service activities in the country. Moreover, the four MNEs, supported by training grants offered by the BIDC, upgraded the skills of their workforce. In addition, several of the MNEs intervened in the education system to improve its quality. In so doing, they sought to develop workers with the requisite skills demanded by industry. Most importantly, Barbados's institutional framework for industry operated with efficacy. Its infrastructure was described as world class. In addition, its bureaucracy was efficient. The government has also sought to improve the country's diamond. Its maintenance of economic, social and political stability, and its attempts at the creation of an information technology society have positively influenced the sustainability of the investment made by the four MNEs studied.

The testing of the 'Double Diamond' hypothesis has also highlighted the deficiencies in the business environment of Barbados. The costs of its telecommunications services were relatively high. In addition, there appears to be a dearth of highly skilled workers, such as software engineers and programmers in the country. Further, the graduates from the local university do not seem to have the necessary skills and training required by the information service industry. Moreover, the capabilities of the local repair and maintenance companies appear to be limited. Finally, the investment incentive system is biased against the local firms. This only could serve to accentuate their weaknesses.

Similarly, the diamond of Trinidad-Tobago appeared to be firmly integrated into the home country's diamond of the seven MNEs studied. It is interesting to note that like Jamaica, the competitive advantage that Trinidad offered to the MNEs was not substantial. Its competitively priced natural gas and strategic location were widely available in competing locations such as Venezuela. However, there were several elements of the Trinidad's diamond that positively influenced the core competencies of the seven MNEs studied. Thus, Trinidad was able to play a much more meaningful role than Jamaica in these firms' global corporate strategy.

The labour force in Trinidad-Tobago appeared to have mastered the technologies needed to operate plants with process operations. Indeed, two of the companies studied were managed and operated by locals. In addition, several of these MNEs implemented comprehensive training programmes. These training programmes were complemented by the skills development scheme introduced by the government in 1993. Moreover, a cluster of firms that provide support services to the MNEs in the natural gas sector seems to have emerged in Trinidad. The country appears to possess a nascent maintenance and repair industry, which services firms in the natural gas sector. In addition, a few local firms have developed in the downstream steel industry. Further, there appears to be links between the natural gas sector and academia. In 1994, an institute was formed at the local university to provide industry-related research and development, and training.

The testing of the 'Double Diamond' hypothesis in Trinidad also highlighted the weaknesses of the country's business environment. The general infrastructure for industrialisation is inadequate: the water, electricity and airline services are inefficient. Moreover, there appears to be a lack of co-ordination of activity among the organisations established to stimulate industrialisation in the country.

The foregoing analysis emphasises the utility of the 'Double Diamond' framework as a technique for evaluating the attractiveness of the business environment of the three Caribbean countries. The 'Double Diamond' framework demonstrated that the business environment of Barbados and Trinidad-Tobago was fairly attractive to the MNEs studied. It also showed that the Jamaican business environment was not supportive of the foreign investor.

The selection of market entry mode in Jamaica, Barbados and Trinidad-Tobago.

Most of the hypotheses drawn from the literature on market entry modes were supported by the qualitative analysis. The results of this analysis confirmed the hypothesis advanced on the relationship between intra-firm trade and the selection of a wholly owned subsidiary. In addition, with the exception of Trinidad-Tobago, the international experience hypothesis was supported by the qualitative analysis. Further, support was found for the arguments posited on the relationship between government's influence on the mode of market entry used in the primary sector and the firm's selection of a form of foreign involvement. Surprisingly, the findings did not confirm the theories advanced by researchers such as Kogut and Singh (1988). The cultural distance between the home and host country appeared to have little influence over these fifteen firms' selection of a market entry mode.

Table 11.3 The results of the testing of the hypotheses on mode of market entry of FDI in the Caribbean

Hypothesis	*Jamaica apparel sector*	*Barbados information services sector*	*Trinidad-Tobago natural gas sector*
There is a positive relationship between intra-firm trade and the use of a wholly owned subsidiary	✓	✓	✓
There is a positive relationship between the MNE with international experience and its use of a wholly owned subsidiary	✓	✓	×
There is a positive relationship between cultural distance and the use of wholly owned greenfield investments and joint venture agreements	×	×	×
There is a positive relationship between the resource-seeking MNE and minority and 50–50 joint venture agreements	n.a.	n.a.	✓
There is a positive relationship between government policy towards mode of market entry used by foreign firms in the primary sector and the resource-seeking MNE	n.a.	n.a.	✓

Key: √=supported ×=not supported ?=uncertain

H10: The intra-firm trade hypothesis

It is noteworthy that all of the firms that were involved in intra-firm trade chose the wholly owned subsidiary as their mode of market entry into the three Caribbean countries studied. The two vertically integrated apparel MNEs selected a wholly owned subsidiary as their market entry mode into Jamaica. Similarly, the majority of the information service MNEs in Barbados chose a wholly owned subsidiary. This was also the case of the sole firm involved in intra-firm trade in the natural gas sector of Trinidad.

The issue of control appeared to play a crucial role in these firms' selection of a market entry mode. All the managers stated that the choice of a wholly owned subsidiary was greatly influenced by the parent company's desire to exercise control over the operations of its subsidiary in the Caribbean (Anderson and Gatignon 1986; Gomes-Casseres 1989, 1990). It is noteworthy that one of the firms involved in intra-firm trade selected a majority owned joint venture as the mode of entering the Barbadian market. It conceded to a form of foreign involvement that resulted in reduced control in order to gain knowledge of local culture and politics.

H11: The international experience hypothesis

The level of international experience of the MNEs studied played an important role in their selection of a wholly owned subsidiary as their mode of market entry into the three Caribbean countries. The three MNEs that possessed considerable international experience chose the wholly owned subsidiary as their mode of market entry into the Jamaican market. Similarly, the three MNEs that had a wealth of experience operating in foreign markets selected the wholly owned subsidiary as the form of foreign involvement in Barbados. It is noteworthy that the firm that lacked international experience used the route of a majority owned joint venture to enter Barbados. The Trinidadian case was an interesting one. Most of the MNEs studied were highly internationalised. However, several chose a minority-owned joint venture as their form of foreign involvement in Trinidad. It seems that the costs of the investment played a far more important role in these firms' selection of market entry mode (Vernon 1983:202; Gomes-Casseres 1990:12).

H12: The cultural distance hypothesis

It is significant to note that the cultural distance between the home country of the fifteen MNEs and the three Caribbean countries had no influence on their selection of a market entry mode. Interestingly enough, the cultural distance between the home country of many of the MNEs studied and the three Caribbean countries was not great. Indeed, ten of the MNEs were American; two were British; one was Canadian; and the remaining two were German and Indian respectively. Thus, there were few cultural dissimilarities between the home country of thirteen of the fifteen MNEs (North America and the UK) and the focus countries. However, none of these firms cited culture as influencing their selection of market entry mode. Indeed, it seems that culture did not play a critical role in these firms' selection of an institutional form of foreign involvement in the Caribbean.

H13: The use of reduced equity modes in the primary sector hypothesis

It is noteworthy that five of seven firms studied used minority joint ventures in the natural gas sector of Trinidad-Tobago. What is interesting, however, is that their motivations for using this market entry mode was inconsistent with the explanations advanced by the extant literature. Indeed, their operations did not use mature technologies. Moreover, several were US MNEs that were industry leaders. The possible reasons for their use of this form of foreign involvement in Trinidad was finance. These projects were highly capital-intensive investments. Most of the firms, notably Amoco, British Gas and Methanex, considered the investments to be strategic. However, because the investments were costly, the firms, specifically Amoco and British Gas, had no recourse but to use minority joint ventures.

H4: The role of government hypothesis

It is only in Trinidad-Tobago that the government has attempted to control the market entry mode used by the MNEs in the primary sector. As was discussed in Chapters 2 and 10, in the late 1980s the government reversed its policy of state ownership in the energy sector. Additionally, it relaxed all controls placed on total foreign ownership of companies in this sector. The investment made by the seven MNEs studied was a response to these changes in the government's policy. Two of the MNEs acquired the privatised assets of state-owned companies, while the others established greenfield investments. Indeed, the government's policy towards its natural gas sector played a decisive role in these firms' selection of a market entry mode.

Conclusions

As Table 11.4 shows, nine of the thirteen hypotheses that were advanced from the foreign direct investment literature were supported by the cross-industry analysis.

This cross-industry case study analysis has provided rich detail on the investment behaviour and corporate strategy of the fifteen MNEs that operate in the export-oriented sector of the three Caribbean countries studied. It would be instructive to compare these findings with those of the quantitative analysis. This will be one of the subjects discussed in the following chapter.

Table 11.4 The results of the cross-industry case study analysis

Hypotheses	*Results*
No relationship exists between the MNE's use of its unique advantages and the presence of domestic competitors	Supported
There is a positive relationship between 'follow-the-leader' investment behaviour of MNEs and the use of low-cost factors	Not Totally Supported
There is a positive relationship between the firm's use of its unique advantages and the locational advantage variables	Supported
There is a positive relationship between the MNE and the decision to establish and continue operations because of low-cost factors	Supported
There is a positive relationship between the export-seeking and resource-seeking MNE and its use of preferential trading agreements	Not Totally Supported
There is a positive relationship between the presence of an EPZ and the export-seeking MNE	Supported
No relationship exists between the investment incentives offered by the Caribbean governments and the MNE's decision to establish and continue operations in the Caribbean	Not Supported
There is a positive relationship between the MNE's use of its home country's 'diamond' and the 'diamond' of the Caribbean	Supported
There is a positive relationship between intra-firm trade and the use of a wholly owned subsidiary	Supported
There is a positive relationship between the MNE with international experience and its use of a wholly owned subsidiary	Supported
There is a positive relationship between cultural distance and the use of wholly owned greenfield investment and joint ventures	Not Suppported
There is a positive relationship between the resource-seeking MNE and minority and 50–50 joint venture agreements	Supported
There is a positive relationship between government polity towards mode of market entry used by firms in the primary sector and the resource-seeking MNE	Supported

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Conclusions and recommendations

Introduction

The central aim of this study is to analyse the factors that influence the motivations, locational choices and market entry mode selections of MNEs making investment in three Caribbean countries. To this end, a triangulation of methodologies was used: a quantitative method, which was based on an analysis of the responses made to a mailed questionnaire, together with the qualitative method of case studies, was employed. To draw some broad conclusions from this study, it is necessary to marry the results obtained from these two methods. Thus, the following section will compare the results derived from the quantitative and qualitative investigations.

Comparison of the research findings from the quantitative and qualitative studies

There are difficulties in conducting a comparative analysis of the research findings from the quantitative and qualitative studies. The main difficulty arises from the difference in the units of analysis used in these two approaches. In the quantitative study, all three types of FDI were examined. However, the qualitative analysis was limited to only resource-seeking and export-seeking FDI. The focus on these two types of FDI was not misplaced. One researcher emphasises that it is only in export-seeking FDI that the Caribbean countries possess 'a comparative advantage (i.e. less disadvantage) to attract FDI' (Azel 1991:22). Moreover, as noted in Chapter 6, the Caribbean governments currently are actively courting foreign investment in this area. Nonetheless, the limitations of this analysis are evident. The research findings on market-seeking FDI that were obtained in the quantitative study were not examined in the qualitative analysis because the latter study sought to analyse only resource-seeking and export-seeking FDI.

The motivations for FDI in Jamaica, Barbados and Trinidad-Tobago

H1: The monopolistic advantage hypothesis

> No relationship exists between the MNE's use of its unique advantages and the presence of domestic competitors.

It is noteworthy that the hypothesis developed from the monopolistic advantage theory as postulated by Hymer (1960, 1976), Kindleberger (1969) and Caves (1971) was supported by both analyses. Indeed, the research findings support the argument posed by several researchers that the monopolistic advantage theory is inapplicable to developing countries (Hood and Young 1979; Vachani 1985; Aswicahyono and Hill 1995). In addition, some of the relationships that were hinted at in the quantitative analysis were fully revealed in the qualitative study. The quantitative analysis demonstrated that MNEs competing with domestic firms were inclined to use their firm-specific asset of access to raw materials. The case study on Trinidad showed that this asset was used together with that of production technology for competition with domestic firms. One of the MNEs studied used its core competency in production technology for gas exploration. However, these assets were not used for competing against *locally owned,* or what Hymer termed *national,* firms (Hymer 1976). They were used for competition with other MNEs operating in the country. This is one of the main findings of this study. Several of the MNEs that operated in Jamaica and Trinidad-Tobago used their firm-specific assets in competition. However, the competitor was not the locally owned firms. The local firms generally were not internationally competitive. It was the other MNEs that operated in the host country that were the competitors. Indeed, for all practical purposes, these MNEs may be considered to be the domestic competitors.[1]

It is noteworthy that the quantitative analysis showed a relationship between the size of the firm and the use of the firm-specific asset of privileged access to raw materials. However, the qualitative study failed to find any support for this finding. There possibly was a spurious correlation between firm size and the use of access to raw materials in competition.

H2: The 'follow-the-leader' hypothesis

> There is a positive relationship between 'follow-the-leader' investment behaviour of MNEs and the use of low-cost factors.

It is noteworthy that the quantitative study demonstrated that the MNEs were involved in 'follow-the-leader' investment behaviour in the focus countries. The study revealed that MNEs followed their competitors into the Caribbean to secure low-cost labour. The qualitative analysis was able to provide a more illuminating analysis on this defensive pattern of investment. All the MNEs that located their labour-intensive activities in Jamaica and Barbados followed their competitors offshore. What is noteworthy, however, is the fact that they did not follow them into these two countries. These countries' labour force was too small to support the manpower requirements of the investing firms. Interestingly enough, this theory seems to explain the behaviour of some firms in the natural gas sector of Trinidad-Tobago. Apparently, some gas MNEs sought to pre-empt competitors from gaining first-mover advantages in the LNG industry.

H3: The eclectic paradigm hypothesis

> There is a positive relationship between the firm's use of its unique advantages and the locational advantage variables.

Interestingly, both analyses lent support to Dunning's eclectic paradigm (Dunning 1979, 1980, 1993a). The quantitative study revealed that the MNE, in establishing operations in the three countries, sought to combine selected firm-specific variables with several locational advantage variables. The firm-specific variables that were used were production technology, new technology, marketing skills, distribution networks, access to finance and privileged access to raw materials. These firm-specific variables were used in combination with selected locational advantage variables. They included the factor cost variables (low-cost labour and natural gas) and the infrastructural support variables (political stability, efficient bureaucracy, efficient airline, port and telecommunications services, and proximity to the US market). The firms, in their decision to continue operations in the countries, sought to combine six firm-specific variables with fewer locational advantage variables. The firm-specific advantages used by the MNEs were production technology, marketing skills, brand name product, privileged access to raw materials, product differentiation and new technology. The locational advantage variables selected were factor cost variables (labour–availability, productivity and cost, and cost of natural gas), political stability, and efficient airline and telecommunications services.

Essentially, the qualitative analysis supported these conclusions. However, it managed to provide a much more illuminating explanation of the MNE's investment behaviour in the focus countries. Indeed, this analysis revealed that all fifteen of the MNEs studied used their firm-specific assets of production technology and marketing skills together with selected locational endowments of the three countries. The locational advantages used were the factor cost variables (low-cost, semi-skilled and skilled labour, and competitively priced natural gas) and strategic location. Further, this analysis clearly demonstrated that the three Caribbean countries were still offering the foreign investor 'basic factors'. They had not managed to fully progress to the development of 'advanced factors' (Porter 1990).

The choice of locating FDI in Jamaica, Barbados and Trinidad-Tobago

H4: The low-cost factor hypothesis

> There is a positive relationship between the MNE and the decision to establish and continue operations because of low-cost factors.

Both analyses support the arguments posed by theorists such as Vernon (1974, 1979), Sharpston (1975), Frobel *et al.* (1980). The findings from the quantitative analysis revealed that the MNE's initial investment decision was influenced by low-cost, productive labour and competitively priced natural gas. Its decision to continue operations in the three Caribbean countries was influenced by the cost of labour and natural gas. Significantly, this analysis showed that it was the cost of natural gas, not labour, that played a decisive role in the firm's decision to continue operations in the countries. It is noteworthy that the qualitative study managed to fully explain these relationships.

The findings from the qualitative analysis revealed that the MNE's initial investment decision was influenced by labour costs. However, the decision to continue operations in the three countries, notably Jamaica, was greatly influenced by labour productivity. Indeed, this finding contradicts that of the quantitative study. The case study on the four apparel MNEs in Jamaica clearly demonstrated that productivity levels played a crucial role in the long-term investment plans of these firms. Moreover, the qualitative analysis highlighted the importance of training. Barbados's relatively successful performance in the information service industry was largely due to the continuous training offered to its workforce. As Chapter 9 shows, the four information service MNEs, supported by training grants offered by the Barbados Investment and Development Corporation, provided continuous training to their workers. Hence, Barbados's competitive advantage in low-cost, skilled labour was derived from the continuous upgrading of the skills of its workforce. By contrast, Jamaica's was obtained from a series of currency devaluations. The result was striking. The competitive advantage that Jamaica enjoys is unsustainable as evidenced by the footloose nature of the FDI in its apparel industry. This is clearly not the case of Barbados. The analysis also demonstrated the importance of the country developing a workforce with specialist skills. Barbados's successful movement to the higher-level information service activities is stymied by the paucity of workers with skills in areas such as programming and software engineering.

In addition, the qualitative study revealed that the competitive advantage that Trinidad has gained from its innovative gas pricing regime is unsustainable. This gas pricing system is easily imitated by competing locations. However, unlike Jamaica, the investment made by MNEs in Trinidad was not footloose. What is important to Trinidad, and indeed to the other two countries, is the sustainability and growth of the investment made by these MNEs. This issue will be discussed at length in a later section.

H5: The preferential trading agreement hypothesis

> There is a positive relationship between the MNE and its use of preferential trading agreements.

The research findings from these two analyses support the arguments posed by Johnson (1968), Joekes (1982), Yannopoulos (1986), Griffith (1990). The preferential trading agreements that these three Caribbean countries enjoyed with the US and Europe played an important role in the foreign firms' decision to establish and continue operations in the countries. The quantitative analysis revealed that the 807 programmes and Lome were important to the foreign investment decisions of the MNEs. However, the qualitative analysis elaborated that while the 807 programme was important to the Jamaican apparel MNEs' initial investment decision, it was not important to their decision to continue operations. The viability of these firms' long-term investment is seriously threatened by the NAFTA. Further, the qualitative analysis showed that the these trading agreements are of less importance to MNEs involved in highly capital-intensive investments in Trinidad.

H6: The export processing zone hypothesis

> There is a positive relationship between the presence of an export processing zone and the export-seeking MNE.

It is significant to note that the hypothesis advanced from the theory posed by researchers such as Frobel *et al.* (1980), Woodward and Rolfe (1993), and Kumar (1994) was supported by the two studies. The presence of EPZs or enclaves for export-oriented activity had a positive influence on foreign investment decisions of the MNEs operating in the three Caribbean countries. Not surprisingly, the qualitative analysis provided a more penetrating analysis of the infrastructural elements that influenced the investment behaviour of the foreign firm.

The case study analyses revealed that all three Caribbean countries possessed enclaves for export-oriented activity. However, it was only in Jamaica that this enclave was actually termed an EPZ. Moreover, the analysis showed that while the presence of these enclaves was important to the foreign firms' initial investment decision, the decision to continue operations in the three countries was greatly influenced by the quality of the general infrastructure. The issues of concern were the costs and reliability of supply of several elements in the general infrastructure. It is noteworthy that the costs and the reliability of the utilities service (water and electricity), the adequacy of the airline service, and the efficiency of the public transportation system all influenced the decision to continue operations in Jamaica and Trinidad. Most importantly, the qualitative analysis highlighted the fallacy of the governments' strategy of developing enclaves for export-oriented activity to attract FDI. It showed that it is vital that the governments make concomitant investments in improving the general infrastructure. Indeed, the sustainability of foreign investment is dependent on a well-developed infrastructure, not just isolated zones for export-oriented activity.

In addition, the qualitative study demonstrated that an efficacious bureaucracy is critical to the foreign investment decision of the MNE. It showed that the bureaucracy in Barbados and Trinidad was efficient. However, in both Jamaica and Trinidad, there appeared to be a lack of co-ordination of activity among the various institutions mandated to stimulate industrial activity. This resulted in a duplication of functions and a needless waste of both human and financial resources.

H7: The investment incentive hypothesis

> No relationship exists between the investment incentives offered by the Caribbean governments and the MNE's decision to establish and continue operations in the Caribbean.

The quantitative and qualitative studies did not support the postulate advanced by theorists such as Toyne and Shah (1978), Lim (1983) and Wheeler and Mody (1991). The investment incentive system did influence the foreign investment decisions of MNEs operating in the three Caribbean countries.

Interestingly, the findings from both studies revealed that the investment incentives favoured by the MNEs were tax holidays or low taxes, and duty exemptions on industry-related imports. These incentives were important to the decision to establish and continue operations in the three Caribbean countries. It is noteworthy that the findings showed that free repatriation of profits and dividends did not influence the investment decisions of the MNEs. These findings contradict those posed by Rolfe *et al.* (1993), Woodward and Rolfe (1993) and Coyne (1995). The only plausible explanation for the conflict in these research findings is that this study was conducted at a much later period than the previous ones. Thus, over the intervening period, the incentive of free repatriation of profits and dividends has become so ubiquitous that it no longer influences the foreign investment decisions of MNEs locating operations in the Caribbean.

The qualitative study also showed that there are biases in the investment incentive package that these governments offer to investors. The domestic investor in Barbados and Jamaica receives less generous incentives than the foreign investor.

H9: The 'Double Diamond' hypothesis

> There is a positive relationship between the MNE's use of its home country's 'diamond' and the 'diamond' of the Caribbean.

The findings from both studies supported the postulate proposed by Rugman and D'Cruz (1993) and Rugman and Verbeke (1993a). The MNE investing in the three Caribbean countries sought to integrate the 'diamond' of its home country with that of the Caribbean country. The quantitative analysis revealed that the US and British MNEs initially used privileged access to raw materials, obtained from their home country's 'diamond', with elements of the Caribbean's 'diamond'. These were low-cost labour, competitively priced natural gas, political stability and efficient bureaucracy. The US MNEs also deployed the new technology secured from their home country with the efficient bureaucracy of the Caribbean. In their continued operations in the focus countries, the US and British MNEs used the privileged access to raw materials obtained from their home country with selected locational advantages of the Caribbean. The locational advantages were the countries' proximity to the US, political stability and competitively priced natural gas. The US MNE also combined new technology secured from its home country with selected locational advantage variables. These were the factor cost variables (low-cost labour and competitively priced natural gas), the country's proximity to the US, and efficient bureaucracy.

The qualitative study provided a much more meaningful interpretation of the firms' investment behaviour. Indeed, it was the qualitative analysis that revealed the utility of the 'Double Diamond' framework as a tool for analysing the business environment of the three Caribbean countries. This framework managed to capture the nuances of the investment behaviour of the MNEs that were not evident from the quantitative analysis. Moreover, it demonstrated the extent to which these three countries were integrated into the global corporate strategy of the MNEs studied. In so doing, it highlighted the deficiencies in the business environment of the focus countries.

The qualitative study revealed that the attractiveness of the business environment of the three Caribbean countries was varied. The business environment of Jamaica proved to be not very attractive to the four apparel MNEs. Many factors contributed to this. Most notable were the unsustainability of its source of competitive advantage, the inefficiency of its infrastructural and institutional framework for industrialisation, and the deterioration in social and political conditions in the country. By contrast, the business environments in Barbados and Trinidad-Tobago were more attractive to the MNEs. Barbados enjoyed a relatively sustainable source of competitive advantage, its infrastructure and institutions operated efficiently, and its government was positively influencing the development of its 'diamond'. There were several weaknesses in Trinidad's business environment. Its general industrial infrastructure failed to operate with efficacy and the competitive advantage derived from its innovative gas regime was unsustainable. However, Trinidad possessed a fairly skilled workforce. In addition, it appears to have a cluster of firms that provide support services to MNEs in the natural gas sector.

The selection of market entry modes in Jamaica, Barbados and Trinidad-Tobago

H10: The intra-firm trade hypothesis

> There is a positive relationship between intra-firm trade and the use of a wholly owned subsidiary.

Conflicting results were obtained from these two studies. The quantitative analysis failed to support the hypothesis that the MNE involved in intra-firm trade would use a wholly owned subsidiary as its mode of market entry into the three Caribbean countries. The qualitative study contradicted this finding. This study convincingly demonstrated that the MNEs involved in intra-firm trade in the three Caribbean countries used the wholly owned subsidiary as their market entry mode. Moreover, the analysis showed that these firms selected the wholly owned subsidiary because they wanted to exercise total control over their Caribbean operations (Anderson and Gatignon 1986; Gomes-Casseres 1989, 1990). In so doing, they were able to capitalise the global synergies arising from establishing operations in the Caribbean (Hill and Hwang 1990).

H11: The international experience hypothesis

> There is a positive relationship between the MNE with international experience and its use of a wholly owned subsidiary.

Interestingly, conflicting results were obtained from the testing of this hypothesis. The quantitative study failed to support the theory advanced by researchers such as Johanson and Vahlne (1977, 1990), Davidson (1980), and Li (1994). However, the three case studies clearly demonstrated that the level of international experience of the MNE played a decisive role in its selection of market entry mode. Indeed, the MNEs which were fairly internationalised chose wholly owned subsidiaries. Several gas intensive MNEs that operated in Trinidad proved to be the exception. These firms were highly internationalised. Yet, they chose a minority joint venture as their mode of market entry. Apparently, the dictates of finance influenced their use of a minority joint venture arrangement (Stopford and Wells 1972:118; Gomes-Casseres 1990:12).

H12: The cultural distance hypothesis

> There is a positive relationship between cultural distance and the use of a wholly owned greenfield investment and a joint venture agreement.

There was a lack of consensus on the role that culture plays in the selection of market entry mode. As Chapter 7 shows, the quantitative study weakly supported the theory posed by researchers such as Kogut and Singh (1988), Hill *et al*. (1990) and Padmanabhan and Cho (1996). This study found that cultural distance, as measured by geographical proximity, influenced the firms' selection of a greenfield investment. However, the qualitative analysis contradicted this finding. None of the managers interviewed cited cultural dissimilarities and geographic proximity as influencing his selection of market entry mode. While the strategic location of the three Caribbean countries played a critical role in the foreign investment decisions of the fifteen MNEs, none of the managers stated that this factor influenced their choice of market entry mode. The evidence is too inconclusive for any definitive statements to be made on the influence that culture has on the MNE's selection of market entry mode in the Caribbean.

H13: The use of reduced equity modes in the primary sector hypothesis

> There is a positive relationship between the resource-seeking MNE and minority and 50–50 joint ventures.

This hypothesis was supported by the quantitative and qualitative analyses. The quantitative examination revealed that the MNEs tended to conclude minority joint venture agreements in the primary sector of the focus countries. It was speculated that these modes of market entry were used by non-USA firms in Trinidad-Tobago. The qualitative study provided a more comprehensive explanation of these relationships. This analysis showed that the majority of the firms that operated in the natural gas sector of Trinidad-Tobago used minority joint venture agreements. However, the reasons for these firms' use of this mode of market entry did not accord with the extant literature. Interestingly, the main reason for their selection of minority joint venture agreements was finance.

H14: The role of government hypothesis

> There is a positive relationship between the government policy towards mode of market entry used by foreign firms in the primary sector and the resource-seeking MNE.

This hypothesis was supported by both the quantitative and qualitative studies. The quantitative study revealed that the Caribbean government exercised no control over the market entry mode choices of MNEs operating in the primary sector. The qualitative study conducted on Trinidad showed that the government played a critical role in the MNE's selection of market entry mode used in the natural gas sector. However, the government's intervention was not in the manner as posited by researchers such as Oman (1988). The Trinidadian government, faced with deteriorating economic conditions, relaxed its restrictive policies on foreign, wholly owned subsidiaries in its strategic sector. It exercised no control over the market entry mode used by the MNE in this sector.

General conclusions

The research question of this study is: *How attractive is the business environment of the Caribbean to the MNE?* In an attempt to find answers to this question, this study focused on three main concerns, namely:

1. The factors influencing motivations for FDI
2. The factors influencing the locational choices for FDI
3. The factors influencing the selection of market entry mode

Several general conclusions can be made from this study.

What motivates an MNE to engage in FDI in the three Caribbean countries?

- The MNE appears to invest in the Caribbean to exploit its firm-specific advantages. What is noteworthy of its investment behaviour is that the MNE does not perceive the local firm to be its competitor. Rather, it uses its firm-specific advantages (production technology and human resource management) to compete with other foreign firms operating in the same industry.
- The MNE that is involved in labour-intensive activity does not appear to follow its competitor into these island-states. However, it is very likely that the MNE in the natural gas sector follows competitors into the country. It is attempting to pre-empt any competitive advantages that its competitor may gain from its operations in Trinidad.
- The MNE tends to combine its firm-specific assets of production technology and marketing skills with the low-cost labour, competitively priced natural gas and strategic location of the Caribbean. The Caribbean countries are yet to progress to the development of an abundant supply of advanced factors.

What factors influence the MNE's choice of location?

- The low-cost factors, namely labour and natural gas, are irresistible attractions to the MNE investing in the Caribbean. Low-cost, semi-skilled labour lures the MNE into the Caribbean. However, it does not keep it there. The sustainability of FDI is dependent on the availability of skilled labour. This has tremendous implications for the training of the countries' labour force. It appears that MNEs are encouraged to continue operations in Caribbean countries which have established successful programmes for the continuous training of their labour force. In addition, training grants seem to have a decisive influence on the MNE's propensity to train its workforce. Further, an innovative pricing regime for natural resources plays a critical role in attracting FDI. However, the competitive advantage derived from this pricing system is unsustainable. The country needs to develop other elements of its business environment in order to sustain FDI.

- Except for firms in the service industry, MNEs are motivated to engage in FDI in the Caribbean because of the preferential trading agreements the countries enjoy with the US and Europe. Interestingly, these trading agreements are not critical to the foreign investment decision of MNEs involved in capital-intensive activities. By contrast, the agreements are critical to the long-term investment of MNEs whose investments are footloose.
- Export processing zones or enclaves for export-oriented activity positively influence the locational decisions of MNEs. However, the presence of these zones is only important to the foreign firm's initial investment decision. The sustainability and growth of FDI are dependent on the quality of the country's general infrastructure.
- Investment incentives influence the locational decisions of MNEs. The favoured investment incentives seem to be low taxes or tax holidays, and duty exemptions on industry-related equipment. Repatriation of profits and dividends do not seem to influence the locational decisions of MNEs.
- The customised 'Double Diamond' framework is a powerful tool for assessing the attractiveness of the business environment of the individual Caribbean countries. This approach suggests that the business environment of Jamaica does not appear to be supportive of the apparel MNE. The unsustainability of its source of competitive advantage, the inefficiency of its institutions and infrastructure, and the deterioration of its economic and social conditions deter the sustainability of foreign investment in the apparel industry. Conversely, Barbados, with its fairly sustainable source of competitive advantage, its efficient bureaucracy and good quality infrastructure, seems to be an attractive environment for FDI in the information service industry. Trinidad-Tobago also seems to be fairly attractive to the MNE involved in gas intensive activities. It offers an innovative gas pricing regime, its labour force is fairly skilled and it possesses a cluster of firms that provides support services to MNEs in the natural gas sector.

What factors influence the market entry mode used in the Caribbean?

- The MNE that is involved in intra-firm trade tends to select a wholly owned subsidiary to enter the Caribbean. The selection of this market entry mode is influenced by the MNE's desire to exercise control over its Caribbean operations. Moreover, it is able to gain the global synergies arising from its operations in the Caribbean.
- The MNE that is highly internationalised tends to choose a wholly owned subsidiary in the Caribbean. In instances where the investment is highly capital intensive, the MNE may select a minority owned joint venture arrangement. This investment behaviour tends to be characteristic of the resource-seeking MNE.
- The MNE, in selecting a market entry mode in the Caribbean, does not appear to be influenced by the cultural dissimilarities between its home country and the Caribbean. The available evidence on this investment behaviour is still very much inconclusive.
- The MNE generally uses minority joint venture agreements in the primary sector. However, it seems that financial considerations play a deciding role influencing its selection of market entry mode in this sector.
- The government plays a decisive role in the MNE's selection of market entry mode in the primary sector. Moreover, given the present economic conditions in these countries, it seems that the government would exercise no control over the mode of market entry used by the MNE in the primary sector.

Limitations of the study

There are several issues that can be considered to be limitations to this research. First, this study sought to obtain responses from managers of MNEs that operated in the three Caribbean countries studied. Concerted attempts were made to ensure that the managers contacted were knowledgeable about the investment behaviour of the firms. Nonetheless, there is some uncertainty about those who responded to the mailed questionnaire. It was very difficult to ensure that the appropriate person filled out the questionnaire. Yet, there was not much discrepancy in the findings of the quantitative and the qualitative studies.

Second, there is an inevitable historical bias in this analysis. In some cases, the initial investment decision was made a few decades ago. Indeed, the quantitative analysis included firms that had been operating in the Caribbean since the 1970s. Evidently, there were not many managers who would have been able to clearly recall the factors that influenced the firm's initial investment decision. Attempts were made to control for this historical bias by contacting informants at both the subsidiary and the headquarters. However, there is some uncertainty about the validity of the responses made by informants from firms that established operations in the Caribbean during the pre-1971 period. The possibilities of this historical bias affecting the qualitative study were limited. In this study, the earliest investment was made in the 1980s. Hence, in most cases, the managers responsible for making the initial investment decision were easily located. Most often, these respondents were located at the headquarters. It is noteworthy that the managers at the subsidiary were often able to furnish details on the factors influencing the long-term investment plans of the firm. Nevertheless, attempts were made to cross-check the statements made by both groups of respondents. To this end, a variety of sources of information was used. However, it was difficult to control for the inevitable biases in their responses.

Notwithstanding these limitations, this study aims to provide reasonably definitive answers to the research question. The answers to this question as well as the public policy and strategic management issues that arise from this study will be discussed in the subsequent section.

Policy recommendations

> How attractive is the business environment of the Caribbean to the MNE?

There is no succinct response to this question. The attractiveness of the business environment of the focus countries varies among the different countries and activities examined. This study clearly shows that the business environment of Jamaica was not supportive of the apparel MNEs. By contrast, the business environments of Barbados and Trinidad-Tobago were increasingly becoming attractive to the MNEs studied. However, what seems to be important is the ability of these countries to sustain their existing FDI, to make it grow, and to attract new FDI inflows. To varying degrees, their ability to do this appears to be limited. As was illustrated in this study, there are several deficiencies in their business environment for FDI. Indeed, it is imperative that the governments implement policies to ensure that their countries develop a business environment that is fully supportive of the MNE. It is also important to note that their ability to carry out these policies will be constrained by their existing economic, social and political conditions. Nonetheless, this study suggests that the governments of the focus countries need to address several critical issues. These are outlined in the next section.

Public policy recommendations

Human resource development

A competitive business environment in a developing country is characterised by a workforce that is able to produce goods and services at a level of competence comparable to its counterparts in the industrialised world. It is generally expected that its labour costs are lower than those of the industrialised world. This has tremendous implications for the focus countries. Caribbean governments need to adopt comprehensive policies for human resource development. They need to make critical interventions in the education system, especially at the tertiary and technical levels. Moreover, MNEs and local firms should be encouraged to intervene in the education system in a systematic and dynamic manner. Governments should actively seek these firms' involvement in the development of curricula, the selection and possibly the financing of equipment used for technical and tertiary training, and the participation in on-the-job training schemes. In addition, governments need to offer incentives such as training subsidies to firms to encourage continuous training. The Barbadian government, with its training grants, appears to have achieved some success in this regard. Further, postgraduate institutes for specialised technical training need to be established, specifically in Trinidad and Barbados. Finally, Caribbean governments must take cognisance of the extremely high levels of migration among its skilled labour force. It may be necessary for them to introduce schemes that make it compulsory for graduates, who benefit from subsidised training programmes, to work in the region for specified periods. Alternatively, they may offer attractive incentives to induce nationals studying or working abroad to return. Indeed, what the Caribbean governments need to develop is 'competitive labour flexibility': Its workforce should possess the skills and training that will allow it to progressively move into higher-value-added activities. This quality workforce is one of the key elements of a competitive business environment.

Infrastructure

The governments of the countries studied should seek to improve the general infrastructure of the country. It seems that capital investments need to be made in the upgrading of the utilities service (water and electricity) in Jamaica and Trinidad, the port service, specifically at Montego Bay in Jamaica, the airline service in Trinidad, and the public transportation system in Jamaica. The introduction of foreign involvement in these sectors seems to have a positive influence on the quality of service offered. The Caribbean government should not only seek to upgrade their basic infrastructure, they should also attempt to offer the foreign investor in their strategic sector specialised facilities that are available in few locations worldwide. Barbados appears to be implementing this strategy. This government is attempting to introduce competitively priced, state-of-the-art telecommunications facilities.

Institutional framework for business activity

The institutional framework for business activity needs to operate with efficacy. Hence, the institutions should be endowed with the human and financial resources that would allow them to function effectively. In addition, there should be greater co-ordination of activity among the various institutions established to stimulate business activity. The Barbados 'country-team' approach is an innovative attempt at addressing this concern. It may be worthwhile for Jamaica and Trinidad-Tobago to adopt this initiative. As the study showed, the operations of their institutions were characterised by duplication of function and a needless waste of resources. Thus, the adoption of a more co-ordinated approach to institutional development will serve to improve their efficiency.

Creation of a nexus between MNE and government

There is need for a nexus between the MNEs and the government. Institutions need to be established where managers of MNEs could articulate their concerns to relevant government bodies. The field research revealed that there was a limited representation of managers from MNEs on organisations such as the Chamber of Commerce. Hence, few fora exist where the MNE could discuss the problems that affect its operations in the country. Thus, policy formation for the development of the country's strategic sector fails to fully address the needs of the MNE.

Investment incentives package

The focus countries offer a wide array of investment incentives. It seems that, at present, the preferred investment incentives are low taxes or tax holidays, and duty exemptions on industry-related equipment. It is noteworthy that all types of FDI are attracted to these incentives. Hence, the Caribbean government could remove some of the extraneous incentives that are offered to the foreign investor. It would be inadvisable for them to eliminate repatriation of profits and dividends from their incentive package. As noted earlier, this incentive has become so ubiquitous that the MNEs investing in the Caribbean assume that it is part of the package. Most importantly, the governments should regularly review the investment incentive package, eliminating those incentives which are no longer required and introducing those that are desired. In addition, attempts should be made to remove the biases present in this system. The domestic investor should receive incentives comparable to those offered to his foreign counterpart.

The development of the domestic firm

In all industries studied, the locally owned firm was not internationally competitive. It is imperative that the governments in the focus countries adopt comprehensive policies for the development of these firms. To this end, the governments need to address issues such as the creation of an entrepreneurial culture, the introduction of venture capital markets, the provision of managerial and technical assistance, the development of links between foreign and locally owned firms, and the investment incentives offered to locally owned companies. Indeed, the presence of locally owned firms which are internationally competitive will undoubtedly improve the quality of the business environment of the focus countries.

The development of clusters

The governments need to encourage the development of activities that are related to and support those conducted by the MNEs in their strategic sectors. The focus countries possessed several institutions that were mandated to stimulate business activity in the country. However, the focus of these institutions appeared to be on investment promotion. They were primarily concerned with attracting FDI into selected sectors of the countries. Thus, limited efforts are made to encourage the development of either foreign or local firms which provide support services to MNEs. In addition, limited attempts are made to encourage firms to enter activities that are related to those performed by MNEs in the strategic sectors. Moreover, some of the investment incentives, such as the duty free imports of intermediate goods and services offered to the foreign investor, actually impede the formation of clusters. As the case studies showed, the failure to adopt policies for the development of clusters in the strategic sectors only limits the competitive advantage of the focus countries.

The maintenance of economic and political stability

There is an irrevocable link between a competitive business environment and economic and political stability. A competitive business environment is characterised by economic and political stability. The governments of the focus countries, specifically that of Jamaica, need to ensure that they adopt sound macro-economic and social policies to promote economic and political stability. Indeed, sociopolitical conditions seriously influence the nature and sustainability of the FDI made in a country. It seems that economic and political instability only encourages footloose investment in activities that are at the lower end of the value chain.

Strategic management issues

This study also highlights several issues that are germane to the managers of MNEs operating in the Caribbean. These firms, lured by the locational advantages of the Caribbean, engaged in FDI in this region. However, the profitability of this investment is dependent on managers recognising several key issues. These are discussed below.

Human resource management

Human resource management is critical to successful operations in the focus Caribbean countries. Firms investing in labour-intensive activities, which are lower end of the value chain, need to offer not only financial but also psychic rewards to attract and maintain a productive workforce. In addition, since there is a paucity of skilled workers in this region, MNEs need to invest in the training of skilled labour. Such training will involve interventions in the education system, especially at the technical and tertiary levels. As was earlier discussed, several of the MNEs operating in the focus countries have already done so. In this way, the firm is assured that the education system produces the quality of worker that it requires.

Competitors

The locally owned firm generally does not pose a competitive threat to the MNE. However, the MNE's formidable rivals are the other foreign firms which operate in the host country. As the case studies on Jamaica and Trinidad-Tobago showed, these firms implement competitive strategies that threaten the MNE's access to the locational advantages which primarily lured its investment to the region. Managers of MNEs need to adopt strategies to counteract this threat. Suggested strategies include collaborative agreements for access to these heavily contested resources.

The presence of clusters

There is an absence of a well-developed cluster of firms and institutions in the industries in which the MNEs operate in the Caribbean. Thus, managers of MNEs are forced to rely heavily on their home country or other locations for supplier and related services. Nonetheless, a nascent cluster is emerging in the gas sector of Trinidad-Tobago. It is imperative that managers operating in this country initiate relationships with the firms and institutions in this cluster. These firms stand to benefit from the largely under-utilised, low-cost services of these firms and institutions. Managers who initiate long-term relationships with these companies are tapping into a new source of competitive advantage in this country. Moreover, those who are the first to foster these relationships are gaining potential first-mover advantages over the competitors that also operate in the host country.

Collaboration with governments

Managers of MNEs operating in the focus countries need to create channels for greater dialogue with host governments. The field research showed that there are no organisations where the MNEs, as a collective body, communicate on business issues with host governments. Yet, these firms play a central role in the focus economies. Thus, in many instances, their managers have considerable influence over host governments. These managers could successfully agitate for changes in the business environment in which they operate. Such changes should not be merely limited to favourable tax concessions. It is in the strategic interest of these companies to aggressively seek improvements in the quality of the education system, the basic infrastructural and institutional framework for industrialisation, as well as to demand the introduction of a specialised infrastructure. These changes will not only improve the competitive advantage of the host country, but also strengthen the international competitiveness of the MNE.

Conclusions

The successful implementation of the policies discussed above will demand changes in the manner in which both the government and the multinational enterprise operate in micro-economies. The governments of these small, developing countries need to adopt a more proactive approach to the creation of a business environment that is supportive of the foreign investor. Similarly, the MNE needs to be more integrally involved in its host environment. Several of the policies recommended necessitate that the foreign firm develops deeper relationships with the host government and other firms.

The study also highlighted several issues that could not be addressed within the confines of this book. These issues form the basis for future research. Indeed, one of the major findings of the study was the utility of the 'Double Diamond' framework as a tool for analysing the business environment of countries. The 'Double Diamond' framework, which was employed in the qualitative study, could be applied to MNE activities in other locations. This framework may be applied to MNE activities in other developing countries as well as specific regions of large, industrialised countries.

The quantitative study focused on export-seeking and resource-seeking MNEs. It will be instructive to conduct studies that analyse the investment behaviour and corporate strategy of the market-seeking MNE in small, developing countries. In addition, the research findings on the role that culture has on the investment behaviour of MNEs were inconclusive. This variable should be analysed in greater depth.

Finally, this study could be conducted in other 'forgotten locations'. There is a dearth of international business research done on countries such as Africa and Eastern Europe. Multinational enterprises, albeit in limited numbers, do operate in these countries. The understanding of multinational behaviour in these 'forgotten locations' could only enhance the study of international business.

Appendix 1

The mailed questionnaire that was sent to executives at the headquarters of the MNEs

Section 1

This section seeks to determine the factors that motivated your firm to invest in the Caribbean.

1. Does your firm benefit from the provisions of guaranteed market access offered under the following agreements?

	CIRCLE ALL THAT APPLY
1. 807 of US harmonised tariff schedule	1
2. 807-A of US harmonised tariff schedule	2
3. CARIBCAN	3
4. Lome	4
5. Multifibre Agreement	5
6. General System of Preferences	6
7. CARICOM	7
8. Other	8
9. None . . . . GO TO Q4	9

In answering questions 2 to 5, use a range of one (1) to five (5), where '1' stands for very important and '5' stands for not important. Please circle the relevant number.

2. How important were the agreements identified in Q1 to your decision to *establish operations* in the Caribbean over *alternative locations?*

	Very Important			Not Important	
1. 807 programme	1	2	3	4	5
2. 807-A programme........................	1	2	3	4	5
3. CARIBCAN	1	2	3	4	5
4. Lome	1	2	3	4	5
5. Multifibre Agreement	1	2	3	4	5
6. General System of Preferences	1	2	3	4	5
7. CARICOM	1	2	3	4	5
8. Other (please specify)					
....					
....	1	2	3	4	5

3. How important are the agreements identified in Q1 to your *continued operations* in the Caribbean?

	Very Important			Not Important	
1. 807 programme	1	2	3	4	5
2. 807-A programme........................	1	2	3	4	5
3. CARIBCAN........................	1	2	3	4	5
4. Lome	1	2	3	4	5
5. Multifibre Agreement........................	1	2	3	4	5
6. General System of Preferences	1	2	3	4	5
7. CARICOM........................	1	2	3	4	5
8. Other (please specify)					
....					
....	1	2	3	4	5

4. How important were the following factors to your decision to *establish operations* in the Caribbean over *alternative locations*?

	Very Important			Not Important	
1. A reliable electricity supply	1	2	3	4	5
2. Competitive electricity rates.	1	2	3	4	5
3. A reliable water supply.	1	2	3	4	5
4. Competitive water rates	1	2	3	4	5
5. Favourable natural gas prices	1	2	3	4	5
6. Efficient telecommunication services.	1	2	3	4	5
7. Competitive rental rates for industrial buildings	1	2	3	4	5
8. Competitive rental rates for administrative buildings.	1	2	3	4	5
9. Efficient inland public transportation system. .	1	2	3	4	5
10. Efficient bureaucracy.	1	2	3	4	5
11. Efficient port services.	1	2	3	4	5
12. Efficient airline services.	1	2	3	4	5
13. The presence of export processing zones	1	2	3	4	5
14. Other (please specify)	1	2	3	4	5

5. How important are the following factors to your *continued operations* in the Caribbean?

	Very Important			Not Important	
1. A reliable electricity supply	1	2	3	4	5
2. Competitive electricity rates.	1	2	3	4	5
3. A reliable water supply.	1	2	3	4	5
4. Competitive water rates	1	2	3	4	5
5. Favourable natural gas prices	1	2	3	4	5
6. Efficient telecommunication services.	1	2	3	4	5
7. Competitive rental rates for industrial buildings	1	2	3	4	5
8. Competitive rental rates for administrative buildings.	1	2	3	4	5
9. Efficient inland public transportation system. .	1	2	3	4	5
10. Efficient bureaucracy.	1	2	3	4	5
11. Efficient port services.	1	2	3	4	5
12. Efficient airline services.	1	2	3	4	5
13. The presence of export processing zones	1	2	3	4	5
14. Other (please specify)	1	2	3	4	5

6. Who are your *main competitors* in the Caribbean market?

	CIRCLE ALL THAT APPLY
1. Foreign firms	1
2. Local firms..	2
3. None	3

7. Which of the following factors enable your firm to compete effectively in the Caribbean market?

Please rank the factors in order of importance to your company. A rank of 1 represents the factor you consider *most important* to your company, a rank of 2 represents the factor you consider *second most important,* etc. A rank of 10 represents the factor you consider *least important* to your company.

Factor	Rank Order
1. Production techniques	. . . .
2. Managerial skills	. . . .
3. Marketing skills	. . . .
4. Distribution networks	. . . .
5. Brand name product	. . . .
6. Access to finance	. . . .
7. Access to raw materials	. . . .
8. New technologies	. . . .
9. Other (please specify)	
. . . .	. . . .
. . . .	. . . .
. . . .	. . . .
. . . .	. . . .

In answering questions 8 to 13, use a range of one (1) to five (5), where '1' stands for very important and '5' stands for not important. Please circle the relevant number.

8. How important were the following *investment incentives* to your decision to *establish* operations in the Caribbean over *alternative locations*?

	Very Important				Not Important
1. Tax holidays	1	2	3	4	5
2. Import duty concessions on raw materials. . . .	1	2	3	4	5
3. Import duty concessions on machinery and equipment.	1	2	3	4	5

4. Free repatriation of profits................	1	2	3	4	5
5. Free repatriation of dividends.............	1	2	3	4	5
6. Waiver of income tax on dividends	1	2	3	4	5
7. Waiver of income tax on profits............	1	2	3	4	5
8. Industrial training grants..................	1	2	3	4	5
9. Market development grants	1	2	3	4	5
10. Other (please specify)	1	2	3	4	5

9. How important are the following *investment incentives* to your *continued operations* in the Caribbean?

	Very Important			Not Important	
1. Tax holidays	1	2	3	4	5
2. Import duty concessions on raw materials....	1	2	3	4	5
3. Import duty concessions on machinery and equipment.	1	2	3	4	5
4. Free repatriation of profits................	1	2	3	4	5
5. Free repatriation of dividends.............	1	2	3	4	5
6. Waiver of income tax on dividends	1	2	3	4	5
7. Waiver of income tax on profits............	1	2	3	4	5
8. Industrial training grants..................	1	2	3	4	5
9. Market development grants	1	2	3	4	5
10. Other (please specify)	1	2	3	4	5

10. To what extent did the following factors influence you to *establish operations* in the Caribbean over *alternative locations*?

	Very Important			Not Important	
1. Low-cost, trainable labour................	1	2	3	4	5
2. Levels of labour productivity.	1	2	3	4	5
3. Labour availability	1	2	3	4	5
4. Levels of unionisation..................	1	2	3	4	5
5. Guaranteed market access................	1	2	3	4	5
6. Size of the Caribbean market..............	1	2	3	4	5
7. Proximity to US market	1	2	3	4	5
8. Proximity to Latin American market........	1	2	3	4	5
9. Investment made by competitors in the Caribbean market	1	2	3	4	5

10. The presence of firms in businesses similar to yours..	1	2	3	4	5
11. The presence of firms that supply requisite raw material.	1	2	3	4	5
12. The presence of firms that supply machinery and equipment.	1	2	3	4	5
13. Political stability.	1	2	3	4	5
14. A government committed to open market policies.	1	2	3	4	5
15. Quality of infrastructure..	1	2	3	4	5
16. Price of natural gas.	1	2	3	4	5

11. How important are the following factors to your *continued operations* in the Caribbean?

	Very Important			Not Important	
1. Low-cost, trainable labour	1	2	3	4	5
2. Levels of labour productivity.	1	2	3	4	5
3. Labour availability.	1	2	3	4	5
4. Levels of unionisation	1	2	3	4	5
5. Guaranteed market access.	1	2	3	4	5
6. Potential growth of the Caribbean market.	1	2	3	4	5
7. Proximity to US market	1	2	3	4	5
8. Proximity to Latin American market	1	2	3	4	5
9. The presence of firms in businesses similar to ours.	1	2	3	4	5
10. The presence of firms that supply requisite raw material.	1	2	3	4	5
11. The presence of firms that supply machinery and equipment.	1	2	3	4	5
12. Political stability.	1	2	3	4	5
13. A government committed to open market policies.	1	2	3	4	5
14. Quality of infrastructure..	1	2	3	4	5
15. Price of natural gas.	1	2	3	4	5

12. How important were the following trade restrictions to your decision to *establish operations* in the Caribbean over *alternative locations*?

	Very Important				Not Important
1. Tariffs	1	2	3	4	5
2. Quotas.	1	2	3	4	5
3. Import licences	1	2	3	4	5
4. Import surcharges.	1	2	3	4	5
5. Stamp duties.	1	2	3	4	5
6. Other (please specify)	1	2	3	4	5

Section 2

This section attempts to determine the factors that influence the mode of investment that you have used to enter the Caribbean market.

13. When did you first start operations in the Caribbean? . . . . / . . . .
month / year

14. What *mode* of foreign investment did you use to enter the Caribbean market?

	CIRCLE ONE THAT APPLIES
1. New wholly owned subsidiary.	1
2. Wholly owned subsidiary gained through acquisition..	2
3. New 50–50 joint venture agreement	3
4. 50–50 joint venture agreement gained through acquisition	4
5. Other (please specify)	5

15. If it is possible, could you please indicate the approximate amount of investment involved in the initial venture identified in Q15?

. . . .

16. How important were the following factors in influencing the *mode of investment* that your firm used in the Caribbean market?

Please circle the relevant number

	Very Important				Not Important
1. Number of years company has operated in foreign markets	1	2	3	4	5
2. Technology used in production of goods or services	1	2	3	4	5
3. Marketing strategy of firm (e.g. use of a brand name)	1	2	3	4	5
4. The availability of established distribution networks	1	2	3	4	5
5. Output dedicated to foreign affiliate	1	2	3	4	5
6. Language similarities between your country and the Caribbean.	1	2	3	4	5
7. Geographic proximity of the Caribbean	1	2	3	4	5
8. Policy of the Caribbean government (e.g. restrictions on foreign ownership)	1	2	3	4	5
9. Cultural similarities.	1	2	3	4	5
10. Other (please specify)	1	2	3	4	5

17. Has there been any change in the *proportion of equity* held in the company subsequent to your entry into the Caribbean?

Yes.	1
No. . . . . GO TO Q19	2

18. Which of the following factors have influenced the decision to *alter* the *proportion of equity* that you initially invested in your firm in the Caribbean?

Please rank the factors in order of importance to your company. A rank of 1 represents the factor you consider *most important* while a rank of 2 represents the factor you consider *second most* important, etc. A rank of 10 represents the factor you consider *least important.*

Factor	Rank Order
1. Policy of Caribbean government	. . . .
2. Changes in the business environment of the Caribbean	. . . .

3. Changes in the industry	. . . .
4. Corporate levels changes	. . . .
5. Other (please specify)	
. . . .	. . . .
. . . .	. . . .
. . . .	. . . .

19. Do you have affiliates (i.e. wholly owned subsidiaries or joint ventures) in the following regions?

	CIRCLE ALL THAT APPLY
1. Latin America	1
2. United States	2
3. Europe	3
4. Asia	4
5. Africa	5
6. Middle East	6

20. To the best of your knowledge, approximately what percentage of your total sales are obtained from your operations in overseas markets?

1. 0%	1
2. 1–25%	2
3. 26–50%	3
4. 51–75%	4
5. 76–100%	5

Section 3

We would like to obtain some information on the person who is completing this questionnaire

1. Name of person completing questionnaire
   . . . .
2. Position in company
   . . . .
3. Telephone number
   . . . .
4. Facsimile number
   . . . .

Appendix 2

The mailed questionnaire that was sent to executives at the subsidiary of the MNEs

Section 1

This section seeks to determine the factors that motivated your firm to invest in the Caribbean.

1. Does your firm benefit from the provisions of guaranteed market access offered under the following agreements?

	CIRCLE ALL THAT APPLY
1. 807 of US harmonised tariff schedule	1
2. 807-A of US harmonised tariff schedule	2
3. CARIBCAN	3
4. Lome.	4
5. Multifibre Agreement.	5
6. General System of Preferences.	6
7. CARICOM	7
8. Other	8
9. None . . . . GO TO Q4	9

In answering questions 2 to 5, use a range of one (1) to five (5), where '1' stands for very important and '5' stands for not important. Please circle the relevant number.

2. How important were the agreements identified in Q1 to your decision to *establish operations* in the Caribbean over *alternative locations*?

	Very Important				Not Important
1. 807 programme	1	2	3	4	5
2. 807-A programme........................	1	2	3	4	5
3. CARIBCAN........................	1	2	3	4	5
4. Lome	1	2	3	4	5
5. Multifibre Agreement........................	1	2	3	4	5
6. General System of Preferences	1	2	3	4	5
7. CARICOM........................	1	2	3	4	5
8. Other (please specify)					
....					
....	1	2	3	4	5

3. How important are the agreements identified in Q1 to your *continued operations* in the Caribbean?

	Very Important				Not Important
1. 807 programme	1	2	3	4	5
2. 807-A programme........................	1	2	3	4	5
3. CARIBCAN........................	1	2	3	4	5
4. Lome	1	2	3	4	5
5. Multifibre Agreement........................	1	2	3	4	5
6. General System of Preferences	1	2	3	4	5
7. CARICOM........................	1	2	3	4	5
8. Other (please specify)					
....					
....	1	2	3	4	5

4. How important were the following factors to your decision to *establish operations* in the Caribbean over *alternative locations*?

	Very Important			Not Important	
1. A reliable electricity supply	1	2	3	4	5
2. Competitive electricity rates	1	2	3	4	5
3. A reliable water supply	1	2	3	4	5
4. Competitive water rates	1	2	3	4	5
5. Favourable natural gas prices	1	2	3	4	5
6. Efficient telecommunication services	1	2	3	4	5
7. Competitive rental rates for industrial buildings	1	2	3	4	5
8. Competitive rental rates for administrative buildings	1	2	3	4	5
9. Efficient inland public transportation system	1	2	3	4	5
10. Efficient bureaucracy	1	2	3	4	5
11. Efficient port services	1	2	3	4	5
12. Efficient airline services	1	2	3	4	5
13. The presence of export processing zones	1	2	3	4	5
14. Other (please specify)	1	2	3	4	5

5. How important are the following factors to your *continued operations* in the Caribbean?

	Very Important			Not Important	
1. A reliable electricity supply	1	2	3	4	5
2. Competitive electricity rates	1	2	3	4	5
3. A reliable water supply	1	2	3	4	5
4. Competitive water rates	1	2	3	4	5
5. Favourable natural gas prices	1	2	3	4	5
6. Efficient telecommunication services	1	2	3	4	5
7. Competitive rental rates for industrial buildings	1	2	3	4	5
8. Competitive rental rates for administrative buildings	1	2	3	4	5
9. Efficient inland public transportation system	1	2	3	4	5
10. Efficient bureaucracy	1	2	3	4	5
11. Efficient port services	1	2	3	4	5
12. Efficient airline services	1	2	3	4	5
13. The presence of export processing zones	1	2	3	4	5
14. Other (please specify)	1	2	3	4	5

6. Who are your *main competitors* in the Caribbean market?

	CIRCLE ALL THAT APPLY
1. Foreign firms	1
2. Local firms..	2
3. None	3

7. Were you the first firm in your industry to enter the Caribbean market?

Yes	1
No.	2

8. Which of the following factors enable your firm to compete effectively in the Caribbean market?

Please rank the factors in order of importance to your company. A rank of 1 represents the factor you consider *most important* to your company, a rank of 2 represents the factor you consider *second most important,* etc. A rank of 10 represents the factor you consider *least important* to your company.

Factor	Rank Order
1. Production techniques	. . . .
2. Managerial skills	. . . .
3. Marketing skills	. . . .
4. Distribution networks	. . . .
5. Brand name product	. . . .
6. Access to finance	. . . .
7. Access to raw materials	. . . .
8. New technologies	. . . .
9. Other (please specify)	
. . . .	. . . .
. . . .	. . . .
. . . .	. . . .
. . . .	. . . .

In answering questions 9 to 14, use a range of one (1) to five (5), where '1' stands for very important and '5' stands for not important. Please circle the relevant number.

9. How important were the following *investment incentives* to your decision to *establish* operations in the Caribbean over *alternative locations*?

	Very Important			Not Important	
1. Tax holidays	1	2	3	4	5
2. Import duty concessions on raw materials	1	2	3	4	5
3. Import duty concessions on machinery and equipment	1	2	3	4	5
4. Free repatriation of profits	1	2	3	4	5
5. Free repatriation of dividends	1	2	3	4	5
6. Waiver of income tax on dividends	1	2	3	4	5
7. Waiver of income tax on profits	1	2	3	4	5
8. Industrial training grants	1	2	3	4	5
9. Market development grants	1	2	3	4	5
10. Other (please specify)	1	2	3	4	5

10. How important are the following *investment incentives* to your *continued operations* in the Caribbean?

	Very Important			Not Important	
1. Tax holidays	1	2	3	4	5
2. Import duty concessions on raw materials	1	2	3	4	5
3. Import duty concessions on machinery and quipment	1	2	3	4	5
4. Free repatriation of profits	1	2	3	4	5
5. Free repatriation of dividends	1	2	3	4	5
6. Waiver of income tax on dividends	1	2	3	4	5
7. Waiver of income tax on profits	1	2	3	4	5
8. Industrial training grants	1	2	3	4	5
9. Market development grants	1	2	3	4	5
10. Other (please specify)	1	2	3	4	5

11. To what extent did the following factors influence you to *establish operations* in the Caribbean over *alternative locations*?

	Very Important			Not Important	
1. Low-cost, trainable labour	1	2	3	4	5
2. Levels of labour productivity	1	2	3	4	5
3. Labour availability	1	2	3	4	5
4. Levels of unionisation	1	2	3	4	5
5. Guaranteed market access	1	2	3	4	5
6. Size of the Caribbean market	1	2	3	4	5
7. Proximity to US market	1	2	3	4	5
8. Proximity to Latin American market	1	2	3	4	5
9. Investment made by competitors in the Caribbean market	1	2	3	4	5
10. The presence of firms in businesses similar to yours	1	2	3	4	5
11. The presence of firms that supply requisite raw material	1	2	3	4	5
12. The presence of firms that supply machinery and equipment	1	2	3	4	5
13. Political stability	1	2	3	4	5
14. A government committed to open market policies	1	2	3	4	5
15. Quality of infrastructure	1	2	3	4	5
16. Price of natural gas	1	2	3	4	5

12. How important are the following factors to your *continued operations* in the Caribbean?

	Very Important			Not Important	
1. Low-cost, trainable labour	1	2	3	4	5
2. Levels of labour productivity	1	2	3	4	5
3. Labour availability	1	2	3	4	5
4. Levels of unionisation	1	2	3	4	5
5. Guaranteed market access	1	2	3	4	5
6. Potential growth of the Caribbean market	1	2	3	4	5
7. Proximity to US market	1	2	3	4	5
8. Proximity to Latin American market	1	2	3	4	5
9. The presence of firms in businesses similar to yours	1	2	3	4	5
10. The presence of firms that supply requisite raw material	1	2	3	4	5

11. The presence of firms that supply machinery and equipment.	1	2	3	4	5
12. Political stability.	1	2	3	4	5
13. A government committed to open market policies.	1	2	3	4	5
14. Quality of infrastructure..	1	2	3	4	5
15. Price of natural gas.	1	2	3	4	5

13. How important were the following trade restrictions to your decision to *establish operations* in the Caribbean over *alternative locations*?

	Very Important				Not Important
1. Tariffs	1	2	3	4	5
2. Quotas.	1	2	3	4	5
3. Import licences	1	2	3	4	5
4. Import surcharges.	1	2	3	4	5
5. Stamp duties.	1	2	3	4	5
6. Other (please specify)	1	2	3	4	5

13. To what extent do you *use product differentiation* as a marketing strategy in the Caribbean?

	Very Important				Not Important
The use of product differentiation as a marketing strategy	1	2	2	4	5

Section 2

This section attempts to determine the factors that influence the mode of investment that you have used to enter the Caribbean market.

15. When did you first start operations in the Caribbean? ..../.......
month / year

16. What *mode* of foreign investment did you use to enter the Caribbean market?

	CIRCLE ONE THAT APPLIES
1. New wholly owned subsidiary.	1
2. Wholly owned subsidiary gained through acquisition..	2
3. New 50–50 joint venture agreement..	3
4. 50–50 joint venture agreement gained through acquisition	4
5. Other (please specify)	5

17. If it is possible, could you please indicate the approximate amount of investment involved in the initial venture identified in Q16?

. . . .

18. How important were the following factors in influencing the *mode of investment* that your firm used in the Caribbean market?
Please circle the relevant number

	Very Important				Not Important
1. Number of years company has operated in foreign markets	1	2	3	4	5
2. Technology used in production of goods or services	1	2	3	4	5
3. Marketing strategy of firm (e.g. use of a brand name).	1	2	3	4	5
4. The availability of established distribution networks	1	2	3	4	5
5. Output dedicated to foreign affiliate	1	2	3	4	5
6. Language similarities between your country and the Caribbean.	1	2	3	4	5
7. Geographic proximity of the Caribbean	1	2	3	4	5
8. Policy of the Caribbean government (e.g. restrictions on foreign ownership).	1	2	3	4	5
9. Cultural similarities.	1	2	3	4	5
10. Other (please specify)	1	2	3	4	5

19. Has there been any change in *the proportion of equity* held in the company subsequent to your entry into the Caribbean?

Yes	1
No. . . . . .GO TO Q21.	2

20. Which of the following factors have influenced the decision to *alter* the *proportion of equity* that you initially invested in your firm in the Caribbean?

Please rank the factors in order of importance to your company. A rank of 1 represents the factor you consider *most important* while a rank of 2 represents the factor you consider *second most important,* etc. A rank of 10 represents the factor you consider *least important.*

Factor	Rank Order
1. Policy of Caribbean government	. . . .
2. Changes in the business environment of the Caribbean	. . . .
3. Changes in the industry	. . . .
4. Corporate levels changes	. . . .
5. Other (please specify)	
. . . .	. . . .
. . . .	. . . .
. . . .	. . . .

21. To the best of your knowledge, what percentage of your firm's output is used by other firms that are owned by your parent company)

1. 0%.	1
2. 1–25%.	2
3. 26–50%.	3
4. 51–75%.	4
5. 76–100%.	5

Section 3

We would like to obtain some information on the person who is completing this questionnaire

1. Name of person completing questionnaire
   . . . .
2. Position in company
   . . . .
3. Telephone number
   . . . .
4. Facsimile number
   . . . .

Appendix 3

The questionnaire administered to the executives of MNEs used for the case studies

1. Where did your company first learn about this country as a potential site for locating its operations?

2. What are the unique advantages that this country possesses over all other competing locations?

3. What are the main reasons for your locating operations in this country?

4. How do your operations in this country assist with enhancing and maintaining the international competitiveness of your parent company?

5. What specific capabilities does your company possess that allow it to operate more effectively than other firms in similar businesses in this country?

Do you believe that you have any serious competitors in this country? If not, who are your major competitors and where are they located?

6. Do you benefit from any of the preferential trading agreements that the country enjoys with the United States, the European Union and Canada?

If so, how important are these preferential trading agreements to your company's continued operations in this country?

7. Were you the first firm in your industry to operate in this country?
If you were not, was your investment in this country influenced by the actions of your competitors?

8. How important was the price of natural gas or the cost, availability and productivity of labour to your firm's decision to locate its operations in this country?

Is the cost of this factor critical to your company's continued international competitiveness?

9. Is the quality of the country's industrial infrastructure satisfactory to your company's needs?

In what areas do you believe the services to be unsatisfactory?

10. What elements of the investment incentive package offered by the governments are attractive to your company?

11. Have you used the services of the organisations designed to promote investment in this country?

Were you satisfied with the services provided by these organisations?

12. Do you use the services of any other local companies in this country? If so, for what activities?

Are you satisfied with the quality of service provided by these local companies?

13. What factors influenced the proportion of equity that your company was willing to commit to its venture in Trinidad?

14. What is the future of your company in this country?

Appendix 4

The stakeholders interviewed

Jamaica

Jamaica Promotions Corporation

- Mrs Patricia Francis, President, Jamaica Promotions Corporation. Interview was conducted on 19 September 1996 in Kingston, Jamaica.
- Mrs Pottinger, Senior Vice President–Strategic Planning, Jamaica Promotions Corporation. Interview was conducted on 19 September 1996 in Kingston, Jamaica.
- Mr Junior Lodge, Marketing Manager, Jamaica Promotions Corporation. Interview was conducted on 25 April 1997 in London, UK.

Kingston Free Zone Authority

- Ms Andrea Philips, Manager, Client Services and Marketing, Kingston Free Zone Authority. Interview was conducted on 16 September 1996 in Kingston, Jamaica.

Montego Bay Free Zone Complex

- Mr Owen Higgins, General Manager of Montego Bay Free Zone Company. Interview was conducted on 24 September 1996 in Montego Bay, Jamaica.

Ministry of Industry, Investment and Commerce

- Ms Forbes, Senior Civil Servant, Ministry of Industry, Investment and Commerce. Interview was conducted on 26 September 1996 in Kingston, Jamaica.

Human Employment and Resource Training Trust of Jamaica

- Mr Robert Gregory, Executive Director, Human Employment and Resource Training. Interview was conducted on 17 September 1996 in Kingston, Jamaica.

- Ms Delores O' Connor, Director of the Academies, Human Employment and Resource Training. Interview was conducted on 18 September 1996 in Kingston, Jamaica.
- Ms Grace Mc Clelland, Director of GAMEX, Human Employment and Resource Training. Interview was conducted on 26 September 1996 in Kingston, Jamaica.

The Chamber of Industry and Commerce

- Mr James Moss-Solomon, President, Jamaica Chamber of Industry and Commerce. Interview was conducted on 2 October 1996 in Kingston, Jamaica.

Locally-owned apparel firm–Taylor Group of Companies

- Ms Campbell, Marketing Manager, Taylor Group of Companies. Interview was conducted on 28 September 1996. (Telephone interview).

Barbados

Barbados Investment and Development Corporation

- Ms Peggy Griffith, Director, International Business, Barbados Investment and Development Corporation. Interview was conducted on 5 September 1996 in Bridgetown, Barbados
- Mr Lavine, Director, Research, Planning and Information, Barbados Investment and Development Corporation. Interview was conducted on 21 August 1996 in Bridgetown, Barbados.
- Mr Kenneth Campbell, First Secretary–Commercial, Barbados Investment and Development Corporation. Interview was conducted on 5 May 1997 in London, UK.

Ministry of Foreign Affairs, Foreign Trade and International Business

- Senator Philip Goddard, Minister in the Ministry of International Trade and Business, Barbados. Interview was conducted on 26 August 1996 in Bridgetown, Barbados.

Computer Department, The University of the West Indies, Cave Hill Campus

- Mr Stewart Bishop, Lecturer, Computer Department, The University of the West Indies, Barbados. Interview was conducted on 26 August 1996 in Cavehill, Barbados.
- Mr David Trotman, Lecturer, Computer Department, The University of the West Indies, Barbados. Interview was conducted on 26 August 1996 in Cavehill, Barbados.

- Prof. Haggar, Consultant, Computer Department, The University of the West Indies, Barbados. Interview was conducted on 4 September 1996 in Cavehill, Barbados.

Barbados Community College

- Dr Gladstone Best, Senior Tutor, Computing Department, Barbados Community College. Interview was conducted on 27 August 1996 in St. Michael, Barbados.

Information Technology Consultant

- Mr Hallam Hope, Consultant, CARITEL, Barbados. Interview was conducted on 31 August 1996 in St Michael, Barbados.

Barbados External Communication Limited

- Mr Tony Haynes, Barbados External Communication Limited. Interview was conducted on 4 September 1996 in St Michael, Barbados, (telephone interview).

Barbados Chamber of Commerce and Industry

- Ms Caroline Charles, Administrative Assistant, Barbados Chamber of Commerce and Industry. Interview was conducted on 30 August 1996 in Bridgetown, Barbados.

Locally-owned information service firms

- Mr Michael Armstrong, General Manager, Caribbean Data Services, Barbados. Interview was conducted on 15 August 1996 in Bridgetown, Barbados.
- Mr John R.Gibbs, Director, Information Technology Services, SCL Systems Caribbean Limited. Interview was conducted on 29 September 1996 in Bridgetown, Barbados.

Trinidad-Tobago

Ministry of Industry, Trade and Consumer Affairs

- Mr Mervin Assam, Minister, Ministry of Industry, Trade and Consumer Affairs, Trinidad and Tobago. Interview was conducted on 31 July 1996 in Port-of-Spain, Trinidad.
- Mr Neville Blake, Permanent Secretary, Ministry of Industry, Trade and Consumer Affairs, Trinidad and Tobago. Interview was conducted on 5 August 1996 in Port-of-Spain, Trinidad.
- Mr Wayne Punnett, Senior Policy Adviser in the Ministry of Industry, Trade and Consumer Affairs, Trinidad and Tobago. Interview was conducted on 5 August 1996 in Port-of-Spain, Trinidad.

Trinidad and Tobago Tourism and Industrial Development Corporation

- Mr Andre-Vincent Henry, Vice President, Trinidad and Tobago Tourism and Industrial Development Corporation. Interview was conducted on 10 October 1996 in Port-of-Spain, Trinidad.
- Mr Brian De Ferreire, Manager–Investor Promotions, Trinidad and Tobago Tourism and Industrial Development Corporation. Interview was conducted on 17 July 1997 in Port-of-Spain, Trinidad.

National Gas Company of Trinidad and Tobago

- Mr Gregory Mc Guire, Manager–Strategic Planning and Marketing, National Gas Company of Trinidad and Tobago. Interview was conducted on 8 August 1996 in Point Lisas, Trinidad.
- Mr Mark Hamilton, Project Officer, National Gas Company of Trinidad and Tobago. Interview was conducted on 17 October 1996 in Point Lisas, Trinidad.

Point Lisas Industrial Port Development Corporation Limited

- Mr Neil Rolingson, Chief Executive Officer, Point Lisas Industrial Estate Port and Free Zone of Trinidad and Tobago. Interview was conducted on 17 October 1996 in Point Lisas, Trinidad.

National Skills Development Programme

- Mr Rudy Serrette, Former Officer, National Skills Development Programme of Trinidad and Tobago. Interview was conducted on 17 October 1996 in Point Lisas, Trinidad.

Chamber of Industry and Commerce

- Mr Michael Arneaud, President of Trinidad and Tobago Chamber of Industry and Commerce. Interview was conducted on 18 October 1996 in Tunapuna, Trinidad.

Local Partner of Joint Venture Agreement–CL Financial Limited

- Mr Keston Coombs, Executive Director, Caribbean Methanol Company and Clico Energy. Interview was conducted on 18 July 1996 in Port-of-Spain, Trinidad.

Appendix 5

The results of the Chi-square tests (Chapter 7)

Table 1 Testing hypothesis 1–privileged access to raw materials and location

Response/Location	*Jamaica*	*Barbados*	*Trinidad-Tobago*	*Total*
Important	5 (21%)	5 (33%)	13 (65%)	23
Not Important	19 (79%)	10 (67%)	7 (35%)	36
Total	24	15	20	59

Table 2 Testing hypothesis 1–new technology and location

Response/Location	*Jamaica*	*Barbados*	*Trinidad-Tobago*	*Total*
Important	1 (4%)	6 (29%)	8 (47%)	15
Not Important	22 (96%)	15 (71%)	9 (53%)	46
Total	24	15	20	61

Table 3 Testing hypothesis 1–product differentiation and type of MNE

Response/Type	*Market-Seeking MNE*	*Resource-Seeking MNE*	*Export-Seeking MNE*	*Total*
Important	20 (71%)	2 (33%)	1 (10%)	23
Not Important	8 (29%)	4 (67%)	9 (90%)	21
Total	28	6	10	44

Table 4 Testing hypothesis 1–marketing skills and type of MNE

Response/Type	*Market-Seeking MNE*	*Resource-Seeking MNE*	*Export-Seeking MNE*	*Total*
Important	29 (63%	1 (9%)	7 (33%)	37
Not Important	17 (37%)	10 (91%)	14 (67%)	41
Total	46	11	21	78

Table 5 Testing hypothesis 1–privileged access to raw materials and type of MNE

Response/Type	*Market-Seeking MNE*	*Resource-Seeking MNE*	*Export-Seeking MNE*	*Total*
Important	6 (15%)	7 (78%)	10 (56%)	23
Not Important	33 (85%)	2 (22%)	8 (44%)	43
Total	39	9	18	66

Table 6 Testing hypothesis 1–access to finance and type of MNE

Response/Type	*Market-Seeking MNE*	*Resource-Seeking MNE*	*Export-Seeking MNE*	*Total*
Important	8 (15%)	6 (46%)	2 (8%)	16
Not Important	44 (85%)	7 (54%)	24 (92%)	71
Total	52	13	26	91

Table 7 Testing hypothesis 1–privileged access to raw materials and quantum of investment

Response/Quantum	*Less US$10m*	*US$10–20m*	*More US$20m*	*Total*
Important	6 (21%)	0 (0%)	11 (92%)	25
Not Important	22 (79%)	2 (100%)	1 (8%)	17
Total	28	2	12	42

Table 8 Testing hypothesis 4—low-cost labour and type of MNE

Response/Type	*Market-Seeking*	*Resource-Seeking*	*Export-Seeking*	*Total*
Important	17 (37%)	7 (70%)	20 (83%)	44
Not Important	29 (63%)	3 (30%)	4 (17%)	36
Total	46	10	24	80

Table 9 Testing hypothesis 4—competitively priced natural gas and type of MNE

Response/Type	*Market-Seeking*	*Resource-Seeking*	*Export-Seeking*	*Total*
Important	4 (18%)	5 (83%)	1 (14%)	8
Not Important	18 (81%)	1 (17%)	6 (86%)	25
Total	22	6	7	35

Table 10 Testing hypothesis 4—low-cost labour and country of origin of MNE

Response/Country	*USA*	*Britain*	*Other*	*Total*
Important	30 (61%)	5 (28%)	8 (67%)	32
Not Important	19 (39%)	13 (72%)	4 (33%)	36
Total	49	18	12	79

Table 11 Testing hypothesis 4—low-cost labour and location of investment

Response/Location	*Jamaica*	*Barbados*	*Trinidad-Tobago*	*Total*
Important	16 (70%)	11 (52%)	16 (62%)	43
Not Important	7 (30%)	10 (48%)	10 (39%)	27
Total	23	21	26	70

Table 12 Testing hypothesis 4–low-cost labour and quantum of investment

Response/Quantum	*Less US$10m*	*US$10–20m*	*More US$20m*	*Total*
Important	14 (42%)	4 (100%)	11 (85%)	29
Not Important	19 (58%)	0 (0%)	2 (15%)	21
Total	33	4	26	50

Table 13 Testing hypothesis 7–repatriation of dividends and country of origin of MNE

Response/Country	*USA*	*Britain*	*Other*	*Total*
Important	36 (74%)	9 (47%)	11 (92%)	56
Not Important	13 (27%)	10 (53%)	1 (8%)	24
Total	49	19	19	80

Table 14 Testing hypothesis 7–tax holidays and country of origin of MNE

Response/Country	*USA*	*Britain*	*Other*	*Total*
Important	16 (31%)	4 (16%)	7 (54%)	24
Not Important	36 (69%	21 (84%)	6 (46%)	56
Total	52	25	13	80

Table 15 Testing hypothesis 7–income tax relief on dividends and country of origin of MNE

Response/Country	*USA*	*Britain*	*Other*	*Total*
Important	19 (36%)	3 (12%)	6 (46%)	28
Not Important	33 (64%)	22 (88%)	7 (54%)	62
Total	52	25	13	80

Table 16 Testing hypothesis 7–tax holidays and quantum of investment

Response/Country	*USA*	*Britain*	*Other*	*Total*
Important	8 (22%)	1 (25%)	11 (75%)	35
Not Important	28 (79%)	3 (75%)	4 (25%	20
Total	36	4	15	55

Notes

1 Introduction

1 The members of ALADI are Argentina, Bolivia, Brazil, Chile, Columbia, Ecuador, Mexico, Paraguay, Peru, Uruguay and Venezuela.
2 The countries of the Caribbean region are Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, the Netherlands Antilles, St Kitts and Nevis, St Lucia, St Vincent, Suriname, and Trinidad and Tobago.

2 The Caribbean host countries: an introduction

No notes.

3 The motivations for foreign direct investment

1 Vachani (1985) divides the Indian market into two distinct parts: the developed country segment and the less developed one. In the former, consumers demand product characteristics similar to those desired by their developed country counterparts. Conversely, in the LDC segment, consumers want product attributes that differ from those demanded by consumers in the developed world.
2 It must be noted that several scholars, for example Hogaguchi and Toyne (1990), have argued that Hymer was aware of transaction market failure as precipitating the formation of a MNE. They point out that Dunning and Rugman (1985) only examined Hymer's dissertation, not his other works. They argue that Hymer's later papers demonstrated his knowledge of Coase, and his application of Coase's theory to the market imperfections theory of MNEs.

4 The location of foreign direct investment

1 The preferential trading agreements which are enjoyed by the countries of the Caribbean are those offered under the Generalised System of Preferences, the Multifibre Agreement, the Caribbean Basin Initiative, the Canadian Preferential Trade Scheme for the Commonwealth Caribbean (CARIBCAN), and the Lome Convention.
2 The Caribbean Basin Initiative beneficiaries were the Central American countries of Guatemala, Belize, Honduras, El Salvador, Panama, Costa Rica, and the countries of the Caribbean namely, St Vincent and the Grenadines, Jamaica, Dominica, St Lucia, Grenada, St Christopher-Nevis, Montserrat, Dominican

Republic, Antigua, Bahamas, British Virgin Islands, Haiti, Barbados, the Netherlands Antilles, and Trinidad and Tobago.

3 It is significant to note that Bhagwati (1996) describes the free trade areas that are presently emerging globally as nothing more than preferential trading agreements. He argues that these are not genuine free trade areas since they grant free trade to members, but (implicitly) protection against non-members.

5 The modes of foreign direct investment

No notes.

6 Hypotheses and methodology

No notes.

7 Foreign direct investment in the Caribbean: a quantitative investigation

1 It is difficult to determine where the MNE is obtaining this 'privileged access to raw material'. Trinidad-Tobago is endowed with reserves of oil and natural gas. Thus, the notion that the MNE is gaining this unique advantage from its operations in Trinidad cannot be dismissed.

2 See *Management International Review* 33, Special Issue (1993); Moon *et al.* (1996); and Dunning (1997).

3 One hypothesis was not examined in the qualitative analysis. This was Hypothesis 8 that relates specifically to market-seeking FDI.

8 Foreign direct investment in Jamaica: a case study of the apparel industry

1 As discussed in Chapter 4, in the new Harmonised System nomenclature introduced on 1 January 1989, these items were designated 9802. 00. 60 and 9802. 00. 80. However, offshore enterprises operating under this schedule are still referred to as '807' operations.

2 The industries were petroleum, footwear, flat goods (gloves, belts, luggage, wallets, etc.), canned tuna, and watches (containing materials from countries ineligible for Most-Favoured Nations treatment by the United States). Cited in Corbett (1992). It is noteworthy that the CBI beneficiaries possessed a competitive advantage in several of these industries, notably petroleum and apparel.

3 Despite previous assurances, the executives based at the New York headquarters of Maidenform Worldwide Incorporated were reluctant to participate in the survey. It appears that at the time when interviews were being solicited, the company was in the process of being acquired by its rival, Vanity Fair Corporation. See Wendy Bounds, 'VF restructures, plans acquisition of Maidenform', *The Wall Street Journal,* 26 March 1997, B12 (W).

4 A distinction needs to be made between the textile and the apparel industry. The textile industry has four cycles involving fibre suppliers, textile mill producers and wholesale buyers. Its serves a diversity of end markets, ranging from automobile producers to the apparel manufacturers. Conversely, the apparel industry is highly specialised. Its end market is composed of consumers and retailers. Its product can be produced on a small or medium scale by subcontractors or in a factory. On the other hand, textile production is designed for larger-scale, high technology production. See Vosko (1993).

5 'Quick response' is an attempt by the US apparel producer to capitalise on its proximity to its customers. It requires the firm implementing the technologies and business systems that would allow for a speedy flow of data from its sales outlet to the fibre warehouse. In so doing, the apparel producer is able to monitor and even forecast the demands of its customer and thus react very rapidly to market changes. Companies that have offshore locations in the Caribbean stand to benefit from this system. Their operations are located sufficiently near to the US market to respond to the need for short delivery times and low inventories. See Steele (1988).
6 These data were obtained from conversations with the marketing manager of the Kingston Free Zone Company Limited, interview by author, telephone conversation, Coventry, UK, 24 April 1997. The figure quoted for freight costs from Montego Bay to Miami is that charged by the shipping line which serves both the ports of Kingston and Montego Bay. The clients at Kingston pay the same costs as those at Montego Bay. However, the freight costs quoted for Kingston are those offered by the competing shipping lines that only serve the port of Kingston.
7 Jamaica Promotions Corporation (JAMPRO) was created in 1988. It resulted from the merger of three existing development organisations. These included Jamaica National Export Corporation, Jamaica Industrial Development Corporation and Jamaica National Investment Promotions. It is the last institute that was responsible for attracting MNEs to the country in the early to mid-1980s.

9 Foreign direct investment in Barbados: a case study of the information service industry

1 The decline in the performance of the manufacturing sector was mainly caused by the collapse of the electronics sector. During the years 1982 to 1985, exports of electronics grew from 26 per cent to 61 per cent of total domestic exports. By 1987, they had declined to 24. 4 per cent. See Watson (1994b). It seems that high labour costs and poor trading conditions were responsible for the decline of this sector. See The Economist Intelligence Unit (1994a).
2 Nelson describes 'back office work' as being highly automated and employing a disproportionate number of low-wage clerical workers. Examples of such services include computer operations, accounting, payroll, billing, credit card services and word processing. See Nelson (1986).
3 The Gross Enrolment Ratio is the percentage of the country's school age population attending secondary school.
4 The Barbados Investment and Development Corporation provides funds of a maximum of US$35.00 weekly for a maximum of eight weeks for the training of workers. These funds are available during the first two years of a company's operation. It also grants a maximum of US$50.00 weekly for a maximum of twelve weeks for retraining. See Barbados Investment and Development Corporation (n.d.).
5 In July 1996, the local university employed an international consultant to identify the deficiencies of its computer science programme. He noted that the computer science department needed to deepen its links with industry; strengthen the first year of its undergraduate programme; update the software used for teaching purposes; and send more students abroad to pursue doctoral degrees. Consultant interviewed by the author, tape recording, Barbados, 4 September 1996. It is noteworthy that the community college already implements several of these proposals. The programme offered at this institute benefits

from interventions made by members of the business sector. Moreover, its students are taught both the technical and management aspects of the discipline. In addition, the college has sought to continuously upgrade its computer software. Head of Computer Department, Barbados Community College, interviewed by the author, tape recording, Barbados, 27 August 1996.

6 Information services were included in the General Agreement on Trade in Services (GATS) at the end of the last Uruguay Round. Barbados is a signatory to the GATS so its information service exports have 'most favoured nation' status. This means that members of the World Trade Organisation are bound to grant its information service exports no less favourable treatment than that accorded to the information service exports of other countries. World Trade Organisation, 'A Summary of the Final Act of the Uruguay Round,' available from http:/www.wto.org/wto/ursum_wpf.html#mAgreement; Internet; accessed 10 June 1997.

7 These buildings are called 'intelligent buildings'. They are distinct from factory shells since they have acoustic ceilings and raised floors. Director of International Business, Barbados Investment and Development Corporation, interviewed by the author, tape recording, Barbados, 5 September 1996.

8 This is the traditional telecommunications system that is based on a standard set of telephones connected by two pairs of copper wire, routed through an electromechanical switching system. It is also characterised by analogue electrical signals that are transmitted between exchanges by means of underground and undersea cables. This system is being replaced by digital exchanges with optical fibres being used for transmission. The result is a telecommunications system that operates at greater speeds, with greater technical efficiency and greater levels of capacity. See United Nations Industrial Development Organisation (1989).

9 ISDN is a mechanism that allows the telephone network to easily carry all types of voice and data services.

10 ATM is an emerging technology for efficiently transmitting voice, data and video on the same network. It requires a large bandwidth (the amount of data that could be transmitted on a circuit) and connectivity between all network stations.

11 Minister of Foreign Affairs, Foreign Trade and International Business, interviewed by the author, tape recording, Barbados, 26 August 1996.

12 This information was obtained from an official of the Barbados Investment and Development Corporation. Official of Barbados Investment and Development Corporation, interviewed by the author, telephone conversation, Barbados, 29 August 1996.

10 Foreign direct investment in Trinidad-Tobago: a case study of the natural gas sector

1 The development of gas-based activities was fraught with difficulties. The projects experienced tremendous cost overruns. Moreover, there was weak international demand for their products. In addition, one company, ISCOTT, experienced serious problems of market access. For an excellent treatment of Trinidad-Tobago's venture into the downstream development of its natural gas sector, see Farrell (1987b).

2 Direct reduced iron is a low-cost, high-quality alternative to scrap or blast furnace technology for producing steel. While the direct reduced iron technology is not proprietary, it is complicated and hard to copy. See 'Making steel. The Carnegie from Calcutta.' *The Economist,* 10 January 1998, 69–70.

3 These European companies unsuccessfully managed the state-owned iron and steel company before it was leased to Ispat. However, it was Hamberger Stahlwereke, North Star Steel of Minneapolis and Nucor Corporation of USA (this company operates an iron carbide plant in Trinidad) that were bidding for the assets of the privatised iron and steel company. See *Trinidad Express,* 9 January 1995, 16.

4 Other mills used scrap iron. The price of this feedstock fluctuates widely. Hence, products from mills that use DRI enjoy a US$50 price advantage over scrap-based mills. In addition, the DRI mills use feedstock of the purest form. Hence, the quality of its product is superior to that of scrap-based mills. Managing Director, Caribbean Ispat Limited, interviewed by the author, tape recording, Trinidad, 23 July 1996.

5 One of the loan conditions demanded by the financiers of the LNG project was security in the supply of natural gas. Thus, if there are supply disruptions to the plant, the gas supplier is to be held liable for all liquidation damages. NGC, with its total asset-base of US$394 million, did not want the risks of being held liable for a US$1,000 million plant. Hence, it willingly conceded the supply responsibilities to Amoco. Manager, Strategic Planning and Marketing, The National Gas Company, interviewed by the author, tape recording, Trinidad, 8 August 1996.

6 This information was obtained from one of the executives of the Atlantic LNG Company of Trinidad and Tobago. Vice President of Finance and Administration, Atlantic LNG Company of Trinidad and Tobago, interviewed by the author, tape recording, Trinidad, 26 July 1996.

7 There are presently two new methanol plants, two new ammonia plants and an iron and steel plant that are coming on stream in Trinidad. In addition, the existing methanol plants are increasing their production capacities.

8 The LNG partners assumed the expenses arising from the relocation of the LNG plant from the La Brea Industrial Estate to Point Fortin. They were thus given additional concessions by the government. These concessions affected the length of the tax holiday, depreciation allowances, and interest on withholding tax. See *Carib-Latin Energy Consultant* 20, January–February 1996:27.

9 These training programmes have been in place since the establishment of the state-owned company Fertrin in 1980. They were developed by the workers of Fertrin, who, imbued with a strong sense of nationalism, sought to ensure that there would be a steady supply of well-trained workers in the energy sector. Executive from Arcadian Trinidad, interviewed by the author, tape recording, Trinidad, 24 July 1996.

10 The facilities at the local technical and vocational institutes are obsolete. It was revealed that students are being trained on equipment that is more than thirty years old. In addition, the training programmes do not include courses on new technologies such as CAD/CAM or electronic transmissions for automobiles. Official from the National Skills Development Programme, interviewed by the author, tape recording, Trinidad, 17 October 1996.

11 This information was obtained from one of the executives of the Atlantic LNG Company of Trinidad and Tobago. Vice President, Finance and Administration, Atlantic LNG Company of Trinidad and Tobago, interviewed by the author, tape recording, Trinidad, 26 July 1996.

12 It is instructive to note that the transaction costs theory explains these two firms' selection of minority joint ventures. Atlantic LNG and Caribbean Methanol could be described as a 'link' joint venture. In this arrangement, the joint venture partners are involved in different stages of the production process of the good. The presence of inefficiencies in the market, for example the high transaction costs that may arise in the distribution of commodities (methanol

and LNG), is a necessary condition for the joint venture to emerge. The equity participation of the distributor, in this case Methanex and Cabot LNG, allows the firm to avoid bargaining stalemates that may result from the presence of a limited number of distributors. For further discussion of this theory, see Hennart (1988).

13 It should be noted that Ispat, under a leasing arrangement, operated the iron and steel plant for five years before its purchase. Thus, it could be argued that the company had ample time to resolve any possible managerial difficulties that may have arisen from it operating in a culturally distant location. Moreover, to some extent, Trinidad-Tobago may not be culturally dissimilar from India since almost 50 per cent of its population are ethnically East Indians.

11 Foreign direct investment in the Caribbean: a cross-industry case study analysis

1 This information was obtained from the Director of International Business, Barbados Investment and Development Corporation, interviewed by the author, tape recording, 5 September 1996.

12 The fututre of foreign investment in the Commonwealth Caribbean: conclusions and recommendations

1 It does not seem that Hymer (1960, 1976) and his followers (Kindleberger (1969) and Caves (1971)) considered the other MNEs that operate in the host country to be competitors to the investing foreign firm. Hymer's theory was based on market-seeking FDI in the manufacturing industry. It did not examine export-seeking FDI. This difference in emphasis may account for the findings obtained in the present study. The author credits Professor Norman Girvan, Director of Consortium Graduate School, The University of the West Indies, Jamaica for making this distinction.

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