

PALGRAVE STUDIES OF  
ENTREPRENEURSHIP IN AFRICA

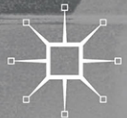
Series Editors: K. Ibeh, S. Nwankwo, T. Mersha  
and V. Sriram

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**BUILDING  
ENTREPRENEURIAL  
ECOSYSTEMS IN  
SUB-SAHARAN  
AFRICA**

A Quintuple Helix Model

**Constant D. Beugré**



# Palgrave Studies of Entrepreneurship in Africa

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Constant D. Beugré

Building  
Entrepreneurial  
Ecosystems  
in Sub-Saharan  
Africa

A Quintuple Helix Model

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## PREFACE

I had the opportunity to spend the spring semester and the summer of 2014 in Ghana as a Fulbright scholar at Methodist University College Ghana (MUCG). The focus of my Fulbright scholarship was both teaching and research. I spent my time teaching an undergraduate course in entrepreneurship and developing a new curriculum for a concentration in entrepreneurship at the undergraduate level and in the MBA program. I also developed a proposal for a Master of Philosophy in Entrepreneurship for the Center for Entrepreneurship Education, Research, and Training (CEERT). As outreach activities, I developed workshop proposals for entrepreneurs and a summer camp for high school students. All these endeavors were under the umbrella of the CEERT. I also conducted research on fostering entrepreneurial ecosystems in sub-Saharan Africa. When I returned to the United States, I presented some of my research findings at the 6th Africa Business Conference held at Syracuse University in March 2015 and at the George Washington University in October 2015.

This book builds on this research effort. It explores the creation of entrepreneurial ecosystems in sub-Saharan Africa (SSA). The literature in economics and entrepreneurship has underscored the role of entrepreneurship in economic growth and development since the seminal work of Joseph Schumpeter in the 1930s. In the context of sub-Saharan Africa, not much attention has been devoted to entrepreneurship as a means of combating poverty and creating wealth. The dominant paradigm for young graduates so far has been that governments will provide them with jobs after graduation. This model is unsustainable because governments are not creators of jobs. Rather, they should create environments

where individual entrepreneurs and organizations can strive. The book focuses on sub-Saharan Africa for at least two reasons. First, this region of the world is the least developed one. Second, and most importantly, sub-Saharan Africa has enormous potential including natural resources as well as an “army” of young people that could contribute to the economic renaissance of the continent if given the opportunity to do so. This book is for policy makers and national and local governments of sub-Saharan Africa who are eager to create a more favorable landscape for their citizenry, especially the youth who cannot find employment after graduation. It is also geared toward entrepreneurship scholars who intend to explore the conditions that could lead to the development of entrepreneurship research and education in Sub-Saharan Africa.

I would like to take this opportunity to thank those who have directly and/or indirectly shaped my thinking about the topic discussed in this book. First, I would like to thank Dr. Ato Essuman of the CEERT at Methodist University College Ghana with whom I had a fruitful collaboration during my Fulbright scholarship at this institution. I would also like to thank the President of the Methodist University College Ghana. Finally, I thank the colleagues who have provided feedback on early drafts and paper presentations on some of the ideas discussed in this book. All errors and shortcomings are mine.

Dover, DE, USA  
April 30, 2016

Constant D. Beugré, Ph.D.

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**Constant D. Beugré** (PhD Rensselaer Polytechnic Institute) is a professor of management at Delaware State University, College of Business, where he teaches courses in organizational behavior and entrepreneurship at the undergraduate level and organizational leadership at the graduate level. Prior to joining Delaware State University, Dr. Beugré was an assistant professor of management and information systems at Kent State University, Tuscarawas Campus. Dr. Beugré was also a visiting fellow at Harvard University in 1996. He recently completed a Fulbright Scholarship at Methodist University College, Ghana, in spring and summer 2014. Dr. Beugré's research interests include organizational justice, entrepreneurship, and organizational neuroscience. Dr. Beugré has published five books and more than 70 refereed journal articles, book chapters, and conference proceedings. His publications have appeared in academic outlets, such as *Organizational Behavior and Human Decision Processes*, *Decision Sciences*, *Journal of Business and Psychology*, *International Journal of Human Resource Management*, *International Journal of Manpower*, *Journal of Applied Behavioral Science*, *Journal of Applied Social Psychology*, and *Research in the Sociology of Organizations*.

## Introduction

**Abstract** This chapter introduces the book and explains its rationale. Specifically, the chapter argues that the development of entrepreneurial ecosystems is important in providing opportunities for the emergence of high-growth potential entrepreneurship in sub-Saharan Africa. It could contribute to the formulation of new strategies and mechanisms aimed at providing opportunities for gainful employment for the many young people of sub-Saharan Africa. The chapter also introduces the key issues discussed in the book.

**Keywords** Entrepreneurship · Entrepreneurial ecosystems · Productive entrepreneurship · Sub-Saharan Africa · Unproductive entrepreneurship

There are three main reasons that led me to write this book. The first reason is to challenge the prevailing view in most sub-Saharan African (SSA) countries that governments should provide jobs to college graduates. In fact, in most SSA countries, when students graduate from college, they expect their governments to provide them jobs in the public or even private sector. It is true that such practice started just after independence when the newly independent countries needed professionals in almost every sector of government. However, this way of thinking is no longer sustainable because government does not create wealth (Beugré 1998). It

is obvious that today, times have changed and the population growth along with the increasing number of graduates has made this practice unsustainable, even counterproductive.

The second reason is that the population growth has put pressure on governments. Although more young people are being educated than ever before, opportunities for employment have not kept pace. For example, it is a common experience that about 80 percent of the graduates from Nigerian universities find it very difficult to get employment every year (Adejimola and Olunfunmilayo 2009). These two compounding factors, high population growth and lack of employment opportunities, create the bedrock for social unrest. It is, therefore, important to envision new strategies and mechanisms to provide opportunities for gainful employment for the many young people of sub-Saharan Africa.

The third reason is a professional and personal one. As a scholar of management, teaching and writing on entrepreneurship, I am convinced that entrepreneurship could provide opportunities for SSA countries to turn the tide. This is particularly important in an era where technology provides opportunities for the young people in sub-Saharan Africa to not only connect with the world but also leverage the vast natural resources available in sub-Saharan Africa to contribute to the betterment of their personal lives and their communities. Today, it is obvious that more countries are turning to entrepreneurship as a means of enhancing opportunities for economic development and growth. For example, Ariza-Montes and Muniz (2013, p. 40) suggest that ‘fostering an entrepreneurial culture constitutes one of the most important priorities for all countries’. Likewise Auerswald (2015, p. 10) argues that “while societies can advance for a short while by making incremental adjustments to the status quo, long-term development requires entrepreneurship and innovation.” Thus, the purpose of this book is to develop a framework for fostering entrepreneurial activities in sub-Saharan Africa (SSA). The main argument of this book is that entrepreneurship could help to create a new development paradigm that could effectively contribute to economic growth and wealth creation in sub-Saharan Africa (Robson et al. 2009; Naudé 2010; Ogbor 2009). For this to happen, countries in sub-Saharan Africa must initiate, implement, and nurture entrepreneurial ecosystems. These entrepreneurial ecosystems could be at the national, regional, local, or organizational levels.

It is worth acknowledging that entrepreneurship is not a new concept or practice in Africa (Olutayo 1999). In fact, from merchants to street

vendors to modern corporations, African countries have harbored entrepreneurs for centuries. As Elkan (1988) put it almost three decades ago, “there is little evidence that Africans are lacking in entrepreneurial spirit or fail to grasp business opportunities when they are within reach. What matters most is the economic environment: if it places entrepreneurship at a discount, it is not surprising that there is then a dearth of it. When the environment changes and government policy comes to depend more upon greater enterprise, the likelihood and the evidence are that people will respond” (p. 184). This echoes Baumol’s (1990) contention that entrepreneurship is an omnipresent feature of human nature. Thus, it is almost inherent to human society. However, what differs across geographic areas is not the degree of underlying entrepreneurial spirit, but how this spirit is channeled (Sobel 1988).

Although there has been remarkable progress in many areas, more needs to be done for sub-Saharan African countries to become middle-income level countries. For example, South Africa, an economic powerhouse and a member of the BRICS (Brazil, Russia, India, China, South Africa) countries, still has several pockets of deep poverty. Likewise, Nigeria, the largest economy and most populous country in Africa, has many areas that still suffer from endemic poverty. These two examples indicate that despite its large resources and economic potential, sub-Saharan Africa is still the least developed region of the world.

Before exploring better the key concepts of this book, it is important to know what is meant by entrepreneurship and by entrepreneurial ecosystems. Entrepreneurship is often defined as the process by which individuals pursue opportunities without regard to resources they currently control (Stevenson and Jarillo 1990). As this definition implies, at the start of the entrepreneurial process lies an opportunity. A second way of looking at entrepreneurship is to consider it as a mindset, that is, a particular way of thinking and acting. This second definition relates entrepreneurship to innovation. When it occurs within existing organizations, entrepreneurship is defined as innovation (or corporate entrepreneurship or intrapreneurship), the process of transforming ideas into actual physical products or services. For entrepreneurship to prosper in a given country, several factors need to be in place.

Thus, this book explores the extent to which the creation of entrepreneurial ecosystems could foster entrepreneurial activities in sub-Saharan Africa. Geographically, sub-Saharan Africa is the region south of the Saharan desert. Politically, countries such as both Sudan and South

Sudan are part of sub-Saharan Africa. Countries in the northern part of the African continent are part of the Arab world and are not generally included in the World Bank's statistics related to Africa. Although considered as the least developed region of the world, sub-Saharan Africa is currently the second most growing economy in the world after Asia. It also has several advantages in terms of nature resources and human endowment.

Developing entrepreneurial ecosystems could help to reduce the heavy reliance on governments for employment and facilitate the emergence of creative economies in sub-Saharan Africa, thereby moving the continent from a resources-driven to a knowledge-based economy. Since the seminal work of Schumpeter (1934), several scholars have established a strong link between entrepreneurship and economic growth (Baumol 1990; Wennekens and Thurik 1999; Wennekens et al. 2005; Acs 2006; Sobel 1988; McMullen 2011; Ariza-Montes and Muniz 2013). For example, using Baumol's (1990) concepts of productive entrepreneurship and unproductive entrepreneurship, Sobel (1988, p. 645) notes that productive entrepreneurship is the fundamental source of economic growth and wealth creation.

In the present book, I explore the means through which entrepreneurship could serve as a means to enhance economic development and growth in sub-Saharan Africa. In doing so, I offer strategies and guidelines for building entrepreneurial ecosystems in sub-Saharan African countries. I do so because I believe that entrepreneurship could play a critical role in the development of sub-Saharan Africa. Very often, entrepreneurship in sub-Saharan Africa has been limited to the informal sector, that is, informal entrepreneurship or necessity-based entrepreneurship. It is not that necessity-based entrepreneurship is necessarily bad, but it cannot help sub-Saharan Africa leverage its vast resources for competitive advantage and economic growth. Thus, I focus more on entrepreneurial ecosystems involving high-growth ventures because this type of entrepreneurship has the potential to contribute to employment creation and economic growth (Acs et al. 2008; Autio and Acs 2010; Estrin et al. 2013). This could lead to the emergence of high-impact entrepreneurs who are defined as entrepreneurs inclined to pursue growth and innovation (Acs 2010). Indeed, high-impact entrepreneurs are the actors that intensify competition, provide the largest potential for new jobs, and enhance economic growth (Stenholm et al. 2013, p. 177).

According to Baumol's (1990) theory of productive and unproductive entrepreneurship, the institutional environment determines whether

people channel their energy toward productive or unproductive entrepreneurship. Applied to sub-Saharan Africa, one may argue that the institutional environments lead people to engage more in informal entrepreneurship. For example, the statistics of the International Labor Organization (2002) show that informal entrepreneurship represents more than 70 percent of economic activity in sub-Saharan Africa. Yet, informal entrepreneurship does not lead to the creation of new jobs and therefore cannot be construed as an engine of economic development and growth. No country can become an economic power house if most of its citizens work in the informal sector. Perhaps, the prevalence of the informal sector could be the result of systemic barriers to high-potential entrepreneurship.

The present book includes nine chapters. The second chapter presents the sub-Saharan Africa region and identifies its economic potential. This lays the groundwork for the subsequent chapters. The third chapter defines the concept of entrepreneurial ecosystems, explores its relevance for sub-Saharan Africa, and identifies its pillars. It does so by developing a Quintuple Helix Model as a conceptual framework to discuss the creation of entrepreneurial ecosystems in sub-Saharan Africa. The chapter also provides guidelines on building entrepreneurial ecosystems and addresses the question of who should lead the effort in building an entrepreneurial ecosystem in a particular country. The fourth chapter discusses the role of government in fostering entrepreneurial ecosystems. The fifth chapter analyzes the role institutions of higher education could play in the development of entrepreneurial ecosystems. Particularly, the chapter discusses the importance of entrepreneurial education, the development of campus-wide entrepreneurial ecosystems, and the establishment of business incubators.

The sixth chapter discusses the role of the private sector in the development of entrepreneurial ecosystems. The chapter focuses on the role of private banks, private investors, venture and angel capitalists, and corporations that could provide seed money to facilitate the spinoff of small businesses. The seventh chapter focuses on the role of citizens in creating entrepreneurial ecosystems. This chapter discusses issues related to social perceptions of entrepreneurs, the solidarity tax as a potential impediment to entrepreneurship, the family as an entrepreneur, and the role of diaspora entrepreneurs and/or professionals. The eighth chapter discusses the role of international cooperation in fostering entrepreneurial ecosystems in sub-Saharan Africa. Finally, the ninth chapter concludes the book by highlighting the importance of building entrepreneurial ecosystems and creating an entrepreneurial society in sub-Saharan Africa.

## The Business Environment in Sub-Saharan Africa

**Abstract** This chapter briefly presents an overview of the sub-Saharan African region. An understanding of the challenges and potential of this region could help to have a better grasp of the importance of this book and its call for a framework to spur economic development and growth. The chapter uses the PEST model to underline the importance of the institutional environment (economic, political, social, and technological) in the development of entrepreneurial ecosystems in sub-Saharan Africa. The chapter also uses the rankings of the Ease of Doing Business Report and the Economic Freedom Index to assess the business environment of sub-Saharan African countries.

Before discussing the development of entrepreneurial ecosystems, I briefly present an overview of the sub-Saharan African region.

**Keywords** Economic environment · Institutional environment · Political environment · Social environment · Sub-Saharan Africa · Technological environment

### 1 THE SUB-SAHARAN AFRICAN REGION

Sub-Saharan Africa is the region south of the Saharan desert that separates the north from the south of the continent. It is home to 49 countries and one territory, Western Sahara. [Table 2.1](#) presents the list of sub-Saharan

**Table 2.1** Countries and territories in sub-Saharan Africa

Angola	Côte d’Ivoire	Madagascar	Seychelles
Benin	Djibouti	Malawi	Sierra Leone
Botswana	Equatorial	Mali	Somalia
Burkina Faso	Guinea	Mauritania	South Africa
Burundi	Eritrea	Mauritius	Sudan
Cameroon	Ethiopia	Mozambique	Swaziland
Cape Verde	Gabon	Namibia	Tanzania
Central African Republic	The Gambia	Niger	Togo
Chad	Ghana	Nigeria	Uganda
Comoros	Guinea	Réunion	Western
Congo (Brazzaville)	Guinea-Bissau	Rwanda	Sahara
Congo (Democratic Republic)	Kenya	Sao Tome and	Zambia
	Lesotho	Principe	Zimbabwe
	Liberia	Senegal	

Source: Library of congress. <https://www.loc.gov/rr/amed/guide/afr-countrylist.html>

African countries. The northern part of the continent that includes Algeria, Egypt, Libya, Morocco, and Tunisia are part of the Arab world and considered as part of the Middle East. Official statistics from the World Bank, the International Monetary Fund, and the United Nations classify sub-Saharan Africa apart from North Africa. In 2015, sub-Saharan Africa was home to 962,286,000 people, who are mostly of the black race. The region has been through several tribulations throughout history including slavery, colonization, apartheid (in South Africa), and neo-colonial political maneuvers to control its vast natural resources. The aim of this book, however, is not to revisit the past (although it could affect the present) but to provide a road map for the future because sub-Saharan Africa is home to many of the world’s biggest opportunities (Chirona et al. 2011).

Although the book focuses on sub-Saharan Africa as an entity, it is worth mentioning that the countries are different in terms of culture and local languages, and colonial history. Indeed, “sub-Saharan Africa is not a unified region but is characterized by diversity, contrast, and contradictions” (Beugré and Offodile 2001, p. 536). There are differences in ethnic makeup, exposure to Western influence, and receptivity to changes. There are four major colonial influences that affect the social, political life, and business practices of these countries. For instance, there are countries colonized by England, France, Portugal,



and Spain. Even within the same country, there are also cultural differences centered on tribes, customs, and traditions that affect business practices (Beugré 2015).

Despite these differences, cultural patterns, such as respect for elders, consensus decision making, respect for authority, family orientation, and collectivism, characterize most African countries (Beugré and Offodile 2001, p. 537). Some of these cultural values could facilitate entrepreneurship, whereas others could inhibit it. For example, Saleh (1985) observed that in Kenya, adherence to traditional values does not allow people to embrace change. Such mentality could be detrimental to entrepreneurship and innovation. However, one must acknowledge today that Kenya is becoming an innovation hub in East Africa. Nairobi is home to innovated startups under the umbrella of the I-Hub. To understand the creation of entrepreneurial ecosystems, it is necessary to have a grasp of the context in which it occurs. After all, context plays an important role in the entrepreneurial process.

## 2 THE INSTITUTIONAL ENVIRONMENT

I use institutional economics (North 1991; Williamson 2000) and institutional theory (DiMaggio and Powell 1983, 1991) as conceptual frameworks to describe the business environment in sub-Saharan Africa. Institutional economics deals with the role of formal institutions, such as laws, and contracts and informal institutions, such as customs and traditions on economic activity (North 1991; Williamson 2000). Williamson (2000) identified four levels of social analysis including (1) embeddedness, (2) formal institutions, (3) governance, and (4) resource allocation and employment. The embeddedness level includes informal institutions, customs, traditions, mores, and religion. These informal institutions influence economic activities and to some extent have an impact on how formal institutions are established and run. Informal institutions represent informal constraints and change very slowly (North 1991; Williamson 2000).

Institutional theory treats institutions as socially constructed rule systems or norms that produce routine-like behavior (DiMaggio and Powell 1983, 1991; Jepperson 1991). DiMaggio and Powell (1991) contend that institutions reproduce themselves by establishing routines, disciplining deviance, and constructing agents' identities and interests. The importance of the institutional environment implies that to

survive, organizations must accommodate institutional expectations even though these expectations may have little to do with technical notions of performance accomplishment (Greenwood and Hinings 1996, p. 1025).

Institutions have a lasting grip on the way a society conducts itself (Williamson 2000, p. 597). In the context of sub-Saharan Africa, informal institutions are pervasive and affect people's daily lives. For example, the role of the extended family has been recognized as an impediment to entrepreneurship and productive activity (Platteau 2000; Kiggundu 2002). This is due to the fact that those who have income through employment or other productive economic activities are expected to help those family members who are less fortunate. This leaves little disposable income to save or invest. Another informal institution that permeates the lives of many sub-Saharan Africans is religion. Religion plays a key role in the lives of Africans as do other superstitious beliefs. The concept of *cosmic justice*—the belief in the existence of a supreme being who governs human activity and the fact that life is preordained and the just gets rewarded, whereas the bad gets punished guides most Africans.

According to Williamson (2000), the institutional environment includes the formal rules, such as constitutions, laws, property rights. For the institutional environment to play a positive role in economic activities, it is important to “get the formal rules of the game right” (Williamson 2000, p. 598). This level includes all government functions, such as the distribution of power between different branches and between regions and states within the same country. Institutional economists mentioned that property rights and contract laws are important features of the institutional environment. This is particularly important because a country without property rights and adequate contract laws cannot develop a sound productive sector. As Coase (1959) argued, “a private-enterprise system cannot function properly unless property rights are created in resources, and, when this is done, someone wishing to use a resource has to pay the owner to obtain it” (p. 12). To survive, organizations must accommodate institutional expectations even though these expectations may have little to do with technical notions of performance accomplishment (Greenwood and Hinings 1996, p. 1025). I briefly review the external environment of SSA countries using the PEST Model (Political, Economic, Social, and Technological).

### *The Political Environment*

Most sub-Saharan countries are now relatively democratic holding regular elections since the early 1990s. As a result, there are now few military coups, thereby leading to some form of political stability. There are also major improvements in the areas of governance and regulations. The direct effect is a relative reduction in the political risk posed by most SSA countries as assessed by the World Bank and the African Development Bank. Political risk can be defined as government interference in business transactions or events, such as political acts or constraints imposed on a firm (Kobrin 1979). Despite these undeniable efforts, corruption still persists and most SSA countries dominate the bottom tier of Transparency International rankings and political risk assessment indices. In addition, SSA countries must increase their efforts to improve governance and reduce the levels of corruption. The political environment can facilitate or impede the emergence of entrepreneurial ecosystems in SSA.

### *The Economic Environment*

The economic environment of most countries in SSA is improving. As a result, recent World Bank statistics indicate that SSA is one of the fastest growing regions of the world after Asia. Countries, such as Angola, Ghana, Ivory Coast, Kenya, Mozambique, have growth rates that are above 6 percent. There is also enormous economic potential in SSA. However, in most SSA countries, infrastructure is poor and represents a hindrance to business activity. For example, SSA has 13 percent of the world's population but 48 percent of the share of the global population without access to electricity (Castellano et al. 2015). Only seven countries, Cameroon, Côte d'Ivoire, Gabon, Ghana, Namibia, Senegal and South Africa, have electricity access exceeding 50 percent. The rest of the region has an average grid access of just 20 percent (Castellano et al. 2015). In addition to access, power outage is a frequent phenomenon in most SSA countries.

These challenges indicate both an impediment and an opportunity. As impediment, they represent an obstacle to economic productivity because they may increase the cost of doing business. For example, to adjust to frequent power outages, most businesses run their own generators. Doing so allows businesses to operate smoothly but it adds to their

operating costs that may lead to higher prices for consumers. However, deficiencies in the electricity sector could provide opportunities for investment and creation of new ventures. For example, start-ups may emerge to provide electricity. It is obvious that the demand is there and will increase over time. New companies could invest in renewable and clean energies, such as solar and wind. Indeed, “infrastructure gaps demand creative solutions from service providers” (Chironga et al. 2011, p. 121).

Another infrastructure deficiency is the poor state of roads and in some occasions the lack of reliable roads to connect cities and rural areas. In most SSA countries, roads are unpaved and road connections between city centers and rural areas or other mid-size cities are unreliable or non-existent. This leads to difficulties in distribution and availability of products where and when needed. Here too, the lack of physical infrastructure can lead to creative solutions. For example, some new ventures could invest in the development of physical infrastructures by exploring the possibility of using alternative materials to pave roads.

The use of internationally recognized economic indexes helps to assess the economic environment of SSA and compare it to global standards. Two indexes, the Index of Economic Freedom and The Ease of Doing Business Survey, provide reliable indicators of the business climate in each country. The Index of Economic Freedom (<http://www.heritage.org/index>) is an annual guide published by the Wall Street Journal and the Heritage Foundation, a think tank located in Washington, DC. Annually, the index ranks 185 countries on 10 components of economic freedom. These 10 components are divided into four categories: (1) rules of law, (2) limited government, (3) regulatory efficiency, and (4) open markets (see Table 2.2).

**Table 2.2** Components of the index of economic freedom

<i>Rules of law</i>	<i>Limited government</i>	<i>Regulatory efficiency</i>	<i>Open markets</i>
Property rights	Government spending	Business freedom	Trade freedom
Freedom from corruption	Fiscal freedom	Labor freedom	Investment freedom
		Monetary freedom	Financial freedom

The scores of the 10 components are aggregated to create an overall score, which represents the index of economic freedom for each country. The scores range from 10 to 100. The higher the score, the more economically free the country is. One of the problems with the Index of Economic Freedom is that it does not directly inform on the prevalence of entrepreneurial activity. However, it could help draw the conclusion that the more economically free a country is, the easier it may be for would-be entrepreneurs to start new ventures. The 2016 index ranked 178 countries and used five categories, free (score between 80 and 100), mostly free (score between 70 and 79.9), moderately free (score between 60 and 69.9), mostly unfree (score between 50 and 59.9), and repressed (score 40 and 49.9). Three sub-Saharan African countries, Somalia, Sudan, and South Sudan, were not ranked. As indicated in the table, only two SSA countries, Mauritius and Botswana, rank among the mostly free countries. Eight other SSA countries rank among the moderately free. All other countries have scores below 60, which consider them as not being free in terms of economic freedom (Table 2.3).

**Table 2.3** Ranking of sub-Saharan African countries on economic freedom

<i>Economy</i>	<i>Sub-Saharan rank</i>	<i>World rank</i>	<i>Overall score</i>	<i>Change over previous year</i>
Mauritius	1	15	74.7	-1.7
Botswana	2	30	71.1	+1.3
Cape Verde	3	57	66.5	+0.1
Rwanda	4	71	63.1	-1.7
Ghana	5	72	63.0	0.0
Seychelles	6	76	62.2	+4.7
South Africa	7	80	61.9	-0.7
Namibia	8	81	61.9	+2.3
Madagascar	9	87	61.1	-0.6
Ivory Coast	10	92	60.0	+1.5
Swaziland	11	94	59.7	-0.2
Benin	12	101	59.3	+0.5
Uganda	13	102	59.3	-0.4
Burkina Faso	14	104	59.1	+0.5
Gabon	15	105	59	+0.7
Zambia	16	106	58.8	+0.1
Tanzania	17	110	58.5	+1.0

(continued)

**Table 2.3** (continued)

<i>Economy</i>	<i>Sub-Saharan rank</i>	<i>World rank</i>	<i>Overall score</i>	<i>Change over previous year</i>
Senegal	18	111	58.1	+0.3
Kenya	19	115	57.5	+1.9
Nigeria	20	116	57.5	+1.9
The Gambia	21	118	57.1	-0.4
Sao Tome & Principe	22	120	56.7	+3.4
Mali	23	121	56.5	+0.1
Djibouti	24	124	56.0	-1.5
Niger	25	129	54.3	-0.3
Cameroon	26	130	54.2	+2.3
Burundi	27	133	53.9	+0.2
Togo	28	135	53.6	+0.6
Guinea	29	136	53.3	+1.2
Mozambique	30	139	53.2	-1.6
Comoros	31	141	52.4	+0.3
Sierra Leone	32	142	52.3	+0.6
Liberia	33	143	52.2	-0.5
Guinea-Bissau	34	145	51.8	-0.2
Malawi	35	146	51.8	-3.0
Ethiopia	36	148	51.5	0.0
Lesotho	37	152	50.6	+1.0
Angola	38	156	48.9	+1.0
Democratic Republic of Congo	39	163	46.4	+1.4
Chad	40	164	46.3	+0.4
Central African Republic	41	168	45.2	-0.7
Equatorial Guinea	42	170	43.7	+3.3
Republic of Congo	43	172	42.8	+0.1
Eritrea	44	173	42.7	+3.8
Zimbabwe	45	175	38.2	+0.6
South Sudan	N/A	N/A	N/A	N/A
Sudan	N/A	N/A	N/A	N/A

*Source:* Index of Economic Freedom (2016).

Published by the World Bank, the *Ease of Doing Business Report* (<http://www.doingbusiness.org>) describes the extent to which the external environment of a country facilitates or impedes the conduct of economic transactions. The World Bank collects data on about 189 countries. Like the

Index of Economic Freedom, the Doing Business Report uses 10 criteria along which the different countries are ranked. These criteria include (1) starting a business, (2) dealing with construction permits, (3) getting a permit, (4) registering property, (5) getting credit, (6) protecting investors, (7) paying taxes, (8) trading across borders, (9) enforcing contracts, and (10) resolving insolvency. The recent rankings published in 2016 are displayed in Table 2.4. Table 2.4 includes only the rankings of sub-Saharan African countries along with their distance to frontier (DTF) score. A high DTF score indicates that the country is performing well, whereas a low score indicates otherwise. Only one SSA country, Mauritius, is ranked among the top 50 countries in the world. This indicates that despite promising efforts, doing business in SSA countries is still a challenge.

**Table 2.4** Ranking and scores of sub-Saharan African countries on ease of doing business

<i>Economy</i>	<i>SSA rank</i>	<i>World rank</i>	<i>DTF score</i>
Mauritius	1	32	75.05
Rwanda	2	62	68.12
Botswana	3	72	64.98
South Africa	4	73	64.89
Seychelles	5	95	61.05
Zambia	6	97	60.50
Namibia	7	101	60.17
Swaziland	8	105	59.10
Kenya	9	108	58.24
Ghana	10	114	57.69
Lesotho	11	114	57.69
Uganda	12	122	56.64
Cape Verde	13	126	55.54
Mozambique	14	133	53.98
Tanzania	15	139	51.62
Malawi	16	141	51.03
Ivory Coast	17	142	50.93
Burkina Faso	18	143	50.81
Mali	19	143	50.81
Ethiopia	20	146	49.73
Sierra Leone	21	147	49.69
Togo	22	150	49.03

(continued)

**Table 2.4** (continued)

<i>Economy</i>	<i>SSA rank</i>	<i>World rank</i>	<i>DTF score</i>
The Gambia	23	151	48.99
Burundi	24	152	48.82
Senegal	25	153	48.57
Comoros	26	154	48.22
Zimbabwe	27	155	48.17
Benin	28	158	47.15
Sudan	29	159	46.97
Niger	30	160	46.37
Gabon	31	162	45.99
Madagascar	32	164	45.68
Guinea	33	165	45.54
Sao Tome & Principe	34	166	45.50
Nigeria	35	169	44.69
Djibouti	36	171	44.25
Cameroon	37	172	44.11
Republic of Congo	38	176	41.88
Guinea-Bissau	39	178	40.56
Liberia	40	179	40.19
Equatorial Guinea	41	180	40.03
Angola	42	181	39.64
Chad	43	183	38.22
Democratic Republic of Congo	44	184	38.14
Central African Republic	45	185	36.26
South Sudan	46	187	34.78
Eritrea	47	189	27.61

*Source:* Adapted from World Bank (2016)

### *The Social Environment*

The social and cultural environment is dominated by social values, including the extended family, respect for elders, traditions, and religiosity. Although this is true for most SSA, there is also evidence that younger generations are straying away from these traditional values. In this regard, young Africans tend to espouse the values that characterize their peers in the developed world. Entrepreneurship scholars contend that entrepreneurs are shaped by contextual influences. Specifically, they argue that social influences have a strong effect on entrepreneurial behavior. Factors, such as proximate peers, social networks, and family background, influence the likelihood of engaging in entrepreneurial



activities (Kacperczyk 2013). On the cultural dimensions described by Hofstede (1991, 2001), SSA countries can be considered as collectivistic, high on power distance, high on uncertainty avoidance, and high on femininity. In addition, in SSA, time is elastic, and people tend to have a short-term orientation compared to a long-term orientation. Even formal business meetings do not always start on time. Time is not perceived as a commodity that must be quantified and preciously managed.

Collectivism requires that people extend a helping hand to those who are in need. It is a value that most Africans share and that they consider important and the key to being human. In addition to the social cultural aspect of business practices, it is also important to consider the technological environment of SSA.

### *The Technological Environment*

The technological environment in SSA is characterized by a paradoxical situation. In most countries, physical infrastructures are limited so much so that it is difficult to travel easily from one location to another. As mentioned earlier, these limitations can increase the distribution costs of products. Another deficiency that is prevalent in most SSA countries is power outage. From South Africa to Nigeria, power distribution is a challenge and power outage is a common occurrence. For example, in a country, such as Ghana, most businesses are compelled to operate their own power generators because the national one is unreliable. This also adds to the costs of doing business. However, one area that seems doing relatively well, is the penetration of the cellular phone and the Internet. In urban areas, there are Internet kiosks that provide services. In most areas, even in remote rural areas, people have now access to the cellular phone. An improvement on the use of wireless technology is mobile banking. Mobile banking is now currently used in most SSA countries, allowing the easy transfer of money.

## 3 THE PROSPECT FOR ENTREPRENEURSHIP

There are multiple areas for business opportunities in sub-Saharan Africa including (1) retailing, (2) telecommunications, (3) banking, (4) infrastructure-related industries, (5) resource-related businesses, (6) healthcare, (7) education, and (8) the agricultural value chain

(MGI 2010; Chironga et al. 2011). However, to take advantage of these opportunities, there is a need to create an environment that is conducive to entrepreneurial activities. Studies and evidence suggest that doing business in SSA countries is a challenging endeavor. For instance, the recent publication of the World Bank, *Ease of Doing Business* (2016) indicates that there is no sub-Saharan African country among the top 10, 20, or 30. The only country that ranks among the top 50 is Mauritius (32nd). This implies that the macroeconomic environment in most sub-Saharan African countries presents a challenge for creating businesses in this region. In addition, there are structural factors that impede entrepreneurial activities. Such factors range from unfriendly government laws and regulations to corruption. Despite these challenges, it is important to create a general cadre for entrepreneurship to flourish in sub-Saharan Africa.

Having presented a general overview of SSA, I now turn to the discussion of the development of entrepreneurial ecosystems. As I indicated in the introduction, many nations around the world are recognizing entrepreneurship as an engine of economic development and growth. Therefore, entrepreneurship is now becoming part of the development equation. Indeed, “associating entrepreneurship with innovation, many nations, regions, states, and universities have adopted policies to stimulate innovation by entrepreneurial firms, in the hope of facilitating economic growth” (Autio et al. 2014, p. 1097). I develop a quintuple helix model to emphasize the importance of developing entrepreneurial ecosystems in sub-Saharan Africa. This model is discussed in the following chapter.

## The Need for Entrepreneurial Ecosystems in Sub-Saharan Africa

**Abstract** This chapter presents and discusses the Quintuple Helix Model of entrepreneurial ecosystems in sub-Saharan Africa. Before presenting the model, the chapter defines the concepts of ecosystem and entrepreneurial ecosystems. It also discusses the measurement of the effectiveness of an entrepreneurial ecosystem. Finally, the chapter presents the five pillars of the Quintuple Helix Model (government, institutions of higher education, private sector, citizenry, and international organizations). The chapter concludes with a focus on the interplay among these five pillars.

**Keywords** Entrepreneurial community · Entrepreneurial ecosystems · Entrepreneurial ecosystem mapping · Entrepreneurial ecosystem effectiveness · Quintuple helix model

This chapter presents and discusses the quintuple helix model of entrepreneurial ecosystems in sub-Saharan Africa. It is divided into three main sections. The first section defines the concepts of ecosystem and entrepreneurial ecosystems. The second section analyzes the measurement of the effectiveness of an entrepreneurial ecosystem, and the third section discusses the Quintuple Helix Model of entrepreneurial ecosystem development in sub-Saharan Africa.

## 1 NATURE OF ENTREPRENEURIAL ECOSYSTEMS

### *Defining an Ecosystem*

The term “ecosystem” was first coined by Arthur Tansley in 1935, who referred to it as a biotic community or assemblage and its associated physical environment in a specific place. Tansley’s argument is that we must consider the external environment in which organisms live instead of the organisms only. As he put it, “though the organisms may claim our primary interest, when we are trying to think fundamentally we cannot separate them from their special environment with which they form one physical system” (Tansley 1935, p. 299). Other biologists and ecologists have further studied the concept of ecosystem and adopted the earlier definition of an ecosystem as a community of living organisms interacting as a system (plants, animals, and microbes) in conjunction with the non-living components of their environment (Molles 1999; Chapin et al. 2002; Smith and Smith 2012). Central to the concept of ecosystem is the *interaction* among its components.

“An ecosystem can be of any size so long as organism, physical environment, and interactions can exist within it” (Pickett and Cadenasso 2002, p. 2). Ecosystems are also dynamic and constantly changing. In using the concept of ecosystem, biologists look not only at the impact that environmental factors such as soil and water have on organisms, but also at the impact that these organisms have on one another and their environment, thereby emphasizing the role of reciprocity and constant interaction. Several organizational scholars have used this conceptualization of an ecosystem to focus on the interplay between organizations and their environments (Iansiti and Levien 2004; Teece 2007; Bloom and Dess 2008; Isenberg 2010b; Zarah and Nambisan 2011, 2012).

For example, Teece (2007) uses the concept of ecosystem to describe “the community of organizations, institutions, and individuals that impact the enterprise and the enterprise’s customers and suppliers” (p. 1325). Although relatively new in management and organizational sciences, the concept of ecosystem is gaining traction (Iansiti and Levien 2004; Teece 2007; Bloom and Dees 2008; Isenberg 2010b; Zarah and Nambisan 2011, 2012). An ecosystems framework incorporates the broader environment within which organizations operate (Bloom and Dees 2008, p. 48). Like individual species in a biological ecosystem, each member of a business ecosystem ultimately shares the fate of the network as a whole,

regardless of that member's apparent strength (Iansiti and Levien 2004, p. 1). In the following lines, I explain the concept of entrepreneurial ecosystems and discuss the importance of using this framework to explore the creation of entrepreneurial ecosystems in sub-Saharan Africa.

### *Defining Entrepreneurial Ecosystems*

Entrepreneurship scholars have developed the concept of *entrepreneurial ecosystem* to account for the set of elements, individuals, organizations, or institutions outside the individual entrepreneur, which are conducive to, or inhibitive of, the choice of a person to become an entrepreneur, or the probability of his or her success following launch (Isenberg 2010b). Using this framework in entrepreneurship research is important because entrepreneurship is embedded in an institutional environment. Although entrepreneurship actions are ultimately undertaken by individuals, these individuals are always “embedded in a given institutional context, which regulates who becomes an entrepreneur, what the ambition level of the entrepreneurial effort is, and what the consequences of entrepreneurial actions are” (Szerb et al. 2015).

The types of entrepreneurs and the businesses they create are influenced by both the formal and informal institutional environment in which they operate (Baumol 1990, 1993; Bowen and De Clercq 2008; Boettke and Coyne 2009; Aidis et al. 2012; Estrin et al. 2013). Estrin et al. (2013) identified three aspects of institutions (level of corruption, strength of property, and scale of government activities) and studied their impact on entrepreneurial activity. They found that higher levels of corruption, weaker property rights and larger governments, significantly constrained entrepreneurial employment growth opportunities. However, “local social networks mitigate the effects of some of these institutional deficiencies” (Estrin et al. 2013, p. 565).

The work of Williamson (2000) on institutional environment illustrates the role of context in entrepreneurial activity. Williamson (2000) argues that the types of institutions, informal, formal, governance, and resource allocation influence entrepreneurship (see Table 3.1). Informal institutions include customs, traditions, and religious norms. These informal institutions are deeply ingrained and hard to change. In addition to these informal institutions, there are formal ones that represent the rules of the game and include formal contracts and property rights. Formal institutions are important in creating a business environment that is

**Table 3.1** Williamson's categorization of entrepreneurship

<i>Types of institutions</i>	<i>Characteristics</i>
Informal	Customs, traditions, religious norms. They are deeply rooted and slow to change.
Formal	Represent rules of the game. Include formal contracts and property rights.
Governance	Shapes interactions and transactions between participants. Integrates private governance structures.
Resource allocation	Includes occupational choices, focuses on specific industries.

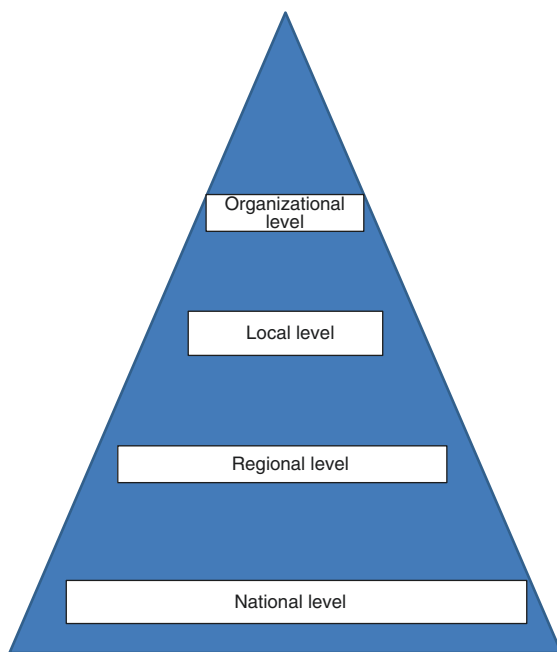
conducive to fairness as long as everyone respects the rules of the game. The third element, governance, shapes interactions and transactions between participants to the economic system. It also integrates private governance structures. For example, it determines how a firm ought to be internally structured. Finally, the element, resource allocation, includes occupational choice and influences the decisions on whether to focus on particular industries. According to Williamson (2000), all these four elements of the institutional environment influence economic activity.

Understanding the institutional environment is particularly important because in building an entrepreneurial ecosystem, it is important to think locally and act locally (Motoyama et al. 2014). The reason is that each environment is unique and what works in one may not work in the other. For example, Silicon Valley in the United States cannot be replicated elsewhere. It is an environment that is unique in itself. Although lessons can be learned from the experience of Silicon Valley, it would be unrealistic for a region or nation to attempt to recreate Silicon Valley. This point led Isenberg (2010a) to warn governments intended to create entrepreneurial ecosystems in their nations or regions to avoid emulating Silicon Valley.

Entrepreneurial ecosystems represent a diverse set of interdependent actors within a geographic region that influence the formation and eventual trajectory of the entire group of actors, potentially the economy as a whole (Spilling 1996; Iansiti and Levien 2004). Spilling (1996, p. 91) notes that “economic development is a result of complex entrepreneurial processes. Many things are linked together; many ventures develop in close interaction with each other and with environmental factors. Furthermore, the development of communities requires more than just the development of a number of businesses; it is also about infrastructure, public institutions, and about firms that can match together in advanced production systems.”

### *Levels of Entrepreneurial Ecosystems*

In the context of sub-Saharan Africa, I identify four levels at which entrepreneurial ecosystems can be developed: (1) national, (2) regional, (3) local, and (4) organizational (Fig. 3.1). At the national level, the entrepreneurial ecosystem can be the result of a national policy, which gives preference for developing entrepreneurs. Within the same country, entrepreneurial ecosystems can be developed at the regional level or the local level. At the regional level, entrepreneurial ecosystems can be championed by elected officials or regional universities. At the local level, entrepreneurial systems can be started by local elected officials. Mayors and city council members can initiate or take a leading role in establishing such localized entrepreneurial ecosystems. Entrepreneurial ecosystems can also occur at the level of an organization or championed by an organization. For instance, a university can develop an entrepreneurial ecosystem by integrating and infusing entrepreneurship in



**Fig. 3.1** Types of entrepreneurial ecosystems

several disciplines across campus. It can also do so by reaching out to the community in providing consulting services to entrepreneurs or creating business incubators.

Similarly, a private company can take the lead in establishing an entrepreneurial ecosystem. [Figure 3.1](#) illustrates what I called the pyramid of entrepreneurial ecosystem development in sub-Saharan Africa. This pyramid includes the four levels I identified earlier and indicates a hierarchy of entrepreneurial ecosystems. Local-level entrepreneurial ecosystems have a smaller context, whereas national-level entrepreneurial ecosystems have a larger context. However, one must acknowledge that this hierarchy of ecosystems embodies the concept of fractals, that is, at each level, the ecosystem reflects the same key success factors (Greene et al. [2010](#)). I will discuss the key success factors of an entrepreneurial ecosystem later in this chapter.

### *Pillars of Entrepreneurial Ecosystems in Sub-Saharan Africa*

I identify five major pillars of the entrepreneurial ecosystem at the national level: (1) government, (2) institutions of higher education, (3) the private sector, (4) the citizens themselves, and (5) international organizations ([Fig. 3.2](#)). Governments can consider entrepreneurship as an engine of economic growth and development and incorporate the emergence of a class of entrepreneurs in their national policies. They can do so by championing national policies that encourage the creation of new ventures. Likewise, institutions of higher education can consider entrepreneurship education and research as essential to their mission. To remain relevant, sub-Saharan African universities must consider themselves not only as entrepreneurial organizations but also as institutions that must have a positive impact on their environment.

The private sector may also play a vital role in the process. The private sector is loosely defined here and includes for-profit corporations, nongovernmental organizations, banks, venture capital firms, angel investor networks, individual investors, and the media. Citizens themselves must play a pivotal role in the entrepreneurial process in SSA. Indeed, for entrepreneurship to prosper in SSA, citizens should consider themselves as part of the problem and the solution. Change in attitudes and behavior must occur for this to happen. Finally, international organizations that intend to help SSA must play a supportive role. [Table 3.2](#) illustrates the five pillars of the entrepreneurial ecosystems and sketches the role each would play.





**Fig. 3.2** The quintuple helix model of entrepreneurial ecosystems in sub-Saharan Africa

An entrepreneurial ecosystem is a system of interconnected stakeholders. It intends to eliminate silos and encourage collaboration among the various stakeholders. “Like any individual species in a biological ecosystem, each member of an entrepreneurial ecosystem ultimately shares the fate of the network as a whole and is influenced by its comparative strength and weakness” (Fuerlinger et al. 2015, p. 5). Therefore, these five pillars must work in unison to produce an effective entrepreneurial ecosystem. Although individually each may lead to entrepreneurship, it is difficult to sustain such an endeavor without collaboration among the different components.

### *Mapping an Entrepreneurial Ecosystem*

When taking the initiative to develop an entrepreneurial ecosystem, a useful task to perform is to map it. An ecosystem map is a diagram that represents the different elements of an entrepreneurial ecosystem and identified the different relationships among them. It is formally defined as a graph that shows the participants in the ecosystem and the connections among them (Auerswald 2015). Entrepreneurial ecosystem mapping refers to the process of illustrating the configurations among the

**Table 3.2** Pillars of entrepreneurial ecosystems in sub-Saharan Africa

<i>Pillars</i>	<i>Elements</i>	<i>Potential roles</i>
Government	Government ministries Elected officials Public media	Laws/regulations Taxes Friendly business policies Financial support
Institutions of higher education	Universities Colleges Postsecondary vocational institutions	Entrepreneurship education Entrepreneurship research Creation of incubators Technology commercialization
Private sector	For-profit corporations Nongovernment organizations Banks Venture capital firms Angel investor networks Individual investors	Seed money for startups Suppliers to startups Clients to startups
Citizens	Public Entrepreneurs Would-be entrepreneurs	Change in societal expectations Change in perceptions of entrepreneurs Change in attitudes toward risk, uncertainty Change in attitude toward failure
International organizations	Development agencies Nongovernment organizations Governments For-profit organizations	Provide support to startups Provide training programs

entrepreneurial ecosystem elements. It consists of indicating the links among these elements. Ecosystem maps can represent valuable tools in developing strategies to engage the different participants (Auerswald 2015). I have identified five key pillars of the entrepreneurial ecosystem in SSA. Of course, mapping the entrepreneurial ecosystem can be refined depending on the specificities of each context. The mapping could also depend on whether the ecosystem is national, regional, local, or organizational. Because ecosystems are large and complex, building one and mapping it can be a tricky task (Bloom and Dees 2008). Figure 3.3 represents the mapping of the five pillars of the entrepreneurial ecosystem described in the context of sub-Saharan Africa. The double arrows indicate interactions

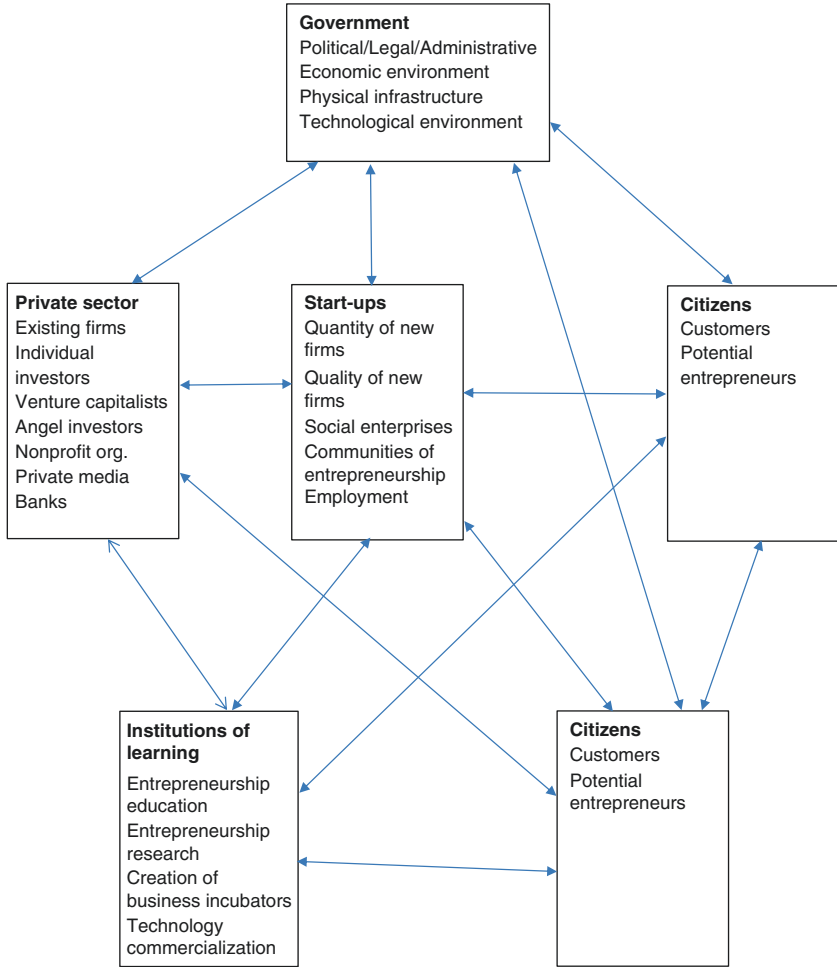


Fig. 3.3 Entrepreneurial ecosystem map

among the pillars of the system. Collaboration and interaction are important in ensuring the success of an entrepreneurial ecosystem. Indeed, business ecosystem effectiveness is dependent on the strength of each individual component and, thus, a weakness in one component decreases the performance of the entire ecosystem (Iansiti and Levien 2004).

## 2 MEASURING THE EFFECTIVENESS OF AN ENTREPRENEURIAL ECOSYSTEM

Before discussing the measuring of the effectiveness of an entrepreneurial ecosystem, it is important to define the concept of effectiveness. In management, an organization is effective when it accomplishes its intended goals. Thus, effectiveness of an entrepreneurial ecosystem could be defined as the extent to which the ecosystem accomplishes its intended goals. Measuring the effectiveness of an entrepreneurial ecosystem depends on the goals pursued by those who created it. In this regard, the indicators that are tracked depend on what one intends to accomplish (Strangler and Bell-Masterson 2015). Some indicators may focus on the number of startups, types of startups, or employment created, whereas others may focus on research and development (R & D), patents, or high-growth startups, or “exit” when the ventures go public (Strangler and Bell-Masterson 2015).

### *Indicators of the Effectiveness of an Entrepreneurial Ecosystem*

Measuring the effectiveness of an entrepreneurial ecosystem is a difficult task. However, some authors have identified indicators that could help determine whether an entrepreneurial ecosystem is effective or not. For example, Strangler and Bell-Masterson (2015) identified four criteria that could be used to measure the vibrancy of an entrepreneurial ecosystem. These indicators include (1) density, (2) fluidity, (3) connectivity, and (4) diversity. According to Strangler and Bell-Masterson (2015), the density of the entrepreneurial ecosystem can be measured by the number of new and young firms in a defined geographic area per 1,000 people, the share of employment in new and young firms, and high-tech or other sectoral startup density. An entrepreneurial ecosystem must also be able to facilitate the emergence of certain types of firms that can be considered as “success stories” that can be benchmarked to others. For example, Isenberg (2010b) suggests the capacity for governments willing to champion the creation of entrepreneurial ecosystems to have some winners on the board and celebrate their success. Doing so can help generate credibility and enthusiasm in the ecosystem.

Fluidity of the entrepreneurial ecosystem is measured by the population flux (number of people coming or living the geographic area), labor market reallocation, and number of high-growth firms. Indicators of

connectivity include connections between programs and resources, the spinoff rate, and the existence of dealmaker networks. Finally, diversity of the entrepreneurial ecosystem is measured by the multiple economic specializations, the immigrant share of population, and economic mobility. With some refinement, these indicators could apply in the context of sub-Saharan Africa to assess the effectiveness of entrepreneurial ecosystems.

Although Strangler and Bell-Masterson (2015) identified four indicators, other authors have identified fewer measures of ecosystem effectiveness. However, one must acknowledge some similarities between these measures. For example, Iansiti and Levien (2004) identified three criteria, productivity, robustness, and niche creation, on which to measure business ecosystems. The productivity of the business ecosystem refers to its “ability to consistently transform technology and other raw materials of innovation into lower costs and new products” (Iansiti and Levien 2004, p. 3). They consider return on invested capital as a measure of productivity. Robustness of the system refers to the extent to which the system is capable of surviving disruptions, such as technological change. Finally, niche creation refers to the “ecosystem’s capacity to increase meaningful diversity through the creation of valuable functions and niches” (Iansiti and Levien 2004, p. 4).

These elements are not totally different from those identified by Strangler and Bell-Masterson (2015). As a result, they could be applied to the measurement of the effectiveness of entrepreneurial ecosystems in sub-Saharan Africa. For example, how do we know that an entrepreneurial ecosystem is effective in a given country, region, or city? What criteria can be used to measure its effectiveness? An entrepreneurial ecosystem’s effectiveness could be measured by using (1) the number of new firms created, (2) the quality of firms created, (3) the number of employment generated by new firms involved in the entrepreneurial ecosystem, (4) the fluidity of the ecosystem (movement in and out of the geographic region), (5) the connectivity, or (6) the diversity within the system as indicators of success.

In addition to the three elements identified by Iansiti and Levien (2004) and the four indicators of Strangler and Bell-Masterson (2015), I added two others: *self-correction* and *sustainability*. Self-correction refers to the entrepreneurial ecosystem’s capacity to learn and make corrections and adjustments. For instance, elements of the entrepreneurial ecosystem can learn from one another. This learning process can help each participant contribute better to the entire ecosystem. Each participant can also

learn from its experiences. For example, an institution of higher education can decide to introduce new programs in entrepreneurship as a result of its self-assessment. Likewise, governments can change their policies as a result of changes in the economy or as other national priorities arise.

### *Ensuring the Sustainability of an Entrepreneurial Ecosystem*

The entrepreneurial ecosystem should be sustainable overtime. That is, it must last in the face of changes—technological, social, or political. This is particularly important because in most SSA countries, changes in governments tend to often lead to changes in priorities. Moreover, new governments tend to undo what was done by previous ones. This could lead to a possible dismantling of a new government reducing or even canceling its participation to an ecosystem started by its predecessor.

Sustainability refers to the ability of the ecosystem to last over an extended period of time. Although this criterion is closely related to the robustness factor identified by Iansiti and Levien (2004), it differs from it in the sense that it refers to the extent to which the entrepreneurial ecosystem can be self-perpetuating. To do so, each component must be able to sustain itself and play a critical part. For instance, in the context of sub-Saharan Africa, the combination of the five pillars will determine whether the entrepreneurial ecosystem is effective or not. Indeed, “for an ecosystem to function properly, each domain in it that is critical to the delivery of a product or service should be healthy; weakness in any domain can undermine the performance of the whole” (Iansiti and Levien 2004, p. 2).

It is obvious that the five pillars of the entrepreneurial ecosystem represent mini-ecosystems themselves. Take the example of a university, which can be described as an ecosystem because it comprises several colleges and departments. It is, therefore, up to those responsible of fostering entrepreneurship education and research in a university setting to determine whether this process is successful or not. It is also important to assess the extent to which the university is playing a catalyst role in the entrepreneurial ecosystem. Likewise, the private sector may assess whether its role in the development and sustainability of the entrepreneurial ecosystem is effective. A characteristic of entrepreneurial ecosystems is their dynamic nature. “A system is not fixed but evolutionary, growing and evolving according to new needs and circumstances” (Hechavarria and Ingram 2014, p. 2). Therefore, entrepreneurial ecosystems are complex phenomena. As Goggle (2014, p. 55) quoted the blog of Alastair Brett,

“entrepreneurial ecosystems are complex, adaptive, emergent systems where the same inputs do not always produce the same outputs, where the behavior of a system is not the aggregation of individual parts, where disruptions and emergence happen, and where effects occur in far-from equilibrium states.”

### *Creating an Entrepreneurial Community*

One may argue that one of the goals of an entrepreneurial ecosystem is to create a community of entrepreneurs. The entrepreneurial ecosystem must create conditions that facilitate interactions between entrepreneurs themselves and between entrepreneurs and other supporting individuals or entities. It should also allow would-be entrepreneurs to learn from those who have already taken the plunge to draw lessons from their experiences. In this regard, activities geared toward networking and the sharing of entrepreneurial experiences are important to undertake. For example, it has been demonstrated that word-of-mouth plays a dominant role at the early stage of creating and developing a startup community (Konczal and Motoyama 2013). An interesting case in point is the creation of *One Million Cups* (1 MC) in Kansas City, in the United States to allow entrepreneurs to interact with one another. One Million Cups drew from Steven Johnson’s (2010) book, *Where Do Good Ideas Come From?*

In his book, Johnson argues that coffee and coffeehouses incubated the ideas behind the Enlightenment. “Each week at 1MC, two startups give six-minute educational presentations about their enterprise to an open-invitation audience usually comprising entrepreneurs, people aspiring to be entrepreneurs, mentors, advisors, and other supporters” (Konczal and Motoyama 2013, p. 3). The meetings are not meant to pitch venture ideas to prospective investors. Rather, entrepreneurs are provided the opportunity to articulate to a group of their peers the process that enable them to identify and evaluate opportunities and their ability to bootstrap, marshal resources, and convince others to buy in (Konczal and Motoyama 2013).

Although social media has broadened the horizon and the potential for entrepreneurs to network with others who are in distant geographic locations, research has found that entrepreneurs still prefer face-to-face interactions with one another (Konczal and Motoyama 2013). It is therefore important that face-to-face interactions remain an essential component of developing an entrepreneurial community. But who should lead an

entrepreneurial community? Feld (2012) contends that entrepreneurial communities should be created by entrepreneurs themselves. In making such a suggestion, Feld considers government officials, university professors, and other people who support entrepreneurship, as feeders and not leaders of the entrepreneurial community. As a result, he concludes that feeders should not lead entrepreneurial communities. However, this distinction between feeders and leaders is not a strict rule for creating and developing an entrepreneurial community (Konczal and Motoyama 2013).

### 3 THE QUINTUPLE HELIX MODEL OF ENTREPRENEURIAL ECOSYSTEMS

As indicated earlier, I identified five pillars of building entrepreneurial ecosystems in SSA. I called these five pillars the Quintuple Helix Model of entrepreneurial ecosystems in sub-Saharan Africa. This conceptualization is an expansion of Etzkowitz's notion of the Triple Helix Model of innovation (Etzkowitz 1998; Etzkowitz and Leydesdorff 1995, 2000; Etzkowitz et al. 2000) that focuses on the interaction among government, industry, and universities to foster innovation in a nation. Etzkowitz and collaborators developed the Triple Helix Model to explain the interaction between government, university, and industry in spurring innovation ecosystems. The Triple Helix Model emphasizes the importance of universities in innovation and knowledge creation. The Quintuple Helix Model developed here builds on the Triple Helix Model, but adds two new dimensions, civil society and international organizations, to explicate the creation of entrepreneurial ecosystems in sub-Saharan Africa.

The fourth helix, civil society, is needed because entrepreneurship cannot take root in a community if it is not ingrained in the culture of its members. Hence, people are an essential component of any entrepreneurial activity. The fifth helix, international organizations, is added because international cooperation plays an important role in the economic development of sub-Saharan Africa. In fact, with globalization and the spread of information and communication technologies, the international dimension is becoming relevant. Efforts to spur economic development and alleviate poverty in SSA have been undertaken by development agencies, the international private sector, nongovernmental organizations, foundations, and universities. Thus, a discussion on the creation of entrepreneurial ecosystems in SSA must integrate this component.



All five helices influence one another and play a pivotal role in the development of entrepreneurial ecosystems in sub-Saharan Africa. A key assumption of the model is constant interaction and mutual information among the five helices.

An interesting issue to address in discussing the entrepreneurial ecosystem is the following. Who must take the lead in building the entrepreneurial ecosystem in each country, the government, institutions of higher education, the private sector, international organizations, the public, or the entrepreneurs themselves? There is no easy answer to this question. The answer depends on the conditions of each country. Kelly (2012) suggests that entrepreneurs take the lead in building entrepreneurial ecosystems in communities. This could be true in communities or countries where there is a critical mass of successful entrepreneurs. But it could also be true that the government could take the lead when there are no other strong actors. Government can spearhead efforts to transform sub-Saharan African countries into entrepreneurial societies.

An entrepreneurial ecosystem can be part of an industrial policy at the national level. In this regard, national governments may take the lead to foster entrepreneurial activity. They can do so by providing support and incentives to nascent entrepreneurs. Particularly, they can provide tax incentives not only during the startup stages of the new ventures but also in providing them favorable conditions when they import equipment and materials from foreign countries. Very often, tariffs imposed on imported goods and equipment represent a deterrent for entrepreneurs. For example, in the context of SSA, governments can foster entrepreneurship by enacting laws and regulations that facilitate the creation of new businesses. They can also act as “venture capitalists” by providing financial support to universities and business incubators. Governments can also provide an impetus to universities to emphasize the importance of entrepreneurship education and research. Because most universities in SSA (at least the largest ones) are public and funded by their governments, they often follow policies and regulations enacted by these governments.

As in Etzkowitz’s Triple Helix Model, universities also play a key role in fostering entrepreneurial ecosystems in the Quintuple Helix Model because they are centers of excellence and should become relevant in transforming themselves into agents of social change and innovation. They can do so by transforming themselves into entrepreneurial universities and by emphasizing entrepreneurship education and research, by creating business

incubators, facilitating knowledge transfer, and cooperating with governments, the private sector, and international organizations. For example, in establishing its regional centers of Youth Leadership and Entrepreneurship in sub-Saharan Africa, the Young African Leaders Initiative (YALI, which is discussed in detail in [Chapter 8](#)) partnered with the Ghana Institute of Management and Public Administration (an institution of higher education) in Ghana and the *Centre Africain d'Etudes Supérieures en Gestion* (CESAG) in Senegal in West Africa. For its regional center in East Africa, it partnered with Kenyatta University in Kenya and with the University of Pretoria in South Africa for its Southern African Center.

Regardless of who should take the lead in building entrepreneurial ecosystems in sub-Saharan Africa, one thing is certain. This endeavor should be in the hands of Africans themselves. After all, you can help someone accomplish his/her dream but you cannot dream on his/her behalf. Within a given country, entrepreneurial ecosystems can emerge at the regional level. For this to occur, regional elected officials and policy makers must engage in initiatives to spur entrepreneurial activity. It is also important that national and/or regional institutions of higher education play a critical role in this endeavor. They can do so by acting as agents of regional development. Developing regional entrepreneurial ecosystems could be an opportunity to attract young people in a particular region and a powerful marketing tool. Finally, local entrepreneurial ecosystems could be created at the city level. Local elected officials, institutions of higher education, or individuals could play a role in doing so. For example, a university in a city could engage the community as part of its outreach activities. The old paradigm of universities as ivory towers is no longer acceptable nor desirable if SSA countries intend to consider entrepreneurship as an engine of economic growth and wealth creation. The remaining part of the book analyzes the potential role that each of the five helices of the Quintuple Helix Model—government, institutions of higher education, private sector, civil society, and international organizations—could play in fostering the development and vibrancy of entrepreneurial ecosystems in sub-Saharan Africa.

## Role of Government

**Abstract** This chapter focuses on the role of government in the development of entrepreneurial ecosystems in sub-Saharan Africa. Governments can positively contribute to the creation of entrepreneurial ecosystems by providing financial support to promote entrepreneurship education and research. Governments can also enact laws and regulations that create a favorable climate for startups. In addition, governments can facilitate entrepreneurship by fighting corruptions and red tapes and using public media to create awareness of entrepreneurial success.

**Keywords** Corruption · Entrepreneurship infrastructure · Government · Reverse innovation

The role of government in creating an environment conducive to entrepreneurship and innovation is well documented (Isenberg 2010a; Fuerlinger et al. 2015). For example, Murphy (2010, p. 2) notes that “governments facilitate (or obstruct) entrepreneurship by setting policies and regulations that directly impact an entrepreneur’s ability to set up a firm, attract capital, and hire, retain or fire employees.” Government is important in creating an entrepreneurial environment because it sets public policy that shapes entrepreneurial outcomes (Hechavarria and Ingram 2014). Isenberg (2010a), a professor of entrepreneurship and head of the entrepreneurial ecosystem project at Babson College in the United States,

identified nine principles that governments could follow to create entrepreneurial ecosystems. These principles are (1) stop emulating Silicon Valley, (2) shape the ecosystem around local conditions, (3) engage the private sector from the start, (4) favor high potential ventures, (5) get a big win on the board, (6) tackle cultural change head-on, (7) stress the roots, (8) don't overengineer clusters, and (9) reform legal, bureaucratic, and regulatory frameworks. In proposing these guidelines, Isenberg explicitly recognizes the critical role that governments can play in the creation of entrepreneurial ecosystems.

Isenberg's guidelines could provide insights to sub-Saharan African governments that intend to champion the development of entrepreneurial ecosystems in their countries. The first step for such governments is to undertake legal and bureaucratic reforms to create friendly business environments. Currently, the business climate in most sub-Saharan African countries is cumbersome and relatively hostile to business start-ups. This is evidenced in the rankings on the Ease of Doing Business Index published by the World Bank (2016). As indicated in [Chapter 2](#), most sub-Saharan African countries are poorly ranked on this index, indicating that the business environment in these countries needs improvement.

Recently, however, efforts have been made by several governments in SSA to improve their business environments. Countries such as Rwanda, Ghana, and Nigeria have taken dramatic steps to create business-friendly environments. Such environments could positively contribute to the emergence of entrepreneurial ecosystems. Governments attempting to create entrepreneurial ecosystems must engage the private sector, fund entrepreneurial education, build a regulatory framework, and tackle cultural changes, and improve physical infrastructure. During my Fulbright scholarship in Ghana in spring and summer 2014, I had the opportunity to discuss with government officials managing the National Student Service (NSS) program, which requires college graduates to perform a one-year national service by working as nonpaid employees in a government or private organization.

It is only at the end of the service that a college graduate can be "free" to seek gainful employment. One caveat, however, is that not all students who participate in the NSS will get a full-time job after their national service. Therefore, my suggestion to the officials of this service was to incorporate a dimension on entrepreneurship education to this program. Doing so would allow students who have business ideas to receive

financial support to start their own ventures. This proposal led the Center for Entrepreneurship Education, Research, and Training (CEERT) at the Methodist University College Ghana, where I was posted as a Fulbright scholar to conduct a workshop on entrepreneurship for a group of 100 students participating in the NSS. Since then, the CEERT has been conducting entrepreneurship workshops for a selected number of students participating in the National Student Service.

Governments can affect the type of entrepreneurship that people pursue in a particular country. To effectively influence productive entrepreneurship, governments must understand that development is an ongoing process of social change, and one subject to regular disruption that involves institutions, culture, and technology (Auerswald 2015, p. 9). Therefore, policymakers should listen to entrepreneurs and not devise policies without their input. Failure to do so could result in blatant missteps. According to Auerswald (2015), rather than develop policies abstractly intended to correct market failures, policymakers should engage local entrepreneurs in person to develop and implement practically focused policies intended to encourage dynamism, increase diversity, and stimulate metabolic activity, such as idea exploration, product development, and increased rate of flow (p. 1). In the following lines, I explore the areas in which SSA governments can intervene to foster the creation of entrepreneurial ecosystems. I divide this discussion into two major areas: (1) creating an entrepreneurial infrastructure and (2) combatting corruption.

## I CREATING AN ENTREPRENEURSHIP INFRASTRUCTURE

### *Enacting Entrepreneurship-Friendly Regulations*

The first step for sub-Saharan African countries to create an entrepreneurial ecosystem is to reform the regulatory environment and make it entrepreneurship-friendly. There are at least two reasons for doing so. First, entrepreneurship and new business creation require a supportive environment. Second, governments in SSA have the power to alter the environment to promote entrepreneurship and innovation. They can do so by enacting laws and regulations that facilitate the creation of new businesses. They can also provide tax incentives to nascent firms and enact laws related to bankruptcy proceedings.

### *Developing and Improving Physical Infrastructure*

Entrepreneurship can only take hold in an environment where physical infrastructure, such as roads, transportation, telecommunication, electricity, and running water, is available and affordable. Sub-Saharan African countries can promote entrepreneurship by investing in the development and improvement of their physical infrastructure. One of the key issues in these countries including South Africa is power outage. Power outage is a constant occurrence in SSA even in oil-producing Nigeria. Improvements in this area can go a long way and reduce the costs of doing business. For example, existing companies tend to operate their own power generators to adjust to the deficiency of national power grid systems. Undoubtedly, this adds to the costs of doing business. Such costs are often passed on to customers in the form of high prices. This can therefore impede the efforts of nascent entrepreneurs to remain efficient and competitive.

Governments could also facilitate entrepreneurship by investing in technology. Although the Internet is making a penetration in SSA, several parts of Africa are still underserved. The existence of Internet cafes allows people to connect to the external world but they are somehow not practical for conducting business operations. Most sub-Saharan African countries do not manufacture computers and other technologies. Yet, importing these technologies is often difficult because of the heavy taxes levied. This often discourages entrepreneurs and other small business owners. Governments could reduce or even eliminate tariffs levied on technologies imported for business purpose. Although the use of wireless communications is widespread in SSA, it is still more expensive for Africans to communicate among them than to call outside the continent. For example, it is easier and less expensive to call from Accra to New York, a distance of approximately 5,124 miles (8,235 km), than to call from Accra to Abidjan (Ivory Coast), a distance of about 262.3 miles (420 km).

Another area where governments can invest is the road system. In most sub-Saharan Africa (except South Africa), most roads are not paved and this makes the distribution of goods a challenge. In business terms, distribution costs can be enormous, thereby making products very expensive for the average customer. In addition, products may not be available in certain areas while they are in abundance in other areas. For example, in the Ivory Coast, the south and southwest produce plantain that is widely available throughout the year. However, because of poor roads, the plantain cannot easily be distributed in the North of

the country. The same is true for manufactured products that cannot easily reach remote areas of the country. Poor roads also lead to delays in distribution. For example, a distance of 70 miles (112 km) can be traveled in an hour in the United States if one travels at 70 miles per hour. The same distance will take probably two or more hours in a sub-Saharan African country. This can lead to distribution costs if one factors in the costs for gas.

A vast country like the Democratic Republic of the Congo does not have a national system of roads. Thus, in this country, it is very difficult to ship goods from one province to another. To facilitate entrepreneurship, sub-Saharan African governments must be able to create national systems of roads that are regularly maintained to facilitate the movement of goods and people. They also need to promote intercountry highway systems to again facilitate the movement of goods. As an example, the highway system in the United States is instrumental in facilitating the movement of goods. Currently, there are efforts to link countries including in the Economic Community of West African States (ECOWAS) through a regional highway system. The same projects are underway in East Africa. Completion of such projects could facilitate the free and rapid movement of people and goods across regional borders.

### *Fostering Entrepreneurship Education*

The major universities in SSA are often public universities. Thus, governments can provide an impetus for entrepreneurship education by requesting that universities play a role of economic and social change agents. For entrepreneurship to take hold in SSA, universities must play a pivotal role in this process. The role of sub-Saharan African universities and colleges in fostering entrepreneurial ecosystems will be discussed in [Chapter 5](#). Governments can provide guidelines to universities and measure their contribution to economic and social development. In doing so, they can make entrepreneurship an important factor in assessing universities' social impact. Governments in SSA must create National Foundations (or Centers) for Entrepreneurship Education and Research. These institutions should work to promote entrepreneurship education at the primary, secondary, and tertiary levels. Although not quite generalized and visible, such efforts are underway in Kenya, Nigeria, and South Africa. For example, in Nigeria, the directive of the National University Commission to all universities requires that they incorporate entrepreneurship education in

their curricula, thereby indicating the federal government's support for entrepreneurship education (Alarape 2009).

These institutions can also support the professional development and training of entrepreneurship educators. This is particularly important because there is a shortage of well-qualified entrepreneurship educators in sub-Saharan Africa. For example, in a recent study conducted on entrepreneurship education in public universities in Ethiopia, Gerba (2012) found that entrepreneurship educators in Ethiopian universities do not seem suitably qualified and experienced and tend to use traditional teaching methods that are ill-suited for teaching entrepreneurship. It is well understood that teaching entrepreneurship is quite different from teaching other disciplines and requires more hands-on experience and the use of experiential teaching techniques (Sherman et al. 2008).

### *Providing Financial Support*

Governments can support the emergence and sustainability of entrepreneurial ecosystems by providing financial support to nascent entrepreneurs. They can provide such support in form of grants or seed money. For example, governments can set aside National Venture Funds that can be used to provide assistance to young promising ventures. However, financially supporting entrepreneurs must be a balancing act to the extent that giving easy money to young and unproven entrepreneurs could lead to complacency. There have been situations where governments' financial support haven't yielded the benefits expected. It is therefore important that young entrepreneurs themselves develop financial discipline and rigor in managing the financial assets of their new ventures. In addition, young entrepreneurs themselves have presented several limitations that made it difficult for them to attract funding even from the private sector. For example, Nwoye (1997) noted that young entrepreneurs in Nigeria were often unreliable and lacking reinvestment acumen, and were likely to engage in projects that were beyond their competence and skill.

Governments in sub-Saharan Africa can also promote the concept of reverse innovation (Govindarajan and Trimble 2013). Reverse innovation is innovation that happens in developing countries and finds its way in more developed ones. In the context of SSA, there is evidence that traditional societies developed technologies used to adapt to their environments. For example, some African traditional cultures, in the Democratic Republic of the Congo and in the Southwest of Ivory Coast, used to make



clothing using raffia fibers. They also used to make salt using palm tree leaves and soap using plantain skins. These “ancient” technologies have almost disappeared. However, research in remote areas where older tribesmen still live can help uncover the techniques used. Hence, entrepreneurs could search for ways of reviving such technologies and adapting them to the current environment.

Governments can spear the creation of technology parks. However, one must acknowledge that governments should not overplay their role. Doing so could backfire because it could prevent ambitious individuals and entrepreneurs from emerging. It could also lead to a bureaucratization of the process of building entrepreneurial ecosystems. To be effective, the development of entrepreneurial ecosystems must be flexible and adaptable. Hence, entrepreneurial ecosystems are dynamic systems that are constantly changing and evolving.

### *Using Public Media as a Vehicle for Promoting Entrepreneurship*

Governments can use the national media to create awareness and showcase successful entrepreneurs. Since most media in SSA countries are publicly owned, they can be a successful medium in fostering an entrepreneurial ecosystem. For example, they can celebrate successful entrepreneurs as well as run documentaries related to entrepreneurship and business creation.

However, for an entrepreneurial culture to take hold in SSA, governments must tackle a daily reality that represents a burden, that is, corruption. In the following lines, I discuss the potential impact of corruption on entrepreneurship and suggest strategies to reduce its negative effects.

## 2 FIGHTING CORRUPTION

### *Defining Corruption*

Corruption involves behavior, which goes outside the boundary of what are considered normal duties associated with a public role, or violates rules of prohibiting the exercise of certain types of private influence (Nye 1967, p. 417). It also refers to the misuse of authority for personal gain (Sherman 1980; Anand et al. 2004). The term “authority” is not limited to a formal position that one holds but the capacity to perform an act (Beugré 2010). For example, a civil servant who does not have a high

position may be responsible of issuing business licenses. He/she may use this position to demand bribes from would-be entrepreneurs to facilitate the process of obtaining business licenses.

In exploring corruption and its relationship with business practices and economic growth, Glaeser and Goldin (2006) identified three types of corruption: (1) public officials directly stealing public funds through embezzlement, (2) public officials taking bribes or other indirect means of compensation for favorably transferring government funds or providing breaks on government rules and regulations, and (3) public officials manipulating laws or rules to directly benefit their own financial interests. These three types of corruption are observed in SSA countries. For instance, there are reports of government officials stealing from state coffers to open bank accounts overseas. A current case in point is Nigeria where the government of President Muhammad Buari is trying to trace the funds embezzled by previous officials of the country. It is also obvious that in most SSA countries the second type of corruption occurs. Indeed, government officials use bribery as a means of facilitating business contracts as well as reprieve from government laws and rules. The same is true when it comes to rule of law. Very often, government officials tend to behave as if they were above the law.

All these factors contribute to a climate that is hardly conducive to the creation and maintenance of viable entrepreneurial ecosystems. Indeed, it has been recognized that corruption is a threat to SSA's development and economic growth. Table 4.1 presents the rankings of sub-Saharan African countries on the Transparency International Index published by Transparency International, a corruption watch dog. It is worth mentioning that most sub-Saharan African countries are poorly ranked on this index. Only six countries, Botswana (Score = 63), Cape Verde (Score = 55), Seychelles (Score = 55), Rwanda (Score = 54), Mauritius (Score = 53), and Namibia (Score = 53), have scores above 50 on a scale ranging from 1 to 100. This indicates that SSA has a severe corruption problem. In fact, Botswana is the only sub-Saharan African country that ranks among the least 30 corrupt countries with a rank of 28. The Anti-Corruption Summit held in London on May 12, 2016, once again put the spotlight on Africa. Before the conference, the British Prime Minister David Cameron described Nigeria as a "fantastically corrupt" country (The Economist 2016).

Corruption in SSA is not limited to the disappearance of funds from state coffers. It includes human trafficking, child mortality, poor education systems, environmental degradation, poor healthcare systems, and even

**Table 4.1** Corruption Perception Index 2015 of sub-Saharan African countries

<i>Countries</i>	<i>World rank</i>	<i>Sub-Saharan African rank</i>	<i>2015 score</i>
Botswana	28	1	63
Cape Verde	40	2	55
Seychelles	40	3	55
Rwanda	44	4	54
Mauritius	45	5	53
Namibia	45	5	53
Ghana	56	7	47
Lesotho	61	8	44
Senegal	61	8	44
South Africa	61	8	44
Burkina Faso	76	11	38
Zambia	76	11	38
Benin	83	13	37
Liberia	83	13	37
Mali	95	15	35
Djibouti	99	16	34
Gabon	99	16	34
Niger	99	16	34
Ethiopia	103	19	33
Cote d'Ivoire	107	20	32
Togo	107	20	32
Malawi	112	22	31
Mozambique	112	22	31
Tanzania	117	24	30
Sierra Leone	119	25	29
Gambia	123	26	28
Madagascar	123	26	28
Cameroon	130	28	27
Comoros	136	28	26
Nigeria	136	28	26
Guinea	139	31	25
Kenya	139	31	25
Uganda	139	31	25
Central African Republic	145	34	24
Congo Republic	146	35	23
Chad	147	36	22
Democratic Republic of the Congo	147	36	22
Burundi	150	38	21
Zimbabwe	150	38	21

*(continued)*

**Table 4.1** (continued)

<i>Countries</i>	<i>World rank</i>	<i>Sub-Saharan African rank</i>	<i>2015 score</i>
Eritrea	154	40	18
Guinea-Bissau	158	41	17
Angola	163	42	15
South Sudan	163	42	15
Sudan	165	44	12

*Source:* Adapted from Transparency International [www.transparency.org](http://www.transparency.org)

violence and terrorism. Indeed, disparaged youth can be easy targets for recruitment from violent and extremist groups, such as Boko Haram in Nigeria and Al-Shabab in Kenya and militia groups in the Democratic Republic of the Congo. Corruption can negatively affect entrepreneurship in several ways. It can slow the startup process by requiring would-be entrepreneurs to bribe officials and civil servants before registering their businesses. It can also lead to government officials and others having political support to “steal” ideas from young entrepreneurs. It can also weaken property rights. There is evidence in several countries that property rights are barely respected. This could lead to patent infringement that could discourage innovators.

### *Impact of Corruption on Entrepreneurship*

There are two views on the impact of corruption on entrepreneurship. The first view argues that corruption can have a beneficial effect on entrepreneurs (Ovaska and Sobel 2005; Dreher and Gassebner 2013). Authors arguing these positions use the “grease the wheels” argument, which contends that “corruption can improve entrepreneurial opportunities like putting grease on a wheel can make it move faster” (Dutta and Sobel 2016, p. 179). The argument favoring the positive effect of corruption is as follows: “by allowing entrepreneurs to bribe their way through the start-up process; it makes it easier for new ventures to be created” (Dutta and Sobel 2016, p. 179). This argument draws from the “theory of the second best” (Lipsey and Lancaster 1956), according to which a policy that by itself in an already efficient environment would be inefficient can, in the presence of a preexisting distortion, be a positive influence. An

illustrative example in the case of SSA countries could be explained in the following ways. Because most institutional environments are weak, corruption could facilitate the process of starting new ventures.

For example, if entrepreneurs can bribe officials to facilitate the startup process by gaining licenses and permits and avoiding erroneous taxation, it can facilitate entrepreneurship. However, “under normal circumstances, with a well-functioning government and efficient rules, the introduction of corruption would harm outcomes and lead to inefficiency” (Dutta and Sobel 2016, p. 181). Therefore, the effect of corruption on entrepreneurship depends on the preexisting institutions. If these institutions function well, corruption will have a detrimental effect on entrepreneurship. However, if these institutions function poorly, corruption would have a positive effect on entrepreneurship. As Dutta and Sobel (2016, p. 181) put it, “whether corruption helps or hurts the number of business ventures depends under these conditions, on paying bribes to government officials could be considered as a cost of doing business.”

However, some authors argue that corruption has a negative impact on entrepreneurship regardless of preexisting institutions (Anokhin and Schulze 2009; Estrin et al. 2013; Dutta and Sobel 2016). For these authors, corruption harms entrepreneurship and innovation. For example, Dutta and Sobel (2016) studied the effect of corruption on entrepreneurship on 104 countries and found that it harmed entrepreneurship regardless of the quality of the institutional environment. Likewise, Estrin et al. (2013) found that less corruption and a stronger protection of property rights increase the growth plans of entrepreneurs. In Kenya, Ngunjiri (2010) observes that corruption destroys the productivity capacity of local talent and entrepreneurship. Due to its negative effect, it is therefore important for SSA countries to design and implement strategies aimed at eliminating if not reducing corruption.

### *Strategies to Reduce Corruption*

There are several strategies envisioned to reduce the negative effect of corruption. Several SSA countries have proposed to make their governments more transparent and accountable or to have government officials disclose their personal financial assets before taking office. Although these measures are welcome, they have been rarely enacted and effectively monitored in most sub-Saharan African countries. At the Anti-Corruption Summit in London, it has been proposed to track “corrupt

**Table 4.2** Framework for government contribution in building entrepreneurial ecosystems in sub-Saharan Africa

<i>Domains</i>	<i>Activities</i>
Regulatory environment	Enact laws and regulations. Tax incentives and policies.
Support entrepreneurship education	Provide grants to universities for entrepreneurship education. Make universities accountable for economic and social impact.
Access to funding	Facilitate the creation of new banks to support entrepreneurship. Provide grants to entrepreneurs. Establish National Entrepreneurship Funds.
Research in technology Combat corruption	Provide grants for research in selected areas. Enact and enforce laws to fight corruption. Initiate measures to repatriate stolen government funds.

assets” and return them to their countries of origin (*The Economist* 2016). The extent to which this measure will be implemented will be assessed in the future. One must acknowledge that corruption deprives African countries from financial assets that could be used to support entrepreneurs and create a sound and reliable entrepreneurship infrastructure. Corruption could also lead to the emergence of unproductive entrepreneurship, where people use their sense of creativity and imagination to engage in corrupt practices. Table 4.2 summarizes the framework for government intervention in building entrepreneurial ecosystems in SSA.

## Role of Institutions of Higher Education

**Abstract** This chapter explores the role of institutions of higher education in the creation of entrepreneurial ecosystems in sub-Saharan Africa. It contends that universities and colleges can play a catalyst role in fostering entrepreneurship. They can do so through entrepreneurship education, research, and in establishing proof-of-concept centers, business incubators, and accelerators. Universities and colleges can also partner with the private sector to facilitate technology transfer and commercialization. The chapter contends that universities must play an important role in the development of entrepreneurial ecosystems.

**Keywords** Business incubators · Entrepreneurial university · Entrepreneurship education · Entrepreneurship research · Proof-of-concept centers · Institutions of higher education

During a public lecture that I gave on May 20, 2014, in Accra, Ghana, on *Building Entrepreneurial Ecosystem in Sub-Saharan Africa: An Integrative Model*, I used a sentence “In Ghana, people do not eat paper, they eat banku” (Beugré 2014) that produced the audience’s laughter. Banku is a national dish made of cassava that is widely consumed in Ghana. In using this sentence, I was emphasizing the importance for universities in SSA to remain relevant, and agents of economic development and social change. After all, as the saying goes, “what you do with what you know is more

important than you know.” In this chapter, I explore the role that universities in SSA can play in fostering entrepreneurial ecosystems. This is particularly important because universities not only educate students but also generate the new ideas that change society. For example, the successful entrepreneurial ecosystems in the United States, such as Silicon Valley in California, Route 128 in Boston, and the Research Triangle in North Carolina, have all benefited from the proximity of institutions of higher education. Silicon Valley is home to such prestigious universities as Stanford University and the University of California, Berkeley, and countless institutions of higher education. Boston is home to the Massachusetts Institute of Technology (MIT) and Harvard University as well as countless institutions of higher learning, and the Research Triangle benefits from the proximity of Duke University, North Carolina State University, and the University of North Carolina at Chapel-Hill.

To play a critical role as a component of the entrepreneurial ecosystem, institutions of higher education in SSA should develop entrepreneurship courses and programs. They should also establish entrepreneurship centers, build business incubators, and contribute to the development of technological parks and maintain strong partnerships with businesses as well as policymakers. In most SSA countries, partnerships between universities and the private sector are very limited, even nonexistent. In addition, there are limited efforts to translate research into products with commercial value in most African universities. By establishing technology commercialization offices, universities can provide environments for translating research into products.

Universities should also develop campus-wide entrepreneurship ecosystems. To this end, entrepreneurship education and research should not be confined to business schools. Universities should foster the development of social entrepreneurship because entrepreneurship is not limited to for-profit ventures. Indeed, “a university-based entrepreneurship ecosystem is integrated and comprehensive, connects teaching, research and outreach, and is woven into the fabric of the entire university and its extended community for the purpose of fostering thought and action throughout the system” (Green et al. 2010, p. 2). In the following lines, I discuss the areas in which universities in SSA can make meaningful contributions in facilitating the emergence and maintenance of entrepreneurial ecosystems in their respective countries. I organize the discussion around three main areas: (1) foster entrepreneurship education and research, (2) commercialize research, and (3) become entrepreneurial universities.



## 1 ENTREPRENEURSHIP EDUCATION AND RESEARCH

### *Entrepreneurship Education in Sub-Saharan Africa*

The late Peter Drucker (1985) debunked the entrepreneurial mystique by stating that entrepreneurship is a discipline and like any discipline, it can be learned. Several authors emphasize the view that entrepreneurship or some aspects of it can be taught and learned (Solomon et al. 2002; Katz 2003; Kuratko 2005; Solomon 2007). This laid to rest the mystique that entrepreneurs are born and not made. Hence, entrepreneurship education has witnessed a surge in developed countries, such as the United States. Other countries in Europe and Asia have followed suit.

However, entrepreneurship education is still lagging in many countries in sub-Saharan Africa despite efforts in Kenya (Nelson and Johnson 1997), South Africa (Davies 2001; Gouws 2002; North 2002; Co and Mitchell 2006), Nigeria (Alarape 2009; Adejimoja and Olufunmilayo 2009), and Ethiopia (Gerba 2012) to promote it. Unlike in the United States and other developed nations, entrepreneurship education is relatively new in sub-Saharan Africa. For example, Co and Mitchell (2006) found that entrepreneurship education was still in its developmental stages in South Africa and research in the field was less rigorous than in other management disciplines. Alarape (2009) made the same observation when he explored the institutionalization of entrepreneurial education in Nigerian universities. He specifically noted that “although there is evidence of entrepreneurial activities and informal entrepreneurial training in Nigerian traditional societies, entrepreneurial education is a new development in the Nigerian educational sector since the 1990s” (Alarape 2009, p. 85). Gerba (2012) explored the state of entrepreneurial education in Ethiopia and observed that entrepreneurship education was still in its early phase of development and was mainly offered in business schools and agricultural colleges within universities.

Hence, to promote entrepreneurship education, universities in SSA must develop strategies to integrate it in their curricula and across campus. They can do so by creating departments of entrepreneurship or developing entrepreneurial programs within existing departments and infusing entrepreneurial culture throughout their academic institutions. Currently, most universities in SSA do not have formal entrepreneurship programs, although some entrepreneurship courses are taught in various universities. The aim of entrepreneurship education is not only to instill the

entrepreneurial mindset into students but to also help them recognize and create opportunities that could translate into viable businesses that can create economic and social value. Therefore, courses and teaching methods should allow students to learn the opportunity discovery/creation process, business modeling, idea generation, proof-of-concept techniques, feasibility analysis, business plan writing, as well as the functional areas of business. Entrepreneurship education should also allow students to build skills in leadership, negotiation, new productive development, creative thinking, and the like.

Some SSA countries, such as Nigeria and South Africa, have taken steps to foster teaching and research in entrepreneurship. For example, the federal government of Nigeria in collaboration with the National Universities Commission (NUC) gave directives requiring all universities to establish entrepreneurship development centers (Alarape 2009; Adejimiola and Olufunmilayo 2009). A review of the state of entrepreneurship education in sub-Saharan Africa by Kabongo and Opkara (2009) shows that most institutions of higher education offer courses in entrepreneurship and/or small business management but few offer specialization in the field. They also found that newly created institutions were more likely to offer entrepreneurship courses and specializations than traditional ones while a few operated university-based entrepreneurship centers. This is consistent with Gerba's (2012) findings that very few universities in Ethiopia run entrepreneurship centers. Out of the 16 universities surveyed, he found that only two operated entrepreneurship centers.

However, to play a key role, universities must consider the teaching of entrepreneurship as part of their mission. As I indicated in the introduction to this book, the old paradigm of expecting the government to provide jobs to college graduates is now an outdated model that needs to be replaced. By emphasizing entrepreneurship and making entrepreneurship education some form of an "entrepreneurial revolution," universities in SSA can create not only awareness but also motivation and engagement on the part of students. Doing so could also contribute to transforming graduates into job creators instead of job seekers. Adejimiola and Olufunmilayo (2009) note that the introduction of entrepreneurship as a compulsory course in the Nigerian university system was seen as a measure to address the problem of graduate unemployment.

Entrepreneurship education should not be limited to business schools. Universities in SSA must make the effort of building campus-wide entrepreneurial ecosystems. They can do so by running joint-degree programs

including the sciences, engineering, social sciences, and agriculture. They can also run campus-wide business plan competitions and student entrepreneurship clubs. Doing so will help open entrepreneurship education to nonbusiness majors. Expanding entrepreneurship education to nonbusiness disciplines, such as engineering and science, is important because product ideas often emerge from these disciplines but students do not always have the knowledge and skills required to translate these ideas into business opportunities and start new ventures (Hynes 1996). Doing so could also help create a culture of entrepreneurship. Hence, faculty, administrators, staff, and students should act entrepreneurially.

To improve the quality of entrepreneurship education, universities in SSA could benchmark world-class institutions that are renowned as centers of excellence in entrepreneurship education, such as Babson College in the United States. Entrepreneurship educators in SSA could benefit from programs, such as the Price-Babson *Symposium for Entrepreneurship Educators* at Babson College and *The Experiential Classroom* at the University of Florida. As an entrepreneurship educator in the United States, I have personally participated in these two programs and found them very useful. In addition to the teaching components, these programs offer invaluable opportunities to network with other entrepreneurship educators.

Universities in SSA can also develop programs to immerse secondary school students in entrepreneurship. For example, they could organize Summer Youth Entrepreneurship Academies to teach the basics of entrepreneurship to high school and/or middle school students. Such programs may instill interest in entrepreneurship as a viable career option. We started such a program in the summer of 2014 when I was a Fulbright scholar at Methodist University College Ghana. Universities in SSA may also develop entrepreneurship training for the unemployed youth. This is particularly important because in every SSA country there are a lot of young people who are unemployed. Providing them with entrepreneurial skills can help them engage in new venture creation.

Entrepreneurship education in sub-Saharan Africa should also contain a training component that engages the informal sector and be expanded to rural areas. These two areas are important because most people in sub-Saharan Africa live in rural areas and make their living in the informal sector. Statistics show that more than 70 percent of people in sub-Saharan Africa make their living in the informal sector (International Labor Organization 2002). Yet, there is little knowledge

about entrepreneurship in this sector. The aim here is not to make the informal sector a formal one but to understand it and help those in the sector be more efficient and productive. In engaging the informal sector, I advocate teaching entrepreneurship in local languages.

As I indicated in the introduction to this book, entrepreneurship is not a new phenomenon in Africa. It is obvious that it has existed even before Africa was colonized by European countries. Today, there are examples of entrepreneurs who do not have formal education and prosper in both the informal and the formal sectors in most SSA countries. Thus, the use of local languages to train entrepreneurs in the informal sector as well as in rural areas can have beneficial effects. First, it can help these entrepreneurs who do not speak the official languages, such as English, French, Portuguese, or Spanish, to have access to valuable knowledge. Second, it could help *illiterate* entrepreneurs to become more efficient. It could also demonstrate the willingness of universities in SSA to engage their surrounding communities.

### *Entrepreneurship Research in Sub-Saharan Africa*

Scholars teaching in these entrepreneurial programs should also engage in research in entrepreneurship. Universities can create centers of economic development that could focus on the social and economic challenges facing the environments in which they operate. To improve the quality of teaching and training, universities in SSA must engage in meaningful and relevant research. Of course, findings from the West are useful but they may not always clearly depict the factors that explain entrepreneurship in the context of Africa. For example, how do entrepreneurs in Africa think and exploit opportunities? What opportunities do they tend to pursue? How do institutional environments shape the types of opportunities that entrepreneurs pursue in SSA? What is the composition of new venture teams in SSA? What roles do ethnicity and tribalism play in the formation of new venture teams? Do entrepreneurs in SSA tend to select members of their ethnic groups when forming new venture teams? Do certain ethnic groups tend to be more entrepreneurial than others? If so, what factors may explain this tendency? All these questions and many others could be subject to empirical investigations. It is only when African scholars understand entrepreneurship in the context of SSA that they could provide useful guidance for entrepreneurship education.

Venues for disseminating research findings must be available. There are currently new journals in business, management, and entrepreneurship in and on Africa, such as the *Africa Journal of Management*, which could serve as adequate publication outlets. Associations, such as the Africa Academy of Management and the African Business and Entrepreneurship Society, are attempting to play a critical role in the development and dissemination of knowledge in business and management in Africa. The Africa Academy of Management (AFAM) organizes a biennial conference in an African country since 2014, and the African Business and Entrepreneurship Research Society (ABERS) organizes an annual conference in the United States since 2010. It planned to organize its 2018 conference in the Ivory Coast. These two academic associations represent important forums to exchange ideas about improving management and entrepreneurship scholarship and education in Africa.

## 2 COMMERCIALIZE RESEARCH

### *Establish Proof-of-Concept Centers*

Universities in SSA can contribute to the development of entrepreneurial ecosystems by establishing proof-of-concept centers (PoCCs). Proof-of-concept centers are centers within universities that can be used to determine whether a research idea can be translated into a viable business. They can be viewed as “a collection of services to improve the dissemination and commercialization of new knowledge from universities in order to spur economic development and job growth” (Bradley et al. 2013, p. 350). In fact, before being commercialized, a technology must first be developed. And before being developed, the technology must be patented and then the new product tested. Patenting the product allows the protection of the rights of the inventor (intellectual property). The phase between invention and new product development is often a challenging one. According to Auerswald and Branscomb (2003), this phase is characterized by the creation and verification of commercial concepts, the identification of appropriate markets, and the development of intellectual property. Hence, PoCCs target activities that go beyond claiming ownership of intellectual property, which were often limited to technology transfer or commercialization offices. Bradley et al. (2013, p. 351) note that the decision for a university to claim ownership of intellectual property, while related, is distinct from activities that seek to further develop and commercialize technology.

Several universities in the United States have established PoCCs. For example, during the past 15 years, there have been at least 32 PoCCs created in the United States (Hayter and Link 2015). Examples of such centers include the Desphande Center at MIT and the von Liebig Center at the University of California, San Diego. The existence of a PoCC tends to facilitate technology commercialization. Hayter and Link (2015) found that universities affiliated with a PoCC enjoyed a positive and statistically significant increase in the number of spinoffs established after adoption. This positive effect can happen for at least two reasons. First, the existence of a PoCC allows a university to consider technology commercialization as an integral part of its mission. As a result, it undertakes effort to identify technologies that could have a market potential. Second, once these technologies with market potential have been identified, the university may be compelled to leverage its resources to test their viability. These two reasons provide opportunities to create new ventures as a result of establishing a PoCC. In the United States, PoCCs have become a vehicle for facilitating technology commercialization.

Universities in sub-Saharan Africa could benchmark those universities that have been successful in developing PoCCs. For example, the two prominent PoCCs in the United States, the Desphande Center at MIT and the von Liebig Center at the University of California, San Diego, could be benchmarked as well as other successful centers. To do so, universities in SSA must establish partnerships with universities in the United States or other developed countries where such centers exist. They can also benchmark other centers that may exist in some African universities. Very often, universities in SSA are eager to establish partnerships with universities from the West or outside the African continent but not between themselves. However, to become agents of economic development and social change, universities in SSA must collaborate with their peers because they face similar challenges. Such collaboration could include the exchange of faculty and students as well as the sharing of best practices and the conduct of joint research projects.

The development of PoCCs also requires collaboration with the private sector. Such partnerships could be beneficial for both universities and corporations. Universities could use such partnerships to facilitate technology transfer and collaborative research with the private sector. Finally, corporations could serve as providers of internships to students and jobs to graduates. Corporations can also provide scholarships to promising students. A partnership could also help universities to make their curricula

relevant for the job market. Indeed, universities could tap into the experience and expertise of practicing executives to design curricula that respond to the needs of an ever-changing labor market. To be successful in these areas, universities in SSA may decide to focus on selected areas, such as health sciences, information technology, engineering, or agriculture. The selection of the areas of focus would depend on the availability of high-caliber scientists. The availability of a pool of qualified scholars could contribute to quality and relevant research. The impact of proof-of-concept activities could be measured by identifying the number of spinoffs and patents or licenses transferred to corporations.

### *Build Business Incubators*

The concept of business incubators originated in the United States. Wiggins and Gibson (2003) reported that incubators came into being in the United States “during the 1970s, although the first began in an abandoned Massey Ferguson manufacturing plant in Batavia, New York in 1959” (p. 57). Since then, business incubators have spread around the world notably in other developed and some emerging countries. “A business incubator is a facility that aids the early state growth of companies by providing rental space, shared office services, and business consulting assistance” (Allen and Kahman 1985, p. 12). This definition is similar to the one provided by Hackett and Ditts (2004) who construed a business incubator as “a shared office-space facility that seeks to provide its *incubatees* with a strategic, value-adding intervention system of monitoring and business assistance” (p. 57). Incubators provide several services to member companies including training in the functional areas of business, networking opportunities, and consulting services. They also provide the opportunity for their tenants to interact with their peers, thereby creating a community of practice. Based on the literature, I illustrate in [Table 5.1](#) the key services provided by business incubators.

According to Wiggins and Gibson (2003, p. 56), business incubators must do the following five things in order to succeed: (1) establish clear metrics for success, (2) provide entrepreneurial leadership, (3) develop and deliver value-added services to member companies, (4) develop a rational new-company selection process, and (5) ensure that member companies gain access to necessary human and financial resources. When they function properly, business incubators become the centers of entrepreneurial gravity in their communities. In a successful business incubator, “people must

**Table 5.1** Typical services provided by incubators

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Accounting and financial management.
Assistance with business basics.
Conference rooms and other shared facilities.
Legal advice.
Linkages with investors.
Linkages with strategic partners.
Marketing assistance.
Networking activities and opportunities.
Shared administrative services.

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assume a can-do attitude, an ability to solve problems, a clear focus on results, and a willingness to work hard” (Wiggins and Gibson 2003, p. 61). In addition to nurturing startups and fostering entrepreneurship, business incubators play an important role in facilitating economic development (Wiggins and Gibson 2003; Peters et al. 2004; Qian et al. 2011). As a consequence, several countries are promoting business incubator programs to revitalize their local economies, increase employment, and nurture high-technology industries (Lee and Osterrryoung 2004).

Although business incubators are now ubiquitous in most universities in the West and particularly in the United States, universities in SSA are still lagging behind. If these universities intend to contribute to entrepreneurship and new venture creation, it is imperative that they experiment the concept of university-run incubators. University-run incubators in SSA can house startups from students as well as faculty. They can also house startups initiated by nascent entrepreneurs from the community. This is particularly relevant to the context of SSA. As I indicated earlier, the concept of incubators is almost unknown in certain countries in SSA, although there is evidence that business incubators are starting in South Africa (Ndabeni 2008). Thus, nascent entrepreneurs do not have the support of such facilities. Therefore, universities in SSA can play a leading role in popularizing the concept of business incubators. In fact, business incubators represent an opportunity for providing assistance to novice entrepreneurs. Of course, the nature and functioning of the incubators would depend on the characteristics and goals of each university. In fact, an incubator represents “an important source of empowerment for novice entrepreneurs, mitigating its insulation, and reducing some of the uncertainties and risks that accompany any process of entrepreneurship” (Ariza-Montes and Muniz 2013, p. 40).



### 3 BECOME ENTREPRENEURIAL UNIVERSITIES

#### *What Is an Entrepreneurial University?*

To play a critical role in the entrepreneurial ecosystem, universities in SSA must themselves be “entrepreneurial universities.” The concept of an entrepreneurial university emerged in the United States in the latest part of the twentieth century. It basically focused on the transformational role of the university. Before that, universities were focused on teaching and research. They were mostly confined within their walls and had little impact on their surrounding social environments, thereby the concept of ivory towers, to characterize the isolationist nature of universities. However, all this changed when governments and some scholars started to envision the new role of the university, particularly in the United States. Etzkowitz (1999) used the concept of triple helix to describe the interactions between government, industry, and universities. Specifically, he argued that “an entrepreneurial university is the keystone of the triple helix model for that it must play a more prominent role in innovation, on a par with industry and government” (Etzkowitz et al. 2008, p. 683). In addition, “the transition to the entrepreneurial university also encompasses the transition from individual to collective and organizational entrepreneurship” (Etzkowitz et al. 2008, p. 683). In this regard, entrepreneurship becomes a collective action undertaken by the entire organization, that is, the entrepreneurial university.

While on a Fulbright Scholarship in Ghana, I had the opportunity to travel to the Ivory Coast where I held a public lecture on July 2, 2014, at the Université d’Abobo-Adjamé in Abidjan. The title of the public lecture was “Science, Innovation and Entrepreneurship: How to Create an Entrepreneurial University.” Most academics in SSA consider themselves as educators and researchers, and not entrepreneurs. This is understandable because academics and staff in public universities are civil servants and university administrators are government appointees. In this context, they are more likely to follow government directives and less likely to act as entrepreneurs. Moreover, public universities are not expected to engage in revenue-generating activities. This model, however, is no longer sustainable in the face of the many challenges that currently besiege SSA countries.

Thus, it is imperative that universities in SSA become entrepreneurial. This implies that “universities converge toward an integration of various

academic roles including teaching and the preservation of knowledge, research and the creation of new knowledge, economic development and regional renewal” (Etzkowitz et al. 2008, p. 691). To this end, universities in SSA must develop programs to help their faculty and staff develop entrepreneurial skills. This is particularly important because the role of universities has broadened now to focus on enhancing entrepreneurial capital and facilitating behavior to prosper in an entrepreneurial society (Audretsch 2014). In fact, entrepreneurial behavior must be at the center of an entrepreneurial university’s activities.

### *Becoming More Entrepreneurial*

The basic ideas presented during my lecture at the Université d’Abobo-Adjamé were strategies to transform SSA universities into entrepreneurial universities. They could do so in four main areas: (1) teaching, (2) research, (3) service, and (4) outreach. In the area of teaching, being entrepreneurial implies that SSA universities must constantly review and update their curricula to make them relevant. Indeed, teaching must translate into learning skills that are relevant for learners and can transform them into productive citizens and lifetime learners. Teaching should also embrace technology and new tools to facilitate learning. To determine what skills students are learning and whether these skills are relevant, it is important to assess student learning outcomes. This aspect has been missing in most universities in SSA.

Universities in SSA should also measure the impact of the education they offer. Do they contribute to educating productive citizens that contribute to the betterment of their communities? Do the universities themselves contribute to the transformation of their countries and regions? Not only should the impact of teaching be measured but so should the impact of scholarly research. It is important that universities in SSA assess the relevance and impact of their research. The same is true for outreach activities. Indeed, universities in SSA should cease of being “ivory towers” and become agents of economic and social development. This requires that they become engaged in their communities. In this regard, a scholarship of engagement is important. In describing the scholarship of engagement, Boyer (1996) contends that “the academy must become a more rigorous partner in the search for answers to our most pressing social, civic, economic, and moral problems, and must reaffirm its historic commitment to what I call the scholarship of engagement” (p. 11).

Universities in SSA must incorporate national or regional development goals into their mission statements. To become entrepreneurial, universities in SSA must also change their reward systems to provide incentives to their faculty to engage in entrepreneurial activities. For example, faculty could be allowed to start new ventures based on their research or provide compensation if their research is licensed to corporations. The current reward systems in most universities in SSA are not conducive to transforming the faculty into entrepreneurs. Indeed, most faculty members are civil servants and paid as such. Moreover, the reward system is not always tied to individual performance. Thus, people sharing the same faculty rank receive the same compensation regardless of their level of performance.

It is worth mentioning that the concept of entrepreneurial university is a global phenomenon (Etzkowitz et al. 2000). It is taking place in the developed world and other regions, such as Asia and Latin America. Therefore, universities in SSA must catch up. In the context of SSA, the entrepreneurial university requires an enhanced capability for intelligence, monitoring, and negotiation with other institutional spheres (Etzkowitz et al. 2000), such as government, the private sector, communities, and international organizations. This is particularly important because universities in SSA must be at the vanguard of economic and social development in their respective countries. As such, their role must change. For example, Etzkowitz et al. (2000, p. 326) note that at least two major trends affect the future of the entrepreneurial university: the shift to ever greater dependence of the economy on knowledge production and the attempt to identify and guide future trends in knowledge production and their implications for society. This implies a shift in the role of universities in SSA. Commenting on the shifting role of universities in Singapore, Wong et al. (2007, p. 941) note that “the role of universities must shift from being primarily a manpower provider and knowledge creator to taking a more visible role in knowledge commercialization through increased patenting, licensing to private industry and spinning-off new ventures.” This could be true for universities in SSA.

## Role of the Private Sector

**Abstract** This chapter emphasizes the role of the private sector in the development of entrepreneurial ecosystems in sub-Saharan Africa. The private sector is loosely defined and includes companies owned by locals, companies owned by foreigners, and subsidiaries of multinational corporations. The private sector can provide financial support to universities and to business incubators. It can also collaborate with universities on joint research programs that could lead to the development of new products or services. The private sector can also support startups by providing financial resources or becoming suppliers or clients.

**Keywords** Crowdfunding · Financial institutions · Media · Private sector · Venture capital

The private sector has been considered as one of the three elements of the triple helix model (Etzkowitz 1999; Etzkowitz et al. 2000) and the Quintuple Helix Model developed in this book. Despite this recognized role, its impact in facilitating entrepreneurship has been less researched and documented (Murphy 2010). In this chapter, I use a multidimensional perspective of the private sector in sub-Saharan Africa to include corporations, financial institutions, venture capitalists, crowdfunding platforms, and private media. I then explain how each of these elements could contribute to the emergence of entrepreneurial ecosystems in SSA.

## 1 CORPORATIONS AND THE ENTREPRENEURIAL ECOSYSTEM

Companies operating in the private sector in sub-Saharan Africa can be divided between subsidiaries of multinational corporations, companies owned by non-Africans, and companies owned by nationals. State-owned enterprises could also be added to this sector although there have been efforts since the 1990s to privatize them. Some of the companies are large ones by African standards, whereas the most are small and medium-size firms. In the context of SSA, “the configuration of the industry includes informal and formal sector businesses, traditional and modern, indigenous and foreign-owned enterprises geographically dispersed in rural and urban areas” (McDade and Spring 2005, p. 18). Hence, the landscape of this sub-sector is multiplex and includes several types of firms.

For-profit corporations in sub-Saharan Africa can play a key role in the development of entrepreneurial ecosystems in several ways. First, they can contribute to entrepreneurial ecosystems by providing management expertise and “seed-money” to startups. This is important because access to bank loans has been considered as the major obstacle for entrepreneurs in SSA. Second, companies can also invest in small-scale ventures that can later become their partners as suppliers or clients. Thus, these new startups can be part of the companies’ supply chains. Companies could also sponsor business plan competitions and establish partnerships with universities. These partnerships could be beneficial for both the companies and the universities involved. They can become means for accessing a pool of talented potential employees and vehicles for joint research projects with universities. Such collaborative research could lead to the development of new products. Partnering with universities could also be seen as a form of corporate social responsibility, thereby enhancing the reputation of the participating companies. Corporations could play a key role in the development of an entrepreneurial ecosystem. For instance, they can engage entrepreneurs through (1) core business activities and value chains, (2) philanthropic or social investment, and (3) public policy dialogue and advocacy (Murphy 2010). All these activities could contribute to improving the economic and social development impact of the private sector.

Companies could also spearhead their own entrepreneurial ecosystems. For example, a hub-based ecosystem is an ecosystem established by a single firm. Examples of such hub-based ecosystem include iPhone ecosystem, IBM’s Power Architecture, Intel’s microprocessor ecosystem, and Pfizer’s biotech system (Ianiti and Levien 2004). Being part of such an

ecosystem could benefit new ventures in several ways. New ventures could benefit from the expertise of managers from the existing company that could serve as sponsors. “Being connected to a powerful platform leader helps new ventures overcome some of the liabilities arising from their newness and inexperience” (Nambisan and Baron 2013, p. 1075). Hence, companies, especially subsidiaries of large multinational corporations, could play a crucial role in fostering entrepreneurship in SSA. Murphy (2010, p. 2) notes that because of their global reach and considerable footprints, corporations have the ability to spread good practices across boundaries in a way that few institutions or organizations can.

It is important to acknowledge that the private sector is unevenly developed in SSA. In larger economies, such as Nigeria, South Africa, and Kenya, the private sector is relatively well developed albeit not as quite developed as in Western countries, Japan, or even emerging countries, such as China or India. Hence, the role that corporations could play in the emergence of entrepreneurial ecosystems depends mostly on how well or poorly they are developed in the country. Take the example of Niger or Burkina Faso as compared to South Africa or Nigeria. In the first two countries, the private sector does not comprise large companies and is not as dynamic as in the last two countries. Therefore, the contribution of corporations to the entrepreneurial ecosystems in South Africa and Nigeria would certainly be more effective in terms of financial support and opportunities for collaborative research with universities than in Niger and Burkina Faso. One element of the private sector that can also play a critical role is private investors, banks, and venture capitalists. In most sub-Saharan African countries, the venture capital market is relatively small or it does not exist at all. In the next section, I discuss the role of financial institutions in supporting entrepreneurship in sub-Saharan Africa.

## 2 FINANCIAL INSTITUTIONS

Several financial institutions, especially commercial banks, have divisions that focus on small and medium-size enterprises and entrepreneurs. However, some entrepreneurs and small business owners often complain about the difficulty of securing bank loans and high interest rates that make bank loans very expensive. Hence, entrepreneurs consider securing a bank loan in sub-Saharan Africa cumbersome. Despite these limitations, the role of banks and other financial institutions in fostering effective entrepreneurial ecosystems in sub-Saharan Africa cannot be overstated. This is particularly important

because access to bank loans to start or scale their businesses is considered as the main obstacle for entrepreneurs in sub-Saharan Africa. To remedy these deficiencies and play an important role in the development of entrepreneurial ecosystems in SSA, banks should find ways of supporting promising ventures by providing loans and other financial services.

They can do so by providing expertise to small businesses and entrepreneurs in the areas of financial management and fiscal discipline. Bankers also complain that some projects are poorly written and do not show too much expertise on the part of their proponents. They consider that one of the main obstacles to entrepreneurship and venture creation in SSA is the lack of talented and innovative entrepreneurs. Despite these difficulties and often misunderstanding, banks could play a critical role in the development of entrepreneurial ecosystems by supporting business plan competitions or even incubators within universities.

### 3 VENTURE CAPITALISTS AND FIRMS

The venture capital market in sub-Saharan Africa is relatively new compared to the United States and other Western countries. Recently, however, some venture capital firms have penetrated the sub-Saharan market. Such firms can contribute to the entrepreneurial ecosystem by funding promising startups in SSA. [Table 6.1](#) shows a list of venture capital firms that are active in SSA. Although this list is far from being comprehensive, it provides an indication of the existence of a venture capital market in sub-Saharan Africa. These venture capital firms can contribute to the emergence of entrepreneurial ecosystems by investing in startups. However, the nascent venture capital market is unevenly developed. For example, South Africa has a relatively important venture capital market compared to other SSA countries. Venture capital firms in South Africa, such as Izibulo SME Fund, Identity Development Fund, Enablis Acceleration Fund, and Business Partners Limited, to name but a few, invest in startups and therefore contribute to the sustainability of its entrepreneurial ecosystem.

The African Private Equity and Venture Capital Association promotes private investments in Africa and can play a useful role in the development of entrepreneurial ecosystems by attracting foreign capital investments in Africa. Most venture capital firms are members of the African Private Equity and Venture Capital Association, which promotes capital investment on the continent. In addition to the venture capital market, there are angel networks that could contribute to the funding of startups. However,

**Table 6.1** Venture capital firms in sub-Saharan Africa

<i>Name</i>	<i>Activities</i>
Gold Venture Capital Limited	Incorporated under the laws of Ghana. Provides capital fund to companies in West African countries.
Fusion Capital	Part of the Fusion Capital group in the United Kingdom. Serves small and medium-size companies in East and Central Africa. Targets businesses in manufacturing, real estate, and services.
EvaFund	Based in the Netherlands. Focuses on the entire sub-Saharan region and targets companies dealing with Internet services. Provides knowledge and expertise, networks, and business applications.
Matamba Anonaka Technologies Holdings	Based in Zimbabwe. Was formed by Bridge-Connect of Germany and Rutland Consultants of Zimbabwe. Invests in pre-emerging and emerging technology companies in Zimbabwe.
Jacana Partners	Started in Kenya but aims at covering most SSA countries. Actually active in Ghana, Liberia, Sierra Leone, Tanzania, and Uganda.
Adlevo Capital	Based in Mauritius. Focuses on technology companies throughout sub-Saharan Africa.
Investment AB Kinnevik	A Swedish investment company. Active in Nigeria.
Intel Capital	Active in Mauritius and Ghana. Invests in technology companies.
Africa Media Ventures Fund	Based in the Netherlands. Focuses on media companies in sub-Saharan Africa. Active in Ghana and Kenya.
Savannah Fund	Focuses on sub-Saharan Africa. Funds technology startups.
Fanisi Venture Capital Fund	Founded in 2009 by the Norwegian Investment Fund for developing countries and Amani Capital Limited. Active in Kenya, Tanzania, Rwanda, and Uganda. Focuses on agribusiness, healthcare, energy and natural resources, retail and consumer services, and education.
Centum Investment Company Ltd.	Based in Kenya. Focuses on financial services, consumer goods, real estate, energy, agribusiness, healthcare, education, and information technology.
Purple Capital Partners Ltd.	Based in Lagos, Nigeria. Focuses on real estate and financial services.
Cepheus Growth Capital Partners	Newly created in 2016. Based in Ethiopia. Focuses on manufacturing, agro-processing, and consumer services.



there is not a well-developed network of angel investors in SSA. Thus, other forms of funding, such as crowdfunding, must be explored.

#### 4 USE OF CROWDFUNDING

To compensate for limited options to find financial support, entrepreneurs in sub-Saharan Africa are now turning to crowdfunding. Crowdfunding can be defined as the collection of small amounts of money through the Internet to fund business projects (Ordanini 2011; Mollick 2014). Since the last decade, crowdfunding has been used in the United States and other developed countries as a means of funding new ventures or projects. It involves efforts by entrepreneurial individuals and groups, cultural, social, and for-profit organizations to fund their ventures by drawing on relatively small contributions from a relatively large number of individuals using the Internet, without standard financial intermediaries (Mollick 2014).

Crowdfunding is not a new phenomenon. Even in rural areas of Africa and India, villagers pool resources together to build elementary schools and health centers in their communities (Beugré and Das 2013). Collecting small amounts of money from many people has a history in the sphere of charity and social cooperation, but crowdfunding extends this model, because the money is invested by consumers to obtain a return, mostly financial, but sometimes intangible, such as status, social esteem, or identification (Ordanini et al. 2011). Although crowdfunding may have been around for a long time, the advent of the Internet is now facilitating its usage and making it more visible and accessible to millions of individuals.

In passing the JOBS Act in 2013, the US Congress has legally recognized crowdfunding as a legitimate means of venture financing and investment (Stemler 2013). As a consequence, crowdfunding, particularly equity crowdfunding, can be used to invest in startups. Academic research has also legitimized crowdfunding by attempting to investigate its determinants, motivations, and consequences (Belleflamme et al. 2014; Mollick 2014). However, one must wonder to what extent this practice can successfully be used in developing countries, especially in sub-Saharan Africa. Crowdfunding can be used as a means to provide nascent entrepreneurs the opportunity to raise capital. In sub-Saharan Africa, crowdfunding can take several forms. For example, one form can be detached from the online world, thereby relying on one's social network (Elkuch et al. 2013; Fatoki 2014).

**Table 6.2** List of selected crowdfunding platforms in sub-Saharan Africa

<i>Name</i>	<i>Web address</i>
Jumpstart Africa	<a href="http://www.africastart.com">www.africastart.com</a>
Thundafund	<a href="http://www.thundafund.com">www.thundafund.com</a>
Funda Solva	<a href="http://www.fundasolva.com">www.fundasolva.com</a>
FundFind	<a href="http://www.fundfind.co.za">www.fundfind.co.za</a>
Malaik	<a href="http://www.malaik.com">www.malaik.com</a>
Akabbo	<a href="http://akabbo.com">http://akabbo.com</a>
Htxt	<a href="http://htxt.co.za">http://htxt.co.za</a>
ABREC Finance	<a href="http://www.abrec.financeutile.com">http://www.abrec.financeutile.com</a>
Realty Africa	<a href="https://www.realtyafrica.com">https://www.realtyafrica.com</a>
M-Changa	<a href="http://changa.co.ke">http://changa.co.ke</a>
Start Crunch	<a href="http://startcrunch.com/home">http://startcrunch.com/home</a>
Orange Collecte	<a href="https://collecte.orange.com/">https://collecte.orange.com/</a>
Slice Biz	<a href="http://www.thecrowdcafe.com/platform/slicebiz">http://www.thecrowdcafe.com/platform/slicebiz</a>

Beugré (2016) identified a list of crowdfunding platforms that are currently active in sub-Saharan Africa (Table 6.2). For a crowdfunding platform to appear on this list, it must be based in SSA and have a legitimate website. Although this list does not certainly represent all crowdfunding platforms in SSA, it indicates at least that crowdfunding is used in the region although not at the same rate as in the United States or other developed nations.

The challenges that crowdfunding faces in SSA include trust and the reliability of the Internet. Corruption has eroded the public trust and people tend to be suspicious of others, especially in business transactions. Therefore, some people may be reluctant to join the fray of crowdfunding because of the lack of trust in this funding mechanism. However, as people become more familiar with crowdfunding as a legitimate means of raising capital and certainly with the visibility of successful ventures, suspicion may give way to a full embrace of the concept in SSA. Another challenge to the use of crowdfunding is Internet reliability and penetration. Although the Internet is used in every SSA country, its degree of penetration and reliability differs across the region. Urban areas are well connected but rural areas still need more work to be done in terms of connectivity, reliability, and speed. Hence, for crowdfunding to play a key role as a means of funding new ventures, efforts should be made to improve Internet connectivity in SSA countries.

## 5 THE PRIVATE MEDIA

Private media can also contribute to creating a national culture of entrepreneurship by publicizing and reporting on successful entrepreneurs. The role of the media in SSA has often focused on political and social issues as well as providing news. However, to contribute more effectively to economic development in SSA, the media must refocus its energy on contributing to the emergence of new entrepreneurs. The media can do so by providing platforms for successful entrepreneurs to share their experiences with the public. They can also do so by writing stories about entrepreneurs. Such stories can provide inspiration to would-be entrepreneurs. The media can also organize end-of-year programs to celebrate entrepreneurs who have made a difference in their communities. For example, the series *CNN Heroes of the Year* could be benchmarked by African media. It is only by bringing entrepreneurship to the forefront of the national conscience that the young generation of Africans can perceive entrepreneurship as a viable career option.

The media can help to dispel the negative connotations that the very term “entrepreneur” may hold in some countries. Indeed, the experience of Africans has been to work for the government or the private sector. In the first case, government jobs provide security and social status, whereas jobs in the private sector provide better wages but are often considered relatively unsecure. Entrepreneurship is even perceived as riskier. Not long ago, entrepreneurship was the option for those who lacked the academic qualifications to join the civil service. However, by celebrating and reporting on successful entrepreneurs, the media could contribute to changing the perceptions about entrepreneurs and entrepreneurship.

As discussed in this chapter, the private sector could play a pivotal role in the entrepreneurial ecosystem of each SSA country. However, this role depends on how well this private sector is developed. In countries where the private sector is relatively developed, such as South Africa, Nigeria, and Kenya, it could play a key role. In less developed countries, such as Niger, Mali, or Burkina Faso, its role could be limited by its own size and dynamism. However, regardless of the country and the size of the private sector, it must be considered as a key component of the entrepreneurial ecosystem.

## Role of Citizens

**Abstract** This chapter discusses the role of citizens in the creation of entrepreneurial ecosystems in sub-Saharan Africa. Very often, citizens blame their governments for what goes wrong. This chapter acknowledges that citizens are part of the problem as well as the solution. Whether a country is entrepreneurial or not depends on its citizens. It is the people, their capacity to tolerate risk and embrace uncertainty that determine whether entrepreneurship will take root in their community or not. Hence, to make a positive impact, citizens must change their value system, attitudes, and actual behaviors. For example, in the context of sub-Saharan Africa, citizens must reevaluate their attitudes toward entrepreneurship and failure, encourage family entrepreneurship, and reduce the forced solidarity tax.

**Keywords** Diaspora entrepreneurs · Entrepreneurial mindset · Forced solidarity tax · Kin venturing

I include citizens as representing a key component of the entrepreneurial ecosystem. In doing so, I concur with Benjamin Schneider (1987) that *the people make the place*. In this seminal article, Schneider argues that “the attributes of people, not the nature of the external environment, or organizational technology, or organizational structure, are the fundamental determinants of organizational behavior” (p. 437). To summarize his

main thesis, Schneider contends that “it is the people behaving in them that make organizations what they are” (Schneider 1987, p. 438). This line of reasoning could be expanded to communities, regions, and countries. Hence, Schneider’s argument can be used to indicate that whether a country is more entrepreneurial or not depends on its citizens. It is the people, their capacity to tolerate risk and uncertainty, to embrace or resist change, that would determine whether entrepreneurship would take root in their community or not. Hence, this chapter focuses on the role of citizens in determining the success of entrepreneurship and entrepreneurial ecosystems in sub-Saharan Africa.

To effectively assess the role of citizens in building entrepreneurial ecosystems in sub-Saharan Africa, it is important to understand their values, attitudes, and behaviors. Understanding human actors in management and the social sciences is important because “nothing is more fundamental in setting our research agenda and informing our research methods than our view of the nature of the human beings whose behavior we are studying” (Simon 1985, p. 303). Very often, African citizens blame their governments for anything that goes wrong. Another way of looking at this and particularly in the context of creating entrepreneurial ecosystems is to view the citizens as part of the problem as well as the solution. This requires that citizens themselves should change to adapt to new challenges and opportunities. For example, individual citizens should view the world in terms of opportunities not problems. I divide the chapter into two main sections. The first section explores the concept of entrepreneurial mindset with a particular focus on sub-Saharan Africa, and the second section describes how some cultural values, long considered as impediment to economic development and growth, could be transformed into assets to foster entrepreneurship in SSA.

## 1 DEVELOPING AN ENTREPRENEURIAL MINDSET

As I indicated in the first chapter of this book, entrepreneurship is not new to sub-Saharan Africa. It is not also specific to a particular country, although some countries may be more entrepreneurial than others. However, efforts must be made for entrepreneurship to be ingrained in the national fabric and become an effective agent of economic development and growth in sub-Saharan Africa. To this end, the citizens themselves must become more entrepreneurial in their regular endeavors. As a result, they must develop and nurture an entrepreneurial mindset. A mindset is a particular way of thinking. This particular way of thinking influences how a person acts or reacts.

### *Defining the Entrepreneurial Mindset*

In their book *The Entrepreneurial Mindset*, McGrath and MacMillan (2000) define the entrepreneurial mindset as a way of thinking about the business that captures the benefits of uncertainty. They identified five characteristics of the entrepreneurial mindset: (1) passionate pursuit of opportunities, (2) pursuit of opportunities with discipline, (3) pursuit of only the best opportunities, (4) focus on adaptive execution, and (5) engage the energies of everyone. The authors also argue that entrepreneurs are action-oriented. Thus, to have an entrepreneurial mindset is to be able to transform opportunities into viable businesses—that is, to act on opportunities. Having an entrepreneurial mindset also implies that one possesses the ability to adapt one’s thinking process to a changing context and task demands (Haynie and Shepherd 2007; Haynie et al. 2010; Shepherd et al. 2010; Bruwer 2012).

Dweck (2006), a psychologist at Stanford University, considers the mindset as a key determinant of success. She argues that whether we are successful or not depends on how we approach problems. According to Dweck, humans approach problems with two types of mindset: a *fixed mindset* or a *growth mindset*. A fixed mindset refers to a view that one’s talents and abilities are a set of traits, whereas a growth mindset refers to a view that one’s abilities can be developed through effort, dedication, and hard work (Dweck 2006). Suppose that we consider someone as having a fixed mindset. In this particular situation, the person cannot grow and adapt because of limited sets of traits and characteristics. However, if we consider that the person has a growth mindset, we are assuming that this person can learn and develop his/her ability to perform. It is this mindset that can help people adapt to their environment and grow.

This conceptualization of mindset has caught the attention of some entrepreneurship scholars, such as Ireland et al. (2003) who view the entrepreneurial mindset as a growth-oriented perspective through which individuals promote flexibility, creativity, continuous innovation, and renewal. Having an entrepreneurial mindset requires that people frame situations in certain ways. For example, in decision-making, Tversky and Kahneman (1981) introduced the *framing effect*, which suggests that the manner in which we frame problems determines the way we solve them. The term “decision frame” refers “to the decision-maker’s conception of the acts, outcomes, and contingencies associated with a particular choice. The frame that a decision-maker adopts is controlled partly by the

formulation of the problem and partly by the norms, habits, and personal characteristics of the decision-maker” (Tversky and Kahneman 1981, p. 453). If we see issues as problems and/or obstacles, we will have a certain way of approaching them. However, if we frame issues as opportunities, we will also have a different way of approaching them.

Therefore, developing the right mindset is very important in fostering personal and collective success. As an example, citizens in SSA must consider themselves as builders not only of their personal lives but also of their respective nations. After all, the development of a country depends on its citizens and not by outside forces. Unless Africans develop a can-do attitude and believe in their ability to transform their own lives, economic development and growth cannot occur. In this regard, an entrepreneurial mindset could prove useful in helping people positively transform their personal lives and better their communities.

### *Social Perceptions of Entrepreneurs*

For citizens to consider entrepreneurship as an attractive option, it must have positive value in the community. To address the question raised above, I explore three types of societal perceptions that are important for entrepreneurship development in sub-Saharan Africa. They include (1) social perceptions of entrepreneurs, (2) attitude toward uncertainty and risk-taking, and (3) attitude toward failure. In the past, entrepreneurs were perceived as those who did not succeed in school and therefore were trying to make a living by engaging in entrepreneurial activities. This could in part be explained by the fact that most entrepreneurs engaged in necessity-based entrepreneurship. For entrepreneurship to take hold, this perception must change. Such change can occur when successful entrepreneurs are celebrated. For example, until recently, in most SSA countries, the dominant paradigm was to get a civil servant job after graduating from college. However, with the increasing number of unemployed youth, African countries are looking for other means of providing gainful employment for their “armies” of young graduates. This can only occur if entrepreneurship is perceived as a legitimate career path.

Recent efforts tend to indicate that young people in sub-Saharan Africa are likely to embrace entrepreneurship as a viable career option. There are workshops, fellowships, and seminars organized in SSA that focus on youth entrepreneurship. For example, the Global Entrepreneurship Program discussed in [Chapter 8](#) includes young college students from

several African countries. The same is true for the YALI (Young African Leadership Initiative) program that is also discussed in [Chapter 8](#). Within countries, governments are making efforts to create awareness and encourage college students and graduates to embrace entrepreneurship. Such efforts at the national levels are encouraging. However, to be fruitful, young people must change their attitude toward risk and uncertainty.

### *Change Attitude Toward Risk and Uncertainty*

Risk taking is one of the characteristics of entrepreneurial behavior because engaging in entrepreneurship involves some form of risk and uncertainty. Uncertainty is a basic fact of life and implies that anything might happen (Wennekers et al. 2007).

Risk is a special case of uncertainty (Wennekers et al. 2007) and represents the possibility that something unwanted or unpleasant will happen. In the case of new venture creation, risk involves the possibility of not being successful in transforming the opportunity into a viable and profitable venture.

In his classic work on risk, uncertainty, and profit, Knight (1921) argued that the entrepreneur bears the uncertainty of the venture and viewed uncertainty as arising from partial knowledge. Specifically, he argued that “the essence of the situation is action according to opinion, of greater or less foundation and value, neither entire ignorance nor complete and perfect information, but partial knowledge” (Knight 1921, p. 199). If uncertainty arises out of partial knowledge, risk, however, involves a probability of loss or gain. Uncertainty is particularly relevant for startup entrepreneurs because they cannot know the full range of possible outcomes (Bhide 1994). For example, when entrepreneurs start new ventures, the risk involved implies a possibility of making or losing money.

To foster entrepreneurship in a community, its members must demonstrate a willingness to take risk and embrace uncertainty. However, while some cultures may embrace uncertainty and risk, others may be risk averse and avoid uncertainty. For example, African cultures are described as high uncertainty-avoidance cultures (Hofstede 1991). Uncertainty avoidance refers to the tendency to avoid uncertain and ambiguous outcomes. Hofstede (1991, p. 113) defined it as the extent to which members of the culture feel threatened by uncertain or unknown situations. “In low uncertainty avoidance cultures, members are expected to cope with



uncertainty as best as they can, whereas in high uncertainty avoidance cultures, structures are established, which minimize the level of uncertainty faced by individual members” (Mueller and Thomas 2000, p. 60). Hofstede (2001, p. 164) argued that people in high uncertainty-avoidance cultures “look for structure in their organizations, institutions and relationships, which makes events clearly interpretable and predictable.”

High uncertainty avoidance is contrary to entrepreneurship because entrepreneurship involves risk taking and starting a new venture is always risky and uncertain. Hofstede (1980, p. 184) found that in “low uncertainty-avoidance cultures, there is more willingness to take risks, and achievement is often recognized in terms of pioneering, whereas in high uncertainty-avoidance cultures, there is a greater fear of failure, a lower willingness to take risk, lower levels of ambition, and lower tolerance for ambiguity.” To develop entrepreneurial ecosystems, citizens in SSA countries must be risk-prone, embrace uncertainty, and subscribe to a positive view of failure. The last aspect cannot be ignored because entrepreneurship also involves failure.

### *View Failure as a Learning Opportunity*

Failure is generally described as the abandonment of an action that has not reached its intended objective. As such, it has a negative connotation not only for the actor but also for the community. People may get disappointed after a failure and may decide not to try again. Society may ascribe certain meanings to failure. For example, failure may be associated with incompetence, lack of effort, lack of motivation, or even ignorance. The way a community perceives and describes failure may determine whether an individual decides to try again after failure or to give up. A traditional view of failure considers it as something negative that must be avoided or hidden when it occurs.

For entrepreneurship to take root a community, failure must have a different meaning because it represents an important aspect of entrepreneurship (McGrath 1999; Cardon et al. 2011). Scholars have defined entrepreneurial failure in different ways. For example, Zacharakis et al. (1999) equate failure to bankruptcy and insolvency, whereas McGrath (1999, p. 14) views it as “the termination of an initiative that has fallen short of its goals” (McGrath 1999, p. 14) and Cannon and Edmondson (2001, p. 162) describe it as “deviation from expected and desired results.” Shepherd (2003, p. 318) provides a somehow comprehensive definition of failure by suggesting that it “occurs

when a fall in revenues and/or a rise in expenses are of such a magnitude that the firm becomes insolvent and is unable to attract new debt or equity funding; consequently it cannot continue to operate under the current ownership and management.”

The common thread of all these conceptualizations of entrepreneurial failure is the termination of the venture resulting from an inability to accomplish its stated objectives. When this occurs, the entrepreneurs involved must draw the necessary conclusions. This process involves both individual as well as external factors. Hence, how an entrepreneur copes with failure may well depend on his/her personal characteristics as well as environmental factors. Entrepreneurs operating in societies that accept failure may develop better coping mechanisms than those operating in societies where failure is feared and perceived negatively.

In entrepreneurship, there are two views of failure: the dysfunctional view and the functional view of failure. The former considers failure as something bad that must be avoided at all costs, whereas the latter views failure as a learning opportunity. A dysfunctional view of failure can lead to a stigmatization of entrepreneurs whose initial ventures have been unsuccessful and negatively affect their willingness to engage in entrepreneurial activities in the future. A functional view of failure, to the contrary, can serve as an opportunity to learn and a potential guideline for future actions.

As Cardon et al. (2011, p. 80) noted, “cultural perceptions of venture failure may profoundly influence the allocation of resources toward risky ventures. . . . If failure is viewed as intolerable, and the associated stigma carries over into personal and social stigmas, potential entrepreneurs would be less likely to pursue entrepreneurial opportunities or be more conscientious in doing so.” To engage in entrepreneurial activities, Africans must subscribe to a functional view of failure and consider entrepreneurship as involving experimentation and trial and error. Hence, failure is part of the entrepreneurial process. As Mantere et al. (2013) put it, “failure and entrepreneurship are natural siblings.”

If failure is inherent to the entrepreneurial process, any culture that intends to consider entrepreneurship as an engine of economic growth and development must embrace it. Hence, citizens in SSA must consider failure as acceptable and an opportunity to learn from experience and mistakes. Considering failure as inherent to the entrepreneurial process would require a paradigmatic shift. Not only should failure be part of entrepreneurship education, but potential entrepreneurs should be

provided training on how to cope with it. To this end, recognizing entrepreneurship as a trial-and-error process is important. Learning to cope with failure is important because failure engenders strong emotions that may prevent learning from taking place (Shepherd 2003, 2004; Sigh et al. 2007).

## 2 TRANSFORMING SOCIAL VALUES INTO ASSETS

The African culture could be characterized as a collectivistic culture in Hofstede's cultural dimensions (Hofstede 1991). Several authors have described the African cultural values of solidarity, extended family, and ethnic loyalty as impediments to change and economic progress (Wolf 1955; Nafziger 1969; Platteau 2000; Grimm et al. 2013). In addition, the migration of Africans outside the continent has spurred intense debates and a voluminous literature on the costs of brain drain on the economic development of sub-Saharan Africa. Although this is true to some extent, it is also possible that these same factors could be construed as assets. In the following lines, I explore how the extended family and the diaspora could be transformed into assets to foster entrepreneurship in sub-Saharan Africa.

### *The Family as Entrepreneur*

In most SSA countries, the notion of the family is one that includes members of the extended family. Anthropologists, sociologists, and economic development experts have all written about the importance of the extended family in SSA and its impact on economic progress and the creation and accumulation of wealth. Wolf (1955) noted the potential negative impact of the extended family on economic growth and development in Africa. He contended that the extended family was a major barrier to entrepreneurial activity because it dampens incentives to achieve, deters risk taking, and impedes the mobilization of capital. Nafziger (1969) explored the effect of the extended family on entrepreneurial outcomes in Nigeria. He found that although the extended family prevented the scaling of a new venture, it contributed to its creation. In this study, Nafziger also found that some entrepreneurs relied on the extended family to start their new ventures. However, once started, it was difficult to expand these ventures because the extended family required financial resources that could have been re-invested.

Helping family members in need is a social expectation in most SSA countries. Some authors have described such expectations as *forced solidarity tax* or *forced redistribution* (Platteau 2000; Grimm et al. 2013). Platteau (2000, p. 209) explicitly notes that “the negative effects of traditional norms of generosity and redistribution in terms of incentives to savings and innovations are not confined to the countryside but may also affect modern cities where many proprietors are unable to resist kinship demands to any great extent, especially so in sub-Saharan Africa.”

Meeting these social obligations can lead employees and managers to look for additional sources, very often, through corrupt practices. Meeting social obligations can also have a detrimental impact on entrepreneurs. For example, Buame (1996) and Kallon (1990) have observed that family obligations impeded entrepreneurs in West Africa. Particularly meeting these family obligations requires a misallocation of financial resources that negatively affect the entrepreneurs’ ability to control their ventures. For instance, entrepreneurs may be required to hire family members who may not have the right skills to become effective employees or refrain from firing poorly performing family-member employees. Kiggundu (2002) also noted that the entrepreneurs’ businesses suffer as a result of social obligations.

For entrepreneurship to take hold, this forced solidarity tax must be reduced if not eliminated. It is also possible to transform this apparent disadvantage into an opportunity, a force for good. Instead of the family becoming a burden for the entrepreneur, the family can be an entrepreneur itself. I introduce the constructs of *the family as entrepreneur of kin venturing*, to consider the extended family as a means for entrepreneurship. In kin venturing, family resources can be leveraged to exploit business opportunities. In this regard, members of the extended family will become an asset rather than a liability. To do so requires a new family dynamic that favors the sharing of experience and knowledge and other nonfinancial resources. For example, a family could use its land to start a venture in agribusiness and/or food processing. A family could also leverage the experience and expertise of family members to start new ventures. However, for the family to become an entrepreneur, family members must build strong ties and trust among themselves.

To do so would require the promotion of self-reliance and a change in the social perceptions of entrepreneurs. In some countries, entrepreneurs are seen as those who have failed in school and as a result, do not have anything to do but go around “trying to fix” things. Entrepreneurs could

rely on family members not only as employees but also as potential sources for income-generating activities. There are already some indications that some entrepreneurs, particularly in the informal sector, rely on family members as employees to launch or scale their ventures. This is prevalent in the transportation sector where family members act as drivers or luggage handlers.

Another element related to transforming the family into an entrepreneurial family is the development of community-based enterprises. This could lead to the development of the construct of “crowd-capitalism” (Beugré and Das 2013) and/or community-based enterprises (Peredo and Chrisman 2006). For citizens to play a positive role in this ecosystem, they must think like entrepreneurs, think-out-of-the-box, set audacious goals, make a lot of experiments, and value characteristics, such as honesty and integrity, resilience, creativity, and innovation. Of course, traditions are important. They give meaning to our lives; but overdone, traditions can stifle creativity and innovation.

### *Engage Diaspora Entrepreneurs and Professionals*

Sub-Saharan Africa is one of the regions of the world to have a large portion of its citizens leaving outside its borders. This migration of highly educated professionals as well as individuals looking for better pastures elsewhere has been construed as a hindrance to the development of SSA. Countless articles and books have been written about the brain drain of Africans going to the West and Asia. Although this migration has negative effects on the growth and development of the continent, to some extent, members of the diaspora could be a blessing for SSA. However, for this to occur, the diaspora must engage in the development of the continent. In this section, I argue that the diaspora could play a positive role in the creation of entrepreneurial ecosystems in sub-Saharan Africa. It can do so by providing ideas, opportunities for training and education, knowledge and technology transfer, and by investing themselves in the creation of new ventures.

Diaspora entrepreneurs and professionals include people from sub-Saharan Africa who have migrated to developed countries, such as the United States, Canada, the European Union, Australia, or Asia. They could help foster entrepreneurship in their respective countries. Diaspora entrepreneurs are uniquely positioned to recognize opportunities in their countries of origin (Newland and Tanaka 2010). An example of an organization that

diaspora entrepreneurs could benchmark is Techwadi, a social venture created and managed by Arab entrepreneurs from Silicon Valley to provide guidance and support to entrepreneurs in the Middle East. A similar organization, The African Network (TAN, <http://theafricannetwork.org/tan>), a US-based nonprofit organization, was created in 2004 in Silicon Valley to foster entrepreneurship and technology in Africa and among people of African descent.

African expatriates could contribute to the entrepreneurial ecosystems as entrepreneurs and investors. As entrepreneurs, they can set up new ventures themselves or team up with home country entrepreneurs. They can also provide guidance and expertise to home-based entrepreneurs in management and entrepreneurship. Specifically, those who are managers in companies overseas or business educators can act as consultants to entrepreneurship centers, proof-of-concept centers, or business incubators. They can also develop venture capital firms to support new ventures. Research shows that diaspora investment benefits the home countries' development. There are few reliable statistics on the contribution of the diaspora in the creation of new businesses in SSA countries. However, it is worth mentioning that the diaspora can also contribute to entrepreneurship through knowledge transfer and investment.

For diaspora entrepreneurs to make a difference, the governments of SSA countries must develop clear policies to lure them back. For example, they can consider lowering tariffs on imported raw materials and equipment into the country of origin to help diaspora entrepreneurs begin transnational businesses and establish mechanisms that encourage regular consultations with diaspora professionals (Newland and Tanaka 2010). Newland and Tanaka (2010) also suggest that national governments make it clear that diaspora entrepreneurs are welcome in their countries of origin and facilitate their movement to and from their countries of origin. This last aspect is particularly important for some SSA countries that require natives of their countries who have migrated elsewhere to apply for a visa. One such country is the Ivory Coast that requires that members of its diaspora who have been granted citizenships of other countries do formally apply for a visa to "re-enter" the Ivory Coast. Such a policy does not facilitate the movement of diaspora entrepreneurs and professionals from the Ivory Coast.

To be an effective player in the development of entrepreneurial ecosystems in sub-Saharan Africa, diaspora entrepreneurs and professionals must leverage their expertise in five key areas, including networking opportunities,

mentoring, training, investment, and venture capital and partnerships (Newland and Tanaka 2010). For example, diaspora entrepreneurs could interact with entrepreneurs overseas as well as entrepreneurs and professionals in their countries of origin. By doing so, they can connect entrepreneurs of their countries of origin to overseas entrepreneurs. Diaspora entrepreneurs can also serve as mentors to country-of-origin entrepreneurs. In so doing, they can share their experience and provide advice and expertise to locally based entrepreneurs.

Diaspora entrepreneurs and professionals can also provide training to country-of-origin entrepreneurs and would-be entrepreneurs. They can do so by being associated with entrepreneurship centers, business schools or universities in their countries of origin. Diaspora entrepreneurs can also directly invest in their countries of origin. Much has been written on the importance of remittances by African diaspora. In addition to these remittances, governments should focus on improving diaspora direct investment (DDI). Hence, governments in sub-Saharan Africa should provide incentives to increase DDI as well as FDI (Foreign Direct Investment). They must recognize that DDI is as important as FDI. In fact, one could argue that members of the diaspora have a vested interest in the development of their countries of origin and are able to make sacrifices in some situations. As a result, they could be able to invest where others could or will not. Finally, members of the diaspora could serve as conduits to facilitate venture capital and partnerships between companies from overseas and their countries of origin.

## Role of International Organizations

**Abstract** This chapter explores the role of international organizations in supporting the creation of entrepreneurial ecosystems in sub-Saharan Africa. The term “international organizations” is broadly used and includes foreign government development agencies, such as USAID, international nongovernmental organizations, and development agencies, such as the World Bank, the international private sector, and international universities. Such organizations can provide support in form of financial resources, expertise, training, and benchmarking opportunities. Examples of international programs that could support the development of entrepreneurial ecosystems in sub-Saharan Africa include the GET (Global Entrepreneurship Training) program funded by the government of South Korea and sponsored by UNESCO (United Nations Educational, Scientific and Cultural Organization) and the YALI (Young African Leadership Initiative) program supported by the White House.

**Keywords** Development agencies · GET program · Young African Leadership Initiative (YALI)

The fifth pillar of the entrepreneurial ecosystem is international organizations, including international governments, economic development agencies, international private sector, international universities, and international nongovernmental organizations. These organizations can only help when



there is an environment that is conducive to meaningful efforts to lift sub-Saharan African countries out of poverty. They can do so by contributing to capacity building and funding of entrepreneurial training programs. To play a positive role, these organizations need to develop a new mindset. Very often, aid agencies, developed countries, and international nongovernmental organizations tend to function on the basis of philanthropy, colonialism, and paternalism. However, it is becoming more evident than before that twinning is better than paternalistic approaches. Twinning is a process that involves pairing individuals and organizations with other individuals and organizations. It is based on a process of co-creation rather than one party dictating to the other what practices to adopt. In this chapter, I explore the potential contribution of international organizations in the development of entrepreneurial ecosystems in SSA. I structured the discussion around three main sections: (1) international governments' initiatives, (2) international organizations, and (3) development agencies.

## I INTERNATIONAL GOVERNMENTS' INITIATIVES

Governments in developed countries have taken initiatives to improve economic development and growth in sub-Saharan Africa. It is obvious that since gaining independence from European colonial powers, SSA countries have received development aids from countries, such as the United States, the European Union, Japan, and others. However, these direct financial aids have not produced the results expected. Today, these same countries have acknowledged that the old paradigm to development is no longer sustainable nor enviable. The funding model adopted by international agencies was not working (Biekpe 2004). As a consequence, many governments are changing the old approach to economic development and are focusing on entrepreneurship and innovation. To this end, they are funding new initiatives that aim at promoting entrepreneurship in sub-Saharan Africa. Examples of such programs include the GET (Global Entrepreneurship Training) program sponsored by UNESCO and funded by the South Korean government. Another initiative is the one established by the US government, the White House Initiative YALI (Young African Leaders Initiative) now named the Mandela Leadership Initiative. I will briefly discuss each of these two initiatives in the following lines.

### *The GET Program*

To provide support to developing countries, the government of South Korea initiated the Global Entrepreneurship Training (GET) program. The program is sponsored by UNESCO (United Nations Educational, Scientific and Cultural Organization) and funded by the government of South Korea. The program's mission is to support developing countries in building entrepreneurial capabilities. Every year, the program trains a group of selected young people from African countries in entrepreneurship. Usually, the program runs for a week. I participated in this program as a business plan evaluation judge in 2014 during my Fulbright Scholarship in Ghana. It is organized by Handong Global University, which sends instructors and volunteer students to the African sites. Such a program could contribute to the development of entrepreneurial ecosystems in SSA.

Nascent entrepreneurs or would-be entrepreneurs could participate in the program. In addition to the knowledge in entrepreneurship that the program offers, participants to the program could also expand their social networks and connect with entrepreneurs of other SSA countries. Hosting institutions can also benefit from the program by creating visibility about their commitment to entrepreneurship education. The 2015 program was held at the Addis Ababa Institute of Technology and the 2016 program was hosted by the School of Business and Management at the Harare Institute of Technology in Zimbabwe. Previous programs were held in Kenya in 2011 and in Ghana in 2014.

### *Young African Leadership Initiative (YALI)*

The Young African Leaders Initiative (<https://yali.state.gov>) was created by President Barack Obama in 2010. Its purpose is to develop a new generation of young leaders from sub-Saharan Africa. Through its Mandela Washington Fellowship, YALI brings about 500 young leaders from Africa to the United States to be immersed in entrepreneurship and leadership. The participants are hosted for six weeks by an institution of higher education where they receive training in entrepreneurship. After the six weeks, some participants could intern for eight weeks in a US company. Participants are expected to return to their own countries to continue their activities. The program has recently established regional centers in sub-Saharan Africa, two in West Africa (Accra, Ghana and

Dakar, Senegal), one in East Africa (Nairobi, Kenya), and one in Southern Africa (Pretoria, South Africa). The purpose of these regional centers is to serve as a follow-up to the Mandela fellowships and contribute to capacity building by providing quality leadership, supporting entrepreneurship, and enhancing professional development and networking.

Along with the Young African Leaders Initiative, the US government also promotes entrepreneurial activities in sub-Saharan Africa through the State Department and the United States Agency for International Development (USAID). Through the Partnering to Accelerate Entrepreneurship (PACE) initiative, USAID promotes entrepreneurship around the world. The PACE initiative focuses on five major areas: (1) investing in early stage enterprises, (2) encouraging approaches that combine investment and philanthropy, (3) researching and sharing lessons learned, (4) testing ways to incubate entrepreneurs and connect them with investors, and (5) making lending to entrepreneurs less risky through guarantees (<https://www.usaid.gov/PACE>).

USAID could contribute to the development of entrepreneurial ecosystems in sub-Saharan Africa through the PACE initiative and the Global Development Lab that partners with incubators, accelerators, and investors to foster entrepreneurship around the world. Under its initiatives, USAID has been instrumental in the creation of Catalyst for Growth, a nongovernmental organization based in Johannesburg, South Africa, with financial support from JP Morgan Chase Foundation and Dalberg Global Development Associates. USAID has also formed a partnership with Open Capital Advisors to deliver technical assistance to accelerate growth and investment for early stage small and growing businesses in Kenya, Rwanda, Tanzania, and Uganda (<https://www.usaid.gov/PACE>). USAID has also developed the Entrepreneurship Toolkit to help partner countries, design, implement, and monitor successful development programs (USAID 2011). The Entrepreneurship Toolkit focuses on opportunity-based entrepreneurship where new ventures have the potential to grow.

### *European Union's Programs*

Several European Union countries, such as France, the United Kingdom, Germany, Norway, Sweden, and the Netherlands, to name but a few, run national programs aimed at contributing to economic and social development in sub-Saharan Africa. Recently, these programs have focused on capacity building and entrepreneurship. All these initiatives by governments

from developed countries could contribute to the development of entrepreneurial ecosystems. They can do so by encouraging governments, the private sector, and universities to focus more on entrepreneurship. They can also help develop talent and provide financial support to nascent entrepreneurs or those entrepreneurs who are in the scaling phase of their ventures. Examples of programs aimed at fostering entrepreneurship in SSA include the Africa Enterprise Challenge Fund (<http://www.aecfafrica.org>), which supports the private sector. It is competitive and companies have to compete to receive the funding.

## 2 INTERNATIONAL ORGANIZATIONS

### *Corporations*

Global corporations can play an important role in developing entrepreneurial ecosystems in sub-Saharan Africa. They can do so through participation by their local subsidiaries or directly by providing knowledge transfer and financial support. For example, they can support the development of new companies that could serve as their suppliers or clients. They can also partner with universities to fund research and entrepreneurial activities. For example, IMB, Samsung, and Nokia are supporting Stanford's efforts to open a new innovation center in Nairobi, Kenya. Other corporations such as MasterCard through its MasterCard Foundation, Microsoft Corporation, Cisco Systems, Procter and Gamble, General Electric, Atlas Maras, and McKinsey & Company are providing financial and in-kind support to the US-led regional centers created in sub-Saharan Africa through the Young African Leaders Initiative (<https://yali.state.gov/regional-leadership-centers>).

### *Nongovernment Organizations and Foundations*

This section explores the role of nongovernment organizations (NGOs) and foundations in promoting entrepreneurship in sub-Saharan Africa. Organizations, such as Endeavor (<http://www.endeavor.org>), aim at identifying and supporting high-impact entrepreneurs around the world. Endeavor has an office in Johannesburg, South Africa. The Global Entrepreneurship Summit is also an avenue that creates awareness of entrepreneurship in a country. It attracts entrepreneurs, investors, policymakers, as well as heads of states. The 2015 Global Entrepreneurship Summit held in Nairobi, Kenya, on July 25–26 featured US president Barack Obama.

Other initiatives aimed at fostering entrepreneurship in sub-Saharan Africa include the Liberalizing Innovations Opportunity Nations (LIONS@AFRICA), launched in 2012 during the World Economic Forum in Addis Ababa, Ethiopia. It is a partnership between governments and the private sector that seeks to encourage and enhance Africa's innovation ecosystem and to spur entrepreneurship by investing in capacity-building, improving access to capital, enhancing connectivity to global markets, and building credibility by raising awareness of Africa's innovation potential. The goal of LIONS@AFRICA is to support 100,000 entrepreneurs in SSA by 2020. Its founding partners include the US State Department, Global Entrepreneurship Week, Microsoft, Venture Capital for Africa, Nokia, InfoDEV, African Development Bank, the US Agency for International Development, DEMO, Startup Weekend, Appfrica, Business Action for Africa, Business Fights Poverty, and Venture Hive (<http://www.demo-africa.com/supporters/lions@frica>).

The Bill and Melinda Gates Foundation is funding an initiative in Ivory Coast to promote the manufacturing of drugs by local companies. Such an initiative could promote research by local scholars and contribute to the emergence of local pharmaceutical companies. Other organizations and foundations that could contribute to the development of entrepreneurial ecosystems in SSA include the Global Entrepreneurship Network (GEN) and the Kauffman Foundation. For example, the Kauffman Foundation, which focuses on entrepreneurial education around the world, could play an important role in entrepreneurial ecosystems in SSA by partnering with local universities.

### *International Institutions of Higher Education*

International institutions of higher education are present in most sub-Saharan countries. For example, Mercer University every year sends a team of MBA students in Rwanda to teach entrepreneurship to women. Entrepreneurship is an essential part of the industrial policy designed by the Rwanda's government known as Rwanda's Vision 2020. Stanford University is currently operating an innovation center in Accra, Ghana, established in 2013 and is planning to open another center in Nairobi, Kenya, in June 2016. Columbia University has also opened a research center in Nairobi, Kenya, called the Columbia Global Research Center (<http://globalcenters.columbia.edu/nairobi>). Initiatives from international institutions of higher education could greatly contribute to the

development and vibrancy of entrepreneurial ecosystems in sub-Saharan. The question, however, is whether these international institutions should partner with local institutions in SSA or go it alone.

### 3 DEVELOPMENT AGENCIES

#### *The World Bank*

A lot has been written about the role of the World Bank and its sister institution the International Monetary Fund (IMF) in supporting economic development policies in the developing world. However, a recent consensus is that most of the policies prescribed since the independence of SSA countries have yielded very few positive results. In fact, they have failed. The new mantra now is to turn to policies that are not only localized but can generate lasting positive impact: hence, the concept of sustainable development. Even officials from the World Bank and the IMF have acknowledged that their policy prescriptions were far from being effective. For example, in a document published in 2005, the World Bank explicitly recognized that its policies were no longer working in sub-Saharan Africa and that new approaches would need to be designed and implemented. This is due to the fact that the structural, institutional, and macroeconomic reforms advocated by the World Bank and International Monetary Fund and implemented by national governments did not result in the expected economic growth.

This indicates that there is no best way to develop a country or no best practice that could be applied across the board. After all, economic development policies are context-specific. What works in one country may not always work in another country. Thus, the World Bank has recently focused on initiatives to strengthen the private sector and empower citizens in SSA. For example, the *Ease of Doing Business* is a metric that could help SSA countries assess their performance in developing business-friendly environments. Their rank on this metric can be considered as a measure of whether their policies are effective or not. An improvement in the ranking can serve as an external validation of their policies, whereas a downward movement on the metric could indicate otherwise.

The World Bank could support the development of entrepreneurial ecosystems in SSA by providing loans and grants to governments, universities, or institutions that focus on entrepreneurship. It is already involved

in activities that foster entrepreneurship in sub-Saharan Africa by supporting governments' initiatives. For example, the World Bank offered \$65 million to support Ghana's Youth Enterprise Development Project. It also funded the creation of the Climate Innovation Center in Nairobi, Kenya (<http://kenyacic.org>). The World Bank Group/IMF Staff Young African Society (YAS) advocates solutions to problems facing young people in SSA by fostering entrepreneurship and innovation. It organizes the Africa Innovative Washington DC Series.

### *The United Nations*

As an institution, the United Nations encourages economic development and promotes peace around the world, especially in the developing world. The United Nations Industrial Development Organization (UNIDO) provides services to the private sector in developing countries to contribute to the eradication of poverty. Its role in sub-Saharan Africa has focused on supporting government policies that contribute to the development of the private sector. For example, UNIDO has created the Competitiveness, Business environment and Upgrading (CBU) unit to help SSA countries strengthen their institutional environment to create a competitive private sector. Through this initiative, UNIDO is also contributing to the promotion of the manufacturing of pharmaceutical products in SSA countries, the promotion of women, youth, and rural entrepreneurship. In promoting such initiatives, UNIDO can contribute to the development of entrepreneurship in sub-Saharan Africa. It can do so by working with national governments or by directly working with universities and other institutions promoting entrepreneurship. In addition to UNIDO, other United Nations organizations, such as the International Labor Organization, run programs that focus on entrepreneurship development in sub-Saharan Africa. For example, the International Labor Organization runs the Youth Entrepreneurship Facility (YEF, <http://www.yefafrika.org>). The program is currently active in SSA countries, such as Kenya, Tanzania, and Uganda, and offers entrepreneurship education and promotes a culture of entrepreneurship and self-employment.

As I have discussed above, international cooperation can help to facilitate the creation of entrepreneurial ecosystems in sub-Saharan Africa. Because of globalization and the spread of information and communication technologies, any effort to develop entrepreneurial ecosystems in SSA should not ignore the potential role of international organizations.

However, to play a positive role, international organizations and governments should integrate the institutional context in their efforts. They should also collaborate with national institutions in sub-Saharan Africa. Although there are many efforts and initiatives, there are not always part of a coherent and consistent structure aimed at fostering entrepreneurial ecosystems. In some cases, efforts are undertaken individually. As a result, they can lead to duplication of effort and result in a lack of synergy. Despite the important role that international organizations could play, it is worth mentioning that these organizations are “feeders” and cannot lead the development of entrepreneurial ecosystems in sub-Saharan. They can only play a supportive role. This implies that the bulk of the tasks remains with Africans themselves.



## Conclusion

**Abstract** This chapter concludes the book by reiterating the importance of creating entrepreneurial ecosystems in sub-Saharan African countries. In so doing, the chapter emphasizes the role of an entrepreneurial society and the development of national systems of entrepreneurship.

**Keywords** Entrepreneurial society · Entrepreneurial mindset · Entrepreneurship · Entrepreneurial ecosystems · National systems of entrepreneurship

In this book, I have argued for the development of entrepreneurial ecosystems in sub-Saharan Africa. I have also suggested strategies for developing such ecosystems. Although each ecosystem depends on the environment in which it is embedded, there are general guidelines that could pave the way for each country. After all, entrepreneurship is embedded in a particular institutional environment. To spur economic development and growth, countries in sub-Saharan Africa must consider entrepreneurship as a key tool. It is only through innovation and entrepreneurship that sub-Saharan Africa can leverage its vast natural resources. I end this book with a quote from the French poet, writer, and novelist Victor Hugo who once said “No army can withstand the strength of an idea whose time has come.” Indeed, the time for entrepreneurship and innovation has come to sub-Saharan Africa.

We are all familiar with the story of the young man and the blind old lady. A young man once approached a blind old lady and asked her the following question: “Look, I have a bird in my hand. Tell me, is it alive or dead?” Had the old blind lady answered the “bird is alive,” the young man would have squeezed the bird in his hand and killed it. Had the old blind lady answered “the bird is dead,” the young man would have released it. Either way, the young man had decided to fool the old blind lady. The old blind lady paused and replied “The answer is in your hand.” So, the answer in building entrepreneurial ecosystems in Africa to transform African countries into entrepreneurial societies lies in the hands of Africans themselves. In this regard, I concur with Kiggundu (2002, p. 254) that “the future of entrepreneurship must be in the hands of the Africans themselves”. Developing entrepreneurial ecosystems in each SSA country would lead to the creation of a National System of Entrepreneurship defined as “the dynamic, institutionally embedded interaction between entrepreneurial attitudes, ability, and aspirations, by individuals, which drives the allocation of resources through the creation and operation of new ventures” (Acs et al. 2014, p. 479). It is my hope that this book will set the stage for the advancement of an entrepreneurial society in sub-Saharan Africa, which is based on people advocating individually driven values that promote innovative venturing as a desirable option (Hechavarria and Ingram 2014) and where people develop the mindset of thinking in terms of opportunities and not obstacles. It is only by developing this entrepreneurial mindset that nations of sub-Saharan Africa can realize their full potential.

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