Frontiers in African Business Research

Leona Achtenhagen
Ethel Brundin
Editors

Management Challenges in Different Types of African Firms

Processes, Practices and Performance

Springer

Frontiers in African Business Research

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Foreword

African Scholars, African Methods, and African Contexts: Understanding Management from an Indigenous Perspective

Africa is now in the 'crosshairs' of the global business world. Long considered a bastion of corruption, inefficiency, and war, today business leaders see Africa for its growth potential. While only 15 years ago Africa was seen as a 'hopeless continent' (*The Economist*, 2000), today it is seen as a 'rising and hopeful continent' (*The Economist*, 2013). With 1.2 billion youthful people and an emerging middle class, Africa represents one of the few silver linings in an otherwise highly competitive global world where many of the wealthier countries have aging populations. Although economic growth has slowed from its recent highs of 7–8%, it is still outpacing population growth (if barely) and at an estimated 3% is adequate to attract global investments in everything ranging from consumer goods to infrastructure. While African political systems are frequently in turmoil, what are largely absent on the continent are the many wars that historically raged, the negative influences of hyperinflation and currency regulations, and some of the worst totalitarian regimes; all these are now in the purview of social media as observed in the ubiquitous African cell phones and Internet cafés. Simultaneously, Africans are becoming better educated with primary enrollments reaching a robust 80% leading to a more enlightened public that demands better governance and transparency.

In this volume, Achtenhagen and Brundin lead an emergent group of African management scholars to begin asking and researching some of the questions that have perplexed management scholars in more advanced economies for over half a century. They and their dedicated colleagues (such as Almas Heshmati and Lars Hartvigson) do us all a service by facilitating this dialog—both through careful training and mentoring (with support from Jonkoping University in Sweden) and providing encouragement for sharing the newfound expertise with scholars elsewhere. Indeed, this publication is emblematic of a new voice—an opportunity for

indigenous African scholars to begin dialoging with management scholars in Europe, North America, and Asia. It is both a critical voice and a powerful one informed through the experiences and unique perspectives that only African scholars can provide.

Reading the chapters contained in this volume point the reader to the importance of conducting indigenous research (Holtbrügge 2013; Nkomo et al. 2015; Tsui 2004). Unfortunately, much of what we know regarding the study of management and public policy emanates from North America, Europe, and Eurasia. We not only lack assurance that our theories are generalizable, we also lack confidence that they are adaptable to other contexts, particularly environments that vary widely from those countries that first developed management research. The scholarship in this volume addresses these points head-on. Its well-thought-out chapters highlight the radical changes occurring on the continent both by their subject and by their context. How do universities reengineer themselves to become more relevant? How does the importance of sustainability influence public policy? What practices are employed in newly emergent supply chains, particularly those developing in new regional trading blocs? How do new capital markets form and how can they be properly developed and monitored? What factors support the growth of ICT, export performance, productivity, and overall strategic change?

Decades of external 'experts,' arriving from bilateral and multilateral agencies, have largely failed to address the economic and social problems unique to the African continent. Addressing these problems and answering many of the questions mentioned earlier from an African perspective require a cadre of well-educated researchers familiar with the local environment. Social norms differ considerably across cultures; for example, the concepts of *jugaard ubuntu* and *guanxi* are rarely reflected in traditional management literature (Holtbrügge 2013). This does not mean that contemporary management scholarship has no value in Africa. International research expertise is still relevant—many of the methods employed are universal—however, understanding the specific context of the African environment requires indigenous expertise. A quick comparison can be made with China and India, both of whom host large research environments, a number of world-class universities, and undertake scholarships that facilitate the identification of appropriate solutions to their specific environments. These institutions are important because they often define the nature of the very questions that are being asked. Subtle variances regarding ethnicity, culture, gender, and social class may be invisible to visiting international scholars and quite apparent to indigenous scholars. Recognizing these disparities can mean the difference between effective and ineffective research conclusions.

In sum, this volume should be of interest not only to other emerging African scholars, but also to those of us who wish to explore the overall generalizability of our own research activities. By exploring related scholarship through the lens of African indigenous scholars, we get an opportunity to both test our own assumptions and examine new relationships overlooked in our existing body of literature.

I trust readers will find these explorations as interesting and novel as I have and that this important volume encourages others to collaborate, examine, question, and challenge their own assumptions in the African context.

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References

Holtbrügge, D. 2013. Indigenous management research. *Management International Review* 53(1): 1–11.

Nkomo, S., D. Zoogah, and M. Acquaah. 2015. Why Africa journal of management and why now? *Africa Journal of Management* 1(1): 4–26.

The Economist. 2000. Africa: The hopeless continent.

The Economist. 2013. Africa rising: A hopeful continent. Special Report: Emerging Africa, March 2.

Tsui, A. 2004. Contributing to global management knowledge: A case for high quality indigenous research. *Asia Pacific Journal of Management* 21: 491–513.

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About the Editors

Leona Achtenhagen holds a Ph.D. and is professor of Entrepreneurship and Business Development at Jönköping International Business School (JIBS), Jönköping University, Sweden. Professor Achtenhagen's current research interests are typically related to entrepreneurial and strategic activities of micro- as well as small- and medium-sized companies in a range of different contexts. She has conducted a number of different research projects on aspects of entrepreneurship and SME management in underprivileged contexts. Her recent papers address issues such as the status of women entrepreneurs in Pakistan, business development in micro-firms, business model innovation, and innovative pedagogical tools for entrepreneurship education. Her research results have been published as numerous book chapters and in leading international journals such as *Entrepreneurship: Theory & Practice*, *Entrepreneurship & Regional Development* and *Long Range Planning*. Professor Achtenhagen has also conducted a number of projects for the OECD and European Commission's initiatives for promoting entrepreneurship. Together with Ethel Brundin, she edited the volume *Entrepreneurship and SME Management Across Africa: Context, Challenges, Cases*, published by Springer in 2016.

Ethel Brundin holds a Ph.D. and is professor of Entrepreneurship and Business Development at Jönköping International Business School (JIBS), Jönköping, Sweden. She is Extra-Ordinary Professor at the University of the Western Cape, Cape Town, South Africa, and has led a number of research projects in previously disadvantaged contexts. Her research on Broad Based Black Economic Empowerment (BBBEE) has been well received by policymakers and has been published in journals such *as Journal of Developmental Entrepreneurship, International Journal of Entrepreneurship and Small Business,* and *the International Journal of Environmental, Cultural, Economic and Social Sustainability*. The focus of her research interest is micro-processes among entrepreneurs and in family businesses including emotions, entrepreneurship, and strategic leadership. Professor Brundin has published in edited books and in leading international journals such as the *Journal of Business Venturing* and *Corporate Governance: An International Review* and edited books about strategic and entrepreneurial leadership with a focus on family firms, as well as about immigrant and social entrepreneurship. Her most recent edited books are *Entrepreneurship and SME Management Across Africa: Context, Challenges, Cases* published by Springer and *Contextualizing Entrepreneurship in Emerging Economies and Developing Countries* published by Edward Elgar.

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Chapter 1
Introduction—Management Challenges in Africa

Leona Achtenhagen and Ethel Brundin

Abstract This introductory chapter addresses management challenges across different types of African organizations. Based on a literature review of how management challenges in Africa have been studied to date, it introduces this volume's three parts—Practices, Processes, and Performance. It also gives a brief insight of the chapters that discuss these challenges in detail.

Keywords Literature review · Practice · Process · Performance · Africa

1 Introduction

This volume provides a selection of papers presented at the second conference on 'Recent Trends in Economic Development, Finance and Management Research in Eastern Africa' held in June 2016 in Kigali. The conference was organized by the University of Rwanda and Jönköping International Business School, Jönköping University, Sweden.

It is evident from the chapters included in this volume that African organizations not only face typical management challenges common to organizations around the world, but in addition also need to tackle a number of context-specific challenges. The organizations and their managers are situated in emerging economies and developing countries that can be characterized as 'in-between'—being developing and developed; being in the center and the periphery and/or being fixed in the periphery as outliers; and within different tensions and dynamics (Ramirez-Pasillas et al., 2017).

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As the chapters show, this entails a set of specific management challenges. It is, however, not only the managers who face challenges, but also the researchers when it comes to data collection, access to companies, methods, and theories. At the same time, an 'in-between' context represents a fertile and unexplored area for management research. Managers—as well as scholars represented in this book—have to face societies with different levels of infrastructure and higher levels of uncertainties both in relation to institutional conditions for enterprises and also unemployment, human capital, gender inequalities, corruption, and logistics that make practices and processes different in the types of organizations in focus here (cf. Bruton et al. 2010).

For us, as editors, it has been an instructive process, and it is our sincere hope that the chapters will offer worthwhile reading. We would like to convey our gratitude to Professor Almas Heshmati, Jönköping International Business School, Jönköping University, for his unconditional support. We would also like to extend our thankfulness to the contributors of the chapters as well as to the following reviewers: Imoh Antai, Zsuzsanna Biedermann, Duncan Levinsohn, Jan Macháček, Anders Melander, Samuel Mutarindwa, Celestin Ndikumana, Jean Bosco Shema, and Malin Tillmar.

2 Previous Literature on Management Challenges in Africa

In order to provide an overview of prior research on management challenges in Africa, we searched for key terms (Africa and 'management challenge') in academic online databases ABI Inform/Proquest and Scopus, limiting ourselves to full-text, peer-reviewed publications in the areas of social sciences and management. Publications dealing with management challenges can be categorized along a number of different themes. As will be seen, the chapters in this volume partly add to these identified challenges in our review and partly also address novel ones.

The first theme that emerged from our literature review addressed *general management challenges*. For example, Nienaber (2007) has assessed the status of management in South Africa and outlined how South Africa was faced with unique competitive challenges related to management. According to him, the unavailability of competent senior managers is a part of South Africa's problems, aggravated by an overall lack of customer focus and a shortage of skills among employees. Addressing the need for skilled managers, Mitiku and Wallace (1999) explored management development in parts of East Africa. They give a fascinating account of a range of prior and existing skill development projects and show how the region's management development institutions benefit from a variety of influences. The authors suggest that international donor agencies can cooperate more closely with governmental agencies and managers in the region to improve management development.

Public universities in Kenya have recently adopted a business-like approach in their operations in view of the changing environment and are adopting coping strategies (Mathooko and Ogutu 2015). Applying Michael Porter's framework of five competitive forces, Mathooko and Ogutu find that the response strategies adopted by public universities are highly influenced by their competitive situation, especially the threat from new entrants. The authors also find pressure from stakeholders, changes in government policies and regulations, reforms in higher education, unethical response strategies by some universities and university locations as influencing the choice of strategy. Matlakala et al. (2015) studied management challenges in a completely different type of organizations, namely larger intensive care units (ICUs) in South Africa. The main challenge they identified is a lack of strategies available to assist nurses to manage these large ICUs. As a result, the authors suggest five strategies for overcoming this challenge.

In a summary of his acceptance speech for a prestigious award, Kiggundu (2013: 183) warned that 'we must refrain from applying management as an instrument of exploitation, exclusion or abuse' and explained that 'for advancing Africa through management knowledge, research and practice [we] must accept the responsibility of advancing an African management system that avoids the excesses of management practices in America and elsewhere, and promotes more humane and ethical management practices.' He pointed to the relevance of establishing whether and how management theories and models developed elsewhere in the world hold for Africa, and what Africa really means.

Literature also discusses a variety of *human resource challenges* as management challenges. For example, Ituma (2011) studied the lack of career studies from an African perspective. His paper serves as an attempt to stimulate scholarly interest in this area by outlining a research agenda with specific research questions that could be addressed. South Africa's culturally and racio-ethnically diverse population was the starting point for Oehley and Theron's (2010) attempt to develop a partial talent management model focusing on the intention to quit. The authors argue that personnel selection from among diverse applicants poses a huge challenge for human resource managers in South Africa. The challenge is to develop valid selection procedures that simultaneously add value, do not discriminate unfairly, and minimize adverse impacts.

Several studies also contribute *with tools, models, best practices*, *or other research results* that allow improvements in the business climate in respective African countries. Shrestha et al. (2008), for example, have developed a normative framework for Kenya that focuses on the need to enhance the role of four environmental forces—socio-demographic, techno-economic, politico-institutional, and cultural. The authors suggest that by reforming private and public institutions and implementing enlightened national development policies, the country could shape its management system and its prevailing climate of uncertainty to enhance its competitiveness.

The importance of clear property rights for a country's development is illustrated, for example, in Ghana by Aryeetey and Udry (2010) who argue that insecure property rights over land have multiple consequences for agriculture and the

organization of rural economic activities. They explain how in Ghana land rights are typically gained by being a member of a certain group (such as an extended family) but that a market for purchasing and renting land is currently emerging, though with many challenges such as a lack of registration of land purchases. In addition, land legislation in Ghana is perceived as incoherent, conflicting, and often outdated. To overcome these challenges, the authors propose the decentralized, private creation of property rights via a new institutional innovation—land banks. Such land banks will be formal institutions taking 'deposits' of land from landowners. The land banks in turn will lease out land to commercial farmers and developers.

Another type of bank is the focus of Dogarawa's (2013) study. He critically assesses a framework released by the Central Bank of Nigeria (CBN) for the regulation and supervision of non-interest banks (NIBs) in 2011. He argues that with this framework an opportunity has been created for banks to provide financial products and services based on Shariah principles. Drawing on examples of Islamic banking practices in other countries, he points out the challenges that could be expected from this framework.

Financial issues faced by small businesses in an area of KwaZulu-Natal, South Africa, are in focus in a study by Mungal and Garbharran (2014). They address the cash management challenges of these companies, arguing that the implementation of sound cash management practices is essential for ensuring the profitability and sustainability of these SMEs.

Another theme is concerned with different aspects of *environmental sustainability and the natural habitat*. Nunan et al. (2012) study the nature and extent of movement of fisheries around Lake Victoria (bordering Tanzania, Kenya, and Uganda) and the implications of this movement for fishers' participation and representation in comanagement. The authors explain that comanagement involving not only boat owners but also crew members has been the prevailing paradigm of fisheries' management since the 1980s; this reflects a much broader shift toward decentralization of power and functions within developing countries. The authors find that about half of all boat crew migrate around the lake during the course of a year, often following fish migration and that their interests are not adequately taken care of in comanagement structures.

Another concern is with the governance practices of international non-governmental organizations, as such organizations are increasingly implementing policies where state power is weak or non-existent, and their commitment to their mission frequently causes actions that violate their proper role (Avant 2004). The management challenge is how members of the conservation community respond when their commitment to conservation, namely to save the world's last population of northern white rhinos in a national park in the Democratic Republic of Congo, requires a law enforcement plan that violates their commitment to a neutral, non-governmental role. Avant (2004) concludes that principled actors appear to have a hard time reasoning through trade-offs when their values conflict.

The challenge of managing *information and communication technologies* (ICTs) is addressed in several publications. Already at the turn of the century,

the importance of expanding developing countries' access to the Internet was recognized by governments and international organizations in the belief that ICTs should be considered as strategic national infrastructure. This is argued by Madon (2000), who assesses the potential of ICT for socioeconomic development. He proposes that a country's ICT strategy should not be evaluated based on the number of connected individuals, but more in terms of ICT's accessibility and its contribution to social progress.

Studying the use of ICTs in a sample of 978 micro-firms and small firms in the township of Soweto, Marnewick (2014) found that ICT was used as a basic tool for doing business, but rarely as an enabler for development and growth. Mainly, he found that the companies relied on basic cell phones without any further features as well as on pen and paper to conduct their businesses though calculators also played an important role. Somewhat larger and more formalized firms were found to be more inclined to replace cell phones with smartphones. Only a small percentage of the companies used laptops or computers for their businesses, which the author attributes to lack of free Wi-Fi availability.

South Africa has been a leading country when it comes to facing supply chain management challenges in terms of expanding its retail businesses throughout Africa. Based on a case study of the company *Game stores*, Parker and Luiz (2015) analyze the company's supply chain issues when expanding into other African countries. They illustrate the type of challenges which the external environment (such as infrastructure, legal institutions, and regulator processes) creates for retail firms, arguing for the need of taking into account external factors more when developing supply chain theories.

Internationalization is addressed in a number of publications as a management challenge. Gupta (2012) studied the internationalization history of Lebanese diaspora businesses in West Africa since the late nineteenth century. At that time, this diaspora began when the USA, as the previous main emigration target, made the health requirements for immigration tougher. The author describes how many Lebanese suffering from infectious eye diseases were disqualified and others were forced to spend more time in the transit port of Marseilles waiting for health clearance. They ran out of transit money and as a result began migrating to French colonies in West Africa, following the marketing done by French colonial shipping companies. Unlike the French traders who kept a distance from the local population, the Lebanese learned local languages and managed to develop business opportunities, mobilizing and leveraging family networks as far away as Brazil. The author outlines how Lebanese firms were able to build linkages both with the local Africans and with European traders.

Another transnational diaspora is addressed by Adendorff et al. (2008), when they discuss the impact that Greek culture exerts on how South African Greek family businesses govern their families and businesses. They argue that this culture is less open to change than the actual Greek culture as any concessions to progress and change or any deviation from the cultural patterns handed down by tradition is interpreted as concessions to 'Africanism.' In a quantitative study, they find that the

more harmony and trust there is in a family, the more likely it is that family members will have a commitment to each other and to the business.

This review shows that management challenges in different types of organizations vary widely and that many publications are especially relevant as they address the peculiarities of their specific contexts.

3 This Volume

The management challenges in this volume are organized around three topics—Processes, Practices, and Performance. The first part, Processes, starts with a chapter by Asres A. Kebede and Dejen A. Abetwe, who critically analyze the implementation of business process reengineering (BPR) in an Ethiopian university. Comparing this process to the recommendations provided by prior research, they conclude that this implementation has failed along a number of dimensions leading to frustration among academic and administration staff members who perceive that their work burden has increased through the newly introduced processes.

In Chap. 3, Virginie Akimana investigates internal and external factors which are influencing SMEs' exporting processes in Rwanda. Studying a diverse sample of manufacturing firms, Akimana outlines a number of context-specific hindrances such as the challenge of organizing functioning cool houses when exporting dairy products to other African countries. In Chap. 4, Ermias W. Asfaw provides a literature review of the readiness to change on an individual and organizational level as an important prerequisite for organizational change processes to succeed. He points out how readiness for change is a cognitive precursor to resistance or support for organizational change efforts and that what is stipulated in theory does not hold in practice since the Ethiopian context faces challenges not yet addressed in the literature.

The second part of the book focuses on Practices. This part starts with Chap. 5 by Mohammad S. Abtew, who provides a critical analysis of the governance practices for the millennium development goals (MDGs) and their successor, the sustainable development goals (SDGs), identifying different challenges in putting the SDGs into practice. He argues that good governance practices including a balance of environmental and economic dimensions and social inclusion have better chances to succeed. In Chap. 6, Wanjau Nehemiah analyzes supply chain management practices of SMEs in Kenya. He found that supply chain management practices positively impacted the operational performance of SMEs across trade and information technology sectors in his sample. According to his study, SMEs are of the opinion that supply chain practices of purchasing, logistics, and customer services are significant for business operations and hence an opportunity to outdo competition.

In Chap. 7, Dan Ayebale explores the implications of low-cost leadership and differentiation strategies in the East African Community (EAC) market. Specifically, he elaborates on the potential upside of pursuing a differentiation

strategy for small, local manufacturing firms. He suggests that taking the path of differentiation should come from incremental rather than radical innovations.

Chapter 8 by Innocent B. Ndagijimana and Jonas Barayandema investigates and evaluates the practice of compiling accounting information according to international standards by large firms in Rwanda. They argue that compliance with such standards could enhance the capital market in the country as international investments will be attracted through the Rwanda Stock Exchange (RSE). Instead, they find that the capital market is still underdeveloped and RSE is illiquid. In the final Chap. 9 in this part, Ngweshi Kazinguvu assesses strategic innovation management practices of SMEs in Rwanda. He found that in his sample most SMEs' vision was not clear to many of their operational staff members, as a consequence of which they did not know where to direct their efforts. He concludes that manufacturing SMEs in Rwanda are largely focusing on harvesting and protecting existing practices rather than paying attention to developing new ideas.

The third and final part of this volume addresses issues of Performance. In Chap. 10, Ludwick E. Ndokang and Andre D. Tsambou assess the effects of innovation and ICT, as well as their combined effect on the performance of SMEs in Cameroon. They find the integration of innovations and ICT to be very low in Cameroonian SMEs; this increases systematically with company size. Their econometric analysis also shows that ICT helps increase SMEs' performance by supporting innovations. In Chap. 11, Patrick Habiyaremye, Dan Ayebale, and Seperia B. Wanyama assess how SMEs in Rwanda can improve their performance through human resource development. Specifically, they study the experiences of manufacturing SMEs to demonstrate the performance implications of using workshops and job rotation among small firms in one district in Kigali. They find support for a positive direct link between job rotation and SME performance, but not between workshops and performance. However, the value of workshops when combined with job rotation among SMEs is positively linked to performance.

Chapter 12 by Bideri I. Nyamulinda and Alice K. Gaju assesses the degree to which Rwandese SMEs in the mining sector set export performance targets in accordance with targets proposed by the government. They find that a majority of SMEs do not set export targets and that for those who do there are challenges connected to achieving them. This chapter also discusses export barriers and appropriate managerial implications.

This volume concludes with Chap. 13 by Pereez Nimusimai and James F. Tumwine, who examine the relationship between employee motivation and work productivity in Nyagatare district in Rwanda to identify performance behavior in terms of punctuality, absenteeism, work morale, ability at work, and a sense of responsibility among Nyagatare district's staff members. Their findings suggest a significant and positive relationship between the level of employee motivation and productivity.

References

Adendorff, C., E. Venter, and C. Boshoff. 2008. The 'impact of family harmony on governance practices in South African Greek family businesses'. *Management Dynamics* 17 (3): 28–43.

Aryeetey, E., and C. Udry. 2010. Creating property rights: Land Banks in Ghana. *American Economic Review: Papers & Proceedings* 100 (May): 130–134.

Avant, D. 2004. Conserving nature in the state of nature: The politics of INGO policy implementation. *Review of International Studies* 30: 361–382.

Bruton, G.D., D. Ahlstrom, and H. Li. 2010. Institutional theory and entrepreneurship: Where are we now and where do we need to move in the future? *Entrepreneurship Theory and Practice* 34: 421–440.

Dogarawa, A.B. 2013. Critique of the non-interest banking framework in Nigeria. *ISRA International Journal of Islamic Finance* 5 (1): 115–134.

Gupta, V. 2012. Variety of capitalism and overseas family businesses: Insights from the case of Lebanese diaspora. *Summer Internship Society* 3 (2): 79–88.

Ituma, A. 2011. Africa: A fertile but "uncharted" territory for career studies. *African Journal of Economic and Management Studies* 2 (2): 243–254.

Kiggundu, M.N. 2013. Personal reflections on African management: Looking in, looking out and looking ahead. *African Journal of Economic and Management Studies* 4 (2): 177–200.

Madon, S. 2000. The internet and socio-economic development: Exploring the interaction. *Information Technology & People* 13 (2): 85–101.

Marnewick, C. 2014. Information and communications technology adoption amongst township micro and small business: The case of Soweto. *South African Journal of Information Management* 16 (1): 1–2.

Mathooko, F.M., and M. Ogutu. 2015. Porter's five competitive forces framework and other factors that influence the choice of response strategies adopted by public universities in Kenya. *The International Journal of Educational Management* 29 (3): 334–354.

Matlakala, M.C., M.C. Bezuidenhout, and A.D.H. Botha. 2015. Strategies to address management challenges in larger intensive care units. *Journal of Nursing Management* 23 (7): 945–953.

Mitiku, A., and J.B. Wallace. 1999. Preparing East African managers for the twenty-first century. *Journal of Management Development* 18 (1): 46–62.

Mungal, A., and H.L. Garbharran. 2014. Cash management challenges of small businesses in a developing community. *Mediterranean Journal of Social Sciences* 5 (27): 11–21.

Nienaber, H. 2007. Assessing the management status of South Africa. *European Business Review* 19 (1): 72–88.

Nunan, F., J. Luomba, C. Lwenya, E. Yongo, and K. Odongkara. 2012. Finding space for participation: Fisherfolk mobility and co-management of Lake Victoria fisheries. *Environmental Management* 50 (2): 204–216.

Oehley, C.C., and A.M. Theron. 2010. The development and evaluation of a partial talent management structural model. *Management Dynamics* 19 (3): 2–28.

Parker, H., and J.M. Luiz. 2015. Designing 'supply chains into Africa: A South African retailer's experience'. In *Supply chain design and management for emerging markets,* ed. W. Piotrowicz and R. Cuthbertson, 65–85. Berlin: Springer.

Ramirez-Pasillas, M., E. Brundin, and M. Markowska (eds.). 2017. *Contextualizing entrepreneurship in emerging and developing countries*. Edward Elgar.

Shrestha, N.R., W.I. Smith, L. McKinley-Floyd, and K.R. Gray. 2008. Management and national development in Kenya: Toward a normative framework. *International Journal of Emerging Markets* 3 (3): 244–267.

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Part I
Processes

Chapter 2
Implementation of BPR at a Public University in Ethiopia: A Fashion or a Solution?

Asres Abitie Kebede and Dejen Alemu Abetwe

Abstract This research evaluates the factors that influence the implementation and consequences of business process re-engineering (BPR). The study is based on a case of a university in Ethiopia. Using various individual and organizational change management theories, our study's findings can have implications for forming policy. The study used primary and secondary data sources, capturing both quantitative information and qualitative information. Our findings suggest that the management system at the university was non-participatory and inadequate attention was paid to employees' concerns in implementing BPR. In addition, lack of transparency in forming BPR teams, a discriminatory organizational culture, poor management commitments, centralization of resources, massive expansion, and external pressures overshadowed BPR's implementation. As a practical implication of our study, we suggest that top managers and BPR team members need to commence their BPR planning process by listening to the voices of the 'customers' (students, academics, and administrative staff), celebrating academic freedom and adopting mutual consent on change matters, and creating a conducive environment that nurtures trust, ignites initiation, and contributes to personal development.

Keywords BPR · Management system · Resistance · Organizational culture · ICT · Education · Training

1 Introduction

In today's global environment, change has become a widespread phenomenon, even reaching higher-education institutions (HEIs). The drivers for change come from different directions such as globalization, improving the quality of student

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learning, government initiatives, inside pressures, academic and support staff development, and learning experiences within institutions. Additionally, the pace of change is increasing making it essential to live with and manage change as an essential skill for all (ProSci 1997). HEIs are confronted with formidable challenges. Thus, undertaking radical reform programs, revisiting and invigorating the long-established teaching/learning modes of delivery, and redirecting research endeavors and service provision are of paramount importance.

Fundamental principles in higher education are seen in isolation as freedom of the academic faculty; the combined focus on research and teaching is pervasive. HEIs in the developing world are facing financial and structural crises. Hence, they need to find new methods and make better use of existing technologies to develop and transfer knowledge in more productive ways. Current developments such as virtual classrooms, digital libraries, computer simulations, and many other technologies affect the core of higher education, that is, developing and transferring knowledge (Tsichritzis 1999).

At the same time, reduced academic research budgets, questions being raised about the economic value of academic research and demanding only relevant research from the best or the cheapest (less-quality focused) universities add to HEIs' problems. Besides this, the number of students has increased significantly and professors are struggling to keep track of the impact of global changes on their topics. This demands a radical process redesign which is mainly driven by new technological possibilities and new learning environments (Tsichritzis 1999).

Over the past years, business process re-engineering (BPR) has been implemented in many public organizations with the hope of bringing about efficiency and effectiveness in organizational performance. However, different publications indicate that BPR frequently fails to deliver its promised results (Al-Mashari and Zairi 2000). According to Al-Mashari and Zairi (2000), one of the main reasons for BPR's failure is lack of an integrated approach in exploiting the process. Some indicators of poor implementation of BPR in Ethiopian universities are emerging. For example, many decisions are taken by circulating letters rather than according to well-documented procedural guidelines. These frequent top-down messages by top officials irritate employees. Besides, marginal attention is paid to pointing out the possible gains from the process to enable employees to own it as their responsibility. In addition, there is a tendency of rushing to implement changes without balanced remunerations for increased accountabilities. Thus, it seems that Ethiopian HEIs have embarked on BPR for fashion, as they are being ordered by the government to do so, rather than its being a trigger of self-internal motivation to increase academic excellence. This chapter investigates this claim through a case study of BPR's implementation at Jimma University.

For several reasons including neglect and inertia due to success in the past, Jimma University had been steadily losing it vitality and falling into a critical state of disrepair and dysfunction over the last few years. The symptoms of its condition were hard to miss even by a casual observer. The university's relationship with the government had been uneasy and cautious at best and contentious and antagonistic at worst. The university appeared to have lost its grip on a clear sense of direction.

Very few of the academic staff members were engaged in fruitful and relevant research, or taking their teaching roles with a satisfactory degree of seriousness. The academic curricula had not kept up with the times. The relationship between students and teachers was not as healthy as it should be. There was recurring discord among students. The libraries were poorly stocked, and the collections that they had were mostly made up of outdated books. Ill-maintained infrastructure, overcrowded classrooms and dormitories, and scarce recreational resources contributed to a rather lethargic academic environment. The administrative side of the university—finance, procurement, human resource management, etc.—was inefficient and overly bureaucratic. The minimal use of technology and automation on both the academic and administrative sides was undoubtedly a major factor in making the system inefficient.

It was obvious to many that the situation was untenable, and the trend could not be allowed to continue if Jimma University were to remain a strong and positive force in moving the country forward. It needed to change. It was also obvious that the change had to be system-wide and a strategic shift and not a piecemeal fix. It was with this realization that the university set out to systematically assess its strengths—there are still many—and weaknesses with the aim of developing a viable strategy for transforming and revitalizing itself. Hence, the strategic plan and the business process re-engineering exercises were deemed crucial. Taking this existing reality into account, Jimma University embarked on a reform program. Priority areas for reform were clearly identified based on the impact that they had on the successful accomplishment of the university's vision and mission.

Yet, as a public HEI, Jimma[1] University appears to have implemented BPR without much awareness about its potential challenges. Its lessons learned indicate that most of the arguments in favor of BPR had been met with greater skepticism by the professionals. Even if the need for process change was undeniable, individuals at various levels of the university showed resistance to BPR's implementation. Nonetheless, the implementation was pushed forward by means of internal as well as external impositions (government sponsorship). Despite the propaganda in favor of BPR at the macro-level, it is evident that the working environment of a HEI such as Jimma University is affected by its implementation. As Jimma University is one of many HEIs in Ethiopia, the analysis of its BPR implementation processes can serve as learning for other HEIs in the country. The aim of this chapter was to provide such an analysis to contribute not only to practice by outlining challenges in BPR's implementation, but also to theory by adding to literature on BPR's implementation in non-business organizations. Our results suggest that timely communications, participation, and mutual sharing of the transformation agenda could turn the university's stakeholders into better re-engineering agents. But what was done was the opposite as most of the changes were imposed from top

[1]**Jimma University** (**JU**) is a public research university located in Jimma, Ethiopia. It is recognized as a leading national university, as ranked first by the Federal Ministry of Education for four successive years (2009–2012).

administrators without the consent of faculties and colleges, departments, and other stakeholders such as academic and support staff members.

The central research question addressed in this chapter is: *What are the influences of a management system, organizational culture, resistance to change, and ICT and how do they contribute to the realization of a BPR initiative in a public university in Ethiopia?*

The remainder of this chapter is organized as follows: Section 2 gives a literature review while Sect. 3 explains the theoretical framework. Section 4 describes the methodology used, and the following section maps the results. The last section gives the conclusions and the way forward.

2 Literature Review

2.1 Concept of Business Process Re-engineering

According to Hammer and Champy (1993), BPR processes refer to rethinking and redesigning business processes to bring dramatic and sustainable improvements in quality, service, costs, lead times, outcomes, flexibility, and innovations. Watts (1995) calls for the need to establish an integrative and holistic view on BPR. Al-Mashari and Zairi (2000: 12) define holistic BPR as 'a continuum of change initiatives with varying degrees of radicalness supported by IT means, at the heart of which is to deliver superior performance standards through establishing process sustainable capability.'

Along similar lines, Andreu et al. (1997) and Watts (1995) believe that a holistic approach to BPR should recognize the importance of processes and technology and their integration in a business' vision, structure, relationships, resources, and culture. However, research studies that claim to adopt a holistic perspective still lack many critical constructs. As Deakins and Makgill (1997: 83) say, 'there is limited evidence that broad implementation issues are now being addressed to the same extent as the previously dominant IT issues.'

Survey studies like those by Mitchell and Zmud (1995), Doherty and Horsted (1996), Braganza and Myers (1996), and Kohli and Hoadley (1997) do not address factors of BPR's implementation from a holistic point of view. Even some large industry surveys (e.g., ProSci 1997) that have attempted to enhance an understanding of BPR fail to capture some of the dimensions that a holistic perspective demands such as costs, efficiency, time, and quality perspectives. Other work that has addressed BPR success factors has been largely anecdotal in nature or based on single organizations. Researching the challenges, practices, and outcomes of implementing BPR can be seen as crucial in using it as change management tool to achieve desired ends.

Re-engineering concepts comprise of four dimensions: (1) *innovative rethinking:* It argues that most of what happens in successful innovations is not the occurrence of a flash of insight, but rather the careful implementation of an unspectacular but

systematic management discipline (Drucker 1993); (2) *process functions:* Taking a systematic perspective, Hammer and Champy (1993) describe process functions as a collection of activities that take one or more kinds of inputs and create an output that is of value to the customer. A typical process includes ordering the organizational structure, manufacturing, production, development, delivery, and invoicing; (3) *radical changes:* A key business process in radical changes is the transformation of organizational elements; it is essential for an organization's survival. Change leads to new ideas, technology, innovations, and improvements. Therefore, it is important that organizations recognize the need for change and learn to manage the process effectively (Pamela and Stephen 1995); and (4) *organizational development and performance:* It looks at a firm's level of efficiency and ways to improve its current activity level in order to meet standards and survive competitive pressures. One way to judge an organization's performance is by comparing it with another unit within the company. However, comparisons with outsiders can highlight the best industrial practices and promote their adoption. This technique is commonly termed 'benchmarking' (Roberts 1994).

Today, users' demands of efficiency and effectiveness of products and services is a driver in implementing BPR in an organization (Al-Mashari and Zairi 2000). Though organizational development is a continuous process, the pace of change has increased. This means that in this competitive environment, organizations will be able to enhance their competitive advantages if they effectively design and implement BPR.

2.2 BPR Success Factors

BPR does not only mean change, but also mean dramatic change. This dramatic and drastic change consists of an overhaul of organizational structures, management systems, employee responsibilities and performance measurements, incentive systems, skill development, and the use of IT. BPR can potentially impact every aspect of how a business is conducted today. A successful BPR can result in enormous reductions in costs or cycle times. It can also potentially create substantial improvements in quality, customer services, or other business objectives. BPR's promises are not empty as it can actually lead to drastic improvements in business operations. Re-engineering can help a company to stay on top or transform an organization on the verge of bankruptcy into an effective competitor (Davenport 1993).

According to Peppard and Fitzgerald (1997), ambitious objectives, creative teams, a process-based approach, and integration of IT are among BPR's main success factors. Ascari et al. (1995) add culture, processes, structure, and technology to these. For Al-Mashari and Zairi (1999), BPR's important dimensions include change management, competency and support in management, information infrastructure, and a project planning and management system. Since success factors may differ based on the type of organization, understanding the nature of the

organization is indispensable. Some important BPR success factors, which are discussed in detail later, include organization-wide commitments, the composition of a BPR team, business needs' analysis, adequate IT infrastructure, effective change management, and ongoing improvements.

2.3 BPR Failure Factors

Beside its success factors, authors have also highlighted some factors which lead to failure when implementing BPR. The seemingly high failure rate of BPR projects has been one of the major road blocks in convincing organizations to commit to BPR efforts. As per a 1995 study by the Standish Group International (USA) which dealt with 8380 BPR projects in 365 companies, 84% of the projects failed or at least experienced some major problems (Valimaki and Tissari 1997). Given this unusually high failure rate compared to other types of improvement efforts, finding critical failure factors becomes an important topic for research. Past research shows that there are two primary reasons for such incidents: employee resistance to change (Stanley et al. 2005) and a lack of resources for the BPR effort (Bashein et al. 1994).

Aggarwal and Samwick (1998) highlight managers' arrogance, resistance, crises, higher than expected costs, and a lack of vision as factors leading to BPR's failure. Hammer and Champy (1993) point out the lack of a process perspective. A fixed process is not flexible enough to be responsive to needs and requirements, does not involve employees (bottom-up) in decision making, and assigns someone who does not understand BPR to do the job. In addition, technological limitations, designing a project but with focus on cost reduction and downsizing, having a weak team and problems with communications are also seen as failure factors.

3 Theoretical Framework

For advocates of BPR, effective redesigning of business processes by removing unnecessary activities and replacing functional processes with cross-functional activities in combination with information technology as an enabler for this type of change will lead to significant gains in speed, productivity, service, quality, and innovation. Business re-engineering normally includes a fundamental analysis of an organization and a redesign of its organizational structure, job definitions, reward structures, and control processes. BPR was conceived by Simon (1994) as consisting of four elements that needed to be considered: strategies, processes, technology, and people. Strategies and processes build the ground for technologies and the redesigning of the human activity system (see Fig. 1).

Strategies—The strategy dimension has to do with strategies—organization strategy, technology strategy, and human resources strategy. All the strategies should be determined with respect to the dynamic marketplaces that the

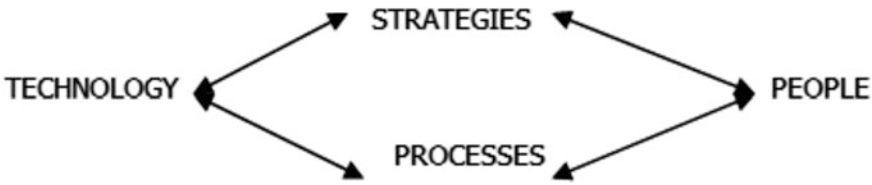

Fig. 1 BPR elements. *Source* Adapted from Simon (1994)

organization is acting in and are not to be focused on internalities, but on external presumptions for successful acting in the market. Further, strategies should be current and relevant to an organization's vision and to internal and external constraints. This implies that a reconsideration and redefinition of strategies might be a presumption for further change. The strategies should be defined in a way that enables understanding and motivation of employees in order to align the workforce to the strategies.

Processes—Processes can be defined on different levels within an organization. The issue is to identify core processes—satisfying customers' needs and adding value for them. It is important to point out that processes are not determined by internal organizational requirements but by customer requirements even though organizational constraints should be taken into account. A shift from functional departments to inter-functional processes includes a redesign of the entire organizational structure and the human activity system and implies process optimization instead of task optimization.

Technology—Information technology is considered a major enabler for processes spanning functional and organizational boundaries and supporting process-driven organizations. However, the point is not to use IT for improving existing activities, as it has often been conceived, but as an enabler for a new organization. This includes using new technologies such as groupware and new methods for using them. It requires acceptance of technological changes and the fact that information technology will be shaping the future.

People—The human activity system within an organization is the most critical factor in re-engineering. While the top management's support for re-engineering efforts is simple to ensure the real change agents—the middle management—are far harder to win over since they have to identify change opportunities and perform them, while they are also the group facing the most threats as BPR is often used for cutting hierarchies and reducing workforces. The other crucial factor is aligning the workforce with the strategies defined and addressing the variables of cultural and environmental contexts within an organization. Finally, flattening hierarchies implies that decision making should be moved down in the organization for which the employees who will be taking the decisions need to be empowered. This requires training and education as well as motivation and trust from the top management so that people are able and willing to take on responsibilities; this contradicts the common 'trust is good, control is better' way of thinking.

Based on the literature review and the theoretical framework, the following hypotheses and constructs were developed for this study:

Hypothesis 1 *A poorly designed and orchestrated management system is more likely to negatively affect the performance of individuals during BPR's implementation.*

Hypothesis 2 *Employees' change resistance is more likely to act against unwanted BPR implementation.*

Hypothesis 3 *A positive organizational culture is more likely to pave the way for BPR.*

Hypothesis 4 *A poor ICT infrastructure is more likely to impede BPR's implementation.*

The constructs include user participation, restructuring, processes re-engineering, organizational culture, ICT, communication, change resistance, teamwork, management system, incentives and rewards, and education and training.

4 Methodology

Our research applied a survey methodology to evaluate BPR's implementation and its consequences in one of Ethiopia's HEI's, Jimma University. In this study, primary as well as secondary data were obtained from relevant sources (organizational customers, online sources, and university archives). Primary data were on the pre-and post-implementation of BPR in the university was collected through a survey questionnaire.

A structured questionnaire included two major components, comprising of 35 questions. The first part consisted of questions relevant to respondents' demographic information. The second section comprised of questions used for evaluating 12 constructs—user participation, restructuring, processes re-engineering, organizational culture, ICT, communication, change resistance, teamwork, management system, incentives and rewards, and education and training. All items for measuring the constructs were developed taking into account the context as well as previous studies. These questions were all based on the 6-point Likert scale, ranging from 1 = *strongly agree* to 6 = *strongly disagree* (1—strongly agree; 2—agree; 3—inclined to agree; 4—inclined to disagree; 5—disagree; and 6—strongly disagree). Organizational performance was operationalized as a dependent variable and was measured using a 2-point scale as 'positive' if good or 'negative' if poor. Accordingly, for a logical analysis and simplicity of understanding, the Likert scales were converted into binary codes (agree or disagree). To ensure the validity of the content in the questionnaires used, each construct was cautiously rephrased to fit BPR's pre-and post-implementation period in the Ethiopian higher education context.

The questionnaires were distributed among students, academicians, and administrative staff members at Jimma University. Stratified random sampling was used to ensure that representatives from every employee category (academicians and supporting staff members) and students from the available colleges were included in the sample. The selection of sampled elements was done using simple random sampling within each stratum. The maximum sample size included in the study was 400 comprising of 150 employees (100 academic staff members and 50 administrative staff members) and 250 students. Student respondents were selected starting from year 3 since senior students are familiar with the management and implementation of BPR in the university. The sub-sample size from each stratum (employees and students) was determined based on their population proportion. Lastly, SPSS, version 16.0, was used for a statistical analysis. Specifically, the binary logistic regression technique available in the tool for the Windows statistical package was employed.

5 Results and Discussion

Of the 400 questionnaires distributed to students, academicians, and administrative staff members of Jimma University, 326 were returned. To increase the response rate, data collectors frequently reminded the respondents through telephone calls, SMSes, and self-visits to respond to the questionnaire. This effort raised the usable response rate to 81.5% which was functional for further analysis after the incomplete questionnaires were discarded. Thereafter, the demographic characteristics of the respondents were collated using descriptive statistics (Table 1).

5.1 Demographic Characteristics of the Respondents

As shown in Table 1, the descriptive analysis indicates that a majority of the respondents were academic staff members (87%), while the rest (13.0%) were administrative staff members. The other category of respondents in this research was students. The demographic distribution of these respondents is given in Table 2.

5.2 Participation in BPR's Implementation

We assessed user involvement in the BPR implementation process in the university from its inception to adoption. As shown in Table 3, 88% of the employee respondents said '*No,*' while 12% of the respondents said '*Yes*' to the question

Table 1 Demographic characteristics of employees

	Number of valid responses	Percent
Academic staff members	80	87.0
Administrative staff members	12	13.0
Total	92	100.0
Service year		
<5 years	59	64.1
5–10 years	23	25.0
10–15 years	5	5.4
>15 years	5	5.4
Total	92	100.0
Education level of employees		
12th Complete	1	1.1
Diploma	12	13.0
BA	42	45.7
Master's	28	30.4
PhD	9	9.8
Total	92	100.0

Source Administered Questionnaire, 2014

Table 2 Demographic characteristics of students

	Number of valid responses	Percent
College where students study		
Business and Economics	35	18.8
Jimma Institute of Technology	35	18.8
Public Health and Medical Science	31	16.7
Agriculture and Veterinary Medicine	29	15.6
Social Science and Law	30	16.1
Natural Science	26	14.0
Total	186	100.0
Class year of students		
Year 3	118	63.4
Year 4	51	27.4
Year 5	14	7.5
Above Year 5	3	1.6
Total	186	100.0

Source Administered Questionnaire, 2014

about participation in BPR's implementation. In connection with this, 51.6% student respondents said '*No*,' while 48.4% respondents said '*Yes*' (see Table 3).

As shown in Table 3, 63.7% of the respondents said that they were not involved in the process, while 36.3% of the respondents said that they had participated in BPR's implementation in the university.

Table 3 Respondents' awareness about BPR implementation in the university

	Employees		Students		Total	
	Number of valid responses	Valid percent	Number of valid responses	Valid percent	Number of valid responses	Valid percent
Participation in BPR's implementation						
Yes	11	12.0	90	48.4	101	36.3
No	81	88.0	96	51.6	177	63.7
Total	92	100.0	186	100.0	278	100.0
Training in implementing BPR						
Yes	26	28.3	65	34.9	91	32.7
No	34	37.0	63	33.9	97	34.9
I don't know	32	34.8	58	31.2	90	32.4
Total	92	100.0	186	100.0	278	100.0
Knowledge about criteria for BPR team formation and composition						
Yes	22	23.9	86	46.2	108	38.8
No	21	22.8	32	17.2	53	19.1
I don't know	49	53.3	68	36.6	117	42.1
Total	92	100.0	186	100.0	278	100.0

Source Administered Questionnaire, 2014

The use of users' (employees' and students') feedback is a major imperative for the BPR team to consider when redesigning processes. Our quantitative analysis revealed that only 36.3% of the users participated in the process (see Table 3). This shows that a major part of the university's community did not participate and inadequate attention was paid to employees' concerns in the BPR implementation process, especially the voices of students and academicians. A failure to re-engineer from a customer's perspective has been blamed for disappointing BPR results (e.g., Terziovski et al. 2003).

5.3 Training in BPR's Implementation

Empowering people by giving them the ability to do their work with the right information, the right tools, the right training, the right environment, and the authority (power) that they need is vital for BPR's successful implementation. Accordingly, the training dimension in our research was used to assess whether users were trained in the BPR implementation process in the university—28.3% of the employees said that they had participated in training, while 37.0% had not. The remaining 34.8% of the employees did not know whether training in BPR was given or not. Likewise, 34.9% of the students responded that they had attended training, while 33.9% had not participated in the training; 31.2% of the students did not know whether training was given for BPR's implementation (see Table 3).

Hence, a large part of the university's customers (students and employees) did not get training about BPR's implementation. According to Abolo (1997) and Coulson-Thomas (1996) cited by Adeyemi and Aremu (2008), one of the essential elements or principles of re-engineering is encouraging training and development by building a creative working environment. Our quantitative analysis shows that only 32.7% of the employees and students had been a part of the process.

5.4 Knowledge About Criteria for Forming BPR Teams and Their Compositions

Knowledge about criteria for a BPR team formation and its composition measures employees' and students' familiarity about members' selection, formation, composition, and representativeness of colleges and departments. Among the 278 respondents, 38.8% were informed about the criteria (Table 3). Along with these respondents, 23.9% employees and 46.2% students were knowledgeable about the criteria for BPR's team formation and composition. The remaining 61.2% were not familiar with the criteria. Similarly, 76.1% of the employees and 53.8% of the students were not knowledgeable about the criteria for BPR's team formation and composition.

5.5 Problems in Implementing BPR

As shown in Table 4, 55.4% of the respondents said that there were problems in BPR's implementation in the university. Thus, a majority of the student and employee respondents stated that there were problems in BPR's implementation in the university.

These respondents were further asked to provide examples of problems that they had observed during implementation. They were able to mention specific gaps beyond the questions asked during the quantitative inquiry. They pointed out

Table 4 Problems in implementing BPR in the university

	Employees		Students		Total	
	Frequency	Valid percent	Frequency	Valid percent	Frequency	Valid percent
Yes	50	58.1	100	54.1	150	55.4
No	36	41.9	85	45.9	121	44.6
Total	86	100.0	185	100.0	271	100.0
No response	6		1		7	

Source Administered Questionnaire, 2014

problems related to users' involvement, competency of staff members, resistance to change, BPR team members' issues, lack of management's commitment, inappropriate staffing, lack of a collaborative working environment, and administrative and communication issues.

The following problems give the employees' and students' impressions about various situations which are grouped under common themes.
One employee stated:

> I think it did not bring the change I expected from BPR. The main reasons are: lack of top management's commitment, resistance to change by stakeholders, lack of competent staff members, absence of pre-implementation (as well pre-designing) preparation and just rushing to meet deadlines for implementation given by superior bodies and misconceptions about the inputs required and using the new system appropriately in the university.

Another employee said:

> The BPR team's composition has its own problems: most of the team members are amateurs and were selected from an agriculture and medical science background, no assessment was done about the needs of BPR from the university's perspective; most of the university community did not participate in the whole process of BPR implementation, the BPR team members lack basic knowhow about BPR, but did not get proper training. In general, there was lack of proper communication among university members about BPR.

One of the student respondents said:

> I have seen various problems related to BPR's implementation in our university such as I don't see the effort made to create awareness about BPR among students; students are not participating and are not considered in its implementation and higher officials are not committed to implementing BPR.

Qualitative data from open-ended questions also supplemented the inquiry about training, participation, and knowledge about criteria for BPR's team composition and formation. Problems in BPR's implementation at Jimma University were related to users' involvement, competency of staff members, resistance to change, BPR team members' issues, management's commitment, inappropriate staffing, collaborative working environment, and administrative and communication issues.

When applying the BPR management technique to a business organization, the implementation team's effort should mainly be focused on the students as primary customers so that they can develop customer service-oriented processes aimed at eliminating customer complaints (Sheehy 1997). Although employee participation is perceived as one of the key success factors in BPR, in our case there was evidence of lack of employees' and students' participation in the entire process. In addition, our qualitative data showed a perceived lack of competence of staff members since the respondents pointed out that not enough training was given to create awareness about BPR among all stakeholders, not all workers had the same level of knowledge about BPR, training was not based on the level of the employees, and there was lack of expertise (knowledge and experience) about BPR. Hence, these findings explain part of the performance of BPR in the university, which failed to achieve its intended outcomes.

Further, findings from students and staff members show problems in BPR's implementation which are related to communication issues such as lack of communication and clarity about BPR, lack of transparency in assigning qualified individuals for positions and work assignments, and poor followup of its implementation. The respondents added problems in their collaborative working environment: A smooth staff–student relationship was perceived to be lacking; that between academic and administrative staff members too was lacking. Recognition among employees was perceived as being very low. A more conducive working environment in the university would be appreciated. Thus, failing to maintain a collaborative environment might have negatively affected BPR's performance in the university.

Regarding staffing, respondents talked of a number of critical issues like assigning individuals inappropriate positions after BPR, selection of BPR team members, and that positions in the university were not based on achievements and performance of individuals but on their ethnic groups and friendships (informal networks). Employee resistance has been found to be a reason for BPR's failure in prior research (Lee 1995). Employee resistance in JU was attributed to the uncertainty and fear of what effects BPR would bring. The most common fear was that of downsizing, which the respondents commonly associated with the BPR effort. In general, even though the objectives of BPR per se do not include laying-off employees, downsizing has been a result of many BPR efforts. Respondents in JU brought up a number of aspects related to employee resistance which in prior research have been attributed to reasons for failure (Lee 1995). These include administrative bodies not being willing to implement BPR, employees fearing losing their jobs, inadequate attention to employees' concerns, middle management's fears of losing authority, uncertainty about project results, and feeling uncomfortable with new systems. There is a doubt such resistance contributed to the lack of BPR's success in the studied university.

According to Stanley et al. (2005), the top management's commitment plays a significant role in the success of BPR projects, as BPR changes have to be aligned with an organization's strategic direction. Also, resistance to a project can be handled expeditiously with clear top management commitment. Communication by the upper management with the affected business units, motivating changes, and stepping into resolve differences have also been outlined as important factors in BPR's success (Stanley et al. 2005). However, our findings suggest that JU lacked not only the top management's commitment, but also the sufficient knowledge about the BPR project, realistic expectations of BPR results, and frequent communication between BPR team members and users.

Another important factor for implementing BPR is the taskforce's composition and empowerment of team members (Lee 1995). The team should represent different skills and backgrounds, combining experts from various functions of the organization. However, our findings reveal that BPR team members at JU were selected from only two colleges—the college of agriculture and veterinary medicine and the medical science college. The university also has many qualified experts in other colleges such as the college of business and economics, where colleagues

have knowledge and experience about BPR. However, no members of the BPR team were selected from this college, which could have helped the reported insufficient expertise (in terms of knowledge and experience) about BPR, thus increasing confidence and trust in team members.

A fundamental principle of universities is academic freedom, and functionally, this includes research and teaching. Thus, BPR in HEIs should strive to enhance the quality of education and promote research which solves societal problems. However, our findings reveal a number of negative effects of BPR on the quality of education and research: increased work loads for some academic staff members, a shortage of qualified academic staff members, a shortage of academic resources such as books, journals, and electronic references, and lack of guidelines and procedures for research. Further, the respondents criticized the increase in monotonous and routine meetings, documents produced in the university were not put to action, BPR's implementation did not follow the standard procedure of BPR implementation, BPR's implementation guidelines were not prepared, and job descriptions for each position were lacking.

5.6 Organizational Structure

BPR aims at achieving dramatic improvements in performance through radical changes in organizational processes and re-architecting of business and management processes (Hammer and Champy 1993). It involves the redrawing of organizational boundaries and reconsideration of jobs, tasks, and skills. In order to assess changes in the organizational structure of the university, the respondents were asked about structural changes as a result of BPR's implementation; JU's BPR document was also reviewed.

A. **Reshuffling of Positions and Departments**

One result of BPR can be reshuffling of positions and/or departments. Thus, we assessed whether employees changed their positions or departments because of BPR's implementation. As shown in Table 5, 21.7% of the employees responded that they had changed their positions or departments. The remaining 77.2% had not changed their positions or departments due to BPR's implementation.

B. **Changes in Top-level Managers due to BPR**

We also assessed changes in the top-level management. Our research revealed that 45.6% of the employees and 52.5% of the students saw changes in top-level managers in the university, while the remaining respondents saw no changes (Table 5).

Though BPR literature suggests that management systems be modified to support the newly redesigned processes, our study finds that such changes were not drastic at JU.

Table 5 Structural changes in the university after BPR's implementation

	Employees		Students		Total	
	Frequency	Valid percent	Frequency	Valid percent	Frequency	Valid percent
Position/departmental reshuffling after BPR						
Yes	20	22.0	–	–	20	22.0
No	71	78.0	–	–	71	78.0
Total	91	100.0	–	–	91	100.0
No response	1		–	–	1	
Change in top-level managers due to BPR						
Yes	41	45.6	96	52.5	137	50.2
No	49	54.4	87	47.5	136	49.8
Total	90	100.0	183	100.0	273	100.0
No response	2		3		5	

Source Administered Questionnaire, 2014

Table 6 Reasons for BPR's implementation in the university

Reason for BPR Implementation	Responses	
	Number of valid responses	Percent
External pressure	116	23.4
Existing system problems	115	23.2
Technology	125	25.2
Market situation	44	8.9
Social and political changes	96	19.4
Total	496	100.0

Source Administered Questionnaire, 2014

5.7 Reasons for BPR's Implementation in the University

BPR can be implemented for various reasons ranging from external pressure and solving existing problems in an organization to the introduction of new information technology and/or information systems, the market situation, or social and political changes. Accordingly, our research assessed the perceived reasons for BPR's implementation at JU.

Among our respondents, 23.4% said external pressure was responsible for implementing BPR at Jimma University, 23.2% cited problems in the existing system, and 25.2% saw technology as the main reason (see Table 6).

5.8 Findings from the Logistic Regression Model

Next, we present our quantitative findings based on a binary logistic regression model. Standard linear regression models are applied when the variables are continuous in nature. But there are many situations in which the dependent variable in a regression equation represents a discrete choice assuming only a limited number of values. Models involving dependent variables of this kind are classified as qualitative response models. This is true for our study where the dependent and independent variables have two qualitative discrete choices. In general, binary logistic regressions can tell us the likelihood for the occurrence of events. Binary logistic regression is suitable for variables of categorical nature as is the case in our study. The reliability of the questionnaires was tested using Cronbach's Alpha, and it was found to be *0.704* for the students' set and was *0.796* for employees. This assures a leeway for statistical inferences.

The logistic regression model describes the relationship between a dichotomous response variable Y_i, coded to take the values 1 or 0 for 'negative' and 'positive' impacts of BPR, respectively. In this case, the dependent variable is BPR's performance, and it takes only two values and is shown by:

$$Y_i = \begin{cases} 1 \text{ if the performance of the } i\text{th individual is affected negatively by BPR} \\ 0 \text{ if the performance of the } i\text{th individual is affected positively by BPR} \end{cases}.$$

This categorization is based on the responses of major stakeholders including staff members (both academic and administrative) and students to the question: 'How is BPR's implementation affecting your performance?' The explanatory variables together with their categories and coding are given in Table 7.

Table 7 Coding of explanatory variables

Variable	Category	Parameter coding
Management system	Agree	1
	Disagree	0
Communication	Agree	1
	Disagree	0
Organizational culture	Agree	1
	Disagree	0
Incentives and rewards	Agree	1
	Disagree	0
Resistance	Agree	1
	Disagree	0
ICT	Agree	1
	Disagree	0
Education and training	Agree	1
	Disagree	0

Source Administered Questionnaire, 2014

The category that is assigned the value 0 (disagree) is the reference category. When interpreting the results, all comparisons were made with reference to this category. Table 8a, b gives the outputs of the logistic regression.

Table 8a, b gives the refined summaries of statistics obtained using SPSS version 16.

The response probability $P_i = \text{Prob}\ (Y_i = 1|X_i)$ refers to the probability that BPR's implementation is perceived to negatively affect the performance of an individual given the conditions bestowed on the identified explanatory variables denoted by X_i. If the odds ratio Exp(B) is less than one, then this means that the odds (or the likelihood) of an individual's performance due to BPR will be negatively affected are higher for the reference category. If Exp(B) is greater than one,

Table 8 Binary logistic model's result summary

	B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I. for EXP(B)	
							Lower	Upper
(a)								
Management system	−0.912	0.452	4.064	1	0.044	0.402	0.166	0.975
Communication	0.828	0.450	3.385	1	0.066	2.288	0.947	5.523
Organizational culture	0.872	0.452	3.723	1	0.054	2.392	0.986	5.799
Incentives and rewards	0.358	0.443	0.655	1	0.418	1.431	0.601	3.410
Resistance	1.145	0.460	6.191	1	0.013	3.143	1.275	7.746
ICT	1.584	0.545	8.433	1	0.004	4.872	1.673	14.186
Education and training	1.056	0.466	5.126	1	.024	2.875	1.152	7.173
Constant	0.677	0.221	9.417	1	0.002	1.968		
−2 Log likelihood 94.518[a]								
Cox & Snell R Square 0.217								
Nagelkerke R Square 0.300								
	B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I. for EXP(B)	
							Lower	Upper
(b)								
Management system	−0.912	0.452	4.064	1	0.044	0.402	0.166	0.975
Communication	−0.828	0.450	3.385	1	0.066	0.437	0.181	1.055
Organizational culture	−0.873	0.319	7.505	1	0.006	0.418	0.224	0.780
Resistance	0.957	0.337	8.067	1	0.005	2.604	1.345	5.041
ICT	1.005	0.480	4.384	1	0.036	2.732	1.066	6.999
Education and training	1.319	0.402	10.742	1	0.001	3.739	1.699	8.227
Constant	1.112	0.231	23.256	1	0.000	3.040		
−2 Log likelihood 215.458[a]								
Cox & Snell R Square 0.105								
Nagelkerke R Square 0.146								

Source Administered Questionnaire, 2014

[a] the loglikelihood, which is the objective function value

then the odds are higher for a particular category as compared to the reference category.

1. The odds ratio for management system (Exp(B) = 0.402) is less than one. Since the coding of management system as (1) refers to a positive view on the system and the reference category (0) is a negative view on the system, the odds of a poor management system are higher than those of a good one. This implies that the likelihood of a management system which is poorly designed and orchestrated to impede the successful implementation of BPR is higher. This further means that if the management system is poor, it will negatively affect the performance of individuals and the organization as a whole which excoriates BPR's implementation. The inverse of Exp(B) is 1/0.402 = 2.49. Thus, it is perceived that well-executed management is 2.49 times more likely to pave the way for proper BPR implementation as compared to a poor one.
2. The variable 'communication' is significant at the 10% level. The odds ratio for communication is greater than one for employees (Exp(B) = 2.288) and less than one for students (Exp(B) = 0.437). In this case, the odds ratio's magnitude for students and employees' responses is totally different. The implication is that the odds ratio of good communication is higher than poor communication through a chain of command for employees. In contrast, the odds ratio of a poor communication style is higher for students. Thus, the quality of communications at the university is more likely to positively influence the performance of employees which supports the idea of BPR's implementation as a solution to organizational problems. On the other hand, poor-quality communication can aggravate the failure of BPR's implementation.
3. The odds ratio for 'Organizational culture' is 2.392 for employees and 0.418 for students. As the coding (1) refers to the existence of a positive organizational culture and the reference category (0) refers to a negative one, the implication is that a conducive and parsimonious organizational culture is 2.392 times more likely to increase individual and organizational performance by paving the way for BPR's implementation as a tool for solving organizational problems. As per the students' statistics, the inverse of Exp(B) is = 1/0.418 = 2.392. This implies that the likelihood of a negative organizational culture to obscure the implementation of BPR is higher than the conducive environment created by an enabling culture. This confirms the relevance of considering cultural issues in BPR's implementation.
4. The variables 'incentives' and 'rewards' are insignificant at both the 5 and 10% levels. Thus, they do not appear to have been relevant for BPR's implementation process at JU.
5. The odds ratio for change resistance (1) is 3.143 for employees and 2.604 for students. Since the coding (1) refers to higher resistance to change and the reference category (0) refers to low resistance, the interpretation is that a higher level of resistance to organizational change is 3.143 times more likely to interfere with the successful implementation of BPR and it is 2.604 times more likely on the students' side. Thus, we find clear evidence of resistance to the

change efforts at JU which do not appear to have been adequately addressed by the management. The odds ratio for ICT is 4.872 for employees and 2.732 for students. Since the coding as (1) refers to an adequate ICT infrastructure and the reference category (0) refers to an inadequate ICT infrastructure, this finding suggests that a well-developed ICT infrastructure in a university due to BPR is 4.872 times more likely to positively influence individual employees' and total organizational performance and is 2.732 times more likely for students. Here, the evidence from Jimma University substantiates this significantly meaning that the claim is confirmed.

6. The odds ratio for education and training is 2.875 for employees and 3.739 for students. Since the coding (1) refers to excellent education and training provisions because of BPR and the reference category (0) refers to poor education and training put in place, our findings suggest that a well-developed and dynamic education and training provision as a result of BPR in a university is 2.875 times more likely to promote BPR as a solution to universities and similar organizations according to the employees and it is 3.739 times more likely to advance knowledge, skills, and attitudinal changes according to the students. Here, the odds ratio's magnitude related to students is higher than that for employees since the variable is students' priority concern.

In conclusion, all the four hypotheses presented in the theoretical framework are supported by this analysis.

6 Conclusion and the Way Forward

6.1 Conclusion

We analyzed, using both descriptive and binary logistic regression analyses, the impact of the management system, communication, organizational culture, incentives and rewards, ICT, resistance, and education and training on BPR's performance.

We found the management system to be non-participatory with inadequate attention being paid to employees' concerns during the BPR implementation process. Top-level BPR managers failed to re-engineer from a customer's perspective, contributing to disappointing BPR results (see also Terziovski et al. 2003). Users' involvement in the process, from BPR planning to its actual implementation, was very meager. Employees were treated as passive followers who were expected to actuate signals given by higher bodies. Regarding awareness creation and training, more training geared toward gaining a conceptual understanding of implementation scenarios could have been more carefully delivered for those in need. The insufficiency of the training offered resulted in lack of expertise. No clear chain of command, lack of transparency in BPR's team formation, and later job assignments were all found to obstruct BPR's success. Team members of the BPR process did

not represent different subjects and positions at the university; instead, they came from very few departments. Moreover, implementation was followed up rather poorly. The organizational culture of Jimma University is facing challenges regarding ethnicity, languages, and geographic affiliations. All these result in higher levels of resistance to attempted changes. Similarly, poor management commitment, centralization of resources, subordination to the needs and orders of external interest groups, and fatigue among academic staff members are all indications that the BPR implementation process was not executed as suggested by management literature.

Neither were reward packages designed to support the proper implementation of BPR. As a result, stress, repetitive, and seemingly useless meetings impede the engagement of academic staff members as also their personal development. Moreover, massive size expansion, external pressures, and voluminous intake of students have created additional challenges for BPR's implementation.

6.2 Practical Implications

Our findings have the following practical implications:

- Creating a conducive environment that nurtures trust, ignites initiation, and contributes to personal development agendas can facilitate bringing about a desired institutional transformation.
- Acknowledging the principle of academic freedom while attempting to achieve mutual consent regarding change initiatives can help in avoiding resistance to change.
- Our findings also imply that organizations undergoing BPR projects would be well advised to allow enough time to complete the transition cycle. Hurrying people might not save time as members will be left with their other working tasks unfinished. At some point, the overall load will get too heavy. Thus, reducing the time pressure and focusing on communication could reduce the burden put on employees.
- Efforts should concentrate on areas that have the most direct impact on BPR's performance—training.
- Top managers and BPR team members should not forget to listen to the voices of the customers (academic and administrative staff members) to enhance the chances of successfully implementing BPR (see also Terziovski et al. 2003).

Jimma University has a track record of implementing innovative management practices. To maintain this track record, it will be a good idea to follow up on the different change initiatives to learn from these processes before embarking on new processes.

References

Adeyemi, S., and M.A. Aremu. 2008. Impact assessment of business process reengineering on organizational performance. *European Journal of Social Sciences* 7 (1): 115–125.

Aggarwal, R., and A.A. Samwick. 1998. 'The other side of the tradeoff: The impact of risk on executive compensation (No. w6634)', National Bureau of Economic Research.

Al-Mashari, M., and M. Zairi. 1999. BPR implementation process: An analysis of key success and failure factors. *Business Process Management Journal* 5 (1): 87–112.

Al-Mashari, M., and M. Zairi. 2000. Revisiting BPR: A holistic review of practice and development. *Business Process Management Journal* 6 (1): 10–42.

Andreu, R., J.E. Ricart, and J. Valor. 1997. Process innovation: changing boxes or revolutionizing organizations? *Knowledge and Process Management* 4 (2): 114–125.

Ascari, A., M. Rock, and S. Dutta. 1995. Reengineering and organizational change: lessons from a comparative analysis of company experiences. *European Management Journal* 13 (1): 1–30.

Bashein, B.J., M.L. Markus, and P. Riley. 1994. Preconditions for BPR success and how to prevent failures. *Information System Management* 11 (2): 7–13.

Braganza, A., and A. Myers. 1996. Issues and dilemmas facing organizations in the effective implementation of BPR. *Business Change and Re-engineering* 3 (2): 38–51.

Davenport, T. 1993. *Process innovation: Re-engineering work through information technology*. Boston, MA: Harvard Business School Press.

Deakins, E., and H.H. Makgill. 1997. What killed BPR? Some evidence from the literature. *Business Process Management Journal* 3 (1): 81–107.

Doherty, N., and J. Horsted. 1996. Re-engineering people—The forgotten survivors. *Business Change and Re-engineering* 3 (1): 39–46.

Drucker, P.F. 1993. *Managing for the future*. London/Thousand Oaks: Routledge.

Hammer, M., and J. Champy. 1993. *Reengineering the Corporation: Manifesto for business revolution*. New York: Harper Business Essentials.

Kohli, R., and E.D. Hoadley. 1997. Business process re-engineering concepts and tools effectiveness: A survey of practitioners. *Knowledge and Process Management* 4 (4): 278–285.

Lee, J. 1995. An exploratory study of organizational/managerial factors influencing business process reengineering implementation: an empirical study of critical success factors and resistance management. *ETD collection for University of Nebraska-Lincoln*. AAI9528825 http://digitalcommons.unl.edu/dissertations/AAI9528825.

Mitchell, V. and R. Zmud. 1995. Strategy congruence and BPR rollout, in Grover, V. and W. Kettinger (Eds), *Business process change: Reengineering concepts, methods and technologies*, Idea Group Publishing, London, 428–452.

Pamela, S.L., and H.G. Stephen. 1995. *Management challenges in the 21st century*, 375–376. St. Paul, Minnesota: West Pub. Company.

Peppard, J., and D. Fitzgerald. 1997. The transfer of culturally-grounded management techniques: The case of business reengineering in Germany. *European Management Journal* 15 (4): 446–460.

ProSci. 1997. Benchmarking study—Best practices in business process reengineering and process design, ProSci, Loveland, CO.

Roberts, L. 1994. *Process reengineering: The key to achieving breakthrough success*. Milwaukee: Quality Press.

Sheehy, B. 1997. Quality comeback. *Executive Excellence* 14 (5): 7–8.

Simon, K.A. 1994. *Towards a theoretical framework for business process reengineering. studies in the use of Information technologies*. Göteborg University: Department of Informatics.

Stanley, D.J., J.P. Meyer, and L. Topolnytsky. 2005. Employee cynicism and resistance to organizational change. *Journal of Business and Psychology* 19 (4): 429–459.

Terziovski, M., P. Fitzpatrick, and P. O'Neill. 2003. Successful predictors of business process reengineering (BPR) in financial services. *International Journal of Production Economics* 84 (1): 35–50.

Tsichritzis, D. 1999. Reengineering the university. *Communications of the ACM* 42 (6): 93–100.
Valimaki, J., and T. Tissari. 1997. Risk management focus in business reengineering initiatives. *Proceedings of the IPMA symposium on project management: Managing risks in projects*, 233–242. London: E & FN Spon.
Watts, J. 1995. An introduction to holistic BPR. *Business Change & Reengineering* 2 (4): 3–6.

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Chapter 3
Internal and External Factors Affecting Exporting SMEs in Rwanda

Virginie Akimana

Abstract Small and medium-sized enterprises (SMEs) in Rwanda are struggling to be successful in the export market. Drawing on a qualitative study, this chapter focuses on internal and external factors that influence SMEs in the country. It shows that Rwandan exporting SMEs lack sufficient funds to invest in export activities which are major internal factors hindering exports. The study also identified other internal factors such as lack of knowledge about foreign markets and meeting the quality and quantities demanded by foreign markets as hindrances. External factors relate to internal ones where competition in the global market hinders SMEs' exports. Networking and lack of foreign market representation also impede the success of exporting SMEs in Rwanda.

Keywords Exporting · Factors · SMEs · Exporting SMEs · Rwanda

1 Introduction

In recent years, export performance has been critical for the economic development of many developing countries. It has contributed to faster growth and reduction in poverty. Exporting has produced economic benefits thanks to efficiency gains associated with exploiting comparative advantages and improved allocation of scarce resources. The export sector also has dynamic gains which are driven by greater competition, greater economies of scale, better use of capacity, dissemination of knowledge and know-how, and technological progress (International Trade Center 2011).

In product markets ranging from food items to footwear and cars to computers, the world market is dominated by a few big brand names. These worldwide producers, such as Nike, Nestle, and Microsoft, are global players that rule the sphere

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of commodity production and set the rules for competition. In this scenario, small and medium-sized enterprises (SMEs), especially those in developing countries, are found mostly at the low end of global production chains. They do not have the enormous amounts of investment capital necessary to establish global brands in an increasingly demanding market of rich countries or to pursue technological or know-how intensive activities such as research and development (R&D) and marketing (Cathrine 2003). A growing concern among policymakers is that for all their success, SMEs are still struggling when it comes to selling their products beyond their national borders independently; this is true of whether these firms are located in developed, developing, or least developed countries (LDCs). Many reasons can explain this situation, among which are perceived insecurities of transborder transactions and the difficulties faced by some companies in gaining access to the existing (global) supply chains because of lack of financial resources or proper trade infrastructure (Paul and Matthieu, n.d.).

According to the Ministry of Trade and Industry of Rwanda (2010), 'the SME sector also has the potential to lower Rwanda's trade imbalance. Rwanda's trade deficit has grown from $229 m to an estimated $770 m over the past five years (2005–2009). The Government of Rwanda's (GoR's) vision is to increase the role of value-added exports to increase export revenue and reduce the import–export gap.' For those who think that only large firms are dependable for economic growth, it is worth pointing out that small merchants and small suppliers also play an important role in this growth. So SMEs are very important for the worldwide economy (Jamshed et al. 2011).

Though the government and its trade partners' policies have been put in place to help exporting SME to upgrade their businesses, problems still persist. There are still very few exporting SMEs in Rwanda, and their participation in the global market is low. There is a gap in research in this area, especially related to Rwanda, to help understand the internal and external factors that hinder exporting SMEs from going global. These SMEs are much relied on for the country's economic development though they are affected a lot both internally and externally in their daily activities.

Thus, this chapter explores the internal and external factors affecting exporting SMEs in Rwanda. According to Koksal and Kattaneh (2011), exporting is considered a complicated and expensive process. In the initial stages, the export process triggers high costs and requires a lot of time. Over time, however, it provides many strategic opportunities and chances for making profits. Yet, this time lag makes exporting a very difficult decision for companies. As SMEs in Rwanda contribute a lot to its economic development, it is important to identify and study the challenges and thus increase awareness and direct attention to reducing them for the mutual benefits of SMEs and the country.

This chapter contributes both theoretically and practically to this discussion. It adds to the literature on hindrances faced by exporting SMEs, especially in Rwanda. It also provides insights into how export challenges are handled around

the world, and this can be a solution for many SMEs in Rwanda which would like to engage their businesses globally. Practically, the work addresses different practitioners such as SME managers and policymakers to jointly face and act against negative factors that hinder the country's development. In the context of Rwanda, this means different stakeholders working hand in hand with exporting SMEs for the country's economic development. These stakeholders include the Ministry of Trade and Industry (MINICOM), the Rwanda Development Board (RDB), the National Bank of Rwanda (BNR), the Rwandan Development Bank (BRD), Ministry of Agriculture (MINAGRI), National Agriculture and Export-Promotion Board (NAEB), and the Private Sector Federation (PSF).

This qualitative study explores which internal and external factors affect exporting SMEs in Rwanda. For this, SMEs which are internationally active were interviewed to gather views on their daily struggles in their efforts to establish themselves in the global market.

The remainder of this chapter is structured as follows: Next, it elaborates on the framework of the study and research method. The next section presents the findings and then develops some propositions. This is followed by a discussion and finally a conclusion.

2 Framework of the Study

2.1 SMEs and Exporting

The term SME covers a diverse group of businesses in a developing economy—a small shop making handicrafts to a sophisticated engineering firm selling to overseas markets (Fischer and Reuber 2003). A number of different criteria can be used to distinguish between a SME and a large firm in an emerging economy: the number of employees, the value of sales, and the value of production equipment. The definition of SME may vary from country to country, but SMEs are generally defined by the number of employees because these figures are readily available (Hashim 2012).

Rwanda's Ministry of Trade and Industry's (2010) definition of SMEs is based on Table 1 where *two of the three conditions should be met.*

SMEs in Rwanda have remained less competitive compared to its neighbors, and if no effort is made to make them more competitive, this situation is likely to worsen with the full-fledged East African Community (EAC) common market. Making existing and new Rwandan SMEs more competitive in value-added exports is therefore one vital action necessary for reversing the trade imbalance and building competitiveness (Ministry of Trade and Industry 2010).

In the face of globalization, many SMEs attempt to expand their sales into foreign markets. International expansion provides new and potentially more

Table 1 Definition of SMEs in Rwanda

Size of the enterprise	Net capital investment (Million RwF)	Annual turnover (Million RwF)	Number of employees
Micro-enterprises	Less than 0.5	Less than 0.3	1–3
Small enterprises	0.5–15	0.3–12	4–30
Medium enterprises	15–75	12–50	31–100
Large enterprises	More than 75	More than 50	More than 100

Source Ministry of Trade and Industry Rwanda (2010)

profitable markets, helps increase a firm's competitiveness, and facilitates access to new product ideas, manufacturing innovations, and latest technology. In the macro-environment and at the industry level, globalization may give rise to market turbulence, increased competition from (especially) multinational firms, loss of protected markets due to trade liberalization, and the emergence of international marketing opportunities, all of which can affect the operations and performance of SMEs (Svend 2011).

By number, SMEs dominate the world business stage. Although precise, up-to-date data is difficult to obtain, estimates suggest that more than 95% of the enterprises across the world are SMEs, accounting for approximately 60% of private sector employment (Ayyagari et al. 2011). Rwandan small and micro-businesses comprise 97.8% of the private sector and account for 36% of private sector employment. There are over 72,000 micro, small and medium enterprises (MSMEs) in Rwanda (Fortune of Africa 2016).

Trade costs have become a focus of discussion within trade policy and academic circles in the recent past due to their increased visibility when it comes to reducing traditional trade barriers. However, this is more urgent in the context of LDCs, where most of the exporting firms are SMEs and where trade costs are reducing more slowly as compared to their trading partners (hence, export diversification is an urgent need). SMEs in LDCs also have the lowest levels of participation in the global/regional value chain (GRVC), and most of them are located in landlocked countries and/or in fragile situations (Executive Secretariat for the Enhanced Integrated Framework, n.d.).

The Uppsala Model of Internationalization Processes was first published in 1977 (Johanson and Vahlne 1977). It has since then been revised and extended a number of times (Johanson and Vahlne 1990, 1993, 2003, 2006, 2009). It is based on the processes and order that several Swedish firms followed during their internationalization processes in the late 1960s and 1970s. The findings suggest that in their internationalization processes, firms incrementally increased their commitments to foreign markets by increasing their presence as time passed and knowledge about the markets grew. Firms began expanding to markets that were most similar to their domestic markets (Johanson and Vahlne 1977).

This suggested that internationalization including exports is a learning process as it helps a firm learn the characteristics of new markets and how to work in them. It thus provides part of the information needed to approach new markets with less uncertainty. In fact, lack of international and foreign market knowledge causes a great deal of uncertainty (Eriksson et al. 1997). The cultural and regulatory diversity that a firm encounters when internationalizing results in higher transaction costs, and this increases demands for managerial information processing (Hitt et al. 1997). For SMEs to be able to internationalize, there is a need to plan in advance. They should put in efforts in doing international market research, human resource development, financial resources, and adapting products to suit global markets' demands.

2.2 *Overview of Exporting in Rwanda*

Rwanda's geographical position presents both opportunities and challenges. The countries to its north and east such as Uganda, Kenya, and to a lesser extent Tanzania have developed relatively rapidly in recent years and now provide a large share of the external markets for Rwandan goods. At the same time, these countries' products are strong competition for Rwandan exports seeking international markets as they have easier access to transport routes. The major constraints in rapid growth and expansion of trade are often also constraints that stem from the geographical and historical situation of a country. For example, being landlocked and without cheap air or rail links greatly hinders Rwanda's current export capabilities. The trade sector suffers from two major problems: production constraints and access to international markets (Ministry of Commerce, Industry, Investment Promotion, Tourism and Cooperatives 2006).

In Rwanda's Vision 2020 plan, the country set ambitious goals for growth that require an *almost sevenfold increase* in the economy. Because of the poor progress made in the last decade, the economy now needs to expand by 250% between 2010 and 2020 in order to increase its per capita GDP from US$550 to at least US$900.3. This growth in the decade ahead will be very challenging, and thus far, Rwanda's scorecard in terms of meeting its export growth of 15% per annum is mixed (Government of Rwanda 2011).

Rwanda's main merchandise trade is concentrated on five main export markets —the European Union (EU), Switzerland, Kenya, the USA, and China. In addition, it exports small values to the Islamic Republic of Iran, Israel, South Africa, Uganda, the United Republic of Tanzania, and Burundi. In 1997, its number one market was regional and was dominated by Kenya where 67% of its total exports went, followed by the EU (12%), the United Republic of Tanzania (9%), Uganda (5%), Burundi (3%), the Democratic Republic of the Congo (2%), and Switzerland (1%).

Four years later, in 2001, Kenya continued to dominate Rwanda's export market although its share in 2007 dropped by 24 points from 1997. The EU's share dropped by 1%, while the shares of the United Republic of Tanzania and Uganda

remained constant at 9 and 5%, respectively. In 2007 (6 years later), EU was the leader of Rwanda's exports with a 36% share, followed by Kenya (19%), a newcomer in the market, Hong Kong (China) (13%), Switzerland (7%), the Democratic Republic of the Congo (6%), the USA (5%), Burundi (4%), Swaziland (3%), South Africa (2%), and Uganda (2%) (United Nations Conference on Trade and Development (UNCTAD) and the Ministry of Trade and Industry 2010).

According to the Rwanda Development Board (2013), Rwanda's exports increased from US$268 million in 2008 to US$483 million in 2012 (Fig. 1). There was an increase of 24.8% in exports as they moved from $387 million in 2011 to $483 million in 2012. Some of the major reasons attributed to this increase in exports are programs which were put in place to boost exports including market linked programs, trade exhibitions, developing cross-border traders' capacities (with support from the International Trade Center) program and an export coaching program.

In Rwanda, the high rate of taxation and the complexity of the tax code are major burdens for SMEs. Businesses in Rwanda must currently pay under a minimum of seven separate tax regimes, not only meaning that taxation is high, but the World Bank estimates that 3% of Rwanda's GDP is spent on compliance issues (Red Tape Study 2008). Further, there are environmental regulations, EAC, and international quality and safety standards which are required for exports along with the Rwandan government's health protocols. Many SMEs in Rwanda have shut down due to failure to comply with environmental or health regulations as they cannot afford to

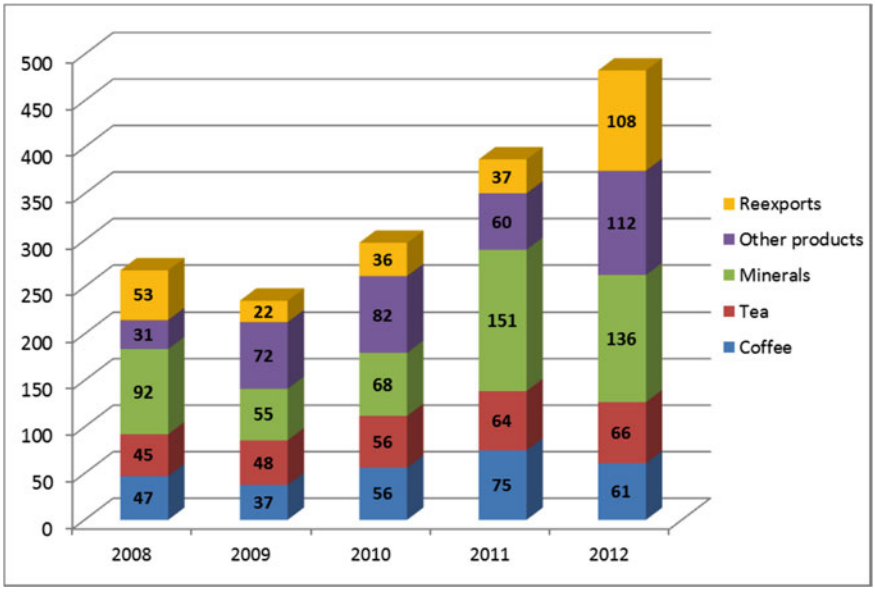

Fig. 1 Value of exports in million US$ (2008–12). *Source* Rwanda Development Board (2013)

comply with these or because they do not understand the regulations (Ministry of Trade and Industry 2010).

3 Research Methods

3.1 Study Design

Hashim (2012: 9) maintains that for studying topics like internationalization, qualitative research is useful in investigating the meanings and interpretations that people (here, experienced entrepreneurs) attribute to events that they have experienced and that this is also appropriate for understanding human phenomena such as the entrepreneurs' orientation and their actions and behavior. In order to understand SMEs' opinions and beliefs about internal and external factors affecting exporting SMEs in Rwanda, a qualitative study was judged to be useful. According to Marshall and Rossman (2011), qualitative research is pragmatic, interpretive, and grounded in the experience of the people. This study used a qualitative approach since it has the potential to answer questions that require an explanation and not straightforward yes/no answers. Since qualitative research is concerned with cases rather than variables and understanding differences rather than calculating the mean of the responses, our study made use of semi-structured interviews, focused group discussions, case studies, and open-ended questions to get answers (cf. Gail and Joan 2011).

3.2 Data Sources

Personal interviews and secondary data were the major sources of data. Face-to-face semi-structured interviews were conducted to gain a better understanding of an entrepreneur's situation and to avoid possible misunderstandings. The respondents were selected from the rather low number of exporting SMEs in Rwanda. In the population of around 30 SMEs operating in different parts of the country (Kigali city, south, north, east, and west provinces), five were purposively selected after confirming that they exported their products and were willing to share their experiences for the study. These SMEs were labeled A, B, C, D, and E for confidentiality. The interviews were conducted with their chief executive officers (CEOs) who were also the owners of these companies. Each interviewee spent between 45 min and an hour talking to the researcher.

As this chapter is about internal and external factors affecting exporting SMEs in Rwanda, the data analysis focused on the export activities of each SME and the factors affecting them. The analysis was based on the respondents' responses; these CEOs were well informed about what their firms had gone through while struggling

to enter and succeed in the international market. The data was analyzed with a focus on factors affecting exporting SMEs in Rwanda. The interview guide consisted of two parts: The first part covered background information about the company, its industry, and duration of exporting activities. The second part related to specific questions on:

1. How do you perceive exporting activities for Rwandan companies in general?
2. What is your view on the exporting activities of Rwandan SMEs?
3. Which characteristics do you think a SME should have to be successful in the export market?
4. Please describe the experience of exporting activities in your firm.
5. What are the motives that influenced your firm to enter the export market?
6. When it comes to exporting activities, how are decisions made and who decide (s) whether to export or not?
7. How does exporting affect the overall performance of SMEs?
8. Are there specific internal factors that influence exporting SMEs in Rwanda?
9. Which are the external factors for exporting SMEs in Rwanda?
10. Do you have any suggestions on how to address both internal and external factors affecting exporting SMEs?

4 Findings and Propositions

The main purpose of this study was to assess internal and external factors affecting exporting SMEs in Rwanda. Table 2 lists the industries and experience in export activities for the SMEs in our sample.

Table 2 provides an overview of the industries in which the SMEs operated. Not only the industries, but also the period of their export activities differed. During the interviews, the respondents shared their views on exporting companies in Rwanda in general, but with special focus on their own exporting SMEs and the factors that affected their export activities.

Table 2 Industries and export experience of studied SMEs

SME	A	B	C	D	E
Industry of operation	Cheese processing firm	Textile handcraft company	Organic pineapple processing factory	Manufacturing and producing of school chalks	Horticulture (fruits, vegetables, and flowers)
Experience in export activity	10 years in export activity	21 years of exporting experience	4 years in export activities	2 years of export experience	15 years of export experience

4.1 How Are Exporting Activities for Rwandan Companies Perceived in General?

The five SMEs perceived exporting activities for Rwandan companies in related ways. The owner-manager of Company A said:

> Export in Rwanda is good, but African countries to which Rwandan companies export are not reliable in terms of security of exported merchandise, nobody there cares about the orders, there is no trust between the exporters and importers; the cost of emptying cold rooms is very high and is not gainful; rivalry/competition is high with national companies, etc. It would be great if the Rwandan government subsidized exporting SMEs since taking goods abroad is always expensive without a subsidiary in the host countries. Banks in Rwanda are not supportive of exporting businesses, especially SMEs: loans are provided at high interest rates, leading to long pay-back times. Many companies end up closing down, while others get auctioned to pay back uncovered loans.

The views of the owner-manager of Company B were as follows:

> There is lack of market information on where to take products, mostly in handicrafts. It is not known what the customers like, we have to tell them about Rwanda before they even see and use our products. Ornament products from Rwanda such as agasekes (baskets) are beautiful and uniquely made by hand by assembling traditional and local raw materials. Some companies just take products and export them without any planning. Planning leads to market access since the market being served is known in advance and the needs of the clients have been identified beforehand. Therefore, without planning, there is high probability of failing in the export market. This is a very big issue. Satisfying the market in terms of quantity is also a major problem. This is partly because of lack of knowledge about the market and also because of production capacity. Most Rwandan companies cannot even satisfy the local market as most of them produce traditionally.

As per the owner-manager of Company C:

> Though the Government of Rwanda is trying to enhance export activities, there are still big challenges that have to be met by all exporting companies in Rwanda. These include quality issues, packaging and transport and cooling rooms which are still very expensive. As for water transport, Rwanda is a land-locked country where accessing water transport is an issue. Nowadays we are accessing Mombasa and Dar-Es Salaam ports; because of our membership of the East African Community (EAC), water transport is becoming accessible though not many SMEs are using it. Cooling rooms are expensive in terms of rent and emptying them as quickly as possible is an option to save costs. This is because of low technology, especially in African export markets where the cost of electricity is high compared to that in the developed world.

The owner-manager of Company D said almost nothing on this subject, while the owner-manager of Company E stated:

> Exporting is a tough activity for firms in Rwanda as much money needs to be invested. When you are a new player in exports, it is even tougher, as there are new rules to follow for each export market.

Perceptions on how export activities were undertaken by companies in Rwanda revolved around challenges. Many of these challenges are also faced by other companies around the world such as financing export costs and addressing lack of

knowledge about the market. However, Rwandan companies have their own specificities especially when it comes to production capacity and transporting products to the export market. But they also have to struggle in dealing with both internal and external financial costs when attempting to build their names both nationally and internationally.

The Rwandan Ministry of Trade and Industry (2010: 24) says: 'SMEs in Rwanda lack an understanding of the local, regional and international market in which they operate, limiting their ability to take advantage of potential market opportunities. They do not have the resources or time to spend gathering and understanding market information that would be useful to their operations. This inhibits SME innovation and growth… Consequently, competition stifles the sector instead of leading to diversification and innovation.'

One aspect mentioned in the interviews was that Rwandan exports were underdeveloped vis-à-vis the rest of Africa. Although the export sector was growing, Rwanda lagged behind other African nations in terms of exports as a percentage of GDP. Closing this gap will require not only more production, but also the creation of niche products and services that respond to the specific needs of target markets. While the government has attempted to support export activities in the past, these export promotion activities have been uncoordinated and have had low impact. The National Export Strategy (NES) addresses previous implementation weaknesses and suggests a systematic and coordinated approach to export development through the Rwanda Development Board (RDB) (NES 2011). Thus, it appears that Rwandan firms such as SMEs lag behind other companies especially in Africa when it comes to export activities. This finding is summarized as follows:

Proposition 1 *Exporting companies in Rwanda, including SMEs, face major challenges in terms of financial means, lack of market information, production (in terms of quality and quantity), transport and storing capabilities for export activities.*

4.2 How Did Interviewees Perceive Exporting Activities of Rwandan SMEs?

According to firm A:

> Exporting SMEs are experiencing almost the same challenges as large companies in Rwanda, the only difference is the capacity and the size of the company. Another thing that SMEs are experiencing often is a smaller market compared to other companies' markets. A good example of this is the East African Community (EAC) market, which is difficult for SMEs to enter because big companies already cover that market and EAC companies export to Rwanda after satisfying their own markets. For example, the main export market for dairy products is West Africa that is poor in these products. To be successful in international markets, exporting SMEs should have quality products and services, good packaging and labeling, cooler boxes, cold rooms, punctuality of air transport, written orders, market knowledge and a secure export market.

This was also stated by Company B:

> Transport is expensive for exporting SMEs; booking a place to put the products (at the destination) needs a high budget, even if you have high quality products. For the products to reach their destination and get sold, it can cost you the whole business that is still small! To be successful in the export market, a SME needs quality products and presentation skills for those products.

The owner-manager of Company C said:

> SMEs face almost the same situation as large companies when it comes to exporting. However, SMEs are still lagging behind when it comes to packaging technology (for example, when Kenyan SMEs pack avocadoes and pineapples, the products reach the Dubai market fresh). SMEs in Rwanda, especially those in fruit processing, are almost incapable of producing for the export market. Production capacity in terms of quality and quantity is still low in Rwandan SMEs. For being successful in the global market, a SME should have an international export certificate, a certificate of origin, Rwanda Revenue Authority (RRA) documents and all possible documentation related to quality requirements.

The owner-manager of Company D explained:

> Rwandan products are appreciated in neighboring countries because they believe in our quality. We have been at a number of trade fairs (Expo) and witnessed this. So, exports are very good for our brands, to be known and competing in the region. For a SME to be successful in the global market, it should have good quality and good packaging of its products; consistent quality of its product should be emphasized.

SME E reasoned:

> Apart from being financially unfit and small, exporting SMEs meet the same issues as large companies. SMEs need enough capital for export activities which is very time consuming and requires expensive transport to succeed in the global market.

From these comments, it can be concluded that exporting SMEs find it difficult to be successful in the global market as they struggle to grow. A lot of importance is being attached to finance and the quality of the products that they trade. Apart from this, formalities for the international market also have to be fulfilled such as certification of the products being exported. According to the Ministry of Trade and Industry of Rwanda (2010: 5):

> SMEs in Rwanda have remained less competitive compared to regional neighbors and if no effort is made to make them more competitive, this situation is likely to worsen with the full-fledged East African Community (EAC) common market, which Rwanda is set to enter in July 2010. Making existing and new Rwandan SMEs more competitive in value-added exports is therefore one among other vital actions necessary to reverse the trade imbalance and build competitiveness.

This implies that the ministry realizes that exporting SMEs are important for the economic development of the country and that they are not yet at a competitive level. This confirms interview statements, for example, that quality and finance issues are still impeding exporting SMEs.

Prior research has confirmed that SMEs play a central role in developing the private sector and integrating it into the global economy as an efficient way for alleviating poverty in developing countries (e.g., Raynard and Forstater 2002). To participate effectively in global markets, SMEs are required to have and maintain significant capabilities in different areas of the industry value chain including production, design, distribution, branding, and marketing (Abonyi 2003). These authors touch two important points that are also raised in my findings. They agree that SMEs contribute to poverty alleviation in developing economies, but they are still lagging behind when it comes to participating in the global market that demands high-quality products, large quantities to satisfy the market, marketing skills, and so on. Exporting SMEs in Rwanda are facing challenges which are similar to those faced by big exporting companies. However, their sizes and capacities differ. Therefore, it is proposed:

Proposition 2 *Being an exporting SME in Rwanda requires relatively much more effort as compared to that put in by large exporting companies. Quality and packaging standards, labeling, production consistency, and on-time delivery are serious challenges that need to be addressed by SMEs to be successful in the global market.*

4.3 Motives and Decision-Making to Enter the Export Market

When asked about reasons why they decided to enter the export market and who decided this, the interviewed SMEs responded differently. Regarding decision makers, three of the SMEs claimed that since their firms were headed by the owners, they were the ones to decide whether to export or not. In two SMEs (C and E), the quality assurance director and the clients (after consultations) had a big say in what to export. Prior research (e.g., Svend 2011) has found that in SMEs, the initial decision to export tends to be made by the president with substantial inputs provided by the marketing department as it has a reasonably good understanding of different global markets. Thus, the marketing department can also actively try to influence the president toward taking such a decision. However, exporting is considered a complicated and expensive process, where benefits are often not derived directly right from the start. Therefore, it is a hard decision to take (Koksal and Kattaneh 2011). Given the character of export activities, decision-making by experts in the field is needed. Thus, SMEs in Rwanda still have a long way to go in human capacity building to be able to make profitable export decisions.

4.4 The Motives to Export

The owner-manager of Company A explained the motives for international expansion as follows:

> I wanted to expand the market and sell at higher prices than here. Exporting brings foreign currency that enters the country which is also beneficial for businesses. High production capacity, local competition in Rwanda by mostly Ugandan and Kenyan farmers and lack of local competition in West Africa, where I sell dairy products, also motivated my export activities.

The owner-manager of Company B explained:

> As I am in handicrafts, I realized that Rwandans in general tend to underestimate the products made in the country. This is not for the sake of underestimating, but there is also lack of financial capacity to pay the higher prices involved when it comes to quality. I decided to export because there is no market in Rwanda and because foreign markets like and value our products.

The owner-manager of Company C asserted:

> It is my own decision. I produce for the export market. I wanted to see whether I can be successful in the export market, and it is possible although it looks difficult.

The CEO of Company D said:

> The quality of our product is the first thing that influenced me to export. I also wanted to try and compete in a region where chalks are needed since most school products are imported by neighboring countries such as Uganda, the Democratic Republic of Congo, Burundi and Tanzania which are the main destinations for my products.

According to the owner-manager of Company E:

> Though I also sell in Rwanda, I felt a need to get to know the business world and to get foreign currency. I wanted more independence in my business and I wanted to be open to the world.

For most SMEs in the sample, the fundamental reason for exporting was expanding their businesses and making money. However, as in most business activities, one factor alone rarely accounts for any given action. Usually, a mixture of factors results in firms taking steps in a given direction (Svend 2011). Svend (2011) recognized the major motives for companies to export. His list is composed of both proactive and reactive motives for starting exports. The proactive motives include profit and growth goals, managerial urge, technological competencies, information about the foreign market, economies of scale, and tax benefits. Reactive motives include competitive pressures, a small and saturated domestic market, overproduction, extending sales of seasonal products, and proximity to international customers. With these push and pull motives, it is clear that exporting SMEs in Rwanda are also motivated to go global as these circumstances are found in all businesses.

Proposition 3 *Exporting SMEs in Rwanda are motivated to export their products for almost the same reasons as those put forward by other companies around the world. However, one peculiarity for exporting SMEs in Rwanda is that some go global for adventure to explore the world and learn how business is done in other parts of the world.*

4.5 Effect of Exports on SMEs' Overall Performance

Discussing how they were affected by export activities, most SMEs largely talked about the positive effects. The owner-manager of Company A said:

> Positive effects are what I gain from my firm's exports. When I export, I can get higher prices than locally, higher quantities are sold and networking with other businesses is made possible. As a Rwandan proverb says, "Akanyoni katagurutse ntikamenya iyo bweze" (a bird that doesn't fly cannot know where they are harvesting!)

As per Company B:

> Our small firm creates jobs for workers since we need products to export. It therefore improves their living standards since the firm gains more profits when products are sold internationally.

Similarly, the CEO of Company C said:

> It is a very good thing to export. It helps in adding value to the products. This leads to a price increase, where both exporting SMEs and producing farmers gain from their efforts.

However, the CEO of Company D warned:

> Sometimes the demand is high domestically and a small firm fails to export. SMEs do not have enough quantity to export, though they may have quality products.

The owner-manager of Company E added:

> Exports play a big role. They help to get known globally as a SME and as a country, Rwanda. Word of mouth is very significant in business, especially when it comes to global business. It is tough to export, but so are many other activities. What it needs is continuous courage and commitment.

Internal export problems are usually related to company resources for export activities. They are generally related to products' characteristics, for example, low-quality products, high prices, or lack of information (Jamshed et al. 2011). All interviewees recognized how advantageous their exporting activities were for their SMEs. They stated many benefits gained from exporting such as job creation, business growth, market knowledge increase and value addition to their export products. It is clear from the interviews with SME CEOs that exporting activities are not an easy task especially for SMEs, but that with commitment, they can be very fruitful.

Proposition 4 *Exporting SMEs in Rwanda tend to find exporting activities beneficial. They make the SMEs known internationally, increase the value of their businesses, and they get higher prices as compared to the domestic market. They can also create more jobs and improve their workers' living standards. Though it costs to produce for the export market, it is clear that with commitment exporting SMEs in Rwanda can grow and develop more.*

4.6 Specific Internal Factors Challenging Exporting SMEs in Rwanda

Lack of financial means and high transport costs are two important internal factors that Company A found impeding proper and well moving exports. The owner-manager of Company B said that exporting SMEs in Rwanda lacked training in market knowledge and research and this became an internal barrier hindering their business development. As SME C produces a lot from factor land, it has to deal with special internal factors such as land which is not yet consolidated leading to scattered produce in different qualities and quantities. This automatically leads to financial problems. Packaging and transport issues were emphasized as internal factors. Company E argued that export activities needed full commitment of the CEO in terms of always being around to see what was going on before export action; there was also lack of efficient workers (caring and committed ones to rely on), and securing financial means to deliver quality was another big issue.

Prior research has also identified barriers originating in organizational resources, internal potential, and company advancement as internal barriers to exports (Leonidou 1995). Poor quality products, lack of skills, lack of finance, lack of information, and lack of planning have also been identified as internal constraints for small firms' exporting (Gumede 2000).

Proposition 5 *Lack of working capital and transport that costs SMEs financially are among dominant internal factors impeding exporting SMEs in Rwanda. Non-committed workers, lack of information, and planning are some other internal factors that impede SMEs' exporting activities.*

4.7 Key External Factors for Exporting SMEs in Rwanda

The key external barriers according to the CEO of Company A were political instability in some export countries (e.g., the Democratic Republic of Congo), being forced by the situation to offer products at low prices when reaching the export market, lack of knowledge about Rwandan products in the export market (with low-quality perceptions in customers' minds), and global competition. The major

external factors perceived by firm B were transit and transport issues as well as long procedures with many documents to fill and others to be provided by exporters to the developed world.

Cooling rooms to store products in the export market and business procedures once outside Rwanda were the biggest issues found by Company C. The CEO of firm D found lack of tax exemptions for exporting SMEs in Rwanda impeding their export activities, while Company E discussed external factors such as quality control in the export market, delayed payments for offered products, hard international trade rules and procedures, lack of stores in foreign countries, and lack of knowledge about foreign markets.

This shows that apart from their own internal challenges, exporting SMEs in Rwanda also have to deal with factors that they cannot control at the destination. The external factors include instability in some export markets, lower prices, goods perishing before reaching the destination, and business procedures and formalities to be fulfilled. These can lead to losing the market for the few products that they produce.

Competitive barriers are a main challenge for many exporting companies around the world. In practice, information on export opportunities is also costly and not easily available (Hotniar et al. 2009; Jamshed et al. 2011). This resonates with the views of the interviewees that the export market was competitive and unpredictable.

Complicated processes and paperwork also impede export activities of SMEs in Rwanda. Dealing with international markets needs experience in those markets that most SMEs in Rwanda do not have. Spreading information about their products in global markets is the first step for selling them. Storing products abroad costs these SMEs, and they have no assurance that they will be able to sell their products to cover costs.

Proposition 6 *The biggest external challenge which exporting SMEs face is competition in the export market as they are not known and their products receive lower prices. Another external challenge is political instability in export markets as most of these SMEs export to African countries. Paperwork and difficult international trade rules and procedures are also serious challenges to exporting SMEs in Rwanda. Lack of knowledge about foreign markets is also a challenge for these small businesses.*

4.8 Strategies for Addressing Both Internal and External Factors Faced by Exporting SMEs

The internal and external factors affecting exporting SMEs were dealt with using different strategies:

Company A argued that export facilitation and advocacy were needed by different bodies such as PSF, NAEB, MINAGRI, MINICON, and RDB. International expos, financial help for SMEs for their growth, and trade missions focusing on

smaller companies were also needed. Company B added that having honest trade partners (importers) in the export market who could help in promoting SMEs' businesses would work better (networking). There is also a need for lower transport, cargo aircraft, and land consolidation costs as these were very high according to the CEO of firm C. The owner-manager of Company D was of the view that SMEs needed to find ways to be well informed about export markets since lack of information about these markers was one of the reasons for the failure or success of their businesses. Investing in market research should be done. As per Company E, working capital from the government and not from banks was needed as banks sold off your property after a period of time because of failure to pay back loans. Committed exporting SMEs should be supported by the government through grants for a given period of time.

Prior research has found that different national governmental activities can stimulate exports. These include the following (Albaum et al. 2002):

- Trade development offices abroad, either as separate entities or as a part of the normal operations of an embassy or consulate.
- Government-sponsored trade fairs and exhibitions. A trade fair is a convenient marketplace in which buyers and sellers can meet and in which an exporter can display his products.
- Sponsoring trade missions of business people who go abroad for the purpose of sales and/or establishing agencies and other foreign representations.
- Operating permanent trade centers in foreign market areas which run trade shows often concentrating on a single industry.

From the national government's point of view, each of these activities represents a different approach to stimulating export growth. From the point of view of an individual company, these activities provide relatively low-cost ways of making direct contact with potential buyers in overseas markets (Svend 2011). The wishes of the SMEs in our study sample resemble the measures pointed out by previous research.

Lack of finance is seen as a major challenge for SMEs. Despite this, there are funds available for SMEs. The Government of Rwanda has created four credit lines and four guarantee funds for which SMEs are eligible. These include funds for export promotion, agricultural development, and SME development. They are managed by two different entities: the National Bank of Rwanda (BNR) and the Rwandan Development Bank (BRD). Their focus is on removing constraints that prevent SMEs from accessing finance, including resolving capacity problems, addressing organizational issues in cooperatives, and influencing changes in banks and micro-finance institutions' attitudes. A SME Fund will be put in place in response to gaps in the market (Ministry of Trade and Industry 2010). Thus, it is clear that the Government of Rwanda through the Ministry of Trade and Industry is aware of the financial challenges met by SMEs and is proposing strategies to address such hindrances for their growth.

Proposition 7 *Exporting SMEs in Rwanda do not feel capable enough in their export activities. The SMEs are requesting more effort and help especially from the government and from some non-governmental organizations. They need export promotion and support from bodies such as PSF, NAEB, MINAGRI, MINICON, and RDB to access international expos or trade shows for networking and financial help (in terms of grants, not loans) for their growth in global markets.*

5 Discussion and Conclusions

The main objective of this study was to shed light on internal and external factors influencing exporting SMEs in Rwanda. It was found that exporting SMEs in Rwanda faced problems that hindered their economic development. Apart from the peculiar nature of SMEs which includes their size, they are also affected when it comes to export activities. Firm size can affect export behavior in a search for economies of scale and for spreading common expenses over expanded markets (Majocchi et al. 2005).

Literature shows that SMEs' capabilities to compete in the export market are moving at a slow pace since they have much to do. Literature also shows that reaching quality and even quantity standards requires finance and commitment for which SMEs in Rwanda should keep improving to be competitive in the global market. The motives for going global through exports for SMEs in Rwanda are mainly getting high prices for good quality products, and a few SMEs are offering such products in the export market.

Based on interviews with exporting SMEs in Rwanda, the major internal factors that came up were 'lack of finance' and 'lack of foreign market knowledge' that give birth to other factors hindering their development. As far as external factors are concerned, exporting SMEs in Rwanda found it difficult to compete in global markets. Many reasons were put forward for this including harsh global competition from big companies and nationals, tough procedures that discouraged small businesses, lack of representation, and networks abroad and payment problems. However, it has been argued that it is a good experience to export even though it is tough for SMEs in Rwanda, since it opens new doors for them. Therefore, exporting SMEs in Rwanda will appreciate support from the government instead of being told to get loans from commercial banks that tend to charge high, and sometimes unaffordable, interest rates. These SMEs need export promotion from the government to become financially fit and so contribute to the country's economic growth and development.

Some lessons can be learned from these exporting SMEs. It was surprising that one of the CEOs of the interviewed SMEs said that one of his motives for exporting was to explore the world and what is going on in the business world without considering the costs. This is a business mindset that not all SMEs owners in Rwanda have because of their financial situation. It was also realized that higher interest rates stop SMEs in Rwanda from growing and most of them end up closing their businesses. That is why

these SMEs are requesting government grants/subsidies instead of bank loans for growth. High transportation costs too were a big challenge for exporting SMEs in Rwanda. Quality that is perceived to be poor in the export market was also seen as an impediment to their products' exports. This perception kills the market for quality products. According to the exporting SMEs, their packaging standards, labeling, and production consistency are still low even when compared to other SMEs in East Africa. For example, Kenya is good at packaging since its horticultural products reach the US market fresh. Lack of workers' commitment in some interviewed exporting SMEs was claimed by the CEOs to be one of hindrances for these firms to perform well in the global market.

6 Limitations and Future Research

This study has several limitations. Due to its limited sample size, its findings cannot be generalized to each exporting SME in any country. The availability of very few interviewees is an important issue that limits research on SMEs in the African context. Related to this is a lack of secondary data on smaller firms on export activities. This lack of appropriate statistical information has been pointed out as a major constraint even in other contexts (Wagner 1995). The relatively low number of exporting SMEs in Rwanda limited the population from which the sample for the study could be drawn. Future researches are advised to extend the list of interviewees for increased opportunities for developing generalizable findings. Future research might also use export performance data from exporting SMEs to assess the degree to which the internal and external factors identified in this study affected their export activities.

7 Contributions

Despite these limitations, this research makes relevant contributions. It contributes to the scarce literature on SMEs in Rwanda, especially their export activities. It explores internal and external factors influencing SMEs' export activities based on in-depth interviews with CEOs. It shows that the CEOs were worried about the future of their businesses as they were exposed to more challenges than opportunities in their daily activities. These owner-managers stated that poor financial capabilities were the biggest impediment to their growth. They also put forward that a global market is very strict and stringent when it comes to requirements that small companies cannot afford at these costs. These requirements include quality products and certification for these products. Knowledge about global markets and satisfying them in terms of quantity are challenging issues. All these challenges are a result of the poor capacities of exporting SMEs in general as other SMEs around the world face almost the same situation; this has been shown in previous research. However,

peculiarities come in where exporting SMEs in Rwanda face infrastructural issues such as electricity cuts, road transport problems, and high costs of air transport. Higher interest rate loans are another big hindrance to the growth of exporting SMEs in Rwanda. Therefore, this chapter has a policy-related outcome as it makes both governmental and non-governmental bodies in Rwanda aware of the challenges faced by exporting SMEs. These bodies could work hand in hand with SMEs to take further action for improving export businesses which will benefit both the firms and the country.

8 Implications for Practice

This study has the following implications and suggestions for exporting SMEs' CEOs in Rwanda and policymakers. Firstly, exporting SMEs' CEOs should believe in themselves and use scarce resources to make quality products that will allow them to be marketed globally. Getting grants for export promotion can be a fruitful way forward if exploited with commitment and aimed at growth. Secondly, policymakers need to work more with committed exporting SMEs in Rwanda, since they are among eligible entities for developing the country economically. For example, the government can review financial funds and land consolidation to identify areas for improvements to enhance the growth of the Rwandan economy.

References

Abonyi, G. 2003. *Challenges of industrial restructuring in a globalizing world: Implications for small- and medium-scale enterprises (SMEs) in Asia*. Singapore: Institute of South East Asian Studies.

Albaum, G., J. Strandskov, and E. Duerr. 2002. *International marketing and export management*, 4th ed. Harlow: Financial Times/Pearson Education.

Ayyagari, M., A. Demirgüç-Kunt, and V. Maksimovic. 2011. Small vs. young firms across the world: Contribution to employment, job creation, and growth, policy research working paper 5631, The World Bank Development Research Group.

Cathrine, C. 2003. *Participation in global value chains as a vehicle for sme upgrading: A literature review*. Geneva: International Labour Organization.

Eriksson, K., J. Jan, M. Anders, and D.S. Deo. 1997. Experiential knowledge and cost in the internationalization process. *Journal of International Business Studies* 28 (2): 337–360.

Executive Secretariat for the Enhanced Integrated Framework (n.d.). *Reducing Trade Costs for least developed countries.* Available at: https://www.wto.org/english/res_e/booksp_e/aid4trade15_chap5_e.pdf.

Fischer, E., and R. Reuber. 2003. Industrial clusters and business development services for small and medium-sized enterprises. In *Competitiveness strategy in developing countries: A manual for policy analysis*, ed. G. Wignaraja, 131–165. London: Routledge.

Fortune of Africa. 2016. *Micro Small Medium Enterprises in Rwanda.* Kampala, Uganda. Available at: http://fortuneofafrica.com/rwanda/micro-small-medium-enterprises-in-rwanda/.

Gail, M.S., and S. Joan. 2011. Qualities of qualitative research: Part I, *Journal of Graduate Medical Education.* Halifax, Nova Scotia: Dalhousie University.

Government of Rwanda. 2011. *Rwanda national export strategy (NES).* Kigali: Government of Rwanda.

Gumede, V. 2000. Growth and exporting of small and medium enterprises in South Africa: Some thoughts on policy and scope for further research. Trade and Industrial Policy Secretariat (TIPS).

Hashim, F. 2012. Challenges for the internationalization of SMEs and the Role of Government: The Case Of Malaysia. *Journal of International Business and Economy.* 13 (1): 97–122.

Hitt, Michael A., E.H. Robert, and K. Hicheon. 1997. International diversification. Effects on innovation and firm performance in product-diversified firms. *Academy of Management Journal* 40 (4): 767–798.

Hotniar, S., Dharma T. Prihandoko, and K. Anacostia. 2009. *Problems faced by small and medium business in exporting products*. New Delhi: Delhi Business Review.

International Trade Center (ITC). 2011. Geneva: ITC.

Jamshed, K.K., A. Muhammad, and U. Muhammad. 2011. SMEs' export problems in Pakistan. *Journal of Business Management and Economics* 2 (5): 192–199.

Johanson, J., and J.-E. Vahlne. 1977. The internationalization process of the firm: A model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies* 8 (1): 23–32.

Johanson, J., and J.-E. Vahlne. 1990. The mechanism of internationalisation. *International Marketing Review* 7 (4): 11–24.

Johanson, J., and J.-E. Vahlne. 1993. Management of internationalization. In *Perspectives on strategic change*, ed. L. Zan, S. Zambon, and A.M. Pettigrew, 43–71. London: Kluwer Academic Publishers.

Johanson, J., and J.-E. Vahlne. 2003. Business relationship learning and commitment in the internationalization process. *Journal of International Entrepreneurship* 1 (1): 83–101.

Johanson, J., and J.-E. Vahlne. 2006. Commitment and opportunity development in the internationalization process: A note on the Uppsala internationalization process model. *Management International Review* 46 (2): 1–14.

Johanson, J., and J.-E Vahlne. 2009. The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership. *Journal of International Business Studies* 40: 1411–1431.

Koksal, H.M., and T. Kettaneh. 2011. Export problems experienced by high and low performing manufacturing companies a comparative study. *Asia Pacific Journal Marketing. Logistic* 23 (1): 108–126.

Leonidou, L. 1995. Export barriers: Non-exporters' perceptions. *International Marketing Review* 12 (1): 4–25.

Majocchi, A., E. Bacchiocchi, and U. Mayrhofer. 2005. Firm size, business experience and export intensity in SMEs: A longitudinal approach to complex relationships. *International Business Review* 14: 719–738.

Marshall, C., and G.B. Rossman. 2011. *Designing qualitative research*, 5th ed. London/Thousand Oaks: Sage.

Ministry of Commerce, Industry, Investment Promotion, Tourism and Cooperatives. 2006. *Trade policy and strategies*. Ministry of Commerce, Industry, Investment Promotion, Tourism and Cooperatives: Kigali.

Ministry of Trade and Industry. 2010. *Small and medium enterprises (SMEs) development policy*. Ministry of Trade and Industry: Kigali.

NES. 2011. National Export Strategy Rwanda, Available at http://www.minicom.gov.rw/fileadmin/minicom_publications/Strategies/National_Export_Strategy.pdf.

Paul, D., and B. Matthieu (n.d.). *The Postal Sector—A key facilitator of global commerce for SMEs.* Available at: http://www.unctadxi.org/sections/WSIS/docs/2AL_C7/The_Postal_Sector.pdf.

Raynard, P., and M. Forstater. 2002. *Corporate social responsibility: Implication for small and medium enterprises in developing countries*. Vienna: UNIDO.

Red Tape Study. 2008. Doing Business 2008: Cutting Red Tape in 178 Countries. Available at http://documents.worldbank.org/curated/en/669491468339912083/text/604300NEWS0San1ape0in01780Countries.txt

Svend, H. 2011. *Global marketing: A decision oriented approach,* 5th Ed. Italy: Pearson Education Limited; Thousand Oaks: Sage.

Rwanda Development Board (RDB). 2013. *2012 Year end achievements*. Kigali: Rwanda Development Board (RDB).

United Nations Conference on Trade and Development (UNCTAD) and the Ministry of Trade and Industry of Rwanda. 2010. *Rwanda's development-driven: Trade policy framework.* New York and Geneva: United Nations Conference on Trade and Development (UNCTAD).

Wagner, J. 1995. Exports. *Firm Size, and Firm Dynamics, Small Business Economics* 7: 29–39.

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Chapter 4
Literature Review of Readiness for Change in Ethiopia: In Theory One Thing; In Reality Another

Ermias Werkilul Asfaw

Abstract Readiness for change is defined as a cognitive precursor to resistance or as a support for a change effort. The main objective of this literature review is to explore readiness for change at the individual and organizational levels. It reviews publications to trace readiness for change. It provides a picture of the concept of readiness for change, explores and identifies the relationships between the readiness for change, individual change, and organizational change and the challenges of change. Dealing with the complex nature of change is the greatest challenge when following through and sustaining a change initiative. Leaning on institutional theory, it contextualizes the concept of readiness for change in Ethiopia.

Keywords Readiness · Readiness for change · Individual change · Organizational change · Institutional theory · Ethiopia

1 Introduction

Increasing global competition and changing political ideologies are some of the reasons for the accelerated rate of organizational change (Armenakis et al. 1999). Organizational change is considered unavoidable (Drucker 1999), and its rate is assumed to be constantly increasing. To cope with this global phenomenon, employees in organizations must be ready for change more than ever before. If people are not ready for change, they will resist it (Lewin 1945; Prochaska et al. 1994). If people resist a change plan, the planned change will not have a chance to

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succeed. The key question for change agents is how people get ready for change in their environment in a way that they are ready to implement effective changes in their organization (Walinga 2008).

Readiness refers to an organization's members' change commitment and change efficacy to implement organizational change (Weiner et al. 2008, 2009). The ordinary definition of the term 'readiness' connotes a state of being both psychologically and behaviorally prepared to act (i.e., willingness and ability). Readiness for change is defined as 'the cognitive precursor to the behaviors of their [employees] resistance to or support for change efforts' (Armenakis et al. 1993: 681–682). Readiness for change embodies individuals': (1) beliefs, attitudes, and intentions regarding the extent to which the change is needed, and (2) perceptions about the organization's ability to deal with change under dynamic business conditions. Change refers to making something different from its initial position and involves confrontation with the unknown and loss of the familiar (Agboola and Salawu 2011). The goal of intentional change typically addresses and helps make rapid improvements in economic value while simultaneously creating an organization whose structure, processes, people, and culture are tailored appropriately for its current mission and environment, and it is positioned to make the change (Beer and Nohria 2000).

The main objective of this review is to explore readiness for change at the individual and organizational levels. In addressing this objective, it answers the following questions:

1. What are the descriptions of readiness as an antecedent of change?
2. What does readiness for change mean at the individual and organizational levels, respectively?
3. How does readiness for change among employees emerge over time?
4. What kind(s) of individual and organizational readiness supports change?

2 Background

Readiness for change is not automatic, and it cannot be taken for granted. A failure in readiness for change may result in managers spending significant time and energy dealing with resistance to change (Smith 2005). Further, as per Smith (2005), if readiness for change is important, how then might this best be accomplished? The most common key steps are as follows: creating a sense of need and urgency for change, communicating the change message and ensuring participation and involvement in the change process, and providing anchoring points and a base for achieving the change.

Change is all about managing the most important and complex assets of an organization—its people. It is people who make up organizations, and it is they who are the real source of, and vehicle for, change. They are the ones who will either embrace or resist change. If organizational change is meant to thrive and succeed, then the

organization and its people must be geared for such a transformation (Smith 2005). Dealing with the complex nature of human beings is the greatest challenge within a change initiative to sustain the change. If not, it is very easy for an organization to fall back into old habits. It takes time and conscientiousness to change an organizational culture. People need to get ready to implement and reinforce the upcoming organizational change efforts. Change is needed for an organization to integrate and align people, processes, culture, and strategies (California State 2014). Therefore, we need to implement organizational changes continuously and thoroughly as the need arises. And there is a need for readiness for change.

This review deals with readiness for change, and it does so from an institutional theory perspective by exploring how readiness for change can be re-conceptualized at the individual and organizational levels (micro- and meso-levels). 'Such an approach opens opportunities to highlight the ways in which actors utilize discursive tools, specifically skillful development of rhetorical argumentation, as instruments of power that can shape their constituents' readiness for change' (Amis and Aissaoui 2013: 73). In doing so, it makes key contributions to an understanding of readiness for change. Besides, according to Amis and Aissaoui (2013: 73), institutional theory 'offers opportunities to develop theoretical frameworks that will allow for the exploration of how change readiness can be re-conceptualized as a process that is dialectically shaped within a given context, rather than a discrete and largely constant state.'

This chapter calls for shifting the locus of meaning to the individual and the overall (organizational) context in which the meaning is made. This recognizes that individuals' cognitions are shaped by broader social institutions and the organization's environment. Assessing readiness for change through an examination of the organizational environment that shapes such processes is likely to offer important insights into how change proceeds. There is a high risk of failure if individual and organizational readiness for change is lacking. Assessing the overall change readiness before any attempt to implement change begins is a good investment and one that can either reveal a path to success or give warnings of problems that may derail attempts at achieving change (Smith 2005). There is thus a need to identify organizational actions that make employees ready for change (Cinite et al. 2009).

It is important to uncover readiness for change from the Ethiopian perspective and identifying its implications for practitioners and policymakers. Readiness for change is a central strategic management issue and an organization requires a strategy to develop and maintain satisfied, committed, and loyal customers. Its significance is at the heart of the employee, customer, and supplier relationship for organizations to thrive. Increasing competitive pressures on both private and public organizations in Ethiopia have made readiness for change an important area of research in the field of management. The Ethiopian government is urging its public servants and officials to adjust themselves as per the demands of the business society and other international contemporary developments. Hence, Ethiopian officials are expected to take into account research outputs for forming and implementing policies.

3 Readiness for Change

In order to grasp the concept of readiness for change, it is important to explore, understand, and identify the relationships between readiness for change (at individual and organizational levels) and the challenges of change as they are currently viewed in existing literature. Readiness takes its roots in early research on organizational change (Schein and Bennis 1965). Perhaps the greatest challenge of change lies in the common assumption in organization change literature that employees need to 'be made ready' for the change that is imminent within an organization (Armenakis and Harris 2002). Change readiness has generally focused on individual cognition, that is, beliefs, attitudes, and intentions toward a change effort. 'It is the cognitive precursor to the behaviors of either resistance to, or support for, a change effort' (Armenakis et al. 1993: 681–682).

Increasing employees' decisional latitude, participation, and power often requires a change in the managerial approach from authoritative to participative (Antonacopolou 1998). Perhaps more important than facilitating employee readiness for change would be exploring how leaders can prepare their employees' readiness for change. Experiments in creating readiness for change involve proactive attempts by a change agent to influence the beliefs, attitudes, intentions, and ultimately the behavior of organizational members. At its core, it is believed that readiness for change involves changing individual cognitions (Bandura 1982; Fishbein and Ajzen 1975).

Armenakis et al. (1999) offer five different elements necessary for creating readiness: The first is the need for change. This is identifying a gap between a desired state and the current state. Quite simply, a change leader must justify the need for change. For example, providing information that shows that the organization's product no longer meets customer expectations can make organizational members see that the current way of making the product is no longer acceptable. The second element for creating and managing readiness is establishing if the proposed change is the right change to make. The role of a change leader in this instance is to demonstrate that the proposed change is the right solution for eliminating the gap between the current and the ideal state. By demonstrating that and replacing an old service with a new, improved service will lead to an increase in revenues, instead of a continued decline, provides evidence that this change in service is the right thing to do.

The third element focuses on bolstering the confidence of organizational members, reinforcing that they can successfully make the change (Armenakis et al. 1999). Sometimes known as efficacy, this confidence comes from both experience and persuasive communication by change leaders. These leaders need to first emphasize that organizational members have the relevant knowledge, skills, and abilities to implement the change or that they will be given the opportunity to develop these. Further, they need to ensure that the organization has the relevant organizational structure, policies, procedures, technology, and management talent in place to successfully implement the change. Next is key support which involves

actual organizational support for the change. The person supporting the change may, in certain circumstances, carry as much weight as the proposed change. Organizational members, when faced with a change, consider the position of both formal and informal leaders in an organization. If a change leader can enlist those formal and informal leaders in support of the change, other organizational members may also begin to adopt the change (Armenakis et al. 1999).

The final element is designed to answer the question, 'What's in it for me/us?' (Armenakis et al. 1999). Organizational members not only want to understand the nature of what the outcomes of implementing the change might be, but they also seek to understand whether these outcomes will be positive or negative, and, if so, what the significance of the outcomes will be in terms of what each organizational member values. It is important to understand that the value of an outcome can carry as much weight as whether or not the outcome is negative or positive. For example, a change that results in an organizational member being promoted might be viewed as negative because of the requirement that he or she must uproot his/her family and relocate. The dislocation outweighs the positive gain in title and pay. It would be the change leader's responsibility to guide the organizational member to embrace the change rather than resist it (Armenakis et al. 1999). Thus, the process must target creating readiness for change and not attempting to overcome resistance to it. By effectively creating and managing readiness, a change leader attempts to shape attitudes toward the change.

According to Goodstein and Burke (1995), organizational change can occur at three levels: (1) Changing the *individuals* who work in an organization, that is, their skills, values, attitudes, and eventually behavior but making sure that such individual behavioral change is always regarded as instrumental for organizational change; (2) Changing various organizational *structures and systems*—reward systems, reporting relationships, work design, and so on; and (3) Directly changing the organizational *climate or interpersonal style*—how open people are with each other, how conflict is managed, how decisions are made, and so on. Figure 1 shows the dimensions of individual and organizational change and their assumed relation to an organization's performance.

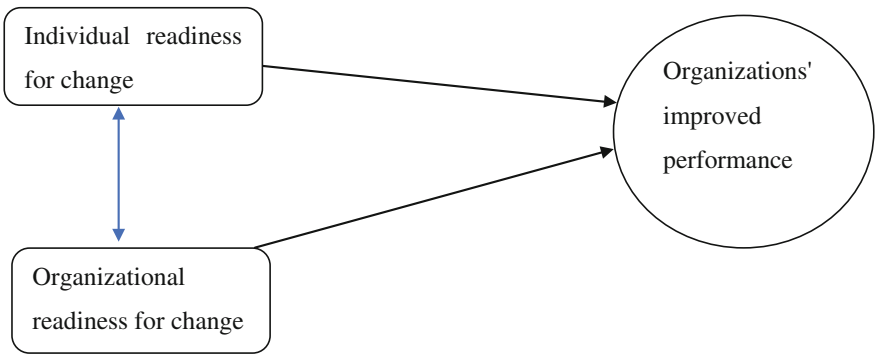

Fig. 1 Relationship between individual and organizational readiness

4 The Challenge of Change

Changing behavior at both the individual and organizational levels means changing habitual responses and producing new responses that feel awkward and unfamiliar to those involved; therefore, it is easy to slip back to the familiar and comfortable (Goodstein and Burke 1995). Hence, successfully implementing change inevitably requires encouraging individuals to enact new behaviors so that the desired change is achieved (Armenakis and Bedeian 1999: 304). However, most change programs do not work because they are guided by change that is fundamentally flawed. This is because organizational change poses many challenges for employees, managers, and organizations (Walinga 2008). A common belief is that the place to begin is with individuals' knowledge and attitudes. Changes in individual behavior, repeated by many people, will result in organizational change.

One way to think about the challenge is in terms of three interrelated factors required for corporate revitalization (Beer et al. 1990). *Coordination* or teamwork is especially important if an organization is to discover and act on cost, quality, and product development opportunities. The production and sale of innovative, high-quality, and low-cost products (services) depends on close coordination among marketing, product design, and manufacturing departments, as well as between labor and management. High levels of *commitment* are essential for the effort, initiative, and cooperation that coordinated action demands. New *competencies* such as business analytical and interpersonal skills are necessary if people are to identify and solve problems as a team. If any of these elements are missing, the change process is likely to break down (Beer et al. 1990).

A change initiative must be conducted in a way that it demonstrates the trustworthiness of the attempted change effort. Even when managers accept the potential value of a program for others, for example, quality circles to solve a manufacturing problem, they may be confronted with more pressing business problems such as new product development which takes up all their attention. According to Beer et al. (1990: 7), 'one-size-fits-all change programs take energy *away* from efforts to solve key business problems- which explains why so many general managers do not support programs, even when acknowledging that their underlying principles may be useful.' This is similar to an Ethiopian proverb '*Chamakasya maere egirka,'* meaning every individual must wear a shoe of his/her size. In other words, every person must wear his/her size regardless of his/her desire, otherwise the result might be unwanted. Hence, each organization must strive to implement a change program that is tailored to its requirements.

Finally, challenges associated with change also require a process of cognitive appraisal to determine whether an individual believes he or she has the resources to respond effectively (Folkman and Lazarus 1988; Lazarus and Folkman 1987). Appraisal literature explains the response or 'coping' processes in terms of problem-focused coping or emotion-focused coping (Folkman and Lazarus 1980; Lazarus and Folkman 1985; Lazarus and Launier 1978). This is also referred to as active and passive coping styles (Jex et al. 2001). In addition, approach and

avoidance style measures of coping also exist (Anshel 1996). When faced with a challenge, an individual primarily appraises the challenge as threatening or non-threatening and secondly appraises the challenge in terms of whether he or she has the resources to respond to it effectively.

If an individual does not believe that he or she has the capacity to respond to challenges or feels a lack of control, he or she might turn to an emotion-focused coping response such as wishful thinking ('I wish I could change what is happening or how I feel'), distancing ('I'll try to forget the whole thing'), or emphasizing the positive ('I'll just look for the silver lining, so to speak; try to look at the bright side of things') (Lazarus and Folkman 1987). If an individual feels that he or she has the resources to manage the challenge, he or she will usually develop a problem-focused coping response such as an analysis ('I try to analyze the problem to understand it better; I'm making a plan of action and following it') (Lazarus and Folkman 1985). It is theorized and empirically demonstrated that one's secondary appraisal determines the coping strategy (ibid).

Change initiatives for performance improvement and achieving competitive advantages have experienced several problems (Denton 1996; Lawson 2003). Up to 70% of all major corporate changes fail (Washington and Hacker 2005). Reasons for the shortcomings of change programs have been documented for decades. One long-known explanation for unsuccessful change initiatives is the management's tendency to seek a quick fix solution instead of taking a longer term perspective (Kilman 1984). Another long-known reason for lack of success for a change is the propensity for organizations to implement piecemeal solutions rather than taking a systems perspective (Ackoff 1974). Another key causal factor of unsuccessful change is employees' perception that the organization is not ready for the change and consequently there is lack of acceptance of it (Armenakis et al. 1993; Walinga 2008).

5 Institutional Theory and Change

This chapter uses institutional theory as a theoretical framework to see and explore how readiness for change can be re-conceptualized. Such an approach opens up opportunities to highlight the ways in which actors utilize discursive tools, specifically skillful development of rhetorical argumentation as instruments of power that can shape their constituents' readiness for change (Amis and Aissaoui 2013).

Institutional theory is perhaps the dominant approach for understanding organizations (Greenwood et al. 2008). Institutionalization is the process by which 'social processes, obligations, or actualities come to take on a rule-like status in social thought and action' (Meyer and Rowan 1977: 341). Something is 'institutionalized' when it has a rule-like status. Institutionalization means that 'alternatives may be literally unthinkable' (Zucker 1983: 5). Further, institutional theory focuses on the deeper and more resilient aspects of social structure. It emphasizes the

processes by which structures, including schemas, rules, norms, and routines, become established as authoritative guidelines for social behavior (Amis and Aissaoui 2013).

Institutional theory has traditionally focused on macro, field-level processes; increasing attention is, however, being accorded to advancing an understanding of the ways in which individuals' perceptions are shaped within a given institutional environment (Scott 2008). This phenomenon, referred to as structured cognition, is a 'very useful idea [that] reminds us that the interaction of culture and organization is mediated by socially constructed mind, that is, by patterns of perception and evaluation' (Selznick 1996: 274).

The cultural cognitive approach is a major contribution of new institutionalism (Scott 2008), as it allows for a better understanding of the ways in which cognitions are influenced, shaped, given stability, or challenged by higher contextual factors such as group membership (Kilduff 1993; Simon 1945) and the broader institutional environment. Therefore, an institutional perspective can enrich our understanding of readiness for change by examining those institutions that individuals primarily build upon to make sense of their environment. This will further allow us to address calls for examining change readiness in the context of a given environment (Amis and Aissaoui 2013: 74).

6 How Do Organizations Get Ready for Change?

Organizational change can occur in more than one way (Goodstein and Burke 1995). 'Change readiness strategies cite the individual's need for perceived control as a determinant of readiness participation' (Walinga 2008: 339). Change agents tend to rely on control factors when managing change and control-oriented words regularly appear in much of the change management literature: influence, advantage, persuade, convince, pressure, change, reengineer, manage, reorganize, merge, restructure, redirect, and mandate (Walinga 2008).

It is normal for people to resist change. Nevertheless, among the things that organizations can do is reduce resistance and establish some momentum (Martin 2013). Some of the mechanisms to reduce resistance include selecting positive people to run projects, providing valid information and explaining reasons, avoiding coercion and treating everybody honorably, sharing decision-making, listening and getting reactions, not over-reacting to the feedback, selling the benefits but not over-selling them, minimizing social change, rewarding those who change, particularly the trailblazers, and reviewing and if necessary modifying the approach based on what you learn.

7 Conclusions and Future Research

Readiness for change comprises different key components. Change is all about managing the most important and complex asset of an organization, its people. Dealing with the complex nature of human beings constitutes the greatest challenge for change initiatives to be followed through and sustained. It is easy for an organization to fall back into old habits.

Most people in organizations will belong to one group or a number of different groups, some formal and several informal. According to Jackson and Schuler (1995) and Armstrong (2009), these small groups may also fall somewhere in between the highly resistant to highly receptive spectrums. Within these groups, there will be leaders and followers. Leaders have a major influence on whether their group will respond positively to a proposed change. Group leaders are catalysts in building early momentum in a change project. To do so, leaders in organizations must have a clear sense of direction of the change initiative. More importantly, the leader's style and approach is one of the most crucial elements in readiness for change.

Successful organizations continually transform themselves as they respond to, or anticipate, a changing environment. When planning for change, a leader needs to consider the short-term risk to the organization, the expected resistance, the holders of power, and the magnitude of commitment needed (Martin 2013).

Successful organizational change requires a visionary leadership. Further, according to Armstrong (2009: 433), 'the achievement of sustainable change requires strong commitment and visionary leadership from the top.' Hence, it is unlikely that a change leader can do everything, and so an energetic and committed team who will help to both lead and manage the change program needs to be established. This means all staff members at all management levels must be cooperative, participative, and optimistic about achieving readiness for a change agenda that arises from the leaders or the top management team.

The purpose of this chapter was to explore readiness for change at the individual and organizational levels, and it shows how the concept of readiness for change is dealt with in the developed world. The practical applicability of this theoretical development is less relevant in the Ethiopian context since the concept of readiness for change in not yet contextualized in Ethiopia. On the one hand, the governmental rhetoric is meant to get Ethiopian businesses to comply with international contemporary developments. On the other hand, the Ethiopian culture, seemingly institutionalized with its collective thinking among the Ethiopian people, is that status quo is better than change. This may be one of the biggest hurdles to readiness for change. There is a popular proverb in Ethiopia: '*Kabiya leytifelto mel'akis, litifelto seytan*,' meaning that a known devil is better than an unknown angel. This proverb indicates that the level of readiness for change among the Ethiopian people is low. So, to mitigate resistance to new developments, the Ethiopian context needs separate attention where it is important to include several levels of analysis in order to assess how readiness for change is understood and practiced at individual,

organizational, and governmental levels. Institutional theory, encompassing these levels and the broader institutional environment (cf. Amis and Aissaoui 2013; Kilduff 1993; Simon 1945), could lead such research in Ethiopia in a relevant direction. To contextualize culture and its influence on readiness for change is one example. This is, in turn, a huge challenge since Ethiopia has a number of ethnic minorities. Such studies would, however, be a first step in assisting policymakers and practitioners to enhance readiness for change in their respective organizations.

References

Ackoff, R.A. 1974. *Redesigning the future: A systems approach to societal problems*. New York: Wiley.

Agboola, A.A., and R.O. Salawu. 2011. Managing deviant behavior and resistance to change. *International Journal of Business and Management* 6 (1): 235–242.

Amis, J.M., and R. Aissaoui. 2013. Readiness for change: An institutional perspective. *Journal of Change Management* 13 (1): 69–95.

Anshel, M.H. 1996. Coping styles among adolescent competitive athletes. *Journal of Social Psychology* 136: 311–323.

Antonacopolou, E. 1998. Developing learning managers within learning organizations. In *Organizational learning and the learning organization: Developments in theory and practice*, eds. M. Easterby-Smith, L. Araujo, and J. Burgoiyne, 214–242. London: Sage.

Armenakis, A.A., and A.G. Bedeian. 1999. Organizational change: A review of theory and research in the 1990s. *Journal of Management* 25 (3): 293–315.

Armenakis, A.A., and S.G. Harris. 2002. Crafting a change message to create transformational readiness. *Journal of Organizational Change Management* 15: 169–183.

Armenakis, A., S. Harris, and K. Mossholder. 1993. Creating readiness for organizational change. *Human Relations* 46: 681–703.

Armenakis, A.A., S.G. Harris, and H.S. Feild. 1999. Making change permanent: a model for institutionalizing change interventions. In *Research in organizational change and development*, ed. W. Passmore, and R. Woodman, 289–319. Greenwich, CT: JAI Press.

Armstrong, M. 2009. *Armstrong's handbook of human resource management practice*, 11th edition.

Bandura, A. 1982. Self-efficacy mechanism in human agency. *American Psychologist* 37: 122–147.

Beer, M., and N. Nohria. 2000. Cracking the code of change. *Harvard Business Review* 78: 133–141.

Beer, M., R.A. Eisenstat, and B. Spector 1990. Why change programs do not produce change. *Harvard Business Review*. Nov–Dec 1–12.

California State. 2014. *Organizational change management: Readiness guide*, Version 1.1.

Cinite, I., L.E. Duxbury, and C. Higgins. 2009. Measurement of perceived organizational readiness for change in the public sector. *British Journal of Management* 20: 265–277.

Denton, K. 1996. 9 ways to create an atmosphere of change. *Human Resource Magazine* 41 (10): 76–81.

Drucker, P.F. 1999. *Management challenges for the 21st century*. New York: Harper business.

Fishbein, M., and I. Ajzen. 1975. *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.

Folkman, S., and R.S. Lazarus. 1980. An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior* 21: 219–239.

Folkman, S., and R.S. Lazarus. 1988. Coping as a mediator of emotion. *Journal of Personality and Social Psychology* 54: 466–475.

Goodstein, L.D., and W.W. Burke. 1995. Creating successful organization change. In *Managing organizational change*, eds. W.W. Burke, 7–9. New York: American Management Association (AMACOM).

Greenwood, R., C. Oliver, K. Sahlin, and R. Suddaby. 2008. *The Sage handbook of institutionalism*, 1–47. SAGE publications.

Jackson, S.E., and R.S. Schuler. 1995. *Understanding human resource management in the context of organizations and their environments*. New York University: Department of Management.

Jex, S.M., P.D. Bliese, S. Buzzell, and J. Primeau. 2001. The impact of self-efficacy on stressor-strain relations: Coping style as an explanatory mechanism. *Journal of Applied Psychology* 86: 401–409.

Kilduff, M. 1993. The reproduction of inertia in multinational corporations. In *Organization theory and the multinational corporation*, ed. S. Ghoshal, and D.E. Westney, 259–274. New York, NY: St. Martin's Press.

Kilman, R.H. 1984. *Beyond the quick fix*. San Francisco: Jossey-Bass.

Lawson, E. 2003. The psychology of change management. *McKinsey Quarterly* 2: 1–8. Available at: www.mckinseyquarterly.com

Lazarus, R., and S. Folkman. 1985. If it changes it must be a process: Study of emotion and coping during three stages of college examination. *Journal of Personality and Social Psychology* 48: 150–170.

Lazarus, R.S., and S. Folkman. 1987. Transactional theory and research on emotions and coping. *European Journal of Personality* 1: 141–169.

Lazarus, R.S., and R. Launier. 1978. Stress-related transactions between person and environment. In *Perspectives in interactional psychology*, ed. L.A. Pervin, and M. Lewis, 287–327. New York: Plenum.

Lewin, K. 1945. Conduct, knowledge, and acceptance of new values. In *Resolving social conflicts and field theory in social science*, ed. K. Lewin, 48–55. Washington, DC: American Psychological Association.

Meyer, J.W., and B. Rowan. 1977. Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology* 83: 440–463.

Martin, O. 2013. Change leadership: Developing a change-adept organization. *Development and Learning in Organizations, An International Journal*. 27(6).

Prochaska, J.O., W.F. Velicer, J.S. Rossi, M.G. Goldstein, B.H. Marcus, and W.L. Rakowski. 1994. Stages of change and decisional balance for 12 problem behaviors. *Health Psychology* 13: 39–46.

Schein, E.H., and W. Bennis. 1965. *Personal and organizational change via group methods*. New York: Wiley.

Scott, W.R. 2008. *Institutions and organizations: Ideas and interests*, 3rd ed. Thousand Oaks, CA: SAGE.

Selznick, P. 1996. Institutionalism "old" and "new". *Administrative Science Quarterly* 41: 270–277.

Simon, H.A. 1945. *Administrative behavior: A study of decision-making processes in administrative organization*. New York, NY: Macmillan.

Smith, I. 2005. Achieving readiness for organizational change. *Library Management* 26 (6/7): 408–412.

Walinga, J. 2008. Toward a theory of change readiness. The roles of appraisal, focus, and perceived control. *The Journal of Applied Behavioral Science* 44 (3): 315–347.

Washington, M., and H. Hacker. 2005. Why change fails: Knowledge counts. *Leadership and Organizational Development Journal* 26: 400–411.

Weiner, J., H. Amick, and Y. Lee. 2008. Conceptualization and measurement of organizational readiness for change: A review of the literature in health services research and other fields'. *Medical Care Research and Review* 65: 379–436.

Weiner, J., A. Lewis, and A. Linnan. 2009. Using organization theory to understand the determinants of effective implementation of worksite health promotion programs. *Health Education Research* 24: 292–305.
Zucker, L.G. 1983. Organizations as institutions. *Research in the sociology of organizations*, 21–47.

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Part II
Practices

Chapter 5
Sustainable Development Goals, Governance, and the Private Sector

Mohammed Seid Abtew

Abstract While the Millennium Development Goals (MDGs), which guided the world's development efforts in 2000–15, have come to an end, world leaders, experts, civil societies, and businesses have been working on developing the Sustainable Development Goals (SDGs) for 2015–30 that will replace the MDGs. Although the MDGs have many success stories, they have also had their limitations. This chapter illustrates that though the world leaders recognized its importance in the 2000 Millennium Development Declaration, governance was not included as one of the goals in the MDGs. However, governance's role as an enabler and a key element of sustainable development has been recognized in the process of formulating SDGs. This chapter explains good governance, areas where it can be enhanced, SDGs' pillars, options for treating governance in SDGs and the interface between SDGs, governance, and the private sector. It also presents different competing ideas about the role of governance and the private sector in SDGs. By indicating different viewpoints of SDGs, governance, and the role of the private sector, the chapter also creates an opportunity for academic and policy debate. The research is an exploratory desk study which focuses on relevant UN documents, articles, government reports, and online material.

Keywords MDGs · SDGs · Private sector · Good governance · Management

1 Introduction

The Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs) are appealing as initiatives. This chapter sheds light on some of the questions surrounding these UN initiatives. It also explores the following questions: Have the MDGs brought about meaningful changes? Are there really successes at

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home (in Ethiopia in this chapter) and abroad? Will the SDGs' goals be different from the business as usual path to true sustainable development which results in inclusive growth or are they only makeovers for the prevailing economic order?

The chapter also demonstrates the main dimensions of SDGs and their interactions and explains what governance and good governance are, how governance is placed in the SDGs' setting and the role of the private sector in formulating and executing the SDGs. By discussing different viewpoints of SDGs, governance, and the role of the private sector, it creates an opportunity for academic and policy debate. In addition, taking Ethiopia as an example, it reflects on the MDGs' successes.

The remainder of the chapter is organized as follows: After the introduction, it outlines the MDG and SDG initiatives. This is followed by a comparison of the MDGs and SDGs and a discussion on SDGs and the 'triple bottom line'. Here, the significance of managing economic, environmental, and social aspects of development in balance and harmoniously is explored. Next, the chapter discusses the theoretical foundation of the nexus between governance and SDGs. By isolating the elements of good governance, it illustrates the ways of enhancing governance. Then, it explores the role of the private sector in the planning and execution of SDGs and discusses Ethiopia's development initiatives. The last section gives a conclusion.

2 The MDG Initiative

It has been reported that the MDG initiative largely achieved its goal of cutting global poverty by half in the last couple of decades (UN 2014a, b). The initiative was aimed at eliminating extreme poverty by reducing it and its ramifications primarily in subsistence, education, and health. The MDG initiative, which guided the world development efforts in 2000–15, was endorsed by 189 countries and is the most recognized, discussed, promoted, and debated initiative. It 'has been repeated in every official speech and appears in all of the UN's glossy reports' (Hickel 2015).

The MDGs were composed of a set of eight interdependent goals to: (1) eradicate extreme poverty and hunger, (2) achieve universal primary education, (3) promote gender equality and empower women, (4) reduce child mortality, (5) improve maternal health, (6) combat HIV/AIDS, malaria, and other diseases, (7) ensure environmental sustainability, and (8) develop a global partnership for development. The MDGs demonstrated a leap in a global partnership resulting from the Millennium Declaration at the UN's Millennium Summit in 2000 that guided the world's development efforts in 2000–15. From a UN system's perspective, the summit's outcome was revolutionary when compared to the UN's tradition where resolutions were long and their aims set in very broad terms. In contrast, the MDGs were precise and measurable, with eight goals, 18 targets, and 48 indicators adopted by 189 countries (Millennium Project 2006) (Annexure AI).

It is important to note though that despite the Millennium Declaration being adopted in 2000, it was not until 2001 that the MDGs were crafted by a team of UN experts in the form that they took. The MDGs were originally difficult to sell to everyone. The goals were considered arbitrary, empty promises and were created by experts without intergovernmental involvement; as a result, it took years for people, governments, civic society, and the media to understand what the MDGs were.

In the end, the MDGs 'galvanized the world to produce the most successful anti-poverty movement in history, helped lift more than one billion people out of extreme poverty, made inroads against hunger, and enabled more girls to attend school than ever before' (UN News Centre 2015). MDGs were primarily motivated by the unprecedented prosperity and growth in affluent societies that followed the footsteps of globalization and the concomitant spread of extreme poverty and income disparities. This was especially the case in the least developed and developing countries with billions of people living in poverty with purchasing powers of less than a dollar a day. In these poorest countries, 'about one-fifth of the children die in the first year of their birth, nearly half of those who survived are malnourished, and a significant proportion of the population does not have access to clear water, sanitation, basic health services, and education' (Ghaus-Pasha 2004: 4). The overall assessment at the end of the MDGs is that people living in these countries of the world 'are on average healthier, better educated, and more prosperous than ever before' (UNDP 2016: 1). When compared to 1990 statistics, the percentage of people in developing regions living on less than $1.25 a-day income 'dropped to 22% by 2010, reducing the number of people living in extreme poverty by 700 million' (UN 2014a, b: 4).

As an illustrative case, Ethiopia showed good performance in MDGs. It aligned its national development strategies with the MDGs, including integrated investment strategies across sectors. According to UNECA (2014), Ethiopia achieved MDG goal 1 and target 1A, in which it halved extreme poverty from 60.5 to 30.7% in spite of increased population growth, overtook MDG 4, that it, reduced child mortality by two-third two years ahead of 2015, slashed the country's hunger index by 39% and performed well in terms of goal 2 as it increased primary school enrollments substantially from 23.2 to 87.4% in 2011 or more than triple the 1995 figures (Table 1).

However, although the Millennium Development Declaration 'recognized the vital link between good governance, development, and human rights' (UNDP 2014: 2), the MDGs did not refer to governance in the goals and target setting. Many years of experience and discussions have, nevertheless, led to an understanding of governance as a key factor in ensuring national prosperity and development.

Though presented differently, governance is actually an aspect of management. According to a document of the United Nations Economic and Social Commission for Asia and the Pacific, governance refers to 'the process of decision-making and the process by which decisions are implemented (or not implemented)' (Sheng 2015). The World Bank in its development discussion in 1992 defined governance as 'the manner in which power is exercised in the management of a country's economic and social resources for development' (Kaufmann and Kraay 2008: 5).

Table 1 Selected MDG indicators for Ethiopia (1990–2011)

MDG indicators for Ethiopia	1995 (%)	2000 (%)	2005 (%)	2011 (%)
Population below an income of USD 1 per day	60.5	55.6	39.0	30.7
Poverty gap ratio at USD 1 a day (PPP), percentage	21.21	16.21	9.61	8.21
Children under five moderately or severely underweight, percentage		42	34.6	28.7 (2012)
Population undernourished, percentage	64.5	53.5	45.4	37.1
Children under five mortality rate per 1000 live births	174.7	145.5	109.8	68.3 (2012)
Infant mortality rate (0–1 year) per 1000 live births	105.5	89.8	70	46.5 (2012)
Maternal mortality ratio per 100,000 live births	880	700	510	
Total net enrollment ratio in primary education, both sexes	23.2	40.4	62.7	87.4

Adapted from UNECA (2014)

This can be translated into the manner in which power is exercised in the management of a company's resources to meet the reasons for its existence (sustainable profit).

So the description that governance sets the goals and the management carries them out is an oversimplification of the concept of management. The meaning essentially depends on the level of management we are talking about, the goals to be achieved, and the approach being followed. It can be at an international, national, board, or lower level; it can also be used in several contexts such as private enterprises (corporate) and in international, national, and local governance/management. Decision-making or goal setting is a pervasive activity that permeates all functions of management from planning to control (Abtew 1996). Good governance is basically good management, and bad governance is mismanagement. The gist of governance is the process of decision-making and the process by which decisions are carried out. Therefore, any scrutiny of the quality of governance has to examine the formal and informal actors involved in and influencing the making and implementation of decisions and the value system and the institutions surrounding these processes.

The World Bank's interest in governance, as a major driver or stakeholder of MDGs (and later SDGs), emanated from its desire to ensure the sustainability of national projects that it finances. The Bank is convinced that sustainable development is within reach only if good governance, 'a predictable and transparent framework of rules and institutions exists for the conduct of private and public business' (Kassem 2014: 1). It is with this understanding that world leaders, major global economic institutions, and civic organizations espoused the idea that governance should play a stronger role in the post-2015 development agenda.

3 The SDG Initiative

The objective of the SDG initiative is eradicating world poverty altogether by 2030. UN member states held a summit on September 25–27, 2015, to discuss the 17 post-2015 SDGs as a follow-up meeting to the Rio+20 Conference[1] (UNDP 2015). The summit proposed creating awareness about the next development agenda and garnering support and commitments from member states. As part of an assurance for the success of the implementation of SDGs, the matter of how to finance them was discussed in the third international conference on Financing for Development (FfD) held in Addis Ababa, Ethiopia, on July 13–16, 2015 (UN 2015a, b). The Sustainable Innovation Forum's annual conference of parties (COP) was also held in Paris in December 2015 which focused on climate and the environment.

However, many issues have been raised regarding the successes claimed and the purposes of both the initiatives. Just as there are many who support and promote MDGs and SDGs, there are others who are skeptical. Though the MDGs are cited 'as the yard stick of development progress and a new development paradigm' (Gabay 2012: 1249; Tiwari 2014), it is also indicated that they were 'created by only a few stakeholders without adequate involvement by developing countries and overlooking development objectives previously agreed upon' (Fehling et al. 2013: 1109). Consequently, the question of how SDGs differ from MDGs in their formulation, content, and execution is worth exploring.

While developing the SDGs, it was very important to sift out the shortcomings of the MDGs, understand what the SDGs are, how different they are from their predecessor, their foundations, and the locus of governance and the private sector in the SDGs so as to set expectations and improve implementation of the post-2015 agenda.

4 Millennium Development Goals and Sustainable Development Goals Compared

The MDGs represented an outcome of a revolutionary consensus-building effort putting development at the center at the global level 'after years of disagreements between a set of actors: between non-governmental organizations (NGOs) and governments, between international financial institutions and the United Nations system, and between the North and the South' (Herfkens 2008). It was the first attempt to achieve a shared vision about development and when the MDGs came to an end the developing world had managed to reduce poverty by half. Good progress

[1]At the United Nations Sustainable Development Summit on September 25, 2015, world leaders adopted the 2030 Agenda for Sustainable Development, which includes a set of 17 Sustainable Development Goals (SDGs) to end poverty, fighting inequalities, and injustices and tackling climate change by 2030.

was also made on all the eight MDGs, though achievement levels were uneven among countries.

The MDGs were limited in number, eight goals, and were relatively realistic and easy to communicate with a clear measurement/monitoring mechanism. Although these MDGs were instrumental in attaining a shared vision among nations and they spurred world leaders and players to take concrete anti-poverty actions that lifted more than a billion people out of extreme poverty, reduced child mortality and morbidity, countered hunger and brought more girls to school than ever before, they fell short of ensuring that the poorest and most vulnerable people were not left behind and our planet's well-being was not compromised.

The MDGs' framework was thus permitted with many omissions 'leaving out the key priorities of addressing inequality, decent work, unemployment, climate change, and sustainability' (Fukuda-Parr 2013: 1) as well as governance. SDGs, unlike MDGs which focused on poor countries, involve rich countries in expressing their solidarity and in providing technological and financial support thereby embracing the world's nations, and their goals are global development goals. The SDGs pertain to what all countries should do together for the global well-being of this generation and of those to come.

Unlike the MDGs which were developed by a group of experts behind closed doors, SDGs were developed following a highly participatory approach, and they were a result of negotiations that involved 193 UN member states and unprecedented participation of civil society and other stakeholders (UN 2015a, b). In developing the SDGs, lessons were drawn from the experience gained in implementing the MDGs. They thus emerged as qualitatively different from MDGs in many aspects (Coonrod 2014). MDGs aimed to reduce poverty while SDGs intend to end it (zero poverty goals). SDGs are universal and comprehensive covering all countries. They also include peace, justice, and inclusiveness (see Tables 3 and 4 for a detailed comparison between the two).

5 SDGs and the Triple Bottom Line

The SDGs broadly rest on the triple bottom line of economic development, environmental sustainability, and social inclusion with tentatively agreed 17 goals (see Table 4) and 169 targets and 230 proposed indicators (Dunning 2016).

The SDGs also aim at three dimensions of sustainability (economy, society, and the planet) (Slaper and Hall 2011).[2] Balancing these three is a recognized paradigm for sustainable development in the South and the North since the triple bottom lines are complimentary and can be sought and achieved simultaneously for development to be sustainable. The other important element which is considered to be an enabler that was missed in the MGDs and is expected to be included in the SDGs is good

[2]Some describe it as 3Ps—People, Planet, and Profits.

Fig. 1 Triple pillars and good governance

governance. Governance and sustainable development are contemporaries and have a similar history and parentage. It is on the fourth condition of good governance at the global, regional, national, and local levels that the success of the three bottom lines will depend (Sachs 2012). In the end, the success of the SDGs hinges on proper planning and execution. This includes the quality of governance (planning and execution), putting in place and scaling up effective governance institutions (Bernstein 2015), systems that are responsive to public needs in the present and the future, considering the environment and the demands of inclusive growth. These provide a capable conducive environment that is needed for investments and is supportive of private, public, and civil society sectors in a productive and balanced manner for the success of the SDGs (Fig. 1).

As shown in Fig. 1, success can be achieved only if the three pillars' functions are balanced and harmonious. A push in only one direction, for example, because of greed, negligence, impropriety, malfeasance, or corruption, will result in sub-optimization and as a result sustainability will be compromised. Trade-offs among the three are bound to happen, but such trade-offs in favor of the economic aspect of growth (as is frequently the case at the expense of social inclusion or the environment) will thwart sustainable development (Gupta and Vegelin 2016). Economic growth which ignores the intricate interrelationship between humankind, the global resource base, and the social and physical environments (Baker 1997; Turner 1988) and entails more social inequalities, environmental pollution, or degradation may not lead to development that is sustainable. At the same time, the governance system needs to be poised to expose despoliation practices and violators of the rule of law and rent seekers and to hold such authorities accountable for their mismanagement and malfeasance (UNDP 2014).

6 Good Governance and SDGs' Theoretical Foundation

Aside from the experience gained during the MDGs' planning and execution, the objective and subjective developmental challenges, conditions, and aspirations of the world have become more complex than when the MDGs were adopted. One of the dimensions of these developments is the realization among global players that good governance is a key player for achieving the three pillars of SDGs. The significance of good governance for SDGs' fruition has been discussed at international levels. The 2014 UNSEF report, for example, described the defining role that the quality of governance plays in supporting the environmental, social, and economic pillars of the SDGs (Biermann et al. 2014). The World Bank presented good governance as a prelude to sustainable development (Ghosh et al. 1999). Many of the achievements or problems that society lives with are partly the results of past choices and practices or in other words, the outcome of management (governance) practices. Unlike the efficiency view of the stakeholder theory or the theory of the firm which limits the responsibility of businesses in increasing profits unconstrained by anything save those established by law and common decency (Rodriguez 2002), sustainability management focuses beyond just a firm's growth. The prevailing population growth, an aging population, increasing and unsustainable consumption, an expanding ecological footprint, observed global warming and environmental degradation, an unprecedented increase in the income gap and rampant corruption which has kindled unrest in different parts of the world necessitated expanding the stakeholders for development endeavors in the world.

In such a situation where stakeholders are becoming more important than firm owners, actors in the society are expected to look beyond the traditional financial measures and at the environmental and social dimensions of their actions. Governance plays a commanding role in combining the three dimensions. The sustainability management theory promotes the concept of inclusive development of the social, ecological, and political dimensions of development. Sustainability management can be defined as 'the formulation, implementation, and evaluation of both environmental and socioeconomic sustainability-related decisions and actions' (Hörisch et al. 2014: 329; Starik and Kanashiro 2013: 12). As indicated earlier, governance is an aspect of management which includes setting a direction, goals, and use of resources. Thus, it is not difficult to understand how indispensable good governance is for adopting SDGs, rallying support around them, mobilizing resources, and executing their goals.

Governance is considered across governmental and non-governmental actors, including civil societies, action networks, partners, and private sector entities at the international, regional, national, and local levels. Governance is also crucial at national and local levels, and the main determinants of its success or failure are national development agendas, interconnectedness of the world economic order, the role of international financial institutions, the effects of climate change, and illicit financial flows. Hence, global governance should not be downplayed.

Though the role of governance is appreciated, it is not yet clear whether governance will be treated as a stand-alone goal or integrated into other goals on

specific issues (e.g., goal of poverty reduction, water, food) (Biermann et al. 2014). Irrespective of its integration into the SDGs, three aspects of governance need to be addressed—'good governance (the processes of decision-making and their institutional foundations), effective governance (the capacity of countries to pursue sustainable development), and equitable governance (distributive outcomes)' (Biermann et al. 2014: 1). This is consistent with the resource-based view that management capacity is a major resource that enhances or impedes development. Systems, be they in an organization or a nation, depend on a constant stream of resources and on the art of using such resources for staying alive and reaching the goals (Müller-Christ 2011). Wise acquisitions and use of resources promote sustainable development and misappropriation and misuse retard it. Globalization, for example, can be an opportunity or a trap for a nation or its people. It has been a bobby trap for Africans, for example. Globalization has become a vehicle for unloading a consumerism culture and commodities which Africa is not producing (Okeke 2015) because of an increase in imprudent consumption oriented practices of the African elites who are becoming rich quickly with black money, rent seeking, and misguided governance. This, coupled with other factors, has led to a depletion of foreign currency reserves in Africa.

Arulrajah (2016: 14) refers to UNESCAP describing good governance as encapsulating eight characteristics of being: 'participatory, consensus-oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive and follows the rule of law'). It is hoped that these qualities of good governance, among others, will reduce corruption, address the concerns and interests of minorities and the most vulnerable in society and be mindful of the environment and future generations (Sheng 2015).

7 Enhancing Governance

Once it is assumed that good governance is pivotal for the other elements of the SDGs to be effected, it becomes important to look for the ways of enhancing it. Improving the quality of governance could reduce budget deficits, minimize governance failures such as those that led to world financial crises including the recent Greece crisis from which Goldman Sachs benefited, increase the responsiveness of governance organs and systems to economic, social, and environmental demands, and 'create the conditions for functioning of markets, operation of private firms, burgeoning of knowledge communities, strength of civil society, and welfare of communities and individuals' (OECD 2015). Capacity building may revolve around human capital and institutions. Technical and managerial competencies are the major elements of governance capability. In a people-centered entrepreneurial model, the honing of technical and managerial competencies alone is not enough. The competencies garnered may not be exploited to the maximum potential or may not be sustainable if the context prevents meritocrats to unleash their contributions as desired or the action is a one-time political or personal will of a strong leader.

Organizations' capacities beyond individual competencies dictate a system's performance.

Organizational structure and management systems are durable and provide sustainability to organizational directions if what is in place is well aligned with stipulated development goals. Prevailing managerial capability on its own or by drawing outside expertise must be able to plant effective, responsive, and accountable structures and management systems (institutions) that are resistant to corruption. Governance has to galvanize participation, correctly interpret, and follow the rules of law and be accountable. Predictability is another aspect that is desirable for the successful realization of SDGs (OECD 2015). Laying out a suitable information system which captures and disseminates vast amounts of important information that enhances transparency and leads to better informed public and business decisions is also part of capacity building's focus.

8 SGDs and the Private Sector

Unlike the process undertaken during the MDGs, SDGs' development has involved the private sector from the outset as a major player in their planning and execution. Although developing countries' private sectors do not own the main productive sectors of the economies, advanced technologies, management skills, and management systems, the private sector still has that potential to plan and execute and hence remains crucial for the success of the SDGs in the countries concerned. Although currently governments are major employers and buyers of goods and works, the private sector will still generate employment and provide basic public services that the governments need not be entangled with. The range of service provisions by the private sector can be broadened and a competitive environment cultivated to get the most out of the sector.

Developing countries' private sectors should focus on building capacities in all respects and in their quality orientation before they start supporting the SDGs in practical and measurable ways. Efforts to enhance their capacities should be reflected in their policies, production processes, organization cultures, and engagement with stakeholders. Although phasing out protectionism may be necessary for locally grown industries, the private sector should refrain from lobbying, bribery, and political activities that might endanger the SDGs. Here, the private sector can play a positive enhancing role or a malfeasance deterring role. It can harness its resources and expertise toward strengthening institutions of governance and policing mechanisms. At the same time, it can create a multi-sectoral alliance, including government officials, civic society, religious clergies, academicians, associations, and international organizations, and works to weed out the culture of greed and dishonesty not just in the government but in other sectors of society as well. This role of being a double-edged sword can help ensure good governance and wise use of resources across sectors and hierarchies.

The private sector can contribute to SDGs' success and benefit from it by committing itself to zero tolerance for corruption in its dealings with all parties, paying its due taxes, respecting employees' rights, protecting the environment, and equally requiring clients and partners in the supply chain to do the same so as to put long-term sustainable development on a firm ground over short-term goals. Public–private dialogues are another area that the private sector can engage into fight corruption, improve policymaking, facilitate positive governance reforms, create mutual understanding, and trust and encourage good behavior, good governance, and service delivery in all parts of the community. An example of such a forum is the Executive Idea Exchange Forum quarterly organized by the Department of Management at the Addis Ababa University. This includes some arguments which promote the idea of lubricating the bureaucracy to avoid undue rigidity and thereby increasing organizational effectiveness (Hecksche 2007). Some experimental studies have suggested that 'greasing bureaucrats is moderately efficient in speeding them up' (González et al. 2002: 1).

There are also apprehensions that when the private sector involves FDI and transnational corporations, this may have questionable consequences for the natural environment, poverty eradication, human rights, and sustainable development. The fear is that such transnationals will spread a culture of consumerism and undermine domestic infant industries, thereby exacerbating underemployment, overexploitation of natural resources and pollution and thus undermining a nation's prospects of achieving sustainable development (Zarsky 2012). In this regard, the prevailing governance is expected to ward off any action that will thwart the achievement of the three pillars of sustainability. Any action which affirms OXFAM's prediction that '1% of the world will control as much wealth as the remaining 99%' (Lamb 2015)[3] will be a disaster and a failure of the West to prevent capitalism from destroying itself. This would be valid at least in the near term (Abtew 2015). Whether governments in developing countries will have the capability to discharge this responsibility is yet to be seen.

Sustainability also has to do with what we do with our consumption behavior and our seemingly insatiable appetite to consume which can be nurtured and manipulated asymptotically by private firms. Think of all the bounties of nature that we amass from its surface or dig out of the ground to feed our growing lifestyles and economies, the way we make things for consumption or sale and the things we buy, use, and discard the next day. All these have an impact on sustainable development; they have consequences for society and our planet and for the fate of future generations. We should produce, consume, reuse, and dispose responsibly and with reason. The private sector's role here could be enormous. Efficient production conserves natural resources and energy and saves time and money. The type of inputs we use for product or service production and delivery dictates the effects on land, water, and air. For example, coal as a source of energy will have

[3]OXFAM in its 2017 report *An Economy for 99%* says that 'eight men now own the same amount of wealth as the poorest half of the world.'

high carbon footprints and plastic products are good, but they are largely permanently non-biodegradable that are hazardous for the environment.

This idea of responsible exploitation of nature was recognized as early as 1992. The UN's head of states described unsustainable patterns of consumption and production as a major cause of the continued deterioration of the global environment (Akenji 2014). For some, sustainability of this sort is more than developing eco-products and creating markets for them. Such a limited scope is regarded as the misguided sustainable consumption and production (SCP) approach (Akenji 2014). Proponents of sustainability should tackle the raison d'être—Why do we produce and consume in the first place? Such an argument could be tricky and is sometimes taboo or a mine zone. Why do we produce, promote, and then market things such as cigarettes, alcoholic drinks, or weapons? Goal 16 of the SDGs reads 'live in peace.' Would it be in the interest of cigarette and alcohol manufactures to see people quit smoking and drinking? How do business owners who are selling coffins feel when more people die from AIDS? Would it be in the interest of the global war machine makers to see world peace? The whole economic system is bolted to the consumerism trade mill and has encroached beyond what the planet can sustainably offer to the extent that no one can decouple 'economic growth' from environmental stress and human induced greenhouse emissions related to air pollution, landfills, and poisonous water released such as the recent (August 2015) toxic waste including arsenic and lead which seeped into a river in southwest Colorado.

Therefore, if the SDGs are to achieve what they are hoped to, all parties concerned should be committed to, among others, shifting our society toward sustainable consumption and production. The private sector will obviously be at the center of this shift. It could conduct businesses in such a way that the sector, customers, and the environment are all winners (Elkington 1994).

With this understanding, a joint effort was made by the Global Reporting Initiative (GRI), the United Nations Global Compact and the World Business Council for Sustainable Development (WBCSD 2015) to involve businesses early on 'with the aim of supporting businesses in assessing their impacts, aligning their strategies with the SDGs and establishing company goals' (Abtew 2015: 7). The assumption is that businesses can play a positive role in innovations, investments, inspiration, partnerships, setting and pursuing sustainable goals and in promoting an inclusive business model which allows businesses to 'do well by doing good.'

In addition, compared to the MDGs, SDGs' financial requirements are enormous. They will require at least US $1.5 trillion extra a year (DFI and OXFAM 2015). Though official development assistance to countries committed to poverty eradication may remain the dominant source of funding, the private sector will play some role in providing investment funds.

The private sector's role in SDGs and good governance can also be manifested in its responsible behavior toward the environment during production, marketing, reverse logistics and redistribution as also in its CSR practices.

9 Ethiopia's Development Initiatives and Governance

In this chapter, Ethiopia serves as an illustrative example. Ethiopia integrated the MDGs with its national strategies and set the economic pace for sustained economic growth over the last five years. Its country performance has been commendable in terms of meeting the MDGs. It has achieved MDG 4. Ethiopia is also in a good position to decrease poverty to 22% which was 46% at the beginning of the MDGs. Overall, it has kept six of the eight MDGs (MDGs 1, 2, 4, 6, 7, 8) on track over the last decade (MOFED 2012) (Table 2).

Ethiopia had a national development plan called the Growth Transformation Plan I (GTP I) that ended in 2015. For the post-2015 period (2015–20), the Ethiopian government has introduced its second growth transformation plan called GTP II. GTP II is to GTP I what SDGs are to MDGs except that the GTPs are meant to have a life span of five years. GTP II will build on what has been achieved through and learnt from the implementation of GTP I.

Regarding governance, UNDP reported that Ethiopia has 'developed and articulated a clear agenda on democratic governance.' The government established the Federal and Anti-Corruption Commission with proclamation No. 235-2001, introduced a revised proclamation to provide for special procedures and rules of evidence on anti-corruption (FDRE 2005). The country also has an independent Prosecutor General. These and other measures such as conviction and imprisonment of public officials and business managers including the recent arrest of officials of the Ethiopian Revenue and Customs Authority (ERCA) indicate efforts to curb bad governance. The arrest of Menashe Levy, the manager and owner of the Israeli construction company, Tidhar Excavation and Earth Moving Ltd. on corruption and tax evasion allegations (Yewondwossen 2015) also reflects Ethiopia's determination to fight corruption and improve governance. Such measures are pivotal in executing the country's development goals through good governance. However, what is happening also shows the prevalence of corruption in the governance system. Some also claim that 'the Commission is under-staffed and suffers from lack of resources needed to carry out its mandate' (Tamyalew 2010: i). There is also some evidence that casts a doubt on the prevalence of good governance. The

Table 2 Summary of progress in meeting millennium development goals in Ethiopia

Goal		Status
1	Eradicate extreme poverty and hunger	On track
2	Achieve universal primary education	On track
3	Promote gender equality and empower women	Likely to be on track
4	Reduce child mortality	On track
5	Improve maternal health	Likely to be on track
6	Combat HIV and AIDS, malaria, and other diseases	On track
7	Ensure environmental sustainability	Likely to be on track
8	Develop a global partnership for development	On track

Source UN (2015a, b)

education sector, for example, was ranked among the very poor in the management of public finances by the Federal Audit General for three consecutive years, and uninterrupted power supply has become an exception (Nigussie 2013). Such examples signal that much needs to be done before good governance reigns in the country.

10 Conclusion

Both MDGs and SDGs are initiatives which speak to almost everybody. The SDGs are meant to fill the holes observed in the MDGs. The SDGs broadly rest on the triple bottom line of economic development, environmental sustainability, and social inclusion. They are inclusive beyond people only in poor countries.

The success of the SDGs partially depends on the prevalence of good governance across all the 17 goals identified. Achieving the triple bottom line can be compromised due to a lack of good management or good governance. Good governance, which refers to the decision-making process, institutional foundations, and execution of decisions, is an enabler for the fruition of SDGs. Corruption corrodes good governance, and hence the promotion of good governance is partially tied to a fight against corruption. Countries are still plagued by the ills of corruption and the culture of greed and dishonesty that have festered not just in governments but also in other sectors including the private sector, civic society, and religious institutions. Therefore, it is not something that only governments, though they have to take the lead, are responsible for. If we are looking at the success of the SDGs and want to make a bigger dent in the fight against corruption, all stakeholders including governments, the private sector, civic society, academia, religious institutions, and the media must do their part. Unitedly, they have to bring about a change in mindsets about our perceptions of business, consumption, production, the planet, and life. We all have to clean up our houses and engage with advocacy to create a cultural reorientation if we want the triple iron pillars to be embraced and galvanized to achieve the SDGs.

Good governance is more than combating corruption. It requires human capital, requisite institutions, and indicator data bases necessary to monitor progress, inform policy, and ensure accountability of all stakeholders. The success of the SDGs' implementation needs a country to have capable management that can plan, coordinate, lead, administer, monitor and control their execution, and create a conduce environment for the participants.

The private sector carries a heavy burden of pursuing the SDGs. It has enormous potential for driving development, creating jobs, providing finance, and introducing new products, processes, and technologies that could fight diseases or curb pollution, waste, and inefficiencies. The role begins from what is normal such as paying taxes, maintaining labor standards, observing environmental regulations, and 'making business without causing harm.' This could move up to adherence to the 'triple bottom line.'

The SDGs are probably more ambitious than the MDGs and urge nations to work together to bring them to fruition. Lessons have been drawn from the implementation of the MDGs, and the SDGs may have even better chances of success.

Appendix

See Tables 3 and 4.

Table 3 Meeting millennium development goals

Goals and targets (from the Millennium Declaration)	Indicators for monitoring progress
Goal 1: Eradicate extreme poverty and hunger	
Target 1: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day	1. Proportion of population below $1 (PPP) per day 2. Poverty gap ratio (incidence *x* depth of poverty) 3. Share of poorest quintile in national consumption
Target 2: Halve, between 1990 and 2015, the proportion of people who suffer from hunger	4. Prevalence of underweight children under five years of age 5. Proportion of population below the minimum level of dietary energy consumption
Goal 2: Achieve universal primary education	
Target 3: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	6. Net enrollment ratio in primary education 7. Proportion of pupils starting grade 1 who reach grade 5 8. Literacy rate of 15–24-year-olds
Goal 3: Promote gender equality and empower women	
Target 4: Eliminate gender disparity in primary and secondary education preferably by 2005 and to all levels of education no later than 2015	9. Ratios of girls to boys in primary, secondary, and tertiary education 10. Ratio of literate females to males of 15–24-year-olds 11. Share of women in wage employment in the non-agricultural sector 12. Proportion of seats held by women in national parliament
Goal 4: Reduce child mortality	
Target 5: Reduce by two-thirds, between 1990 and 2015, the under five mortality rate	13. Under five mortality rate 14. Infant mortality rate 15. Proportion of 1-year-old children immunized against measles

(continued)

Table 3 (continued)

Goals and targets (from the Millennium Declaration)	Indicators for monitoring progress
Goal 5: Improve maternal health	
Target 6: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	16. Maternal mortality ratio 17. Proportion of births attended by skilled health personnel
Goal 6: Combat HIV/AIDS, malaria, and other diseases	
Target 7: Have halted by 2015 and begun to reverse the spread of HIV/AIDS	18. HIV prevalence among 15–24-year-old pregnant women 19. Condom use rate of the contraceptive prevalence rate 20. Number of children orphaned by HIV/AIDS
Target 8: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	21. Prevalence and death rates associated with malaria 22. Proportion of population in malaria risk areas using effective malaria prevention and treatment measures 23. Prevalence and death rates associated with tuberculosis 24. Proportion of tuberculosis cases detected and cured under directly observed treatment short course (DOTS)
Goal 7: Ensure environmental sustainability	
Target 9: Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources	25. Proportion of land area covered by forest 26. Ratio of area protected to maintain biological diversity to surface area 27. Energy use (kg oil equivalent) per $1 GDP (PPP) 28. Carbon dioxide emissions (per capita) and consumption of ozone-depleting CFCs (ODP tons) 29. Proportion of population using solid fuels
Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water	30. Proportion of population with sustainable access to an improved water source, urban, and rural
Target 11: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers	31. Proportion of urban population with access to improved sanitation 32. Proportion of households with access to secure tenure (owned or rented)
Goal 8: Develop a global partnership for development	
Target 12: Develop further an open, rule-based, predictable, non-discriminatory trading and financial system includes a commitment to good governancegood governance, development, and poverty reduction—both nationally and internationally	*Some of the indicators listed below are monitored separately for the least developed countries (LDCs), Africa, landlocked countries and small island developing states*

(continued)

Table 3 (continued)

Goals and targets (from the Millennium Declaration)	Indicators for monitoring progress
Target 13: Address the special needs of the least developed countries includes tariff and quota-free access for least developed countries' exports; enhanced program of debt relief for HIPC and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction	*Official development assistance* 33. Net ODA, total and to LDCs, as percentage of OECD/DAC donors' gross national income 34. Proportion of total bilateral, sector-allocable ODA of OECD/DAC donors to basic social services (basic education, primary health care, nutrition, safe water and sanitation) 35. Proportion of bilateral ODA of OECD/DAC donors that is untied 36. ODA received in landlocked countries as proportion of their GNIs 37. ODA received in small island developing states as proportion of their GNIs
Target 14: Address the special needs of landlocked countries and small island developing states (through the Program of Action for the Sustainable Development of Small Island Developing States and the outcome of the twenty-second special session of the General Assembly)	*Market access* 38. Proportion of total developed country imports (by value and excluding arms) from developing countries and LDCs, admitted free of duties 39. Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries 40. Agricultural support estimate for OECD countries as percentage of their GDP 41. Proportion of ODA provided to help build trade capacity
Target 15: Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term	*Debt sustainability* 42. Total number of countries that have reached their HIPC decision points and number that have reached their HIPC completion points (cumulative) 43. Debt relief committed under HIPC initiative, US$ 44. Debt service as a percentage of exports of goods and services
Target 16: In cooperation with developing countries, develop and implement strategies for decent and productive work for youth	45. Unemployment rate of 15–24-year-olds, each sex and total
Target 17: In cooperation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries	46. Proportion of population with access to affordable essential drugs on a sustainable basis
Target 18: In cooperation with the private sectorprivate sector make available the benefits of new technologies, especially information and communications	47. Telephone lines and cellular subscribers per 100 population 48. Personal computers in use per 100 population and Internet users per 100 population

Table 4 Sustainable development goals

Goal 1. No poverty	End poverty in all its forms everywhere
Goal 2. Zero hunger	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture
Goal 3. Good health and well-being	Ensure healthy lives and promote well-being for all at all ages
Goal 4. Quality education	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
Goal 5. Gender equality	Achieve gender equality and empower all women and girls
Goal 6. Clean water and sanitation	Ensure availability and sustainable management of water and sanitation for all
Goal 7. Affordable and clean energy	Ensure access to affordable, reliable, sustainable, and modern energy for all
Goal 8. Decent work and economic growth	Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all
Goal 9. Industry, innovation, and infrastructure	Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation
Goal 10. Reduced inequality	Reduce inequality within and among countries
Goal 11. Sustainable cities and communities	Make cities and human settlements inclusive, safe, resilient, and sustainable
Goals 12. Responsible consumption and production	Ensure sustainable consumption and production patterns
Goal 13. Climate action	Take urgent action to combat climate change and its impacts
Goal 14. Life below water	Conserve and sustainably use the oceans, seas, and marine resources for sustainable development
Goal 15. Life on land	Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Goal 16. Peace, justice and strong institutions	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels
Goal 17. Partnerships for the goals	Strengthen the means of implementation and revitalize the global partnership for sustainable development

References

Abtew, M.S. 1996. Introduction to management. Available at: http://www.merriamwebster.com. Accessed August 22, 2015.

Abtew, M.S. 2015. On sustainable development goals. *Management Insight* 4 (2): 01–16.

Akenji, L. 2014. Can the sustainable development goals reduce our appetite?' Available at: http://www.greeneconomycoalition.org.

Arulrajah, A.A. 2016. Literature review on good governance in the organizations through human resource management: A corporate level analysis. *International Business Research* 9 (8): 14.

Baker, S. 1997. *The politics of sustainable development: Theory, policy and practice within the European Union*. London & New York: Psychology Press.

Bernstein, S. 2015. 'Good, effective and equitable governance and the SDGs, governance for sustainable development', by the friends of governance for sustainable development. Available at: http://friendsofgovernance.org/index.php/paper-2-2-good-effective-and-equitable-governance-and-the-sdgs/.

Biermann, F., C. Biermann, S. Stevens, A. Bernstein, N.K. Gupta, K. Norichika, M. Levy, M. Nilsson, L. Pintér, M. Scobie, and O.R. Young. 2014. 'Integrating governance into the sustainable development goals', Policy Brief#3. Available at: http://www.post2015.jp/dl.

Coonrod, J. 2014. MDGs to SDGs: Top 10 differences. Available at: https://advocacy.thp.org.

DFI and OXFAM. 2015. *Financing the sustainable development goals, government spending watch 2015 report.* Available at: https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/rr-financing-sustainable-development-goals-110615-en.pdf.

Dunning, Casey. 2016. 230 Indicators approved for SDG agenda, center for global development. Available at: http://www.cgdev.org/blog/230-indicators-approved-sdg-agenda.

Elkington, J. 1994. Towards the sustainable corporation: Win-win-win business strategies for sustainable development. *California Management Review* 36 (2): 90–100.

FDRE. 2005/2015. Federal Negarit Gazeta, FDRE Proclamation No. 434/2005/No.882/2015, Addis Ababa.

Fehling, M., B.D. Nelson, and S. Venkatapuram. 2013. Limitations of the millennium development goals: A literature review. *Global Public Health* 8 (10): 1109–1122.

Fukuda-Parr, Sakiko. 2013. MDG strengths as weaknesses. European centre for development management. *GREAT Insights* 2 (3): 01–03.

Gabay, C. 2012. The millennium development goals and ambitious developmental engineering. *Third World Quarterly* 33 (7): 1249–1265.

Ghaus-Pasha, A. 2004. *Role of civil society organizations in governance*. Available at: http://unpan1.un.org/intradoc/groups/public/documents/un/unpan019594.pdf.

Ghosh, R.N., R. Gabbay, and A. Siddique. 1999. *Good governance issues and sustainable development: The Indian Ocean region*. New Delhi: Atlantic Publishers & Dist.

González, L., W. Güth, and M.V. Levati. 2002. 'Speeding Up Bureaucrats by Greasing Them', Discussion Paper, Max Planck Institute of Economics, Strategic Interaction Group.

Gupta, J., and C. Vegelin. 2016. Sustainable development goals and inclusive development. *International Environmental Agreements: Politics, Law and Economics* 16 (3): 433–448.

Hecksche, C.C. 2007. *The collaborative enterprise*. New Haven and London: Yale University Press.

Herfkens, E. 2008. The Millennium Campaign: Successes and challenges in mobilizing support for the MDGs. *UN Chronicle*, XLV(1). Available at: https://unchronicle.un.org/article/millennium-campaign-successes-and-challenges-mobilizing-support-mdgs.

Hickel, J. 2015. The delusion at the heart of the sustainable development goals. Available at: http://thoughtleader.co.za.

Hörisch, J., R.E. Freeman, and S. Schaltegger. 2014. 'Appling stakeholder theory in sustainable management' links, similarities, dissimilarities, and a conceptual framework. *Organization and Environment* 27 (4): 328–346.

Kassem, T. 2014. Poor governance in Egypt, an obstacle to economic development. *IOSR Journal of Humanities and Social Science* 19 (2): 01–14.

Kaufmann, D., and A. Kraay. 2008. Governance indicators: Where are we, where should we be going?. Policy Research Working Paper 4370. Available at: http://info.worldbank.org.

Lamb, H. 2015. Will the sustainable development goals change our Barbie Doll world? Institute of Development Studies. Available at: http://www.ids.ac.uk/opinion/will-the-sustainable-development-goals-change-our-barbie-doll-world.

Millennium Project. 2006. Available at: http://www.unmillenniumproject.org/goals/gti.htm, © Copyright 2006 Millennium Project [Historic Site].

MOFED. 2012. *UN country team, assessing progress towards MDGs.* Ethiopia MDGs Report 2012.

Müller-Christ, G. 2011. *Sustainable management: Coping with the dilemmas of resource-oriented management*. London: Springer Science & Business Media.

Nigussie, F. 2013. Good governance on the ground in Ethiopia. *The Global Journal*. Available at: http://www.theglobaljournal.net.
OECD. 2015. Promoting good governance, PUMA. Available at: https://www.gdrc.org/u-gov/doc-oecd_ggov.html.
Okeke, M.G.S. 2015. Africa research review. *International Multidisciplinary Journal* 9 (4): 27–36.
Rodriguez, M.A. 2002. Sustainable development and sustainability of competitive advantage: A dynamic and sustainable view of the firm. Available at: http://ecsocman.hse.ru/data/677/657/1219/sust_dev.pdf.
Sachs, D.J. 2012. From millennium development goals to sustainable development goals. *Lancet* 379: 2206–2211.
Sheng, Y.K. 2015. *What is good governance?* UN-ESCAP. Available at: http://www.unescap.org.
Slaper, T.F., and T.J. Hall. 2011. The triple bottom line: What is it and how does it work? *Indiana Business Review* 86 (1): 03–10.
Starik, M., and P. Kanashiro. 2013. Toward a theory of sustainability management: Uncovering and integrating the nearly obvious. *Organization & Environment* 26 (1): 7–30.
Tamyalew, A. 2010. *A review of the effectiveness of the federal ethics and anti-corruption commission of Ethiopia*. IBRD: European Commission.
Tiwari, M. 2014. Looking back to move forward: The MDGs and the road to post-2015. Available at: http://www.elmmagazine.eu.
Turner, R. 1988. *Sustainable environmental management: Principles and practice*. London: Belhaven Press.
UN. 2014a. *Assessment of Ethiopian progress towards mdgs, 2014 Report*. Available at: http://www.et.one.un.org.
UN. 2014b. *The millennium development goals report*. Available at: http://www.un.org/millenniumgoals/2014%20MDG%20report/MDG%202014%20English%20web.pdf, August 12, 2016 (12; 14).
UN. 2015a. *Resolution adopted by the general assembly on 27 July 2015*. Available at: http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/69/313.
UN. 2015b. *Time for global action*. Available at: www.un.org.
UNDP. 2014. *Discussion Paper, Governance for Sustainable Development*. Available at: http://www.undp.org.
UNDP. 2015. *Sustainable Development Goals, (SDGs).* Available at: http://www.un.org/sustainabledevelopment/summit/.
UNDP. 2016. *From the MDGs to Sustainable development for all*. United Nations Development Programme.
UNECA. 2014. MDG 2014 Report, Assessing progress in Africa toward the Millennium Development Goals. Available at: http://www.uneca.org/sites/default/files/PublicationFiles/mdg_report_2014_ethiopia_case_study.pdf.
UN News Centre. 2015. *Lessons from millennium development goals 'springboard' for future UN agenda-Ban*. Available at: http://www.un.org/apps/news/story.asp?NewsID=51342#.WIX6RVUrJaR.
WBCSD. 2015. *Joining forces for business action on sustainable development goals*. Available at: http://wbcsdservers.org/web/wbcsdfiles/GlobalPolicy/UNGC-GRI-WBCSD%20Partnership_07Oct14.pdf.
Yewondwossen, M. 2015. Authority to transfer Tidhar's road projects to other contractors. *Capital*. Available at: http://www.capitalethiopia.com. Accessed August 18, 2015.
Zarsky, L. (ed.). 2012. *International investment for sustainable development*. UK: Earthscan.

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Chapter 6
Supply Chain Management Practices and Operational Performance of SMEs in Nairobi County, Kenya

Wanjau Nehemiah

Abstract Small and medium-sized enterprises are a major contributor to economic growth in the largest economy in the East African region, Kenya. The purpose of this study was to determine the effects of supply chain management (SCM) practices on the operational performance of small and medium-sized enterprises (SMEs) in Nairobi County, Kenya. Due to the role that SMEs play in economic development, an integrated supply chain management approach is required for attaining desired levels of operational performance based on cost, flexibility, and delivery speed. In addition, the study also identifies the best in class supply chain management practices that SMEs use as a benchmark against set standards. This study adopts a descriptive research design. The target population is SMEs in Nairobi County where a sample of 45 firms was drawn using stratified sampling. The enterprises are represented by the subsectors of trade and information technology. Data was collected using questionnaires administered by the researcher and analyzed using descriptive statistics of percentages and inferential statistics of a regression analysis. The research findings show that supply chain management practices positively impact the operational performance of SMEs across the sectors of trade and information technology. SMEs are of the opinion that supply chain practices of purchasing, logistics, and customer services are significant for business operations and hence an opportunity to outdo competition. The study concludes that SMEs should adopt SCM as part of their business strategies to enhance their operational performance. The study recommends that awareness about SCM should be raised for SMEs to align them with their business strategies.

Keywords Benchmarking · Operational performance · SMEs · Supply chain management · Supply chain practices

JEL Classification Codes L25 · M110

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1 Introduction

Small and medium-sized enterprises (SMEs) play a critical role in a nation's economy. They are an important subsector for the Kenyan economy since they employ about 85% of the Kenyan workforce (Ong'olo and Odhiambo 2013). With the new constitution in place, SMEs' operational and business opportunities are influenced by regulatory and institutional reforms. Although SMEs provide good opportunities for the nation's economic development, they suffer from high failure rates often caused by inadequate resources such as credit availability and strong competition from large firms. Supply chain management (SCM) is an integrated approach beginning with planning and control of materials, logistics, services, and information streams from suppliers to manufacturers or service providers to end clients; it therefore represents the most important change in business management practices (Fantazy et al. 2010). An integrated supply chain can provide a competitive advantage (Koh and Demirbag 2007).

Forward-looking enterprises today are dynamic; they collaborate with suppliers, customers, and even with competitors and share information and knowledge aimed at creating a collaborative supply chain that is capable of competing if not leading a particular industry. Therefore, firms gaining a competitive edge under such a cut-throat environment become difficult, if not impossible (Koh and Demirbag 2007).

SCM practices involve a set of activities undertaken by an organization to promote effective management of its supply chain. Li et al. (2005) have developed and validated a measurement instrument for SCM practices. The dimensions include but are not limited to strategic supplier partnerships, customer relationship, information sharing, information quality, and internal lean practices. SCM practices are a multidimensional concept. However, the commonly used dimensions of these practices are purchasing, logistics, and customer services. Purchasing involves establishing partnerships with suppliers designed to leverage the strategic and operational capabilities of individual participating organizations to help them achieve significant ongoing benefits (Gunasekaran et al. 2001). Small firms often use a number of purchasing practices including clerical purchasing, sourcing (local sourcing), supplier relationships, and horizontal purchasing collaborations with other SMEs. When implemented, these practices improve SMEs' operational performance in terms of cost reduction, quality, and flexibility (Eyaa and Ntayi 2010). A sourcing manager's knowledge, skills, and capabilities can supply critical information (e.g., information regarding the supply market) which helps a company's decision making and can enhance the firm's ability to maintain a competitive position (Chen and Paulraj 2004). This is upheld by the fact that a majority of the strategy management teams are cross-functional to ensure that there is a wealth of knowledge and skills in the organization.

According to Ketchen and Giunipero (2004), logistics play a crucial role in the growth and performance of SMEs since this enables them to reach out to markets. Logistics practices have previously been discussed as operational capabilities.

However, businesses have transformed the role of logistics operations from a traditional management review to a vertically integrated supply chain management function that links a firm's strategy and business planning for implementing logistics strategies (Chopra and Meindl 2001). A traditional approach applied by organizations, mostly large firms, on logistics management is based on costs. Kirby and Brosa (2011) argue that logistics is moving from a traditional point of view that entailed mere transportation and distribution operations to a function of supply chain management that links with an organization's strategy.

Logistics management practices used by SMEs include stock management, packaging, and transportation. Customer-focused practices comprise of the entire array of practices that are employed for the purpose of managing customer complaints, building long-term relationships with customers, and improving customer satisfaction (Claycomb et al. 1999).

According to Rahman and Sohal (2001), organizations use both financial and non-financial metrics to determine their operational performance. The outcome of their research showed that there is a positive relationship between best business practices and a business' operational performance. Small entrepreneurs are involved in implementing business practices based on the use of the principles of supply chain management and tools of business management that lead to improvements in their business performance. The operational performance dimensions for organizations as defined by Kaplan and Norton (1992) can be seen to cover aspects of a business such as financial results, operating performance (through the dimensions of time, quality, and flexibility), the way the company is perceived externally (by its customers), and the cultural aspects of the working environment (through the human resource dimension).

Operational measurement has been recognized as a crucial element for improving business performance. Our study is based on operational performance measures of cost, delivery speed, and flexibility as developed by Gunasekaran et al. (2001). Government of Kenya (1992) defines a small and medium enterprise as an organization employing between one to 50 employees with an annual turnover ranging between of US$38,835 to US$970,874 (Ksh 4–100 million). This definition, however, is different from the definition of SMEs in EU countries. In Turkey, for example, a SME is defined as an organization that employs up to 250 people (Koh and Demirbag 2007).

There is growing recognition of the important role that SMEs play in economic development. They are consistently contributing to Kenya's GDP growth and employment opportunities (Katua 2014). This sector accounted for 75% of the total employment in Kenya and contributed 18.4% to the country's gross domestic product (KIPPRA 2009).

It has been proposed that the SME sector will move Kenya to a middle-level economy as envisaged in the development blueprint of Vision 2030. The importance of implementing effective supply chain practices by SMEs was studied by Gunasekaran et al. (2001) who developed a framework for a supply chain management's performance measures and metrics for the supply chain process (plan, source, make, and deliver). All of these comprise of supply chain activities and

levels of management (strategic, tactical, and operational). Their study recommended implementing the supply chain processes of planning, sourcing, making, and delivering as applicable to the SMEs' context in order to enable growth and performance. Koh and Demirbag (2007) in their study on the impact of supply chain management practices on the performance of SMEs in Turkey found that implementing SCM practices had a significant impact on their operational efficiencies. Their study showed a direct influence of SCM practices and SMEs' operational performance in terms of cost savings and efficiency. Quayle (2003) studied SCM practices in UK's industrial SMEs and identified issues such as firms' strategies, waste reduction, and procurement which can be addressed by effective supply chain management and can thus contribute to the growth of SMEs. Also, customer dominance, a component of supply chain, has emerged as an important factor for SMEs' growth and competitiveness. Studies done outside the Kenyan context also show that SMEs need to employ SCM practices that are not managed at an arm's length from customers in order to remain competitive.

Linsey's (2011) study in Kenya on the effect of supply chain finance on small and medium-sized manufacturers' performance found that supply chain operation processes influence SMEs' performance in terms of cost and time. Although the needs and operating environments of SMEs are very different from those of large firms, there is a dearth of literature regarding the use of SCM practices and their effect on SMEs' performance in emerging market economies such as Kenya. Further, from these studies, little is known about the specific supply chain management practices that directly or indirectly influence the operational performance of SMEs. In addition, the studies have been carried out in developed and developing nations outside Kenya representing a geographical gap in research. SMEs are not in focus in these studies since a majority of them were carried out in large enterprises (Bayraktar et al. 2009). In view of the fact that the success of SMEs has a direct impact on the national economy, this chapter seeks to add to the existing body of knowledge by providing new data and empirical insights into the relationship between SCM practices and the performance of SMEs operating in Nairobi County.

2 Literature Review

SCM practices involve a set of activities undertaken by an organization to promote the effective management of its supply chain. Koh and Demirbag (2007) describe these practices as covering areas such as strategic supplier partnerships, lean practices in inventory management, and customer relationships. SMEs often use a few suppliers, form close partnerships with suppliers and opt for e-procurement to increase coordination with suppliers. The practice of using a few suppliers helps build more effective supplier relationships. Establishing close partnerships with suppliers not only benefits suppliers and customers, but also improves coordination

with suppliers due to a closer 'control' of the supply chain (Helo and Szekely 2005). Also, with information sharing and use of information technology, SMEs often use e-procurement during the ordering process which can be streamlined and automated.

Purchasing has evolved from a clerical buying function to a strategic business function that contributes to companies' competitive position. Buyers in a non-sophisticated purchasing function solve day-to-day problems with suppliers and spend their time mainly on clerical and administrative tasks, which is also the case with SMEs (Gelderman and Weele 2005).

The 1999 National MSE Baseline Survey by the Central Bureau of Statistics (CBS), International Center for Economic Growth (ICEG), and K-Rep Holdings Ltd. established that there were 1.3 million small enterprises in Kenya. These were mainly found in rural areas and indicated a slight increase in their numbers in the urban population, especially Nairobi and Mombasa representing 9.7% of the national population.

A majority of the enterprises were a mixture of dynamic enterprises involved in an array of activities but largely within the service sector (transport and communication), wholesale and retail trade, manufacturing, construction, finance, real estate, community and personal services, and insurance (KIPPRA 2013; KNBS 2014). The wholesale and retail trade sector in Kenya is predominantly comprised of informal SMEs.

Government planning documents and studies such as those by Adam Smith International (2013) recognize the role that SMEs play in the growth of the Kenyan economy. The blueprint strategy for development and growth—Vision 2030—recognizes that the SME sector is a crucial component of the economy. This is central in national strategies for stimulating economic activity and reducing unemployment and poverty. That a competitive SME sector is a critical and strategic engine for growth in attaining Vision 2030 is not negotiable. These form the base of entrepreneurial development and the 'seed bed' for inculcating an entrepreneurial culture and supporting rural industrialization and industrial development (Kirori and Achieng 2013). These studies observe that the average capacity to perform required technical activities, but with low managerial abilities.

Virtually all small-scale SMEs and a number of those that can qualify as medium scale do not have internal management systems including supply chain management practices. The assessment also indicates very low levels of flexibility in terms of the SMEs' ability to respond to random orders. Moreover, the challenge extends to high volumes of orders of any particular kind. This is largely because (apart from a few medium-scale-sized enterprises) a majority of the SMEs procure and hold in their stores small quantities of produce at any given time. Goods are largely procured on order. This is due to their limited holding capacity, limited financial capacity, concerns of security, and inability to project future demands.

Within manufacturing companies, the purchasing function is typically part of material management. SMEs often limit their sourcing strategies to the region that they operate in. This reduces transport costs and improves delivery lead times.

In addition, local sourcing provides flexible delivery arrangements and opportunities for horizontal supply chain integration (Enarsson 2006).

In the current competitive environment, enterprises must react quickly to market changes. Enterprises must collaborate with one another on the purchasing strategies that they need to adopt. Cao et al. (2010) define supply chain collaboration as two or more firms that form relationships and work closely to plan and execute supply chain operations. Horizontal supply chain management thus means cooperating across, rather than along, supply chains composed of both competing and non-competing companies (Björnfot and Torjussen 2012). Logistics is a relevant and essential business activity used by all enterprises throughout the world; it helps in determining if products arrive to customers on time, containing the requested quality requirements and at the lowest possible costs. The significance of logistics has evolved from a more passive and cost minimization-oriented activity to a key success factor for a firm's competitiveness.

Arbones (1999) reviewed warehouse management, material handling, managing inventory, demand forecasting, transport organization, location and sizing of production and storage facilities, and managing expectations as core logistics activities for SMEs. CSCMP (2010) looks at logistics management practices including inbound and outbound transportation management, fleet management, warehousing, material handling, order fulfillment, and the logistics network's design as the activities carried out by SMEs to ensure operational performance and achieving an edge over competition.

Bagchi and Virum (1998) studied the logistical competencies of SMEs and showed that it is difficult for small and medium-sized enterprises to develop their logistics competencies and apply them as competition instruments since their resources are limited and they are forced to provide higher quality logistics to remain competitive. Therefore, the SMEs commonly use basic stock management practices of receiving, storing, and issuing stocks to customers. The products that have good packaging will have a higher level of consumer acceptance. Good packaging means that the product is protected with a good material, a good cover, and complete information. Packaging is therefore a key component of logistics practices of SMEs as it attracts customers' attention to a product (Setyawan et al. 2012). To complete the supply chain process, organizations engage in transportation of shipments from the source to final consumers. SMEs, however, engage in minimal and simplified transportation in order to reduce costs (Kirby and Brosa 2011). This is a fundamental element of supply chain management that enhances the growth and performance of SMEs. According to Arsalan et al. (2011), it is indispensable for every business to conduct marketing practices to improve customer focus and for enhancing a firm's competitive advantages. Executing a proper marketing strategy adds excellence to a firm's operations and strengthens its competiveness and market share.

Market orientation of maintaining regular contact with customers is a key element for organizations, both small and large. All small business organizations are in regular contact with their customers to ensure regular information gathering that could improve the quality of organizational performance (Ogundele 2007).

Relationship marketing is concerned with creating a high level of customer satisfaction through the collaborative efforts of the parties involved. These include end-use customers, suppliers, and internal teams (Ogundele 2007) and enhanced mutual trust and understanding which fosters partnerships aimed at providing customer-oriented products.

Providing a service component to existing and new customers builds on relationships and increases revenues and profits for organizations. It also reduces sales costs while adding to the customer base, thus improving the competitive advantage of a firm (Susman et al. 2006). SMEs offer after-sale services in the form of free gifts, timely customer complaint handling, and general feedback information on products and services sold. A key objective of the effective application of supply chain practices is creating a major source of competitive advantage for enterprises so that they can differentiate themselves in the eyes of the customers from its competitors by operating at a lower cost and hence at a greater profit. SCM assumes that a firm sets up alliances with members of the same chain to improve its competitive advantage, whereby areas such as purchasing and logistics integrate in order to provide it with a strategic view of enhancing performance (Miguel and Brito 2011). The positive impact of SCM on operational performance can manifest itself in dimensions such as process integration, long-term relationships, information sharing, delivery speed, and cost reductions. According to Shin et al. (2000), cooperation and process integration between members of the same chain results in cost and time reduction and quality and flexibility improvements which are the core measures of performance of an organization.

A benchmarking tool for SMEs should remain simple and comprehensive but not too demanding in terms of resources, and it must be able to guide owner-managers toward action when appropriate. Therefore, the importance of benchmarking practices in SMEs is in improving their organizational competitiveness and prosperity (Gunasekaran 2003).

Supply chain benchmarking should be tailored to SMEs based on their size in order to target those that wish to progress and not only those that wish to become world leaders or the best in their market. Moreover, benchmarking allows SMEs to get and know the best practices which in turn enhance performance (Suttipong and Tian 2012).

3 Methodology

This study employed a descriptive research design which sought to determine the effects of SCM practices on SMEs' operational performance. The study targeted SMEs in sectors of trade (wholesale and retail) and information technology in Nairobi County. Nairobi County was chosen since it has the highest number of growth enterprises (15.9%) as compared to other counties (Kenya National Bureau of Statistics 2014). According to data obtained from the Kenya National Bureau of Statistics (2014), there were approximately 5000 registered small and

microenterprises in Nairobi County. Out of these, 239 businesses (or 4.8% of the registered businesses) represented trade and information technology sectors. Businesses with a minimum of five employees were chosen in order to exclude microfirms that were not suitable for the purposes of this study due to time and budget limits. Another reason was the lack of consensus on differentiating small and microenterprises in Kenya which varies across different sectors and government agencies.

Data for this study was collected using a self-administered questionnaire that was distributed to 239 businesses in Nairobi County. Approximately 80% of the SMEs in Nairobi operate in the information technology and trade sectors since the cost of running and operating them is much lower as compared to SMEs operating in other industry sectors (Kenya National Bureau of Statistics 2014). The sample was randomly selected from the KNBS database since these SMEs depicted similar features in terms of their location and size. SME owners and managers of businesses were requested to complete the questionnaire. Of the 239 questionnaires administered, 151 were returned; 29 were eliminated as they were incorrectly filled and had some missing values. The overall response rate was thus 51% which is considered satisfactory for analysis.

The questionnaire consisted of structured, open, and closed questions. It was divided into two parts covering general information about the business and SCM practices and their impact on the performance of the SME. Based on literature, a set of three SCM practices that are commonly used and applicable across SMEs were identified: purchasing, logistics, and customer services. Respondents were asked to what extent the SCM practices had impacted their operational performance measured by cost, flexibility, and delivery speed relying on a five-point scale ranging from 1 = very significant to 5 = not significant. Respondents were also requested to indicate the best in class SCM practices that they would implement in their businesses and which would have an impact on their performance.

The study adopted a regression technique to establish the effects of various supply chain practices on the operational performance of SMEs. In particular, this study used the multiple regression approach. As a starting point, a simple normal error regression model can be denoted as follows:

$$Y_i = \beta_0 + \beta_1 X_i + \varepsilon_i \tag{1}$$

where Y_i represents the operational performance of the ith SME in the sample while X_i corresponds to one of the many supply chain management practices assumed to be impacting an organization's performance. Linear regression allows for either continuous factors or categorical factors. In addition, linear regression presupposes that a measurement error is made while sampling and collecting data for each SME. Thus, ε_i is the quantification of this deviation of individual SMEs from sample average scores. The model thus far described is a simple linear regression model which adjusts for one covariate only. However, in more realistic settings, it is often of interest to adjust for multiple predictors.

A generalization of Eq. 1 and the subsequent estimation procedures carry on easily. In a multiple regression model, multiple X_i values are included simultaneously. Let $X_1, X_2, \ldots X_{P-1}$, for $P > 1$, denote the predictors of interest. The multiple linear regression model can be denoted as follows:

$$\begin{aligned} Y_i &= \beta_0 + \beta_1 X_{i1} + \cdots + \beta_1 X_{i,p-1} + \varepsilon_i \\ \varepsilon_i &\sim N\left(0, \sigma^2\right), \quad \text{for } i = 1, \ldots, n \\ \boldsymbol{\beta} &= \beta_0, \beta_1, \ldots \beta_{p-1} \end{aligned} \tag{2}$$

where $\boldsymbol{\beta}$ is a vector of regression coefficients each estimated from the ordinary least squares. Interpretation of the regression coefficients is now performed by fixing some predictors to constant values of interest and then solving the resulting equation.

In most (if not all) situations, there is a need to identify a subset of parameters from the full set $X_1, X_2, \ldots X_{P-1}$ which results in the best fit for the data. What is worth noting here is the fact that the complete set of predictors $X_1, X_2, \ldots X_{P-1}$ may include interaction terms between different predictors as well as transformations of some predictors such as quadratic functions and variable log transformations. This therefore calls for sound model building strategies. Variable selection for model building can be performed using automatic variable selection procedures such as forward selection, backward selection, and stepwise model building. The algorithm for forward model selection can be summarized in four general steps:

I. Starts with no predictors in the model.
II. Only one predictor can enter the model (based on p values and F-statistic) at a time.
III. After a variable enters the model, it can no longer be removed.
IV. The procedure continues until no other predictors can enter the model.

On the other hand, the backward selection approach is basically the converse of the forward approach and is guided by the following key steps:

I. Starts with all predictors in the model.
II. At each step, one predictor is removed from the model (based on p values and f-value).
III. After a variable is removed from the model, it can no longer reenter at a later step.
IV. The procedure continues until no other predictors can be removed from the model.

After applying the automatic algorithms, the algorithm returns a set of models which are ranked in terms of criteria such as the regression R-squared (R^2) value, Mallow's CP, and smallest mean-squared error. The best model is then used for further inference as it is or additional modifications are performed on it in order to test the hypotheses of interest. This is because automatic model selection procedures will not necessarily result in scientifically meaningful models, especially with

regard to the scientific question of interest. Since the objective of this chapter is to quantify the significance that each factor of the supply chain management practice has on a SME's operational performance, automatic variable selection was not performed. Instead, factors of supply chain practices specifically in purchasing, logistics, and customer services were preselected. Model building then entailed including variables of interest and adopting appropriate parameterization. Still, the appropriateness of the final model could be assessed via the adjusted model R^2.

Finally, just like in any estimation that involves some underlying assumptions, it is recommended that some model diagnostic checks as well as remedial measures be performed. The validity of these assumptions influences the validity of inferences drawn from the analysis.

Tests for normality are the most crucial and most performed diagnostic tests in linear regression modeling. Statistical tests for normality are performed using tests such as Kolmogorov–Smirnov test, Shapiro–Wilk test, and a graphic examination though a QQ-plot. Statistical diagnostic checks for linear regression models are mostly developed based on the resulting model's residuals. For instance, to identify outlying outcomes, raw, studentized residuals, deleted residuals, and studentized deleted residuals are all tools that can be applied with a different threshold. Outliers can also be checked on the predictor variables in which case the hat matrix is used. Testing for influential cases (outliers) is formally performed using a Cook's distance measure.

In situations where some of the underlying assumptions have been violated, possible remedial measures can be taken. For instance, for linearity, modifying the regression model or using a transformation of X and/or Y can remedy the nonlinearity problem. On the other hand, if there is heteroscedasticity, the use of weighted least squares or variance stabilizing transformations such as the square root transformation may be appropriate. Lack of independence on the other hand cannot be resolved within the linear regression context but instead calls for models such as time series and generalized least squares estimations.

4 Results

We analyzed data using descriptive and inferential statistical techniques. To measure the reliability of internal consistency in the research, a Cronbach's coefficient alpha of 0.867 was obtained suggesting that the items had relatively high internal consistency. A reliability coefficient of 0.70 or higher is considered 'acceptable' in most social sciences. Internal consistency describes the extent to which items in a test measure the same concept or construct. Trade (wholesale and retail) and information technology sectors formed the largest proportion of responses in the survey with a representation of 53.3 and 40%, respectively, business owners largely from limited liability companies.

We introduced the survey results by taking a look at the various descriptive statistics obtained from the study mainly from fitting appropriate cross-tabulations. On a broad perspective, our study reveals that purchasing, logistics, and customer services are all major SME supply chain management practices. A further look at individual purchasing practices reveals that the most relevant purchasing practices in the SME sector are small-scale purchasing (30.7%), local sourcing (32%), and supplier relationships (28%). Collaborations with other SME sectors were not very relevant with a 9.3% representation. From a legal form of ownership perspective, individual SMEs mainly practiced small-scale purchasing (45.5%) while limited liability enterprises largely practiced local sourcing.

Stock management (47%) and transportation (36%) were the major logistics practices within the SME sector. Further, the two practices were very critical in individually owned enterprises, SMEs formed under partnerships and limited liability enterprises. Lastly, under customer service, the study revealed that most SMEs mainly engaged in customer relationship building (50%). This was also depicted across various forms of businesses—individual, partnership, and limited liability enterprises.

Having established the various supply chain practices and their relevance in the SME sectors, we established their effects on operational performance. By fitting relevant multiple linear regression models, we evaluated the effects of these practices on an enterprise's operational performance based on three key indicators—cost, flexibility, and delivery speed. The coefficient of determination (R2) was used to establish goodness of fit for the fitted model. R2 indicates the proportion of variance explained by a model. The final fitted regression model thus takes the form:

$$Y_{ij} = \beta_{0i} + \beta_{1i} X_{1i} + \beta_{2i} X_{2i} + \beta_{3i} X_{3i} \cdots + \beta_{10i} X_{10i} + \varepsilon_{ij}$$

Basically, the study attempts to answer the following questions:

I. Which supply chain practices have a significant effect on organizations' costs?
II. Which supply chain practices have a significant effect on organizations' flexibility?
III. Which supply chain practices have a significant effect on organizations' speed of delivery?

Table 1 provides parameter estimates for the regression model. We observe that all specific supply chain activities in purchasing, logistics, and customer service practices significantly affected the operational performance of a SME in terms of cost, flexibility, and speed of delivering goods to a customer.

The effect of each activity (parameter estimate) on the operational performance indicator is also observed in the table. For instance, transportation, small-scale purchasing, local sourcing, and stock management activities have a much higher effect on an organization's costs. Gathering information about customers, relationship building, and supplier relationships has a much higher effect on flexibility.

Table 1 Parameter estimates for the regression model's coefficients

Supply chain practices	Parameter	Cost		Flexibility		Delivery speed	
		Estimate (SE)	*P* value	Estimate (SE)	*P* value	Estimate (SE)	*P* value
Purchasing practices	(Intercept)	1.375 (0.033)	<0.0000	1.003 (0.028)	<0.0000	2.036 (0.08)	<0.0000
	Small-scale purchasing	0.963 (0.026)	<0.0001	0.24 (0.026)	<0.0001	0.21 (0.106)	<0.0001
	Local sourcing	0.781 (0.034)	<0.0000	0.289 (0.36)	<0.0001	0.281 (0.034)	<0.0001
	Supplier relationships	0.384 (0.035)	<0.0001	0.884 (0.003)	<0.0000	0.184 (0.035)	<0.0001
	Collaboration with other SMEs	0.121 (0.001)	0.001	0.423 (0.029)	0.0001	0.199 (0.11)	<0.0001
Logistics practices	Stocks management	0.823 (0.012)	<0.0000	0.620 (0.112)	<0.0000	0.123 (0.012)	<0.0001
	Product packaging	0.226 (0.01)	<0.0001	0.233 (0.01)	<0.0001	0.759 (0.016)	<0.0000
	Transportation	0.995 (0.01)	<0.0000	0.308 (0.012)	<0.0001	1.15 (tra0.263)	<0.0001
Customer service practices	Customer information gathering	0.495 (0.025)	<0.0000	0.995 (0.056)	<0.0000	0.813 (0.367)	<0.0000
	Relationship building	0.01 (0.0002)	0.001	0.702 (0.504)	<0.0001	0.595 (0.01)	<0.0000
	After-sales service	0.124 (0.033)	<0.110	0.295 (0.01)	<0.0001	0.05 (0.082)	<0.001

Table 2 ANOVA test for overall significance

Parameter	F-critical	*P* value
Intercept	745.054	<0.0001
Purchasing practices	154.209	<0.0001
Logistics practices	94.522	<0.0001
Customer service practices	68.183	<0.0001

On the other hand, delivery speed is mainly affected by product packaging, gathering customer information, and transportation. These kinds of insights are very useful in decision making especially in identifying areas to prioritize regarding specific performance indicators.

The overall significance test (omnibus test) for supply chain practices is obtained by using an analysis of variance (ANOVA). The *P* values in this case are estimated from an ANOVA-based F distribution. Table 2 presents a summary of the overall omnibus tests of supply chain practices indicating statistically significant effects on SMEs' operational performance.

Finally, performing the model goodness of fit and diagnostic checks is vital in order to know the reliability of the analysis and the inference based on the model's

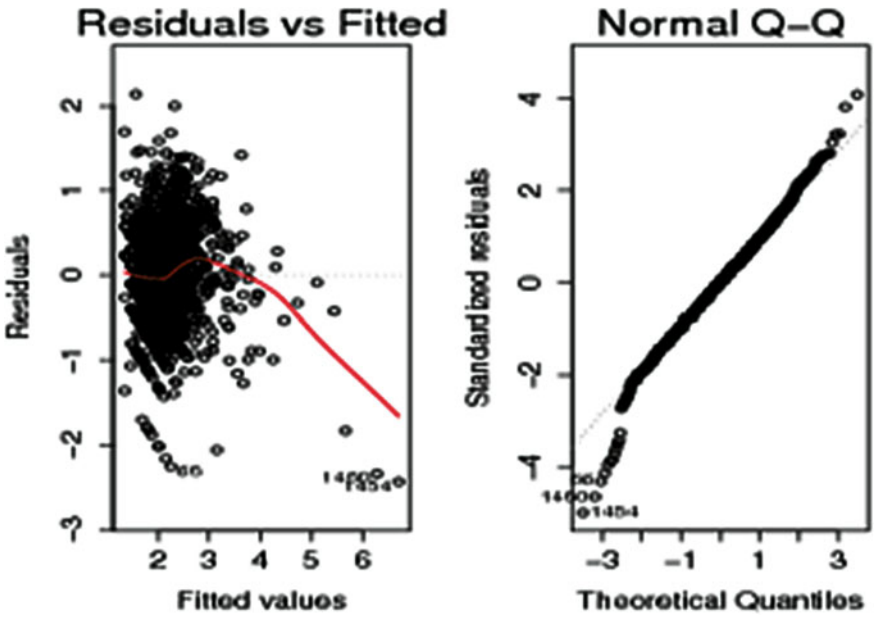

Fig. 1 Selected diagnostic plots for the linear regression model

output. Linear regression diagnostic plots for the fitted model had an adjusted $R^2 = 0.786$ implying that supply chain practices accounted for 78.6% of the variability in operational performance.

Selected diagnostic plots are shown in Fig. 1. Residual versus fitted plots do not show any particular trend in the distribution of residuals. We can therefore infer that there is no dependency in the data that has not been accounted for in the model. On the other hand, the normal Q-Q plot is an informal normality test. Distribution is potentially heavy-tailed. We can therefore reliably make inferences regarding the factors of production.

Since the distribution of residuals is along the diagonal for the better part, there is little evidence of deviation from normality. However, the ends of the line are more dispersed implying that the distribution is potentially heavy-tailed. We can therefore reliably make inferences regarding the factors of production.

5 Findings

The study aimed at establishing supply chain management practices that SMEs prefer and their impact on operational performance. The research findings reveal that SMEs use customer focus practices as key supply chain practices with purchasing and logistics also preferred in equal measure. This is due to the fact that

SMEs are a customer-facing industry thanks to the level of their interaction with customers. The results also indicate that SMEs in the trade sector prefer logistics and purchasing as main supply chain practices since the acquisition and distribution of these goods forms the core of their businesses. For SMEs in the information technology sector, there was no major difference in preference between the three supply chain practices. Further, individually owned SMEs in trade and information technology sectors preferred purchasing with customer services being the lowest in their choices of supply chain management practices due to the purchasing cost factor. Small-scale sourcing, local sourcing, and supplier relationships were the most relevant specific purchasing practices for various enterprises in Nairobi County, whereas collaborations with other SMEs in purchasing were the least relevant. Also, a majority of the enterprises which preferred logistics as their key supply chain practice opted for stock management and transportation as specific logistics practices. Relationship building with customers on the other hand formed the key customer focus practice for SMEs across both sectors of trade and information technology.

The results provide evidence of a positive and significant impact of SCM practices on SMEs' operational performance supporting previous empirical contributions by Koh and Demirbag (2007). Our findings suggest that supply chain practices positively impact operational performance measured by cost, flexibility, and delivery speed of SMEs across trade and information technology sectors. Individually, all the three supply chain management practices of purchasing, logistics, and customer services had a significant and positive impact on the operational performance of SMEs.

Our study also sought to establish the best in class supply chain management practices that the SMEs use for benchmarking with supplier partnering and electronic sourcing the preferred best in class purchasing practices. Supplier partnering was preferred by SMEs in trade and information technology sectors. In logistics, all the three best in class practices of logistics outsourcing, computerized stock management and sales, and inventory planning were preferred by businesses, whereas it was observed that customer relationship management and relationship building with customers were the most common best in class practices in customer services preferred by SMEs.

6 Summary, Conclusion, and Future Research

The findings of this chapter show that applying supply chain management practices is instrumental in ensuring sustainable operational performance for SMEs in Nairobi County. Among these findings is the realization that SMEs consider supply chain as an integral part of their business strategies in providing superior customer services as customers form the backbone of these enterprises. It is apparent from the research findings that SMEs in both trade and information technology sectors recognize that to achieve a competitive advantage and to manage business costs,

they need to align their businesses with supply chain practices to enhance their operational performance and thereby sustainable business growth.

Of paramount importance, however, was relationship building with customers which SMEs considered to be a major factor in achieving operational performance, since this influenced re-purchase decisions. This confirms that customer service is a key supply chain attribute in modern businesses. Thus, with ever-growing competition and rising costs of doing business, business owners who are also decision makers need to improve their supply chain management activities and also benchmark them with the best in class practices. Our research findings also show that SCM practices impact the operational performance of SMEs positively. The following recommendations can be derived from the findings:

i. SMEs should view supply chain management as a strategic activity, rather than as a mere operational activity that forms a part of their business in a bid to attain a competitive edge in the market. SME owners should be cognizant of the role that SCM practices play in enhancing their competitiveness and hence should work toward their implementation.
ii. Nairobi County's government needs to improve the social infrastructure in order to facilitate communication with supply chain partners and professionals.
iii. Education and public awareness about the need to adopt supply chain principles in business operations is needed. This can be done through conferences organized by professional bodies such as the Kenya Institute of Supply Management (KISM) to enable SMEs to learn from large enterprises.
iv. SMEs need to embrace technology in order to improve their efficiency of operations. This will entail the use of systems designed for managing the various aspects of supply chains such as e-purchasing, customer relationships, and inventory management systems. SMEs operating in Nairobi County can take advantage of the growing technological advancements experienced in the capital city as compared to the other counties in the country. This can lead to a better and efficient way of handling their operations.

Limitations of the study

This study is subject to some limitations. Its narrow focus on SMEs in Nairobi County is a limitation since it excludes other geographical regions of the country. In addition, the study focused on SMEs in trade and information technology sectors, thereby excluding businesses from other sectors of the economy such as manufacturing and agriculture. Future research should endeavor to investigate other aspects of supply chain management such as procurement and technology enablers and investigate their relationship with the operational performance of SMEs. Future studies can also be conducted across other countries within sub-Saharan Africa and across several industries.

References

Adam Smith International. 2013. Recommendations for the development of Kenya's extractive industries based on inclusive multi-stakeholder consultation, Final draft report for the UK department for international development. London: DFID.

Arbones, E. 1999. *Business logistics*. Barcelona: Editorial Marcombo.

Arsalan, M.G., U.R. Naveed, and A.M. Muhammad. 2011. Marketing practices of textile business and firm's performance: A case of Pakistan. *Europe Economica* 2 (28): 99–107.

Bagchi, P., and H. Virum. 1998. Logistical competencies of SMEs from Norway. *Logistics Management Journal* 6 (2): 46–55.

Bayraktar, E., M. Demirbag, and L. Koh. 2009. A causal analysis of the impact of information systems and supply chain management practices on operational performance: Evidence from manufacturing SMEs in Turkey. *International Journal of of Production and Economics* 122 (1): 133–149.

Björnfot, A., and L. Torjussen. 2012. Extent and effect of horizontal supply chain collaboration among construction SME. *Journal of Engineering, Project, and Production Management* 2 (1): 47–55.

Cao, M., M. Vonderembse, Q. Zhang, and T.S. Ragu-Nathan. 2010. Supply chain collaboration: Conceptualization and instrument development *International Journal of Production Research* 29 (3): 163–180.

Chen, I., and A. Paulraj. 2004. Towards a theory of supply chain management: The constructs and measurements. *Journal of Operations Management* 22 (2): 119–150.

Chopra, S., and P. Meindl. 2001. *Supply chain management*. Englewood: Prentice-Hall.

Claycomb, C., C. Droge, and R. Germain. 1999. The effect of just-in-time with customers on organizational design and performance. *International Journal of Logistics Management* 10 (1): 37–58.

CSCMP. 2010. *Supply chain management. terms and glossary*. Available at: http://www.cscmp.org/digital/glossary/glossary.asp.

Enarsson, L. 2006. *Future logistics challenges*. Copenhagen Business School Press.

Eyaa, S., and M. Ntayi. 2010. Procurement practices and supply chain performance of SMEs in Kampala. *Asian Journal of Business Management* 2 (4): 82–88.

Fantazy, A., V. Kumar, and U. Kumar. 2010. Supply management practices and performance in the Canadian hospitality industry. *International Journal of Hospitality Management* 29 (4): 685–693.

Gelderman, J., and J. Weele. 2005. Purchasing portfolio models: A critique and update. *The Journal of Supply Chain Management: A Global Review of Purchasing and Supply* 41 (3): 19–28.

Government of Kenya. 1992. *Sessional paper no. 2– towards industrialization by 2020*. Nairobi: Government Printers.

Gunasekaran, A. 2003. Benchmarking in small and medium enterprises. *Benchmarking: An International Journal*, (10) 3.

Gunasekaran, A., C. Patel, and E. Tirtiroglu. 2001. Performance measures and metrics in a supply chain environment. *International Journal of Operations and Production Management* 21 (1): 71–87.

Helo, P. and B. Szekely. 2005. Logistics information systems: An analysis of software solutions for supply chain co-ordination, *Industrial Management and Data Systems*, 105.

Kaplan, R. and D. Norton. 1992. The balanced score card: The measures that drive performance, harvard business review, January−February, 71–79.

Katua, T.N. 2014. The role of SMEs in employment creation and economic growth in selected countries. *International Journal of Education and Research* 2 (12): 461–472.

Ketchen, D.J.J., and L.C. Giunipero. 2004. The intersection of strategic management and supply chain management. *Industrial Marketing Management* 33 (1): 51–56.

KIPPRA. 2009. *Kenya economic report 2009: Building a globally competitive economy*. Nairobi: Kenya Institute of Public Policy Research and Analysis.

KIPPRA. 2013. *Kenya Economic Report 2013: Creating an enabling environment for stimulating investment for competitive and sustainable counties*. Nairobi: Kenya Institute for Public Policy Research Analysis (KIPPRA).

Kirby, C. and N. Brosa. 2011. Logistics as a competitiveness factor for small and medium enterprises in Latin America and the Caribbean. In 5th Americas Competitiveness Forum for the Inter-American Development Bank and Compete Caribbean, Dominican Republic.

Kirori, Z., and M. Achieng. 2013. Assessing the readiness by SMEs and financial institutions in the establishment of an integrated ict infrastructure for financial transactions in Kenya. *International Journal Of Intelligent Information Systems* 2 (2): 40–45.

KNBS. 2014. *Economic Survey 2014*. Nairobi: Kenya national bureau of statistics, government printer.

Koh, L., and M. Demirbag. 2007. The impact of supply chain management practices on performance of SMEs. *Journal of Industrial Management and Data Systems* 107 (1): 100–113.

Li, S., S.S. Rao, T. Ragu-Nathan, and B. Ragu-Nathan. 2005. Development and validation of a measurement instrument for studying supply chain management practices. *Journal of Operations Management* 23 (6): 618–641.

Linsey, A. 2011. *Effect of Supply chain finance on small and medium manufacturing enterprises performance: A case of Nairobi County*. University of Nairobi Repository.

Miguel, S., and L. Brito. 2011. Supply chain management measurement and its influence on operational performance. *Journal of Operations and Supply Chain Management* 4 (2): 56–70.

Ogundele, K. 2007. *Introduction to Entrepreneurship Development*. Lagos, Molofin Nominees: Corporate Governance and Small Business Management.

Ong'olo, D. and S. Odhiambo. 2013. SMEs development in the devolved governance system policy options for institutional and regulatory reforms in Kenya, *CUTS Nairobi*, Policy Brief No. 1-2013, http://www.cuts-international.org/arc/nairobi/pdf/SMEs_Development_in_the_Devolved_Governance_System_Policy_Options_for_Institutional_and_Regulatory_Reforms_in_Kenya.pdf. Accessed 23, January, 2017.

Quayle, M. 2003. A Study of supply chain management practice in UK industrial SMEs. *Supply Chain Management: An International Journal* 8 (1): 79–86.

Rahman, S., and A. Sohal. 2001. Total quality management practices and business outcome: Evidence from small and medium enterprises in Western Australia. *Total Quality Management* 12 (2): 201–210.

Setyawan, A., S. Prajaka, and I. Suyudi. 2012. *Evaluation of SMEs product's packaging as an effort to improve marketing acceptance*. Jakarta University.

Shin, H., D.A. Collier, and D.D. Wilson. 2000. Supply management orientation and supplier/buyer performance. *Journal of Operations Management* 18: 317–333.

Susman, G. I., K. Jansen, and J. Michael. 2006. *Innovation and change management in small and medium-sized manufacturing companies*. The Pennsylvania State University, Smeal College of Business.

Suttapong, K., and Z. Tian. 2012. Performance benchmarking for building best practice in small and medium enterprises (SMEs). *International Journal of Business and Commerce* 1 (10): 46–60.

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Chapter 7
Exploring the Implications of Low-Cost Leadership and Differentiation Strategies in the East African Community Market: A Perspective of Local Firms

Dan Ayebale

Abstract Over the past few decades, East African countries have made tremendous economic, social, and political progress and are seeking to consolidate this growth with the formation of the East African Community (EAC). The Global Entrepreneurship Summit held in Kenya's capital Nairobi in July 2015 highlighted the competitiveness of local firms in the region as having the potential to contribute to high value-added activities through innovation and entrepreneurship. Nonetheless, there are general concerns as to whether local firms can maintain their competitive advantages in the new environment of economic integration especially with the increasing entry of more resource-endowed players from abroad. This conceptual chapter explores the capacity of local firms to maintain their competitive edge in the current environment by either occupying low-cost positions or by becoming differentiators. Specifically, the chapter presents arguments in support of the differentiation strategies among fledgling manufacturing local firms. While recognizing the limitations of local firms along this path, the chapter identifies areas from previous research which address the question of upgrading firms from large emerging-market economies such as China, India, and Brazil to suggest possible lessons that can guide policy and research aimed at helping local firms to be successful differentiators.

Keywords Economic integration · Firm competitiveness · Low-cost competencies · Differentiation Competencies · East African Community

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1 Introduction

As market opportunities around the world become thin, the world is looking at Africa for future growth (Ernst and Young 2015). The increasing high-level political visits from the global South and North are aimed at cultivating new forms of relations on the continent. There is also an increasing influx of multinational corporations (MNCs) and growing positive international media coverage of the continent (Roxburgh et al. 2010; UBS 2012). All these strongly suggest the growing strength of the continent.

A number of observers are now recognizing that Africa is the world's last frontier market, and there are clear indications that the continent is moving from the periphery to the center stage of global business issues (Global Entrepreneurship Summit 2015; Roxburgh et al. 2010). For instance, the gross domestic product (GDP) of a number of key economies on the continent has continued to grow with the current overall GDP growth estimated at 3.3% despite the collapse of global commodity prices and political unrest in North Africa (IMF 2015; Taylor et al. 2011). In 2015, the continent registered US$54 billion dollars in foreign direct investment (FDI) representing about a four times growth from US$12.5 billion in 2000 (Ernst and Young 2015; UNCTAD 2016). And in the recent past, Africa has been ranked as the second most attractive investment location after North America (Ernst and Young 2015). With this new global reality, the six East African countries are seeking to consolidate their position on the continent with the formation of the East African Community (EAC) (Kamala 2006; Kiggundu and Walter 2015). EAC is an economic bloc comprising of Kenya, Uganda, Burundi, Tanzania, and Rwanda (Ogola et al. 2015), which was most recently joined by South Sudan in March 2016. This formation is a market of over 162 million people including South Sudan (Daily Nation 2016) with a growing middle income class. The market also boasts of a collective GDP of over US$147.5 billion as per 2015 estimates[1] (East African Community Secretariat 2014).

Also, typical about the EAC market is increasing attempts by member countries, with the exception of Burundi and South Sudan, to build a strong competitive business environment based on meaningful political, market, legal, and institutional reforms (Ogola et al. 2015). The recent disappointing market performance of the continent characterized by challenges such as currency fluctuations, a decline in commodity prices, and slow demand from China and Europe has not strongly stood in the way of EAC's economic progress. The key EAC countries including Rwanda, Uganda, Kenya, and Tanzania have continued to demonstrate high-level economic resilience (International Monetary Fund 2015; Rosenberg 2015). Therefore, under the auspices of this rebranding, it does not come as a surprise that over the recent past the EAC region has witnessed remarkable growth in local entrepreneurship and foreign firm activities (Global Entrepreneurship Summit 2015; Ogola et al. 2015; Sutton et al. 2016). With the hosting of the 2015 Global

[1]These estimates exclude South Sudan.

Entrepreneurship Summit in Kenya, one can conjecture that the world is recognizing the innovativeness and entrepreneurial prospects of local firms in the region more than it has ever done before. However, with this region increasingly becoming attractive for the entry of foreign firms, it is not clear how local firms' executives can cope with the increasing influx of foreign firms and strategically position themselves to survive and achieve growth in this new business environment.

There is dearth of systematic research efforts to understand how recent changes in the region that are coming about with the EAC are likely to affect the competitiveness of local firms (Kiggundu and Walter 2015). Most of the existing contributions have taken a macro-perspective of the economic implications of the EAC's formation. Of critical concern to the economic future of regionalization efforts is whether firms can compete favorably by pursuing low-cost strategies or engage in differentiation to survive the intense competition from the current regionalization regime that is inviting superior competitors. Specifically, a number of firms that are entering the region are coming with superior resources and are competing with strong financial bases, advanced technologies, superior products, and talented managers possessing extensive international experience. Moreover, they also have the capacity to attract and maintain talent from around the region. Global brands such as Nestle, Google, General Electric, Pepsi, and IBM have already set foot in the region, and several others are in a queue to enter this market. These companies have already learnt from their earlier mistakes operating in other emerging markets and coupled with their superior resources are widely observed to have the capacity to influence consumer preferences, build locally attractive brands and shape industry structures in their target market to their advantage (Dawar and Frost 1999; Hoskisson 2000).

Taking the local firms' perspective, this conceptual chapter seeks to arouse interest in a firm-level debate on how strategic choices between low-cost leadership and differentiation can help local firms in the manufacturing sector to survive the competition emerging on their domestic turfs with the current integration of East African countries. Specifically, this chapter outlines how building differentiation competencies are imperative for local firms to enjoy the benefits of the integration more. This is a critical area of inquiry given that private sector growth has been earmarked as a key strategic success factor of EAC's integration (Kiggundu and Walter 2015).

2 Literature Review

2.1 Overview of the East African Community's Formation

The EAC market is a group of six countries—Uganda, Kenya, Tanzania, Rwanda, Burundi, and South Sudan. The foundation of this regional integration can be traced to the long history of cooperation between Uganda, Kenya, and Tanzania (East African Community Secretariat 2006; Kamala 2006; Ogola et al. 2015). In 1917,

Uganda and Kenya established a customs union, representing the first formal economic ties in the region. They were later joined by Tanzania in 1927 (East African Community Secretariat 2006). To upgrade their economic ties, the three countries established the East African High Commission (1947–1961) and later the East African Common Services Organization (1961–1967) (East African Community Secretariat 2006; Ogola et al. 2015).

The climax of the cooperation was reached in 1967 with the formation of the first East African Community. During this stage, however, there was increasing divergence among member states from the key principles that had made the previous series of cooperation successful. For instance, the different member countries embarked on different foreign policies and approaches (Mugomba 1978). Economic marginalization of Uganda and Tanzania became a visible characteristic of the integration and consequently caused tension. It also became a common practice for member states to fail in their obligations to transfer funds to regional integration institutions as early as the 1960s. In 1966, a decision to end the common monetary union was taken (Mugomba 1978). Other indicators of the failing integration followed such as the breakup of the University of East Africa in 1970, closure of the East Africa tax department and later the collapse of East Africa Airways in 1977. Combined with sharp political disagreements between Uganda and Tanzania these factors resulted in regional instability that eventually led to the collapse of the first East African Community in 1977 (Ogola et al. 2015; Sutton et al. 2016). The collapse of the community, however, did not eliminate sentiments of future reintegration.

During the post-disintegration period, there were a number of interesting events that kept the hopes of a future integration alive. More notable among these were the provisions of the disbarment agreement of 1984 between the three countries (East African Community Secretariat 2006). Within this agreement, the three East African countries agreed to disband assets and divide liabilities but offered their commitment to exploring opportunities for future economic cooperation (East African Community Secretariat 2006). This was followed by the signing of an agreement for establishing the Permanent Tripartite Commission in 1993 (East African Community Secretariat 2006). This and other such initiatives which followed gave birth to a renewed spirit for stronger integration between the founding members of the EAC (East African Community Secretariat 2006). In 1999, these countries eventually signed the East African Community treaty, and in 2000, the East African Community came into effect comprising of Uganda, Kenya, and Tanzania to begin with. Rwanda and Burundi joined later in 2007, and in March 2016, South Sudan became part of the group. Though unresolved issues exist on the pace of the integration, all the EAC member states, with the exception of Tanzania, appear to support a fast track process of integration (Ogola et al. 2015).

So far, the member states have ratified a customs union in 2005, a common market in 2010 and a monetary union is scheduled for 2017 (Ogola et al. 2015). Drawing on existing literature and the experience of other regional blocs, it is widely anticipated that the current regional integration efforts in the East African region are likely to give member countries a high level of competitiveness and

strength to integrate with the global market via their strategy of private-sector led growth (Kiggundu and Walter 2015; Ogola et al. 2015). Current indications already point to some noticeable achievements along this path including but not limited to an increase in intra-EAC trade, growth in cross-border investments, resilience of the regional economy amidst a general decline registered on the continent in the previous year, and promising control of inflation in the regional market (Gigineishvili et al. 2014; International Monetary Fund 2015; Rosenberg 2015).

2.2 Competitiveness of East African Community Firms

The main area of competition for EAC firms has conventionally been in the agricultural sector (Dolan and Humphrey 2010; Murphy 2003; Ogola et al. 2015). Competitiveness in the manufacturing and service sectors has continued to be low with the manufacturing sector contributing a minimal percentage to regional GDP (below 10%) (African Development Bank 2014; East African Community Secretariat 2016; Ogola et al. 2015). Within the current regional integration efforts, a key question in member countries' development agenda is how to build and sustain competitive industrial and service sectors (Matambalya 2014). The most pressing challenge is enhancing the competitiveness of the manufacturing sector whose contribution to regional GDP continues to be below expectations. In some member states, we are beginning to see some interesting developments that now give hope to the region's capacity to develop its potential in both manufacturing and service sectors.

The recent strong economic and political transformation drive, most notably in Kenya, Uganda, Tanzania, and Rwanda appears to be yielding some fruits (Gigineishvili et al. 2014; Ogola et al. 2015). For instance, there is mention of a number of innovations in the manufacturing and service sectors in these countries involving local firms (Littlefield 2016). Innovations such as M-Pesa[2] in Kenya are now making their way to other continents. In manufacturing, there is growing visibility of local brands in different sectors including electronics, beverages, automobiles, apparel, and telecommunications such as Mukwano, Tusker, Azam, and Movit (Brand Africa 100 2015). But despite this progress, local firms across the region still suffer from a number of constraints that affect their competitiveness in the face of competition from foreign companies (Dolan and Humphrey 2010; Hategeka 2011). Most notable of these is local firms' prior competitive environment where the local manufacturers evolved in an environment of weak technological and institutional support, and as such have not developed strong technological bases, lack the necessary support to compete favorably in the current business environment (Dolan and Humphrey 2010; Murphy 2003). In addition, local firms

[2]Pesa is a Swahili word that means money. M-Pesa is a mobile phone-based money transfer and micro-financing service innovation.

have majorly focused on domestic operations and therefore lack international experience when faced with firms that are more resource endowed with vast international experience (Dolan and Humphrey 2010; Murphy 2003). Extant studies have also identified lack of capital and unsupportive legal and regulatory frameworks in describing the low competitiveness of local firms in the region (Ogola et al. 2015).

The formation of EAC is expected to reverse this trend (Lalani 2015; Musani 2015; Shah 2015). For instance, members of EAC have now embarked on a number of programs aimed at enhancing the competitiveness of local firms, including but not limited to, infrastructure development, technological enhancement, reduction in trade barriers, and strengthening of the financial sector (Ogola et al. 2015; Sutton et al. 2016). In return, local firms more than ever before have to survive without the protective cover that their national boundaries provided them earlier and have to compete for their domestic turfs with both local and international brands that are increasingly attracted by the market potential of the integration. It is clear from the operations of a number of new entrants that East Africa is their key strategic location with some renowned brands such as General Electric already moving their Africa strategic quarters to the region (Omwenga 2012).

2.3 Conceptual Background

While it is true that the formation of EAC is creating a new form of competitive dynamism for local firms in the region (Hategeka 2011), competition for firms in this region is not necessarily a new phenomenon. In the 1990s, East African Community member states, individually and with support from IMF and the World Bank, agreed to shift their ideology toward a free market economy (East African Community Secretariat 2006). This model specifically emphasized an export growth strategy, privatization, and a market and trade liberalization agenda. Since then, the competitive environment for EAC firms has been characterized by an influx of foreign and local competitors and the proliferation of imported products (Hategeka 2011; Ogola et al. 2015). The formation of EAC is expanding the scope of this competition through the removal of barriers that gave advantage to local firms (Lalani 2015; Musani 2015; Shah 2015).

The restoration of EAC is also happening at a time when opportunities for market growth around the world are becoming thin (Frameworks 2016; Roxburgh et al. 2010; UBS 2012). In this environment, the widening market in the region is attracting world class competitors (Hategeka 2011). As such, the market entry of competitors from abroad is now not merely an action of experimentation or even marginal or opportunistic but is rather deliberate and with a strategic dimension to it. In fact, a number of companies such as General Electric, IBM, Pepsi, Google, and Nestle have made the region part of their strong area of operations on the continent. This is in addition to other international and African brands such as SABmiller, Game, and Woolworth that have had a long history in the regional market. These developments make it necessary to address the question of how firms

should compete in the new competitive environment that is emerging with the formation of the EAC.

While addressing the competitive challenges of emerging markets, scholars in extant literature discuss the role of differentiation and low-cost competencies (Elango and Pattnaik 2007; Kotabe et al. 2000; Malik 2008; Pett and Wolff 2003). These studies give insights into how local firms can utilize differentiation and low-cost competencies in similar contexts. The key argument highlighted in these studies is that firms need to tailor their strategies appropriately to the changing business environment in order to survive.

2.4 *Prospects for Local Firms Competing on the Basis of Low-Cost Strategies*

Low-cost strategies provide advantages via scale, efficiency, and access to low-cost inputs (Dess and Davis 1984). Firms with these competencies are capable of gaining a competitive advantage by delivering the same products as the competition at prices below the industry average in order to achieve a larger market share, or at prices which match the industry average to gain higher profits (Gao et al. 2010; Kotabe et al. 2000; Pett and Wolff 2003). In extant literature, access to low-cost inputs has been the most discussed advantage supporting firms' low-cost strategies in developing countries (Elango and Pattnaik 2007; Kotabe et al. 2000; Li et al. 2008; Malik and Kotabe 2009). Local firms in the East African region are no exception. Prior to the formation of EAC they had specifically delivered their advantages almost entirely on their country-based low-cost resource advantages and associated benefits (Hategeka 2011; Ogola et al. 2015). These included, but were not limited to, a comparative advantage in understanding local labor market dynamics; unique access to other local resources such as land; and strong relations with their local governments that continuously offered them preferential resource access (Hategeka 2011; Musani 2015; Shah 2015).

The formation of EAC is increasingly eroding these advantages and exposing local firms to competitors from abroad who can match these advantages drawing on their learned experience operating elsewhere in similar markets. For instance, the large firms entering this market are well known for their experience in outsourcing (Kotabe et al. 2000). These foreign competitors can access low-cost supplies cheaply from around the world or even their earlier regional areas of operations. These are also firms with huge financial resources which they can deploy to acquire local knowledge and build the necessary business and political ties to match local competitors. There is also a general trend of regional governments supporting these firms in terms of providing hefty incentives as a way of encouraging them to invest in the region. In fact, these observations imply that there are limited prospects for low-cost producers to compete with new entrants on the basis of just preferential access to cheap inputs or earlier political ties. Other low-cost bases such as scale and efficiency may be even more impossible for local firms to utilize (Hategeka 2011; Shah 2015).

In extant literature, the scale and efficiency capabilities are widely discussed in the context of large firms. However, with their small sizes, these are areas that local firms in the region may not be able to address easily in the face of new competition that is emerging with the formation of EAC. Collectively, these factors make it difficult for local firms within EAC to compete on the basis of low-cost advantages to fully defend their domestic turfs. Based on these arguments, we can conjecture that in the short-run low-cost firms in the region can still register some success, but they will have to compete with a disadvantage in the long-run as more resource-endowed firms enter different industry segments.

2.5 *Prospects for Local Firms Competing on the Basis of Differentiation Strategies*

The previous section discussed the viability of low-cost strategies for local firms to deliver advantages in an evolving environment in the EAC. This section extends the discussion to the role of differentiation strategies in determining local firms' success in the EAC. The differentiation competencies are based on building unique assets and image for a firm's offerings (Dess and Davis 1984; Elango and Pattnaik 2007; Kotabe et al. 2000; Pett and Wolff 2003). These can help firms survive competition by appearing different; they can later charge premium prices. Drawing on resource-based strategic management literature, scholars have discussed how differentiation competencies may offer more competitive advantages than low-cost competencies. Differentiation competencies are particularly non-fungible; they are very difficult to substitute and imitate and hence create opportunities for firms to deliver superior market value (Barney et al. 2011). Developing them not only requires more commitment of resources in the form of R&D but this is also associated with risky outcomes. It is therefore not likely for competitors to be able to cope easily. With these unique characteristics, previous researchers have increasingly demonstrated how these competencies are influencing alliance partner choices, investment and outsourcing decisions of firms especially in developing countries (Alcacer and Oxley 2014; Heide and John 1990; Kotabe et al. 2003; Langfield-Smith and Greenwood 1998; Murray et al. 2005; Wilson 1995).

For instance, scholars observe that in developing countries multinational firms are choosing to work more closely with local firms that are investing in innovative activities and/or demonstrating capacity to contribute to their innovative needs (Kothari et al. 2013). Some studies also indicate that these firms are now turning to developing-country suppliers such as those in China to help them with their innovation challenges. These observations collectively point to the relevance of discussing differentiation competencies in understanding how local firms in the EAC can register strong advantages as they face a new breed of competitors. It is, however, important to distinguish between differentiation competencies of developing-country firms and those of developed-country firms.

Extant literature provides a contrast in the differentiation competencies of developed-country and developing-country firms. Differentiation strategies for developed-country firms are based on radical innovations built on superior technology and designs (Corredoira and McDermott 2014; Malik, 2008; McDermott and Corredoira 2010). This is not the case in the context of East African firms and also in other emerging-market or developing-country contexts (Corredoira and McDermott 2014; Elango and Pattnaik 2007; Malik 2008). In a context like EAC, some local firms are observed to follow an approach identified in the works cited earlier while seeking to develop technology based differentiation competencies. This involves as observed in other developing country contexts adapting imported technology from developed countries to local contexts (Dolan and Humphrey 2010; Murphy 2003). Some smart firms in the region have also relied on natural product characteristics and cultural factors as a base for their differentiation strategies, while others are using cultural factors such as the local language and symbols in branding their products to create a unique appeal in their export ventures outside the regional market (Austin et al. 1996). In an exploratory study, Austin et al. (1996) specifically cite some examples to help distinguish between successful and relatively unsuccessful firms in the East African region. Nonetheless, these advantages may not support the success of local firms especially in head-to-head competition with superior firms, especially MNCs, entering the current regional market.

In this chapter, we conjecture that local firms are more poised to benefit from these technological and local differentiating factors if they are deployed to capture niche markets, deployed to proactively secure partnerships and sourcing relationships with their foreign firm competitors. Sourcing ties are specifically promising in the East African region as formerly popular locations of sourcing in Asia experience increasing levels of wages and foreign exchange fluctuations. These factors combined with political changes and investments make the East African market attractive. The opportunities for local firms that have invested in innovations especially in the apparel sector appear to be on the rise (Berg et al. 2015). Further, more than low-cost competitors who target broad markets, local differentiators can more easily identify and exploit niche markets that are outside the reach of foreign firms. Based on this discussion, we propose that local firms employing differentiation strategies are more likely to achieve higher success in the increasingly competitive EAC.

The arguments advanced on the role of differentiation and low-cost strategies in this discussion are corroborated with an exploratory survey of 31 manufacturing SME exporters from Uganda, one of EAC's key member states. The respondents in this survey were top executives in these establishments. The SMEs surveyed were selected from two of the major industrial parks located in capital Kampala: Nakawa and Ntinda. Fifteen respondents from Nakawa while 16 from Ntinda were surveyed using a purposive sampling method. These constituted about 30 and 70% of all exporters in these two industrial regions, respectively. Most of the firms in the sample were formed during the economic restructuring of the country. In the 1990s, the government implemented structural economic restructuring programs (SAPs) whose tenets included trade liberalization and privatization.

The economic reforms led the country toward a path of free market ideologies. Intuitively, therefore, the SMEs in the survey operate amidst competition and employ various strategies to survive competition from both local and foreign rivals. The average exporting years of the SMEs in the survey was seven years. With such international exposure, the formation of EAC is likely to be of interest to these firms. Thus, notwithstanding the small sample size, we can still get some insights to corroborate conceptual rationalizations regarding a discussion on how local firms' strategies are associated with managerial perceptions of opportunities for export growth and survival within the emerging EAC market. SMEs competing on the basis of low-cost strategies in the sample described themselves as firms: (a) with lower levels of advertisements as compared to competitors, (b) emphasized keeping their operating costs lower than their competitors as a strategy to compete, and (c) had price adoption as their major weapon to compete. Using these three indicators, 18 firms in the sample were identified as low-cost strategy firms. In order to establish the magnitude of utilization of a low-cost strategy by each of these firms, the respondents were asked to indicate the extent to which they agreed with each of the three indicators of a low-cost strategy on a five-point Likert scale with 5 indicating strongly agree and 1 indicating strongly disagree.

Firms in the sample adopting differentiation strategies were identified by asking respondents to indicate whether or not the following statements accurately described their firm: (a) we do more to compete on the basis of providing quality products, (b) our brand focuses on high-end customers, (c) compared to our competitors we have invested more in R&D, and (d) introducing new products as compared to our competition has been our competitive advantage. Using these criteria, 13 companies in the sample were identified as differentiators. As was the case with firms in the low-cost strategy category, a five-point Likert scale was used to establish the extent to which each of these 13 firms used a differentiation strategy. Further, to establish the extent to which EAC will affect a firm's growth and survival, a Yes or No response was solicited from the respondents to the following two questions: The first question required a respondent to indicate whether or not the EAC will be a vehicle for increasing its sales, and the second question required respondents to indicate whether or not the EAC formation will enhance their survival. Both low-cost and differentiation variables were categorized into two categories around the mean with firms having higher scores above the mean designated as high differentiators (or high adopters of low-cost strategies) and those below the mean designated to a group of low differentiators (or low adopters of low-cost strategies). Tables 1, 2, 3, and 4 provide the results of this survey. Based on percentage scores our exploratory findings indicate that the group where most SMEs answered Yes to questions of whether or not EAC will be a vehicle for enhancing their survival and growth was in the category of high differentiators. The pattern was generally the opposite for local SMEs that focused more on low-cost strategic action for both dependent variables.

Table 1 Low-cost strategies and anticipated effect on a firm's sales

Variable		Whether or not the respondent expects the formation of EAC to lead to an increase in sales			
		Yes		No	
		Frequency	%	Frequency	%
The extent of adoption of low-cost strategy	Low	3	16.7	6	33.3
	High	4	22.2	5	27.7

Note: n = 18 Mean score for the low-cost strategy = 4.1

Table 2 Low-cost strategies and anticipated effect on a firm's survival

Variable		Whether or not the respondent expects the formation of EAC to increase the chances of the firm's survival			
		Yes		No	
		Frequency	%	Frequency	%
The extent of adoption of low-cost strategy	Low	2	11.1	9	50
	High	6	33.3	1	5.6

Note: n = 18 Mean score for low-cost strategy = 4.1

Table 3 Differentiation strategies and anticipated effect on sales growth

Variable		Whether or not the respondent expects the formation of EAC to increase the firm's sales			
		Yes		No	
		Frequency	%	Frequency	%
The extent of adoption of low-cost strategy	Low	5	38.5	0	0
	High	7	53.8	1	7.7

Note: n = 13 Mean score for differentiation strategy = 3.81

Table 4 Differentiation strategies and anticipated effect on the firm's survival

Variable		Whether or not the respondent expects the formation of EAC to enhance the firm's chance of survival			
		Yes		No	
		Frequency	%	Frequency	%
The extent of adoption of low-cost strategy	Low	5	38.5	2	15.4
	High	5	38.5	1	7.7

Note: n = 13 Mean score for differentiation strategy = 3.81

3 Discussion and Conclusion

This chapter contributes to the current debate on local firms' survival with the formation of the EAC. The discussion addressed the nascent manufacturing sector in the region where local firms are now faced with more experienced competitors from abroad. Recent discussions have looked at macroeconomic factors and argued for the benefits of regional integration including productivity, growth, and welfare of member states. While the key part of this debate recognizes the constraining role of competition as the integration takes shape, it is not clear from these macro insights how local firms can position themselves in the manufacturing sector to deal with the new challenge of competition coming from international competitors. In this market, local firms have always competed with less innovative products and produced mature products. But with the formation of EAC, they now face an increasing number of more sophisticated competitors who are introducing cheap and high-quality innovative products in the market.

The core argument in this chapter is that executives of local firms can more easily improve their chances of surviving competition in the current EAC market by taking the path of differentiation as opposed to the path of low-cost leadership. Differentiation advantages arise from firms' commitment to be innovative and creating products that the market considers unique. Local firms in the manufacturing sector are not expected to build their advantages by engaging in radical innovations associated with high investments in R&D. Local firms may not particularly be successful along this path, but they can benefit from incremental innovation efforts to build the necessary differentiation competencies to compete favorably. Competing on the basis of pioneering innovations requires superior firm-level resources, a strong institutional and market regulatory framework, resource-rich institutions, and/or universities engaged in ground breaking research (Corredoira and McDermott 2014; Elango and Pattnaik 2007; Malik and Aggarwal 2012; McDermott and Corredoira 2010). These factors are not available for local firms in the East African region.

While this chapter did not focus on how firms can build competencies for differentiation through innovations, there is an opportunity to draw on previous work on upgrading which focused on firms in big emerging markets such as China, Brazil, and India to guide strategic action in the region. For instance, a large body of research has found support for a higher competitive position for emerging-market firms in those markets which invest in building their innovative capacities through reverse engineering; adapting technologies, products, and processes from developed countries to local contexts; and being committed to adopting flexible manufacturing processes such as lean production and total quality management (Corredoira and McDermott 2014; Malik and Kotabe 2009; McDermott and Corredoira 2010).

More recent studies have started demonstrating how seemingly weak institutions such as technical institutes and organizations such as business associations can help firms in emerging markets to be innovative by helping them acquire diverse experiential knowledge (Malik 2008; McDermott and Corredoira 2010). These are

interesting observations that future research can investigate to deepen our understanding of how local firms in the East African region can utilize similar avenues to overcome the challenges that they face in becoming successful differentiators. With these insights, this conceptual chapter not only opens a discussion on how a choice between low-cost leadership and differentiation strategies can affect the competitiveness of local manufacturing firms in the EAC market, but also offers avenues for future research addressing the aspect of how these firms can be supported so that they become differentiators.

References

African Development Bank. 2014. *Manufacturing Sector: Promoting Technology, Innovation*. Tunis: Productivity and Linkages.

Alcacer, J., and J. Oxley. 2014. Learning by Supplying. *Strategic Management Journal* 35 (2): 204–223.

Austin, J., W. Cohn, and J. Quelch. 1996. Pathways to Business Success in Sub-Saharan Africa. *Journal of Africa Finance and Economic Development* 2 (1): 57–76.

Barney, J.B., D.J. Ketchen, and M. Wright. 2011. The Future of Resource-Based Theory: Revitalization or Decline? *Journal of Management* 37 (5): 1299–1315.

Berg, A., B. Berlemann, S. Hedrich, K.H. Magnus, B. Mathews, and B. Russo. 2015. *Sourcing in a Volatile World: the East African Opportunity*. Johannesberg: Mckinsey & Company.

Brand Africa 100. 2015. *Africa's Best Brands*. Available at: http://www.brandafrica.net/Rankings.aspx

Corredoira, R.A., and G.A. McDermott. 2014. Adaptation, Bridging and Firm Upgrading: How Non-market Institutions and MNCs Facilitate Knowledge Recombination in Emerging Markets. *Journal of International Business Studies* 45 (6): 699–722.

Daily Nation. 2016. *South Sudan Joins East African Regional bloc*. Available at: http://www.nation.co.ke/business/South-Sudan-admitted-into-EAC/-/996/3100314/-/6t0bfiz/-/index.html

Dawar, N., and T. Frost. 1999. Competing with Giants: Survival Strategies for Local Companies in Emerging Markets. *Harvard Business Review* 77 (2): 119–129.

Dess, G.G., and P.S. Davis. 1984. Porter's (1980) Generic Strategies as Determinants of Strategic Group Membership and Organizational Performance. *The Academy of Management Journal* 27 (3): 467–488.

Dolan, C., and J. Humphrey. 2010. Governance and Trade in Fresh Vegetables: The Impact of UK Supermarkets on the African Horticulture Industry. *Journal of Development Studies* 37 (2): 147–176.

East African Community Secretariat. 2006. *Trade Policy Review Report by the Secretariat East African Community*. Geneva: World Trade Organisation-Trade Policy Review Body.

East African Community Secretariat. 2014. *East African Community Facts and Figures*—2014. Arusha.

East African Community Secretariat. 2016. *Industrialization and SME development overview*. Available at: http://www.eac.int/sectors/industrialisation-and-sme-development

Elango, B., and C. Pattnaik. 2007. Building Capabilities for International Operations through Networks: A Study of Indian Firms International Expansion of Emerging Market. *Journal of International Business Studies* 38 (4): 541–555.

Ernst and Young. 2015. *Attractiveness Survey Africa 2015 Making Choices*. Durban: Ernst and Young.

Frameworks. 2016. Africa: The Last Frontier Spring 2015 Africa: The Last Frontier the Fervor of Investment, 1–5.

Gao, G.Y., J.Y. Murray, M. Kotabe, and J. Lu. 2010. A "Strategy Tripod" Perspective on Export Behaviors: Evidence from Domestic and Foreign Firms Based in an Emerging Economy. *Journal of International Business Studies* 41 (6): 1090–1091.

Gigineishvili, N., P. Mauro, and K. Wang. 2014. *How Solid Is Economic Growth in the East African Community?*. Washington, DC: IMF.

Global Entrepreneurship Summit. 2015. *Obama's Visit to Kenya Highlights Africa' immense Potential.* Available at: http://www.ges2015.org/press-releases/2015/8/25/obama-visit-to-kenya-highlights-africas-immense-potential

Hategeka, E. 2011. *Creating Favorable Conditions for the Competitiveness of Companies in the East African Community Procurement Process*. *EAC Procurement Forum*. Kigali., Available at http://www.rppa.gov.rw/uploads/media/Creating_favorable_conditions_for_the_competitiveness_of_companies_in_EAC_procurement_process.pdf

Heide, J.B., and G. John. 1990. Alliances in Industrial Purchasing: The Determinants of Joint Action in Buyer-Supplier Relationships. *Journal of Marketing Research* 27 (1): 24–36.

Hoskisson, R.E. 2000. Strategy in Emerging Economies. *Academy of Management Journal* 43 (3): 249–267.

IMF. 2015. *World Economic Outlook Update*. Washington. Available at: http://unctad.org/en/PublicationsLibrary/wir2016_Overview_en.pdf.

International Monetary Fund. 2015. *Regional Economic Outlook: Sub-Saharan Africa; April 2015*. Washington, DC. Available at: https://www.imf.org/external/pubs/ft/reo/2015/afr/eng/pdf/sreo0415.pdf

Kamala, D.B. 2006. *The Achievements and Challenges of the New East African Community Cooperstion*. Hull: The business School University of Hull.

Kiggundu, Moses and T. Walter. 2015.Introduction to the AJOM-GIZ/EAC Special Issue, *African Journal of Management*, *1*(4), 295–302.

Kotabe, M., H. Teegen, and P.S. Aulakh. 2000. Export Strategies and Performance of Firms from Emerging Economies: Evidence from Brazil, Chile, and Mexico. *The Academy of Management Journal* 43 (3): 342–361.

Kotabe, M., X. Martin, and H. Domoto. 2003. Gaining from Vertical Partnerships: Knowledge Transfer, Relationship Duration, and Supplier Performance Improvement in the U.S. and Japanese Automotive Industries. *Strategic Management Journal* 24 (4): 293–316.

Kothari, T., M. Kotabe, and P. Murphy. 2013. Rules of the Game for Emerging Market Multinational Companies from China and India. *Journal of International Management* 19 (3): 276–299.

Lalani, O. 2015. How to Scale up Operations for the East African Market: The Case Of Roofings Group. *African Journal of Management* 1 (4): 390–395.

Langfield-Smith, K., and M.R. Greenwood. 1998. Developing Co-operative Buyer-Supplier Relationships: A Case Study of Toyota. *Journal of Management Studies* 35 (3): 331–353.

Li, J.J., K.Z. Zhou, and A.T. Shao. 2008. Competitive Position, Managerial Ties, and Profitability of Foreign Firms in China: an Interactive Perspective. *Journal of International Business Studies* 40 (2): 339–352.

Littlefield, E. 2016. *Kenya : Exporting Innovation to the World*. Available at: http://allafrica.com/stories/201507250307.html

Malik, O.R. 2008. Adapting to Market Liberalization: The role of Dynamic Capabilities, Initial Resource Conditions, and Strategic Path Choices in Determining Evolutionary Fitness of Less Developed Country (LDC) firms. *Journal of International Management* 14 (3): 217–231.

Malik, O.R. and R. Aggarwal. 2012. The Rise of Emerging Market Mulitnational Companies (AMNC): A Capabilities-based perspective. In: *Third Copenhagen Conference on Emerging Multinationals: Outward Investment from Emerging Economies*, Denmark.

Malik, O.R., and M. Kotabe. 2009. Dynamic Capabilities, Government Policies, and Performance in Firms from Emerging Economies: Evidence from India and Pakistan. *Journal of Management Studies* 46 (3): 421–450.

Matambalya, F.A.S.T. (ed.). 2014. *African Industrial Development and European Union Co-operation: Prospects for a Reengineered Partnership*. London: Routlege.

McDermott, G.A., and R.A. Corredoira. 2010. Network composition, collaborative ties, and upgrading in emerging-market firms: Lessons from the Argentine autoparts sector. *Journal of International Business Studies* 41 (2): 308–329.

Mugomba, A.T. 1978. Regional Organisations and African Underdevelopment: The Collapse of the East African Community. *The Journal of Modern African Studies* 16 (2): 261–272.
Murphy, J.T. 2003. Social Space and Industrial Development in East Africa: Deconstructing the Logics of Industry Networks in Mwanza, Tanzania. *Journal of Economic Geography* 3 (2): 173–198.
Murray, J.Y., M. Kotabe, and J.N. Zhou. 2005. Strategic Alliance-Based Sourcing and Market Performance: Evidence from Foreign Firms Operating in China. *Journal of Development Studies* 36: 187–208.
Musani, R. 2015. For Cosmetics Manufacturing Firms in the EAC " Localizing" is the Key to Regional Relevance. *African Journal of Management* 1 (4): 384–389.
Ogola, F., G. Njenga, P. Mhando, and M. Kiggundu. 2015. A Profile of the East African Community. *African Journal of Management* 1 (4): 333–364.
Omwenga, G. 2012. *Multinational in Nairobi*. Available at: http://www.trademarksa.org/news/multinationals-now-turning-nairobi-hub-africa
Pett, T.L., and J.A. Wolff. 2003. 'Firm Characteristics and Managerial Perceptions of NAFTA: An Assessment of Export Implications for U.S'., SMEs. *Journal of Small Business Management* 41 (2): 117–132.
Rosenberg, A. 2015. Sub-Saharan Africa's Most and Least Resilient Economies. In *Havard Business Review Magazine*. Available at: https://hbr.org/2016/02/sub-saharan-africas-most-and-least-resilient-economies
Roxburgh, C., N. Dorr, A. Leke, A. Tazi-Riffi, A. Wamelen, Van, Lund, S., Zeino-Mahmalat, T. 2010. *Lions on the Move : The progress and potential of African economies*. New York: McKinsey Global Institute. Available at: http://www.mckinsey.com/insights/africa/lions_on_the_move
Shah, J. 2015. Leveling the Field: Why Harmonization is Imperative to Successful Integration. *African Journal of Management* 1 (4): 411–415.
Sutton, T., J.C. Short, A.F. Mckenny, and R. Namatovu. 2016. Institutional Factors Affecting Expansion within the East African Community: An Analysis of Managers' Personal Stories. *African Journal of Management* 1 (4): 365–383.
Taylor, R., D. Engelbrecht, H. Martin, and E. Roman. 2011. *Growing in Africa Capturing the Opportunity for Global Consumer Products Businesses*. London: Ernst and Young. Available at: http://www.ey.com/Publication/vwLUAssets/Africa_opportunities_for_consumer_product_businesses/$FILE/Growing in Africa - February 2011.pdf.
UBS. 2012. Africa—The Final Frontier Market. *UBS Insight*.
United Nations Conference on Trade and Development. 2016. *World Investment Report–Investor Nationality: Policy Challenges*. New York and Geneva: United Nations Conference on Trade and Development. Available at: http://unctad.org/en/PublicationsLibrary/wir2016_Overview_en.pdf
Wilson, D.T. 1995. An Integrated Model of Buyer-Seller Relationships. *Journal of the Academy of Marketing Science* 23 (4): 335–345.

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Chapter 8
International Financial Reporting Standards and the Capital Market in Rwanda

Innocent B. Ndagijimana and Jonas Barayandema

Abstract This chapter investigates the level to which International Financial Reporting Standards (IFRS) have been adopted in Rwanda, the challenges faced in their adoption, and the effect of the adoption on capital market development in the country. Primary data were collected using a self-administered questionnaire issued to two respondents from the surveyed companies using a stratified sample of 63 companies. In total, 126 responses were received. The data were analyzed with the help of SPSS. Pearson's correlation coefficient helped measure the level of IFRS adoption and challanges faced in adopting IFRS for the Rwandan Stock Exchange (RSE). A regression analysis was used to measure the strength of the relationship between IFRS adoption and the level of capital market development. The findings show that there is a positive and significant relationship between IFRS adoption and capital market development in Rwanda. This implies that as companies implement IFRS in their financial reporting, there is the likelihood of capital market development. Challenges such as a lack of professional qualified accountants and IFRS adoption guides are the main hindrances for IFRS adoption in Rwanda.

Keywords International Financial Reporting · IFRS adoption · Financial reporting · Capital market · Rwandan Stock Exchange

JEL Classification Code M16 · M41 · M48

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1 Introduction

Accounting standards differ from country to country. This difference reduces information quality and relevance of accounting. For users of accounting information, comparability of this information is a raw material for decision making. Adopting worldwide accounting standards is seen as a solution to differences in accounting standards (Doupnik and Perera 2007).

Joos and Lang (1994) maintain that accounting diversities result in differences in accounting measurements and valuation practices as they have implications for preparing financial statements. According to Zahirul (2009), some other problems caused by accounting diversity relate to the preparation of consolidated financial statements, access to foreign capital markets, comparability of financial statements, and lack of high-quality accounting information.

In recent years, the adoption and use of International Accounting Standards (IAS) has been successful mainly because of the internationalization of the world's capital markets. On all the continents, both developed and developing countries have adopted IFRS for developing their capital markets and for attracting local and foreign investors (Choi and Meek 2011).

According to Barth (2007) by adopting IFRS, countries expect to lower the cost of information processing and auditors of financial reports can be expected to become familiar with one common set of International Accounting Standards than with various local accounting standards. Therefore, adopting IFRS is expected to lower costs and thus be beneficial for African countries because of their significant reliance on foreign capital inflows for financing their economic and industrial development.

However, African countries have faced different challenges in developing reporting systems for developing their capital markets. Before IFRS was adopted in Rwanda, financial reporting failed to meet the required standards to attract international investors (The World Bank 2008). Like other African countries, Rwanda has accounting and auditing practices that suffer from institutional weaknesses in regulation, adoption, and enforcement of standards and rules (Owolabi 2011). As some weaknesses and flaws have been identified in the laws and regulations governing financial reporting, this chapter analyzes the correlation between adopting IFRS and the development of the capital market in Rwanda.

For many decades, Rwanda used accounting standards derived from the Organization Commune Africaine Malgache et Mauricienne (OCAM) which are tax oriented. The establishment of the capital market made it necessary to start developing market-oriented standards. Although noticeable efforts to align accounting and auditing practices with internationally accepted standards and codes have been underway (OCAM 1970), there are various adoption gaps in both accounting and auditing practices which impede the development of the capital market. These gaps are inadequate understanding of IAS and IFRS by professional accountants, inadequate technical capacities of the regulators, no guidance for adopting IFRS, lack of independent oversight of the auditing profession and

shortcomings in professional education and training, limited access to professionally qualified accountants in the corporate sector, and insufficient skills to prepare financial statements in line with applicable accounting and reporting requirements (The World Bank 2008).

This chapter makes a contribution to previous work in this area. In Africa's case, prior research has focused on emerging countries mostly with an English background, and most of these countries have had professional accounting training for about 20 years; their local standards have also been market oriented. For Rwanda, there has been no previous study on IFRS adoption and its effects on capital market development. We make use of recent developments in Rwanda characterized by a French accounting background (a continental European accounting background) and professional accounting training which is still in its infancy while incorporated companies have IFRS adoption as a requirement for financial reporting.

The rest of the chapter is organized as follows. After this brief introduction, it has a literature review. Section 3 gives the research methodology which is followed by a discussion in Sect. 4. Section 5 gives the conclusion.

2 Literature Review

2.1 The Shift from Accounting Diversity to Accounting Harmonization

Accounting diversity results in differences in the financial statements given in annual reports. These differences include those in the format used to present financial statements, in the details provided in the financial statements, differences in terminologies and disclosures, and recognition and measurement differences (Doupnik and Perera 2007). Apart from the differences in the formats of financial statements that do not bring out significant diversity, the differences in disclosures, recognition, and measurements result in different accounting principles specific to every country's generally accepted accounting principles (GAAP). These are likely to impair the comparability of financial statements. Accounting diversity creates issues related not only to the preparation of consolidated financial statements, but also to access to foreign capital markets, comparability of financial statements, and poor accounting information. Consequently, when it comes to international investments, frustration stems from the differences in accounting rules affecting the quality of accounting information and investors' confidence (Choi and Meek 2011; Tripathi and Gupta 2011).

As national controls over capital flows, foreign exchange, foreign direct investment, and related transactions have been dramatically liberalized in recent years, barriers to international business have been reduced. In this regard, changes in the financial sector's policies in both developed and developing countries reflect a growing realization that information and financial technology render capital

controls ineffective. National governments have also realized that liberalizing financial markets allows them access to international funds with which to finance national debts. As accounting is the language of business, cross-border economic interactions mean that accounting reports prepared in one country must increasingly be used and understood by users in another (Choi and Meek 2011). This is a result of accounting harmonization, which Nobes and Parker (2008) define as a process of increasing the compatibility of accounting practices by setting bounds to their degree of variation.

The word 'harmonization' means different things to different people. According to Doupnik and Perera (2007: 75), for some harmonization is the same as standardization. But standardization implies the elimination of alternatives in accounting for economic transactions and other events, while harmonization refers to a reduction of alternatives and retaining a high degree of flexibility in accounting practices. In this regard, accounting harmonization is considered a phenomenon of removing conflicts between various local accounting standards and at the same time offering a considerable degree of flexibility (Tripathi and Gupta 2011: 41). Therefore, the ultimate objective of international harmonization efforts consists of harmonizing accounting practices because of other factors such as differences in the quality of the audits, enforcement mechanisms, culture, legal requirements, and social, economic, and political systems that may lead to non-comparable accounting numbers despite similar accounting standards.

Although the advantages of accounting harmonization are obvious, they still have pros and cons. Opponents of accounting harmonization maintain that there are obstacles such as the magnitude of the differences that exist between countries and the fact that the political cost of eliminating these differences will be enormous and that global financial markets, globalization, and multinationals have survived without harmonization (Saudagaran and Diga 1998). Others argue that the business environment and the tax systems constitute differences that cannot be eliminated totally (Doupnik and Perera 2007, Tripathi and Gupta 2011: 41). However, when both the cost of eliminating accounting diversity and the benefits of accounting harmonization are compared in the long run, the latter overweigh the former.

The introduction of financial reporting standards for listed companies in many countries around the world is one of the most significant regulatory changes in accounting history. This has been identified as a good way of harmonizing accounting standards. Adopting standards that require high-quality, transparent, and comparable information is welcomed by investors, creditors, financial analysts, and other users of financial statements. Without common standards, it is difficult to compare financial information prepared by entities located in different parts of the world. In an increasingly global economy, the use of a single set of high-quality accounting standards facilitates investments and other economic decisions across borders, increases market efficiency, and reduces the costs of raising capital. IFRS is increasingly becoming a set of globally accepted accounting standards that meet the needs of the world's increasingly integrated global capital markets (Beke 2010; Daske et al. 2008; Mizra et al. 2008).

2.2 Capital Market Development

Capital markets are places where those who require additional funds seek out those who wish to invest their excess funds. There are also places where participants can manage and spread their risks. Originally, capital markets were physical spaces, but nowadays, participants in capital markets may be located on different continents who conduct deals using advanced information technology (Chisholm 2009).

Different types of markets exist such as financial assets markets where physical assets are purchased and sold, future assets where agreements are made to buy or sell at some future date, money markets for short-term and high-liquid debt securities, and capital markets that are markets for intermediate- or long-term debt and corporate stocks.

2.2.1 Capital Market Listing

Listing requirements vary from one country to another. In general, these requirements relate to the size of a company, earning records, number of years in business, and the number of shares outstanding and their market value. As suggested by Menamin (2005), the reasons for being listed and accessing a stock market include the following:

- **Access to a wider pool of finance**: A stock market listing widens the number of potential investors. It may also improve a company's credit rating, making debt finance easier and cheaper to obtain;
- **Improved marketability of shares**: Shares that are traded on the stock market can be bought and sold in relatively small quantities at any time. Existing investors can easily realize a part of their holdings;
- **Transfer of capital to other uses**: Founder owners may wish to liquidate a major part of their holdings either for personal reasons or for an investment in other new business opportunities;
- **Enhancing a company's image**: Quoted companies are commonly believed to be more financially stable. Listings may improve the image of a company with its customers and suppliers allowing it to gain additional business and to improve its buying power; and
- **Facilitation of growth by acquisitions**: A listed company is in a better position to make a paper offer for a target company than an unlisted one.

To be listed in capital markets, a company has to fulfill listing requirements. According to Menamin (2005), the most common listing requirements are as follows:

- ***Incorporation.*** An applicant must be duly incorporated.
- ***Accounts.*** A company must have published audited and unqualified accounts which cover at least three years, with the latest accounts being less than six months old on the date of listing; for many capital markets, published financial statements have to comply with IFRS.

- ***Nature and duration of business activities.*** A company must be carrying out a revenue-earning business and must have done so for the period covered by the accounts.
- ***Market capitalization.*** The aggregate market value of all securities listed must be at least the minimum capital value required by the exchange, although in some cases a lower value may be admitted if the exchange is satisfied that there is an adequate market for the company's securities. The minimum capitalization requirements are revised from time to time by the exchange.
- ***Directors.*** The directors of the applicant company must have collectively appropriate experience and expertise in managing the business.
- ***Shares in public hands.*** At least 25% of the class of shares for listing must be in the hands of the public.
- ***Prospectus.*** A company is legally required to issue a prospectus providing details of the offer and disclosing forecast and pro forma financial statements.

In this regard, there are two sources of new company listings on an exchange. The first is the parastatals and state-owned enterprises (SOEs) that could sell some or all of the government's equity interest to the public through privatization offerings. A second source of potential company listings was, and still is, the numerous privately owned companies (typically family-controlled) that undertake public securities offerings in order to raise capital (UN, March 2007). For these companies although there is a pressure to list to the capital market, they are reluctant to do so for two reasons: Firstly, there is an issue of fearing transparency, that is, a desire by company owners to remain private and beyond the demands of public disclosure. For such companies, the financial statements are only prepared for tax purposes and not for investors, and others are prepared when there is a need of loans from financial institutions and finally for existing shareholders who know the financial situation before these statements are prepared. Secondly, it has been suggested that another problem exists in many countries with this type of company, due to the fact that a large percentage of the more established, successful family-owned businesses are owned by members of the non-native population, such as Asian-owned businesses in East Africa. In such circumstances, there is also resistance to public offerings because of the fear that such minority groups are opening themselves up to a potential eventual loss of economic dominance (Lutwana and Musaali 2009).

2.2.2 Measures of Capital Market Development

Development of a capital market is a result of a combination of different factors including the raising of new capital by listing companies, the listing of new companies on the stock exchange, the size of the market, and the number of traded securities in the market (Black 2001; Mayer and Vives 1992; Ocampo and Stiglitz 2008).

Researchers who measure capital market development use different indicators including not only market capitalization but also the value traded on the capital market, market liquidity, and capital raised. All these are measured in comparison with GDP (Brookson 1998; Paramasivn and Subramanian 2009). An important factor that is considered when analyzing the development of a capital market is measuring its size as a percentage of GDP. Different authors have called this 'market capitalization' which refers to the process of determining the quantum of funds that a firm needs to run its business. Capitalization is only the par value of share capital and debentures and does not include reserves and surplus. Actually, it refers to the sum of the par value of stocks and bonds outstanding. In other words, capitalization is the balance sheet value of stocks and bonds outstanding. This is calculated by multiplying the number of shares that the company has issued (a finite and known figure) by the share price (Frost et al. 2006; Paramasivn and Subramanian 2009).

Market capitalization therefore gives a crude estimate of a company's worth in the marketplace, except of course that any real bid to take over a company would result in the share price increasing. Market capitalization as a ratio of GDP seeks to measure the market size, and it assumes that the market size measures the market's ability to mobilize capital (Bokpin and Isshaq 2008).

2.3 IFRS' Role in Capital Market Development

It has been proven that sound and internationally comparable corporate financial reporting that meets the requirements of financial markets increases market liquidity, improves investor confidence, facilitates risk assessment in making investment decisions, facilitates international capital formation, and flows and helps reduce the cost of capital (Beke 2010; Dumontier and Raffournier 2002; UN 2007). The application of International Financial Reporting Standards allows greater comparison of accounting results and provides investors more accurate information for their investment decisions. Even small investors are able to get the information needed for making investment choices (Beke 2010). The same idea is shared by Choi and Meek (2011), citing Nicolaisen (2005), who add that the key forces that favor a single set of globally accepted accounting standards are continued strong expansion of capital markets across national borders and countries' desire to achieve strong, stable, and liquid capital markets to fuel economic growth. Converging with or embracing a common set of high-quality accounting standards contributes immensely to investors' understanding and confidence.

Harmonized standards are compatible; that is, they improve investors' confidence and they do not contain conflicts. If a company's financial statements are prepared using standards which are not viewed as being of high quality or which the investors are unfamiliar with, then investors may not be able to fully understand a company's prospects and thus may insist on a risk premium for an investment in that company. The relative cost of obtaining capital will therefore increase for the

company. Without common standards, global investors must incur time and effort to understand and convert financial statements so that they can confidently compare opportunities. If they resort to educated guesses, they will incur some costs. Embracing a common set of accounting standards can also lower issuers' costs (Choi and Meek 2011). Not only investors, but also the preparers of financial statements will incur some costs if their companies are listed on stock exchanges outside their home countries. The costs incurred by companies are related to conversion of financial statements to conform to the rules of the country in which the holding company is based (Doupnik and Perera 2007).

A unified international accounting system creates more transparency in financial markets, and no more adjustments are needed to make companies' financial reports internationally comparable. The countries that adopt IFRS do so to improve their international trade and their access to capital markets (Beke 2010). A survey carried out by Owolabi and Iyoha (2012) on both the preparers and users of accounting information shows that they ranked better access to global markets and cross-border investments as the greatest benefits of adopting IFRS.

IFRS' role in access to the capital market can be explained taking an example of countries where a number of large companies started preparing their financial statements in accordance with International Accounting Standards, not because they were required to do so by national regulators, but in order to be able to access financial markets outside their country. In 1998, some of European countries' lawmakers gave listed companies the option of preparing their consolidated financial statements in accordance with International Accounting Standards (UN 2007). Feeling the need to expand their capital markets and attract investors from outside, many countries have been replacing their local standards with IFRS for some or all domestic companies.

Harmonization of accounting standards and IFRS' role in accessing capital markets have been the subject of extensive studies. On the one hand, these include findings of scholars who analyzed the determinants of developments in capital markets such as stock market capitalization, real income, saving rate, financial intermediary development, stock market liquidity, and macroeconomic volatility (Bokpin and Isshaq 2008; Brasoveanu et al. 2008; Frost et al. 2006; Garcia and Liu 1999). On the other hand, most of the past literature has focused on the role of IFRS in harmonizing accounting standards and their huge contribution to improving financial reporting (Amstrong et al. 2008; Daass and Siam 2011; Daske 2004; Daske et al. 2008; Owolabi and Iyoha 2012; Tripathi and Gupta 2011).

Other scholars have highlighted IFRS' role in accessing capital markets (Beke 2010; Choi and Meek 2011; Dumontier and Raffournier 2002) in developed countries, where the existing markets were reacting to the new accounting standards that had been adopted.

This chapter adds to the growing body of literature on IFRS and capital market development by investigating how adopting IFRS streamlines access to capital markets by an increasing number of market participants in emerging countries.

3 Research Methodology

3.1 Sample and Operationalization

This research was conducted through a descriptive correlational research design to determine whether there is a relationship between adopting IFRS as an independent variable and capital market development as a dependent variable.

The study targeted large industries in Rwanda, including banking institutions, insurance companies, telecommunications companies, and large trading and manufacturing companies (Table 1).

Companies included in the population of the study are those considered as large by the National Institute of Statistics of Rwanda (NISR), that means they have more than 100 employees and a turnover of more than USD1,338,688 (NISR, May 2016).

A stratified sampling strategy was used to determine the sample size and to ensure that the whole population was represented. A sample of 63 companies was determined in accordance with Kreijce and Morgan's model (1970) as per:

$$n = \frac{X^2 NP(1-P)}{\left(\mathrm{ME}^2(N-1)\right) + \left(X^2 P(1-P)\right)} \quad (1)$$

where n = sample size; X^2: chi-square for the specified confidence level at 1 degree of freedom; N = population size; P = population proportion; ME = desired margin or error (expressed as a proportion).

We took n from 91 companies including listed and non-listed ones.

Two respondents were selected from each company (126 respondents). They included managing directors and directors of finance who were responsible for preparing and presenting financial statements and related policies. A questionnaire was prepared and addressed to them, but respondents from seven companies (representing 11% of the 126 respondents) failed to return the questionnaire and were replaced by respondents from other similar companies from the sampling frame.

IFRS adoption was measured not only by considering recognition, measurement, and disclosure of elements of financial statements (Bhattacharjee 2009), but also by analyzing financial information from the Rwandan Stock Exchange (RSE) to

Table 1 Study sample

Sector of activity	Population	Percentage (%)	Sample	Respondents
Insurance	5	5	3	6
Hotel	1	1	1	2
Banks	11	12	8	16
Telecommunication	4	4	3	6
Manufacturing	70	77	48	96
Total	91	100	63	126

supplement the data collected. Through a legal framework, we also analyzed the impact of different laws enacted in Rwanda on the adoption of IFRS.

Capital market development was measured using an analysis of market capitalization as a percentage of GDP, the total shares traded as a percentage of GDP, the capital raised by listed companies through the capital market, and the number of companies which were listed and others willing to list on the capital market (Brookson 1998; Garcia and Liu 1999; Naceur and Ghazouani 2007).

The relationship between IFRS adoption and capital market development was measured using the Pearson's correlation coefficient.

3.2 Data Presentation, Analysis, and Discussion

This section presents research results related to sample characteristics, the factor structure of IFRS adoption, capital market development, relationships between the study variables, and the prediction model of further capital market success.

3.2.1 Status of the Sampled Companies

(a) Sector of activities:
As shown in Fig. 1, the sample was composed of companies involved in different activities. Most of the companies (76%) were in trading and manufacturing. This was followed by banking (13%), insurance (5%), telecommunications (5%), and hotels (1%).
Company law in Article 5 states that every company incorporated in Rwanda should either be a private company or a public company. Table 2 shows that a majority of the companies in our sample (93.7%) were private companies and only a small percentage (6.3%) were public companies which were allowed to sell their shares to the public.

(b) The purpose of preparing a financial statement
Our findings reveal that most of the surveyed companies prepared financial statements to meet legal requirements, for tax purposes and for shareholders. The findings also reveal that some of the companies wanted financial statements to be available to a certain number of select users only and did not want their financial statements to be published on their Web sites (Table 3). Another category of companies considered their financial statements to be confidential.

3.2.2 Adoption of IFRS in Rwanda

The responses show that the level of adoption of IFRS in Rwanda is low (Table 4). The results confirm those of earlier research by Emeni (2014) which suggested that

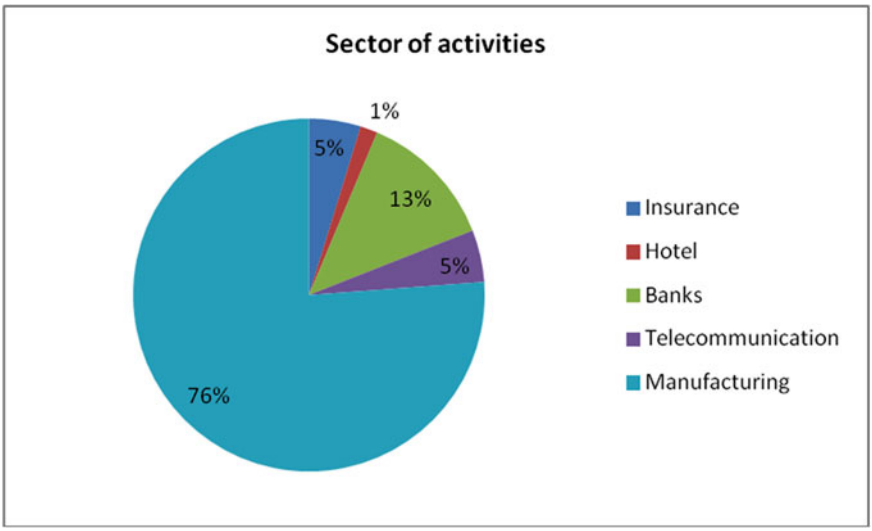

Fig. 1 Sector of activities for selected companies. *Source* Primary data

Table 2 Company status

Category	Frequency	Percent
Private	59	93.70
Public	4	6.30
Total	63	100.00

Source Primary data

Table 3 Purpose of preparing financial statements

Purpose for financial statements preparation	N	Mean	Std. deviation	Variance
Legal requirements	126	4.23	0.717	0.515
Tax requirements	126	3.96	0.852	0.726
Listing requirements	126	2.46	0.836	0.698
For shareholders	126	3.92	0.968	0.938
For prospective investors	126	3.24	1.261	1.591
For the general public	126	3.13	1.175	1.382
Confidential with the company	126	3.07	1.392	1.939
For selected users	126	3.21	1.341	1.797
Published on the Web site	126	2.48	1.137	1.292

Source Primary data

a weak institutional framework is one of the reasons for poor IFRS adoption in Africa.

IFRS was adopted primarily to gain access to foreign capital and capital markets. This confirms Kim et al.'s (2011) findings which focused on loans negotiated from

Table 4 Level of IFRS adoption

IFRS/IAS adoption	Minimum	Maximum	Mean	Std. deviation	Variance
Impairment test of assets	1	5	3.04	1.069	1.142
PPE cost less depreciation and impairment loss	1	5	2.81	1.178	1.387
Use of fair value	1	5	3.02	1.29	1.664
Fair value not used (not measurable)	1	5	2.57	0.834	0.695
Contingent liabilities disclosure	1	5	2.82	1.176	1.382
Statement of changes in equity	1	5	3.34	1.247	1.555
Cash flow statement	1	5	3.73	1.046	1.095
Recognition of assets held for sale	1	5	2.97	1.145	1.311
Useful life determination for PPE depreciation	1	5	2.89	1.161	1.348
Investment property disclosure	1	5	2.83	1.108	1.228
Disclose of investment in associates	1	5	2.72	1.086	1.18
Averaged IFRS adoption	1	5	2.99	0.862	0.744

Source Primary data

Table 5 Purpose of IFRS adoption

	N	Mean	Std. deviation	Variance
Access to foreign investment	126	4.3810	0.84718	0.718
Access to capital market	126	4.0000	0.69282	0.480
Information quality	126	3.5317	0.77652	0.603
Regulatory requirements	126	3.1825	0.84286	0.710
Valid N (list wise)	126			

Source Primary data

foreign markets that banks charge lower rates from IFRS adopters than they do from non-adopters and that IFRS adopters have less restrictive covenants than non-adopters. They concluded that adopting IFRS enhances a borrower's visibility among foreign lenders in the international market. While willing to gain access to capital, companies may achieve this by accessing local or foreign capital markets. Information quality as a reason for adopting IFRS was ranked third. The other reason given was that IFRS was adopted for information quality. This confirms the Barth's (2007) research that adopting high-quality standards is a necessary condition for acquiring high-quality information. However, no study has been done to analyze the quality of information prepared in accordance with Rwandan GAAP. Finally, the findings show that IFRS was adopted as a regulatory requirement (Table 5).

An analysis of different challenges faced by Rwandan companies in adopting IFRS was also done (Table 6). The respondents were requested to rank the challenges according to their importance. The most important challenge for the

Table 6 IFRS/IAS adoption challenges in Rwanda

	N	Mean	Std. deviation	Variance	Rank
Cost of adoption	126	4.4921	0.68988	0.476	1
IFRS adoption guidance	126	3.9762	0.85289	0.727	2
Qualified professional accountants	126	3.7381	1.10402	1.219	3
Ethical environment	126	3.5556	1.05494	1.113	4
Complexity of conversion	126	3.5159	1.08616	1.180	5
Training of professional accountants	126	3.4127	0.74048	0.548	6
Compliance and enforcement	126	3.3095	1.03896	1.079	7
Valid N (list wise)	126				

Source Primary data

successful adoption of IFRS was the cost of adoption. This should be understood in the context that the cost of adoption includes the costs of hiring experts for conversion from local GAAP and also for training companies' accountants. The costs also include audit fees, as financial statements prepared under IFRS have to be audited by experts. The findings confirm those of De George et al. (2012), who, using a comprehensive dataset of all publicly traded Australian companies, found that with the adoption of IFRS there was an increase in audit costs in the year of IFRS' transition. The second and third challenges were lack of adoption guidance and professional accountants. This is in accordance with Owolabi (2011) and a report by the IMF (2011) on observing standards and codes that stressed on a lack of professional accountants in Rwanda and that African countries did not have enough trained and professional accountants. Interestingly, the challenges also include the ethical environment, complexity in conversion, training professional accountants, as well as compliance and enforcement.

3.3 Capital Market Development in Rwanda

Capital market development was analyzed by analyzing it as a percentage of GDP, capital market liquidity as a percentage of GDP, and stock market efficiency, which was measured as a ratio of the value of total shares traded to the average real market capitalization.

Capital market capitalization in Rwanda was measured as the value of listed shares and bonds to GDP. Market capitalization considered the total listed and cross-listed shares and bonds that have not yet reached their maturity and the number of shares listed and cross-listed on RSE. The findings indicate that capital market capitalization was 27.87% of GDP in 2011; 26.13% in 2012; 40.57% in 2013; 28.12% in 2014; and 54.09% in 2015. So capitalization decreased by 1.74% in 2012 compared to the previous year and then saw an increase of 12.70% in 2013. The increase in 2013 was followed by a decrease of 12% in 2014 and then another increase of 26% in 2015. The increase in the capitalization rate in 2013 may be

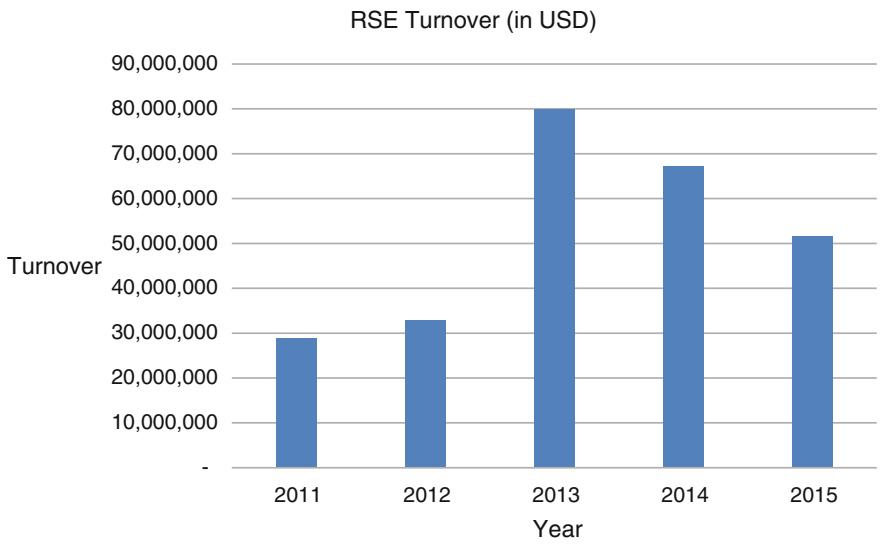

Fig. 2 Market turnover for listed and cross-listed companies from 2011 to 2015

explained by the fact that the number of listed and cross-listed companies increased. The increase in market capitalization in 2015 is explained by the Government of Rwanda participating in the market by selling treasury bonds (Fig. 2).

The end of the year 2012 and the start of the year 2013 were characterized by the increase in Bralirwa's share price from USD 0.55 to USD 1.36 per share and of BK's shares from USD 0.20 to USD 0.34 per share. The increase in price being the result of the law of supply and demand, this explains how the number of transactions increased for the two companies, resulting in the increase in turnover. However, as shown by the figure above, the turnover decreased in the years 2014 and 2015, respectively.

RSE is still illiquid. In 2011, it had a turnover ratio of 2.14%, and in 2012, there was a decrease, and this was only 1.53%, while it increased up to 3.34% in 2013. This is very low when compared to other countries including South Africa which has a turnover ratio of 83% and Kenya with a turnover ratio of 4.5%. RSE has a small impact on the economic growth of the country; this needs to be improved. The findings of our research concur with that of Jefferis and Okeahalam (2000), who concluded that African stock markets, including Johannesburg's stock market, are illiquid by global standards, a characteristic which may well have a negative impact on the market's efficiency. They state that as liquidity has also been found to be one of the most important factors linking stock market development with economic growth, this could explain why the emergence of stock markets in Africa has had very little broader economic impact.

3.4 Correlations Between IFRS Adoption and Capital Market Development

A correlation analysis measures the relationship between two or more variables. An analysis was done to determine the relationship between the independent variable IFRS adoption and capital market development as the dependent variable.

The Pearson's correlation coefficient was computed to measure the relationship between the study variables as per the objectives.

Table 7 presents the correlation analysis between the challenges faced by the surveyed companies and the level of IFRS adoption in Rwanda. The results show that there was a negative correlation between the two variables of −0.576. This leads us to conclude that when there are many challenges for companies to adopt IFRS, the level of IFRS adoption will be low and this will have an impact on compliance with capital market reporting requirements, and it will hinder capital market development.

The strength of the relationship between the level of IFRS adoption and capital market development was also measured (Table 8). The findings reveal that the relationship between the two variables was positive but not strong, that is, $R^2 = 0.256$. This means that IFRS adoption by companies in Rwanda counted for 25.6% of the total variations in stock market access. Knowing that IFRS adoption is mandatory in Rwanda, our findings regarding the relationship between the highlighted variables are in accordance with those of Daske et al. (2008), who came to the conclusion that the effect of IFRS adoption on capital markets will be different across voluntary and mandatory adopters. As a result, effects of the capital market around voluntary adoptions are likely to be larger, but they cannot be attributed to IFRS alone. In our case, the effect was low and there is a need to find out other factors affecting capital market development in Rwanda.

Table 7 Challenges and IFRS adoption

Variables correlated		Challenges	IFRS adoption
Challenges	Pearson's Correlation	1	−0.576**
	Sig. (2-tailed)		0.000
	N	126	126
IFRS adoption	Pearson's Correlation	−0.576**	1
	Sig. (2-tailed)	0.000	
	N	126	126

**Correlation is significant at the 0.01 level (2-tailed)

Table 8 Regression analysis: model summary

Model	*R*	*R* square	Adjusted *R* square	Std. error of the estimate
1	0.506[a]	0.256	0.250	0.450

[a]Predictors: (Constant), Adoption with IFRS

This analysis leads to the rejection of the null hypothesis stating that there is no association between the level of IFRS adoption and the level of capital market development. There is instead a significant relationship between both. This confirms what was determined previously by using Pearson's correlation analysis.

4 Discussion

The findings of our research reveal that the level of IFRS adoption in the surveyed companies was low with an average mean of 2.99. The findings are in accordance with IMF and the World Bank's (2008) findings that showed that IFRS application in Rwanda is at a lower level even after seven years of its adoption. The findings also show that there is little application of IFRS in financial reporting in Rwanda and little development in that direction. It was also found that the banking sector was at first place in implementing IFRS, followed by the telecommunications and insurance sectors; the last place was occupied by the trading and manufacturing sector. This level can be improved if incorporated companies adopt IFRS as is required by the Company's Act and by removing the challenges faced by companies in trying to implement IFRS/IAS in their financial reporting.

Moreover, managers of the surveyed companies had little knowledge about RSE's reporting requirements and the existence of the Company's Act that requires companies to adopt IFRS/IAS.

The surveyed companies faced different challenges with IFRS adoption including no IFRS adoption guidance and lack of qualified professional accountants who have a clear understanding about the requirements of internationally accepted standards and could help in the adoption of IFRS/IAS. What also needs to be mentioned is the conflict between tax laws that still require the use of National Accounting Standards and the Company's Act that requires the use of internationally accepted standards. Knowing that most of our respondents prepared their financial statements as a legal requirement and for tax purposes, this meant that the surveyed companies retained local accounting standards and had not shifted to IFRS/IAS.

It was also found that RSE is still in its infancy and has a market capitalization of 26.13% of GDP, a total value of shares traded to GDP of 0.42% and a turnover ratio of 1.53%. It can be concluded that RSE is illiquid and that its contribution to the economic development of the country is still low. RSE can be developed if the incorporated companies adopt IFRS and by removing the challenges faced by companies trying to implement IFRS/IAS in their financial reporting.

An analysis of the relationship between the level of adoption of IFRS/IAS and capital market development was also done. The overall results indicate that the relationship between the two variables was positive but not strong. This implies that the level of adoption of IFRS could be reliably used to influence capital market development. This concurs with the findings of Daske et al. (2008) who stress on the impact of IFRS adoption on an increase in capital market liquidity, but highlight

that this development in the capital market cannot be attributed to IFRS alone. This implies that further research should be done to analyze the relationship between the use of IFRS and capital market development taking into consideration other factors including stock market capitalization, real income, savings rate, financial intermediary development, stock market liquidity, and macroeconomic volatility in RSE.

5 Conclusion and Implications

Based on the findings presented in this chapter, it is noted that the level of IFRS adoption among the surveyed companies was low and this will impact the quality of financial information prepared by companies in Rwanda. This confirms the findings of Barth (2007) that when adhering to IFRS, the inherent flexibility in principles-based standards can provide an opportunity to manage earnings. Our study also shows that companies in Rwanda adopt IFRS to facilitate access to foreign capital including access of foreign and local capital markets by increasing confidence in investors. This adoption also contributes to improving the quality of financial statements. In the meantime, Rwandan companies need support to overcome the challenges that they face while adopting IFRS.

References

Amstrong, C.M., A. Barth, Jagolinzer, A.D. and E.J. Riedl (2008). Market reaction to events surrounding the adoption of IFRS in Europe. Working paper, Harvard Business School and Stanford University.

Barth, M.E. 2007. Research, standard setting and global financial reporting. *Foundations and Trends in Accounting* 1 (2): 71–165.

Beke, J. 2010. International accounting harmonization. *International Business and Management* 1 (1): 48–61.

Bhattacharjee, S. 2009. Problems of adoption and application of international financial reporting standards (IFRS) in Bangladesh. *International Journal of Business and Management* 4 (12): 165.

Black, B. 2001. The corporate governance behavior and market value of Russian firms. *Emerging Markets Review* 2 (2): 89–108.

Bokpin, A., and Z. Isshaq. 2008. Stock market development and financing decisions of listed firms in Ghana. *African Journal of Business Management* 2 (11): 209–216.

Brasoveanu, O.L., V. Dragota, D. Catarama, and A. Semenescu. 2008. Correlation between capital market development and economic growth: The case of Romania. *Journal of applied quantitative methods* 3 (1): 64–75.

Brookson, S. 1998. *Mastering financial management*. London: Thorogood Ltd.

Chisholm, A.M. 2009. *An introduction to international capital markets*, 2nd ed. New York: Wiley.

Choi, F., and G. Meek. 2011. *International accounting*, 7th ed. New Jersey: Prentice Hall.

Daass, A. and W.Z. Siam. 2011. The applicability of applying international financial reporting standards for small and medium enterprises in the Jordanian Environment. *Advances in Management,* 4 (1).

Daske, H. (2004). Economic benefits of adopting IFRS or US-GAAP – have the expected costs of equity capital really decreased? Finance and Accounting, Working Papers.

Daske, H., L. Hail, C. Leuz, and R. Verdi. 2008. Mandatory IFRS reporting around the World: Early evidence on the economic consequence. *Journal of Accounting Research* 46 (5): 1085–1142.

De George, E.T., C.B. Ferguson, and N.A. Spear. 2012. How much does IFRS cost? IFRS adoption and audit fees. *The Accounting Review* 88 (2): 429–462.

Doupnik, T., and H. Perera. 2007. *International accounting*. New York: Mc Graw-Hill.

Dumontier, P., and B. Raffournier. 2002. Accounting and capital markets: A survey of the European evidence. *The European Accounting Review* 11 (1): 119–151.

Emeni, F.K. (2014). Foreign direct investments and international financial reporting standards adoption in Africa, *Ushus Journal Business Management*, 27–44.

Frost, A.C., A.E. Gordon, and F.A. Hayes. 2006. Stock exchange disclosure and market development: An analysis of 50 international exchanges. *Journal of Accounting Research* 44 (3): 437–483.

Garcia, V.F., and L. Liu. 1999. Macroeconomic determinants of stock market development. *Journal of Applied Economics* 2 (1): 29–59.

IMF (2011). *Financial system stability*, Country Report No. 11/244 (August). Washington: International Monetary Fund.

Jefferis, R.K., and C.C. Okeahalam. 2000. The impact of economic fundamentals on stock markets in southern Africa. *Development South Africa* 17 (1): 23–51.

Joos, P., and M. Lang. 1994. The effect of accounting diversity: Evidence from European Union. *Journal of Accounting Research* 32: 141–168.

Kim, J.-B., J.S.K. Tsui, and Y.H. Cheong. 2011. The voluntary adoption of international financial reporting standards and loan contracting around the world. *Review of Accounting Studies* 16 (4): 779–811.

Kreijce, R.V., and D.W. Morgan. 1970. Determining sample size for research activities. *Educational and psychological measurements* 30: 607–610.

Lutwama, S.J., and E.M. Musaali. 2009. Analysis of the hindrances to capital market access among private sector firms in Uganda. *A report to the capital market authority*. Capital Market Development in Uganda.

Mayer, C., and X. Vives. 1992. *Capital markets and financial intermediation*. Cambridge: Cambridge University Press.

Menamin, Mc. J. (2005). *Financial Management an introduction.* London: Routledge.

Mizra, A.A., M. Orell, and J.G. Holt. 2008. *IFRS practical implementation guide*. New Jersey: Wiley.

Nicolaisen, D.T. 2005. A securities regulator looks at convergence. *Northwestern University Journal of International Law and Business.* 25 (3): 661–686.

Naceur, S.B., and S. Ghazouani. 2007. Stock markets, banks and economic growth: Empirical evidence from the MENA region. *Research in International Business and Finance* 21 (2): 297–315.

Nobes, C., and R. Parker. 2008. *Comparative international accounting*, 10th ed. London: Pearson Education.

OCAM (1970). Plan Comptable general, Yaoundé.

Ocampo, J.A., and J.E. Stiglitz. 2008. *Capital market liberalization and development*. Oxford: Oxford University Press.

Owolabi, A.A. 2011. Corruption and the environment of accounting and auditing in Africa. *International Journal of critical accounting* 3 (2/3): 1–15.

Owolabi, A., and F. Iyoha. 2012. Adopting international reporting standards (IFRS) in Africa: Benefits, prospects and challenges. *African Journal of Accounting Auditing and Finance* 1: 77–86.

Paramasivn, C., and T. Subramanian. 2009. *Financial management*. New Delhi: New Age International.

Saudagaran, S., and G.J. Diga. 1998. 'Accounting harmonization in ASEAN, benefits, models and policy issues. *Journal of International Accounting, Auditing and Taxation* 7 (1): 21–45.
The World Bank (2008). *Report of the observance of standards and codes (ROSC), Republic of Rwanda.*
Tripathi, R., and S. Gupta. 2011. International financial reporting standards: A way for global consistency. *Australian Journal of Business and Management Research* 1 (1): 38–51.
United Nations (2007). *International accounting and reporting issues.* New York.
Zahirul, M. 2009. Problems of adoption and application of IFRS in Bangladesh. *International Journal of Business and Management* 4 (12): 165–175.

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Chapter 9
Strategic Innovation Management of Small and Medium-Sized Manufacturing Companies in Rwanda

Ngweshi Kazinguvu

Abstract This chapter has two objectives: first, to investigate the basic strategies for innovation in Rwandan SMEs, and second, to create awareness about the necessity of strategic innovations in the daily management of SMEs in the country. The chapter starts by defining the concept of strategic innovation and discusses some tactics used by SMEs for the successful implementation of strategic innovations, that is, how they cultivate a style of organizational behavior that is comfortable with new ideas, changes, risks, and even failures. A purposeful technique is used to select a sample of 40 people in seven manufacturing SMEs for interviews to see how strategic innovations were implemented through transmission of SMEs' vision and strategic targets to employees, tolerance of risks, mistakes and failures, degree of decision making by operational staff members, and attention to the future through transparency and truth. This chapter also gives a set of practical implications and suggestions on how to increase the culture of innovation.

Keywords Strategic innovation · Management · Culture · Change · Risk · Failure

JEL Classification Codes O21 · O30 · O31 · M10 · M14

1 Introduction

Today, many small companies are confronted with the challenges of globalization, especially in industries in which foreign, low-cost producers have entered the market and are threatening the survival of existing companies. In addition, new government regulations can change a profitable small and medium-sized enterprise (SME) into a nightmare in just a few weeks or months. Changing conditions thus force SMEs to adapt or reinvent their businesses through new innovations. At the same time, SMEs face several constraints in differentiating their products and

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changing their business models. These issues are critical considering the role of SMEs in today's economies (Bartelsman et al. 2005; Coulter 2010). SMEs have to turn to new directions from their managements to ensure their success, thus making strategic innovations a logical way for many of them.

In this chapter, SMEs in Rwanda are defined as businesses that are individually or jointly owned. They have set administrative processes and employ between 50 and 100 people and account for 22% of the businesses in Rwanda contributing 5% to the total private sector employment in the country. The broad goals of the Rwanda Industrial Policy as stipulated in the 'Rwanda Vision 2020' and the Economic Development and Poverty Reduction Strategy (EDPRS) are creating and building transformational industrial growth that will make Rwanda regionally and internationally competitive.

Innovations are a necessity and also an opportunity for SMEs in Rwanda to succeed in the market. Innovations play a significant role in the success of organizations (Elenkov et al. 2005). Much has been written about strategic innovations in large private and public companies (Brem 2008), but very little has been written about strategic innovations in SMEs. Of particular concern for SMEs are their needs to innovate to defend their existing competitive positions and for seeking new competitive advantages. Porter (2004) suggests that a firm can achieve a competitive advantage by creating a competitive strategy that is consistent with trends in the firm's industry and appropriate to the firm's resources and capabilities; these can be achieved through innovations.

According to Robinson (1997), strategic innovations are the creation of growth strategies, new technologies, new services, and new ways of doing things or business models that change the game and generate significant new values for consumers and customers. Innovation is the spark that makes good companies great. Innovation is not only just invention but also a style of corporate behavior comfortable with new ideas and risks. According to the same authors, companies that know how to innovate do not necessarily throw money into R&D. Instead, they cultivate a new style of corporate behavior that is comfortable with new ideas, changes, risks, and even failures.

Firms can use innovations strategically in order to achieve competitive advantages (Hitt et al. 1998; Ireland and Hitt 1999), compete effectively in local and global markets (Subramaniam and Venkatraman 1999), adapt their strategies to changing market and customer demands, create value and growth (Amit and Zott 2001), and achieve superior performance (Grimm and Smith 1997; Lee et al. 2000; Roberts 1999). Therefore, a strategic innovation represents an important component of a firm's strategy and is a major contributing factor to its competitive advantage (Porter 2004). Consequently, strategic innovations have become a central topic in the strategic management field. In many industries, it has become increasingly risky not to innovate. According to Pearce and Robinson (2010), consumer and industrial markets have come to expect periodic changes and improvements in the products that they are offered. As a result, some firms find it profitable to make innovations their grand strategy. They seek to reap the initially high profits associated with customer acceptance of a new or greatly improved product.

However, how is innovation management carried out among SMEs in the context of Rwanda and how do SMEs meet the demands of industrial growth by innovation management? This chapter investigates strategic innovations in the daily management of manufacturing SMEs in Rwanda including the techniques and factors driving these innovations.

The main objectives of this study are to investigate strategic innovation practices in the management of manufacturing SMEs and to create awareness about the necessity of innovations for SMEs in Rwanda.

2 Literature Review

2.1 Strategy and Strategic Management

The words 'strategy' and 'strategic management' are typically associated with issues like the long-time direction of an organization, the scope of an organization's activities which give it an advantage over its competition, strategic fit with the business environment, and the organization's resources and competencies (Aosa 1992; Hall 1992; Johnson et al. 2008; Mintzberg 1987; Pearce and Robinson 2010; Schendel and Hofer 1979).

A strategy involves people, especially managers who decide and implement the strategy. It is a set of decisions that result in action, which in turn results in forming and implementing plans designed to achieve a company's objectives (Ansoff 1965; Fred 2011; Pearce and Robinson 2010).

Johnson et al.'s (2008) view is more relevant to our study as they underline the importance of managers with regard to strategy as they craft a road map for a company's success.

2.2 The Strategic Management Process

Strategic planning is part of the strategic management process. Strategic management entails both strategic planning and implementation and is the process of identifying and executing an organization's strategic plan by matching the company's capabilities with the demands of its environment. The strategic management process is more than just a set of rules to follow. It is a philosophical approach to business. The upper management must think strategically first, then apply that thought to a process. The strategic management process is best implemented when everyone within the business understands the strategy. According to Pearce and Robinson (2010), the five stages of this process are goal-setting, analysis, strategy formation, strategy implementation, and strategy monitoring.

2.3 Innovation and Strategic Innovation

SMEs today act under big pressure from the business environment and pressure from customers who expect to get more quality products or services. In order to face these challenges, SMEs are made to continuously search for new ways of offering new products/services and enhancing existing ones. Innovations are widely recognized by industry and academics as an essential competitive enabler for any enterprise that wants to remain competitive and survive and grow (Drucker 1985). In one word, enterprises should continuously introduce innovations. But, what in fact do innovations mean?

An innovation is a new idea, which may be a recombination of old ideas, a scheme that challenges the present order, a formula, or a unique approach which is perceived as new by the individuals involved (Rogers 1982; Zaltman et al. 1973). As long as the idea is perceived as new by the people involved, it is an 'innovation' even though it may appear to be an 'imitation' of something that exists elsewhere to others.

Joseph Schumpeter defined innovation as an activity which leads to a new producing function, a new product (Mc Daniel 2002). Lionnet (2003) defines innovation as a process by which a novel idea is brought to the stage where it eventually produces money. It is a dynamic, technical, economic, and social process involving an interaction of people coming from different horizons, with different perspectives and different motivations. Pearce and Robinson (2010) define innovation as a grand strategy that seeks to reap the premium margins associated with the creation and customer acceptance of a new product or service.

Innovation is the process of developing and improving products, processes, and markets with the aim of aggregating value. This definition is based on a distinction made by Schumpeter between an invention, an idea, and an innovation as the generation of value out of an idea (Cooke 2001; Marins 2008). However, high technology SMEs also engage actively in radical innovations. These include spin-off firms and multinationals' R&D partners. SMEs are crucial for introducing radical new technologies if the technology gap is large (Nelson 1994).

Incremental innovations entail that existing knowledge is combined with or slightly adjusted to a local context. Most firms, especially SMEs, innovate incrementally. Even if a firm copies an existing technology, the technology has to be adjusted to the context-specific routines of the firm which spurs new innovation processes. In increasingly demand-driven markets, incremental innovations enable firms to enter market niches at relatively low costs (Asheim et al. 2009; Fagerberg et al. 2012).

According to Schlegelmilch et al. (2003), strategic innovation is the most commonly used term in literature for applying innovations to corporate strategy. Other closely related terms are strategic entrepreneurship, strategic change, and value innovation. Strategic innovation is a concept that provides more insights into how firms compete in volatile markets and sustain or create new competitive advantages (Kataria 2013).

Strategic innovations take the road less travelled as they challenge an organization to look beyond its established business boundaries and mental models and to participate in an open-minded, creative exploration of the realm of possibilities (Palmer and Kaplan 2007). Strategic innovation often involves changing or innovating business models—the template on how a firm is going to make money—to make a company more competitive. This requires changing or bringing in new value propositions, services, and production processes (Lundvall 2007). The key notion behind the concept of innovation systems is that innovation is an interactive process.

According to Schlegelmilch et al. (2003), strategic innovation is the fundamental reconceptualization of a business model and the reshaping of existing markets (by breaking the rules and changing the nature of competition) to achieve dramatic value improvements for customers and high growth for companies. This definition contains three key elements. The first is the fundamental reconceptualization of the business model, and strategic innovators must ask the most basic questions about their business model: What business are we in? Who are the customers? How do we achieve value?

Asking such fundamental questions forces managers to look at the tacit rules and assumptions that underlie the way the business is traditionally conducted in their industry (Geroski 1998; Hamel 1998). Strategic innovators take nothing for granted and guard against established mental models and tacit industry rules; they ignore what their companies are and concentrate on what they could be (Kim and Mauborgne 1999; Markides 1998; Yates and Skarzynski 1999).

The second key element is the reshaping of existing markets. Strategic innovators not only focus on rivals within their market or on their competitive position within a strategic group; instead, they look across substitute markets and across substitute strategic groups (Kim and Mauborgne 1999). The third key element is dramatic value improvements for customers. Strategic innovation is not about making marginal or incremental improvements but about achieving quantum leaps in value (Hamel 1998; Kim and Mauborgne 1999; Peters 1988).

Strategic innovation is about creating new markets and leaps in customer value and reshaping the existing markets to achieve value improvements for customers (Gebauer et al. 2012; Schlegelmilch et al. 2003). In his seminal work on the subject, Abell (1980) proposed that all companies in an industry develop their strategies on the basis of the answers that they give to three key questions: Who should we target as customers? What products/services and what value propositions to offer the chosen customers? How to offer these products/services in a cost-efficient way?

An organization moves beyond an ad hoc approach to innovation when it begins to develop and institutionalize a cultural mindset and a set of processes that support repeatable, sustainable innovations. This then becomes the foundation for an ongoing competitive advantage (Davila et al. 2006).

2.4 Process of Innovation Development

Van de Ven (1995: 275) reports six inter-related process elements that are neither linear nor simple but rather 'unfold in a partially cumulative progression of multiple paths of activities.' They include:

(1) The innovation process consists of an accretion of numerous events performed by many different people over an extended period of time.
(2) Concentrated actions to allocate resources and initiate innovation development are triggered by 'shocks' (not mere persuasion) produced by direct personal confrontations with needs or problems.
(3) Once work on innovation development begins, the process does not unfold in a simple linear sequence of stages and substages. Instead, it proliferates into complex bundles of innovation ideas and divergent paths of activities by different organizational units.
(4) Setbacks are frequently encountered and serve as either breaking points, when the innovation is rejected, or learning opportunities when the innovation is 'reinvented.'
(5) Innovation receptiveness, learning, and adoption speed are facilitated when the innovations are initially developed within the user organization, and they are inhibited when end users are provided no opportunities to reinvent (or modify) innovations that were initially developed elsewhere.
(6) Management cannot ensure an innovation's success, but can influence its odds.

2.5 Strategic Innovations by SMEs in Eastern African Countries

To date, little has been researched about strategic innovations in SMEs in Eastern African Countries (EAC). Yet, many small companies in EAC are confronted with the challenges of globalization, especially in industries in which foreign, low-cost producers have entered the market and are threatening the survival of existing companies.

Ngugi et al. (2013) investigated the influence of innovativeness on the growth of SMEs in Kenya and their findings indicate that innovativeness influenced the growth of SMEs in the country. The tendency of owner–managers to engage in and support new ideas, novelty, experimentation, and creative processes results in new products, services, or technological processes which have a great influence on the performance of SMEs. The increase in innovation adoption is a largely defensive measure against increasingly sophisticated and highly demanding consumers, escalating competition and the necessity to control and reduce rising costs (Barras 1990; Gitonga 2003; Mwangi 2007).

In EAC, as in the rest of the world, literature on innovations in SMEs is dominated by studies endeavoring to predict success by identifying the determinants of innovations, including those studies that try to identify critical success factors for innovative strategies in SMEs (Bowen and Ricketts 1992; Dodgson and Rothwell 1991; Riedle 1989) and those that specify successful technology and innovation practices in SMEs (Berry 1996; Boag and Rinholm 1989; Bracker et al. 1988; Oakey and Cooper 1991).

2.6 Innovation Management of SMEs

Small firms are dominant in most countries, and successful innovation management in small firms is of significant interest for managers of SMEs, policymakers, and researchers in the perspective of economic changes and firms' struggles to establish sustainable competitive advantages. According to Biolos (1996), innovation champions can rely on three fundamental competencies: They show that new products are connected to the core competencies of a firm and at the same time are also related to the market reality; these firms show flexibility and are able to react to the changing demands of potential clients and markets; and these firms can not only create but also develop and commercialize innovative outputs. Davila et al. (2006) relate successful innovation management to 'design principles': strong leadership, innovation strategy, and innovation portfolio. Innovation has to be integrated in the business model and is connected with the vision and mentality of a firm. This is in line with Smith et al.'s (2008) findings: the innovation principal has to be fully integrated to the culture of an organization. Factors that influence the ability to manage innovations are leadership style, resources, structure of the organization, culture, technology, knowledge management, strategy, employees, and the innovation process.

The link between vision, strategy, and innovation is important for effective innovation management. Strategy determines the configuration of resources, products, processes, and systems that firms adopt to deal with the uncertainties existing in their environment. This requires firms to take decisions about what businesses and functions they should be performing and in what markets. Successful innovations require a clear articulation of a common vision and a firm expression of the strategic direction. This is a critical step in institutionalizing innovations. Without a strategy for innovation, interest and attention become dispersed.

From this review, it can be concluded that the most innovative SMEs seek to be 'the best of the best.' Their employees have clarity of purpose and find it challenging to look for totally new ways of doing things in order to achieve their goals. For these SMEs, innovation is more than benchmarking. They do not try to succeed simply by matching others. Instead, they create a vision and a target which if achieved will create products that outperform and provide a distinct market position. An innovation strategy is critical in directing organizational attention.

In general, organizations that adopt an offensive strategy of trying to create the future (as opposed to protecting the past) are more innovative. The success of companies who broke the rules of their industry through innovations with or without technology and went on to become dominant players has been well documented (Hamel 1998; Kim and Mauborgne 1999; Markides 1998). These companies were able to stimulate demand, expand existing markets, and create new ones through accessible and competitive market pricing.

The ability of innovation capability to integrate newstream and mainstream is therefore ever more important. Newstream enables the creation of new products and services while the focus on lowering costs and improving quality reinforces the need for strong mainstream capabilities.

3 Methods

In order to investigate strategic innovations in the daily management of manufacturing SMEs in Rwanda, this study adopted a descriptive research design. Descriptive research involves gathering data that describe events (Glass and Hopkins 1970). A purposeful technique was used to select manufacturing SMEs for interviews, and data were collected using self-administered interview guides. The data collected through the interview guides were qualitative and were analyzed thematically using a content analysis.

Interviews were conducted in seven manufacturing SMEs in Rwanda selected randomly; 40 staff members were selected and interviewed, including nine senior managers and 31 operational staff members. The structured interviews focused on questions about strategic innovations in daily management and were directed to uncover: the extent to which the vision of the SME was known and transmitted to staff members, degree of tolerance to risks, mistakes and failures, and the degree to which decision making and support for entrepreneurs existed. Innovation and intrapreneurship are often seen as necessary and integrated ingredients in creating growth and industrial renewal in society (Braunerhjelm 2010).

4 Empirical Results

4.1 Approaches to Incorporating Strategic Innovations in the Daily Management of SMEs

Transmission of vision and strategic intent: As said by Pinchot and Pellman (1999), employees are more effectively empowered if they are given a clear vision of the future and where the company is trying to go. The need for innovation is then

apparent to them, and they know how to direct their efforts. For about 65% of the 40 people interviewed the vision of their companies was not clearly understood, yet senior managers were confident about the understandability of the vision of their SMEs. From this view, integrating a culture of innovation in SMEs is quite impossible until the vision and mission of a company is understood by all its staff members. Thus, the first conclusion is that transmitting an SME's vision is the first step to innovation. This lines up with Cato and Gordon (2012), who stipulate that the alignment of the strategic vision to employee productivity is a key contributor to the success of an organization. This alignment encourages and stimulates employees' creativity so that they can perform more effectively to realize organizational goals and objectives.

Tolerance of risks, mistakes, and failures: Taking risks, making mistakes, and failing are not tolerated and are punished. This was approved by 72.5% of the people interviewed. Yet, both innovation and organizational learning require trying new things, seeing what happens, and learning from the experience. According to Pinchot and Pellman (1999) when new ideas are punished for mistakes, two things may go wrong: (1) people stop experimenting, and (2) mistakes are covered up so there is no organizational learning. For innovation to happen, SMEs should have minimum acceptance of risks, mistakes, and failures, and more importantly, they should learn from those mistakes and failures. Thus, tolerance for risks, mistakes, and failures in innovations is the second important step for SMEs' innovations.

Support for intrapreneurship: According to De Jong and Wennekers (2008), intrapreneurship refers to employee initiatives in organizations to undertake something new, without being asked to do so. Hence, the intrapreneur focuses on innovations and creativity and transforms an idea into a profitable venture while operating within the organizational environment. Intrapreneurs become hands-on leaders for specific innovations within an organization. They are essential ingredients in successful innovation processes, and for this, they have to be supported by rewarding their intrapreneur spirit, by empowering people to take quick decisions (decision making by doers) and not pushing most decisions up to a level way above the doers (Bhardwaj et al. 2007). In our data, 67.5% of the people interviewed revealed that there was no motivating staff policy about creating something new within the SME and the policy in the organization, and the views of senior managers were not far from the point of lack of a rewarding system. Thus, SMEs in their day-to-day management should have a policy of rewarding intrapreneurs to motivate innovative qualities. Once this factor is well implemented, it can be a driver for an innovative culture. Thus, empowering people to take quick decisions and rewarding any initiative of doing a new thing is a third technique for SMEs to innovate.

Degree of decision making by doers: Some organizations push most decisions up to a level which is way above the doers. Such organizations are not good at implementing innovations. According to Aghion and Tirole (1997), the transfer of formal authority to an agent credibly increases the agent's initiative to provide effort. About 60% of the people interviewed said that they did not have the responsibility to take quick decisions; rather they had to wait for some order from

the hierarchy. When workforces are empowered to take decisions, employees are able to think outside the box and drive the organization in new and innovative ways.

Focus on the future: What an organization becomes depends in part on how far ahead it looks. Innovation is more likely to occur when people are thinking well into the future. About 72.5% of the people interviewed agreed that paying attention to the future of the company was a good sign for innovations. Focus on the future should be combined with other factors mentioned earlier to build a strong culture of innovation.

4.2 Building the Innovation Culture

About 90% of the people interviewed in different SMEs did routine work and had no curiosity about knowing new things outside their daily work. The analysis shows that this practically weakened capabilities to innovate in SMEs in Rwanda as for any organization that wants to innovate or wants to be prepared to innovate; this means that it has to have a few things in place. The first and perhaps the most important thing that SMEs in Rwanda should do is to undertake methods for fostering an open mind. This means not only having a sense of inquiry and curiosity about things, but also having the quickest way for removing that curiosity. SME managers in Rwanda have to prepare their staff members for innovations by creating room for discussions about the future of the company and giving them the freedom of thought and for expressing their opinions about the future of the company.

The second aspect that emerges from the analysis is that is it important for managements of SMEs in Rwanda to have the ability to create spaces where trust can happen, where risks can get taken. To take risks, you have to have some level of trust within an organization because if people get penalized for failure, particularly the kind of failure through which you learn, then they will not learn, in which case you are not going to get any innovations. As discussed earlier, about 72.5% of the people interviewed said that even minor mistakes were punished and that people who made mistakes were not encouraged to share these mistakes so that others could learn from them. This aligns with what Gadomska-Lila (2008) describes as different characteristics of pro-innovation organizational culture including creating a climate that is favorable for organizational changes; developing knowledge and skills and sharing knowledge; tolerance for risk, uncertainty, and novelty; implementing democratic principles of decision making and conflict solving; supporting group activities; building an atmosphere of recognition and respect for innovators; and supporting creative thinking and problem solving.

5 Discussion and Conclusion

Creating an innovative culture in SMEs is still a long road to travel. Yet, the environment is pushing SMEs to innovate as a sole means of survival in this global village. Our findings show that most SMEs' vision in Rwanda is not clear to many of their operational staff members, as a consequence of which they do not know where to direct their efforts. Manufacturing SMEs in Rwanda are largely focusing on harvesting and protecting existing practices rather than paying attention to developing new ideas. Cato and Gordon (2012) have said that the alignment of the strategic vision to employee productivity is a key contributor to the success of an organization.

Risks, mistakes, and failures in innovation are zero tolerance which discourages most employees of SMEs in Rwanda to innovate. No curiosity about new things outside their daily work (as mentioned by 90% of the people interviewed) is principally caused by a lack of corporate behavior that is comfortable with new ideas and risks. Janssen (2005) found that employees are more likely to use their influence to carry out innovative activities when they perceive their supervisors as being supportive of innovations. For innovations to become a strategic and tangible cultural value in manufacturing SMEs in Rwanda, there has to be a substantial degree of internal consistency between processes, metrics, reward structures, and the top management's support and it is precisely this synchronicity that is lacking in most manufacturing SMEs in Rwanda. It is in this context that we suggest that SMEs' managements have to create and incorporate an innovative culture by transmitting an SME's vision clearly and encouraging staff members to try new things by accepting minimum risks, not punishing mistakes made in innovations and discussing widely any failure with the spirit of learning from it. We further suggest that SMEs should empower the entire workforce to connect points seen and unseen for success.

6 Limitations and Future Research

As our sample size was not large, we suggest exploring more about different approaches of building a culture of innovation in SMEs in sub-Saharan Africa for other researchers. Future researchers can progress further by exploring and trying to answer the question: Why is the vision of an SME not clearly transmitted and why are risks of undertaking a new thing not acceptable?

References

Abell, D. 1980. *Defining the business: The starting point of strategic planning*. Englewood Cliffs, NJ: Prentice-Hall Inc.

Aghion, P., and J. Tirole. 1997. Formal and real authority in organizations. *Journal of Political Economy* 1–29.

Amit, R., and C. Zott. 2001. Value creation in e-business. *Strategic Management Journal* 22: 493–520.

Ansoff, H. 1965. *Corporate strategy: An analytic approach to business policy for growth and expansion*. New York: McGraw-Hill.

Aosa, E. 1992. An Empirical Investigation of Strategy Formulation and Implementation with Large Private Manufacturing Companies in Kenya, Unpublished PhD thesis, University of Strathclude, Scotland.

Asheim, B.T., O. Ejermo, and A. Rickne. 2009. When is regional "Beautiful"? Implications for knowledge flows, entrepreneurship and innovation. *Industry and Innovation* 16 (1): 1–9.

Barras, R. 1990. Interactive innovation in financial and business services: The vanguard of the service revolution. *Research Policy* 19 (3): 215–237.

Bartelsman, E., S. Scarpetta, and F. Schivardi. 2005. Comparative analysis of firm demographics and survival: Micro-level evidence for the OECD countries. *Industrial and Corporate Change* 14 (3): 365–391.

Berry, M. 1996. Technical entrepreneurship, strategic awareness, and corporate transformation in small high—tech firms. *Technovation* 16 (9): 187–199.

Bhardwaj, B.R., and K. Momaya. 2007. Corporate entrepreneurship: Application of moderator method. *Singapore Management Review* 29 (1): 47.

Biolos, J. 1996. *Managing the process of innovation*. Boston: Harvard Business School Publishing.

Boag, D., and B. Rinholm. 1989. New product management practices of small high technology firms. *Journal of Product Innovation Management* 6 (2): 109–120.

Bowen, A., and M. Ricketts. 1992. *Stimulating innovation in industry: The challenges for the United Kingdom*. London: NEDO.

Bracker, J., B. Keats, and J. Pearson. 1988. Planning and financial performance among small firm in a growth company. *Strategic Management Journal* 9 (6): 590–600.

Braunerhjelm, P. 2010. *Entrepreneurship, Innovation and Economic Growth-past experience, current knowledge and policy implications*, Stockholm: Swedish Entrepreneurship Forum, Working Paper 2010:02.

Brem, A. 2008. *The boundaries of innovation and entrepreneurship. Conceptual background and essays on selected theoretical and empirical aspects*. Gabler Edition. Wissenschaft. Wiesbaden: Gabler.

Cato, S.T., and J. Gordon. 2012. Relationship of the strategic vision alignment to employee productivity and student enrollment. *Research in Higher Education Journal* 15: 1.

Cooke, P. 2001. Regional innovation systems, clusters, and the knowledge economy. *Industrial and Corporate Change* 10 (4): 945–974.

Coulter, M. 2010. *Strategic management in action*, 5th ed. London: Pearson Higher Education.

Davila, T., M. Epstein, and R. Shelton. 2006. *Making innovation work: How to manage it, measure it and profit from it, COI insight*. Upper Saddle River: Wharton School Publishing.

De Jong, J., and S. Wennekers. 2008. *Intrapreneurship: Conceptualizing entrepreneurial employee behaviour*. Zoetermeer: EIM-SCALES (Scientific Analysis of Entrepreneurship and SMEs), Working Paper 2008–02.

Dodgson, M., and R. Rothwell. 1991. Technology strategies in small firms. *Journal of General Management* 17 (1): 45–55.

Drucker, P. 1985. *Innovation and entrepreneurship: Practise and principles*. London: Heinemann.

Elenkov, D.S., W. Judge, and P. Wright. 2005. Strategic leadership and executive innovation influence: An international multi-cluster comparative study. *Strategic Management Journal* 26: 665–682.

Fagerberg, J., M. Fosaas, and K. Sapprasert. 2012. Innovation: Exploring the knowledge base. *Research Policy* 41: 1132–1153.

Fred, R. 2011. *Strategic management concepts and cases*, 13th ed. New Jersey: Prentice Hall.

Janssen, O. 2005. The joint impact of perceived influence and supervisor supportiveness on employee behaviour. *Journal of Occupational and Organizational Psychology* 78: 573–579.

Johnson, G., K. Scholes, and R. Whittington. 2008. *Exploring corporate strategy*, 8th ed. London: Prentice Hall.

Gadomska-Lila, K. 2008. Evolution of organisational culture of polish companies in the context of their competitiveness–results of empirical research. *Studia i Prace Wydziału Nauk Ekonomicznych i Zarządzania* 4: 119–134.

Glass, G.V., and K.D. Hopkins. 1970. *Statistical methods in education and psychology*. Englewood Cliffs, NJ: Prentice-Hall.

Gebauer, H., H. Worch, and B. Truffer. 2012. Absorptive capacity, learning processes and combinative capabilities as determinants of strategic innovation. *European Management Journal* 57–73.

Geroski, P. 1998. Thinking creatively about your market: crisps, perfume and business strategy. *Business Strategy Review* 9 (2): 1–10.

Gitonga, T. 2003. Innovation processes and the perceived role of the CEO in the banking industry, Unpublished MBA Project, University of Nairobi.

Grimm, C.M., and K.G. Smith. 1997. *Strategy as action: Industry rivalry and coordination*. Cincinnati, OH: South Western.

Hall, R. 1992. Strategic analysis of intangible resources. *Strategic Management Journal* 13 (2): 135–144.

Hamel, G. 1998. Strategy innovation and the quest for value. *Sloan Management Review* 7–14.

Hitt, M.A., J.E. Ricart I Costa, and R.D. Nixon. 1998. The new frontier. In *Managing strategically in an interconnected world*, ed. M.A. Hitt, J.E. Ricart I Costa, and R.D. Nixon, 1–12. Chichester: Wiley.

Ireland, R.D., and M.A. Hitt. 1999. Achieving and maintaining strategic competitiveness in the 21st century: the role of strategic leadership. *Academy of Management Executive* 13: 43–57.

Kataria, S. 2013. *Strategic innovation: a review and a theoretical framework*. Management of governance business administration: University of Twente.

Kim, W.C., and R. Mauborgne. 1999. Strategy, value innovation and the knowledge economy. *Sloan Management Review* 40 (3): 41–54.

Lee, H., K.G. Smith, C.M. Grimm, and A. Schomburg. 2000. Timing, order and durability of new product advantages with imitation. *Strategic Management Journal* 21 (1): 23–30.

Lionnet, P. 2003. *Innovation, the process*. Lisbon: ESA training workshop.

Lundvall, B. 2007. National innovation systems analytical concept and development tool. *Industry and Innovation* 14 (1): 95–119.

Marins, L. 2008. *The challenge of measuring innovation in emerging economies' firms: A proposal of a new set of indicators on innovation*. Maastricht: United Nations University. Maastricht Economic and social Research and training centre on Innovation and Technology.

Markides, C. 1998. Strategic innovation in established companies. *Sloan Management Review* 38 (Spring): 31–42.

Mc Daniel, B.A. 2002. *Entrepreneurship and innovation: An economic approach*. London: M.E Sharp.

Mintzberg, H. 1987. The strategy concept I: Five Ps for strategy. *California Management Review* 30 (1): 11–24.

Mwangi S.K. 2007. Factors influencing financial innovation in Kenya's securities market. A study of firms listed at the NSE. Unpublished MBA Project University of Nairobi.

Nelson, R.R. 1994. The co-evolution of technology, industrial structure, and supporting institutions. *Industrial and Corporate Change* 3 (1): 47–63.

Ngugi, J.K., M.O. Mcorege, and J.M. Muiru. 2013. The influence of innovativeness on the growth of SMEs in Kenya. *International Journal of Business and Social Research* 3 (1): 25–31.
Oakey, R., and S. Cooper. 1991. The relationship between product technology and innovation performance in high technology small firms. *Technovation* 11 (2): 79–90.
Palmer, D. and S. Kaplan. 2007. A framework for strategic innovation. *Blending strategy and creative exploration to discover future business opportunities*. Innovation Point Working Paper 925.405.5003, accessed at http://www.innovation-point.com/A%20Framework%20for%20Strategic%20Innovation.pdf on January 23, 2017.
Pearce, J.A., and R.B. Robinson. 2010. *Strategic management, formulation, Implementation and control*, 10th ed. New York: McGraw-Hill Companies Inc.
Peters, T. 1988. Facing up to the need for a management revolution. *California Management Review* 30 (2): 7–38.
Pinchot, G., and R. Pellman. 1999. *Intrapreneuring in action: A handbook for business innovation*. San Francisco: Berrett-Koehler Publishers.
Porter, M.E. 2004. *Competitive advantage, creating and sustaining superior performance*. New York: Free Press.
Riedle, K. 1989. Demand for R&D activities and trade—off between in-house and external research: a viewpoint from industry with reference to large companies and SMEs. *Technovation* 9: 213–225.
Roberts, P.W. 1999. Product innovation, product-market competition and profitability in U.S. pharmaceutical industry. *Strategic Management Journal* 20: 655–670.
Robinson, E.A. 1997. America's most admired companies. *Fortune*, 3 March, p. 68+.
Rogers, E. 1982. *Diffusion of innovations*, 3rd ed. New York: The Free Press.
Schendel, D., and C. Hofer. 1979. Strategic management: A view of business policy and planning. *Administrative Science Quarterly* 25 (3): 536–543.
Schlegelmilch, B.B., A. Diamantapoulos, and P. Kreuz. 2003. Strategic innovation: the construct, its drivers and its strategic outcomes. *Journal of Strategic Marketing* 11 (2): 117–132.
Smith, M., M. Busy, P. Hall, and R. van der Meer. 2008. Factors influencing an organizations ability to manage innovation: A structured literature review and conceptual model. *International Journal of Innovation Management* 12 (4): 655–656.
Subramaniam, M. and N. Venkatraman. 1999. The influence of leveraging tacit overseas knowledge for global new product development capability: An empirical examination. In *Dynamic strategic resources*, ed. M.A. Hitt, P.G. Difford, R.D. Nixon, and K.P Coyne, 373–401. Chichester: Wiley.
Van de Ven, A.H. 1995. Managing the process of organizational innovation. In *Organizational change and redesign*, ed. G.P. Huber and W.H. Glick, 269–294. Oxford UP.
Yates, L., and P. Skarzynski. 1999. How do companies get to the future first? *Management Review* 88 (1): 16–22.
Zaltman, G., R. Duncan, and J. Holbek. 1973. *Innovations and organizations*. New York: Wiley.

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Part III
Performance

Chapter 10
Cameroon: Innovations and ICT and Their Combined Performance Effects on Small, Medium, and Micro-sized Enterprises

Ludwick 1er Ndokang Esone and André Dumas Tsambou

Abstract A firm's performance is a result of many factors including its ability to innovate and use ICT. Investments in ICT and innovation are also seen as a driver of productivity and competitiveness, enhancing the continuity of a business. This chapter assesses these two sources of performance and examines possible synergies between different types of innovations through ICT and their effect on the performance of small, medium and micro-sized enterprises (SMMEs). The data used is the General Census of Companies in Cameroon conducted with 93,969 companies by the National Institute of Statistics (INS). The chapter uses a multiple regression model to assess the direct effects of innovative activities and the use of ICT tools in business practices, as well as the combined effect of different types of ICT innovations on SMMEs' performance. The statistical analysis shows that the integration of innovations and ICT is very low in Cameroonian SMMEs but that this increases systematically with company size. The econometric analysis shows that ICT helps increase SMMEs' performance by supporting innovations. Thus, innovations accompanied by a firm's further use of ICT have a significant influence on its performance. However, specific investments in innovations and the use of existing ICT resources lead to differentiated performance in terms of strong effective market changes, creating new markets and improving goods and services.

Keywords Innovation · ICT · SMME · Performance

JEL Classification Codes O 32 · L 25

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1 Introduction

Many studies converge to emphasize the importance of small, medium, and micro-sized enterprises (SMMEs) in the economic fabric of both developed and developing countries. Considering substantial cell market economies, SMMEs played an important role in innovations, job creation, and development in industrialized countries during the twentieth century (Quiles 1997). In developing countries, mainly in sub-Saharan Africa (SSA), SMMEs are the dominant forms of business organizations, representing between 95 and 99% of the business environment depending on the country: about 99% in Cameroon with a strong representation (89%) of individual companies (INS 2009), 93% in Morocco, 90% in the Democratic Republic of Congo, and 95% of manufacturing activity in Nigeria (OECD 2006). Despite this, SMMEs' contribution to gross domestic product (GDP) is estimated at less than 20% in most African countries, while it is up to 60% in OECD countries (Admassu 2009). In addition, SMMEs operating in sub-Saharan African countries on average employ less than 30% of the workforce in the manufacturing sector, while this is 74.4% in Asian countries, 62.1% in Latin American and Caribbean countries, and 73.1% in OECD countries (Ondel'ansek 2010). In Cameroon, SMMEs employ 61% of the workforce and their contribution to GDP is estimated at 31% (INS 2009).

Beyond this contrast, it should be noted that in developing countries such as Cameroon, SMMEs present a huge potential for job creation, for stimulating entrepreneurship, and in creating an industrial fabric that is capable of adapting to the needs of large companies. It could therefore be assumed that they can contribute more to economic growth in Cameroon if they manage to find better combinations between information and communication technology (ICT) and innovations to boost productivity and get better performance. More generally, the use of ICTs as a lever for profits from the innovativeness of companies comes from their ability to accelerate innovation processes (Pavlou and Sawy 2006) and from their ability to better identify emerging markets' needs (Tambe et al. 2012). Numerous works on this subject claim that generally problems related to the use of ICT tools for doing business and the separate and joint adoption of different types of innovations are the first barrier to SMME development—more important than corruption, poor infrastructure, or abusive taxation (Dibrell et al. 2008; Huang and Liu 2005). In fact, for proper operations, SMMEs need a good combination of ICTs and innovations. However, it appears that since the reform of the telecommunications sector in Cameroon (law 98/014), the use of ICTs alone has no significant impact on a firm's performance, and innovation activity considered separetly has a nonlinear impact on its performance (Mbassi and Alain 2012). So the implementation of new ICT systems alone will be insufficient to generate positive effects on SMMEs' productivity.

To these problems are added those related to innovations that can be defined according to the OECD Oslo Manual (2005) as the implementation of a new product (good or service) or a new or significantly improved process, a new marketing method or a new organizational method in business practices, workplace

organization, or even external relations. It thus distinguishes four categories of innovations: Firstly, product innovation which is the introduction of a new good or service significantly improved in terms of its characteristics or the use to which it is intended. Secondly, process innovation which is the implementation of a new or substantially improved method of production or distribution. Thirdly, marketing innovation, which is the implementation of a new marketing method, involving significant changes in product design or packaging, product placement, product promotion, or product pricing. And fourthly, organizational innovation, which refers simultaneously to new forms of work organization, knowledge management systems, methods of mobilizing workers' creativity, and new forms of relationships between companies and their economic environment. Whatever its form, economists generally agree that innovation is one of the ways of being more efficient and gaining a competitive advantage by addressing the needs of the market (Dibrell et al. 2008; Hajjem et al. 2010; Tirole 1995).

Considering innovations and ICT as the drivers of productivity and competitiveness, different scholars from around the world argue that innovations and ICT are important sources of growth and business performance (Balachandre and Friar 1997). Since there are hardly any publications on innovation practices and their impact on SMMEs in Cameroon, this chapter attempts to fill this gap by assessing the impact of SMME innovations and use of ICT tools on their performance. More specifically, this chapter:

- Examines the importance that SMMEs in Cameroon in relation to the concepts of innovations and ICT in order to face competition and so ensure their sustainability and performance;
- Assesses and analyzes the effects of innovations and use of ICT in business practices on SMMEs' performance;
- Assesses and analyzes the combined effects of different types of innovations and ICT on SMMEs' performance; and
- Provides policy recommendations that can create a favorable framework for innovations and ICT in SMMEs in Cameroon.

The rest of the chapter is organized as follows: The following section reviews relevant literature related to innovations and business performance and ICT and business performance and establishing a link between innovations, ICT, and performance. Section 3 presents the methodology and data used. Results and conclusions are then discussed in Sect. 4. The chapter ends by outlining the limitations of the study and giving suggestions for future research.

2 Literature Review

Business performance is a result of many factors, including the ability to innovate and invest in ICTs. Thus, it is important to find out the relationship between these.

2.1 Innovation Behavior and SMMEs' Performance

Innovation plays an important role in the success of a product in the market and hence in a firm's performance. The acceptance of the Schumpeter (1939) thesis establishing that intensive R&D innovations are the engine of economic development leads to the assumption that most successful companies are those which manage to develop innovations with a high degree of novelty or radical innovations. While this assumption had been accepted for long, recent analyses are more critical. For example, researching this subject in America and Germany Dowd and Burke (2000) found only a mitigated relationship. Similarly, Markides (2000) identified more than 30 firms that became international leaders (such as Dell) without making any technological innovations. Also, continuous development of incremental innovation waves is given credit for the rise of Japanese companies (Markides 2000). This strategy has proved to be more effective than the slower development of radical innovations.

Thus, the link between innovations and performance is more complex than initially assumed. Some researchers (e.g., Balachandre and Friar 1997) used technical characteristics assessed by obtaining a patent or the intensity of efforts in development research (R&D) to measure the degree of novelty of a firm. Companies with a patentable innovation may prefer the strategy of secrecy (Tidd and Driver 2000) given the fact that the dissemination of information caused by the diffusion of the patent can reduce profits linked to the knowledge crystallized in it. In addition, the deliverance of a patent is only an indicator of the recognition of innovation and does not give information on the importance of the novelty it bears. For St-Pierre and Mathieu (2004), SMME innovations are often unpatentable because on the one hand delays or administrative requirements do not suit the reality of SMMEs and on the other hand, the disclosure obligations of certain strategic information about an innovation may place a company in a vulnerable position vis-à-vis its competitors with more resources. Thus, given the fact that some patents are filed only to block development among competitors the question about the usefulness of patents remains open. This shows how the indicator of measuring innovations through the number of patents filed leads to an underestimation of the importance of innovations.

In addition, budget utilization for R&D activities to measure the importance of innovations in firms can significantly understate their actual effect on performance because companies do not always measure the actual amount of money being spent on R&D and beyond that R&D processes are often diffused and unorganized. As Audretsch (1995) suggests, R&D activities are not all aimed at producing innovations, but may also be oriented to the imitation of a new technology or its transfer within a company, or they may simply target an increase in productivity and efficiency (Raymond and St-Pierre 2010). Thus, R&D activities, allocated resources, and the possession of patents fail to fully define the degree of innovations in companies, if not to understand some elements of the process that can lead to

innovations. Crépon et al. (2000) use two methods (the decision to patent an innovation that varies from one company to another and the share of products less than five years in corporate sales) to assess firms' productivity gains attributable to R&D. They find that productivity growth explained by the number of patents is quite important and that large companies (those with large market shares or which are diversified) commit more often than others to formal research programs. This confirms the existence of Schumpeterian effects. In addition, while studying the innovation activities of French companies, Hajjem et al. (2010) took into account selectivity problems. Not taking into account the time component necessary for a proper understanding of the innovation process allowed the authors to show that different types of innovations (product, process, organizational and marketing innovations) had significant positive effects on the productivity of French companies.

This difficulty in demonstrating a link between innovations and performance is due to the creative destruction phenomenon because innovation destroys products, techniques, and obsolete markets while creating new ones. According to Schumpeter (1942), creative destruction allows growth through the investments resulting from it and also generates the evolution of capitalism. It generates imbalances while creating a new equilibrium. Yet, Dibrell et al. (2008), using a survey of 311 American SMMEs, highlight the lack of a direct relationship between innovations (products and processes) and performance (measured by the rate of profitability and the growth rate). Similarly, Jansen et al. (2006) found lack of direct effect of operating innovations on the financial performance of 238 firms. Their study shows the moderating role that the dynamism and competitiveness of the environment plays, having significant cross-effects on performance.

Faced with the problems of competition and growth, innovations become important because they can place a firm in a quasi-monopoly for a longer or shorter time (Liouville 2006). Firms innovate in this case to defend their current position relative to their competitors and to obtain new competitive advantages (Tirole 1995). A firm may respond by innovating not only to avoid losing market share to the benefit of an innovative competitor, but also to take the lead in order to grab a strategic market position relative to its competitors. Roper and Love (2002) show that the probability of exporting is positively related to product innovations in British and German companies. For British companies, innovations are positively related to the intensity of exporting. This relationship is reversed in Germany, and this is explained by the fact that the needs of this country, which at the time of the study was undergoing profound structural reorganization after reunification, presented significant market opportunities for innovative businesses. Faced with a lack of consensus in the literature on the innovation–performance relationship, next we review literature on the use of ICT and SMMEs' performance.

2.2 The Use of ICT and SMMEs' Performance

The use of ICT is growing in companies for different tasks such as communication, search for information, marketing, group work, management accounting, and prospecting. In its early days, the impact of ICT on performance was unreliable as, for example, expressed by the ICT productivity paradox (Solow 1987). Many authors were interested in the differences in ICT productivity growth between the USA and European countries. Beyond macroeconomic issues, ICT use in industrial firms was an opportunity for economists to focus on the evolution of organizations, their productivity, and employee working conditions (Benghozi et al. 2000) and thus the performance of firms (Greenan and Mairesse 2006). Greenan and Mairesse studied the impact of ICT investments and use on a firm's performance. Leavitt and Whisler had already predicted in 1958 that the use of ICT (including computer use) would lead to the disappearance of the middle management because ICT would perform their usual tasks and moreover improve the performance of firms. Subsequently, despite researchers' increasingly growing interest in the topic, studies on the effects of ICT on productivity emerged with the main assumption that the implementation of a new ICT system alone was insufficient to generate positive effects on a firm's performance (measured by productivity).

Following this trend, Black and Lynch (2001) analyzed the effects of ICT on the productivity of US manufacturing firms. They showed that the reorganization of work through ICT had a positive and significant effect on labor productivity. Investigating major US companies in the same sector, Bresnahan et al. (2002) demonstrated that ICT, just like new products and services, positively affected the demand for skilled workers and labor productivity of firms. In French manufacturing firms, Janod and Saint-martin (2003) and Ben Aoun et al. (2010) show that reorganizations had a positive effect on the productivity of factors while they did not alter the labor and capital growth rate. They conclude that firm reorganization induced by the use of ICT is a source of performance improvement built on a more efficient use of factors of production.

Following these, numerous works using econometric estimates and very divergent methodological approaches have achieved concrete results, which are not always generalizable (Aral and Weill 2007). For example, Huang and Liu (2005) conclude that ICT investments taken separately have no significant direct impact on the performance of a firm. However, Cardona et al. (2013) indicate that the effect of ICT on productivity is positive and significant. Thus, the role of ICT cannot be analyzed solely as an investment in tools (hardware and software), but has to also be seen in the development of a specific capacity of the firm that offers an opportunity to develop a competitive advantage (Liang et al. 2010). Bocquet and Brossard (2007) show that investments in ICT generate value at the organizational level, but that this value depends on the level of additional resources, the competitive environment, and the macroeconomic situation.

Certainly, the role and specificities of ICTs in SMMEs' operations had been a subject for debate. Relationships with ICT are not evident for small-sized

organizations (Deltour and Lethiais 2014). These types of businesses often develop a sense of 'impotence' in the face of ICT because of possible systematic difficulties and high levels of computer illiteracy. The link between ICT and SMMEs' performance can be influenced by additional factors such as the implementation of relevant ICTs, their complexity, their quantity, and associated skills needed by users. According to Aral and Weill (2007), ICT assets (equipment and investments) and ICT capabilities (ICT skills, ICT practices) can be combined with innovations and with material and human resources to improve SMMEs' performance.

2.3 Support for Innovation Activities Through the Use of ICT on a Firm's Performance

Prior research on the interaction between ICT and innovation capacity on a firm's performance presents contradictory results. But ICT has a positive influence on the relationship between innovations and SMMEs' performance. Based on an investigation of 297 large enterprises in Taiwan, Huang and Liu (2005) show that the interaction variable between companies' innovation capacity (R&D rates) and ICT capital (ICT investment rate) is positively related to performance, showing a synergistic effect. Similarly, Dibrell et al. (2008) found a lack of a direct link between innovations and performance and demonstrated an indirect relationship through the importance given to ICT by executives. By investigating a model of 311 American SMMEs, they emphasized the mediating role of ICT on performance. Kmieciak et al. (2012) on the other do not confirm the positive effect of ICT on the relationship between innovation capacity and performance of firms. In the framework of the OECD Working Group on Luxembourg firms, Ben Aoun (2010) concludes that there is a positive relationship between the use of ICT and innovativeness. Similarly, Raymond et al. (2013) show that the ability to innovate has an effect on the growth and productivity of these firms. However, the increased use of ICT by companies focusing on the ICT integration process does not strengthen the effect on their performance.

These contradictory findings can be explained by different types of operationalizations, analysis tools, and dimensions: Kmieciak et al.'s (2012) study uses multiple regressions on data from 109 Polish SMMEs, while Raymond et al. (2013) perform a quantitative investigation with 309 Canadian manufacturing SMMEs with different frameworks. Ben Aoun (2010) estimates a probit model with random effects correcting the endogeneity of ICT, while Deltour and Lethiais (2014) use a multiple correspondence analysis model extended to the use of ICT in Luxembourg firms. Some authors propose an analysis focusing on specific ICTs. This is the case with Aral et al. (2012) who emphasize the importance of distinguishing the effects of information technology, the role of ICT taken as a whole and effects of specific tools that can be associated with policies. These specific ICTs can strengthen companies' innovation capacities. In the context of product innovation, Pavlou and

Sawy (2006) identify three situations in which new product development skills can be enhanced through ICTs: appropriate use of project management and resource management systems; appropriate use of knowledge management systems; and appropriate use of collaborative work systems. Asdemir et al. (2012) show that the use of ICT tools and software effectively enhance the collaboration between those responsible for innovations and consequently reduce the development cycle. They also reduce development costs, increasing the possibilities for different achievements and reuse, and finally improve the quality of the conceived product. Tambe et al. (2012) analyze how external data collection practices supported by ICT are a source of innovation (product) and productivity. Meanwhile, Kmieciak et al. (2012) put forward the idea that some ICT tools enable a better understanding of the market by facilitating communications with customers, who participate (via e-mail, discussion forums, social networks) to design products that meet their expectations. Although this opening to customers is often limited (Kuusisto and Riepula 2011), it can be high in some cases.

Given this divergence of ideas in developed countries, a comprehensive study in developing countries would be welcome not only to assess the importance of innovations and ICT in their economies but also their combination on SMMEs' performance. This need to deepen the research in the Cameroon context is reinforced by the poor existing literature regarding Cameroon and sub-Saharan Africa, whereas SMMEs are the dominant forms of business organization in sub-Saharan Africa (SSA) representing between 95 and 99% depending on the country, mainly about 99% in Cameroon with a strong representation (89%) of individual companies (INS 2009). Moreover, Africa is among the continents with the highest technological penetration.

3 Methodology

Given the lack of consensus from previous researches and the poor existing literature regarding Cameroon and sub-Saharan Africa, the objective of this research was to assess the impact of innovations and the use of ICT on SMMEs' performance in Cameroon. In particular, we tested the existence of a reinforcing effect caused by innovations supported by ICT on the performance of SMMEs.

3.1 Data Source

The data used for this research was from the General Census of Enterprises done in 2009 by the National Institute of Statistics (INS). This census involved 93,969 companies and institutions operating in Cameroon. It represented 86.5% of the tertiary sector, 13.1% of the secondary sector, and only 0.4% of the primary sector. The main objective of the census was to gain a better understanding of the current

situation of enterprises and institutions in order to develop strategies for public authorities, economic operators, and other analysts to effectively play their roles. In general, the informations in this survey are related to companies, their managers and employees, business environment, technological innovations, ICT use and production stock. It covered the entire country by targeting all economic units spotted in the field. We focused only on SMMEs operating in professional fixed and permanent locations (having a permanent business address). From the 93,969 companies and institutions surveyed, we extracted 36,976 that matched our study's requirements. The classification used here is that of the National Institute of Statistics (INS 2009), which considers those businesses with not more than five employees and an annual turnover of less than US $27,275 as micro-businesses; small businesses are companies with between six and 20 employees and an annual turnover of between US $27,275 and US $180,820; and medium enterprises are companies with between 21 and 100 employees and an annual turnover between US $180,820 and US $1,818,182.

3.2 Specification of the Econometric Model

The context of innovations and ICT analyzed in this work is devoted to measuring the output of innovative activities accompanied by the use of ICTs in terms of productivity. While many authors have measured firms' performance, they have not used the same measuring instruments. Some (e.g., Gauzente 2011) used countable indicators of a company that were calculated by assessing their annual reports and were associated with their economic and financial performance such as the growth in the sales turnover, the production of goods and services, the value added, the rough operating surplus, the rough operating result, and the net operating profit. Apart from these indicators, other authors (e.g., Charreaux 1997; Louizi 2011) used financial ratios such as profitability (ratio between realized benefits and sales turnover), capital turnover (ratio between sales turnover and investments), investment output (ratio between realized benefits and investments), credit output (ratio between net benefits and total assets), assets output (ratio between net benefits and stockholders' equity), and Tobin's Q.

The context of innovation and ICT analyzed in this chapter is devoted to measuring the output of innovation activities and of the use of ICT in terms of productivity. To estimate the productivity of firm i, one can postulate a relation binding its gross margin Y_i to its inputs—capital (K_i) and labor (L_i) (see, e.g., King and Park 2004):

$$Y_i = \theta_i f(K_i, L_i) \tag{1}$$

where factor θ_i collects the productivity of the company.

By supposing a functional form of a Cobb–Douglas equation type, we can obtain a log linear relation as:

$$\ln Y_i = \ln \theta_i + \beta_K \ln K_i + \beta_L \ln L_i \tag{2}$$

The measurement of performance used in this study can be the sales turnover, profit, or added value. Each measurement integrates at least one of the three following shutters: the quantity and the set of market products, the selling prices of goods, and the costs of the acquisition of goods. Each of these shutters can be affected by the entrepreneur's characteristics, the company's characteristics, and related commercial practices. In our analysis, we consider two main inputs: the capital which we approximate by the investments made by the company since its creation and the labor factor which includes the total number of permanent and temporary workers, which is a fraction of the annual total number of working hours performed by these employees.

Productivity θ_i is unobservable by the econometer. We make the assumption that it depends on the characteristics of the entrepreneur (like Paulson et al. 2006) and on the characteristics of the company and the market (see King and Park 2004). We hold with these authors by supposing that productivity depends, beyond other determinants, on the capacity to innovate and the use of ICT tools. We can thus express the logarithm of productivity θ_i of company i as:

$$\ln \theta_i = \alpha_0 + \gamma X_i + \lambda Z_i + \tau C_i + \varepsilon_i \tag{3}$$

where X_i is a vector of variables related to innovation activities, Z_i the vector of the variables related to ICT, and C_i the vector of variables related to innovation activities supported by ICT. The term ε_i can be seen as errors of measurement or shocks on a firm's productivity and are independently and normally distributed with zero as mean.

By combining Eqs. 2 and 3, we obtain a reduced form of the model where the logarithm of the production is explained by the logarithm of the stock of capital in the SMME, the logarithm of employment plus the contribution of innovations and ICT and the combination of both:

$$\ln Y_i = \alpha_0 + \gamma X_i + \lambda Z_i + \tau C_i + \beta_K \ln K_i + \beta_L \ln L_i + \varepsilon_i \tag{4}$$

Taking into account the broad variance in the size and type of the company and the heterogeneity of its activities, the traditional assumption of the constant variance of the stochastic term of error in this model is likely to be violated. We thus supposed heteroscedasticity by expressing the variance of errors like a multiplicative function of all explanatory variables of the model (see, e.g., Harvey 1976 or Greene 2003). The parameters of the model are estimated by the maximum likelihood method. Given the size of our sample (4078 SMMEs), the standard deviations might not be correctly estimated if we use the asymptotic matrix of

variance–covariance. We therefore used the bootstrap method to estimate standard deviations and testing the significance of the coefficients.

3.3 Variable Selection

In terms of variables representing innovation activities in SMMEs, the capacity to innovate was measured through the level of investments in R&D (Huang and Liu 2005). An alternative approach consists of estimating the capacity of acquisition of the results of R&D centers that the company has been able to implement. Thus, Subramanian (1996) stresses that measuring the innovation capacity must be done in a multidimensional way. Among the different dimensions of innovation capacity in this chapter are investments in experimental R&D, the acquisition of R&D services, and the launch of new products in the market.

Variables related to the use of ICT by SMMEs are characterized by two complementary dimensions highlighted by Aral and Weill (2007): ICT assets and internal IT skills. ICT assets correspond to investments in equipment and software in an enterprise. In this chapter, we use functions' computerization rates, measured by the rate of access to computers and the rate of employees who can use computers. For a set of possible positions within a company (accounting and finance, sales, purchasing, inventory, logistics/distribution, and human resources management), the use of Internet, intranet, and online business practices were assessed.

In the variables related to support of innovation activities through ICT, ICTs dedicated to innovation correspond either to investments in specific tools (acquisition of machinery, software, equipment, and other external technologies) related to the implementation of technological innovations, or the increased use of ICT tools available as part of innovative activities. In addition, the training of employees to ICT for innovation activities is an important indicator of human capital (Abeysekeraa and Guthrieb 2004). We introduce an interaction variable (innovation capacities dedicated to ICTs) in the model that combines innovative capacity and the fact of having accompanied innovations through investments in ICTs, or a more developed use of these technologies in business. We added two control variables in this model which allow us to complete the analysis of the sources of performance (Table 1).

3.4 Statistical Analysis of the Explanatory Variables

The use of computers in business is a common practice. However, only 51.79% of SMMEs in Cameroon have at least one computer as a work tool (with an average of seven computers per SMME depending on size). The presence or absence of this business ICT tool is not always linked to the ability of staff members to use it. In fact, less than 50% of the staff members mastering ICT use effectively have access

Table 1 Description of variables

Variables	Descriptions
Dependent variable	
VA	Added value in the year of the survey in US $
Variables linked to innovation activities	
R&D	Experimental R&D 1 = Yes, 2 = No
SER_R&D	Acquisition of R&D services 1 = Yes, 2 = No
NOU_PROD	New products in the market 1 = Yes, 2 = No
Variables linked to ICT usage	
UTIL_TIC	ICT usage 1 = Yes, 2 = No
TAUX_ORDI	Computer access rate TAUX_ORDI = number of functional computers/number of people mastering computer use
NET	Internet connection: 1 = Yes, 2 = No
AF_NET	Online business practices 1 = Yes, 2 = No
Variables linked to support of innovation through ICT	
F_TIC	IT skill training for innovation activities 1 = Yes, 2 = No
LOG_INNOV	Software acquisition linked to technological innovations. 1 = Yes, 2 = No
MA_INNOV	Machinery acquisition linked to technological innovations. 1 = Yes, 2 = No
COMB	Combination innovation-ICT innovation capacity X ICT use rate
Control variables	
SA	Sector of activity (operation) of the SMME 1 = Primary sector, 2 = Secondary sector, 3 = Tertiary sector
ENR	Business environment 1 = Good, 2 = Fairly Good, 3 = Bad

Source Compiled by the authors, based on RGE (2009)

to a computer at work. While ICT penetration in the country remains uneven regarding the sector of activity, it is much more visible in the tertiary sector (58.24%) and the secondary sector (41.42%), but less so in the primary sector (0.34%). This sector is characterized by a high level of computer illiteracy among working personnel.

In general, the anchoring of ICT is low in SMMEs. Barely one-third of the SMMEs are connected to the Internet (35.9%) and an even lower proportion has an

intranet (18.39%) in its working environment (INS 2009). A study by the Ministry of Communication in 2005 said that 12% of the businesses were connected to the Internet. Four years later (INS 2009), there was a clear improvement which is explained by the strong competition observed in the telecommunications sector and the considerable cut-down of media costs such as those on computers, phones, and network access. Moreover, looking beyond the tertiary sector (e.g., banks) that largely uses intranet, other sectors are still at the embryonic stage of developing this tool. The use of Internet for business transactions (e-commerce) only affects a quarter (25.99%) of SMMEs as a whole. It is experienced much more by the service sector (58.24%) (e.g., transport) and the secondary sector (41.42%) (e.g., extraction, manufacturing, construction). This weak Internet usage may be partly explained by the way in which the Internet market operates. Thus, two years after the observation made by the Ministry of Post and Telecommunications in 2007 (INS 2009), the underutilization of possibilities offered by Internet remain valid. We generally find that the ICT indicators listed here increase systematically with the size of a company, that is, the larger a company, the higher these indicators.

Overall, only 7.33% of the SMMEs reported using results of research centers. The primary sector (agriculture, for example) which usually experiences an extensive dissemination of results from research centers uses them the most. Very few firms have devoted budgets for technological innovations ($16,683.63 on average). The acquisition of innovative machinery and equipment (5.37%), innovation-oriented software (4.05%), and ICT-related training for innovative activities (3.24%) are the three areas where they spend more of their budgets (Table 2).

When it comes to the business environment, only 2.53% entrepreneurs had a good opinion about it, 16.11% had a fairly good opinion, 36.46% thought it was bad, while 44.90% did not have an opinion. Despite efforts by the government and GICAM (main employers' federation in Cameroon) to improve the business environment, a majority of the business leaders were pessimistic and therefore worried about the future of their businesses. In general, the most optimistic CEOs were in the primary sector (agriculture, livestock) and to a slightly lesser extent in the service sector (banks and insurance). The more pessimistic ones were in the secondary sector (trade, industries).

4 Econometric Results

Our regression results are given in Table 3. The results show that innovation capacities and abilities in ICT taken separately do not have the same results on the performance of SMMEs as they do when they are combined.

– Individual effects of innovations and ICT on SMMEs' performance

Table 2 Descriptive statistics

Variables	Descriptions	
Standard production factors		
VA	Added value in the year of the survey in US$	Mean = 11,621.50 Standard deviation = 144,181.82 Min = −1476; max = 1,818,181,82
Variables linked to innovation activities		
CAP_INNOV	Innovation capacities	Mean = 9,176.213 Standard deviation = 460,525.8 Min = 0; max = 2.93e + 07
RESUL_R&D	Exploitation of R&D results	Yes = 7.33 No = 92.67
R&D	Experimental R&D	Yes = 1.62 No = 98.38
SER_R&D	Acquisition of R&D services	Yes = 0.96 No = 99.04
NOU_PROD	New products in the market	Yes = 0.71 No = 99.29
Variables linked to ICT usage		
NOM_ORDI	Number of functional computers	Mean = 7.112 Standard deviation = 28.7 Min = 0; max = 623
CAP_TIC	ICT capacities	Mean = 7641.3 Standard Deviation = 267,047.8 Min = 0; max = 1.65e + 07
TAUX_ORDI	Computer access rate TAUX_ORDI = number of functional computers/number of people mastering computer use	Mean = 0.4938 Standard Deviation = 0.8323 Min = 0; max = 20.83
UTIL_TIC	ICT use	Yes = 51.79 No = 48.21
NET	Internet connections	Yes = 35.90 No = 64.10
AF_NET	Online business practices	Yes = 25.99 No = 74.01
Variables linked to support for innovations through ICT		
LOG_INNOV	Software acquisition linked to technological innovations	Yes = 4.05 No = 95.95
MA_INNOV	Machinery acquisition linked to technological innovations	Yes = 5.37 No = 94.63
COMB	Combination CAP_INNOV X CAP_TIC	Mean = 2.50e + 07 Standard deviation = 0.47e + 08 Min = 70; max = 3.56e + 10

(continued)

Table 2 (continued)

Variables	Descriptions	
Control variables		
SA	Sector of activity of the SMME	Primary = 0.34 Secondary = 41.42 Tertiary = 58.24
ENV	Business environment	Good = 2.53, Fairly Good = 16.11, Bad = 36.46, No opinion = 44.90

Source Authors compilation, based on RGE (2009)

Table 3 Econometric model's results

Variables	Independent variable VA
	Coefficient
LOG_COMB	0.0215031* (0.03386)
CAP_TIC	−0.027223 (0.02223)
CAP_INNOV	−0.0044528 (0.03625)
NOMB_ORDI	0.0034129** (0.00173)
UTIL_TIC	0.4161848*** (0.14822)
RESULT_R&D	0.6061973*** (0.18940)
SER_R&D	−0.9015664* (0.4958)
ENV_1	0.2885192 (0.30378)
ENV_2	0.4062594*** (0.15219)
ENV_3	0.5731813*** (0.12592)
SA_1	2.479741**
SA_2	1.538525*** (0.16287)
NET	−0.3456903** (0.13807)
Constant	1.589216*** (0.07343)

Source Authors compilation based on RGE (2009)
R^2 = 0.0429; R^2 Adjusted = 0.0399; Prob $(X > F)$ = 0.0000; F = 14.02; Observation = 4078; ***(1%), **(5%), *(10%)

The innovation capacities and ICTs' abilities taken separately have an insignificant negative effect on the performance of SMMEs. This negative effect of innovation capacities and of SMMEs' computerization is because of difficulties returns on investments for both these activities in SMMEs. Developing and implementing innovations has significant costs, but the benefits of their withdrawal remain uncertain commercially. Similarly, the cost of computerization is high as technologies tend to become obsolete quickly and this makes it difficult for a firm to get distinguished from other firms. These results are consistent with those of Dibrell et al. (2008) who concluded that the direct effect of innovation capacities on performance was insignificant. Huang and Liu (2005) noted the existence of a non-linear relationship between a firm's innovation capacities and performance, which reflects a positive effect up to a certain investment threshold in R&D and then a negative effect. To explain this negative effect, they based their analysis on the concept of diminishing returns of R&D which states that the production rates increase but this increase is lesser than the increase in R&D.

Contrary to the positive impact of the effect of ICT capacities on SMMEs' performance found in prior research (Dibrell et al. 2008; Huang and Liu 2005), we find this effect to be negative and insignificant especially as configuring ICT into an asset requires individual and collective skills to the point where ICT-led companies are tempted to look at the external labor market to tap new skills. This is not necessarily effective for SMMEs. This contradictory result is probably due to the various measures used for determining ICT capacities. While Dibrell et al. (2008) measured ICT abilities by the overall budget allocated to ICT, we followed the approach used by Aral and Weill (2007) and first considered computerization resources and second the use of ICT tools in business practices. This orientation was guided by Cameroon's context as outlined earlier: an insignificant budget for ICT. Rather than basing our study on the budget, we found it best to look at its dissemination.

– Combined effects of innovations and ICT on SMMEs' performance

The combined effect of support for innovation activities by ICT was positive and significant at a 10% level. This result is explained by the fact that ICT can have benefits such as effectiveness, efficiency, being an aid in decision-making, increased communication, or mobility that affect the tasks performed by a firm. For this, the effect of innovations on performance will become concrete when accompanied by ICT. Further, the degree of anchoring of ICT tools and their usage in a company enables managers and employees to accelerate the innovation process, and thus improves the firm's performance in terms of process streamlining and cost reduction. Similarly, an innovative SMME benefits from ICT in a social dialogue. This means that the implementation of intranet in a firm can boost commercial innovations, since e-mails or social e-posts can replace billboards. The demonstration of a synergistic effect between ICT and innovations is consistent with Huang and Liu's (2005) results for large firms. These results differ from those put forward by Raymond et al. (2013) using a sample of Canadian SMMEs. The use of ICT tools

specifically mobilized for innovations favors exploitative activities. While there may be software dedicated to innovation management, digital media for innovation uses collaborative ICT tools. That is why Dibrell et al. (2008) show that the innovation capacity of a firm affects its performance only through increased ICT resources, with the direct effect being insignificant.

By focusing on the relationship between ICT and innovations, using the Internet for business transactions increases Cameroonian SMMEs propensity to innovate (Table 3). ICT's use for production and human resource management operations and quality management operations is favorable for SMMEs' innovation activities. The disparity in results (the negative impact of the Internet and the positive effect of using ICT tools) suggests that different types of ICT equipment and their usage have distinct effects on innovation activities. If these results confirm that not all ICT investments produce equivalent effects on the propensity to innovate, they are consistent with those obtained by Nguyen Thi and Martin (2011) for Luxembourg data. Our analysis also reveals that to ensure the best conditions for success in innovations through ICT, companies will have the advantage of playing on three basic factors: space, time, and materiality. ICT enables companies to overcome physical limits of space by smoothly managing the spatialization of the value chain. The relation to time is also changed by ICTs. They open instant, transparent, and comprehensive access to information. In addition, ICTs have also revolutionized the nature of products and services, providing access to electronic distribution of services and immaterial goods. These observations on Cameroon's data suggest that the use of ICT allows a company to work with its customers and suppliers and so benefit from new ideas and expertise. Internally, ICT (intranet) facilitates group work and team synergy through fluid exchange and information flow. In this part of the implementation of the intranet, for example, e-mail messages can replace billboards; this is the same for typing of conventional forms for business operations.

– Business environment and sector of activity

Considered as the model's control variable, the business environment positively influenced SMMEs' performance at 1%. This result confirms the conclusion of Jansen et al. (2006) according to which the dynamism of the business environment and the degree of competition has an impact on the performance of SMMEs under certain conditions. Also, the significance of the sector of activity confirms Forsman's (2011) results according to which the sector of activity acts on innovation activities and also on performance, the latter being influenced by the nature of the activity. This strong positive and significant influence of the business environment and sector of activity variables, respectively, at the 1 and 5% threshold can be attributed to the implementation of government policies in the private sector in order to ease conditions of starting and operating a business.

5 Conclusions

SMMEs occupy an important place in the Cameroonian economy and constitute almost all of the country's economic fabric. Despite their strong representation in the productive sectors, SMMEs contribute little to GDP and employment in the country. Convinced that they can contribute to more economic growth in Cameroon if they manage to find better conditions for their development and thus improved performance, this work aimed to highlight the link between innovations, ICT, and SMMEs' performance. To achieve this objective, the analyses were based on data collected through the General Census of Businesses conducted by the National Institute of Statistics (INS 2009), covering 93,969 companies and institutions operating in Cameroon. For this, we performed an analysis in two steps: First, a descriptive statistics analysis was done using different variables, and then an econometric analysis to test the significance of these variables was done.

From descriptive statistics, we found that the anchoring of ICT is low in SMMEs. Only 51.79% of the SMMEs had at least one computer as a working tool. Similarly, only one-third of the SMMEs were connected to the Internet (35.9%), and a lower proportion had an intranet (18.39%) in their work environment. Therefore, the use of the Internet for business transactions (e-commerce) affected only about a quarter (25.99%) of the SMMEs. This weakness in Internet use may be partly explained by the way the Internet market operates in Cameroon: weak connection flows, very high connection costs, and limited Internet supply. When 4G connections are already functioning in most African countries, Cameroon is still having difficulties in completely providing 3G connections. This infrastructural environment hinders the development of e-businesses. Thus, a more efficient Internet supply will be an incentive for SMMEs to integrate its use in their business activities. To this, we can add weak migration to business credit cards (Visa, Paypal, Mastercard, etc.) for online transactions. Banks in Cameroon should reduce paper transactions by delivering business credit cards to their customers. The government in synergy with network operators should ameliorate the functioning of the Internet market: a high-quality connection and lower connection costs by opening the market to other economic agents. We also found that the ICT indicators listed here increased systematically with the size of a company. Given the means that the bigger companies have, they can benefit considerably from their ICT investments. SMMEs will benefit more from their ICT investment as they keep expanding.

The econometric analysis led us to the following results: Taking into account the weaknesses in innovation activities in all SMMEs in our sample, we could detect a nonsignificant negative effect of innovations and ICT capacities on the performance of SMMEs when taken separately. However, a combination of ICTs and innovations was positive and had significant relationship with performance. The effects of innovation on performance cannot be sufficiently important unless accompanied by ICT. The role of ICT in innovations, however, is more important as the anchoring of ICT use in SMMEs speeds up the innovation process. It thereby improves

a firm's performance in terms of reducing costs and streamlining processes. To market a new product, a SMME can publish offers and advertisement, develop various activities such as e-commerce and social exchange with customers and even create partnerships through the Internet. First, ICTs bring about a big change in attitudes and the way information is processed by SMMEs. ICTs also participate in the dematerialization and the creation of added value. Secondly, ICTs improve the level of decision-making and facilitate interactions and collaborations between employees and managers. Finally, they accompany the setup and implementation of innovations, thereby improving the performance of SMMEs. Therefore, SMMEs should orientate their ICT investments to those directly linked to innovations in order to improve their performance. To maximize the effects of innovations in SMMEs, it is important to focus on three dimensions that transform markets: market size, interconnection with customers and partners, and rich and diversified content. By allowing customers to access products and services regardless of their location, ICTs help companies reach new markets. While integrating innovation-focused ICTs for improving firms' performance, the cybercrime phenomenon pops up. Solving this and establishing a competitive economic environment may induce competition favorable for innovations and thus better performance.

References

Abeysekeraa, A., and J. Guthrieb. 2004. Human capital reporting in a developing nation. *The British Accounting Review* 36: 251–268.

Admassu, Tadesse. 2009. 'Quelles perspectives de financement pour les PME en Afrique?'. *La revue de PROPARCO*.

Aral, S., and P. Weill. 2007. IT assets, organizational capabilities, and firm performance: How resource allocations and organizational differences explain performance variation. *Organization Science* 18 (5): 763–790.

Aral, S., E. Brynjolfsson, and M. Van Alstyne. 2012. Information, technology and information worker productivity. *Information Systems Research*, 12: 1–19.

Asdemir, O., R.D. Banker, and I. Bardhan. 2012. Understanding the impact of collaboration software on product design and development. *Accounting Faculty Publications.* Paper 35. Available at http://ir.stthomas.edu/ocbacctpub/35

Audretsch, D.B. 1995. *Innovation and industry evolution*. Cambridge: The MIT Press.

Balachandre, R., and J.H. Friar. 1997. Factors for success in R&D projects and new product innovation: A contextual framework. *IEEE Transactions in Engineering Management* 44 (3): 276–287.

Benghozi, P.J., P. Flichy, and A. Iribarne. 2000. Le développement des NTIC dans les entreprises françaises. *Réseaux* 104: 31–58.

Ben Aoun, L., A. Dubrocard, and H. Tudor. 2010. TIC, innovation et effets perçus dans les entreprises luxembourgeoises, *Economie et Statistiques*, Working papers du STATEC et Observatoire de la Compétitivité.

Black, S.E., and L.M. Lynch. 2001. How to compete: The impact of workplace practices and information technology on productivity. *The Review of Economics and Statistics* 83 (3): 434–445.

Bocquet, R., and O. Brossard. 2007. The variety of ICT adopters in the intra-firm diffusion process: Theoretical arguments and empirical evidence. *Structural Change and Economic Dynamics* 18: 409–437.

Bresnahan, T.F., E. Brynjolfsson, and L.M. Hitt. 2002. Information technology, workplace organization and the demand for skilled labor: Firm-level evidence. *Quarterly Journal of Economics* 117 (1): 339–376.

Cardona, M., T. Kretschmer, and T. Strobel. 2013. ICT and productivity: Conclusions from the empirical literature. *Information Economics and Policy* 25 (3): 109–125.

Charreaux, G. 1997. Vers une théorie du gouvernement des entreprises, in G. Charreaux (ed.) *Le gouvernement des entreprises*, Economica, 421–469.

Crépon, B., E. Duguet, and J. Mairesse. 2000. Mesurer le rendement de l'innovation. *Économie et Statistique* 334.

Deltour, F. and V. Lethiais. 2014. Innovation et performance des PME : une approche par la contribution des technologies de l'information. *Association Internationale de Management Stratégique (AIMS)*, XXIII Conférence Internationale de Management Stratégique.

Dibrell, C., P. Davis, and J. Craig. 2008. Fueling innovation through information technology in SMMEs. *Journal of Small Business Management* 46 (2): 203–218.

Dowd, M.K. and R. Burke. 2000. In innovation, is it true that nothing succeeds like success? Engineering Management Society: Proceedings of the 2000 IEEE, available at http://ieeexplore.ieee.org/document/872565/?reload=true

Forsman, H. 2011. Innovation capacity and innovation development in small enterprises a comparison between the manufacturing and service sectors. *Research Policy* 40 (5): 739–750.

Gauzente, C. 2011. Mesurer la performance des entreprises en l'absence d'indicateurs objectifs: quelle validité? Analyse de la pertinence de certains indicateurs. *Finance Contrôle Stratégie* 3 (2): 145–165.

Greenan, N., and J. Mairesse. 2006. Réorganisations, changements du travail et renouvellement des compétences. *Revue Économique* 57 (4): 1121–1135.

Greene, W.H. 2003. *Econometric analysis*, 4th ed. Prentice Hall: Pearson Education Inc.

Hajjem, O., P. Garrouste, and M. Ayadi. 2010. Effets des innovations technologiques et organisationnelles sur la productivité: une extension du modèle CDM. Post-Print halshs-01208095, HAL.

Harvey, A.C. 1976. Estimating regression models with multiplicative heteroscedasticity. *Econometrica* 44 (3): 461–465.

Huang, C.J., and C.J. Liu. 2005. Exploration for the relationship between innovation, IT and performance. *Journal of Intellectual Capital* 6 (2): 237–252.

INS/RGE. 2009. Le recensement général des entreprises au Cameroun, Août-Novembre.

Janod, V., and A. Saint-Martin. 2003. Impact des réorganisations du travail sur les performances des entreprises manufacturières: une analyse sur donnée françaises 1997–1999. *Revue économique* 54 (3): 637–648.

Jansen, J., F. van den Bosch, and H. Volberda. 2006. Exploratory innovation, exploitative innovation, and performance: effects of organizational antecedents and environmental moderators. *Management Science* 52 (11): 1661–1674.

King, R.P., and T.A. Park. 2004. Modeling productivity in supermarket operations. *J Food Distrib Res* 35 (2): 42–55.

Kmieciak, R., A. Michna, and A. Meczynska. 2012. Innovativeness, empowerment and IT capability: Evidence from SMEs. *Industrial Management and Data Systems* 112 (5): 707–728.

Kuusisto, A., and M. Riepula. 2011. Customer interaction in service innovation: Seldom intensive but often decisive. Case studies in three business service sectors. *International Journal of Technology Management* 55 (1/2): 171–186.

Liang, T.P., J.J. You, and C.C. Liu. 2010. A resource-based perspective on information technology and firm performance: A meta analysis. *Industrial Management and Data Systems* 110 (8): 1138–1158.

Liouville, J. 2006. 'Degré d'innovation et performances des entreprises: Limite des recherche actuelles et nouvelles perspectives pour le management de l'innovation', *AIMS,* XVème conférence Internationale de Management Stratégique, Annecy/Genève, 13–16 Juin.

Louizi, A. 2011. 'Les déterminants d'une Bonne Gouvernance' et la performance des entreprises Françaises: Études empiriques, Université Jean Moulin Lyon 3, Université de Sfax, Thèse de doctorat en Sciences de gestion sous la direction de ROTH F.

Markides, C. 2000. *All the right moves: A guide to crafting breakthrough strategy*. Boston MA: Harvard Business School Press.

Mbassi, Sone and A. Alain. 2012. TIC, Changements Organisationnels et Performances Economiques des Enterprises au Cameroun, ICBE-RF Research Report No. 35/12.

Nguyen Thi, T.U. and L. Martin. 2011. *The relationship between innovation and productivity conditional to R&D and ICT use: An empirical analysis for firms in Luxembourg* Working Papers 11, Development and Policies Research Center (DEPOCEN), Vietnam.

Paulson, A.L., R.M. Townsend, and A. Karaivanov. 2006. Distinguishing limited liability from moral hazard in a model of entrepreneurship. *Journal of Political Economy* 114 (1): 100–144.

Pavlou, P., and O. Sawy. 2006. From IT leveraging competence to competitive advantage in turbulent environments: The case of new product development. *Information Systems Research* 17 (3): 198–227.

OECD. 2007. *Travaux de Synthèse sur Le financement des PME et des entrepreneurs*. Paris: Février.

Ondel'ansek, K. 2010. Les contraintes de financement des PME en Afrique: le rôle des registres de crédit. Thèse de Doctorat, HEC Montreal.

Quiles, J. 1997. *Schumpeter et l'évolution économique: Circuit, entrepreneur, capitaliSMME*. Paris: Nathan.

Raymond, L., F. Bergeron, and A.M. Croteau. 2013. Innovation capability and performance of manufacturing SMEs: The paradoxical effect of IT integration. *Journal of Organizational Computing and Electronic Commerce* 23 (3): 249–272.

Raymond, L., and J. St-Pierre. 2010. R&D as a determinant of innovation manufacturing SMMEs: An attempt at empirical clarification. *Technovation* 30 (3): 48–56.

Roper, S., and J.H. Love. 2002. Innovation and export performance: Evidence from the UK and German manufacturing plants. *Research Policy* 31: 1087–1102.

Schumpeter, J. 1942. *Capitalisme, socialisme et démocratie, éd française*, Paris, Payot 1990.

Schumpeter, J.A. 1939. *Business cycles: A theoretical, historical and statistical analysis of the capitalist process*, 461. New York: McGraw-Hill Book Company.

Solow, R. 1987. We'd Better Watch Out, *New York Times* Book Review, 12 juillet.

St-Pierre, J. and C. Mathieu. 2004. 'Innovation de produits et performance: une étude exploratoire de la situation des PME canadiennes', 7ème Congrès International Francophone en Entrepreneuriat et PME, *Association Internationale de Recherche en Entrepreneuriat et PME (CIFEPME)*, 27, 28 et 29 October 2004. Available at: www.airepme.org

Subramanian, A. 1996. Innovativeness: Redefining the Concept. *Journal of Engineering and Technology Management* 13 (3/4): 223–243.

Tambe, P., L. Hitt, and E. Brynjolfsson. 2012. The extroverted firm: How external information practices affect innovation and productivity. *Management Science* 58 (5): 843–859.

Tidd, J., and C. Driver. 2000. Technological and market competencies and financial performance, in J. Tidd (ed.) *From knowledge management to strategic competence*. London: Imperial College Press.

Tirole, J. 1995. *Théorie de l'Organisation Industrielle, Economica et The Theory of Industrial Organization*, MIT Press.

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Chapter 11
Job-Rotation, Utilization of Workshops, and Performance of SMEs: An Empirical Study from the Gasabo District in Rwanda

Patrick Habiyaremye, Dan Ayebale and Seperia B. Wanyama

Abstract This study addresses an important aspect of building small- and medium-sized enterprises' (SME) performance capacity through human resource development. It specifically studies the experiences of manufacturing SMEs in Rwanda to demonstrate the performance implications of using workshops and job-rotation in small entrepreneurial firms. Given its unique commitment in the region for building necessary support for developing enterprises, Rwanda was a particularly interesting context to study this aspect. Our study included 101 firms drawn from Gasabo, a district in capital Kigali. With the help of a regression analysis, we found support for a positive direct link between job-rotation and SME performance. We, however, did not find a similar result regarding workshops and SME performance. In order to examine the effects of job-rotation and workshops in more depth, we tested for the combined effect of these two practices. Our findings demonstrate the value of workshops when combined with job-rotation among SMEs in our study setting. With these findings, our study demonstrates how local firms and advocates of workshops can effectively use this method to enhance SME performance.

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JEL Classification Codes J21 · J62 · N37

1 Introduction

In a world of increasing competition, employee training has become an important strategic activity in a contemporary firm (Dyer and Reeves 2006; Grant 2014; Mark et al. 1996; Nelson 2007).

Extant research has gone a long way in enhancing our understanding of training strategies (Huang 2001), costs (Kotey and Folker 2007), and benefits (Devins et al. 2004). Much focus in existing scholarly efforts has been on training practices and their strategic implications in the context of multinational corporations (MNCs) (Ferner 1997; Kostova 1999; Kostova and Roth 2002; Zellmer and Gibson 2006). However, a number of pertinent questions regarding SME adoption of training as a strategic activity still remain unanswered, especially in the developing-country context (Cook 2001; Robertson 2003). It is, therefore, not known whether training practices that create advantages for large firms are likely to offer the same competitive benefits to SMEs. And if so, under what circumstances can these practices be optimally adopted in the context of an SME (Moy and Lee 2002; Thassanabanjong et al. 2009). This study contributes to this area of academic debate by examining the experiences of SMEs in a developing country in Africa.

In the last few decades, firms in developing countries have increasingly been exposed to an environment of economic and regulatory reforms geared toward free market ideologies (Dasgupta et al. 2002; Luthans et al. 2000; Porter and Linder 1995; Vogel 1997). In this environment, SMEs in particular have to compete not only with local competitors but also with foreign firms that come with superior talent and unique skill development practices. In light of this trend, it becomes imperative for SMEs within these liberalized market and regulatory regimes to pay close attention to employee training as a strategic activity for survival (Beaver and Hutchings 2005). This view is echoed in the growing number of support programs by governments and their development partners in these countries aimed at encouraging SMEs to nurture and develop their skill and talent bases (Chaston et al. 1999; Collins and Clark 2003; Jennings 1997). Local SMEs can optimally benefit from these programs when there is knowledge about the relative performance implications of different training strategies on their performance.

We contribute to this knowledge base by studying manufacturing SMEs in Rwanda with regard to their utilization of workshops and job-rotation practices. Given its current unique and strong commitment to improving the business environment in the region, Rwanda is a particularly interesting country to study for this.

Given the increasing use of workshops as training support for SMEs in the region, studying the impact of workshops represents an interesting opportunity to guide practice. We also focus on job-rotation especially because of its strategic role in integrating knowledge and enhancing firms' learning capacities.

The rest of the chapter is organized as follows. The next section presents a literature review, which is followed by the research methodology and, thereafter, an analysis of the findings. The last section has a discussion and also provides a conclusion.

2 Literature Review

In comparative terms, extant literature demonstrates less preference for formal training (Clarke et al. 1999; Ramsay and Scholarios 2000), pays limited attention to an analysis of training needs (Salas and Cannon 2001; Winfred et al. 2003), and generally shows low commitment to employee training among SMEs vis-a-vis their large and MNE counterparts (Beaver and Hutchings 2005; Kotey and Folker 2007; Lepourte and Heene 2006; Shen and Darby 2006; Smallbone et al. 1995). A number of factors have been advanced to explain the unique training behavior among SMEs. Some studies have identified and found support for SME skepticism regarding the benefits of training at the firm level (Arendt 2008; Panagiotakopoulos 2011; Stokes 2001) and the increased preoccupation of these firms with day-to-day activities of the establishment as a result of which they fail to pay attention to broader strategic issues such as training (Beaver 2003). In the same vein, ignorance about available training opportunities has also been addressed (Gritz 2002; Moreland 2002; Patton et al. 2000). Some existing studies point to the lack of proactive behavior among SMEs related to conducting training needs' analyses which deters them from considering employee training in their strategies (Jayawarna et al. 2007; Pansiri and Temtime 2008). Beyond factors that are internal to a firm, ample evidence also exists delineating the external barriers that SMEs face in their quest for training employees (Okpara and Kabongo 2009; Quader 2007; Tiwari and Buse 2007).

For instance, a number of studies have demonstrated a lack of training programs appropriate for SMEs (Ibrahim and Soufani 2002; Storey and Westhead 1996), wide occurrence of poaching of trained employees by competitors (Birdthistle 2006; Lange et al. 2000) and the cost of available training opportunities in the market (Almeida and Aterido 2010; Bryan 2006) to explain the limited intensity of training among SMEs. Along similar lines, the question of which training methods can be appropriate for SMEs has also attracted considerable academic interest. The discussion in this area has specifically revolved around issues related to cost (Huang 2001; Ladzani and Van Vuuren 2002), nature of formality (Gibb 1997; Jameson 2000), and flexibility (Aguilera et al. 2011; Rigby 2004) of the prevailing training opportunities in the market. This stream of research has specifically argued for a

need of developing training programs and methods that can be appropriate to the unique context of SMEs. In addition, training as a strategic activity has also been discussed in the previous literature (Achanga et al. 2006; Gray and Mabey 2005; Montesino 2002; Smallbone et al. 1995). Empirical studies on the topic have, however, largely yielded mixed results (Heraty et al. 2008; Jayawarna et al. 2007; Storey 1994). For instance, while some studies have found support for a positive relationship between training and SME performance (Bryan 2006; Fening et al. 2008; Mehmet et al. 2006; Zeng et al. 2010), others demonstrate counteractive evidence (Freel and Robson 2004; Namjae et al. 2007).

In order to address this problem, a number of studies have investigated underlying contingent factors that complicate the direct relationship between training commitment and performance (Chi et al. 2008; Macpherson and Jayawarna 2007). Notwithstanding the contributions made by previous studies, it can be observed that most of the conceptual and empirical contributions have focused more on large firms (Ballot et al. 2001; Brah et al. 2002; Gilley et al. 2004; Laursen and Foss 2003). A second limitation of this literature is that there are relatively few empirical studies on SMEs, especially in the context of developing countries (Karaev et al. 2007; Ruzzier et al. 2006). There is therefore room to contribute to the extant literature by advancing explanations on how employee training enhances the performance of an SME in a developing-country context.

3 Methods

3.1 Research Design and Study Setting

We adopted a survey methodology for our study. The survey was conducted between August 2013 and April 2014. The survey methodology has been widely applied in previous research addressing issues related to the topic of interest (Anderson and Sohal 1999; Fabi et al. 2007; McMahon 2001). Our interest was in studying the role and performance implications of workshops and job-rotation among SMEs in the manufacturing sector. In our study context, there were no publicly available relevant data on these variables. Consequently, the survey methodology was the most appropriate for studying the variables of interest. The survey consisted of manufacturing SMEs in capital Kigali. Kigali comprises of three districts: Nyarugenge, Kicukiro, and Gasabo. Compared to the other districts, Gasabo is where most SMEs in the manufacturing sector can be found (Ndamage 2013). Therefore, our survey concentrated on manufacturing SMEs in Gasabo District.

3.2 Study Sample and Data Collection Method

Our study sample comprised of manufacturing SMEs[1] in the furniture, crafts, metal works, brick making, and juice processing sectors. The SMEs included in the study were not randomly selected. Instead, we considered SMEs whose owners or managers were present at the time of the survey so that they could participate in the study. Following this approach, we visited 113 of the 228 SMEs in Gasabo District. Out of the 113 SMEs approached and who were requested to participate in the study, 12 declined, bringing our sample to 101 firms. This constituted 44% of the total population and a response rate of 89%. The high response rate can be attributed to the approach adopted in data collection. For each of the firms contacted, the second author personally administered the survey instrument. He visited the SMEs, requested a meeting with key informants, and conducted a personal structured interview in accordance with a prepared survey instrument. The characteristics of SMEs included in the study are presented in Table 1.

As shown in Table 1, the sample comprised of SMEs from a number of sectors including crafts (44.6%), furniture (43.6%), metal works (9.9%) with brick making and juice processing sectors contributing 1% each. Further, a majority of the SMEs in the sample had been in existence for over five years (65%); 22.8% had been in existence for over ten years. This implies that the firms included in the study had the necessary experience to provide the information needed for studying training and its associated performance. A majority of the SMEs were sole proprietors (93.1%) and partnerships (6.9%). In addition, 50.5% of the SMEs were owned by males and 49.5% were owned by females. In terms of the size of the establishment measured by size of employment, a majority of the SMEs were those that employed between one and three people (54.7%). Lastly, the respondents in the study were owners or managers (85 and 15%, respectively). This means that the respondents were knowledgeable about the strategic issues of SMEs.

3.3 Study Variables

Dependent variable: The dependent variable was firm performance. Performance is a wide construct and has been measured in different ways. In our study, six measurement items were used to tap into different performance aspects at the firm level: (1) achievement of the SME's firm-level targets, (2) accomplishment of

[1]In this study, we use the definition of an SME adopted from the Rwandan small- and medium-sized enterprises Development Policy (2010: 7). In this policy document, a SME is generally defined to include a firm employing under 100 people with annual turnover of not more than 50 million Rwf as well as a net capital investment of not more than 75 million Rwf. Going with the policy document, the term SME was used to also include micro-enterprises that are firms employing one to three people. In our study, only the employment dimension is used to characterize a SME.

Table 1 Characteristics of SMEs included in the study

Variables	Categories	Frequency	(%)
Type of business	Sole proprietor	94	93.1
	Partnership	7	6.9
Ownership by gender	Female	50	49.5
	Male	51	50.5
Manufacturing sector	Furniture	44	43.6
	Crafts	45	44.6
	Metal works	10	9.9
	Brick making	1	1
	Juice processing	1	1
Age of the firm	<1	6	5.9
	1–5	29	28.7
	6–10	43	42.6
	11–15	10	9.9
	15+	13	12.9
Firm size (in number of employees)	1–3	58	57.4
	4–30	43	42.6
Key informants	Owner	86	85
	Manager	15	15

departmental targets, (3) level of creativity, (4) teamwork among staff members, (5) quality, and (6) business growth level. The items were adopted from studies addressing similar constructs (Baker et al. 2006; Francis and Collins 2004; Maurel and Hadley 2007; Tierney and Farmer 2002); they were adapted to suit our study context. The responses were evaluated on a 5-point Likert scale where 1 was strongly disagree and 5 was strongly agree. The Cronbach's alpha coefficient for this scale was 0.93 representing a high level of reliability.

Independent variables: The independent variables included job-rotation and utilization of workshops by SMEs. Job-rotation measurement items were adapted from Zin et al. (2013) and Stevens and Campion (1994). The items included the extent to which a SME favored job-rotation over other methods, the frequency of use of job-rotation, the importance attached to frequently rotating employees as a strategic activity, an understanding of job-rotation by the employees in the organization, and the SME's ease in employing job-rotation. The measurement items were assessed on a 5-point Likert scale (where 1 = strongly disagree and 5 = strongly agree). The reliability coefficient for this scale was 0.87, thus demonstrating a high level of reliability.

The variable of utilization of workshops was based on three items adapted from Houkoku (2007): (1) preference given to workshops over other training methods, (2) importance given to this method of training, and (3) level of participation and enjoyment in seminars. The responses on these items were also assessed on a 5-point Likert scale (where 1 = strongly disagree and 5 = strongly agree).

The reliability coefficient for this scale was 0.70, which is within the expected level of reliability of the 0.70 cutoff (Nunnally 1978).

Control variables: Three control variables were included in the study: (1) ownership by gender, (2) age of the firm, and (3) size of the firm. Ownership by gender was operationalized as 1 for female and 2 for male. Age of the firm was established by counting the number of years that a SME had been in existence and was later categorized into 5 groups (1 = 15 years). Following earlier studies, the size of the firm was captured by the number of employees. This variable was categorized into three groups (1 = 1–3 employees, 2 = 4–30 employees, and 3 = 31–40 employees).

3.4 Validity and Reliability

A number of steps were taken to strengthen the validity and reliability of our findings. First, the data were collected by the first author who was well versed with the empirical setting. We ensured that the key informants in the study were well versed with the strategic and operational activities of their establishments and therefore could provide accurate answers to the issues under study. These included owners (85%) and managers of SMEs (15%) (See Table 1). After ensuring that the data met all the properties for conducting a factor analysis,[2] we used this method to conduct a post hoc statistical test to examine the likelihood of a common method's bias and to confirm convergent and discriminant validity of the study constructs. To test for the problem of a common method's bias, we specifically followed Harman's one-factor test. Following this procedure, the problem of the common method's variance will be present when the un-rotated factor solution of the study measures results in a one-factor solution. Our study did not reveal this problem, as the un-rotated factor analysis solution resulted in three factors. An examination of factor loadings also revealed that the data reasonably satisfied the conditions of discriminant and convergent validity. This is because the different items loaded well to their respective constructs and discriminated well across the scales of other constructs (see Table 2). In addition, Cronbach's alpha for each scale was computed to test the reliability of the scales. As expected, all the scales of the study constructs met the threshold cutoff of 0.7 (job-rotation, 0.87; workshop and seminars, 0.70; and performance, 0.93).

[2]The KMO measure of sampling adequacy was 0.85 (above the 0.60 threshold), and the Bartlett's test of Sphericity was significant ($P < 0.001$) which indicates that the data matrix met the expected condition for a factor analysis to be conducted (Hair 1998).

Table 2 Factor analysis results for the dependent and independent variable scales

Scale and measurement items	1	2	3
Job-Rotation			
In this organization, we favor job-rotation in comparison with other forms of training	0.232	**0.810**	−0.265
In this organization, the aspect of job-rotation is frequently practiced	0.108	**0.871**	−0.195
In this organization, in order to have better understanding of the organization, employees are rotated quite often	0.190	**0.838**	−0.303
In this organization, job-rotation is well understood by all employees	0.470	**0.512**	0.123
In this organization, it is very difficult to use job-rotation (R)	0.050	**0.813**	−0.033
Workshop utilization			
In our organization, it is preferred that seminars and workshops should take place at work	−0.099	−0.206	**0.867**
In our organization, we consider seminars and workshops to be more effective in enhancing our skills	0.160	−0.187	**0.685**
In our organization, employees do not like to take part in seminars and workshops (R)	−0.122	−0.063	**0.719**
SME performance			
In our organization, training strategies adopted have facilitated the accomplishment of our performance targets	**0.921**	0.148	0.000
In our organization, we have been able to achieve our departmental goals because of the training approach adopted	**0.921**	0.108	0.034
The training approach in our organization has contributed a lot toward the level of team spirit experienced in this organization	**0.856**	0.217	−0.093
In our organization, the training approach adopted has improved the quality with which work is done	**0.890**	0.157	0.088
In our organization, costs incurred have decreased significantly as a result of the employee training approach employed	**0.864**	0.029	−0.148
With the training approach adopted, employees in this organization have become more creative	**0.600**	0.426	−0.313
Eigen value	**6.00**	**2.80**	**1.41**
% of variance explained	**42.86**	**20.00**	**10.05**
Cumulative % of variance explained	**42.86**	**62.85**	**72.91**

Note Extraction method: Principal Component analysis. *Rotation method* Varimax with Kaiser Normalization. The high factor loadings for the respective constructs are indicated in bold. The items with *R* in parentheses were reverse coded before the analysis

4 Data Analysis and Results

We used a multiple regression analysis to analyze the data. We specifically employed the ordinary least squares (OLS) technique. This analysis was done in SPSS version 17.0. In addition to the descriptive statistics presented in Table 3, we also carried out a number of tests to ensure that the data were suitable for a regression analysis.

Table 3 Mean, standard deviations, and correlations

Variables	Mean	SD	1	2	3	4	5	6	7
1. Ownership by gender	1.50	0.502	1						
2. Age of the firm	2.95	1.07	0.251*	1					
3. Firm size	1.43	0.50	0.052	0.021	1				
4. Job-rotation	2.77	1.07	0.103	0.249*	0.387**	1			
5. Workshops	3.79	0.89	−0.113	−0.140	−0.303**	−0.365**	1		
6. Workshop*Job-rotation	10.16	4.03	0.021	0.214*	0.228*	0.793**	0.242*	1	
7. SME performance	3.20	1.11	0.218*	0.551**	0.102	0.450**	−0.149	0.418**	1

Note: $N = 101$, ***$P < 0.001$, **$P < 0.01$, *$P < 0.05$

As can be seen in Table 3, the correlations among the independent variables were within the acceptable level of 0.6. The only exception was the correlation involving interaction variables which was 0.79. In the consequent regression analysis, this problem was addressed by centering the variables before multiplication. The VIF of each independent variable included in the model was also computed. All the variables, including interaction terms, had VIF values below the threshold of 10. Estimates of mean and standard deviations were supplemented with kurtosis and skewness tests.

These measures also indicated that the data met the required assumption of normality. We also examined the variance and normality of residuals and did not find evidence of violations of these assumptions in the data. Given that we included categorical variables in the analysis, it was also required that we test for the problem of heteroscedasticity of the relationship between our metric dependent variable and the categorical independent variables. We specifically employed the Levene test. Based on this test, all the categorical variables satisfied the condition of homoscedasticity at the 95% level of significance.

Collectively, these tests supported the use of the OLS regression analysis. We employed the hierarchical regression analysis procedure. This procedure involves addition of variables to the analysis in steps in order to examine their incremental contribution to the dependent variable. In this study, three models were estimated representing the unique contribution of the control variables (Model 1), focal independent variables (Model 2), and the combined effect of the two independent variables (Model 3). The results are presented in Table 4.

Model 1 gives the results pertaining to the contribution of control variables. The model is statistically significant with an adjusted R^2 of 0.30 ($F = 15.10$, $P < 0.001$). Out of the three control variables included in the model, only the contribution of 'age of the firm' was found to be statistically significant ($B = 0.53$, $P < 0.001$). This means that older firms in the sample demonstrated higher levels of performance. But what is interesting is the null effect of the gender control variable. There have been mixed results regarding whether or not women-owned enterprises perform better than male-owned enterprises (Elizabeth and Baines 1998). In the context of our study, ownership by gender was not found to be a significant factor associated with the performance of SMEs. We conjecture that this could be due to the deliberate government action in Rwanda to support gender equality in all aspects of the development including enterprise development and participation (Burnet 2008). But beyond this speculation, there is need for a more refined research inquiry into this area.

Model 2 gives the differential contributions of workshops and job-rotation to SME performance. The collective contribution of the two variables over and above the effect of the control variables on firm-level performance is significant ($\Delta F = 7.99$, $P < 0.001$).

Model 2 is also statistically significant and with an adjusted R^2 of 0.39 ($F = 13.56$, $P < 0.001$). Based on the coefficients of this model, the relationship between utilization of workshops in the study context is not supported ($B = 0.042$, $P > 0.05$). On the other hand, the findings offer evidence of a positive and

Table 4 Results of hierarchical regression analysis

Variables	Model 1[a]			Model 2[a]			Model 3[a]		
	β	t	VIF	β	t	VIF	β	t	VIF
Control variables									
Ownership by gender	0.081	0.935	1.07	0.075	0.925	1.08	0.097	1.197	1.09
Age of the firm	0.529	6.109***	1.07	0.449	5.367***	1.14	0.404	4.731***	1.23
Firm size	0.087	1.032	1.00	−0.038	−0.439	1.23	−0.061	−0.711	1.25
Independent Variables									
Job-rotation				0.361	3.962***	1.35	0.366	4.076***	1.35
Workshops				0.042	0.493	1.21	0.039	0.460	1.21
Interaction terms									
Seminars and workshop*Job-rotation V[b]							0.163	2.020*	1.10
R^2	0.32			0.42			0.44		
Adjusted R^2	0.30			0.39			0.41		
F value	15.10***			13.56***			12.35***		
Change in R^2				0.10			0.02		
Change in F				7.99***			4.08*		

Note: $N = 101$, $*P < 0.05$, $**P < 0.01$, $***P < 0.001$

[a]Dependent variable: SME performance

[b]Interaction terms computed after mean centering each variable

significant relationship between job-rotation practice and performance of SMEs (0.361, $P < 0.001$). Specifically, the coefficients reveal that for a unit increment in an effort toward job-rotation, a SME in the sample would on average realize an increment in performance of 0.36 units, other factors held constant. While we did not find a significant relationship between workshop utilization and firm performance, Model 3 offers unique additional insights into this relationship. This model demonstrates a combined effect of workshops on SME performance. The model's statistics show that it is well fitted. As was the case in the earlier models, this model is also statistically significant with an adjusted R^2 of 0.41 ($F = 12.35$, $P < 0.001$). The change in F-statistic is also high and significant, implying that the addition of the interaction term to the analysis contributes meaningfully to the variance in SME performance ($\Delta F = 4.08$, $P < 0.05$). In Model 3, the combined effect of utilization of workshops and job-rotation is positive and significant ($B = 0.16$, $P < 0.05$). This means that in the firms of interest, combining workshops and job-rotation will contribute meaningfully in enhancing firm-level performance.

5 Discussion and Conclusions

The findings of our study outline the positive role that job-rotation plays in the performance of small and medium-sized manufacturing firms in the study context of Rwanda. Drawing on the relevant literature, we conjecture that the value of job-rotation among the studied SMEs comes from the opportunities created by this practice for employees to gain a holistic understanding of the organization; it thus lets employees make more effective contributions to the firm. Job-rotation in particular has been found to be associated with empowering employees with the right skills and knowledge that are tailored to a firm's context (Jansen et al. 2003; Patterson et al. 2004; Wood and Wall 2007). We argue that this is particularly important in a highly dynamic environment where collective effort and broad knowledge and skills are necessary to effectively respond to emerging challenges and opportunities. Lack of support for the effect of workshops is rather interesting in the study setting. In Rwanda, just like in many other countries in the region, there has been a growing trend of encouraging off-the-job training programs to support human resource development among firms in the SME sector such as the Hanga Umurimo Program (HUP) and the Akazi Kanoze Program.

Previous research has supported the benefits that these activities can bring to firms, including but not limited to, provisions of new knowledge on current practices prevailing in the industry (Commerce 2014; Dawes et al. 2014). Our findings, however, reveal that such practices on their own can be ineffective, unless the beneficiaries have the right mechanisms to absorb this knowledge. Job-rotation can be seen as an important aspect of the absorptive capacity of a firm for supporting such learning (Jansen et al. 2003). In our sample, SMEs that simultaneously practiced higher levels of job-rotation and used workshops more frequently were also found to achieve higher levels of performance. Overall, these findings offer

interesting insights into guide practice. Specifically, we observe that efforts toward helping SMEs acquire new skills and knowledge through workshops can be of help when efforts are made to help firm-level integration of this knowledge. In our study, we see this realization more for SMEs which have adopted job-rotation. It is thus imperative for stakeholders to extend these particular programs to address the question of how SMEs can integrate knowledge and skills that are advanced in workshops and seminars into actual job performance.

The findings of the study also offer empirical evidence justifying managerial action on job-rotation. This evidence is particularly critical in the study context where limited empirical research exists. Based on our findings, we highlight one area for future research: It can address the question of why the utilization of workshops on its own does not contribute to improved performance among SMEs in the study context. This null finding points to a need for more refined studies on understanding how different types of workshops enhance or impede SME performance. This disaggregation was not done in the current study. We are, however, aware of the following limitations which should be taken into consideration while interpreting the findings of this study. The study is based on the manufacturing firms and as such, these findings may not be directly applicable to the service sector. The sample of manufacturing firms included in the study is for SMEs located in capital Kigali. These SMEs may enjoy locational advantages that are different from the rest of the country. In addition, the study is mainly exploratory and theoretical in nature.

But notwithstanding these limitations, we consider this effort to be important in laying a foundation for more rigorous future research on training practices and their performance implications for SMEs in the unique context of Africa. We also believe that the study provides timely empirical insights into current practices and sheds some light on the appropriate course of action regarding the relevance of workshops and job-rotation support within the SME sector in Rwanda and in a region which is experiencing a growing attraction for new business activities.

References

Achanga, P., E. Shehab, R. Roy, and G. Nelder. 2006. Critical success factors for lean implementation within SMEs. *Journal of Manufacturing Technology Management* 17 (4): 460–471.

Aguilera, E., G. Martha, R. Camacho, and R. Rodrigo. 2011. Small business competitiveness model for strategic sectors. *Advances in Competitiveness Research* 19 (3): 58–73.

Almeida, R., and R. Aterido. 2010. *Investment in job training: Why are SMEs lagging so much behind?*. Washington DC: World Bank Human Development Network Social Protection and Labor Unit.

Anderson, M., and A. Sohal. 1999. A study of the relationship between quality management between quality management practices and performance in small businesses. *International Journal of Quality and Reliability Management* 16 (9): 859–877.

Arendt, L. 2008. Barriers to ICT adoption in SMEs: How to bridge the digital divide? *Journal of Systems and Information Technology* 10 (2): 93–108.

Baker, D., D. Rachel, and E. Salas. 2006. Teamwork as an essential component of high-reliability organizations. *Health Services Research* 41 (4): 1576–1598.
Ballot, G., F. FakhFakh, and E. Taymaz. 2001. Firms' human capital, R&D and performance: A study on French and Swedish firms. *Labour Economics* 8 (4): 443–462.
Beaver, G. 2003. Small business: Success and failure. *Strategic Change* 12 (3): 115–122.
Beaver, G., and K. Hutchings. 2005. Training and developing an age diverse workforce in SMEs: The need for a strategic approach. *Education and Training* 47 (8): 592–604.
Birdthistle, N. 2006. Training and Learning strategies of family businesses: An Irish case. *Journal of European Industrial Training* 30 (7): 550–568.
Brah, S., S. Tee, and M. Rao. 2002. Relationship between TQM and performance of Singapore companies. *International Journal of Quality and Reliability Management* 19 (4): 356–379.
Bryan, J. 2006. Training and performance in small firms. *International Small Business Journal* 24 (6): 635–660.
Burnet, J.E. 2008. Gender balance and the meanings of women in governance in post-genocide Rwanda. *African Affairs* 107 (428): 361–386. doi:10.1093/afraf/adn024
Chaston, I., B. Badger, and E. Sadler-Smith. 1999. Small firm organisational learning: Comparing the perceptions of need and style among UK support service advisors and small firm managers. *Journal of European Industrial Training* 23 (1): 36–43.
Chi, N., C. Wu, and Y. Lin. 2008. Does training facilitate SME's performance? *The International Journal of Human Resource Management* 19 (10): 1962–1975.
Clarke, J.L., G. Boocock, A. Smith, and J. Whittaker. 1999. Investment in management training and development by small businesses. *Employee Relations* 21 (3): 296–311.
Collins, C., and K. Clark. 2003. Strategic human resource practices, top management team social networks, and firm performance: The role of human resource practices in creating organizational advantage. *Academy of Management Journal* 46 (6): 740–751.
Commerce, M.D. 2014. Hanga umurimo beneficiaries urged to use bank loans efficiently. *Ministry of Trade and Industry Newsletter* 1 (9): 1–16.
Cook, P. 2001. Finance and small and medium-sized enterprise in developing countries. *Journal of Developmental Entrepreneurship* 6 (1): 17–40.
Dasgupta, S., B. Laplante, H. Wang, and D. Wheeler. 2002. Confronting the environmental kuznets curve. *The Journal of Economic Perspectives* 16 (1): 147–168.
Dawes, L., P. Nema, and R.Zelezny Green. 2014. *Scaling mobile employment services: A stakeholder perspective*. London: GSMA.
Devins, D., S. Johnson, and J. Sutherland. 2004. Employer characteristics and employee training outcomes in UK SMEs: A multivariate analysis. *Journal of Small Business and Enterprise Development* 11 (4): 449–457.
Dyer, L., and T. Reeves. 2006. Human resource strategies and firm performance: What do we know and where do we need to go? *The International Journal of Human Resource Management* 6 (3): 656–670.
Elizabeth, C., and S. Baines. 1998. Does gender affect business "performance"? A study of micro businesses in business services in the UK. *Entrepreneurship and Regional Development* 10 (2): 117–135.
Fabi, B., L. Raymond, and R. Lacoursière. 2007. HRM practice clusters in relation to size and performance: An empirical investigation in Canadian manufacturing SMEs. *Journal of Small Business & Entrepreneurship* 20 (1): 25–39.
Fening, A., G. Pesakovic, and P. Amaria. 2008. Relationship between quality management practices and the performance of small and medium size enterprises (SMEs) in Ghana. *International Journal of Quality and Reliability Management* 25 (7): 694–708.
Ferner, A. 1997. Country of origin effects and HRM in multinational companies. *Human Resource Management Journal* 7 (1): 19–37.
Francis, J., and C. Collins. 2004. Impact of export promotion programs on firm competencies, strategies and performance: The case of Canadian high-technology SMEs. *International Marketing Review* 21 (4): 474–495.

Freel, M., and P. Robson. 2004. Small firm innovation, growth and performance: Evidence from Scotland and Northern England. *International Small Business Journal* 22 (6): 561–575.
Gibb, A. 1997. Small firms' training and competitiveness. Building upon the small business as a learning organisation. *International Small Business Journal* 15 (3): 13–29.
Gilley, M., C. Greer, and A. Rasheed. 2004. Theory and research: Human resource outsourcing and organizational performance in manufacturing firms. *Journal of Business Research* 57 (3): 232–240.
Grant, R. 2014. Toward a knowledge-based theory of the firm. *Strategic Management Journal* 17 (2): 333.
Gray, C., and C. Mabey. 2005. Management development: Key differences between small and large businesses in Europe. *International Small Business Journal* 23 (5): 467–485.
Gritz, M. 2002. The impact of training on the frequency and duration of employment. *Journal of Econometrics* 57 (1): 21–51.
Hair, J. 1998. *Multivariate Data Analysis.* Upper Saddle River: NJ: Prentice Hall Inc.
Heraty, N., M.J. Morley, and J. Cleveland. 2008. Complexities and challenges in the work-family interface. *Journal of Managerial Psychology* 23 (3): 209–214.
Houkoku, Y. 2007. *JSPS Asian science seminar on development strategy for sustainable food system.* Available at: https://www.jsps.go.jp/jasia_seminar/data/02jisshi_old/h14_h18/houkoku_1801.pdf
Huang, T. 2001. The relation of training practices and organizational performance in small and medium size entreprises. *Education and Training* 43 (8): 437–444.
Ibrahim, A., and K. Soufani. 2002. Entrepreneurship education and training in Canada: A critical assessment. *Education and Training* 44 (8): 421–430.
Jameson, S. 2000. Recruitment and training in small firms. *Journal of European Industrial Training* 24 (1): 43–49.
Jansen, J., V. Bosch, and H. Volberda. 2003. Absorptive capacity, adaptation, and performance: An intra-organizational perspective, *OLKC Conference*. Barcelona: Academic Track, 2–22.
Jayawarna, D., A. Macpherson, and A. Wilson. 2007. Training commitment and performance in manufacturing SMEs: Incidence, intensity and approaches. *Journal of Small Business and Enterprise Development* 14 (2): 321–338.
Jennings, P. 1997. The Performance and competitive advantage of Small Firms: A management perspective. *International Small Business Journal* 15 (2): 63–75.
Karaev, A., L. Koh, and L. Szamosi. 2007. The cluster approach and SME competitiveness: A review. *Journal of Manufacturing Technology Management* 18 (7): 818–835.
Kostova, T. 1999. Transnational transfer of strategic organizational practices: A contextual perspective. *Academy of Management* 24 (2): 308–324.
Kostova, T., and K. Roth. 2002. Adoption of an organizational practice by subsidiaries of multinational corporations: Institutional and relational effects. *Academy of Management Journal* 45 (1): 215–233.
Kotey, B., and C. Folker. 2007. Employee training in SMEs: Effect of size and firm type-family and nonfamily. *Journal of Small Business Management* 45 (2): 214–238.
Ladzani, W., and V. Vuuren. 2002. Entrepreneurship training for emerging SMEs in South Africa. *Journal of Small Business Management* 40 (2): 154–161.
Lange, T., M. Ottens, and A. Taylor. 2000. SMEs and barriers to skills development a Scottish perspective. *Journal of European Industrial Training* 24 (1): 5–11.
Laursen, K., and N. Foss. 2003. New human resource management practices, complementarities and the impact on innovation performance. *Cambridge Journal of Economics* 27 (2): 243–263.
Lepourte, J., and A. Heene. 2006. Investigating the impact of firm size on small business social responsibility. *Journal of Business Ethics* 67 (3): 257–273.
Luthans, F., A. Stajkovicb, and E. Ibrayeva. 2000. Environmental and psychological challenges facing entrepreneurial development in transitional economies. *Journal of World Business* 35 (1): 95–100.

Macpherson, A., and D. Jayawarna. 2007. Training approaches in manufacturing SMEs: Measuring the influence of ownership, structure and markets. *Academy of Management Journal* 49 (8): 836–866.
Mark, Y., S. Snell, D. James, and L. David. 1996. Human resource management, manufacturing strategy, and firm performance. *Academy of Management Journal* 39 (4): 836–866.
Maurel, K. and L. Hadley. 2007. *The architect's handbook of professional practice* (*Vol. 13*). AIA.
McMahon, R. 2001. Business growth and performance and the financial reporting practices of Australian manufacturing SMEs. *Journal of Small Business Management* 39 (2): 152–164.
Mehmet, D., T. Ekrem, T. Mehmet, and Z. Selim. 2006. An analysis of the relationship between TQM implementation and organizational performance: Evidence from Turkish SMEs. *Journal of Manufacturing Technology Management* 17 (6): 829–847.
Montesino, M. 2002. Strategic alignment of training, transfer-enhancing behaviors, and training usage: A post training study. *Human Resource Development Quarterly* 13 (1): 89–108.
Moreland, R. 2002. Training people to work in groups. *Theory and Research on Small Groups* 4: 37–60.
Moy, J., and M. Lee. 2002. The career choice of business graduates: SMEs or MNCs? *Career Development International* 7 (6): 339–347.
Namjae, C., Z. Guo, and S. Che Jen. 2007. An empirical study in high performance HRM practices in Chinese SMEs. *International Journal of Human Resource Management* 17 (10): 1772–1803.
Ndamage, P. 2013. *District development plan.* Available at: http://www.kicukiro.gov.rw/uploads/media/final_DDP_2013_2018_KICUKIRO.pdf
Nelson, R. 2007. Why do firms differ, and how does it matter? *Strategic Management Journal* 12 (2): 61–74.
Nunnally, J. 1978. *Psychometric Theory.* New-York: NY: McGraw-Hill.
Okpara, J., and J. Kabongo. 2009. An empirical evaluation of barriers hindering the growth of small and medium sized enterprises (SMEs) in a developing economy. *African Journal of Business and Economic Research* 4 (1): 7–21.
Panagiotakopoulos, A. 2011. Barriers to employee training and learning in small and medium-sized enterprises (SMEs). *Development and Learning in organizations* 25 (3): 15–18.
Pansiri, J., and Z. Temtime. 2008. Assessing managerial skills in SMEs for capacity building. *Journal of Management Development* 27 (2): 251–260.
Patterson, M., M. West, and T. Wall. 2004. Integrated manufacturing, empowerment, and company performance. *Journal of Organizational Behavior* 25 (5): 641–665.
Patton, D., S. Marlow, and P. Hannon. 2000. The relationship between training and small firm performance; research frameworks and lost quests. *International Small Business Journal* 19 (1): 11–27.
Porter, M., and C. Linder. 1995. Toward a new conception of the environment-competitiveness relationship. *The Journal of Economic Perspectives* 9 (4): 97–118.
Quader, M. 2007. Human resource management issues as growth barriers in professional service firm SMEs. *Journal of Services Research* 7 (2): 115–161.
Ramsay, H., and D. Scholarios. 2000. Employees and high-performance work Systems: Testing inside the black box. *British Journal of Industrial Relations* 38 (4): 501–531.
Rigby, M. 2004. Training in Spain: An evaluation of the continuous training agreements. *Human Resource Development International* 7 (1): 23–37.
Robertson, P. 2003. The role of training and skilled labour in the success of SMEs in developing economies. *Education and Training* 45 (8/9): 461–473.
Ruzzier, M., R. Hisrich, and B. Antoncic. 2006. SME internationalization research: Past, present and future. *Journal of Small Business and Enterprise Development* 13 (4): 476–497.
Salas, E., and B. Cannon. 2001. The science of training: A decade of progress. *Annual Review of Psychology* 52: 471–499.

Shen, J., and R. Darby. 2006. Training and management development in Chinese multinational enterprises. *Employee Relations* 28 (4): 342–362.
Smallbone, D., R. Leig, and D. North. 1995. The employment generation potential of mature SMEs in different geographical environments. *Urban Studies Journal Limited* 32 (9): 1517–1536.
Stevens, M., and M. Campion. 1994. The knowledge, skill, and ability requirements for teamwork: Implications for human resource management. *Journal of Management* 20 (2): 503–530.
Stokes, A. 2001. Using telemonitoring to deliver training to SMEs: A pilot study. *Education and Training* 43 (6): 317–324.
Storey, D. 1994. *Understanding the small business sector*. Illinois: Social Science Electronic Publishing Inc.
Storey, D., and P. Westhead. 1996. Management training and small firm performance: Why is the link so weak? *International Small Business Journal* 14 (4): 13–24.
Thassanabanjong, K., P. Miller, and T. Merchant. 2009. Training in Thai SMEs. *Journal of Small Business and Enterprises Development* 16 (4): 678–693.
Tierney, P., and S. Farmer. 2002. Creative Self-Efficiency: Its potential antecedents and relationship to creative performance. *Academy of Management Journal* 45 (6): 1137–1148.
Tiwari, R. and S. Buse. 2007. 'Barriers to innovation in SMEs: Can the internationalization of R&D mitigate their effects?' *Role and Dynamics of Corporate R&D*. Sevilla, Spain: Hamburg University of Technology (TUHH), 1–31.
Vogel, D. 1997. Trading up and governing across: Transnational governance and environmental protection. *Journal of European Public Policy* 4 (4): 556–571.
Winfred, A., J. Bennett, P.Winston Edens, and S. Bell. 2003. Effectiveness of training in organizations: A meta-analysis of design and evaluation features. *Journal of Applied Psychology* 88 (2): 234–245.
Wood, S., and T. Wall. 2007. Work enrichment and employee voice in human resource management-performance studies. *The International Journal of Human Resource Management* 18 (7): 1335–1372.
Zellmer, M., and C. Gibson. 2006. Multinational organization context: Implications for team learning and performance. *Academy of Management Journal* 49 (3): 501–518.
Zeng, S., X. Xie, and C. Tam. 2010. Relationship between cooperation networks and innovation performance of SMEs. *Technovation* 30 (3): 181–194.
Zin, M.L.M., F.M. Shamsudin, and C. Subramaniam. 2013. Investigating the influence of job rotation on career development among production workers in Japanese companies. *International Journal of Business and Society* 14 (1): 135–148.

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Chapter 12
Export Performance of SMEs in the Rwandan Mining Sector: Challenges and Prospects

Bideri Ishuheri Nyamulinda and Alice Karema Gaju

Abstract This study investigates the export performance of SMEs in the Rwandan mining sector. Specifically, it ascertains if Rwandan mining SMEs set annual export targets; investigates the strategies that they follow to achieve these targets; assesses the extent to which set export targets have been achieved; finds out the barriers that affect SMEs' operations with regard to mineral exports; and examines how SME owners in the mining sector mitigate these barriers. It measures export barriers such as those related to problems of internal resources, procedural and distribution complications, foreign market factors, external-foreign barriers, knowledge and experience, and difficulties in legal, political, and managerial issues. A 5-point Likert scale was used to measure respondents' perceptions about the export barriers faced by SMEs in the mining sector. All eight registered SMEs were included in the study. The three major minerals exported are coltan, cassetterite, and wolfram. The study found that while the government sets an export target for the mining sector, 75% of the SMEs do not set export targets, and for those who do there are ups and downs in achieving them. This chapter also discusses export barriers and appropriate managerial implications.

Keywords Rwanda · SMEs · Mining sector · Export barriers · Coltan

JEL Classification Codes M16 · M31

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1 Background

A strong demand for minerals has driven their growth, expansion, and exploration in Africa. It is an exciting and opportune time for investments in the mining sector on the continent. However, mining companies have to deal with several opportunities and challenges some of which are beyond their control such as an unstable sociopolitical environment, nationalization, rising costs, and access to capital and poor infrastructure.

The economic boom in emerging economies such as Brazil, India, and China has increased the demand for raw materials across the globe which has resulted in some countries adopting protectionist measures to restrict their mineral exports. The European Union and some American countries are highly dependent on mineral imports for their industrial value chains. Africa is said to have large reserves of minerals required by these economies, and it wants to use them as an engine for development. This was expressed at the African Union's summit held in 2008, where an 'Africa Mining Vision' was determined. The African Union identified challenges in the African mining sector in terms of using African minerals to promote industrialization and economic development, notably through beneficiation and value addition. This means thinking about how mining can contribute more to local development by ensuring that workers and communities see real benefits from large-scale industrial mining, and that their environment is also protected.

This also means making sure that nations are able to negotiate contracts with mining multinationals that generate fair resource rents and stipulate local inputs for operations. Thus, this study investigated the export performance of SMEs in Rwandan mining and also the challenges facing the sector.

2 Problem Statement

The Rwandan Mining Policy (2009) formulated five pillars with the objectives of boosting mineral exports; strengthening an enabling legal, regulatory and institutional environment; developing targeted investments, fiscal and macroeconomic policies; improving the mining sector through the use of knowledge, skills, and best practices; raising productivity and establishing new mines, diversifying into new products; and increasing the value addition of mining products.

According to Leonidou et al. (2007), exporting represents the most popular and the quickest and easiest way for many small and medium companies to internationalize. Morgan and Katsikeas (1997) also affirm that exporting activities assure the survival, growth, and long-term viability of SMEs. Much of the literature on internationalization focuses on multinational enterprises (Andersson et al. 2004) or on well-established companies from developed countries (McDougall and Oviatt 1996). Improving the small and medium business sector's international contributions is widely considered an increasingly important policy priority in countries

across the world. Also, much of the literature is agreed that for improving deficit in the balance of payments, SMEs should focus more on internationalization of their businesses, which will also lead to their prosperity and result in national prosperity as well.

During the last decade, several studies related these determinants to export performance only for well-established businesses that are located in developed countries. However, no common agreement has been reached in export-oriented literature regarding relevant determinants of export performance that affect companies in developing countries in general or in African countries in particular; nor on how to measure them. In this regard, despite the fact that the Government of Rwanda has set a goal to earn US$ 400 million by 2018 from export of minerals, it is not yet known how individual SME's plans fit in with this national mineral export goal (Cook and Mitchell 2014). Likewise, although the Government of Rwanda has formulated a supportive mining policy to boost, among other things, mineral exports, there have been no systematic studies that focus on understanding the export performance of Rwandan SMEs in the mining sector. This study aims to fill this gap.

The main objective of this research was studying the export performance of Rwandan SMEs in the mining sector with the specific aim of ascertaining if Rwandan mining SMEs set annual export targets; investigating the strategies that they follow to achieve these targets; assessing the extent to which set export targets have been achieved; finding out which barriers affect their operations in mineral exports, and examining how SME owners in the mining sector are mitigating these barriers.

The rest of the chapter is organized as follows: After the background and the problem statement, it discusses the mining sector in Rwanda. The next section gives a literature review, which is followed by the research methodology. The results are discussed in the section that follows. The last section gives the conclusion and managerial and policy implications.

3 The Mining Sector in Rwanda

A survey undertaken by the Ministry of Industries and Commerce in August 2011 found that about 390 businesses were involved in mining activities out of which 40 were registered in the mining sector. The rest (350) were unregistered artisanal miners or small-scale miners who sold their minerals to registered companies. The survey also found that only eight of these 40 companies had been categorized as small and medium enterprises (SMEs). According to the Rwandan Ministry of Industry and Commerce, a business is categorized as a SME when it employs less than 100 persons, has a net capital investment of less than 50 million Rwandan francs (i.e., less than 100,000 USD), and has an annual turnover of less than 50 million Rwandan francs.

Seeing the potential of the mining sector for Rwanda's economic growth, reducing the trade balance deficit and providing off-farm employment, the

Government of Rwanda drafted a mining policy in 2009. This became a major pillar for sustainable development as it was expected to boost the volume of exports and hence increase revenue from the sector.

Data from the mining sector indicate that mineral exports grew from US$ 70.62 million in 2007 to US$ 136.07 million in 2012 registering a 192.3% increase in five years (Cook and Mitchell 2014). This was attributed to an increase in mining exploration, increase in production, and worldwide demand for coltan, cassetterite, and wolfram. The export destinations included USA, Europe, and Asian countries where these minerals are used as raw material for manufacturing spare parts used in airplanes and different new technologies such as computers, laptops, and satellites. China is the largest export market for minerals from Rwanda.

The mining sector was also captured in 'Vision 2020', where the Government of Rwanda sets the objectives of increasing productivity in the sector, creating three industrial mines by 2020, and stimulating and increasing investments in the mining sector to US$ 500 million, thus creating more employments in the sector. The Government of Rwanda expected that by 2015, the mining sector would employ 50,000 persons. It was also expected that the mining sector would contribute tax revenues to the tune of US$ 30 million per year, and the imports would be reduced by US$ 10 million per year. Previous studies have indicated that the mining sector in Rwanda directly employed between 20,000 and 35,000 people who had minimum education. There was also a shortage of skilled mine engineers, geologists, and metallurgists who could be involved in exploration and safe mining. Further, the mining was mostly artisanal (small miners who used poor tools), and the Government of Rwanda was working on building capacity to professionalize mining workers. This forced companies to import skilled staff members to look for new sources of minerals. Not only this, the companies in the mining sector still used poor machines. As a result, the Government of Rwanda invested in research to increase knowledge about potential mineral reserves that might boost the volume of mineral exports.

According to the Ministry of Commerce and Industry, SMEs in Rwanda also face difficulties in accessing finance from financial institutions and difficulties in dealing with taxes. They also face difficulties in handling price risks, and most of the time, the prices included in the contracts between Rwandan mining companies and international companies are fixed by international companies based on worldwide prices of concerned mineral ores.

From 1994 to date, like any other East African country, Rwanda has been facing problems in exporting minerals. Rwanda is a neighbor of the Democratic Republic of Congo (DRC) where there have been endemic conflicts, and the international media has been campaigning to discourage foreign companies in any East African countries on the grounds that they are 'blood minerals.' The media alleged that women were being raped and children were employed in mining sites situated in East Africa. It also argued that corporate social responsibility codes of conduct had not been implemented by SMEs involved in mining activities in this region. This necessitated certification of mines in Rwanda and tagging of minerals to ensure their traceability.

4 Literature Review

The literature reviewed in this chapter aims at understanding how SMEs set annual export targets; set strategies to achieve these targets; the extent to which set export targets have been achieved and the barriers that affect export operations with regard to mining export products; and the mitigation of export barriers.

Hazel (1972) has argued that for any mining company the process of setting export objectives should be a conscious one, which starts at the top management. These objectives should be set in line with the short-term and long-term vision of the company and shared among all the employees. Hazel emphasizes that in setting objectives top managers in a mining company should focus on productivity, worker performance, profitability, and maintenance and replacement of resources. Though the prioritization of strategic objectives is unique to each business, common objectives also exist. He identified six most common areas of strategic business goals such as market share, financial resources, physical resources, productivity, innovation, and action planning. In the same vein, Diamantopoulus and Kakkos (2007) opine that the importance of different export objectives may differ both within and between companies. They found that managers viewed long-term assessments of export performance as considerably more important than short-term assessments.

Some authors discuss the export strategies which companies can adopt. Fetscheri et al. (2012) measured and analyzed the industry's export competitiveness with a database of 97 different industries in India. Their analysis was based on the export growth rate and relative export market share. The results showed that industry specialization led to dominance in the worldwide export market share. This was in line with the required export strategies in the mining sector including setting export-oriented strategies and focusing on industry specialization and implementing export agencies in the foreign country.

On export barriers, Karelakis et al. (2008) argue that export problems are likely to occur in companies that are more inactive in terms of export activities than in companies that adopt active and competitive export attitudes. They claim that although various factors encourage firms to be involved in exports such as developing a competitive product, incentives for export promotion or attractive growth opportunities, other factors may discourage export activities. Morgan and Katsikeas (2003) make a clear distinction between export barriers and export problems. They state that export barriers refer to factors that prevent non-exporting companies from engaging in exports, whereas export problems are obstacles that companies that already involved in export activities have to deal with. In other words, problems consist of all factors that can negatively affect the internationalization of a firm. These include internal resource problems, procedural and distribution complications, foreign market factors, knowledge and experience in the mining sector, and also legal, political and management issues. They also classified these problems as internal and external ones. They further subdivided these into internal-domestic and internal-foreign export problems on the one hand and external-domestic and

external-foreign export problems on the other. Internal-domestic export problems include lack of personnel qualified in export activities, lack of experts in export consulting, insufficient production research and capabilities, difficulties in promoting products, poor quality of export packaging and difficulties in meeting export customers' needs, high transportation costs, inadequate promotional programs provided by the government, lack of government assistance in overcoming export problems, lack of attractive export incentives, high cost of capital to finance exports, unnecessary documentation prerequisites, procedural difficulties in developing export activities, regulatory difficulties, intensive competition in export markets, and lack of competitive prices.

Murray et al.'s (2007) work develops a better understanding of the factors that influence export performance. They caution that success in the domestic market does not guarantee success in foreign markets. Thus, it is imperative for companies to develop unique strategies such as adopting market-oriented behavior to achieve a desirable export performance (Cavusgil and Zou 1994; Zou and Stan 1998). Consequently, export market orientation has become increasingly important as a major research stream in international business (Hurley and Hult 1998). Export market orientation involves the continuous monitoring of a firm's customers, competitors, and the market environment for it to develop and market appropriate goods and services that are valued by its customers in export markets (Cadogan et al. 2012; Kohli and Jaworski 1990; Narver and Slater 1990). Cadogan et al. (2012) found that there is a relationship between export flexibility and export sales performance. Lages et al. (2005) developed and tested a new measure for assessing the annual performance of an export venture (the APEV scale) and a scorecard for measuring performance in exporting (the PERFEX scorecard). Both the scale and the scorecard can help disclose export venture performance and can be useful instruments for annual planning, management, monitoring, and improving export programs.

Brouthers et al. (2009) identified some key factors that result in superior export performance for small companies in small countries. They advise that emphasizing on international sales while focusing on a few markets enables small companies to develop expertise in those markets, build strong distribution networks, and manage export activities effectively. Ricci and Trionfetti (2012) found that companies are more likely to export if they are more productive and larger and if they benefit from foreign networks (ownership and financial linkages), domestic networks (chambers of commerce, links to regulation), and communication networks (e-mail, internet). They also found that companies have a lower probability of exporting if they are affected by state ownership or unionization networks as their export performance suffers because of them. Brouthers et al. (2009) identified various internally controllable and uncontrollable factors that influence export performance. The internally controllable factors include the export marketing strategy of a firm, planning and organizational issues, attitudes and perceptions of the management (for example, its international orientation), and export commitment or perceptions of export barriers. Internally, uncontrollable determinants include firm characteristics

such as international experience, technological intensity and company size, and managerial traits such as international experience, formal education, and general business experience. These characteristics are difficult to change in the short run. Chandan and Mishrab (2011) found that a firm can encounter high exporting costs while exporting to a new market when the firm has less information about foreign markets. They suggest that entering an export market does not improve the productivity of any company. Zou and Stan (1998) provide a list of internal and external forces that can lower export performance. The internal factors include inadequate regulations and reforms, modest institutional changes and technologies that meet external challenges, and also modest investments in research and development including training of scientists and professionals. They also provide a list of external factors that can lower export performance, including international waves of economic optimism and pessimism, limited access to technology, funds and international market, and geopolitics.

There is also a stream of research that has dealt with how SMEs mitigate export challenges. Solberg and Nes (2002) found that trust and commitment have a significant impact on export performance. His results indicate that advancement in penetrating a particular export market must be based on a harmonious working relationship between the exporter and the importer. On the other hand, Kang (2010) investigated the role of export promotion agencies (EPAs) as a strategy for boosting exports. His findings demonstrate that a network of EPA offices abroad was a critical factor in the success of Korea's exports. He emphasized that establishing EPAs is the government's responsibility for facilitating and encouraging exports.

5 Research Methodology

This study investigated the export performance of SMEs in Rwandan mining and the challenges facing the sector. In Rwanda, there are only eight registered SMEs in the mining sector (Table 1).

Table 1 A brief profile of SMEs in the mining sector

SME's name	Registered in	Exported minerals	Experience
Ets Kalinda Valens	2007	cassetterite, wolfram	9 years
Wolfram Mining Process (WMP)	2011	cassetterite, wolfram	5 years
Phoenix Metal	2010	Coltan, cassetterite	6 years
Mineral Supply Africa (MSA)	2009	Coltan, cassetterite, wolfram	7 years
ACK Mining Company	2013	Coltan, cassetterite, wolfram	3 year
Gatumba Mining	2010	Coltan, cassetterite, wolfram	6 years
Rutongo Mines	2007	Coltan, cassetterite	9 years
Ets MUNSAD Minerals	2011	Coltan, cassetterite, wolfram	5 years

All eight registered SMEs were involved in our study which was conducted in Kigali, where offices of SMEs in the mining sector are located. The study employed a mixed-method approach in which interviews were combined with questionnaires to gain insights about export performance and the challenges facing the sector. The study adopted Morgan and Katsikeas' (2003) questionnaire to find out the export barriers faced by SMEs in the mining sector. This instrument was developed to measure barriers related to problems in internal resources, procedural and distribution complications, foreign market factors, external-foreign barriers, knowledge and experience, and difficulties in legal, political and managerial issues. The same instrument was used to capture the views of supporting public institutions. These export barriers were measured using a 5-point Likert scale in which 1 was strongly disagree and 5 was strongly agree. An interview proforma and a questionnaire were developed and used for data collection through personal interviews with SME managers. In addition, a question was asked to find out whether the SMEs set annual export targets and if they meet the set targets.

6 Results and Discussion

The Government of Rwanda sets an annual mineral export target, but it was observed that out of the eight companies involved in mining, six (75%) did not set individual export targets. This implies that there was no coordination between the Ministry of Natural Resources and the actual players in the mining sector, thus making it difficult for the government to achieve the desired mineral export goals. Hence, the government missed the opportunity to get inputs from the mining industry that would clarify whether the set targets were realistic given the level of technology and tools used in mining.

This corroborates Diamantopoulus and Kakkos (2007) and Fetscheri et al.'s (2012) studies, who found that managers' long-term views and setting of export strategies were important in improving export performance.

The results of the performance of two SMEs which set export targets (Ets Kalinda Valens and Rutongo) are given in Table 2. The SMEs' owners explained that failure to meet the targets could be due to price fluctuations of minerals in the world market which forced exporters to reduce production. Sometimes, there was also reluctance on the part of financial institutions to finance mineral production. On the other hand, higher achievements were a result of an increase in demand for minerals in the world market, which was accompanied by attractive prices.

Regarding export barriers related to internal resource problems, the findings show that the barriers that affected export performance include insufficient production research, difficulties in meeting export customers' needs, insufficient production capabilities, lack of experts in export consulting, lack of export-marketing researches, and the absence of qualified personnel in export activities (in that order). For insufficient production research, the managers explained that due to lack of technical know-how among their employees the companies had no capabilities to

Table 2 Targets set and achieved

	Type	Coltan			Cassetterite			Wolfram		
Name of the SME	Year	Target in tons	Achieved tons	Achieved in %	Target in tons	Achieved tons	Achieved in %	Target in tons	Achieved tons	Achieved in %
Rutongo Mines	2008	75	30	40	100	60	60	40	18	45
	2009	100	40	40	140	75	53.6	50	29	58
	2010	80	38	47.5	160	125	78.1	65	30	46.2
	2011	120	43	35.8	190	185	97.4	70	48	68.6
	2012	130	49	37.7	210	200	95.2	85	80	94.1
	Total	505	200	39.6	800	645	80.6	310	205	66.1
Ets Kalinda Valens	2007	n.a	n.a	n.a	175	150	85.7	n.a	n.a	n.a
	2008	n.a	n.a	n.a	200	187	93.5	n.a	n.a	n.a
	2009	n.a	n.a	n.a	225	196	87.1	n.a	n.a	n.a
	2010	n.a	n.a	n.a	250	230	92.0	20	16	80.0
	2011	n.a	n.a	n.a	125	100	80.0	60	54	90.0
	2012	n.a	n.a	n.a	75	30	40.0	23	10	43.5
	Total	n.a	n.a	n.a	1050	893	85.0	103	80	77.7

locate potential areas with high concentration of minerals, where they could establish their mining activities. They also explained that even when they discovered potential areas, they did not have modern equipment that could be used efficiently in mining and mineral cleaning activities. As a result of these two problems, they were not able to meet customers' needs in both quantity and quality. This is in line with Brouthers et al. (2009) and Salih's studies (2000), who found that technology intensity had an impact on export performance.

On lack of experts in export consulting and lack of export-marketing researchers, the managers explained that since they were very few such experts in Rwanda, the companies were not able to outsource such services when in need, making it difficult for them to identify as many potential export markets as possible and look for the best price. Our results also show that 'poor product design' and 'poor quality of export packaging' were export barriers that did not affect export performance. As explained, this is due to the fact that customers buy unprocessed minerals; therefore, they do not expect any value addition. This was also due to the nature of the mineral ores exported using bags with special tags that were controlled by the government and were recognized internationally. They ensured traceability and controlled the export of illegal minerals from areas of conflict in neighboring DRC. However, this added to the costs to an exporting company.

Concerning export barriers related to administrative procedures and distribution complications, it was found that unnecessary documentation, procedural difficulties in developing export activities, inadequate promotional programs by the government, and high costs of capital to finance exports affected the perceived export performance of SMEs in the mining sector.

The managers explained that a license for exploitation at a mining site was given only for five years. The license for export of mining products was given for one year, and it costs 300,000 Rwandan francs. This implies that each SME was required to renew the license for exports annually which was time-consuming and in the fifth year it had to renew two licenses. The companies preferred license and authorization periods to be longer than the current set periods so that they could invest more in their businesses. This may help them in getting long-term loans to finance, for example, equipment for extracting more minerals or buying new potential mineral plots. For the unnecessary documentation prerequisites and procedural difficulties in developing export activities, the managers explained that both of them were time-consuming that may lead to late delivery of goods, thus making Rwandan mineral exporting SMEs uncompetitive. However, these procedures have been put in place, since Rwanda is located close to DRC where there are several rebel groups who are also involved in illegal mining to prevent companies from selling minerals from DRC, which can affect the marketability of minerals from Rwanda.

About the government's inadequate promotional programs, the managers proposed that the government should come up with some incentives on an annual basis such as recognition and awards for SMEs that perform well in mineral exports to motivate them.

The foreign market factors that strongly affect perceived export performance include difficulties in transportation due to poor infrastructure within the region, high costs of transport, inadequate distributors, lack of information about foreign distributors, and ineffective communication with foreign distributors. Chandan and Mishrab (2011) also found that less information about foreign markets negatively affected a firm's export performance. According to them, since Rwanda is a landlocked country, minerals are exported by road through Dar-es-Salaam and Mombasa ports in Tanzania and Kenya, respectively. A truck from Rwanda takes two days to reach Dar-es-Salem and seven days to reach Mombassa which in both cases results in high transport costs. Chandan and Mishrab (2011) also found that high exporting costs negatively affected a firm's export performance. They also explain that sometimes containers with minerals were stolen at ports especially at Dar-es-Salam port causing unnecessary losses to exporters. According to them, locating a reliable foreign distributor was an uphill task. Further, SMEs also faced ineffective communication barriers because of the language used. Given that Rwanda was French speaking before it became both a French- and English-speaking country, they explained that when a SME's owner is from French-speaking background, it becomes difficult for him to communicate with English-speaking distributors. So, the company has to look for a translator which is inconvenient and adds to the costs. This is also true if the owner is from English-speaking background, and he has to deal with French-speaking distributors.

The external-foreign barriers that affect export performance in the mining sector include language and cultural differences, lack of an export market distribution channel, structure, and development, lack of competitive prices, and lack of information about export markets. All SMEs said that it was difficult for them to look for new potential international customers because of language and cultural differences and also due to lack of export market distribution channel structures. The customers they dealt with had come seeking suppliers in Rwanda. Mohammed et al. (2009) found that harmonious working relationships between an exporter and importer were important for penetrating a particular export market. According to him due to high electricity tariffs in Rwanda, the companies could not afford investments in smelter machines that could add value so that their prices can be competitive in the international market. SMEs want the government to put incentive programs in place to remunerate those who do well in exports. They also suggested that the government should reduce the cost of financing exports through local financial institutions.

7 Conclusions

This study examined the export performance of SMEs in the mining sector with the purpose of understanding how different factors affect mineral export from Rwanda. The findings show that 75% of the registered SMEs had not set export targets, meaning that they ran their businesses without concrete knowledge about the

achievements that they wanted to attain in a specified period. This made it difficult for the owners and employees to know whether the resources at their disposal had been used effectively and efficiently. While the government sets export target for the sector, it does so without involving the SMEs in the mining sector. As a result, neither the government nor the mining sector achieves the annual export targets set by the government.

Findings on the performance of SMEs which had set export targets indicate that their performance fluctuated according to price fluctuations in the world market, which in turn negatively affected mineral production.

Given that there is a shortage of agricultural land, there is a low manufacturing base, and there is surging unemployment, the mining sector could play a big role as a source of off-farm employment if the concerned SMEs can address barriers that are within their control, while the government creates a conducive environment for mining businesses including streamlining registration procedures and acquisition of export licenses. Concerted efforts are also needed during the planning process for which the government needs to involve all stakeholders, so that they can have a common understanding about each party's role in achieving national mineral export goals.

8 Managerial and Policy Implications

Based on the findings of this study, the following recommendations are made for the management of SMEs in the Rwandan mining sector:

- Set annual export targets and put in place adequate mechanisms to ensure that these targets are achieved and deal with bottlenecks that may affect attaining the set goals.
- SMEs in the mining sector should invest in modern technology to increase the volume of minerals for export so as to satisfy customers' needs. These include drilling equipment, magnetic separators, bulldozers, and jaw crushers. Since this equipment is expensive, SMEs can acquire it jointly and use it on a rotational basis.
- Managers should explore new mining areas to increase the quantity of minerals to be exported. They should also improve the skills of agents at the mining sites, those involved in the export of mining products and when looking for new potential customers.
- SMEs should seek assistance from researchers in higher learning institutions who can assist in research for export markets. Whenever possible they should employ experts or consultants in the export of mining products, who can help in identifying export markets.
- SMEs should organize regular meetings with regulatory institutions to discuss all export barriers related to procedures in place so that appropriate solutions can be found.

- They can seek the Private Sector Federation's help for reducing the procedures required for both company registration and export licenses.
- The government needs to streamline export licensing procedures. It is also pertinent for the government to understand the production capability of each SME before coming up with annual export targets. The government also needs to involve the SMEs in the planning process for the sector, particularly when setting annual mineral export targets. Once this is done, the SMEs can include this data in their own planning while at the same time increasing a sense of ownership of the national mineral export targets.

References

Adamantios, D., and N. Kakkos. 2007. Managerial assessments of export performance: Conceptual framework and empirical illustration. *Journal of International Marketing*. 15 (3): 1–31.

Altıntas, M.H., and T. Tuncer. 2007. The effects of export barriers on perceived export performance. An empirical research on SMEs in Turkey. *Euro Medical Journal of Business* 2 (1): 36–56.

Andersson, S., J. Gabrielsson, and I. Wictor. 2004. International activities in small firms: Examining factors influencing the internationalization and export growth of small firms. *Canadian Journal of Administrative Sciences* 21 (1): 22–34.

Brouthers, Lance Elliot, G. Nakos, J. Hadjimarcou, and K.D. Brouthers. 2009. Key factors for successful export: Performance for small firms. *Journal of International Marketing*. 17 (3): 21–38.

Cadogan, J.W., S. Sundqvist, K. Puumalainen, and R.T. Salminen. 2012. Strategic flexibilities and export performance: The moderating roles of export market-oriented behavior and the export environment. *European Journal of Marketing* 46 (10): 1418–1452.

Cavusgil, S.T., and S. Zou. 1994. Marketing strategy-performance relationship: An investigation of the empirical link in export market ventures. *Journal of Marketing* 58 (1): 1–21.

Chang, J. 2011. The early and rapid internationalization of Asian emerging MNEs-Multinational enterprises. *International Business Journal.* 21 (2): 1418–1452.

Cook, R. and P. Mitchell. 2014. Analysis report for Rwanda natural resources authority and Federal Institute for Geosciences and Natural Resources.

Fetscherin, M., I. Alon, J.P. Pillania, and K. Rajesh. 2012. Export competitiveness patterns in Indian industries. *International Business Journal* 22 (3): 188–206.

Government of Rwanda, Ministry of Natural Resources. 2009. A Revised Rwandan Mining Policy-Transforming Rwandan Mining Industry.

Hazel, A.A. 1972. Mine management by objectives. *Journal of South African Institute of Mining and Metallurgy*, 1–5.

Hill. 2007. Foreign direct investment, or FDI, defined as "direct investment in business operations in a foreign country". *International Business Journal*, 24–28.

Howitt, D., and D. Cramer. 2011. *Introduction to statistics in psychology*, 5th ed. Harlow: Pearson Education Limited.

Hultman, M., M.J. Robson, and C.S. Katsikeas. 2009. Export product strategy fit and performance: An empirical investigation. *Journal of International Marketing.* 17 (4): 1–23.

Hurley, R.F., and G.T.M. Hult. 1998. Innovation, market orientation, and organizational learning: An integration and empirical examination. *Journal of Marketing* 62 (3): 42–54.

Jalali, S.H. 2012. Environmental determinants entrepreneurial orientation and export performance: Empirical evidence from Iran. *Serbian Journal of Management* 7: 245–255.

Kang, K. 2010. Overseas network of export promotion agency and export performance: The Korean case, contemporary economic policy Korea. *Western Economic Association International Journal* 29 (2): 274–283.

Karelakis, C., K. Mattas and G. Chryssochoidis. 2008. Export problems perceptions and clustering of Greek wine firms. *Euro Med Journal of Business* 3 (1): 6–22.

Kathuria, L.M. 2013. Analysing competitiveness of clothing export sector of India and Bangladesh: Dynamic revealed comparative advantage approach. *International Business Journal.* 23 (2): 131–157.

Kohli, A.K., and B.J. Jaworski. 1990. Market orientation: The construct, research propositions, and managerial implications. *Journal of Marketing* 54 (2): 1–18.

Kothari, C.R. 2009. *Research Methodology: Methods and Techniques*, 2nd Revised Ed., New Delhi: New Age International (P) Ltd., Publishers.

Lages, L.F., C. Lages, and C.R. Lages. 2005. Bringing export performance metrics into annual reports: The annual export venture (APEV) scale and the performance in exporting (PERFEX) scorecard. *Journal of International Marketing.* 13 (3): 79–104.

Leonidou, L.C., C.S. Katsikeas, D. Palihawadana, and S. Spyropoulou. 2007. An analytical review of the factors stimulating smaller firms to export: Implications for policy-makers. *International Marketing Review* 24 (6): 735–770.

Luiz, J.M., and M. Ruplal. 2013. Foreign direct investment, institutional voids, and the internationalization of mining companies into Africa. *Emerging. Markets Finance and Trade Journal* 49 (4): 113–129.

McDougall, P.P., and B.M. Oviatt. 1996. New venture internationalization, strategic change, and performance: A follow-up study. *Journal of Business Venturing* 11 (1): 23–40.

Mohammed, Osman, Hafez Abdel Ali, and T. Ramayah. (2009), Exports to Arab speaking countries: Determinants of performance of Malaysian companies. *International Journal of Management* 26 (3): 465–475.

Morgan, R.E. and C.S. Katsikeas. 2003. Firm level export performance assessment. Review, evaluation, and development. *Journal of the Academy of Marketing*. 28(4), 493–511.

Morgan, R.E., and C.S. Katsikeas. 1997. Theories of international trade, foreign direct investment and firm internationalization: A critique. *Management Decision* 35 (1): 68–78.

Murray, J.Y., G.Y. Gao, M. Kotabe, and N. Zhou. 2007. Assessing measurement invariance of export market orientation: A study of Chinese and Non-Chinese firms in China. *Journal of International Marketing* 15 (4): 41–62.

Narver, J.C., and S.F. Slater. 1990. The effect of a market orientation on business profitability. *Journal of Marketing* 54 (4): 20–35.

Osman, et al. 2009. Exports to Arab-speaking countries: Determinants of the performance of Malaysian companies. *International Journal of Management* 26 (3): 465–475.

Ricci, Luca Antonio, and Federico Trionfetti. 2012. Productivity, Networks, and Export Performance: Evidence from a Cross-country Firm Dataset. *Review of International Economics* 20, 552–562.

Salih, T.M. 2002. Lessons from Malaysian trade and development experiences, 1960–99. *International Journal of Economics* 12 (1): 76–93.

Sharma, C., and R.K. Mishrab. 2011. Does export and productivity growth linkage exist? Evidence from the Indian manufacturing industry. *International Review of Applied Economics* 25 (6): 633–652.

Solberg, C.A., and E.B. Nes. 2002. Exporter trust, commitment and marketing control in integrated and independent export channels. *International Business Review* 11 (4): 385–405.

Suh, T., and D.J. Boggs. 2011. Communications infrastructure and traditional determinants of inward foreign investment: A comparison of developed and emerging markets. *International Business Journal* 21 (2): 205–223.

Torok, A. 2008. Export competitiveness and the catch-up process of Hungary (1996–2001). A comparative analysis with some reflections on trade theory. *International Business Journal* 18: 131–153.

Vogel, A. 2011. Exporter performance in the German business services sector. *The Service Industries Journal* 31 (7): 1015–1031.

Yu, T.T., and M.M. Zhang. 2000. Intra-industry trade and economic development: Empirical evidence of the newly independent states of the former. *Soviet Union Economic Journal* 10 (2): 199–208.

Zou, S., and S. Stan. 1998. The determinants of export performance: A review of the empirical literature between 1987–1997. *International Marketing Review* 15 (5): 333–356.

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Chapter 13
Assessing the Relationship Between Employee Motivation and Productivity in Rwanda's Nyagatare District

Pereez Nimusima and James Francis Tumwine

Abstract This chapter examines the relationship between employee motivation and work productivity in the Nyagatare district in Rwanda. The study was guided by the objectives of identifying performance behavior in terms of punctuality, absenteeism, work morale, ability at work and a sense of responsibility among Nyagatare district staff members. This involved finding out the methods used for employee motivation and then analyzing the relationship between the level of employee motivation and productivity. The research design involved the use of quantitative and qualitative approaches to collect and analyze data. The findings demonstrate the existence of a significant and positive relationship between the level of employee motivation and productivity. The results also show that the higher the employee motivation, the more they are likely to be productive. The study also contributes to an understanding that the more the employees are materially and immaterially rewarded at work, the more they are likely to be productive and consequently achieve their performance targets (as they are happy to identify with the district administration; this also reduces absenteeism at work).

Keywords Rwanda · Motivation · Productivity

JEL Classification Codes J01 · J16 · J24 · L60 · O14

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1 Introduction

The role of motivation in influencing a worker's behavior and productivity has been recognized ever since Taylor's (1911) work on rational analysis and scientific management. Taylor, along with his contemporaries, believed that men and women at work were entirely economic beings; therefore, they could work hard only if their economic positions improved (Richard 1991). Thus, economic rewards were provided to employees for their performance, which was expected to result in high productivity. This reflects the overall spirit at the beginning of the twentieth century, when managers and scholars in the field of management were concerned with improving organizations' productivity within which work was performed. Therefore, they directed their efforts at finding ways of how organizations should be managed so that there were higher levels of productivity at lower costs of production.

The process of achieving high productivity is a result of many interacting forces. Motivation arguably is one of the most important means of boosting worker morale and satisfaction. Motivation is one of the major physical and psychological factors that affect productivity; others include but are not limited to employee training and development, management development, organizational development, performance appraisal, employee rewards, employee selection and recruitment, human power planning and communication. It has been argued that employees' needs ought to be the cornerstones for institutions in forming policy for strategic human resources (Richard and Aquilino 1985). James (1989) uses the term 'socio-technical system' to describe the interrelationships between a technical and social system for people to work together. Operations' managers must be interested in both components of the socio-technical system since they are responsible for coordinating the efforts of groups of people to perform a technical task. According to James (1989), the environment in which people work can affect their comfort, health and productivity. Some environmental variables to be considered are temperature, noise and lighting.

Temperature: Human beings can perform under a variety of combinations of temperature, humidity and air movements. The effects of these variables depend on the strenuousness of the work and individual adoption of the conditions.

Noise: Unwanted sound in the workplace may not only be distracting but may even cause damage to a worker's hearing. Regulations in the American Occupational Safety and Health Act of 1970 state that workers should not be exposed to noise above 90 db[1] for more than nine hours at a time.

Lighting: Good illumination on work items or the work surface is necessary for proper work performance without eyestrain. The color content of the light and the amount of glare are also important.

James (1989) contends that many elements of an organizational system affect workers and should be taken into consideration when jobs are designed. These may be grouped into the following broad categories:

[1]See https://www.epa.gov/laws-regulations/summary-occupational-safety-and-health-act.

- Technical and physical factors.
- Task content—the operations that must be performed to convert inputs into a desired output.
- Physical context—heat, light, noise, fumes or pollution, appearance and safety precautions that surround a job holder.
- Socio-psychological factors.
- Social factors—personal interactions that occur because of the organizational structure and job assignments.
- Intrinsic factors—internal psychological feelings that are engendered as a result of performing a job.

The way in which human and non-human resources/aspects in relation to jobs are planned, organized, coordinated and controlled determines the strength of the productivity. Motivation is thought to be the cause of either good or bad performance by employees in institutions (Thomas and Carl 1990). Stoner and Freeman (1989) suggest that just as the biological approach tries to ensure that the physical demands of a job do not exceed the physical capabilities of the people who do it, the perceptual/motor approach seeks to ensure that the mental demands of their work do not exceed workers' mental capabilities.

The importance of understanding motivation has been reflected in its relationship with productivity. From the management's point of view, the motivation levels of subordinates are a reflection of the potential human energy available for production. The unleashing and directing of that energy requires the management to activate the energy source by applying stimuli (incentives) (Richard 1991). The intensity of stimulation required is inversely related to the motivation level. Therefore, motivation and productivity are directly related; the higher the motivation level, the higher the productivity potential of subordinates.

1.1 Conceptual Framework

The important variables for our study are employee training and development (HRD), management development, organizational development, performance appraisal, employee rewards, employee selection and recruitment, human power planning and communication. The way human and non-human resources/aspects in relation to jobs are planned, organized and coordinated is expected to determine productivity strength. How the staffing and leading functions are done and the work environment (conducive) (not forgetting enabling aspects—information, equipment and capital) are expected to have a profound effect on employee motivation and productivity.

Employee training and development (HRD), management development, organizational development, performance appraisal, employee rewards, employee selection and recruitment, human power planning, communication and career development are ingredients of employee morale, satisfaction and motivation

which, when available and favorable, lead to high productivity among employees. All these are supportive elements that must not be overlooked. As an example, if the appraisal and assessment processes do not allow for feedback, then they are not likely to yield good results. Several factors at an individual level (individual work job skills and knowledge, health and emotional state that bear on his/her today's performance and tomorrow's growth potential) and at the organizational level (that are used to promote organizational predictability)—equipment and facility, job design, organizational structure, policies and procedures and managerial style—ought to be considered when planning for staff motivation and productivity. To get people to do things, their knowledge, skills, talent, creative abilities, aptitudes, values, decision-making prowess, zeal and enthusiasm are invaluable assets to be drawn upon. The logic to do this is by motivation. For example, for an institution like a district, a decision taken over an issue affects multiple resources and operating areas over time; this decision is also implemented by people.

In a framework of decentralization, the Government of Rwanda (like it did with other districts) gave powers of autonomous management to the Nyagatare district in 2001 (during the first reforms) and in 2005 (during the second reforms) to be carried out in accordance with the priorities expressed by local community members. This is provided in Law No. 08/2006[2] determining the organization and functioning of the districts. Article 5 of the law says that the district shall accomplish its political, administrative, socioeconomic and cultural duties as determined by law. Therefore, it shall be particularly responsible for implementing government policies, delivering and assisting sectors in delivering good quality services, elaborating, coordinating and implementing development programs and promoting solidarity and cooperation with other districts.

A major objective of the decentralization process is taking the services close to the beneficiaries of the programs for easy monitoring and accountability once the beneficiaries are empowered enough to take part in this process. That is why it ought to be very important to have elected officials who hold public trust in using transferred funds to accomplish their prescribed targets. As a result, decentralized local governments are responsible for what they do and how well they do it. Thus, they have to be accountable for establishing appropriate targets embedded in budgetary presentations and/or policy priorities and ensuring their relevance to poverty reduction; sound management of funds received from the central government and donors; expenditure; effective organizational governance practices (including structures for capacity building) and outcomes, as well as the quality and range of their programs and services.

To enable the realization of Rwanda's Vision 2020[3] (which is Rwanda's long-term strategic development plan), Nyagatare district crafted its vision which is to ensure good governance through social justice, durable peace and sustainable socioeconomic development based on the modernization of infrastructure.

[2]See http://www.southernprovince.gov.rw/fileadmin/templates/documents/District.pdf.

[3]See http://edprs.rw/content/vision-2020.

Nyagatare district's mission is to execute the government's decisions and programs for promoting development, ICT, increasing and giving more value to agro-pastoral production, protecting the environment and providing quality services to Nyagatare's population with special care for the vulnerable while promoting unity, reconciliation and gender balance in government decision-making positions (Five year District Development Plan 2008–12).[4]

A realization of this mission in the sense of motivation requires the district management to be aware of different individuals' needs, values, attitudes and interests, different job dimensions and organizational rules and regulations, personnel policies, managerial practices and reward systems. A holistic approach for addressing different individual socio-psychological and physical needs requires that these are favorably tailored in the whole management process. There is a need to identify employees' needs, values and interests, attention to which has a multiplier effect on motivation and productivity as it instills a favorable work landscape.

Since motivation is an inner state that activates or moves, Donnelly et al. (1997) say that a person who is motivated can be described as the person works hard, the person sustains a pace of hard work and the person's behavior is self-directed toward important goals which elicit effort, persistence and goal attainment. Since the motivational cause is felt at individual, job and organizational levels, it should be a serious concern for district authorities that have embraced decentralization.

The Government of Rwanda has taken up a large campaign to improve the work standards of its employees. The existing established government programs manifest this will, yet the reality for many organizations, including Nyagatare district, is that their people (staff members) have negative performance behaviors in the sense that they are little motivated and consequently perform well below their true capabilities.

For quite some time, neither government officials nor the citizens could precisely predict the causes of declining performance behavior in Nyagatare district. According to the Rwanda Governance Board's (RGB) district annual performance rankings (2012–13, 2013–14 and 2014–15), Nyagatare district's[5] position was not the best. On the surface, motivation initiatives seemed to be above average, but with no clear substantive effect on work output. There were observable insufficient tools (equipment), insufficient information technology infrastructure, communication failures, coordination inefficiencies (some posts having incompetent people), procurement delays, filling failures, skilled and experienced human power moving from job to job time and time again and some workers appeared to be little enthused and little motivated.

Given the government's willingness to address employee motivation and non-improving employee productivity over the years, this research assesses the

[4]See http://www.nyagatare.gov.rw/uploads/media/NYAGATARE_DDP_20132018_01.pdf.

[5]See http://www.rgb.rw/fileadmin/templates/Documents_pdf_word_jpeg/Rwanda_Governance_Scorecard_2014_Edition.pdf.

relationship between motivation and productivity in Nyagatare district. The research was conducted on the performance of Nyagatare district's employees in terms of punctuality, absenteeism, work morale, ability at work, sense of responsibility and motivation methods used therein to determine the relationship between motivation and productivity.

2 Research Methodology

This study attempted to assess the relationship between employee motivation and productivity in Nyagatare district. It took two broad designs, quantitative and qualitative. It used semi-structured questionnaires with both Likert type and open-ended questions. Observations were used to complement questionnaires in collecting primary data for the purposes of empirical evidence. Secondary data were collected from various sources such as reports published by the district, the Rwanda Vision 2020 document, the Labor Code of Rwanda, the Ministry of Finance Poverty Reduction Paper (2000), newspapers, journals, business magazines and the Internet.

Data collection took into consideration the fact that the unit of analysis was an individual worker in the district. The design was also sensitive to the fact that the type of investigation was correlational with a particular interest in examining how the key variables (punctuality, absenteeism, work morale, ability, sense of responsibility, methods of motivation used) related to the key parameters of the population (age, gender, level of education) that were studied.

The study population was Nyagatare district employees (216). This implied that whoever was employed by Nyagatare district qualified as a respondent irrespective of sex, religion or economic status. Due to limited resources in terms of money and time, and the researcher's need for precise results, it was not possible to study the whole population. Also because complete coverage of a population in a scientific inquiry is hardly ever possible, a sample size of 90 was taken to be numerically adequate and culturally representative. A combination of stratified, universal, purposive and systematic sampling techniques was applied depending on the nature of the population. The population was stratified considering the heterogeneity that exists between different district administrative strata. The use of these methods was intended to eliminate any possible personal biases of the researcher.

The research variables' relationship (dependent and independent) was analyzed/measured using the 5-point Likert scale and Pearson correlations. Qualitative data were captured through semi-structured questionnaires and observations among others. A thematic analysis was done to analyze the qualitative data.

3 Results and Discussion

3.1 Performance Behavior in Terms of Identified Indicators

The identified indicators included punctuality, absenteeism, work morale, ability at work and a sense of responsibility among Nyagatare district staff members. The results given in Table 1 were generated using a 5-point Likert scale which was ordered such that 1 represents Strongly Disagree, 2 Disagree, 3 Uncertain, 4 Agree and 5 Strongly Agree. A mean close to 1 or 2 reflects disagreement with the issue at hand, while a mean close to 4 or 5 shows agreement with the same issue. On the other hand, a mean close to 3 reflects some uncertainty with the issue at hand. Column N shows how many of the respondents replied to the question.

The results in Table 1 show that on average, the employees claimed to have reported for work on time all of their work life (Mean = 4.50), to have achieved performance targets all the time (Mean = 4.19) and to have been present at work all the time (i.e., absence was always with permission) (Mean = 4.63). Further, the table also shows that the respondents claimed that the strength of their commitment to work had been persistent since the start to the present day (Mean = 4.24). The employees also reported that generally they were happy identifying themselves with Nyagatare district (Mean = 4.55) and also felt obliged to keep serving the district (Mean = 4.20). It was also reported that these employees felt that they had necessary abilities and skills to do their work (Mean = 4.44). However, the results also show that if offered better jobs elsewhere, there was a possibility that these employees would leave this district (Mean = 2.87), and on average, they were uncertain about wanting any more responsibilities added to their daily workloads (Mean = 2.95).

Table 1 Performance behavior measurement

Performance behavior	N	Min	Max	Mean	SD
I have reported for work on time all of my work life	90	2.00	5.00	4.50	0.85
I achieve performance targets all the time	88	2.00	5.00	4.19	0.84
I am present at work all the time (absence is always with permission)	89	2.00	5.00	4.63	0.61
The strength of my commitment to work has been persistent since the start to the present day	90	1.00	5.00	4.24	0.90
I feel happy identifying myself with Nyagatare district	88	2.00	5.00	4.55	0.66
I feel obliged to keep serving the district of Nyagatare	88	1.00	5.00	4.20	1.01
If I got a better offer elsewhere, I would not feel it right to leave this district	87	1.00	5.00	2.87	1.54
I have necessary abilities and skills to do my work	89	2.00	5.00	4.44	0.67
I wouldn't mind more responsibilities and tasks added to my daily workload	88	1.00	5.00	2.95	1.41

These results show that some district employees would be willing to leave the institution in case they got a better offer elsewhere and they lacked a sense of responsibility toward the operations that they were supposed to oversee. The scenario among the Nyagatare district employees can be explained by Ingeman and Bjerke's (2008) work which shows that employees' satisfaction with an institution can only be high when the organizational cultural practices on issues such as criteria for promotion and rewards are perceived to be fair. In such a case, the employees will also feel that it is worth identifying oneself with the institution. Some employees' desire to take up better offers in other institutions has led to a scenario in Nyagatare district which is no different from that which is faced by institutions elsewhere which are trying and struggling to ensure that their employees do not leave due to poor motivation (Ramlall 2004).

3.2 *Methods of Motivation Used*

The results in Table 2 show the methods of motivation used in Nyagatare district. These reveal that the district did not motivate employees to work hard (Mean = 2.79), and in addition, on average the employees felt that the responsibilities and tasks that the district assigned them did not match their remunerations (Mean = 2.48).

It was observed that the differences in district staff salaries were not based on experience (Mean = 2.13), but rather on the post held (Mean = 4.25). Another

Table 2 Methods of motivation used

Methods of motivation	N	Min	Max	Mean	SD
Apart from salary the district motivates me in other ways to work hard	84	1.00	5.00	2.79	1.35
The responsibilities and tasks that the district assigns to me match the remuneration	90	1.00	5.00	2.48	1.39
There are differences in district staff salaries	89	1.00	5.00	4.40	0.86
These differences are based on experience	86	1.00	5.00	2.13	1.30
The differences in salaries are based on the post held	89	1.00	5.00	4.25	1.03
Staff at the same work level (job category) get uniform remunerations	87	1.00	5.00	4.05	1.28
Staff at the same work level (job category) do not get uniform remuneration	87	1.00	5.00	2.57	1.53
Supervision at work is a necessary function	89	1.00	5.00	4.03	1.21
Supervision of staff is done once a week	83	1.00	5.00	2.19	1.28
Supervision of staff is done twice a week	83	1.00	5.00	2.04	1.19
Supervision is done twice a month	83	1.00	5.00	2.41	1.37
Supervision is done weekly	74	1.00	5.00	2.27	1.30

Source Field survey (December 2014–May 2015)

observation was that staff members at the same work level (job category) did not get uniform remunerations (Mean = 2.57). Further, it was revealed that though the employees felt that supervision at work was necessary (Mean = 4.38), there was disagreement as to whether the supervision was done even once a week (Mean = 2.19) and a further indication that the supervision was not done even twice a week (Mean = 2.04).

Table 3 further reveals that though job attributions were clear and known to employees (Mean = 4.13), the district had had no training for its staff members in the last ten months (Mean = 2.66), and when the performance appraisal was done (if at all), the results were not communicated to the employees (Mean = 2.04). The results further show that the district did not reward excellent performing staff members at the end of every year (Mean = 2.48). Field observations further indicate that not every district staff member took part in the decision-making process chain (Mean = 2.43), and as a result, for many employees, it was unclear whether they had a personal 'say' about how and when the work was to be done (Mean = 3.33). The results also show that many things were neither standardized nor under employee control so employees were uncertain whether they could take some decisions about their work (Mean = 3.43).

Table 3 Methods of motivation used in Nyagatare district

Methods of motivation	N	Min	Max	Mean	SD
My job attributions are clear and known to me	88	1.00	5.00	4.13	0.92
The district has trained its staff in the last ten months	89	1.00	5.00	2.66	1.48
Performance appraisal is done often and the results are communicated to us	89	1.00	5.00	3.06	1.55
The district rewards excellent performing staff at the end of every year	90	1.00	5.00	2.48	1.47
Every district staff member takes part in the decision-making process chain	87	1.00	5.00	2.43	1.42
The job gives me almost no personal 'say' about how and when the work is to be done	85	1.00	5.00	3.33	1.25
Many things are standardized and not under my control but I can take some decisions about the work	87	1.00	5.00	3.43	1.26
The job is set up so that I get almost constant 'feedback' as I work about how well I am doing	90	1.00	5.00	3.41	1.23
The district has a demonstratively better team-building approach	89	1.00	5.00	3.71	1.26
The district uses a diversity approach (wisdom and experience of all the staff members) to shape solutions to problems in the district	90	1.00	5.00	3.33	1.37
District staff members with needs to further their education are supported	88	1.00	5.00	2.47	1.52
The district develops its action plans depending on critical people's issues (staff opinions are paid attention to)	89	1.00	5.00	3.13	1.51

Source Field survey (December 2014–May 2015)

It was also observed in quite a number of cases that the job was set up so that employees could get almost constant 'feedback' on how well they were doing (Mean = 3.41). In addition, it was observed that the district had a demonstratively better team-building approach (Mean = 3.71), but it did not always use a diversity approach (making use of the wisdom and experience of all the staff members) to shape solutions to problems in the district (Mean = 3.33) and neither did it support district staff members with needs to further their education levels (Mean = 2.47). Finally, the results show that employees were uncertain regarding the degree to which the district developed its action plans depending on the critical people's issues (staff opinions were partly paid attention to) (Mean = 3.13).

Apart from foreseen immaterial rewards, the district materially had a result-based salary structure, special allowances for technical professionals, one month leave every year for every staff member, telephone codes for directors and executives, tax exemption for executives importing fancy cars, rental and transport allowances, pension after service and financial support to any staff member in bad times say if he/she lost any family member. This was captured through the researcher's extended talks with the human resource office in the district.

The employees tended to perceive the remuneration to be unfair compared to what they were doing, and in addition, they tended to see an unfair distribution of rewards. For instance, the employees at the same work level did not get the same remuneration. The employees concluded that the Nyagatare district management had not done enough to motivate them to continue working with the government institution. However, as Lord (2002) reveals, it is essential that the Nyagatare district council makes it a point to address the displeasure of the employees since the retention and consequent productivity of these employees directly hinge on their motivation. He further adds that the management should ensure that major motivators such as work accomplishments, job responsibilities and recognition be given to the employees.

The researcher believes that the two most significant elements of employee motivation are adequate pay and recognition for work-based achievements. Others are non-monetary benefits, for instance, health insurance and a good working atmosphere with friendly and cooperative co-workers.

Finally, an attempt was made to seek employees' opinions on what could be done to increase the motivation and productivity of district employees:

- How do you apply both positive and negative motivation? Apply positive motivation for those who perform well to encourage them to keep up their intensity and be persistent in their efforts at work by increasing their salaries, paying them overtime, providing refreshments, lunch, recognition gifts, etc. And apply negative motivation for poor performers by reducing their salaries, leave without pay, demotions, outside transfers, etc., as deterrents to encourage them to perform better if they are not fired from their services.
- Involve staff members in the decision-making process.
- Increase responsibility for information sharing.
- Positively reinforce and treat all staff members in a fair manner.

- Reduce the gap between the executive and implementation committees (powers, salaries, fringe benefits).
- Give timely training (capacity building) and adequate facilities to workers.

3.3 The Relationship Between the Level of Employee Motivation and Productivity

The Pearson correlations (r) were generated to explore the relationship between the level of motivation and productivity in Nyagatare district (Table 4).

The results in Table 4 show that there exists a significant and positive relationship between the level of employee motivation and productivity ($R = 0.432^{**}$, $P < 0.01$). These results also show that the higher the motivation, the more the employees are likely to be productive.

As discussed earlier, there is a positive and significant relationship between the level of employee motivation and productivity. These results also show that among Nyagatare district employees, the more the transparency and fairness that are used in rewarding the employees, the more the employees are likely to be productive and consequently achieve their performance targets, happily identify with the district administration and also reduce absenteeism levels. These results are supported by Rafikul and Ahmad (2008) who show that lack of employee motivation within an institution results in the underutilization of the potential and skills of employees since they feel that their efforts are not being rewarded in a fair fashion.

3.4 Factor Analysis Results

3.4.1 Factor Analysis for the Exploration of Performance Behavior

Factor analysis results were generated to explore the issues that stand out with regard to the performance behavior among the employees in the district (Table 5).

The results in Table 5 show that the issues that stood out with regard to the performance behavior were punctuality and commitment as explained by 39.56 and 16.48% of the performance behavior. The most important issues were reporting to

Table 4 Correlation relationship between motivation and productivity

	Employee motivation	Productivity
Employee motivation	1.000	
Productivity	0.432**	1.000
	0.000	

**Correlation is significant at the 0.01 level (two-tailed)

Table 5 Factor analysis results: performance behavior

Performance behavior	Punctuality	Commitment
I have reported for work on time all of my work life	0.739	
I achieve performance targets all the time	0.824	
I am present at work all the time (absence is always with permission)	0.719	
The strength of my commitment to work has been persistent since the start to the present day	0.720	
I feel happy identifying with Nyagatare district		0.732
I have the necessary abilities and skills to do my work		0.620
I would not mind more responsibilities and tasks added to my daily workload		0.862
If I got a better offer elsewhere, I would not feel it right to leave this district		0.635
Eigen values	3.56	1.48
Variance %	39.56	16.48
Cumulative %	39.56	56.05

Source Survey results 2015

work on time during all of an employee's work life (0.739), the capacity to achieve targets all the time (0.824) and continuous presence at work all the time (0.719). Further, the strength of employee commitment to work being persistent throughout his/her tenure was also a key issue that could be used to assess performance behavior (0.720).

On the other hand, with regard to commitment the most important issues that stood out were willingness to have more responsibilities and tasks added to daily workloads (0.862), feeling happy about identifying oneself with Nyagatare district (0.732), having the necessary abilities and skills to do one's work (0.620) and the unwillingness to go elsewhere even when an employee got a better job offer (0.635).

3.5 Factor Analysis of the Methods of Motivation Used

The results in Table 6 were generated to explore the issues that stand out when it comes to the methods of motivation used in Nyagatare district.

The results show that supervision, remuneration criteria and performance assessment were the three most important considerations and they comprised variances of 47.86, 13.31 and 10.36%. With supervision, the results revealed that the most important factors had to do with the necessity of supervision at work (0.815) and the frequency with which it was done, either twice a week (0.828), weekly (0.864) or twice a month (0.827).

Table 6 Factor analysis for the methods of motivation used

Methods of motivation	Supervision	Remuneration criteria	Performance assessment
Supervision at work is necessary	0.815		
Supervision of staff is done once a week	0.777		
Supervision of staff is done twice a week	0.828		
Supervision is done twice a month	0.827		
Supervision is done weekly	0.864		
The differences in remuneration are based on experience		0.802	
The responsibilities and tasks that the district assigns to me do not match the remuneration		0.789	
The responsibilities and tasks that the district assigns to me match the remuneration		0.627	
There are differences in district staff salaries		0.699	
Staff members at the same work level (job category) do not get uniform remuneration		0.673	
The district has had training for its staff in the last ten months			0.784
Performance appraisal is done often and the results are communicated to us			0.746
The district rewards excellent performing staff members at the end of every year			0.840
Every district staff member takes part in the decision-making process chain			0.842
Eigen value	6.222	1.7305	1.347
Variance %	47.86	13.31	10.36
Cumulative %	47.86	61.18	71.54

Source Survey results 2015

Another important factor that emerged had to do with criteria for remuneration where the important issues were the fact that differences in remuneration were based on experience (0.802), the responsibilities and tasks that the district assigned employees did not match the remuneration (0.789), the responsibilities and tasks that the district assigned employees matched the remuneration (0.627) and the fact that there were differences in district staff salaries (0.699). Finally, it was observed that another issue that the employees considered was that staff members at the same work level (job category) did not get uniform remunerations (0.673).

4 Conclusions

The following conclusions can be drawn from this research:

- Organizational reward practices and the motivation system determine employee turnover to a great degree. When employees perceive that, for instance, they are not being rewarded well enough for the work that they are doing, they are more likely to take up an offer in another institution.
- A failure to adequately motivate the employees might result in their leaving which in turn has financial implications for the institution. For instance, it has been argued that today's institutions incur great financial losses estimated to the tune of $1 million for every ten key administrative and technical persons who leave an institution (Rafikul and Ahmad 2008).
- Employees' perceptions that fellow employees who are at the same rank are rewarded more tend to lead to a loss of motivation.
- The management style in an institution becomes a very crucial issue when it comes to motivating employees. If the leadership is too dictatorial, always takes decisions that directly affect the employees and yet these employees are not consulted (for instance, about work schedules which are most convenient for them), they become less enthused.
- Employee motivation is also enhanced when employees successfully and proficiently accomplish the tasks assigned to them. After this, the employees would at least expect some recognition for outstanding performance.

5 Limitations

Whereas efforts were made to assess empirically the relationship between motivation and productivity, this study has some shortcomings. First, based on the limited time frame for conducting such an empirical study, the sample was too small to represent nationwide views of the district's staff members and so its findings cannot be generalized. We hope future researchers will address this challenge by conducting an extensive nationwide study.

Second, based on the fact this was a descriptive study, the tools were not effective in addressing the descriptive intentions of staff members on motivation in Rwanda. Future studies could use more effective tools.

References

Donnelly, J.H., J.L. Gibson, and J.M. Ivancevich. 1997. *Fundamentals of management*. New York: Business Publication Inc.

Ingeman, A., and B. Bjerke. 2008. *Methodology for creating business knowledge*. New Delhi: Sage Publications.

James, B.D. 1989. *Production and operations management, manufacturing and non-manufacturing*, 4th ed. New York, Toronto: Random House.
Lord, R.L. 2002. Traditional motivation theories and older engineers. *Engineering Management Journal* 14: 3–7.
Rafikul, I., and Z.H.I. Ahmad. 2008. Employee motivation: A Malaysian perspective. *International Journal of Commerce and Management* 18 (4): 344–362.
Ramlall, S. 2004. A Review of Employee Motivation Theories and Their Implications for Employee Retention within Organizations. *Journal of American Academy of Business,* 53–63.
Richard, B.C., and N.J. Aquilino. 1985. *Production and operations management*, 4th ed. Illinois: Irwin, Home wood.
Richard, L.D. 1991. *Management*, 2nd ed. Orlando, New York: Dryden Press.
Stoner, J.A.F., and R.E. Freeman. 1989. *Management*, 4th ed. USA: Prentice Hall.
Taylor, F.W. 1911. *The principles of scientific management*. New York: Harper Brothers.
Thomas, S.B., and P.Z. Carl. 1990. *Management function strategy*. Illinois: Irwin, Home wood.

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