Africa's Competitiveness in the Global Economy

Edited by
Ifedapo Adeleye
Mark Esposito

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Haslam College of Business
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Editors
Ifedapo Adeleye
Haslam College of Business
University of Tennessee
Knoxville, USA

Mark Esposito
Harvard University
MA, USA

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To the loving memory of my mother. I miss you every day

Foreword

This book is a timely effort to rethink Africa's economic narrative. For nearly two decades Africa's popular storyline was represented by the "Africa Rising" meme built on the commodity boom and rise of China as Africa's leading trading partner. It was simply, catchy and hopeful. It was both hopeful and misleading. The narrative gave hope those who thought that revenue from commodity exports could be reinvested to spur Africa's economies and diversify industrial growth. Worse, it lulled those who believed that the rise of China and the associated commodity boom would restore Africa's so-called comparative advantage as world supplier of raw materials.

The optimism gave birth to new ideas such as resource-based industrialization that were pegged on the historical belief in raw materials as Africa's best starting point for long-term economic transformation. The optimism wasn't all misplaced. For many it became a source of pride and renewed self-confidence that extended to countries that were not benefitting from the commodity boom.

The impact of such optimism will outlive commodity price fluctuations. But optimism alone does not constitute a strategy that could guide Africa's search for alternative development pathways. This book provides new intellectual and pragmatic approaches that could help the continent enhance its global competitiveness and transcend the magical thinking that surrounds reliance on commodity exports. At the core of the

alternative approach offered in this book is the importance of industrial policy in long-term economic transformation. The focus on industrial development is a welcome departure from twentieth-century market liberalization ideology that defined globalization as we know it today.

The book elaborates a number of strategic policy approaches needed for industrial development. The most notable of these are the role of cities as centers of industrial diversification, banking institutions as catalysis of industrial growth, services as an integral part of overall economic growth, and human capital development as a critical driver of development.

African cities are some of the most underutilized economic assets on the continent. In most countries they account for the bulk of economic output. Yes, they are hardly managed as economic assets. They are often treated as administrative units often falling under local government. This deprives them not only of the support their need to advance industrial development, but as second-rate regions they hardly get the talent that truly reflects their economic potential. Drawing from diverse strands of economic theory, the book seeks to reposition African cities as centers of industrial innovation and diversification. The point here is not about cities as administrative unit but as clusters of critical assets necessary for industrial dynamism. The same cluster logic is extended to agricultural and energy sectors.

Part of the alignment of urban assets to drive industrial growth includes redefining the role of banking institutions so they can serve as catalysts of industrialization. This is not unique to Africa. Banks have placed this strategic role in emerging economies around the world, starting with Europe and the US when they were in their early stages of industrialization. The book examines this potential with specific emphasis on the role of indigenous pan-African Banks (PABs). The rise and growth of PABs represents a set of new assets that did not exist in the early decades of post-colonial Africa.

The need to rethink the role of the service sector is one of the themes addressed in this book. Much of the economic theory on this topic has been misleading and at odds with reality. The linear assumption that economies transition through certain stages that include the shift from industry to services has been heralded as a model for Africa to explore.

The view has been that Africa could leapfrog industrial development and move into services. There are cases where this is possible but the reality is that services are often an integral part of healthy ecological, agricultural and industrial foundation. This view suggests that the need to replace the linear model of economic stages with a more robust systems approach that acknowledges the importance of integration.

Finally, the book stresses the importance of human capital development as a critical driver of economic diversification. This is a key point given Africa's deficiencies in higher education, especially the limited investment in fields such as engineering. The point here is not to argue against humanities and social sciences but to redress the imbalances in the system and biases against investment in technical fields.

This book appeals to policymakers, academics and practitioners alike. But even more important is the timing of its publication. Africa is currently negotiating the creation of a Continental Free Trade Area (CFTA) that will cover all the 55 members of the African Union. The negotiations are an important testing ground for many of the ideas proposed in this book on how to enhance Africa's global competitiveness. Maybe the most immediate application of the ideas is at the African regional level. If Africa cannot rapidly expand its internal trade, it is unlikely to compete favorably internationally. Vibrant regional trade leagues will equip the continent with the knowledge and skills needed to play globally.

Professor of the Practice of International Development
Harvard Kennedy School,
Cambridge, MA, USA
Author, *Innovation and Its Enemies: Why People Resist New Technologies*

Calestous Juma

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Finally, we owe a debt of gratitude to all the contributors to this third volume of the SSA book series for their ambitious attempt to fill gaps in the literature on international competitiveness of African firms, industries, cities, and nations.

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Notes on Contributors

George Acheampong teaches entrepreneurship, international business and marketing at the University of Ghana, Pentecost University College, Ghana and Methodist University College, Ghana. He is a doctoral advisor at the Nobel International Business School. He holds a PhD from the University of Ghana after completing coursework at the University of Copenhagen. George is a past DANIDA Scholar. He has held fellowships at the UNU-WIDER and DERG University of Copenhagen. His research interests are in how enterprise can lead to development in Africa utilizing market-based approaches. He is a member of the following professional bodies: the Academy of Management (AoM), Africa Academy of Management (AFAM), International Academy of African Business and Development (IAABD) and the International Network of Social Network Analyst (INSNA).

Kweku Adams is a senior lecturer in Management at the York Business School (YBS), York St. John University, UK. He obtained his PhD from the University of Wales Swansea in the United Kingdom. He is the MSc Pathway Course Leader for International Business, Marketing and Management specialist programmes at the YBS. Prior to joining the York Business School in 2016, Dr. Adams held academic positions in North America, at the Haskayne School of Business, University of Calgary and the University of Lethbridge School of Management, Canada. His research interests centre on business strategy and international business, specifically the management of headquarters—subsidiary relations, investigating the wider governance challenges facing multinational corporations. His work has appeared in the *Journal of International Management* and *Thunderbird International Business Review*.

Ifedapo Adeleye is a lecturer in Management and Global Business at Haslam College of Business, University of Tennessee, USA. Prior to joining Haslam in 2016, he was on the faculty at Lagos Business School, Nigeria, for nearly a decade. Dapo is a passionate management educator, and a global business enthusiast. His research revolves around three broad areas: international strategy and organization, strategic human resources management, and corporate sustainability. Dapo has published 3 books, 15 book chapters and 12 articles in academic and practitioner journals. He is the Founding Editor of the Palgrave Macmillan Business in Africa Series, and has guest-edited a special issue of *Thunderbird International Business Review* on Africa. He received his PhD in Management from The University of Manchester, UK.

Ogechi Adeola teaches Marketing Management at Lagos Business School, Nigeria. She holds a doctorate in Business Administration (DBA) and an MBA from Manchester Business School, UK and a law degree from University of Nigeria. She has been a guest speaker and discussant at local and international conferences, including the Lagos Chamber of Commerce and Industry (LCCI) business clinic, West African Power Industry Convention (WAPIC) and the Yale Africa-China Conference. She has published academic papers in top scholarly journals. In April 2016, her research work won the Best Paper Award at the Australia-Middle East Conference on Business and Social Sciences (AMECBSS) held in Dubai, UAE. Adeola currently serves as Associate Dean, Business Administration at the University of the People, an accredited online institution, headquartered in Pasadena, California, USA.

Abdoulkadre Ado attended universities in Africa, Asia, and North America and is a specialist focusing on emerging markets and south-south cooperation. His research is on Africa and its partnerships with emerging powers like China. He has research and teaching experience at Canada's leading universities including University of Ottawa, Laval University, and Ryerson University of Toronto. He is also a researcher and consultant in international business at the Jarislowsky Chair of Laval University. He was also a visiting researcher to UN Headquarters in New York, at the office of the special adviser of the Secretary General on Africa. His academic and professional experiences expand to more than 30 countries in all continents. He has received the most prestigious doctoral distinction, the Vanier title, from the Federal Government of Canada.

Joseph Amankwah-Amoah is an associate professor (reader) of International Business at University of Kent. His research interests are anchored in core topics of strategy and international business specifically global business strategy,

international divestment, entrepreneurship (business failure), and lateral hiring in emerging markets. He currently serves as co-editor of the *Cogent Business & Management* journal and sits on the editorial boards of many journals, including *Thunderbird International Business Review, Critical Perspectives on International Business, Journal of African Business* and *International Journal of Multinational Corporation Strategy*. He has published over 100 articles in refereed academic journals, conference proceedings and book chapters, including *Technological Forecasting and Social Change, Industrial and Corporate Change, International Journal of Human Resource Management, Business History, Group and Organization Management, and Journal of Business Research*.

Suresh Chandra Babu is a senior research fellow and Head of Capacity Strengthening Program at the International Food Policy Research Institute, Washington, D.C. Before joining IFPRI in 1992, he was a research economist at Cornell University, and he also spent five years in Malawi, in various academic and advisory capacities. He currently conducts research on issues related to capacity development including economic analysis of extension and advisory services; understanding policy process; and institutional innovations for agricultural transformation. He has published more than 16 books and monographs and 80 peer reviewed journal papers. He has been on the advisory board of World Agricultural Forum. Dr. Babu was educated at agricultural universities in Tamil Nadu, India (B.S and M.S.) and at Iowa State University (M.S. and Ph.D Economics).

Claire Beswick heads up the Case Centre at the University of the Witwatersrand Graduate School of Business Administration, having joined the institution as a case writer in September 2001. She has more than 20 years' experience in research and writing: as a researcher at the South African Institute for Race Relations, a journalist, and now at the WBS Case Centre. In her position at the head of the case centre, Claire has written a wide range of cases herself and overseen the writing of most of the cases that are currently in the collection. Her co-authored case, Calum McCracken and NGN Telecoms received the Emerald Emerging Market Case Studies Award for the Best Teaching Case at the 2015 Academy of International Business Sub-Saharan Africa conference.

Nathaniel Boso is an Associate Professor in Marketing at Leeds University Business School in the United Kingdom (UK). His research focuses on the interface between international entrepreneurship, innovation and marketing management. His research has won multiple awards and has been published in leading scholarly journals such as the *Journal of Business Venturing*, *Journal of*

Product Innovation Management, *Journal of Business Ethics* and *Journal of International Marketing*. He sits on the editorial review board of *International Marketing Review* as an associate editor and has guest edited several journals and books on international business in Africa. He received his PhD from Loughborough University in 2011, and is a professional chartered marketer at the Chartered Instituting of Marketing, UK.

Obi Berko Damoah is a senior lecturer at the University of Ghana Business School, Accra, Ghana and a visiting lecturer at the China Europe International Business School (CEIBS), Accra, Ghana. He holds an MPhil and MBA degree from the University of Ghana and the Maastricht School of Management, the Netherlands, respectively, and a PhD from the Cardiff Metropolitan University, Wales, UK. Dr. Damoah teaches and researches in international business and strategy. He is a member of the following professional bodies: the Academy of management (AoM), USA, Academy of International Business (USA), British Academy of Management (BAM), Africa Academy of Management (AFAM) and the Academy of International Business sub-Saharan Africa (AIB-SSA).

Yaw A. Debrah (BA, MA, Simon Fraser University, Canada; PhD, Warwick University, UK; GIPM, UK) is professor of human resource and international management at the Swansea University, UK. His scholarly work has appeared in journals such as *International Journal of Human Resource Management*, *Journal of World Business*, *World Development*, *Journal of International Management*, *International Marketing Review*, *Asia Pacific Journal of Management*, *Asia-Pacific Business Review*, and *Thunderbird International Business Review*. Yaw is on the editorial board of the *International Journal of Human Resource Management*, *Ghana Policy Review*, *African Journal of Economic and Management Studies*, and *Scientific Journal of Administrative Development*. He has consulted for many organisations including Singapore Telecom, Commonwealth Secretariat and ILO. Yaw has also acted as an external assessor and consultants to many African universities.

Peter Draper is senior research fellow in the Economic Diplomacy programme at the South African Institute of International Affairs. His expertise is in trade and investment policy and negotiations, and international business regulation, with specific reference to South and Southern Africa and their relations with the US, EU, China and India and the World Trade Organization. His other domestic affiliations are: adjunct professor at Wits Business School; senior consultant to the India, Brazil, and South Africa think tank consortium at the Centre for Development and Enterprise; and research associate of the Department of

Political Science at the University of Pretoria. He holds a Master of Commerce degree from the University of Natal (now University of KwaZulu-Natal).

Ebes Esho is a lecturer in the department of business management at Covenant University. She has a first degree in accountancy from the University of Nigeria, Nsukka, and an MBA and a PhD from the Lagos Business School. Her areas of research interest broadly include understanding the role of human capital and strategic factor markets in shaping entrepreneurship and firm performance. Prior to entering academia, she worked in various arms of the treasury department, domestic operations and internal control units of Zenith Bank Plc and United Bank for Africa (UBA). Ebes has consulted widely for firms in various industries in Nigeria and many World Bank assisted projects.

Mark Esposito is Professor of Business & Economics at Hult International Business School and a member of the teaching faculty at Harvard University's Division of Continuing Education, where he equally serves as Institutes Council Co-Leader for the Microeconomics of Competitiveness Program at Harvard Business School. He is an appointed fellow of the Mohammed Bin Rashid School of Government in Dubai as well at the Global Federation of Competitiveness Councils, Washington DC. He equally holds a research fellowship at the Judge Business School, University of Cambridge, UK.

Esposito consults in the area of corporate sustainability and competitiveness worldwide, including for startups, boards of directors, communities and national governments. He has advised the President of the European Parliament and is part of the "Future of Production" network at the World Economic Forum, where he was also appointed as Global Expert. He has co-founded Nexus Frontier Tech, an Artificial Intelligence Studio, based out of Boston, London and Tokyo.

Esposito was named one of the emerging tomorrow's thought leaders most likely to reinvent capitalism by Thinkers50, the world's premier ranking of management thinkers, and was inducted into the "Radar" of the 30 most influential thinkers, on the rise. He is the co-author of the bestseller *Understanding How the Future Unfolds: Using DRIVE to Harness the Power of Today's Megatrends*. He holds a Ph.D. in Business and Economics from the International School of Management in Paris/New York.

Malcolm Fabiyi is president of Hydromantis, Inc. He holds a First Class Honors Degree in Chemical Engineering from University of Lagos, a PhD degree also in Chemical Engineering from University of Cambridge, and an MBA from the University of Chicago Booth School of Business. Dr. Fabiyi

worked with McKinsey & Company as a strategy consultant serving customers across Africa in the food & beverage, fast moving consumer goods (FMCG), utilities, banking and retail markets. He served on the faculty of Lagos Business School as a visiting professor. He is widely published and was a contributing author to the book *Advances in Decision Making Under Risk & Uncertainty* (Springer, 2008). Dr. Fabiyi is a prolific contributor and commentator on Nigerian socio-political and economic matters.

Fatou Gueye is professor of Economics at the University Cheikh Anta Diop (Dakar, Senegal). She has been actively involved in research work on the informal sector in West and Central Africa, undertaken by CREA/Cheikh Anta Diop University for more than 12 years now. She has also conducted research on various topics of development.

Jacklynne Hobbs is a freelance writer who reports on business, development and environmental matters and forms part of the freelance staff of the Case Centre at the Graduate School of Business Administration of the University of the Witwatersrand in Johannesburg, South Africa. In addition to this case on poultry tariffs, she has co-authored cases on South Africa's economic policy as espoused in the National Development Plan and on options for ensuring industrial peace in South Africa's fractured labour relations environment.

Nkemdilim Iheanachor is a doctoral scholar in International Strategy at Lagos Business School, Nigeria. He has a Bachelor's degree in Electrical/Electronic Engineering and an MBA from the Lagos Business School. He has had prior experience in banking as a relationship manager in the Multilateral, Conglomerates and Private Banking Group of Zenith Bank, as an investment banker where he was involved in project finance, mergers and acquisitions and financial advisory and as a consultant where he was involved in advisory engagements for state governments, large multinationals and local corporates. Nkemdilim has extensively consulted for companies in the area of corporate strategy development, competitive strategy development and blue ocean strategy development.

Abel Kinoti Meru is the founding dean and associate professor at Riara University School of Business, Kenya, and also founding chair of Academy of International Business Sub-Saharan Africa Chapter. His teaching and research interests are in the areas of innovation and business incubation, social entrepreneurship and marketing. He holds a doctorate degree in Commerce from Nelson Mandela Metropolitan University, South Africa, an MBA (Marketing) and Bachelor of Commerce (Accounting) degrees. He is the author of two books:

Business Incubation and Business Development in Kenya (LAP) and *The Changing Dynamics of International Business in Africa* (Palgrave Macmillan). He has also contributed a section to *Public Budgeting in Africa Nations* (Routledge), and published in several local and international peer-reviewed journals.

Mary Wanjiru Kinoti is the associate dean of graduate studies at the School of Business, University of Nairobi, East Africa's leading university. Mary holds a PhD in Business Administration from the University of Nairobi, and an MBA (Marketing) and Bachelor of Commerce degree. She is a member of Marketing Society of Kenya, Kenya Institute of Management and the Academy of International Business Sub-Saharan Africa Chapter. Mary has consulted for SMES, public, and private organizations in Kenya. Her research interests include green marketing and sustainable development, women and youth in entrepreneurship development, and entrepreneurship and socio-economic development. She recently contributed two sections to the books *Climate Change and the 2030 Corporate Agenda for Sustainable Development* (Emerald) and *Women Empowerment through Government-Loaned Entrepreneurship Teams* (Edgar).

Ahmadou Aly Mbaye is professor of Economics and director of the Laboratoire d'Analyse des Politiques de Développement (LAPD) at the Université Cheikh Anta Diop in Dakar, Senegal. He has published extensively on economic development issues in West Africa, including international trade, employment, education and entrepreneurship. He is the co-author of *The Informal Sector in Francophone Africa: Firm Size, Productivity, and Institutions*, a pioneering study on the measurement and analysis of the informal sector in several West African countries, published by the World Bank.

Franklin N. Ngwu is a senior lecturer in Strategy, Finance and Risk Management at Lagos Business School, Pan-Atlantic University, Nigeria. He completed his PhD in Law and Economics at University of Manchester, UK. He has over 15 years of experience in teaching, private sector, policy research and consulting both in Nigeria and UK. He worked in Barclays Bank UK for over five years and has lectured at Glasgow Caledonian, Salford, and Manchester universities in the UK. He has multidisciplinary teaching and research interests, including business strategy and management, financial services risk management and regulation, corporate governance and responsibility, law and development economics. He is the author/editor of the corporate governance handbook titled *Corporate Governance in Developing and Emerging Markets* (Routledge, 2016).

Chris Ogbechie is professor of Strategic Management at Lagos Business School (LBS), Nigeria. He teaches strategy, sustainability and corporate governance at the LBS and Strathmore Business School, Kenya. His research interests are in strategy in turbulent environments, strategic leadership, board effectiveness, and sustainability. He obtained a first class honours degree in Mechanical Engineering and an MBA from the University of Manchester and a PhD from Brunel University, UK. He has extensive experience in international business, derived from his work as a marketing/sales executive at Nestlé in Nigeria, Singapore, Malaysia, and Switzerland, and from his consulting work with Nigerian, Ghanaian, and Kenyan firms. Ogbechie has published widely in international journals and has developed several teaching cases, some of which have received international awards.

Chijioke Oji is a postdoctoral fellow at the School of Environment Enterprise and Economic Development at the University of Waterloo, Canada and a visiting scholar at Cornell University, New York, USA. His expertise is in the business and policy aspects of clean energy finance and environmental sustainability. Chijioke has consulted to governments, private sector enterprises and civil international organizations on infrastructure development and issues on local economic development including financial inclusion, financing sustainable energy and developing lending programs to bridge financing gaps and address market failures. Chijioke has an MBA in Strategic Management and a PhD in International Business, both from Wits Business School, Johannesburg, South Africa.

Adun Okupe has over ten years' business advisory and research experience. She has worked on several business advisory projects in sub-Saharan Africa with a focus on business development, destination development and management, investment analysis and market feasibility studies. Her research interests explore the role of the private sector in the sustainable development of Africa, with a focus on the sustainable development of the domestic tourism industry in Africa. She has worked with the KPMG London, the World Travel & Tourism Council, W Hospitality Group and Lagos Business School. She is the director of the Africa Tourism Institute.

Theresa Onaji-Benson is a doctoral candidate and research assistant at the Gordon Institute of Business Science, University of Pretoria. She also lectures at the Federal University Lafia, Nigeria. Tess has financial industry experience from the Royal Bank of Scotland in the UK, Ecobank and Guaranty Trust Bank in Nigeria. She received her MSc from the University of Essex, UK and her BSc from Ahmadu Bello University, Zaria, Nigeria. Theresa's research interests strad-

dle the fields of International business and Strategy, with particular interests in non-market strategies, emerging market multinationals and sub-Saharan Africa. She is a founding member and treasurer of the Academy of International Business (AIB) Sub-Saharan Africa chapter.

Oriaghe Raphael Oseghale completed his PhD in business management at Swansea University in 2016. Raphael conducted his doctoral research on talent management in multinational companies in the Nigerian oil and gas industry. He is currently working with the Talent Bank, Swansea University as an associate. His research interests centers on talent management, university-industry partnerships, specifically the management of industry and university relationships for talent development and institutional entrepreneurship.

Joseph Parilla is a fellow at the Brookings Institution's Metropolitan Policy Program. His work focuses on improving the economic competitiveness of US and international cities and metropolitan areas. Joseph is the lead researcher on Brookings' Global Cities Initiative, a five-year project that aims to equip city and metropolitan area leaders with the practical knowledge, policy ideas, and networks they need to become more globally connected and competitive. He holds degrees in public policy from Georgetown University's McCourt School of Public Policy and economics and geography from Macalester College.

Doyin Salami is a senior fellow in economics at Lagos Business School. A doctoral degree graduate of Queen Mary College, University of London, he is also an executive director of the UK-based African Business Research. Dr. Salami's research interests include: issues in corporate long-term financial management; macroeconomic policy; corporate competitiveness and risk management; and characteristics of small and medium enterprises (SMEs). In addition to teaching, Doyin is a consultant. His consulting activities have included assignments for the Department for International Development (DFID), World Bank, United Nations Industrial Development Organisation (UNIDO), and United States Agency for International Development (USAID). He is a member of the Monetary Policy Committee of the Central Bank of Nigeria and had been a member of the Federal Government's Economic Management Team.

Mahika Shishodia is a senior research assistant in the Director General Office of International Food Policy Research Institute (IFPRI). She has a bachelors in Economics (Honors) from Delhi University and a Master in Public Administration from LSE, with a specialization in applied econometrics. Mahika was the recipient of the LSE Masters Award for both years of her postgraduate degree. Prior to

IFPRI, she was a research analyst at Oxford Policy Management, helping in the monitoring and evaluation of health and nutrition projects in rural India. In particular, she worked on the roll out of a DFID-funded conditional cash transfer pilot in Bihar to improve health outcomes of pregnant women and children. Her research interests include, food security, agriculture, and nutrition.

Jesus Leal Trujillo is a senior consultant at Deloitte. Prior to joining Deloitte, he worked as a research analyst at the Brookings Institution's Metropolitan Policy Program. Prior to that, he worked for the Ministry of Social Development in Mexico City where he specialized in poverty alleviation programs. He received his bachelor's degree in Political Science from the Center for Research and Teaching in Economics (CIDE) and a master's in public policy and management from Carnegie Mellon University.

Trevor Ward is a specialist consultant in the hospitality, tourism and real estate industries. He is the principal of the Lagos-based W Hospitality Group, and chairman of Hotel Partners Africa. His experience includes advising clients on hotel and tourism development in over 90 countries across the globe. With a special focus on sub-Saharan Africa, he works with many of the international hotel groups seeking a presence there. He is regarded as the foremost expert on the hotel industry in sub-Saharan Africa, and is engaged primarily in development consultancy, ranging from investment appraisals to operator selection, asset management, valuations, financing, development management, procurement and agency. As well as project appraisal expertise, he has worked on tourism planning projects in Central and Eastern Europe and South America.

Melina Balliard are graduates of the Master in International Business Program at Grenoble Ecole de Management, France. They developed *The South African Renewable Energy Cluster* (Chap. 12) with Professor Mark Esposito of the Grenoble Lab-Center for Competitiveness, a research centre affiliated with the Microeconomics of Competitiveness Program at Harvard Business School, and one the largest producers of cluster-based case studies in the world.

Laura L. Broccoli are graduates of the Master in International Business Program at Grenoble Ecole de Management, France. They developed *The South African Renewable Energy Cluster* (Chap. 12) with Professor Mark Esposito of the Grenoble Lab-Center for Competitiveness, a research centre affiliated with the Microeconomics of Competitiveness Program at Harvard Business School, and one the largest producers of cluster-based case studies in the world.

Yann Claudel are graduates of the Master in International Business Program at Grenoble Ecole de Management, France. They developed *The South African Renewable Energy Cluster* (Chap. 12) with Professor Mark Esposito of the Grenoble Lab-Center for Competitiveness, a research centre affiliated with the Microeconomics of Competitiveness Program at Harvard Business School, and one the largest producers of cluster-based case studies in the world.

Nasma Harrachi are graduates of the Master in International Business Program at Grenoble Ecole de Management, France. They developed *The South African Renewable Energy Cluster* (Chap. 12) with Professor Mark Esposito of the Grenoble Lab-Center for Competitiveness, a research centre affiliated with the Microeconomics of Competitiveness Program at Harvard Business School, and one the largest producers of cluster-based case studies in the world.

Months Raut are graduates of the Master in International Business Program at Grenoble Ecole de Management, France. They developed *The South African Renewable Energy Cluster* (Chap. 12) with Professor Mark Esposito of the Grenoble Lab-Center for Competitiveness, a research centre affiliated with the Microeconomics of Competitiveness Program at Harvard Business School, and one the largest producers of cluster-based case studies in the world.

Yang Yang are graduates of the Master in International Business Program at Grenoble Ecole de Management, France. They developed *The South African Renewable Energy Cluster* (Chap. 12) with Professor Mark Esposito of the Grenoble Lab-Center for Competitiveness, a research centre affiliated with the Microeconomics of Competitiveness Program at Harvard Business School, and one the largest producers of cluster-based case studies in the world.

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Africa's Competitiveness in the Global Economy: Past, Present and Future

Ifedapo Adeleye, Joseph Amankwah-Amoah, Nathaniel Boso, and Mark Esposito

Introduction

Improving Africa's competitiveness has taken on a heightened importance as the region experiences subdued growth following a decade of commodity-fuelled expansion. The commodity plunge, as well as the economic slowdown in China, Africa's largest trading partner, has exposed the economic vulnerabilities of many countries across the region. As a result, the issue of industrializing and diversifying beyond the extractive economy is now being taken seriously. Meanwhile, economies in the

I. Adeleye (✉)
Haslam College of Business, The University of Tennessee Knoxville, USA

J. Amankwah-Amoah
University of Kent, Canterbury, UK

N. Boso
Leeds University Business School, Leeds, UK

M. Esposito
Harvard University, Cambridge, MA, USA

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region are weak on national competitiveness, a prevalent and persistent problem. In the World Economic Forum's 2016–2017 Global Competitiveness Index, not a single African country was ranked in the top quartile, with 24 of the bottom 38 countries (n = 138) coming from the region (WEF, 2016). This is particularly problematic as many economies in the developing regions of Middle East, Latin America and especially Asia, are making considerable progress in their drive to enhance international competitiveness.

On a somewhat positive note, some African countries are making progress, with 13 countries increasing their competitiveness scores in the 2016–2017 WEF Global Competitiveness Index rankings. Rwanda, with the most improved score, climbed remarkably to the 52nd position, while Botswana jumped up seven positions to rank 64th; Africa's top four, Mauritius (45th), South Africa (47th), Rwanda (52nd), and Botswana (64th) featured in the upper half of the world rankings. The region also achieved improvements in three areas: business environment, information and communication technologies, and infrastructure (WEF, 2016).

Like many other developing regions, country performance in Sub-Saharan Africa (SSA) varies widely, reflecting economic and political conditions. There is also a wide variation across and within the various regions in SSA. With three of the top four most competitive countries, Southern Africa is the most competitive SSA region; however, it also includes some of the competitiveness region's least competitive countries as Madagascar, Mozambique, and Malawi rank 128th, 133rd, and 134th (n = 138) respectively. The performance of the East Africa region, home to the continent's emerging spotlight, Rwanda, has generally improved since 2007. The West Africa region is not only the least competitive region, but it is also stagnating in the competitiveness rankings. The highest ranked West African country, Côte d'Ivoire (99th) barely makes the top 100, and countries like Sierra Leone and Nigeria rank in the bottom 15; West Africa countries ranked poorly in almost all the pillars of the competitiveness index (WEF, 2016).

Africa's Competitiveness: A Brief Historical Overview

Historically, African countries have had low levels of global competitiveness. Out of 75 countries on the 2000–2001 index, South Africa stood out amongst African countries, ranking 25th, with Mauritius (52nd), Zimbabwe (65th), and Nigeria (67th) lagging in the lower quartile (WEF, 2000). This same pattern was repeated in 2005–2006 when there was no African country in the top quartile; a few countries in the second quartile (South Africa, 42nd; Botswana, 48th; Mauritius, 52nd); a few countries also in the third quartile (Ghana, 59th; Namibia, 63rd; Tanzania, 71th); while many others trailed in the lower quartile (Nigeria, 88th; Kenya, 92nd; Ethiopia, 106th; Chad, 117th), ranked in the bottom 50 countries out of 117 countries (WEF, 2005). In the 2010–2011 edition of the index, 8 of the bottom 10 countries were also from Africa (n = 139) and SSA was once again outperformed by Southeast Asia and Latin America (WEF, 2010).

This consistent poor ranking of African countries is worrisome, as the past 15 years have seen impressive economic growth rates that are second only to Asia (WEF, 2016). However, high growth rates have not been sufficient as the continent overly relies on exports of primary goods from natural endowments (making it vulnerable to commodity shocks), and the problem of low productivity levels persists. To tackle the persisting challenges posed by the low levels of competitiveness and the vulnerability of commodity exporters to international shocks, the *Action Agenda for Africa's Competitiveness* report (WEF, 2016, p. 2) highlights "the need for economic diversification, especially into sectors that offer significant employment opportunities".

Grounds for Cautious Optimism

Several African countries are now making progress in increasing their competitiveness, and there appears to be grounds for cautious optimism about future improvements. As wages rise in China and Asia, there is a real chance for Africa as international economy policymakers

in China appear willing to offshore low-end manufacturing to Africa because of low wages (Newman et al., 2016). However, although low wages may be needed to attract offshore manufacturing, the productivity levels, which are perhaps more important, are currently low in Africa. The continent also faces some serious competition from Asia-Pacific economies such as India, Indonesia, Malaysia, Taiwan, and Vietnam, which are projected to be amongst the top global manufacturing countries by 2020 (Deloitte, 2016). Africa's current low productivity levels and the competitive challenge from Asia-Pacific countries raise serious questions about the ability of the continent to compete effectively in the global economy.

Rwanda's success story in building its national competitiveness offers some hope and interesting insights. With a score of 3.99 (out of 7) in 2010–2011, the country has moved steadily from being ranked in the 80th position to becoming 52nd in the 2016–2017 rankings with a score of 4.41. Rwanda's progress is due largely to its business and political leadership, which seems to have adopted "Singapore's model" for rapid economic growth (Ulrich and Thomas, 2014). The country's performance is even more inspirational given the significant improvements in some of the pillars of the index such as institutions (a score of 5.6 out of 7, ranked 13th globally), health and primary education (5.5, 84th), labour market efficiency (5.4, 7th), goods market efficiency (4.7, 35th) and financial market development (4.6, 32nd).

Are there grounds for cautious optimism about Africa's future's competitiveness? Will there be more Rwanda-type success stories in the region over the coming years? The ongoing economic slowdown across SSA presents an opportunity. It appears that the severity of the great plunge in oil and commodity prices, combined with the relative political stability being experienced, and concerted efforts from governments may be grounds for cautious optimism. Rwanda's recovery following the tragic genocide and political instability of the 1990s shows that progress is indeed possible. However, if past performance is relied on as an indicator of future results, Africa's competitiveness outlook appears grim, as performance has been relatively stagnant for over a decade.

Bringing the Firm In: Competitiveness, Firm Performance and Business Failure

While a lot of attention has rightly been placed on competitiveness at the national level, it is also important to look at firm-level competitiveness. This is especially important in Africa, where the private sector is only beginning to develop with large corporations now playing a critical role in the domestic economy. As the quote above from the McKinsey Global Institute's study of African economies indicates, the region urgently needs firms to step up their performance, as size matters for competitiveness. The study finds that Africa's top 100 firms have been successful by building a strong position in their domestic markets and then expanding within the region. An earlier empirical study of manufacturers of various sizes in South Africa similarly concludes that: "competitiveness and productivity increase as the size of firms increases" (Kleynhans, 2009, p. 31). Hence, there is an urgent need to put in place policies to support private sector development in the region, to encourage the growth and expansion of African firms.

Beyond learning from the success of the current market challengers and leaders, it is important to pay attention to failed companies (Amankwah-Amoah, 2011). This is especially useful in the African context where firms have relatively high mortality rates. From airlines to textiles, automotive, manufacturing, financial services and agriculture, there are too many public and private firm failures (see Amankwah-Amoah, 2015; Carmody, 2001), and many enterprises never reach their potential or outlive their owners/founders. In sum, learning from failed enterprises can yield useful insights to help improve the competitiveness of African firms.

Unfortunately, business failure remains an under-researched topic in the African management literature. Given its importance to firm competitiveness and the need to address these gaps, we provide an extended discussion on the key issues and challenges related to business failures and highlight fruitful avenues for future research.

Researching Business Failures in Africa

African firms can learn and apply pivotal lessons from business failures to increase their global competitiveness. Increasingly, smart firms have turned to others' experiences and failures as well as their own to improve their competitiveness and innovativeness (Yang, Phelps, & Steensma, 2010). Past studies have demonstrated that innovation can flourish by learning from failure (Cannon & Edmondson, 2005; Edmondson, 2011). Indeed, Li and Rajagopalan (1997) observed that learning from failure helps firms to make greater quality improvements compared with learning from success. Other studies on business failure in developed economies have demonstrated that organizations and individuals learn more from failure than successes (see Desai, 2011). Notwithstanding these observations, learning from business failures still remains a largely untapped source of knowledge for firms to improve their competitiveness in developing economies (Amankwah-Amoah, 2011).

Business failure is the cessation of business due to its inability to meet obligations imposed by the environment, which forces the owners to close the venture (Mellahi & Wilkinson, 2004; Ucbasaran, Shepherd, Lockett, & Lyon, 2013). There are two broad theoretical perspectives on the causes of business failure: voluntaristic and deterministic perspectives (see Mellahi & Wilkinson, 2004). The deterministic perspective attributes business failure to external factors such as competition, economic recession and market forces, which are difficult to control (Amankwah-Amoah & Debrah, 2010, 2014). Central to this perspective is the notion that business failures are unpredictable and uncontrollable events, and stem from an outcome of random factors. The voluntaristic perspective attributes business failure to a host of firm-level factors encompassing quality of human capital, leadership and management style of the top management team (Mellahi & Wilkinson, 2004).

Arguably, none of these schools of thought offers a complete understanding of the root causes of business failure. By focusing solely on one or the other theoretical groundings, scholars have often failed to offer a more meaningful understanding on how endogenous and exogenous factors interact and even shape the processes leading to business failure. Current theories and research on business failure, although insightful,

offer very little on such interaction of firm-level and external factors as there is often an interaction between these two broad categories of factors for a business to fail (Zhang, 2017).

Traditional and Modern Perspectives of Business Failures in Africa: Religion and Culture

Many Africans tend to attribute business failure to "powers from above" and as such there are little humans can do to mitigate business failure (Asamoah-Gyadu, 2005). This is rooted in informal institutional factors such as religion, local traditions, customs, norms and beliefs which have shaped and continue to shape individuals' beliefs and attitudes to business. In many African societies it is not uncommon for traditional authorities and individuals to explain their fortunes and misfortunes in terms of divine intervention, encompassing traditional gods. Some attribute business failure to "Acts of God" and therefore uncontrollable factors. In the supernatural causation theory, individuals and traditional authorities often attribute failure and disasters to the "anger of the gods" against individuals' neglect of their traditional rituals and responsibilities (Asamoah-Gyadu, 2008, pp. 88–89).

The bedrock of this belief lies deep in the notion that leaders and managers are at the mercy of the external forces and unable to alter or shape them. Therefore, understanding how business failures are arrived at in the African setting requires integrating these often overlooked factors which operate at the individual and institutional levels. This is fundamentally different from Western societies where there is a perception that firm-level or individual-level factors are primary causes of business failure.

Barriers to Learning from Business Failure

Stigmatizing Failure

Perhaps one of the most daunting scenarios in learning from business failure is creating conditions towards de-stigmatizing failure to create opportunities for individuals to share their experiences. One of the unintended

outcomes of stigmatization of business failure in many developing nations is that the possibility of learning from failure to innovate and build a more resilient organization is lost when individuals opt out of starting another business after venture failure. Given that scholars have long recognized knowledge as a strategic asset (Winter, 1987), the ability to harness untapped sources of learning from business failure can deliver a unique source of competitiveness advantage and develop robust business survivability. By hiding knowledge about failure, the hider's and organizational creativity can shrink (Edmondson, 2011). In addition, the historical tendency to "worship" success and reject failure created conditions which did not portend well for learning from failure to improve either for firms or individuals.

Firm Ownership and Incentives

For profit-oriented organizations, business failure is a regular occurrence and management are often preoccupied with how to outwit rival firms to avert failure. On the other hand, public sector organizations are often protected from competition and market forces (Kiggundu, 1996). In addition, performance decline and losses are often met with government subsidies and supports. These alter the competitive landscape and offer little or no incentive to learn from failure. The dominance of bureaucratic public organization as a primary source of employment in many African nations often means that organizational survival and job security are assured (Amankwah-Amoah & Debrah, 2010). Accordingly, individuals are barely exposed to competitive pressure and the need to improve efficiency and effectiveness to help ensure organizational survival. An analysis at this level highlights that many large African and government organizations are often characterized by maladministration, poor leadership, obsolete routines and rituals, gross inefficiencies and corruption (Modisane, 2017), which ultimately create the conditions for business failure to occur in the long run (Amankwah-Amoah & Debrah, 2010). It is noteworthy that the recent forces of globalization have ushered in a new competitive environment, which necessitates upgrading the expertise of leaders and managers in Africa as well as shaping their mindset towards evidence-based decisions in the organization setting (Modisane, 2017).

A New Business Failure Research Agenda for Africa

There is still a paucity of business failure research in Africa. Consequently, the lessons that can be learned from business failure are not well documented and where such research exists, some have been lacking variety in methodology. Recent scholarly attempts to explain business failures of African organizations such as Air Afrique and Ghana Airways have broadly focused on both the voluntaristic and deterministic perspectives (Amankwah-Amoah & Debrah, 2010, 2014). These studies and explanations often overlook the interactions of exogenous and endogenous factors in creating conditions for business failure. Accordingly, an examination of the interactive process can be a fruitful line of research. There is also a need for future research to explore business failure using different and alternative research methods. In that sense, more attention should be devoted to big data analytics as a promising opportunity to explore such a complex and dynamic issue (Sheng, Amankwah-Amoah, & Wang, 2017). The scholarly efforts to understand the causes and effects of business failures using single organizations overlook the potential of analysing large national datasets on firms' exit.

In addition, we know from past studies that one of the most predictable paths to success is de-stigmatizing the notion of entrepreneurial business failure (see Cannon & Edmondson, 2005). Creating a non-tolerant culture of failure encourages individuals to hide errors and problems rather than seek solutions (Edmondson, 2011). It might be worthwhile for future research to explore how organizations and society can create processes or take steps towards de-stigmatizing failure. In the absence of robust scholarly examination of the relationship between religion and business failure, additional research is needed to explicate the societal perception of the causes of failure and its effects.

Although the management literature is full of guidelines on "best practices" for firms to gain competitive advantage (Barney & Clark, 2007), learning from business failure to improve firms' competitiveness is often overlooked. Given the centrality of leaders and leadership in many aspects of African traditions, it is surprising that limited attention has been devoted to the effects of leaders in the business failure process. This is a fruitful area for business failure research in Africa.

Key Themes and Specific Issues Covered in This Volume

The remainder of this chapter provides a summary of the major themes captured across the chapters presented in this volume: the competitiveness of francophone African economies (Chap. 2); the global competitiveness of African Cities (Chaps. 3 and 4); the rise of African global challengers (Chap. 5); measuring and evaluating competitiveness in Africa (Chaps. 6 and 7); understanding sectoral competitiveness and declining industries in Africa (Chap. 8); human capital, talent competitiveness, and knowledge transfer in Africa (Chaps. 9 and 10); Africa's competitiveness and the threat of the "Dutch" disease (Chap. 11); building the competitiveness of emerging industries and clusters in Africa (Chaps. 12 and 13); and an exploration of the role of protectionism and tariffs in enhancing competitiveness (Chap. 14).

The Competitiveness of Francophone African Economies

Francophone Africa has low levels of competitiveness, both regionally and globally. At the 99th position in the 2016–2017 Global Competitiveness ranking, Côte d'Ivoire is the best performing francophone country in Africa; Benin, Burundi, Chad, Congo, Mali, and Mauritania rank in the bottom 15 on the index (n = 138).

A major obstacle to competitiveness in francophone Africa is the lack of an enabling business environment. An inadequately educated workforce, policy instability and an inefficient government bureaucracy constrain the business environment in francophone Africa (WEF, 2016). Although some research studies identify competition from the informal sector as the main constraint to francophone Africa's competitiveness, recent evidence points to a constraining business environment as the culprit (Benjamin & Mbaye, 2012).

In Chap. 2, "The Competitive Challenge of the Formal Sector in Francophone Africa: Understanding the role of the Informal Sector and the Business Environment", authors Mbaye and Gueye investigate the

role of the business environment in the contraction of the formal sector in many francophone countries. They use a unique set of quantitative and qualitative data to show that the constraining business environment in francophone Africa affects not just the formal sector, but also the informal sector. Contrary to findings from some extant studies, competition between the formal and informal sectors is not responsible for the low productivity levels of the formal sector. Rather, both sectors strive to overcome the challenges posed by the business environment and sometimes even collaborate with each other.

While acknowledging the issue of competition between the formal and informal sectors, Mbaye and Gueye's (2018, in this volume) findings bring to light the contribution of the large informal sector that is a characteristic of francophone Africa and indeed, most of Africa. The informal sector, due to its interlinkages with the formal economy in developing countries, actually helps to cushion the effects of global economic shocks (Dhir & Sushil, 2016). Despite sometimes providing an unfair competition and preventing the formal sector from upgrading in global value chains (Kouty & Ongono, 2017), there is still a positive correlation between the formal and informal sectors.

The Global Competitiveness of African Cities

The importance of cities in driving country competitiveness has come to the fore in recent years. Countries with competitive cities are much more competitive globally as cities have always been the engine of growth. African cities, however, continue to perform poorly in comparison to cities in other world regions. On the A.T. Kearney Index for 2016, which ranks world cities using the level of business activity and human capital amongst other factors, no African city was featured in the top 50 (n = 125). Of the nine SSA cities on the index, Johannesburg is the highest ranked at 60th, followed by Cape Town (70th), Nairobi (73rd), Lagos (80th), Accra (88th), Addis Ababa (100th), Abidjan (103rd), Luanda (120th), and Khartoum (123rd).

On a more worrisome note, all these nine SSA cities were ranked in the bottom 25 of the 125-country "outlook index", which is a projection of

a city's potential based on the value of change across four dimensions—personal well-being, economics, innovation, and governance (A.T. Kearney, 2016). At the 101st position, Nairobi topped other SSA cities in the outlook index while Khartoum brought up the rear at 125th. Johannesburg is ranked 102nd, Abidjan 106th, Accra 107th, Cape Town 108th, Addis Ababa 121st, Lagos 122nd, and Luanda 123rd.

To be competitive, cities need to be able to attract businesses and entrepreneurs (Ghani, Kerr, & O'Connell, 2014), and they need good education and infrastructure to attract businesses and a highly productive workforce. In Chap. 3, "Theorizing Cities as Sources of Competitive Advantage: Accra in Comparative Perspective", Acheampong and Damoah (2018, in this volume) analyse the competitiveness of Accra and compare it to cities in other world regions. Using the resource-based view as a theoretical framework, they argue that cities require a bundle of resources and capabilities to be able to provide competitive advantage to firms.

Similarly, Parilla and Trujillo (2018, in this volume) present a study of the Gauteng-City region, a mega-metropolis in South Africa, highlighting the city's strengths and challenges. An in-depth explorative study in Chap. 4, "The International Competitiveness and Connections of African Cities: Profiling Africa's Gauteng-City Region", concludes that for African cities to be competitive, they need to embrace trade and investment, enhance technology commercialization, and boost the employability of city residents.

The Rise of African Global Challengers

African firms are rising. Even in sectors historically dominated by Western multinationals, African firms are now seriously challenging incumbents for market share within and beyond their home markets (Boso, Adeleye, & White, 2016). The rise of African firms is particularly evident in the financial services sector where indigenous banks are emerging from several African countries as regional giants; 25% of the 40 African firms identified as global challengers in a Boston Consulting Group study are financial institutions, the highest of seven sectors analysed (BCG, 2010).

Banks like Togo-based Ecobank, FNB and Standard Bank from South Africa, and UBA from Nigeria, have been designated as "systemically important" banks in many countries in the region, as they now hold a considerable chunk of the local banking assets. In Chap. 5, "Banking on Africa: Can Emerging Pan-African Banks Outcompete their Global Rivals?", Adeleye, Ngwu, Iheanachor, Esho, Oji, Onaji-Benson and Ogbechie (2018, in this volume), argue that the banking sector is somewhat unique in the sense that it appears to be the one sector where local and regional firms are competitive and can effectively challenge their global peers. They provide an analysis of the regional expansion strategies and patterns of six leading cross-border banks in Africa, and offer perspectives on future competitive dynamics between the pan-African challenger banks and foreign banks.

Measuring and Evaluating Competitiveness in Africa

Several competitiveness indices have emerged over the last two decades, providing useful benchmarks to rank the competitiveness of countries, cities and industries. Some scholars have, however, expressed concerns over the methodological rigour and appropriateness of some of these indices. For example, Lall (2001) faults the approach and methodology used by the World Economic Forum's Global Competitiveness Index, arguing that its theoretical and empirical foundations are subjective and weak, and questioning its usefulness for developing countries. Such criticisms are useful, and it appears they have helped to revise and improve the design and methodology of many competitiveness indices. The key benefits of these competitiveness rankings remain in that they provide a global benchmark and historical patterns, and help draw attention to areas and issues that policymakers and other stakeholders need to focus on.

In Chap. 6, "Enhancing Tourism Competitiveness in Sub-Saharan Africa", Okupe, Ward, and Adeola (2018, in this volume) analyse the 2017 World Economic Forum Travel and Tourism Competitiveness Index (TTCI), with a special focus on the relative performance of countries in the SSA region. Although the regional performance of SSA has

increased, it remains the least developed region on the TTCI. Just like the WEF national competitiveness index, Southern Africa is the best performing region (South Africa, 53rd; Mauritius, 55th; Namibia, 82nd; Botswana, 85th), followed by East Africa (Kenya, 80th; Tanzania, 91st; Rwanda, 97th), and then West Africa (Côte d'Ivoire, 109th; Senegal, 111st; Nigeria, 129th). Their findings lead them to argue that "a systems-thinking approach" should be adopted to tackle the interconnected challenges of tourism in the region; they provide specific recommendations to help tackle these challenges.

As highlighted above, questions have been raised about the usefulness and relevance of some competitiveness indices, especially in the context of developing countries. In Chap. 7, "Measurement of Agribusiness Competitiveness: An Application to African Countries", Babu and Shishodia (2018, this volume) develop an index for measuring the competitiveness of agribusiness, a high potential but underperforming sector in SSA. This new index is developed by integrating the World Economic Forum's Global Competitiveness Index, the Ballasa Agriculture Competitiveness Index, and the World Bank's Ease of Doing Business Index. Their index shows that most African countries have a medium level of competitiveness, with South Africa ranking top (2.64) followed by Rwanda (2.20), Namibia (1.98), and Botswana (1.84). The least performing countries on the derived index are DR Congo (0.30), Central African Republic, Djibouti, and Chad, all with a score of 0.35. Their chapter provides useful guidance on how to make strategic decisions on value chain development, and also presents policy insights and lessons for increasing agribusiness competitiveness in SSA.

Sectoral Competitiveness and Declining Industries in Africa

Since independence in the 1950s and 1960s, many African countries have prioritized the modernization of their economies and the development of new industries. Unfortunately, there have been too many failures in these drives for industrial development, as stated in the section on business failures above. No industry perhaps better epitomizes this failure

across the continent than the airline industry, where virtually all national airlines have either collapsed or are grossly underperforming. In Chap. 8, "Why are so many African Companies Uncompetitive on the Global Stage? Insights from the Global Airline Industry", Amankwah-Amoah (2018, in this volume) identifies internal and external factors responsible for the lack of or limited competitiveness of many African airlines. One of the findings is that the airlines have limited economies of scale and poor quality services, which have hindered them from competing seriously with their foreign counterparts. The chapter also offers specific ideas on how the competitiveness of African airlines can be increased.

Human Capital, Talent Competitiveness, and Knowledge Transfer in Africa

The issue of human capital and how it is managed is very important because it is a main driver of competitiveness (Adeleye & Anibaba, 2015). Africa has some unique advantage in this area, and could benefit from the so-called "demographic dividend": "In an aging world, Africa has the advantage of a young and growing population and will soon have the fastest urbanization rate in the world. By 2034, the region is expected to have a larger workforce than either China or India—and, so far, job creation is outpacing growth in the labor force." (McKinsey, 2016, p. VII).

The reality, however, is that human capital competitiveness requires much more than having a large youth population; the people need to be healthy and well educated to be highly productive and globally competitive. These partly explain why Africa has not fared well on many human capital and talent competitiveness indices. In the recent Global Talent Competitiveness Index rankings (INSEAD, 2017), for example, Mauritius (ranked 46th out of 118) is the only African country that was above the global median score. Of the 19 African countries ranked, 8 were amongst the bottom 10 countries. Botswana (ranked 63rd), South Africa (67th), and Namibia (76th) along with Mauritius made up the top four in Africa. In Chap. 9, "Human Capital, Innovation and International Competitiveness in Sub-Saharan Africa", Debrah, Oseghale, and Adams (2018, in this volume) provide some insights on how Africa can develop

its human capital for competitive advantage. The paper particularly explores how multinational companies operating in Africa can help in developing human capital through on-the-job training, knowledge transfer and other initiatives that provide the necessary skills to compete in the current global marketplace.

The strategic importance of knowledge transfers and knowledge spillovers is emphasized in Chap. 10, "Improving Africa's Competitiveness through Knowledge Transfer: Lessons from Partnerships with China and Ways Forward". Abdoulkadre Ado (2018, in this volume) argues that since knowledge transfer from multinational companies is neither automatic nor guaranteed, effective (government) policies are required to provide incentives for these multinationals to transfer knowledge and technology to Africans, especially at management levels. This extensive study of 29 Africa–China partnerships in 12 African countries identifies factors that have hindered the knowledge transfer process, and provides insights on requirements for effective knowledge transfer in international joint ventures and multinational enterprises in Africa.

Africa's Competitiveness and the Threat of the "Dutch Disease"

Africa's vast natural resources have undoubtedly contributed significantly to growth and export revenues. Eight key economies including Angola and Nigeria derive more than 90% of their export revenues from oil and gas (*The Economist*, 2016), and about a third of the region's GDP growth is accounted for by commodity exports alone (*The Economist*, 2013). However, this has left the continent vulnerable to shocks from sporadic price changes in the international market, a serious risk to long-term growth (Newman et al., 2016). Even in periods of high commodity prices, many countries have not been able to manage their windfalls prudently (Cole, Tse, & Esposito, 2015).

Huge foreign exchange receipts from commodity exports often result in currency appreciation, making imports cheaper and exports of other products less price competitive. Nowhere in Africa is this colossal problem—often referred to as the "Dutch disease"—more evident than in

Nigeria. In Chap. 11, "Nigeria: Oil and Competitiveness", Salami, Fabiyi, and Adeleye (2018, in this volume) chronicle the country's decades-long overreliance on oil since the first oil boom of the 1970s. The first of four topical real-life case studies in this volume, this case presents the ongoing great plunge in oil prices (which has once again exposed the fragility of the Nigerian economy), as an opportunity for the newly democratically elected government to restructure the economy and initiate the long process of diversifying the economy. The key deliverables for the Nigerian president were how to immediately deal with the currency crisis and inflation, and in the longer term, implementing policies to restructure the economy, diversify exports, and put the country on a solid path to achieving international competitiveness.

Building the Competitiveness of Emerging Industries and Clusters in Africa

Clearly, Africa cannot afford to continue to depend on the extractive industry alone. African governments need to put more effort into creating and developing viable industries (Newman et al., 2016; Oqubay, 2015). Industrial clusters can be an effective way to achieve this goal, and there is an increasing number of successful clusters in Ethiopia, Cameroon, Ghana, Kenya, Mauritius and Rwanda (Carmody, 2017; Oqubay, 2015; and Yoshino, 2011). In Chap. 12, "The South African Renewable Energy Cluster", Esposito, Raut, Broccoli, Harrachi, Claudel, Yang, and Balliard (2018, in this volume) carry out an in-depth analysis of one of such emerging cluster. In this case study, they analyse the evolution of this cluster over the last two decades, highlighting its successes and achievements. The case also presents the cluster's strategic challenges and proposes viable solutions to them.

Another inspiring example that has attracted considerable global attention is the flower cluster in East Africa (Kenya and Ethiopia). In Chap. 13, "Kenya's Blooming Flower Industry: Enhancing Global Competitiveness", Adeola, Kinoti, and Kinoti (2018, in this volume) presents the challenges facing a sector that had remarkably risen to become one of the world's top flower exporters. The case highlights the

key issues and challenges facing industry players and stakeholders as they deal with the increasing competitive threats posed by countries such as the Netherlands, Colombia and Ecuador, as well as concerns over continued access to the European market.

Making Africa Globally Competitive: Protectionism or Liberalism?

While free trade offers several potential benefits to African countries, there are concerns that the unquestioning pursuit of neo-liberal economic policies under the auspices of the World Bank over the last three decades or so has made many countries in the region worse off (Carmody, 2001). Some economists like Oqubay (2015) make a strong case for a more "activist state", citing how state activism and protection of some strategic industries has contributed to Ethiopia's economic development. In a similar vein, Carmody (2017, p. 340) argues that in Africa, where connections between large firms and politicians contribute to high inter-firm productivity differentials, "state–firm relations and networks are then important, rather than simply assuming the state to be a barrier to enterprise development".

In other words, African countries require a more strategic and pragmatic approach to developing effective industrial policy, and the state must find ways to play a creative role in promoting and protecting local industries in an increasingly globalized world. This challenge comes to the fore in Chap. 14, "Poultry Tariffs in South Africa: Levelling the Playing Field or Rewarding Inefficiency". Hobbs, Draper and Beswick (2018, in this volume) examine the dilemma and debates relating to the South African government's decision to impose tariffs on chicken meat in 2013. The case highlights the economic, political and diplomatic complexities of adopting measures to protect local industries and jobs, while also honouring reciprocal trade agreements. The case also brings to up a debate on whether imposing tariffs and other protectionist measures leads to (unintended) consequences, such as a reduction in the level of competitiveness of local firms and higher prices paid by local consumers.

Conclusion

The 14 chapters in this book draw attention to topical issues and challenges relating to the competitiveness of African firms, industries, cities, and nations. We hope that the insights generated in this third volume of the Academy of International Business Sub-Saharan Africa Series stimulates further research on several topical yet understudied areas we have highlighted. More importantly, we hope it provides useful ideas and stimulates debates among the people who can really make a big difference in Africa (policymakers and practitioners), and contributes to the development of effective competitiveness policies and strategies.

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Part I

The Global Competitiveness of African Nations and Cities

2

The Competitiveness Challenge of the Formal Sector in Francophone Africa: Understanding the Role of the Informal Sector and the Business Environment

Ahmadou Aly Mbaye and Fatou Gueye

Introduction

The informal sector is widely understood and the set of enterprises on which very little visibilty exists. Several criteria are used in economic literature to characterize them. In this chapter we use the comprehensive approach of defining informality set forth in Benjamin and Mbaye (2012). The informal sector is predominant in francophone Africa, with its share of around half of GDP and more than 90% of employment, according to national accounts figures. In some countries like Benin, 70% of GDP and more than 95% of total employment is in the informal economy (Golub & Hayat, 2015). While the formal economy is stagnating, the informal economy experiences a vibrant upward trending evolution and has become the most dynamic part of the economy. For example, in Cameroon, the growth rate of informal total value added has

A.A. Mbaye (✉) • F. Gueye
Université Cheikh Anta Diop, Dakar, Senegal

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consistently outpaced that of the formal sector since 2007 (Mbaye et al., 2015). Some authors find competition from informal actors as the main explanatory factor for the lack of dynamism of the formal sector. The World Bank Enterprise Survey (WBES, 2015) reports that in Senegal more than 23% of surveyed formal firms point to competition from informal firms to be their number one problem. Likewise, Gonzales and Lamanna (2007), find that formal firms that are exposed to competition from informal ones tend to have lower levels of productivity than the others. They also find the magnitude of this impact to vary a lot, depending on several factors, such as firm characteristics.

While there is strong evidence about formal sector growth and exports leveling off, and even declining over time, the conclusion according to which this is due to competition from informal firms is widely challenged. Mbaye et al. (2017) find no correlation between the two variables in West Africa. Ali and Najman (2015), using World Bank Enterprise surveys for 33 Sub-Saharan African countries, come up with results showing the reverse trend; that is, a greater informal competition being positively correlated with labor productivity of formal firms. Business environment affects both the formal and the informal sector, with the latter being more resilient, due to a greater flexibility and ability to bypass cumbersome regulations formal sector actors must comply with. In particular, informal firms have the notable advantage over formal businesses of being able to avoid paying taxes or to circumvent time-consuming and costly regulations. However, they have greater difficulties accessing most infrastructural services. They cannot deduct Value Added Tax, nor can they participate in biddings for state contracts, or benefit from bank loans (Perry et al., 2007). In this chapter, we use quantitative and qualitative analysis to explain the reason why the formal sector shrinks while the informal sector thrives. Our findings tend to validate the idea that business environment plays the most important role.

The remainder of the chapter is organized as follows. "Business Environment and the Informal Sector" presents a brief review of the economic literature on the relationship between the business environment and the rise of the informal sector. The section "General Economic Trends and Private Sector Development in Francophone African Countries" reviews macroeconomic and regulatory environment peculiar to francophone Africa, to show how it is shaping entrepreneurial behavior and choice of being informal. "Methodology and Data" explains the methodology and sources

of data used in this chapter. The section "How Do the Business Environment and Informal Competition Affect the Formal Economy?" presents the main features of the informal sector in francophone Africa, using both descriptive statistics and qualitative sources of information. "Conclusion and Policy Implications" investigates how the business environment and informal competition are respectively affecting formal enterprises. The chapter ends with a discussion of policy implications and recommendations.

Business Environment and the Informal Sector: A Brief Review of the Literature

In economic literature, the business environment is usually considered as the main determinant of the size of the informal sector, which tends to overwhelm the formal one. It determines how possible it is for private enterprises to undertake profitable enough activities to keep running over time. When a business-friendly climate prevails in the economy, domestic firms are not at a disadvantage vis-à-vis foreign competitors as regards factors directly linked to their national or regional environment. Otherwise, private enterprises might find it difficult to export or even sustain market shares on their own domestic market, and domestic as well as foreign investments are discouraged. In an abundant literature, including Mbaye and Golub (2003, 2007), and Carlin, Glyn, and Reenen (2001), a strong negative correlation between sectoral real exchange rates (a proxy for cost-competitiveness), on the one hand, and exports and FDI, on the other hand, is widely documented.

Informality is a usual way through which private enterprises circumvent the many hurdles they have to deal with in their business environment (Hausmann, Klinger, & Wagner, 2008). Many authors view informality as a rational choice in response to costs and benefits of formal versus informal status; for example, Perry et al. (2007), Kanbur (2009), Djankov, Lierberman, Mukherjee, and Nenova, (2002), Loayza, Oviedo, and Serven (2005), Ishengoma and Kappel (2006), Aterido, Hallward-Driemeier, and Pages (2007), Marcouiller and Young (1995), and Johnson et al. (2000). The quality of the business climate is found to weigh heavily on this choice. Formalization means compliance with the rules and regulations governing businesses, and when those regulations

are distortionary, businesses are incentivized to opt out, especially when government enforcement capabilities are weak. Enforcement capacity and the quality of the business environment are found to be the most critical determinants of informality (Gelb, Mengistae, Ramachandran, & Shah, 2009). Ingram, Vijaya, and Vyjayanti (2007) test a probit model where perceptions of constraints in the business climate are the major determinants of a firm's choice to locate in the informal sector. The results show a robust correlation between formality and certain business climate attributes—access to electricity, finance, and land. Dabla-Norris, Gradstein, and Inchauste (2008) confirm that the regulatory framework is the greatest determining factor in the development of an informal sector.

An important element of the business environment is the costs and quality of infrastructural services. According to Steel and Snodgrass (2008) and Verick (2006), lack of access to services is a major determinant of low productivity and informality. Using a quality-adjusted measure of access, Maurel and Seguir (2014) find that a small increase in the magnitude of 1% in electricity access would raise total factor productivity by 12% in Senegal. Very often, in developing countries, access to these services is made even more difficult for some vulnerable actors like Small and Medium Enterprises (SMEs), women and rural household enterprises, almost all of them informal. Liedholm (2001) emphasizes that most tax exemptions for imports apply only to large enterprises, and most small enterprises cannot qualify.

Failure of the education and training system to provide adequate inputs to the productive sector is another important feature of the business environment in Africa (Atchoarena and Delluc, 2001; Brewer, 2004; Haan, 2006; Niser, 2007). Education has largely failed to promote the kinds of skills and knowledge that are helpful for private sector development. In most African countries, the education system is also widely dualistic, with the coexistence of a modern system and a more traditional, informal one. While the former has retained an outdated orientation towards preparation for careers as government officials and fails to develop practical skills (such as management and entrepreneurship), the latter, being too informal, offers training of dubious quality (Haan, 2006; Johanson & Adams, 2004). Again, bigger, formal firms are better prepared to address this failure by offering in-house training to their

employees, as opposed to the smaller informal firms that cannot afford such training. This lack of adequate training confines informal actors to less complex low-productivity and low-profitability activities.

Low access and high costs of financing is also making the business environment weaker. In Senegal exporting firms (mostly formal) are found to be twice as likely to have a line of credit with a banks than non-exporting ones (mostly informal). Furthermore, more than 85.2% of smaller enterprises were required to provide collaterals for their loans, against 70% for bigger firms. The amount of those collaterals is 228% of the value of the loan for small firms, against 190% for bigger firms (MCC, 2016).

While it is clear that access to public services is weaker and costs are higher for the informal than for formal businesses, the situation is reversed when it comes to regulations governing businesses. Policies and regulations tend to be heavily distortionary, and compliance costs very high. By being unregistered and unknown to most administrations dealing with private enterprises, informal firms systematically "fly under the radar" and avoid the burden of complying with cumbersome and costly regulations, which would be impossible for formal firms. Loayza (1996) find that tax burdens and labor-market restrictions greatly influence the size of the informal sector: a one-standard deviation change in these variables raise informality by 0.33 and 0.49 standard deviations, respectively. Likewise, Arias et al. (2005) and Golub et al. (2015) find that excessive labor market restrictions reduce productivity and inhibit the adoption of new technology, adversely affecting economic growth. Similarly, Azuma and Grossman (2002) blame political elites that shift the tax burdens on formal firms, pushing them to seek refuge in the informal sector.

General Economic Trends and Private Sector Development in Francophone African Countries

The franc zone in Africa represents about 7 million square kilometers, which is about 20% of the area of the continent and counts more than 140 million inhabitants, which translates to more than 30% of the African population. The francophone African nations share a certain number of

socioeconomic and institutional characteristics largely determined by a common colonial legacy, such as the use of a common language and the sharing of a common currency, the CFA franc, as well as harmonized regulations and policies applicable to private businesses. These general characteristics have a dramatic influence on the business environment, and hence, on the size of the informal sector in those countries.[1]

The CFA Franc Currency and Competitiveness

The CFA franc was created in 1945 and was standing for "Franc of the French Colonies of Africa" which became later in 1958, the "Franc of the French Community of Africa". After the independence of former French colonies in Africa, it became the "Franc of the Financial Community of Africa" in West Africa and the "Franc of the Financial Cooperation of Central Africa" in Central Africa. Two institutions issue the franc: the Central Bank of the States of West Africa (BCEAO) and the Central Bank of the States of Central Africa (BEAC). The 1994 devaluation of the CFA franc marks an important turning point in the history of the franc zone. There has been a transition in the franc zone towards economic and monetary unions, in the aftermath of the devaluation. The constitution of these monetary unions had as a final goal the implementation of customs unions between member countries and a common regional market with harmonized policies in some areas (fiscal and macroeconomic policies, sectoral and trade policies). The CFA franc currency, which was pegged to the French franc until 1998, is since then linked to euro, through a fixed peg. This was the outcome of a long series of negotiations aiming at maintaining the same institutional arrangements linking France to its former colonies, as regards cooperation in the area of monetary and exchange rate policies.

Beyond the monetary and financial cooperation linking African member countries collectively to France, they have implemented as part of regional integration schemes, some policy instruments to support growth and development. The West and Central African Development Banks were respectively setup in 1973 and 1975, to meet financial needs for investment financing in the two sub-regions. By the same token, a

common external tariff and a harmonized macroeconomic policy were implemented after devaluation, in both zones.

An important policy debate about the CFA franc is how it affects African member countries' competitiveness. Figure 2.1 shows a long-term appreciation of the real exchange rate, meaning that costs and prices are higher in francophone countries than in partner countries. An increasing number of authors (Kako, 2011) identify that as a major impediment to cost-competitiveness in Africa and the main reason why manufacturing so prematurely plateaus in these countries (Benjamin & Mbaye, 2016). In early 80s, despite all member countries undergoing deep structural adjustment programs, huge resistance was noted from the Union Economique et Monétaire Ouest Africaine (UEMOA) and Central African Economic and Monetary Community (CEMAC) governments to alter the exchange rate, so as to offset levels of currency overvaluation that had become unsustainable. Devaluation eventually occurred in 1994, and temporarily corrected the CFA currency misalignment. Shortly after that period, the real exchange rate started trending

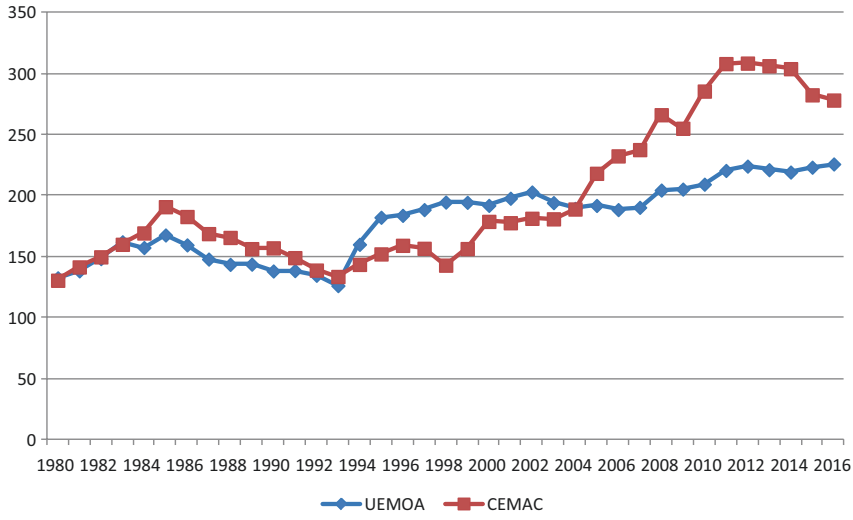

Fig. 2.1 Evolution of the exchange rate in the two regions. Source: IMF, 2016 and authors' calculations

upward again, significantly contributing to deter investment and exports in both zones.

Harmonized Macroeconomic and Business Development Policies

Since 1994 devaluation, harmonization of macroeconomic policy has become an important component of African franc zone's economic policies. This is accomplished through a multilateral surveillance system that UEMOA and CEMAC commissions are in charge of implementing. To this end, a set of convergence criteria is put in place, to make sure macroeconomic imbalances are kept in rather tight boundaries. We distinguish two sets of criteria: the primary set relates to public finance management (the basic fiscal balance, the outstanding public debt as a ratio of GDP and the accumulation of arrears of payments to the private sector) and inflation ceilings. Regarding the secondary set of criteria, this relates to foreign exchange reserves, levels of public payroll, investments financed from internal public sources, tax rates, and the common external balance. According to most evaluations, franc zone African countries have a stable macroeconomic environment, which is an important asset to a favorable business climate.

In UEMOA and CEMAC countries, business law is governed by the provisions of the OHADA[2] treaty signed in Port-Louis (Mauritius) in 1993 and modified in Quebec in 2008. The main objective of OHADA is to promote trade and investment in Africa, by bringing about a business-friendly regulatory framework. In December 2010, a special provision was added to business law, to set up a new status for small enterprises, aiming at providing preferential treatment and support to this vulnerable and mostly informal category of firms.

Despite big progress in macroeconomic management and sectoral policies, francophone African countries still have a long way to go in terms of governance towards a friendlier private sector environment (Tables 2.1 and 2.2). Besides, many of them face a marked political instability and a high incidence of corruption.

Table 2.1 Business setup procedures and taxation in selected francophone African countries

	Business setup				Taxation		
Countries	Number of procedures	Duration (number of days)	Costs (% of income per head)	Required minimum capital (% of income per head)	Payment (number per year)	Duration (hours per year)	Total to be paid (% of profit)
UEMOA							
Benin	8	29	126.8	264.5	55	270	65.2
Burkina Faso	3	13	46.8	353.9	46	270	42.7
Côte d'Ivoire	10	32	130	184.6	63	270	44.4
Guinea Bissau	9	9	42.2	338	46	208	45.9
Mali	4	8	86.2	331.9	45	270	51.1
Niger	9	17	112.8	572.8	41	270	44.3
Senegal	4	6	64.4	192.3	59	666	45.5
Togo	6	38	142.3	435.6	50	270	48.9
CEMAC							
Cameroon	5	15	35.8	168.3	44	654	48.8
Democratic Republic of Congo	10	58	284.7	0	40	336	339.1
Republic of Congo	11	161	55.3	80.5	61	606	64.5
Gabon	8	57	14.5	22.3	26	488	43.5
Equatorial Guinea	18	154	98.2	11.7	46	492	44.1
Central African Republic	8	22	172.6	444.1	56	483	67.4
Chad	9	60	202	289.4	54	732	75.7

Source: Doing business, 2014

Table 2.2 Governance indicators in francophone African countries

	Political stability and absence of violence/terrorism		Control of corruption	
Country/territory	Score	Rank	Score	Rank
UEMOA				
Benin	6.00	57.82	11.00	22.01
Burkina Faso	8.00	21.80	14.00	33.49
Côte d'Ivoire	8.00	17.06	14.00	23.44
Guinea Bissau	4.00	18.48		
Mali	7.00	6.64	13.00	25.36
Niger	6.00	9.95	11.00	35.41
Senegal	8.00	43.13	15.00	50.24
CEMAC				
Chad	6.00	15.17	10.00	6.22
Cameroon	8.00	28.44	14.00	9.57
Dem. Rep. of Congo	6.00	2.37	12.00	5.74
Rep. of Congo	6.00	29.86	10.00	10.53
Equatorial Guinea	4.00	50.24	9.00	36.36
Gabon	7.00	58.77	5.00	0.00

Source: WBI (2014)

The Job Market in the Franc Zone: A Strong Formal/Informal Duality

Demographic trends are rather peculiar in Africa. Table 2.3 shows the evolution of the labor force between two periods of reference. It significantly increased for both men and women.

The labor force is directly influenced by fertility and, in Africa, where this level is among the highest in the world, population growth hits record levels and the labor force increase is exponential. Table 2.4 shows a peak of 4% for population growth in Niger between 2010 and 2015; for most of the remainder of UEMOA countries it rests well above 2%. In the meantime, the urban population increased annually by 6% in Burkina Faso, 5% in Niger, and 4% in Benin. Which means that it will double in every 12 to 21 years. Clearly, these demographic trends have huge repercussions in the labor market.

One consequence of high population growth is its contrast with the low capacity of the formal private sector to grow and to create jobs. Thus,

Table 2.3 Population growth rate (annual average), 2010–2015

	Total	Urban	Rural
Benin	2.7	4.1	1.5
Burkina Faso	2.8	6	1.8
Côte d'Ivoire	2.3	3.6	0.7
Niger	3.9	4.9	3.2
Senegal	2.9	3.3	2.1

Source: Mbaye et al. (2015)

Table 2.4 Rate of participation by gender in selected countries

	Women		Men	
Country (years)	Period 1	Period 2	Period 1	Period 2
West Africa				
Niger (2001/2005)	39.5	87.9	39.2	90.6
Togo (2006)		80.3		80.6
Burkina Faso (1991)	77.1		90.9	
Senegal (2006/2011)	50.1	72.8	44.5	68.5
Benin (2002/2011)	65.5	69.8	78.7	74.0
Ghana (2000/2006)	71.6	66.6	75.8	71.0
Sierra Leone (2004)		66.5		67.6
Liberia (2010)		57.8		64.0
Côte d'Ivoire (1998)	48.4		82.1	
Nigeria (2004)		47.5		61.7
Mali (2004/2010)	36.3	46.8	67.7	74.1
Cape Verde (1990)	41.8		85.2	
São Tomé et Príncipe (1991)	37.2		77.3	
Mauritania (2012)		28.8		63.9
Central Africa				
Rwanda (1996/2001)	85.6	86.4	88.4	84.5
RD Congo (2005)		70.5		72.3
Congo (2005)		67.5		71.6
Chad (1993)	64.7		80.8	
Cameroon (1996/2010)	61.0	64.2	77.1	74.1
Gabon (1993/2010)	55.0	39.9	70.8	58.2

Source: Mbaye et al. (2015)

we observe high levels of unemployment and underemployment (Golub & Mbaye, 2015).

In Africa as a whole, employment is overwhelmingly informal and precarious. Fox and Sohnesen (2013), in a study on Burkina Faso, Cameroon, Democratic Republic of Congo, Ghana, Mozambique, Rwanda, Tanzania

and Uganda, found that employment in the private sector outside of agriculture is very rare, accounting for only 9% of the employed population. Francophone Africa is no exception in this regard.

Methodology and Data

In this study, we use the data set on formal and informal businesses developed in seven francophone African countries in West and Central Africa by Benjamin and Mbaye (2012) and Mbaye et al. (2015). In the economic literature, several concurrent definitions of informality are used. Benjamin and Mbaye use six criteria for defining informal firms: size, registration, honesty of accounts, fixity of workplace, access to credit, and tax status. These criteria are then combined to create indicators of levels of formality depending on how many of the six a particular firm meets; the two extremes of purely informal firms, satisfying no criteria, and purely formal firms, satisfying all criteria of formality, being relatively rare.

In order to have a mix of formal, large informal and small informal firms in their surveys, they used a stratified sampling strategy. That is, they sought random samples within three-by-three categories comprised of (a) formal, small informal and large informal enterprises; and (b) industry, commerce and other services. A first set of surveys was conducted in 2007, with a sample of 300 enterprises in each of Dakar (Senegal), Ouagadougou (Burkina Faso) and Cotonou (Benin), for a total of 900 units surveyed in the three cities combined. In 2009, follow-up interviews were conducted in the three cities with a smaller number of firms, focusing on large informal and formal firms. The same approach was then implemented in Bissau (Guinea Bissau), Yaoundé, Douala (Cameroon), and Libreville (Gabon). The general population of firms consists of all firms in each of the three countries, which is split into three sub-groups:

(a) Those firms paying regular business taxes.
(b) Those firms paying lump-sum presumptive taxes.
(c) All others, including those that are not known to the fiscal authorities or not subject to either of the above two tax regimes.

The next step is to identify the share of each of the three categories of firms in the total sample and its distribution in the three sectors of interest (commerce, other services, and industry). Within each category of firms (a), (b) and (c), the shares of global value added in the respective subsamples for commerce, other services, and industry are replicated. They used national accounts data on GDP by industry for categories (a) and (b), and results of the 123 surveys to identify concentration areas for category (c).

Besides the survey and secondary data used in the paper, results from semi-structured interviews with various key stakeholders in the informal sector were also important sources of information. We used a set of predetermined questions, but also allowed the interviewees some flexibility to discuss their views as openly as possible. We made efforts to identify well-informed organizations and individuals.

Using these qualitative and quantitative sets of data, we investigate the relationship between the business environment and informal competition, on the one hand, and formal sector growth and productivity, on the other, using two different angles:

(a) We provide an in-depth description of formal and informal actors' interactions in some value chains, to show that while they are contentious in several instances, they can be rather cooperative in other, thus ruling out any assumption that informality is the main impediments to formal entrepreneurial endeavors.
(b) We use our survey data to perform descriptive statistical analysis as well as a simple econometric analysis, to look at the correlation between exposure to informal competition and productivity of formal firms (which is a proxy for a firm's growth and expansion).

Size of the Informal Sector in Francophone Africa: A National and Sectoral Perspective

The informal sector in francophone Africa's private business landscape is overwhelming. In this section, we combine descriptive statistics from national income accounts and from our own database to document the

size of the informal sector in value added and in total employment, at national as well as at sectoral level. Besides, qualitative materials gathered from our interviews and focus groups are used to spotlight the role the informal sector is playing in the dynamics of strategic sectors in the economy. This is done through case studies of such selected sectors.

Tables 2.5 and 2.6 show the sheer share of the informal sector in the economy, both in terms of contribution to GDP and to employment in francophone African countries.

More than 9 employees out of 10 are in the informal sector. Moreover, the informal sector's share of GDP ranges between 40% and 70%, with very significant sectoral peaks. In the primary sector, most value added is contributed by the informal sector in West Africa. The picture in Central Africa is somewhat different given the importance of mining activities in the latter countries. Mining companies tend to be state-owned or expatriate; thus widely formal. Apart from that, agriculture, livestock and fishing are predominantly informal. Likewise, the bulk of manufacturing is informal handicraft, while the magnitude of low productivity services operating in the economy is very large.

Table 2.5 Share of Value-Added contributed by informal businesses in the different sector in selected francophone countries (2015)

Designation	Senegal (%)	Benin (%)	Burkina Faso (%)	Cameroon (%)
Primary sector				
Agriculture	98	100	99	96,28
Livestock	100	100	99	98,18
Fishing	87	98	99	97,08
Forestry	99	98	99	20,30
Secondary sector				
Mining	30	96	95	1,07
Manufacturing	45	79	7	79,87
Water, energy	5	0	0	34
Construction	48	57	100	52,17
Tertiary sector				
Trade	69	81	66	61,80
Transport	62	43	61	34,68
Finance	0	1	0	0,00
Other services	78%	86%	57%	20,43%

Source: Mbaye et al. (2015)

Table 2.6 Proportion of firms by sector (%)

	Cotonou		Ouagadougou		Dakar		Libreville		Douala		Yaoundé	
	Formal	Informal	Formal	Informal	Formal	Informal	Formal	Informal	Formal	Informal	Formal	Informal
Trade	17.31	82.69	5.19	94.81	35.25	64.75	26.73	73.27	29.79	70.21	32.2	67.8
BTP	23.08	76.92	54.55	45.45	29.41	70.59	50	50	55.56	44.44	85.71	14.29
Other Industries	22.39	77.61	9.68	90.32	12.5	87.5	11.54	88.46	66.67	33.33	37.74	62.26
Service	28.83	71.17	15.69	84.31	22.45	77.55	14.47	85.53	30.39	69.61	35.56	64.44
Total	23.05	76.95	13.33	86.67	24.03	75.97	20.75	79.25	39.85	60.15	37.2	62.8

Descriptive statistics as presented above are very useful to give an idea of the size of the informal sector in the general economy. However, they show very little about the relative dynamism of the informal sector, as compared to the formal sector, in shaping the growth patterns in main industries. Below, we present a few sectors where very strong interactions between formal and informal businesses are observed. Our main conclusion from these interview and desk review findings is that the biggest players in most industries within these economies are informal actors.

The Pharmaceutical Industry: Official and Informal Drugs Importing Circuits

In francophone Africa, the drug distribution channels are very similar from one country to another. Very few drugs are manufactured locally; most are imported and the state and professional organizations, such as the federation of pharmacists, play an important role. Very often, there is a monopoly with a public or mixed (public and private) status that imports and distributes wholesale to retail pharmacies, which, in turn, sell at retail.

In this industry, like in most others, modern pharmacies coexist with informal ones. The former sell better quality products, which are much more expensive than the ones from informal shops. The latter sell cheaper drugs sourced through unofficial channels, including counterfeit drugs. The supply of counterfeit medicines often comes from fraudulent imports. These products generally pass through the port with the complicity of customs officials and police and are easily found at market stalls. The other source is from the diversion of goods originally destined for public health structures. Medications for these structures being largely subsidized, some health workers recycle them in the informal sector. There are also thefts from private pharmacies that can subtract products subsequently resold in the informal sector.

Because of the prohibitive price of imported medication facing African urban and rural households, most of which are on a low income, drugs sold in the informal sector, most of which are either outdated or counterfeit, are a second option. It is difficult to quantify the number of actors

operating in this sector, but it is clear that it generates a large volume of jobs. Often, sellers of counterfeit medicines are found at the street markets and are therefore difficult to distinguish from other traders of wholesale or retail. This is especially true since they often combine sales of illicit medical products with commercial products such as cosmetics.

The Gasoline Retail Market

The informal trade of petroleum products in Africa is another case of competition between formal and informal sectors. It is prevalent in Benin and to a lesser extent Cameroon. In both cases, petroleum products mainly come from illegal imports from Nigeria. This product is known as *Zoua Zoua* in Cameroon and *Kpayo* in Benin.

In Benin, official prices of petroleum products are administered and are set to be equal across the national territory. Pricing is governed by a complex mechanism, combining equalization between the products on the one hand, and on the other, equalization between the different regions of the country. Alongside this formal circuit, there is another circuit, the informal one, involving an alternative pricing mechanism. Actors in the informal sector fraudulently import petroleum products from Nigeria, and flow them into the Beninese territory at a price lower than that displayed on the pump. The difference between the pump (official) price and the one practiced by informal actors varies greatly and can reach up to 50% of the formal retail price, according to our interviewees. In 2009, there were some estimated 267 formal gas service stations, meaning, on average, a gas station for every 429 km^2 or 31,855 inhabitants (Table 2.7). In contrast, there are more than 40,000 informal outlets in the country, about three outlets every km^2.

The quality of oil products sold by the informal sector is considered more than suspicious by most traders. The product packaging method does not guarantee their quality meets the standards required by the engines of different using vehicles. Furthermore, storage and open distribution of these products results in huge amounts of product spill. This poses obvious health and safety issues. The petroleum products are also subject to open-air manipulations, which result in significant levels of

Table 2.7 Imports of petroleum items in Benin (2009)

	Formal		Informal		Total	
	Volume (cubic meter)	Value (billion CFA)	Volume (cubic meter)	Value (billions of CFA)	Volume (cubic meter)	Value (billions of CFA)
Gasoline	36,900	212.175	732,355.35	219.707	769,255.35	431.882
Lamp oil	8000	4.32	56,131.098	33.679	64,131.098	37.999
Diesel	148,000	82.14	262511.83	137.819	410,511.83	219.959
Total	192,900	298.635	1,050,998.3	391.204	1,243,898.3	689.839

pollutant particles in the air. Moreover, since petroleum products are highly flammable and very little precaution is taken in handling them, fires are a frequent occurrence. In short, the social costs, in terms of environmental and health hazard, are significant. Nevertheless, the low-price levels make these risks worth taking.

The financial losses incurred by the state and other official actors in the sector are considerable, even if it is very difficult to get an exact idea of their level, due to the few available data on transactions volumes. The losses are estimated at 125 billion CFA francs per year, or almost 50% of the wage bill of the public sector permanent staff (Igué, 2011). In Cameroon, the 2009 national statistics showed domestic losses of an average of nearly 32 billion CFA francs annually in the illegal sale of smuggled fuel from neighboring countries.

The distribution system involves importers, wholesalers, transporters and retailers. It appears that the income of retailers is about 1.5 times higher than minimum wage. Similarly, the monthly earnings of wholesalers are significantly higher than that of a public administration executive (Igué, 2011; Mbaye et al., 2015). Evaluating all actors in the value chain gives an estimate of over 50,000 players; in other words, more than half of the country's government employees. (Igué, 2011).

The Used Car Trading Industry

Used car dealers play an extremely important role in francophone Africa and Benin is a special case which exemplifies that, given its geographical proximity to one of the region's largest economies, Nigeria. Imports of used

vehicles, which are estimated at over 10% of GDP, are intended to cover the needs of Benin's domestic market, as well as Nigeria's, and to a lesser extent those of landlocked countries such as Chad, Niger, Mali and Burkina Faso.

In the capital city of Benin, parks have been built for the trade of used vehicles. These parks, completely controlled by informal actors, have a very light administrative structure: at the top, we have the head, assisted by a supervisor. Both of them are sellers of used vehicles. Apart from these two individuals, there are other employees recruited on a temporary basis who are responsible for minor activities.

Over the years, imports of used cars from informal actors have increased significantly, so that the import of new vehicles from formal actors is minimal. For example, in 2014, out of nearly 150,000 vehicles imported, only about 1500 came from formal dealers.

How Do the Business Environment and Informal Competition Affect the Formal Economy?

The business environment in francophone Africa is poor, by several standards: labor regulations are stringent, costs of finance are high, most infrastructure services are of low quality despite being overpriced, and red tape bureaucracy is pervasive (Millenium Challenge Corporation 2016, Haussmann and Rodrik 2005). According to many authors, the quality of the business environment is strongly correlated with the size and the rise of the informal sector (Benjamin & Mbaye, 2012; Gelb et al., 2009). Is the poor business environment for formal firms resulting from competition from the informal sector? According to our survey results, while informal actors can more easily avoid compliance with costly regulations, they are usually exposed, by a greater extent, to higher costs and lower quality of infrastructural services. However, due to their greater flexibility, they can move away from products intensive in such expensive services, to cluster around less complex and lower scale activities. Furthermore, they avoid compliance with cumbersome regulations, which allows them to reduce costs and be more flexible.

Table 2.8 shows that formal firms by far enjoy a greater access to public services. In all countries under consideration, the proportion of this category of firms having access to electricity, water, telephone and Internet services is greater than for informal firms. Furthermore, larger firms have far more flexibility to circumvent failure in the provision of such services. For example, Table 2.8 shows that in Douala, only about 2% of small informal enterprises own a generator, against around 60% of formal ones.

If we now look at the perception of regulations applicable to private businesses and costs of compliance with these regulations, some distinc-

Table 2.8 Proportion of firm access to infrastructural services

	Dakar	Cotonou	Ouagadougou	Douala	Yaoundé	Libreville
Proportion of firms with access to water (%)						
Formal	87.84	100	58.97	84.26	83.61	88
Large informal	74	78.57	27.27	44.44	30	68.42
Small Informal	50	59.63	30.91	10.34	24.73	54.65
Proportion of firms with access to electricity (%)						
Formal	97.3	98.41	90	97.22	93.44	90
Large informal	90	97.67	84.85	72.22	70	84.21
Small Informal	89.13	89.08	84.89	62.76	58.06	82.56
Proportion of firms with a telephone (%)						
Formal	94.59	96.67	85	90.74	91.8	80
Large informal	84	83.72	60.61	61.11	60	47.37
Small Informal	77.17	60.87	66.96	32.41	39.78	25.58
Proportion of firms with a generator (%)						
Formal	55.41	73.53	22.5	59.26	50.82	50
Large informal	28	51.11	18.75	16.67	30	15.79
Small Informal	19.57	30.94	12.33	2.07	5.38	3.49
Proportions of firms using IT services (%)						
Formal	45.95	67.65	36.84	75.93	67.21	84
Large informal	32	57.78	33.33	27.78	20	26.32
Small Informal	20.11	29.67	18.94	4.83	7.53	9.88

tions are observed between formal and informal enterprises. Both categories of firms have a very negative perception of the enforcement capacity of rules and regulations governing private firms. Around half of formal enterprises and about the same proportion of informal ones believe that paying taxes will expose firms to fiscal harassment. Benjamin and Mbaye (2012) have documented several cases of fiscal harassment to which formal firms are more exposed. Once they are identified as taxpayers, many firms report to be more frequently visited by tax authorities, and to undergo repeated audits, inspections and penalties. Formal firms are more exposed because they are known to the public tax authorities and their accounts lend themselves to better scrutiny; while for informal firms, costs of collecting taxes are higher, due to well-hidden activities.

Because they pay very few or even no taxes, informal firms can reduce costs to a great extent and avoid the burden of filing tax statements and queuing to pay taxes. Likewise, because they do not comply with labor regulations, they enjoy more flexibility in dealing with their employees and avoid related costs.

Beyond the descriptive statistics presented above, we have performed an econometric analysis of the relationship between firm productivity and the business environment on the one hand, and exposure to informal competition, on the other hand. The simple model we consider is:

$$y = C + \alpha_1 X + \alpha_2 E + \alpha_3 V + \varepsilon \tag{1}$$

where y is the log of firm labor productivity, X is a set of control variables (including: size, access to bank credit, the age of the firm, wage), E is a set of business environment indicators, V is an indicator for perceived competition from informal firms taking 1 when formal firm's answer to questions related to exposure to informal firms' competition is yes, 0 otherwise. C is a constant. Table 2.9 displays the regression results of our model using four different specifications. Models 1 and 2 are OLS regressions of Eq. (1), with the "access to electricity" variable (model 1) being proxied by the "owning a generator" variable (model 2). Models 3 and 4 use generalized least squares with the same differentiations about electricity. The results show that access to public infrastructure service variables, which is a proxy for the quality of business climate are all significant and correctly

Table 2.9 Estimation of productivity models

	Model 1		Model 2		Model 3		Model 4	
Variables	Coef.	$P > t$	Coef.	$P > t$	Coef.	$P > t$	Coef.	$P > t$
Salaries	0.7045028	0.000						
Number of employees			0.8403159	0.000	0.3139581	0.027	0.8403159	0.000
Age	0.6647952	0.000	2.726419	0.000	1.437754	0.000	2.726419	0.000
Access to loans	0.9490966	0.001	1.492561	0.002	1.479839	0.000	1.492561	0.002
Access to a mutual health insurance	0.8343618	0.001	1.758203	0.000	1.358355	0.000	1.758203	0.000
Access to telephone	1.346054	0.000	4.019006	0.000	2.021967	0.000	4.019006	0.000
Access to electricity	3.197682	0.000			8.24594	0.000		
Own a website	0.2499426	0.405			0.7135512	0.083		
Access to water			1.611747	0.001			1.611747	0.001
Own a generator			0.0620863	0.890			0.0620863	0.890
Have a mailbox			1.370915	0.001			1.370915	0.001
Formal and informal Wholesale trading with small informal	0.0476676	0.905	1.845776	0.006	0.9233462	0.090	1.845776	0.006
Formal and large informal contested by small informal	0.8780845	0.000	2.85952	0.000	1.904151	0.000	2.85952	0.000
Number of jobs	603		603		603		603	
$F(9, 594)$	1940.58		572.27		998.51		572.27	
Prob > F	0.0000		0.0000		0.0000		0.0000	
R-squared	0.9671		0.9061		0.9380		0.9061	
Adj-squared	0.9666		0.9045		0.9371		0.9045	
Root MSE	2.7957		4.7274		3.8383		4.7274	

signed. Moreover, competition and trading with/outsourcing to informal firms are both positively correlated with productivity.

Conclusion and Policy Implications

The informal sector is predominant in francophone Africa and its dynamism contrasts with the atrophy of the formal sector. Some authors find competition from informal actors as the main explanatory factor for the lack of dynamism of the formal private sector, with more than 23% of surveyed firms by World Business Environment Survey (WBES) pointing to competition from informal firms to be their number one problem.

In this chapter, we use a set of quantitative and qualitative information to investigate the reason for the declining private formal sector, contrasting with the rise of the informal sector. Our findings lend support to the idea that a gloomy business environment is hampering both the formal and the informal sector, with the latter being more resilient, due to a greater flexibility and ability to bypass cumbersome regulations formal sector actors have to comply with.

According to our survey results, while informal actors can more easily avoid compliance with costly regulations, they are usually exposed, by a greater extent, to higher costs and lower quality of infrastructural services. However, due to their greater flexibility, they can move away from cost-intensive in such expensive services, to cluster around less complex and lower scale activities. Moreover, they avoid compliance with cumbersome regulations, which allows them to reduce costs and be more flexible.

In francophone Africa, a poor business environment is affecting both formal and informal enterprises, although not to the same extent. The lower exposure to an adverse business climate by informal firms can be seen as causing severe and unfair competition to formal firms. In the areas where formal and informal firms are in competition, the latter have been able to substantially outpace the former but products offered by both categories of firms are strongly differentiated, with informal actors offering much lower quality output. Moreover, in several instances, we observe a more collaborative than contentious interplay between both actors, cases of subcontracting and a trading-type relationships between them

being widespread. The descriptive statistics and regression results of the simple econometric model presented in this chapter show a strong correlation with access to infrastructure services and firm-level productivity while at the same time failing to validate any negative impact of informal competition on productivity.

The main policy implication stemming from this chapter has to do with the business environment, which needs to be significantly improved in order to jump-start private sector development and economic growth. Successful examples of special economic zones in Rwanda and Ethiopia should be better examined with the view to adapting them to country-specific circumstances.

Notes

1. For a more detailed study on the franc zone arrangement and how it impacts African countries' economies, see Mbaye et al. (2017).
2. *Organisation pour l'Harmonisation du Droit des Affaires en Afrique—Organization for the Harmonization of Business Regulations in Africa.*

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3

Theorizing Cities as Sources of Firm Competitive Advantage: Accra in Comparative Perspective

George Acheampong and Obi Berko Damoah

Introduction

In recent years, there has been an improvement in the global competitiveness of many African states (KPMG, 2016), as countries move beyond their overreliance on the agricultural and extractive industries, and towards a deeper integration into the global economy. In spite of some progress, Africa remains an underperforming region in global competitiveness. There are several positive factors in favour of the region, including a strong base in mining, agriculture, and oil production, as well as a growing pool of young and well-educated people. Furthermore, many African cities are investing in infrastructure and new technologies—such as mobile telephony and Internet services—which have the potential to accelerate the growth of a consumer- and service-led economy, as well as cutting-edge industry.

G. Acheampong (✉) • O.B. Damoah
University of Ghana Business School, Accra, Ghana

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The growth in many African economies is driven by the emergence of competitive African cities like Cairo, Addis Ababa, Pretoria, Accra, Lagos, Nairobi and Abidjan. Parilla and Trujillo (2015), for instance, studied the case of Gauteng city-region and conclude that the city-region's economic assets are comparable to those of other cities in the world—with the right mix of multinational firms, reputable universities, capable human capital, infrastructure and a stable democracy. The factors that can improve the competitiveness of cities include the ability to drive trade, having the right mix of human capital in the form of skills and talent, infrastructure (especially of transport), energy and housing that can facilitate as well as attract new firms and finally, the right governance systems (Parilla & Trujillo, 2015).

The Economist Intelligence Unit (2013) argues that cities of all sizes can be competitive and that it is the quality of institutions that greatly matter for a city's economic competitiveness. Cities with maritime access and good physical infrastructure are more likely to be competitive compared to other cities without these. African cities lag significantly behind other cities of the world including other third world cities in Latin America and Asia. This problem has received increasing academic attention. Obeng-Odoom (2009), in a discussion on the future of Ghanaian cities, noted that they face many urban problems in transport, waste management, crime, housing and unemployment. He notes that cities have the capability to be entrepreneurial centres if they can deal with these challenges. An institutional overhaul—from urban government to urban governance—should be proactive in making the city prosperous and enhancing its job creation and investment prospects. The goal should be building cities that encourage even small businesses to flourish; attract new forms of investment; provide jobs to residents; and are internationally competitive. Through this form of entrepreneurialism, cities should be able to expand their local tax base to modernize and expand existing infrastructures.

Boschma (2004) notes that it is meaningful to talk about regional competitiveness when the region affects the performances of local firms to a considerable degree. This is especially true when the competitiveness of a region depends on intangible, non-tradable assets based on a knowledge and competence base embedded in a particular institutional setting that are reproduced and modified through the actions and repeated inter-

actions of actors. Kitson, Martin, and Tyler (2004) argue that regional competitive advantage relies heavily on productive capital, knowledge/creative capital, infrastructural capital, cultural capital, socio-institutional capital and human capital. Malmberg and Maskell (2002) posit that industrial agglomeration from a regional perspective has several advantages including shared costs of infrastructure, transaction efficiency and knowledge spillovers. The shortcoming of the literature, they suggest, comes from a lack of a unified theoretical framework to guide these efforts. They suggest the use of knowledge creation and learning perspective to understand the benefits of agglomeration (Boschma, 2004; Kitson et al., 2004; Malmberg & Maskell, 2002).

In line with the above suggestion, this study first contributes to the literature by integrating the resource-based theory with other macro level theories (e.g. new trade theory) as the guiding framework to explain the competitiveness of cities. The resource-based theory suggests that, for an economic agent to have sustained competitive advantage, that agent must possess resources that are valuable, rare, inimitable and non-substitutable (Barney, 1991, 2001). However, the specific roles of these resources within specific locations remain nascent. The study extends this theory to the study of cities by suggesting that cities that possess these resources are likely to have a sustained competitive advantage over other cities. The study argues that cities must possess a bundle of resources such as human capital, infrastructural resources and market size to remain competitive in the global arena.

These arguments have implications for the development of city resources that are aimed at attracting firms to locate in these cities and the development of new ones. Secondly, the study focuses on how competitive Accra (an African city) is relative to other cities of the world. This comparison is based on the resources that Accra offers enterprises located in it to be competitive relative to these other cities. The differences are then established using the Blinder–Oaxaca decomposition approach (Fairlie, 2005; Sinning, Hahn, & Bauer, 2008). The arguments of this study are tested using firm level data from the World Bank Enterprise surveys undertaken between 2006 and 2014. Data was extracted for Accra, Sana'A, Rio de Janiero, Jakarta, Sofia and Dhaka. The rest of the paper consists of the literature review, the research methods, results and discussion as well as the conclusion reached from the results.

Literature Review

Macro Level Theories

There are macro level theories that explain the competitiveness of nations. Among these theories are the theory of absolute advantage (Adam Smith, 1934), the theory of comparative advantage (David Ricado, 1817) and the Heckscher–Ohlin (H–O) theory (Heckscher, 1919). Despite the wide application of these theories, Porter propounded the theory of competitive advantage of nations, popularly called the Porter's diamond in the 1990s (Porter, 1990). The basic assumption of Porter's diamond is that six explanatory variables, namely, factor conditions, demand conditions, related and support industries and company's strategy, structure and rivalry, government policy and chance explain why some countries and, for that matter, cities are more successful in some industries than others. According to Porter, it is these conditions that give rise to variations in national competitive advantage as well as the competitiveness of cities. Following Porter (1990) with regard to factor conditions, unlike the traditional factors of production (land, labour, capital and entrepreneurship), the factor conditions are subdivided into basic factors such as raw materials, unskilled labour and water resources. Porter argues that whilst the basic factors are given and require little effort to be utilized in a production process, the other part, namely advanced factors (e.g. knowledge, infrastructure) are grown, updated, ungraded through innovation. Consequently, the advanced factors become the specialized factors that create a sustainable competitive advantage for a nation and/or cities.

With regard to the demand conditions, Porter argues that it is not only the quantum of the demand that creates differences in national and city competitiveness, but also the degree of the sophistication of the demand. As regards a firm's strategy, structure and rivalry, Porter argues that the degree of rival competition in a country influences the extent to which firms are differentiated based on either cost or quality. The competitive rivalry ultimately determines their structure and strategy of firms in the city. Concerning the cluster of related and support industries, the dia-

mond theory believes that location (e.g. countries, cities), with a cluster of support industries have competitive advantage over those that do not. Lastly, differences in enabling government policy and chance (e.g. exogenous factors) are core drivers of variations in competitiveness of nations. However, the variables in the framework are not in isolation, but it is their interactions and interplay that create differences in the competitiveness of cities.

The New Economic Geography

The new economic geography (Kruman, 1991a) seeks to explain the underlying factors informing the clustering of economic activities in a geographical space. The basic tenet of the theory is that the clustering of economic activities occurs at different geographical levels (e.g. cities, urban, nations, regions) with different sizes. According to Kruman (1991) the main explanatory variables accounting for these variations in economic activities are cost of transportation across space and the interaction of market size with increasing returns to scale. These factors determine the degree of economic activities and, for that matter, competitiveness of cities.

The New Growth Theory

The new growth theory, also known as the endogenous growth theory, assumes that the reason why some economies and/or cities are richer, including why some geographical locations (e.g. urban, region and nations) grow faster than others, is accounted for by the differences in knowledge (Romer, 1992, 1993, 1994). The key thrust of the theory is that knowledge drives growth and so it concurs with the proponents of a shift towards the knowledge-based economy from the resource-based economy. Implicitly, the theory assumes that any economic processes of cities and nations which hinge on creating and diffusing new knowledge are crucial and more likely to shape the growth of that geographical location; in this case, a city.

Location Theory

Location theory focuses on the optimal location choice that is determined by the attractiveness of a site for firm location (pull factors). Boschma (2004) notes that it is meaningful to talk about regional competitiveness when the region affects the performance of local firms to a considerable degree. This is especially true when the competitiveness of a region depends on intangible, non-tradable assets based on a knowledge and competence base embedded in a particular institutional setting that are reproduced and modified through the actions and repeated interactions of actors. Although regions are increasingly becoming collective players actively responding to a growing exposure to extra-regional competition, there are serious limits in enhancing the competitiveness of regions. The usefulness of benchmarking practices with the purpose of improving regional competitiveness has been questioned, as there exists no "optimal" development model. It is, thus, difficult to imitate a successful model from elsewhere and new trajectories often emerge spontaneously and unexpectedly in other locations. Gordon and McCann (2000) state that the concept of industrial clusters has attracted considerable attention during the past decade, both as being descriptive of an increasingly important phenomenon and as a basis for effective public intervention in the economies of lagging city-regions.

Three models of industrial clusters are discussed; namely, pure agglomeration; industrial complex; and social network models. The significance of the distinction between these three interpretations lies partly in the implied scope for policy action to stimulate growth and competitiveness in backward areas or to create counter-magnets to congested metropolitan areas. In different periods and economic contexts, the complex and network models both have the prospect that substantial spatial externalities could be generated through appropriately planned development in areas lacking a strong existing concentration of advanced industrial or service activity (Gordon & McCann, 2000). In order to understand the competitiveness of cities from a locational perspective, the study considers the three city-based resources of human capital, market size and infrastructure.

Human capital is the collective skills, knowledge, or other intangible assets of individuals that can be used to create economic value for the individuals, their employers, or their community (Ciccone & Peri, 2006). Human capital in specific locations is a significant driver of city competitiveness. Jacobs (1969) has also called attention to the central role played by people in the generation and organization of economic activity in cities. Building upon these insights, Lucas (1988) essentially argued that cities function to collect and organize human capital, giving rise to strong external economies, which he refers to as external human capital. The literature suggests that places attract human capital or talent through two interrelated mechanisms. The traditional view offered by economists is that places attract people by matching them to jobs and economic opportunity. More recent research suggests that places attract people by providing a range of lifestyle amenities (see Gottlieb, 1995). This is particularly true of highly educated, high human-capital individuals who possess resources, are economically mobile, and can exercise considerable choice in their location. Lloyd and Clark (2001) argue that amenities are a key component of modern cities, referring to this lifestyle-oriented city as an "entertainment machine". Brouwer, Mariotti, and van Ommeren (2004) demonstrate that internal growth factors measured by increases (and decreases) in the workforce induce firm relocation. Florida (2002) has argued that the economic geography of talent is highly concentrated. Talent is associated with the diversity index. Furthermore, the economic geography of talent is strongly associated with high-technology industry location. Talent and high-technology industry work independently and together to generate higher regional incomes. In short, talent is a key intermediate variable in attracting high-technology industries and generating higher regional incomes.

Market size refers to the number of individuals in a certain market who are potential buyers and/or sellers of a product or service (Low, Chapman, & Sloan, 2007). Market size is very important to cities being competitive as firms locate in regions that offer significant markets for their production. Brouwer et al. (2004) note that firms that serve larger markets relocate more often. It is demonstrated that relocations are often

as a result of acquisitions, mergers and takeovers, which are a consequence of external growth. In a post-industrial or post-Fordist era, the milieu concept held out is the prospect that qualitatively crucial interrelations could be developed among clusters of small or medium-sized businesses, securing both growth and innovation in lagging regions and/or smaller centres in developed regions. Kitson et al. (2004) have argued that the basis of regional competitive advantage is based on productive, knowledge, infrastructural, cultural, social-institutional and human capital.

Infrastructure provides the guiding framework for firm-level productivity. Cities then become competitive when their infrastructural sets are comparable or better than competing cities. In the study by Kumar (2002), the possibility of using regional distribution of public investment as a policy instrument to reduce regional disparities is evaluated. The analysis demonstrated that while there were prospects of concentrating on the varying forms of infrastructure in different categories of states at earlier points in time, the current situation calls for each region receiving investment in all of the different forms of infrastructure. Malmberg and Maskell (2002) note that industrial agglomeration from a regional perspective has several advantages including shared costs of infrastructure, transaction efficiency and knowledge spillovers. The shortcoming in the literature, they suggest, comes from a lack of a unified theoretical framework to guide these efforts. They suggest the use of knowledge creation and learning perspective to understand the benefits of agglomeration. McCann and Shefer (2003) state that the evaluation of the relationship between transportation infrastructure and regional development is much more complex than it simply being a matter of road building, and no single transportation impact evaluation technique can be applied to all regions and industries (Shefer, 1975). Taking account of the nature and extent of modern spatial transaction costs, and the interrelationships between firms, the evaluation of transportation infrastructure appears to depend as much on issues relating to firm organization, firm mobility, information spillovers and externalities, as it does on the movements of traffic along the transportation infrastructure itself.

Micro-Level Theories

The Resource-Based Theory

Taken from a city's perspective, the resource-based view of the firm (Barney, 1991) assumes that the performance differentials among firms in an industry within a city are explained by a stock of internal bundle of resources that firms possess. The model defines resources as consisting of tangible (funds, machines, manpower) and intangible (e.g. organizational identity, routines, management skills) resources. Any sustainable competitive advantage among firms within a city can only be explained by the bundle of the stock of resources that are owned and controlled by the firms in the city. However, Barney (1991) argued that for resources to confer long-term sustainable competitive advantage to firms within a city the resources must be valuable (enduring), rare (scarce), inimitable (difficult to copy) and non-substitutable (one of a kind). This explains why some firms are more successful than others though they may operate in the industry within a city and face the same market conditions (Barney, 1991). Although the resource-based view theory originates from the strategic management field, it has received many applications in different fields, including international business (Peng, 2001), marketing (Srivastava et al., 2001), entrepreneurship (Alvarez & Busenitz, 2001) and Wright et al. (2001). It has been used to integrate with other theories to explain sustainable competitive advantage. For example Oliver (1997) integrated the resource-based view with the institutional theory to explain sustainable advantage of firms

Since the resource-based theory emerged other related constructs have emerged from the theory. These concepts and/or constructs include, but are not limited to core competence (Prahalad & Hamel, 1990; Hamel & Prahalad, 1994), the dynamic capabilities (Helfat & Peteraf, 2003; Teece, Pisano & Shuen, 1997), the knowledge-based view (Grant, 1996), distinctive competence (Selznick, 1957) and the invisible assets. The main argument is that these related concepts are components of organizational stock of resources in a geographical location; say, a city, but it is the alignment these capabilities and competences to other tangible

resources that make the resource stocks of the firm within a city rare, enduring, inimitable and non-substitutable. Implicitly, the capabilities and competencies are complementary to resource stocks of firms in a city because having one without the other cannot achieve sustainable competitive advantage. Examples of competence, capabilities and organizational knowledge include, but are not limited to, a firm's capacity to integrate, build and reconfigure its routines and processes, product design and value chain integration in order to create sustainable competitive advantages, which are casually too ambiguous to be imitated by other firms.

In recent times, because of the difficulties with regard to how to test the characteristics—rare, inimitability, valuable and non-substitutable—of the resources, researchers (e.g. Autio et al., 2000; Bloodgood et al., 1996; Hall & Cook, 2009; Westhead et al., 2001) distinguish the "weak" version of the resource-based theory (RBT) from the "strong" version. These researchers argue that whilst Barney's (1991) version (strong) with all its characteristics—rare, inimitable, valuable and non-substitutable—is plausible, resources meeting such standards are most times difficult to identify, and so using the weak version applies the tenets of the theory, but relaxes the core characteristics. The data set used in this study does not include measures of the core characteristics of Barney (1991), and so this study also uses the weak version of the RBT and does not measure directly the core characteristics.

The City as a Bundle of Resources

In other words, Barney (1991) has theorized that if strategic resources are heterogeneously distributed across firms, and that these differences are stable over time, the link between firm resources and sustained competitive advantage would be a function of the value, rarity, imitability and substitutability (VRIS) of the resources in question. The resource-based view of the firm suggests that the ability of a firm to develop distinct capabilities enhances its ability to adapt to the changing competitive environment and improves its survival prospects. Esteve-Pérez and Mañez-Castillejo (2006) found that firms that develop firm-specific

assets through advertising and R&D (independently of the technological intensity of the industry) enjoy better survival prospects. From a city competitiveness perspective, it can then be argued that the bundle of resources that a city offers a collection of firms is what informs their location and relocation decisions. These resources include the city's ability to drive trade; having the right mix of human capital in the form skills and talent; infrastructure, especially of transport; energy; a housing form that can facilitate as well as attract new firms; and, finally, the right governance systems (Parilla & Trujillo, 2015). The resources in this study are infrastructure, human capital and market size. For a city to gain an advantage from these resources its unique bundle or combination must be different from those of other cities it competes with; that is, it must meet the VRIS condition of the resource-based theory (Barney, 2001).

Firm resources can only be a source of competitive advantage if they are valuable in the sense that it helps the firm improve its productive efficiency and effectiveness after the exploitation of these resources (Barney, 2001; Gagnon, 1999). In the same vein, a city must offer a valuable bundle of resources that firms can utilize if they are agglomerated in the city under consideration. Kitson et al. (2004) have argued that the basis of regional competitive advantage relies heavily on productive, knowledge, infrastructural, cultural, social-institutional and human capital. These are resources that can directly affect the overall functioning of any business and hence can be considered valuable to operations. Another important condition for resources to be relevant is that it needs to be rare (Barney, 1991). If competing firms all possess the same resources, then these resources cannot offer any advantage to the firm. In the same direction, if two cities possess similar combinations of resources then no one city can gain a competitive advantage. Consequently, for a firm in a particular city to be competitive, the city needs to offer resources that are not only valuable, but also rare.

Cities with valuable and rare resources will be able to also create strategic innovation clusters and may be likened to the 'first mover advantages idea' (Grant, 1991). However, for these cities to sustain their competitive advantage, the valuable and rare resources in question should be inimitable by competing cities. This inimitability can be achieved through the development of unique histories in time and space that help in the acqui-

sition of a unique bundle of resources that are not readily copied by the competition, creating a causal ambiguity between a city's competitive advantage and its bundle of resources and developing socially complex resources, such as interpersonal and inter-organization relations, that cannot be easily imitated. Another requirement for city resources to be a source of sustained competitive advantage is the level of substitutability of rare and valuable resources (Barney, 2001). If these resources are equivalently available and yet not rare or inimitable then there cannot be a channel for competitive advantage for the city. This is because other competing cities can look for a strategically similar alternative and hence achieve the same production efficiency through another bundle of resource configuration.

Research Methods

Data

This chapter relies on data from the ongoing World Bank Global Investment Climate Assessment survey (see www.enterprisesurveys.org). The survey collects information on internal firm level issues such as firm characteristics and corporate governance issues as well as investment climate issues; namely, infrastructure and government relations. The data include details about 150,000 firms globally from several regions of the world such as the Middle East-North Africa (MENA), Africa, East Asia Pacific, South Asia and Latin America. The data set has been extensively used in prior studies (Acheampong & Dana, 2015; Eifert, Gelb, & Ramachandran, 2008; Hansen & Rand, 2014). Based on our research objective of evaluating the competitiveness of African cities, the data set for this study was constructed by selecting a city from each of these regions. Accra (Ghana) was selected as the African city for purposive reasons, as the researchers have a clear understanding of the contextual issues. Again, Accra is the capital of one of the fastest growing economies as well as one of the most stable on the African continent. Accra also fairly represents the average city on the African continent. It is not as

affluent as Pretoria or Tunis but yet not as deprived as Mogadishu and Kinshasa. Consequently, it can be a critical case for empirical testing. The remainder of the cities were purposively and randomly drawn from the data set with each city in each region given an equal chance of been selected. On each continent, cities that were close to Accra in characteristics in terms of size, population and per capita income were selected purposively from the data and lots drawn to select the final cities. Consequently, Jakarta (Indonesia) was selected for East Asia Pacific, Dhaka (Bangladesh) was selected for South Asia Region, Rio de Janeiro (Brazil) was selected for Latin America, Sana'a (Yemen) was also selected for MENA and finally Sofia (Bulgaria) was selected for Eastern Europe. In total, 3275 firms from these countries were utilized for the analysis in this study.

Operationalization of Variables

Dependent Variable: Enterprise Competitiveness

Export intensity of an enterprise was used as a proxy for this variable. This is a useful proxy because firms must be competitive in order to be able to export out of their home markets. Competitiveness here referring to the total value delivered into international markets. Consequently, it helps address the key theme of this chapter, which is competitiveness. The question posed in the survey asked: "What proportion of the enterprise's sales were direct exports?" This question can measure competitiveness because to increase enterprise export intensity the enterprise needs to be competitive relative to other enterprises in the global market place (Buckley et al., 1988).

Main Effects

Human Capital: This was measured using the constraint that labour imposes on the overall performance of the enterprise. In the survey, the question was posed as: "How much of an obstacle is an inadequately

educated workforce to your firm?" The responses options range from labour not being an obstacle at all to it being a severe obstacle. This is particularly useful because it measures the access to quality human capital, which is a function of the investment made by a particular city. The relationship between human capital and the education of a workforce has already been established in the literature (Heyneman, 2010).

Infrastructure: The reliability of electricity in the place of business of the enterprise served as a proxy in measuring this variable. The question posed in the survey asked: "What is the number of power outages experienced in a typical month over the last fiscal year?" The idea of utilizing a key utility as measure of infrastructure is not new in the management and economic literature (Asiedu, 2002). The relationship between electricity and competitiveness already exists in the literature (Adenikinju, 2005).

Market Size: The market size was measured using the population of the locality of the city of operation of the enterprise as a proxy. This was placed on a rank scale and included localities with a population above 1 million people, those between 250,000 and 1 million and those between 50,000 and 250,000.

Control Variables

The study controlled for other variables that could confound the results sought (Bernerth & Aguinis, 2016). These controls include age, size, quality certifications and industry (Buame & Acheampong, 2015). The age of the business was measured according to how long the enterprise had been in operation. Size was measured by the number of full-time employees that the enterprise had. Quality certifications focused on whether the enterprise had international certifications such as ISO and GLOBALGAP. These are particularly relevant since competitiveness is measured using export intensity. Lastly, the industry in which the enterprise is embedded was controlled for. Other sectors (referred to as core in the survey) were used as reference for the manufacturing and services sectors.

Empirical Specification

To examine the relationship between city resources and the competitiveness of enterprises located in them, a pooled-cross-section ordinary least squares (OLS) model of general form was specified.

$$C = \alpha + \beta_1 HCap + \beta_2 Inf + \beta_3 MktSize + \beta_4 Cov + \varepsilon$$

where α is the constant, β is the estimated coefficient, HCap refers to the human capital, MktSize refers to the market size, Inf refers to the infrastructure, Cov refers to the control variables and ε is the statistical noise in the model. To estimate the source of city differential, a Blinder–Oaxaca non-linear decomposition was specified.

Threefold decomposition (Sinning et al., 2008):

$$Y_A - Y_{NF} = (X_A - X_{NF})\beta_{NF} + X_{NF}(\beta_A - \beta_{NF}) + (X_A - X_{NF})(\beta_A - \beta_{NF})$$

where A and F represent Accra and Non-African cities respectively; $Y_A - Y_{NF}$ is the difference in competitiveness between firms located in African cities and those located in non-African cities; X is the mean value of the explanatory variable and β is the estimated coefficient for each group. The first and second parts of the right-hand sides of the equations represent the characteristic and coefficient effects respectively and in the case of the threefold decomposition, a third, which is the interaction effect.

Results and Discussion

Table 3.1 presents some descriptive statistics of the data utilized for this study. It is observed that approximately 16.5% of the enterprises had export competitiveness in the global marketplace. On average, the firms were 17 years old with 185 employees. However, the number of employees mean has to be treated with a lot of caution as it has a very high standard deviation of 523.965 and range (difference between maximum and

Table 3.1 Summary statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Competitiveness	3272	16.550	35.120	0	100
Age of enterprise	3266	17.387	13.114	1	183
Number of employees	3269	185.014	523.965	2	11,000
Quality certification	3209	1.818	0.386	1	2
Industry					
Manufacturing	3275	0.710	0.454	0	1
Services	3275	0.162	0.369	0	1
City					
Accra	3275	0.197	0.398	0	1
Dhaka	3275	0.525	0.499	0	1
Jakarta	3275	0.049	0.216	0	1
Rio de Janeiro	3275	0.050	0.218	0	1
Sana'a	3275	0.040	0.196	0	1
Sofia	3275	0.139	0.346	0	1
Infrastructure	2444	55.405	48.350	0	300
Human capital	3253	1.619	1.253	0	4
Market size					
Above 1 million	2448	0.583	0.230	0	1
250,000 to 1 million	2448	0.105	0.307	0	1
50,000 to 250,000	2448	0.313	0.464	0	1

minimum figures). Many of the enterprises possessed an international quality certification. The majority, representing 71%, operated in the manufacturing sector while the remaining were in the services and other related sectors. Dhaka was home to most of the enterprises under study with 50%; Accra had approximately 20%; Sofia with 14%; and Jakarta, Rio de Janeiro and Sana'a all had approximately 5%. The main resource variables under consideration were infrastructure, human capital and market size. Power outages served as proxy for infrastructure. The descriptive analysis shows that on average, an enterprise experiences 55 power outages in a month. Human capital remains a moderate constraint to global competitiveness of enterprises located in these cities. Fifty-eight percent of the enterprises have access to local markets with more than 1 million people while 10.5% have access to between 250,000 and 1 million people while 31% have access to between 50,000 and 250,000 people.

Table 3.2 City competitiveness and resources

Indicator	Accra	Dhaka	Jakarta	Rio de Janeiro	Sana'a	Sofia
Competitiveness	3.705	23.604	8.156	2.091	0.492	20.824
Infrastructure	9.803	84.727	0.896	4.031	59.258	2.566
Human capital	0.785	1.712	0.696	2.755	1.540	2.398
Market size						
250,000 to 1 million	0.095	0.153	0.006	0.348	0.008	–
50,000 to 250,000	0.467	0.008	0.006	0.030	–	0.993

Table 3.2 presents the descriptive analysis of the competiveness and resources of the cities under study. The most competitive city was Dhaka, with most firms having a greater propensity to export, followed by Sofia and then Accra. The advantages these cities hold over Accra may be due to differentials in the bundle of city resources. In terms of infrastructural challenges of enterprises, the worst city was Dhaka with approximately 85 power outages in a typical month. Jakarta has the best environment with a mean of less than one outage in a month. Accra is only better than Dhaka and Sana'a with 10 outages in a month. In terms of the value of human capital, it is observed that Accra offers the most competitive environment to enterprises after Jakarta. The worse performing city in terms of human capital challenges was Rio de Janeiro, followed by Sofia and Dhaka respectively. In Accra, 44% of enterprises have access to markets with populations exceeding 1 million. Dhaka has 85%, Jakarta has 99%, Rio de Janeiro has 65%, Sana'a has approximately 100%, and Sofia has less than 1%. The data therefore shows that Sana'a and Jakarta offer the highest local market size to enterprises located within those cities.

Table 3.3 presents the results of econometric analysis of how cities can offer competitive advantages to enterprises located in them. This was discussed in relation to the existing literature. An observation of the control variables show that age of enterprise has a negative relationship competitiveness indicating a liability of obsolescence effect (Sorensen & Stuart, 2000). The negative and significant effect was only observed for enterprises located in Sofia but not the remaining cities. The number of employees has a positive effect and shows a liability of smallness effect (Ropega, 2011). This positive effect may be driven by enterprises located in Jakarta and Dhaka that report both positive and significant results.

Table 3.3 Regression estimates of city effects

DV: Competitiveness	General	Accra	Dhaka	Jakarta	Rio	Sana'a	Sofia
Age of enterprise	−0.108	0.073	−0.112	−0.227	0.045	0.020	−0.545
	(0.041)***	(0.050)	(0.076)	(0.185)	(0.048)	(0.031)	(0.236)**
Number of employees	0.025	0.010	0.029	0.014	0.005	0.006	0.036
	(0.004)***	(0.010)	(0.006)***	(0.003)***	(0.008)	(0.004)	(0.027)
Quality certificate	−9.245	−2.339	−18.445	−11.324	−0.103	1.148	−7.908
	(2.511)***	(2.766)	(4.989)***	(10.849)	(1.519)	(0.719)	(5.701)
Manufacturing	3.983	0.256	7.804	1.350	−2.348	−0.180	−1.496
	(1.207)***	(1.501)	(2.188)***	(7.775)	(3.224)	(0.731)	(8.082)
Services	1.288	−0.091	−3.928	−3.876	−1.902	−0.273	−2.515
	(1.514)	(1.665)	(2.286)*	(7.188)	(3.573)	(0.512)	(8.135)
Infrastructure	−0.044	−0.091	−0.055	−0.302	0.179	0.013	−2.005
	(0.025)*	(0.050)*	(0.032)*	(1.239)	(0.212)	(0.012)	(0.591)***
Human capital	2.376	1.266	2.576	2.975	−0.415	0.013	5.850
	(0.584)***	(0.907)	(1.034)**	(3.040)	(0.445)	(0.188)	(2.007)***
Market size	−1.742	−1.245	−6.026	−5.608	0.079	−0.312	8.317
	(0.695)**	(0.608)**	(2.674)**	(3.369)	(1.068)	(0.519)	(3.310)**
City (Accra is Reference)							
Dhaka	6.228						
	(2.446)**						
Jakarta	−3.628						
	(2.716)						
Rio de Janeiro	−8.992						
	(1.826)***						
Sana'a	−4.615						
	(1.785)***						
Sofia	13.868						
	(3.140)***						

(*continued*)

Table 3.3 (continued)

DV: Competitiveness	General	Accra	Dhaka	Jakarta	Rio	Sana'a	Sofia
Constant	23.043 (5.253)***	9.807 (5.976)	52.886 (11.563)***	38.081 (21.879)*	2.172 (6.639)	−2.349 (1.672)	−0.550 (17.546)
R^2	0.22	0.06	0.26	0.32	0.19	0.11	0.10
N	1584	540	612	76	61	114	181

*$p < 0.1$; **$p < 0.05$; ***$p < 0.01$

Enterprises with international quality certificates are less likely to be competitive in the international arena. This effect may be driven by enterprises located in Dhaka that had a negative and significant relationship. Dhaka-based enterprises operating in manufacturing are more likely to be competitive in global markets and driving the effect in the general model. Meanwhile, service enterprises based in Dhaka are more likely to be competitive in global markets, although the general model is insignificant.

First, it can be observed from the results on the main effects of variables model that infrastructure has a negative relationship with global competitiveness of enterprises. A single power outage produces about 0.044% reduction in the competitiveness of the firms in specific cities in the general model. This effect is consistent for Accra, Dhaka and Sofia. Sofia had the strongest negative effect. A blackout in Accra leads to a 0.091% loss in competitiveness of firms; in Dhaka it is 0.055%, and in Sofia 2.00%. Accra is not in a competitive position relative to the other cities for which power infrastructure is significant. This is consistent with expectations as infrastructure is measured by the number of power outages in a typical month. If the number of outages is high, productive activity is expected to be low and vice versa. This is consistent with the arguments of Kitson et al. (2004) that competitiveness relies heavily on the infrastructural base of the location under consideration. The temptation then is to utilize public investment to overcome the infrastructural in-competitiveness posed especially by electricity outages (Kumar, 2002). However, if consideration is not given to the types of firms, the nature of their transaction costs and internal capacities the infrastructural investment will be fruitless (McCann & Shefer 2003). Another route out of this situation is utilizing the regional industrial agglomeration to ensure that the above considerations are accounted for before major public investment is made into infrastructure to ensure competitiveness (Malmberg & Maskell, 2002).

Secondly, the human capital effect on competitiveness is considered. The study finds that human capital becomes a severe obstacle to enterprises when these enterprises start competing in the global arena. This result needs to be interpreted cautiously. Since, the regression estimates reported are associative models, the result needs to be interpreted as firms

that compete in the global markets find an uneducated labour force to be a major obstacle. This is because as enterprises internationalize they need quality human capital to stay competitive. With the exception of Rio de Janeiro, all the other cities report this positive relationship but only Dhaka and Sofia have significant effects. The general model shows that improvements in human capital lead to a 2.4% change in the competiveness of firms. However, this is insignificant for firms located in Accra while firms located in Dhaka and Sofia have 2.6% and 5.9% gains in competitive advantage in the city specific models. These results buttress the relevance of human capital to the creation of economic value for enterprises and the cities within which they are located (Ciccone & Peri, 2006). The findings show that Accra does not benefit from its human capital but is not worse of, like Dhaka and Sofia. Accra will consequently need to properly organize its human capital efforts to give rise to competitive enterprises as well as attract new ones (Lucas, 1988). As Florida (2002) notes, there is an economic geography of talent and city authorities in Accra need to develop a strategy that removes the bottlenecks that human capital imposes on enterprises in Accra looking to compete in the international arena.

The study also sought to understand the role of market size in terms of potential buyers on the competitiveness of enterprises. The general model shows that, as market size increases enterprises locality, it becomes less likely to be competitive in the international market. More specifically, the general model shows a 1.7% loss in competitiveness, while in Accra there is a 1.3% loss; Dhaka has a 6% loss, and there is an 8.3% gain in Sofia. This finding is consistent for both Accra and Dhaka but not Sofia about which there is a positive effect. This may be due to the fact that enterprises in Accra and Dhaka either become content with the growing market size and do not want to bother with stringent export regulations (Narteh & Acheampong, forthcoming) or they do not have the capacity to deal with export demands as the local market expands. This finding supports the assertion in literature that firms relocate to certain cities largely to take advantage of large markets in the new cities they relocate to (Brouwer et al., 2004). Again, the specific advantages offered by the various cities included in the analysis were explored. Accra, representing Africa, is used as the reference city and the other cities are compared to it. The findings

Table 3.4 Decomposition estimates of city effects

	(1)	(2)
Differential	9.762	−9.762
	(1.114)***	(1.114)***
Endowments	−0.413	−4.944
	(1.990)	(1.726)***
Coefficients	4.817	−10.174
	(1.835)***	(2.149)***
Interaction	5.357	5.357
	(2.604)**	(2.604)**
N	1584	1584

*$p < 0.1$; **$p < 0.05$; ***$p < 0.01$

indicate that Accra offers better competitive advantages to enterprises located in it than Rio de Janeiro and Sana'a, while it is less competitive when compared with Sofia and Dhaka, but equivalent to Jakarta.

In order to understand the source of the competitive advantages offered by other cities of the world compared to Accra, a threefold decomposition analysis was conducted. This is achieved by setting Accra as the base city in Model 1in Table 3.4 and swapping to check for robustness in Model 2 in the same table. The average difference in competitiveness on the model variables in this study shows an overall competitive advantage of 9.762% in favour of Accra as shown in the differential. The results show that the endowment effects are not consistent when the reference group for the composition was swapped. The findings specifically show that Accra has between 4.817% and 10.174% in environmental (city) advantage. The results for the coefficient (pure city) effect and interaction with endowments are considered. They are consistent and significant. This is also offers 5.357% point advantage to Accra and when swapped, it favours the other cities. This finding therefore cannot be relied on.

Policy Implications and Recommendations

We make some recommendations for Accra's city planners with possible extensions for other African cities. These recommendations are based on the three city resources that were the basis of our analysis in this study. In terms of infrastructure, city planners in Accra should look to improving

their competitive as they lag behind other cities such as Jakarta, Rio and Sofia. The implication of this is that firms located in these cities can leverage infrastructural resources to improve their competitiveness in the international markets and those firms located in Accra may lose and consequently move their businesses out of the city and exacerbate the current unemployment situation the city experiences. In fact, the World Bank (2010) suggests that power outages cost firms 0.5% in production loses. To address this problem, city planners can collaborate with stakeholders responsible to create industrial clusters within the city, which will experience limited outages in order to boost firm competitiveness.

Our findings also show that human capital is a critical competitive tool that cities can offer to firms located within them. Accra has a higher quality of human capital compared to other cities, with exception of Jakarta. However, this does not translate into international competitive advantage, as is the case for Dhaka and Sofia. Accra city managers should consequently seek to develop human capital that is highly trained but can provide firms with global competitive advantages. City managers and planners can achieve by integrating firm-level skill demands into educational curriculum to create a tangent between labour demand and supply.

Finally, on market size, we observed generally that as the city market size gets bigger (ordinally) international competitiveness reduces significantly. This holds specifically for Accra and Dhaka. However, in Sofia, as the city market expands, firms gain in international competitiveness. This suggests that compared to Sofia, firms in Accra are not able to benefit from productive gains that can accrue from serving a large local market. Alternatively, the firms may also be showing signs of satisfaction with the local market without much consideration for international competitiveness. City planners can offer firms free zones that encourage local firms to export by implementing export subsidies.

Conclusion

The study set out to explore the usefulness of cities as sources of competitive advantage to enterprises located in them. These competitive advantages are seen in the light of the resourced-based theory. Cities are argued

to possess human capital, market size and infrastructural resources that offer global competitiveness to enterprises located in them. Infrastructure, market size and human capital were all, in general, seen to hurt the global competitiveness of enterprises. Sofia, however, experiences positive effects from expanded market size compared to Accra and Dhaka, which recoiled from the international market. Accra is also seen to offer greater competitive advantages to enterprises located within it than cities such as Rio de Janeiro and Sana'a, but is less competitive when compared with Sofia and Dhaka. To understand the source of this difference, Accra is then compared with cities in other regions of the world. It was found that the differences come from a pure city effect and an interaction between the city effects and the endowments of the enterprises located in the city. These findings contribute to a new stream of research in resource geography, showing that cities can offer global competitive advantages to enterprises located in them by focusing on enhancing resource capabilities in the cities. This, however, requires firms to have the right competencies to take advantage of these city-based resources.

Limitations and Directions for Future Research

This study is an exploratory study and one of the first in this area to explore theorizing city competitiveness in the African context. The study has some limitations. First, the study relies on a large-scale secondary data that provides model stability. However, primary data sources can provide more data for better framework development that can help in understanding the nuances of city competitiveness. This study opens up opportunities for the study of city competitiveness. There is still a lot that academics and practitioners do not know about city competitiveness, and the literature on Africa is relatively scarce compared to the rest of the world. One of the un-hypothesized findings suggests that enterprises with international quality certificates are less likely to be competitive in the international arena. This effect may be driven by enterprises located in Dhaka, Bangladesh, that had a negative and significant relationship. This effect may need further studies to understand the reversal of basic theory that shows that possessing international capabilities should lead to

global competitiveness. Future studies could also focus on city competitiveness driving entrepreneurship, tourism and technological developments. In addition, the reverse loop effects of city competiveness driving growth and the growth reinforcing the competitiveness of the city could be further considered. Finally, future research could also go into the turning points of city competitiveness; that is, under what circumstances planned developments in city competitiveness return negative effects.

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4

The International Competitiveness and Connections of African Cities: Profiling South Africa's Gauteng City-Region

Joseph Parilla and Jesus Leal Trujillo

Introduction

Cities around the world must adapt to a set of global forces that are redefining what it takes to excel in today's global economy. As globalization intensifies, technology alters how firms create products and services, and urbanization changes the geography and growth of economic activity, cities are being positioned as the centers of global growth as well as being challenged by new disruptions (Manyika et al., 2014). For those places that can offer competitive environments that allow firms and people to successfully plug-in to the global economy, the returns are high (Clark & Moonen, 2014; McDearman, Clark, Parilla, & Brookings Institution, 2013).

These dynamics are all roiling the economic, social, and political landscape of South Africa, and nowhere is that more apparent than in the Gauteng City-Region, the nation's largest urban area that constitutes the

J. Parilla (✉)
Brookings Institution, Washington, DC, USA

J.L. Trujillo
Deloitte, Washington, DC, USA

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economic heartland of South Africa. It includes three metropolitan municipalities: Johannesburg, South Africa's major business and financial capital; Tshwane, which includes South Africa's national capital Pretoria, and Ekurhuleni (East Rand). The Gauteng-City Region is the economic engine of South Africa: the city-region housed 12.9 million people and accounted for approximately 24 percent of the national population, 35 percent of the South African economy, and 10 percent of the African economy in 2014.

This profile draws upon a unique dataset of globally comparable performance indicators to offer new insights about the economic competitiveness of the Gauteng City-Region. It uses international benchmarking to explore the overall economic performance of the region; its comparative strengths and weaknesses on five key competitiveness factors; and concludes with implications from this assessment, and key topics for the city-region's network of government, business, civic, and community leaders to consider as it positions the Gauteng City-Region on the global stage in the coming years.

Methods

This section provides a short overview of our methodological approach to measure the Gauteng City-Region's economic competitiveness. Countless definitions of competitiveness exist. This research draws on the Harvard Business School definition of a competitive market as one in which firms can compete successfully in the global economy while supporting high and rising living standards for local households (Rivkin et al., 2015). Competitive regions are, by this definition, supportive environments for both companies and people. Building on an extensive literature review on regional economic development by researchers at George Washington University, this research analyzes competitiveness through a five-factor framework—trade, innovation, talent, infrastructure, and governance (George Washington Institute of Public Policy and RW Ventures, LLC, 2011). Globally competitive traded sectors, innovation ecosystems, and skilled labor are the key drivers of overall productivity, employment creation, and income growth—outcomes that all metro areas care about. These drivers are supported by

enablers: well-connected, spatially efficient infrastructure and reliable governance, public services, and business environment.

This report utilizes a group of carefully selected metropolitan peers to understand competitiveness beyond a national context. To select peers, we utilized a combination of principal components analysis (PCA), k-means clustering, and agglomerative hierarchical clustering. These commonly used data science techniques allowed us to group metro areas with their closest peers, given a set of economic and competitiveness indicators. For this report we selected 14 economic variables: population, nominal GDP, real GDP per capita, productivity (defined as output per worker), total employment, share of the population in the labor force, and industry share of total GDP (eight sectors). We included six additional variables that measure one of the four quantitative dimensions of the competitiveness analysis framework used in this report. The variables included are: share of the population with tertiary education (talent), stock of Greenfield foreign direct investment (FDI) (trade), number of international passengers in 2014 (infrastructure), number of highly cited papers between 2010 and 2013 (innovation), mean citation score between 2010 and 2013 (innovation), and average Internet download speed in 2014 (infrastructure).

Our analysis proceeded in three steps. First, we applied PCA to reduce the number of dimensions of our data by filtering variables that are highly interrelated while retaining as much variance as possible. PCA generates "components" by applying a linear transformation to all the variables. To successfully perform our clustering algorithm we selected the number of components that explain 80 to 90 percent of the variance of a dataset. For this report we selected the first seven components, which accounted for 84 percent of the total variation of the data.

The second stage applied a k-means algorithm to the seven components, a process that calculates the distance of every observation in our data set to each other, then generates a cluster centroid and assigns each data point to the closest cluster. K-means repeats this procedure until a local solution is found. This algorithm provides a good segmentation of our data and under most circumstances it is a sufficient method for partitioning data. However, k-means sometimes generates clusters with multiple observations, thus obscuring some of the closest economic

relationships between metro areas. To improve the results of k-means we implemented a third step, hierarchical clustering, which follows a similar approach to k-means. Hierarchical clustering calculates Euclidean distances to all other observations, but generates a more granular clustering that permits clearer peer-to-peer comparison.

Seven emerging market cities were selected because they most closely resemble the economic profile of the Gauteng City-Region based on this analysis. Table 4.1 compares the city-region to its peer metro areas on five of these variables. Similar to the city-region, these metro areas are large in terms of output and population, remain in the middle-income development stage, and tend to be important hubs of business and exchange in their respective countries and regions. Whenever possible, the analysis employs comparable metrics of economic performance and the five competitiveness factors to unveil areas of comparative strength and weakness.

We deploy the Gauteng City-Region Observatory (GCRO) definition of the Gauteng City-Region: the "integrated cluster of cities, towns and urban nodes that together make up the economic heartland of South Africa." The core of the city-region is Gauteng province, but the city-region's footprint extends beyond the formal provincial boundaries. Due

Table 4.1 Key indicators for the Gauteng City-Region and global peer metro areas

Rank	Population	Nominal GDP	Employment	GDP per capita	GDP per worker
1	Mexico City	Mexico City	Mexico City	Warsaw	Warsaw
2	Istanbul	Istanbul	Shenzhen	Shenzhen	Istanbul
3	Gauteng City-Region	Shenzhen	Rio de Janeiro	Istanbul	Santiago
4	Rio de Janeiro	Rio de Janeiro	Istanbul	Santiago	Shenzhen
5	Shenzhen	Gauteng City-Region	Gauteng City-Region	Mexico City	Mexico City
6	Santiago	Santiago	Santiago	Rio de Janeiro	Rio de Janeiro
7	Cape Town	Warsaw	Warsaw	Gauteng City-Region	Gauteng City-Region
8	Warsaw	Cape Town	Cape Town	Cape Town	Cape Town

Source: Authors' analysis of Oxford Economics data

to data limitations, however, we use provincial-level data to examine trends in the Gauteng City-Region throughout this report. Additionally, Gauteng province contains three metropolitan municipalities—Johannesburg, Tshwane, and Ekurhuleni—and two district municipalities Sedibeng and West Rand. When data availability allows for it, we also provide data for the three metropolitan municipalities.

State of the Regional Economy

The Gauteng-City Region is the economic engine of South Africa. Anchored by the three metropolitan municipalities of Johannesburg, Ekurhuleni (East Rand), and Tshwane (Pretoria), the city-region housed 12.9 million people and accounted for approximately 24 percent of national population and 35 percent of the South African economy in 2014.

The Gauteng City-Region's economy has grown significantly since 2000 in terms of output, but employment growth has lagged global peer regions. GDP growth averaged a solid 3.4 percent between 2000 and 2014, on par with Cape Town and slower than four other global peer regions (Fig. 4.1). The Johannesburg Metropolitan Municipality's economy grew faster than every regional peer except Shenzhen and Santiago. Employment growth has been more sluggish, averaging 1.3 percent per year since 2000, partly due to major job losses in the aftermath of the global recession.[1] Job growth has picked back up in recent years and the city-region has returned to pre-recession employment levels.

GDP per capita and productivity are higher today than in 2000, but growth in both metrics has slowed during the first half of this decade. To create lasting prosperity, economic growth must keep pace with population and labor force growth so that individuals can continue to see their standard of living rise. Annual GDP per capita growth, a common metric of standard of living, in the Gauteng City-Region has averaged 1.5 percent since 2000, similar to national trends and fifth among its peer regions (Fig. 4.2). After steady gains leading up to the global recession, however, GDP per capita growth has slowed since 2009, as GDP growth has not kept pace with rapid population growth. GDP per capita growth

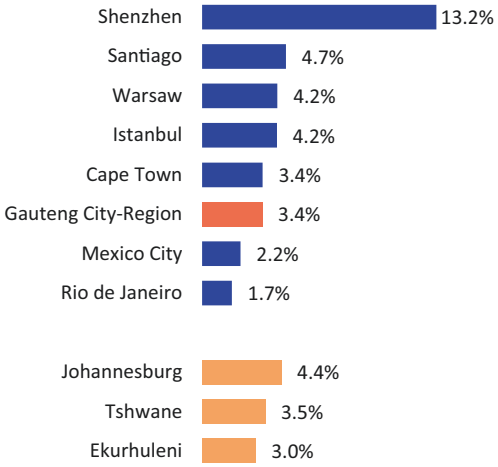

Fig. 4.1 Real output growth, CAGR, 2000–2014. Source: Authors' analysis of Oxford Economics data

is in turn related to productivity, or the ability of firms and workers to transform the factors of production into more valuable products and services. Productivity—measured by GDP per worker—grew rapidly until 2010 (2.9 percent compound annual growth rate (CAGR), but its growth has since slowed.

Income inequality, however, continues to inhibit broadly shared growth. High inequality can reduce the durability of economic growth if it undermines health and education access, limits productivity-enhancing investments, and diminishes social cohesion (Ostry, Berg, & Tsangarides, 2014). While many of the global economic trends that contribute to income inequality are beyond the control of any individual city, understanding how income gains are distributed within a regional economy can reveal whom among the population is benefitting from local growth. One common way to measure income inequality is the Gini coefficient, which defines inequality on a scale from zero (perfect equality) to one (perfect inequality). The city-region registered a Gini of 0.74 in 2011, down from 0.76 in 2001. While lessening over time, income inequality in the Gauteng City-Region exceeds that of South Africa (Gini of 0.65) and almost every major metropolitan region in the world (Boshoff et al., 2013).

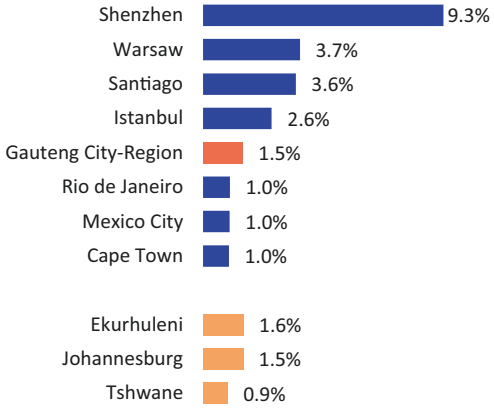

Fig. 4.2 Real GDP per capita growth, CAGR, 2000–2014. Source: Authors' analysis of Oxford Economics data

Much economic progress has been made since 2000. Average standards of living and labor productivity are higher today than they were in 2000. But signs of a competitiveness challenge linger: comparatively low job creation during this period, slowing productivity growth since 2010, and continued high levels of income inequality. To solidify this international position in the coming decades, however, the city-region's leadership must focus on the core drivers and enablers of competitiveness and prosperity.

Competiveness Drivers and Enablers

This research analyzes competitiveness through a five-factor framework—trade, innovation, talent, infrastructure, and governance.

Trade

Trade is a critical driver of prosperity. Firms selling internationally inject new wealth from abroad that, when spent locally, creates a "multiplier effect" in the regional economy, spurring new jobs, growth, and further

tax revenue to be reinvested locally (Fujita, Krugman, & Venables, 1999; Krikelas, 1992). Local companies that embed themselves in global value chains gain access to high-quality inputs, lower overall costs, and as a result become more globally competitive. This process tends to boost productivity, wages, and export prowess (Melitz & Trefler, 2012; OECD, 2013; WTO, 2013). Therefore, the traded economy—as measured by the health of traded sectors, trade in goods, services, and foreign direct investment—is both an important signpost and a critical driver of competitiveness.

The Gauteng City-Region's traded sector accounted for 43 percent of employment and 53 percent of economic output in 2014.[2] For all the reasons mentioned above, the health of the traded sector—those industries that sell their goods and services beyond the local economy—is an important indicator of overall competitiveness. The Gauteng City-Region's traded sector has undergone a shift toward advanced services since 2000. Overall, the Gauteng City-Region's traded sector has grown 3.4 percent per year since 2000, a healthy expansion but lower than most of its global peer regions. One simple way to gauge the health of individual traded sectors is to examine the change in jobs and output within each of them. Doing so reveals a significant industrial transition in the Gauteng City-Region over the past 15 years. Financial and business services and transport and communications grew quite quickly; both sectors outperformed national growth trends between 2000 and 2014 indicating an expanded market share for the city-region. Within manufacturing—where labor-saving automation has expanded productivity—employment declined by 14 percent during this period yet output expanded by 32 percent. Changes in the city-region's manufacturing sector mirror national shifts. Particularly striking is the significant decline in both employment and output within mining, which have shrunk more quickly within the city-region than in South Africa as a whole (Table 4.2).

The Gauteng City-Region accounted for 63 percent of total South African goods trade in 2014, up from 20 percent in 2004. This high share of national trade partly reflects the importance of the prominence of the city-region's economy, but also reflects how import and export

Table 4.2 Gauteng City-Region's industrial structure, 2014

Sector	Share of jobs	Share of output
Tradable	43%	53%
Financial & business services	20%	24%
Manufacturing	13%	17%
Transport & communications	8%	9%
Agriculture, forestry & fishing	1%	0%
Mining	1%	3%
Non-tradable	57%	47%
Public services	21%	23%
Wholesale & retail trade and hotels & catering	21%	13%
Other services	7%	4%
Construction	7%	5%
Utilities	1%	2%

Source: Authors' analysis of Oxford Economics data

statistics from the South African Revenue Service (SARS) are assigned to the postal code of the trading firm's reporting office, not necessarily the site of production. Trade is growing faster than the economy as a whole. Between 2004 and 2014, nominal growth in two-way goods trade averaged 12 percent annually, compared to nominal GDP growth of 5.5 percent. In 2004, the Gauteng City-Region enjoyed a goods trade surplus of R63.2 billion ($4.6 billion), but since then imports have grown 40 percent faster than exports (14 percent vs. 10 percent, annually). By 2014, the province's trade surplus had shifted to a R44.5 billion deficit.[3]

The Gauteng City-Region's merchandise export advantages lie in a core set of industries while imports to the province are dominated by manufactured goods. The city-region exported R622 billion (roughly $54 billion) in goods in 2014. Five local industries—mining products, precious metals, iron and steel products, transportation equipment, and machinery—accounted for 81 percent of exports in 2014 and 90 percent of export growth since 2004.[4] Manufactured products dominate the city-region's import basket, reflecting the rising demand for goods among local firms and consumers. In 2014, the top import

industries are machinery (31 percent), mineral products (17 percent), transportation equipment (11 percent), and chemicals (10 percent).

Expanding services exports, which are still relatively limited nationally, can be an important growth driver for the Gauteng City-Region. In the absence of provincial-level data, country-level trade statistics can be useful to understand the city-region's role in the global exchange of services, especially given its position as South Africa's most prominent services hub (the city-region accounts for 39 percent of national value added in tradable services). In 2013, South Africa exported $14.2 billion and imported $16.4 billion in services, a deficit of $2.2 billion overall. Since 2001, services exports and imports have grown 9.4 and 10.0 percent per year, respectively, slower than the growth in provincial-level goods trade. National service exports are dominated by tourism (65 percent), followed by other business services (7 percent) and financial services (6 percent). Transportation is the largest imported service (47 percent), followed by tourism (21 percent) and royalties (12 percent), the latter indicating that South Africa imports much more intellectual property than it exports. As shown earlier, services such as finance, business services, and telecommunications are significant sources of employment and output growth, yet those gains do not appear to be translating to the export statistics.

Foreign direct investment is another important metric of the tradable economy, and the Gauteng City-Region remains the top destination for new, or "greenfield," foreign direct investment (FDI) in Sub-Saharan Africa, and one of the top recipients among peer cities. Greenfield investments—the process by which companies open a new establishment in a foreign market—help reveal the extent to which multinational firms find the Gauteng City-Region an attractive operational environment vis-à-vis other global regions. Greenfield FDI flows into the Gauteng City-Region have totaled $11.3 billion since 2009, trailing only Rio de Janeiro and Istanbul in terms of FDI attraction. About one third of the Gauteng City-Region's foreign direct investment is concentrated in high value-added industries such as communications, software and IT, and automotive (Fig. 4.3; Table 4.3).

Firms seeking to establish regional headquarters in Africa benefit from a dense set of advanced services that cater to the Gauteng City-

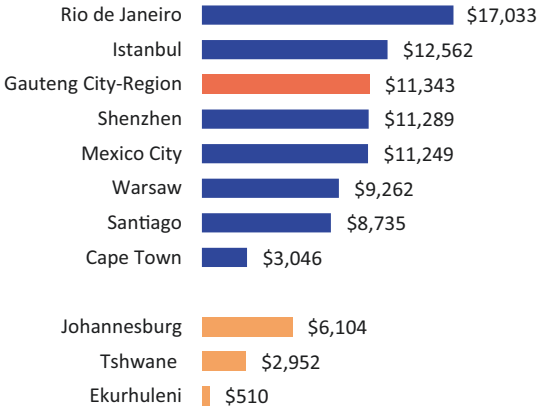

Fig. 4.3 Total greenfield FDI, 2009–2015, USD million. Source: Authors' analysis of FDI intelligence data

Table 4.3 Greenfield FDI by industry, 2009–2015

Industry	Total FDI (USD million)
Coal, oil and natural gas	1751
Communications*	1701
Metals	1285
Software & IT services*	1124
Automotive OEM*	775
Business services*	555
Alternative/renewable energy*	530
Financial services	492
Warehousing & storage	432
Pharmaceuticals*	406

Source: Authors' analysis of fDi Intelligence data
*Advanced industries

Region's significant concentration of major multinational firms. The Johannesburg Metropolitan Municipality houses the headquarters of 14 Global 2000 firms—most among its peer city-regions—with assets totaling more than $400 billion.[5] The density of major multinational firms reflects the city-region's status as Africa's premier business capital. Multinational headquarters demand clusters of firms that provide a diversity of advanced services such as finance, management consulting, legal

services, advertising, and marketing (Sassen, 2012). Among 525 urban areas worldwide, Johannesburg ranks 25th in terms of its centrality in global networks of advanced services firms, second highest among its peer city-regions (after Mexico City) and by far the most connected African city.

Innovation

A region's innovative capacity and its levels of entrepreneurship both have implications for its ability to develop and deploy commercial applications, start new businesses, and maintain industrial competitiveness in the face of disruptive technological change (George Washington Institute of Public Policy and RW Ventures, LLC, 2011). Innovation takes many forms and can be hard to measure, especially innovations that improve processes, management techniques, or occur in the informal economy. Yet, the most productive and technologically advanced metropolitan economies in the world tend to combine a common set of institutions and assets into a rich, collaborative innovation ecosystem that can commercialize research and development into new products and services for the market.

The city-region is home to 44 percent of South Africa's research and development, but is comparatively less R&D-intensive than other parts of the world. Research and development (R&D) is an important measure of the resources invested in the discovery and commercialization of new products, processes, and technologies (Audretsch & Feldman, 1996; Griliches, 1992; Lichtenberg, 1992; Muro, Rothwell, Andes, Fikri, & Kulkarni, 2015; Trajtenberg, 1990). The Gauteng City-Region accounts for 44 percent of national R&D, and as a result is more R&D-intensive (just over 1 percent of provincial GDP) than South Africa as a whole. But even at these levels, the region is less R&D-intensive than emerging market competitors like Brazil, China, and Russia. Critically, businesses in the region are driving research and development activity. The private sector accounted for the majority of the Gauteng City-Region's R&D (65 percent), followed by science councils (18 percent), higher education (13 percent), and government (2 percent).

The Gauteng City-Region houses internationally relevant research universities and performs near the top in terms of research impact when compared to peer cities. Research universities play a major role in driving innovation by providing the basic research that underlies scientific discovery and understanding, facilitating the translation of research results into consumable goods and services, and attracting and supporting the growth of other research-intensive industries (Carlino, 2014; NSF, 2015). Two universities in the Gauteng City-Region, the University of Pretoria and the University of the Witwatersrand, are ranked within the top 750 research universities in the world. The Gauteng City-Region ranks second among its peers, only behind Cape Town, in overall scientific impact as measured by the share of published papers among the top 10 percent most cited publications.

The Gauteng City-Region generates more than half of South Africa's patent activity, but the rate of new commercial inventions has declined in the last five years. Patents provide a reliable and comparable, if imperfect, measure of new inventions that spur economic development (Rothwell, Lobo, Strumsky, & Muro, 2013). As with research and development, the Gauteng City-Region demonstrates an outsized contribution to patenting activity within South Africa. Only Santiago and Istanbul accounted for a higher share of national patents than the city-region, which generated 51 percent of South Africa's patents between 2008 and 2012, led by the Ekurhuleni metropolitan municipality.[6] Four groups of technologies—IT methods and management, metallurgy and materials, oil and gas, and civil engineering—are particularly important, accounting for 27 percent of Gauteng's total patents. Gauteng's most globally connected and sophisticated industries—finance and telecommunications, mining, and manufacturing—tend to demand these technologies, highlighting the imperative to innovate to maintain the city-region's key industrial specializations. However, after rising quickly in the 1990s, the number of patents per worker in both South Africa and the region was actually lower in the period between 2008 and 2012 than it was in both the 1998–2002 and 2003–2007 periods. As compared to global peers, the Gauteng City-Region falls in the middle, higher than the three Latin American metro regions, but trailing Cape Town and its Asian and European counterparts (Fig. 4.4).

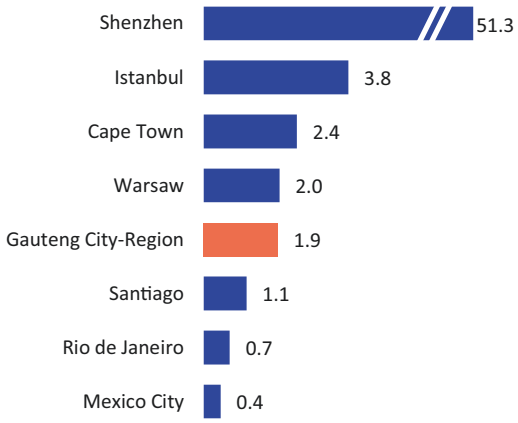

Fig. 4.4 Patents per 10,000 workers, 2008–2012. Source: Authors' analysis of OECD REGPAT data

Talent

Human capital—the stock of knowledge, skills, expertise, and capacities embedded in the labor force—is of critical importance to enhancing productivity, raising incomes, and driving economic growth (Hanushek & Woessmann, 2010; Hausmann et al., 2013; Lucas, 1988; Manuelli & Seshadri, 2014; Moretti, 2003; Shapiro, 2006). Producing, attracting, and retaining educated workers; creating jobs for those workers; and connecting those workers to employment through efficient labor markets all matter for regional competitiveness and ensuring broad-based economic opportunity for a metropolitan area's population (Moretti, 2004; OECD, 2015a; Ahrend, Farchy, Kaplanis, & Lembcke, 2014).

The Gauteng City-Region's demographic dividend and steady flows of in-migrants ensure a growing supply of workers for the regional economy. In an aging world, the Gauteng City-Region has the advantage of being relatively young. The demographic profile of the city-region suggests that it will have a significant supply of workers over the next two decades. Growth in the working-age population will also result from migration to the city-region from the rest of South Africa and the world. As of 2011 approximately 44 percent of the population was born outside

of the city-region; 10 percent of residents were born outside of South Africa. Of these international in-migrants, nearly half are between the prime working ages of 20 and 35 (Gauteng City-Region Observatory, 2013b).

Currently, however, workers are not being absorbed into the labor market at a sufficient scale and pace, resulting in high levels of unemployment, particularly among youth. High structural unemployment remains the most pressing issue for the Gauteng City-Region and the country as a whole. As of the second of quarter of 2015, unemployment in the city-region stood at 26.8 percent, lower than national unemployment but highest among its global peer cities by a significant margin. As of 2014, youth unemployment stood at 39.8 percent, slightly higher than the national average of 36.9 percent (Statistics SA, 2014).[7] Educational disparities by race are playing out in the labor market, as evidenced by unemployment disparities between black African (29.5 percent), people of mixed ethnic origin (36.9 percent), Indian/Asian (14.5 percent), and white (7.2 percent) population groups (Statistics SA, 2014).[8]

High and lasting unemployment reveals problems with both labor demand and labor supply. Demand for labor has been low, as growth has slowed in recent years, exacerbating unemployment. Raising the long-term growth potential of the city-region's economy by improving industrial competitiveness would help address this challenge (Altbeker, Storme, & Bernstein, 2014). But growth alone is likely insufficient to curb labor market challenges. Supply-side issues matter as well. Mismatches between the skills of the workforce and needs of employers are a particularly pronounced challenge in South Africa (Dobbs et al., 2012; Statistics SA, 2015). Between 2000 and 2014, the city-region added new jobs at a clip of 1.3 percent annually. The two sectors that created the most new jobs—financial and business services (4.6 percent annually) and public services (3.3 percent)—generally demand high levels of skills. Meanwhile, sectors that offer employment opportunities to lower and middle-skilled workers such as agriculture, mining, manufacturing, and wholesale and retail trade actually shed jobs amid increasing global competition and technological change.

Understanding this growing gap between employer demands and worker skills, provincial and national governments have made the

expansion of education and training a major priority. Education gains have been substantial in the post-apartheid era. Compared to the nation, a higher proportion of Gauteng City-Region residents possess secondary and tertiary degrees. Indeed, in 2012 the city-region's universities produced over half the graduates in South Africa.[9] Yet, stark disparities remain between the mixed ethnic origin and black African segments of the Gauteng City-Region population, for whom the proportion of the population with a tertiary degree is 9.6 percent, and whites and Indians, among whom 26.1 percent had attained tertiary education levels in 2014.[10] However, this gap has been closing since 2008.

Infrastructure

Infrastructure and the spatial layout of a metropolitan area matter for competitiveness in two ways. First, firms rely upon global access points like airports and port and digital infrastructure to bring their products and services to domestic and global markets outside the region in the most cost-effective manner possible (Canning & Fay, 1993; Kessides, 1993). Second, the competitiveness of a regional economy also hinges on its ability to effectively connect its people and physical assets to their best use within the region—what planners and economic developers call "spatial efficiency" (Sarzynski & Levy, 2010; Glaeser, 1998; George Washington Institute of Public Policy, 2014; OECD, 2015).

The Gauteng City-Region benefits from well-developed logistics infrastructure to send goods to market. Metropolitan areas rely on the exchange of goods to allow for economic specialization and, ultimately, long-term growth and prosperity. Freight transportation networks are critical to forge these economic connections (Tomer, Kane, & Puentes, 2013). Given its landlocked position, the Gauteng City-Region's ability to deliver goods to the global marketplace depends on infrastructure countrywide, especially freight corridors to send raw commodities and manufactured products via road and rail to seaports in Durban, Cape Town, and Port Elizabeth. According to the World Bank, South Africa's transportation and logistics systems are relatively well developed, ranking

Table 4.4 Logistics performance index rank, 2014

Rank	Country (City)
28	China (Shenzhen)
30	Turkey (Istanbul)
31	Poland (Warsaw)
34	South Africa (Johannesburg)
42	Chile (Santiago)
50	Mexico (Mexico City)
65	Brazil (Rio de Janeiro)

Source: World Bank Logistics Performance Index and World Bank Doing Business data

34th out of 160 countries and fourth among global peer countries in 2014 (World Bank, 2014). Yet, as global trade has increased, so too has congestion in the system. Despite having declined 6 percent since 2005, the average cost of $1830 to ship a container from Johannesburg exceeded the cost in many global peer cities in 2014 (Table 4.4).[11]

Firms and workers benefit from the Gauteng City-Region's status as Africa's most well-connected aviation hub. In addition to goods, metropolitan economies must efficiently move people. Airports serve as key exchange points in the domestic and international flow of people and ideas, and in doing so help stimulate regional employment and GDP per capita growth (Brueckner, 2003; Florida, Mellander, & Holgersson, 2012; Green, 2007; Neal, 2011). Connectivity via the O.R. Tambo International Airport amounts to a major comparative advantage for the city-region. In 2014, 23.9 million passengers moved through the airports in the Gauteng City-Region's three main metropolitan areas (Johannesburg, Ekurhuleni, and Tshwane), the 67th highest total of any metropolitan area in the world and by far the highest total in Africa and fifth among global peer regions.[12] Nearly two in three passengers are destined for other parts of South Africa, typically Cape Town (6.7 million) or Durban (2.2 million).[13] Total aviation passenger flows increased by 5.3 percent annually in the city-region between 2004 and 2014.

Broadband speed in the Gauteng City-Region is improving, but lags speeds in global peers. Today, consistent and quality broadband access is increasingly a prerequisite for students, workers, and firms to benefit from the knowledge available online in ways that spur regional economic

development (Kolko, 2010; Tranos, 2013). One common way to measure broadband quality is the speed at which data can be transferred through the network. By this metric, the average download speeds reported by Internet users in Johannesburg quintupled in just seven years, from 1.4 megabits per second in 2008 to 7.2 megabits per second in 2015. Similar gains were also seen in Tshwane and Ekurhuleni.[14] Yet, global comparisons suggest that more progress needs to be made around broadband speed. Access is also a challenge. In 2011, 54 percent of the city-region's residents did not have access to the Internet, although this number has improved in recent years.

The city-region's legacy of spatial segregation, sprawling housing development, and insufficient public transportation coverage creates inefficiencies that slow economic growth. As the Gauteng City-Region Observatory has clearly documented, the city-region's physical growth patterns have followed the apartheid spatial framework (Gauteng City-Region Observatory, 2013). While exceptions exist, much of the growth in the recent decades has been on the fringes of the city-region, where land is cheaper (Mubiwa & Annegarn, 2013). The province's share of urbanized land grew by 45 percent between 1991 and 2009 (Gauteng City-Region Observatory, 2013). Population density varies significantly, from 3067 inhabitants per square kilometer in Johannesburg, to 475 in Tshwane. Overall, the Gauteng City-Region is less dense than most of its comparison regions, although Johannesburg's density level exceeds that in all peers except Shenzhen.

Governance

Broadway and Shah (2009) define governance as "the formulation and execution of collective action at the local level." Therefore, we consider governance to include formal government structure as well as the quality and capacity of public, private, and civic institutions to positively influence competitiveness (George Washington Institute of Public Policy, 2014). Governance matters for competitiveness because proactive government, public, and civic groups can marshal investment from a wide variety of domestic and international sources to enable new growth strat-

egies. Central, provincial, and municipal governments also have unique and complementary roles to play in enabling firms and their wider regions to succeed in global markets.

A majority of the city-region's residents are satisfied with public service delivery, but are wary of corruption's influence. The quality of service delivery influences the competitiveness of the Gauteng City-Region because it shapes the support systems for local students, workers, and firms to unleash their full economic potential. Residents are most satisfied with the provision of basic services such as water, waste removal, sanitation and energy, and less satisfied with the provision of streetlights, education, road infrastructure, and public safety. These figures occur against the backdrop of growing protests about the quality of service delivery. According to a local survey, approximately 4 percent of the city-region's residents participate in protests, reflecting citizen concerns around service delivery and the quality of government. Perceptions that government is corrupt fuel these concerns (Cheruiyot, Wray, & Katumba, 2015). A total of 89 percent of the city-region's residents either strongly agree or agree that corruption is the main threat to South Africa's democracy (Gauteng City-Region Observatory, 2013).

The Gauteng City-Region's municipal governments enjoy relatively high fiscal autonomy. The Organisation for Economic Co-operation and Development (OECD) provides several useful metrics of sub-national autonomy, including the share of sub-national government expenditures and the share of sub-national tax collections. According to a 2011 report, approximately half of total government spending in South Africa is undertaken by sub-national governments, higher than OECD averages overall. Municipal governments have greater authority to raise revenues locally than their provincial counterparts. However, much of local spending relies on central government grants, as sub-national governments only generate about 20 percent of their own revenue (OECD, 2011).

Johannesburg's business environment compares favorably to other cities. Firms often cite the "business environment" as a determining factor in where they locate operations (Cohen, 2000). This environment is based partly on factors outside the remit of local or provincial officials (e.g. property rights, national taxes, quality of financial markets, or distance to other markets) as well as those squarely within their control

(e.g. local tax rates, permitting processes, other regulatory structures, or corruption). The World Bank's Doing Business project, which collects measures of the business environment, assembles its analysis from the perspective of a firm located in the largest city in the country. In this way, it actually provides a window into the business environment of Johannesburg, as well as several other global peer cities. South Africa performs well overall (43 of 189 countries) in terms of the overall ease of doing business, behind Poland, Mexico, and Chile but ahead of Turkey, China, and Brazil. Firms in Johannesburg find it relatively easy to pay taxes and obtain construction permits. The level of protection afforded minority investors is quite high. Electricity access and trading across borders remain the main challenges for firms operating in Johannesburg.[15]

Implications and Opportunities

This section discusses implications that arise specifically from this assessment's comparisons of the Gauteng City-Region to other similar global cities, and the opportunities it reveals to further advance the region's global competitiveness.

For starters, the city-region can reinvigorate economic growth through expanded exports and foreign investment, cementing the Gauteng City-Region's status as the "Gateway to Africa." An important tactic to boost trade and investment is solidifying the city-region's position as the gateway to a rapidly expanding market in Sub-Saharan Africa. As Africa urbanizes and industrializes, the Gauteng City-Region can take several steps to increase the local benefits of that growth wave. First, it can make competitiveness-enhancing investments in important traded sectors through technology and skills upgrading. The Automotive Industry Development Centre's Automotive Supplier Park in Tshwane could offer a useful model for other sectors to upgrade skills development, supplier development, and technology sharing (Automotive Industry Development Centre, 2015). Second, the city-region can further embrace services exports. Lack of services trade data at the municipal or provincial level currently limits tracking. Advocating to the relevant central ministries (e.g. SARS, DTI, etc.) to track services data could provide the platform

for a more robust services exports strategy. Third, Gauteng's leaders can expand FDI by consistently marketing the city-region as the continent's gateway. Rio de Janeiro, Brazil, which attracted more FDI than any of the city-region's peers, has established a public-private business development agency, Rio Negócios, that partners with state-level promotion agencies to market the city internationally, incentivize foreign direct investment, and streamline red tape for incoming firms (Berube & Parilla, 2012).

The city-region must boost employability through enhanced connections between the worlds of school and work. The full slate of reforms and actions needed to expand employment opportunity is beyond the scope of this report. In a recent synopsis, Bhorat and colleagues suggest that addressing labor market rigidities, instituting public employment schemes, easing job creation in the informal sector, pursuing labor-intensive industry growth, improving basic education through increased educational expenditures per learner, streamlined management of basic education systems, and improved teacher quality all could make dents in the unemployment rate (Bhorat, Hirsch, Kanbur, & Ncube, 2015). While many of these reforms require central government action, the Gauteng province's education budget echoes many of the recommendations aimed at sub-national governments, with an added emphasis on the role that technology can play a role in overcoming disparate teacher quality and school management (Lesufi, 2015).

Nonetheless, the labor market skills mismatches and the high rates of youth unemployment documented in this report suggest that improving basic education on its own may not be enough to smooth the pathway from the education system to gainful employment. Empowering sector-focused workforce intermediaries such as the Sector Education and Training Authorities and the Human Resources Development Council to help bridge the gap between employers and educators on skills demands, curriculum development, and job placement would help address this coordination failure (International Youth Foundation, 2015). Similar efforts are underway in states and provinces around the world.

Finally, the Gauteng City-Region could benefit from greater organization between public, private, and civic leaders around a shared vision for growth and competitiveness. In metropolitan areas across the world, regional competitiveness is becoming an increasingly shared agenda.

Formal and informal networks of public, private and civic leaders are coming together to design and implement economic strategies. These networked approaches, while certainly more complex, incorporate the market expertise, financial resources, and political will of a wider range of stakeholders, and thus make economic strategies more market-oriented, community-driven, and sustainable beyond political cycles (Carlson, Helm, & Uhalde, 2011; OECD, 2015; Katz & Bradley, 2013).

The principles of public-private-civic economic planning are already present in the Gauteng City-Region. Government growth strategies go through an extensive public review process that draws upon the feedback of all elements of the region, including targeted outreach to particularly relevant groups. The Gauteng Growth and Development Agency, the provincial economic development group, has a private sector board that influences its strategies and decision-making. Premier Makhura has launched the Business Consultative Forum as a vehicle for further discussion about the city-region's economy. Within the private sector, chambers of commerce, industry associations, and leadership groups advocate for the policy priorities of business. Universities and non-profits also weigh in on economic debates with their insights. Yet—the Business Consultative Forum notwithstanding—none of these current arrangements offer a shared space where leaders from all sectors debate economic issues and craft solutions to pressing problems.

Conclusion

This assessment reveals that the Gauteng City-Region reflects the challenges and opportunities of its nation's extraordinary economic, demographic, social, and political transformation. Just 20 years removed from the adoption of democracy for all, the city-region rivals other major international cities in key competitive assets: major global companies, leading universities, a young and increasingly educated workforce, well-connected infrastructure, and democratic government. Yet, as in many other emerging market cities, too many residents still lack the skills, networks, and access to benefit from, and contribute their abilities to, this

competitive position. Significant levels of unemployment, income inequality, and social exclusion remain, hindering progress toward full equality of opportunity and the city-region's long-term economic competitiveness. The city-region can bolster its position by embracing its services sector as a route to cement its status as trade and investment gateway to Africa, boosting employability through enhanced connections between the worlds of school and work, and organizing public, private, and civic leaders around a shared vision for growth and competitiveness. By taking purposeful action now, the Gauteng City-Region's public, private, and civic institutions can build a globally competitive economy that works for all.

Notes

1. Employment figures for the years 2009 to 2015 come from the Quarterly Labor Force Survey (QLFS) of Statistics South Africa. This survey was adopted in March 2009 to better measure employment. As a result the employment figures for the years 2000–2008, which were based on the Labor Force Survey (LFS), and the new series were not comparable. To bridge this gap in the times series Oxford Economics estimated employment between 2007 and 2008 using GVA series and sectoral productivity trends. The data prior to 2007 was estimated using a combination of sectoral GVA, productivity trends and total employment from the original LFS. By using total employment data from the original LFS, the estimated profile follows the pattern of the original series. At each stage of the process, all provinces were constrained to be consistent with the national total.
2. Defining a "tradable" industry has become more complicated as technology and transportation have redefined the types of economic activity that can be traded. In order to compare metropolitan areas in different countries, this analysis defines the tradable industries as: Agriculture, forestry & fishing; Mining; Manufacturing; Transport and communications; and Financial & business services. This definition is based on previous analysis by Spence and Hlatshwayo (2011) and Jensen and Kletzer (2005), but we were unable to recreate exactly the industrial definitions from these analyses. For instance, financial and business services include real estate activities, which are not tradable.

3. The Gauteng City-Region Observatory (GCRO), who partnered on the research for this report, is acknowledged for extracting, and furnishing to the authors specific Quantec data used at various points in this City Profile. Under the auspices of a license for Quantec data held by the University of the Witwatersrand (Wits) where GCRO is based, which license was jointly paid for by GCRO, GCRO accessed selected Quantec datasets and provided data to the authors as excel tables for the purposes of analysis. Quantec is referenced as the original source of the data wherever applicable.
4. Authors analyzed trade data from Quantec, a data provider that receives provincial trade statistics from SARS, which provides the following disclaimer. "The import and export statistics from SARS are tied to postal codes. These are the postal codes of the head office or agent that report importing and exporting activity. Quantec publishes the import and export statistics for each province and municipality by aggregating the figures for all the postal codes in each province or municipality. The data Quantec receives from SARS incorporates two issues over which Quantec has no control. First, the postal code may not reflect the actual importer/exporter address but that of an agent that handles the actual international trade (smaller agricultural exporters are sometimes a good example of this). The agent may therefore not be in the same province/municipality as the exporter or importer. Second, the importer or exporter may have several branches but all international trade transactions are handled by head office (the petroleum and mining industries are sometimes a good example of this). The head office may therefore not be in the same province/municipality as the branches."
5. Authors' analysis of data from the Globalization and World Cities Network (GaWC).
6. Authors' analysis of OECD REGPAT data.
7. Author's analysis of Statistics SA data.
8. Author's analysis of Statistics SA data.
9. Authors' analysis of data from the Education Management Information Systems database.
10. Authors' analysis of data from the South African Quarterly Labor Force Survey.
11. Authors' analysis of World Bank's *Doing Business* indicators.
12. Authors' analysis of Sabre data.
13. Authors' analysis of Sabre data.

14. Authors' analysis of data collected through speed tests at Ookla.net. There are few sources that provide comparable measures of Internet speed across cities. At the time of this analysis, the best available data was from Ookla, a leader in broadband testing and web-based network diagnostic applications. Over three million people a day use Ookla software. These data are self-reported by user-generated speed tests, and therefore should be interpreted with caution. Further, they likely offer a better approximation of residential Internet speed than commercial Internet speed.
15. Authors' analysis of 2015 World Bank *Doing Business* data.

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Part II

Sectoral Dynamics and International Competitiveness in Africa

5

Banking on Africa: Can Emerging Pan-African Banks Outcompete Their Global Rivals?

Ifedapo Adeleye, Franklin Ngwu, Nkemdilim Iheanachor, Ebes Esho, Chijioke Oji, Theresa Onaji-Benson, and Chris Ogbechie

Introduction

With the increasing liberalization and globalization of the financial services sector over the past two decades or so, there has been a rise in the percentage of foreign banks among total banks around the world (from 21 per cent in 1995 to 35 per cent in 2009), accompanied by an increase

I. Adeleye (✉)
Haslam College of Business, The University of Tennessee Knoxville, USA

F. Ngwu • N. Iheanachor • C. Ogbechie
Lagos Business School, Lagos, Nigeria

E. Esho
Covenant University, Ota, Nigeria

C. Oji
University of Waterloo, Waterloo, ON, Canada

T. Onaji-Benson
University of Pretoria, Pretoria, South Africa

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in the foreign ownership of banking assets (Claessens & Van Horen, 2014). Spanish and Portuguese banks, for instance, have expanded their footprint in Latin America, leveraging their historical colonial ties; Australian banks have become dominant players in New Zealand; Asian banks are expanding their regional footprints; and South African and Nigerian banks have built a strong franchise across Sub-Saharan Africa (De Haas, 2014).

In Sub-Saharan Africa, where European multinationals have dominated many economies since the colonial era, there was also a considerable increase in the percentage of foreign banks among total banks between 1995 and 2009, from 31 to 53 per cent (Claessens & Van Horen, 2014). Since this period, there has been a remarkable rise of domestic and regional banks. From Togo to Mali, Kenya, Nigeria and South Africa, banks like Ecobank, Bank of Africa, Equity Bank, KCB, United Bank for Africa (UBA), Guaranty Trust, First Bank, Standard Bank, and First Rand have ambitiously positioned themselves in the form of challenger firms as competition for market share intensifies across the region (Boso, Adeleye, & White, 2016). Financial services firms accounted for 25 per cent of the 40 African global challengers identified in a report by BCG (2010), the highest of seven sectors analysed. This trend is especially interesting as it runs counter to the current dominance of foreign multinationals in most other sectors across Africa, and raises a pertinent question: Can Pan-African banks outcompete their global counterparts in cross-border banking in the region?

This chapter is focused on addressing this issue, providing analysis from past, present and future perspectives. The chapter is organized into four main sections. First, we provide a historical overview of five major time periods, from the pre-colonization era to the present: barterization and commercialization, colonization and formalization, nationalization and indigenization, liberalization and privatization, and recapitalization and internationalization. Second, we provide an extended discussion on the current competitive dynamics between local and multinational banks. This is illustrated using mini case studies of African challenger firms (Ecobank, Standard Bank and United Bank of Africa) and their global rivals (Société Générale, Standard Chartered and Barclays). We sum up by offering perspectives on the future competitive dynamics in African banking.

A few caveats are warranted at this point. Given the diversity that characterizes Africa's 55 countries, our analysis provides broad generalizations and narrows in on a smaller number of countries. The chapter mostly excludes North African countries as this book series is devoted to Sub-Saharan Africa; most of the reviewed literature and discussions focus on the larger economies and banking markets, particularly South Africa, Nigeria and Kenya.

"The Scramble for Africa": A Historical Overview of Banking Sector Developments

There is a long history of competition between domestic and foreign financial institutions in Africa, dating back to pre-colonial times. The geographical scope of the competition and the power dynamics in this centuries-long rivalry has changed considerably, with a persistent decline in the dominance and competitiveness of African players until the last two decades or so. In this section, we identify five distinct trends in the history of banking in Africa—barterization and commercialization, colonization and formalization, nationalization and indigenization, liberalization and privatization, and recapitalization and internationalization (see Table 5.1), and provide an overview of the defining characteristics of each period and how these impacted sectoral competitive dynamics.

Barterization and Commercialization Era: Pre-Nineteenth Century

Before the establishment of European banks in Africa in the late 1800s and early 1900s, indigenous institutions existed to facilitate trade in the largely informal economic societies of Africa. There is evidence that *manillas* (pieces of copper and brass) were used as currency as far back as the thirteenth century in the Benin kingdom, and cowry shells were also used as a means of exchange until the mid-1850s (Verhoef, 2017). There were thriving communities in the Mali, Songhay and Ashanti kingdoms

Table 5.1 Key historical developments in African banking

1	Barterization and Commercialization	Pre-1800s	Indigenous entrepreneurial-lending activities existed before colonization ushered in "modern" banking in the nineteenth century. There is evidence of the use of manillas as currency in thirteenth century Benin, and barter was widespread in many societies. Later, as the use of gold and silver coins and other currencies spread, allowing for accumulation of wealth, the provision of "financial services" by local traders became a commercial activity.
2	Colonization and Formalization	1800s–1960s	From the 1850s, the Europeanization of banking in Africa commenced, with the rapid expansion of British, French and Portuguese banks. These banks largely focused on supporting colonial export trade and expatriates, and dominated local and regional economic activities. The adoption of European institutional arrangements led to the formalization and globalization of the industry, marginalizing the traditional entrepreneurial African money-lenders.
3	Nationalization and Indigenization	1960s–1970s	As most African nations became independent in the 1950s and 1960s, states pursued interventionist economic policies, taking control of foreign banks, establishing public sector banks and granting licenses to indigenous firms. Faced with diluted/minority equity, most foreign banks continued operating, although they lost their dominance and industry competitiveness.
4	Liberalization and Privatization	1980s–1990s	Following failed interventionist policies and severe economic headwinds, many African states embraced the World Bank's neo-liberal reforms, granting licenses to new private sector players and privatizing state-owned banks. Notably, many dynamic banks emerged across the continent, reducing the dominance of state-owned banks and incumbents. Several foreign banks also benefited from the reforms, expanding their presence in the region.
5	Recapitalization and Internationalization	Post-2000	Widespread bank failures were commonplace across the continent after the liberalization. Regulators then imposed sharp increases in banks' capital requirements for stability, sparking a wave of mergers and acquisitions and capital raising deals. Armed with more capital, and with increasing regional integration, banks from several countries embarked on international expansion, many of them emerging as serious challengers to foreign multinational banks in Africa.

Source: Authors' analysis, drawing from various sources including Adeleye (2009) and Verhoef (2017)

in West Africa, and trading networks between Sudanese and other east African societies and Middle Eastern merchants developed before the 1600s. Towards the end of the seventeenth century, as the Mediterranean Islamic economy stagnated, the Sudanese networks expanded into eastern Africa (Verhoef, 2017). Following this period, the Atlantic trade with Europe and the Indian Ocean trade with India and Portugal became dominant. These extensive contacts with global merchants paved the way for the more widespread use of gold and silver coins, and the development of relatively sophisticated systems for accumulation of money.

Before the free circulation of money in the late 1800s, however, a barter economy was prevalent, and there were "institutions" to facilitate exchange, controlled by indigenous trading families and kingdoms that served as a form of commercial organization (Verhoef, 2017). The commercialization of informal and indigenous banking was eventually enhanced with the development of systems of wealth accumulation; local institutions engaged in entrepreneurial money-lending activities and served as the major providers of "financial services", a position that would be taken over by European banks in the mid-nineteenth century (Verhoef, 2017).

Colonization and Formalization Era: 1800s–1960s

From the 1850s, colonial and imperial banks sprang up across Africa, as British, French and Portuguese banks established operations in their colonies. The Portuguese Banco Nacional Ultramarino (National Overseas Bank), for instance, was founded in 1864 as a joint venture between the Portuguese government and entrepreneur, Francisco Chamiço, enjoying government subsidies and full exclusivity for operations in the colonies for a period of 15 years, and even the authority to issue paper money. The bank quickly opened branches in Angola and Cape Verde in 1865, and three years later opened more branches in São Tomé and Príncipe and Angola (Nunes, Bastien, Valério, Martins de Sousa, & Costa, 2010). In Great Britain, the Standard Bank of British South Africa was founded in 1862, and rapidly expanded in South Africa and the southern Africa

region. The bank later merged with another colonial bank to become Standard Chartered in the 1960s, and following a 1987 divestment became today's Standard Bank. Another British bank, the Colonial Bank, was permitted by an Act of Parliament to expand from the West Indies into West Africa in 1916; the bank was eventually acquired by Barclays Bank in 1925. French banks also established operations in Africa; Société Générale commenced banking in Morocco in 1913, and later expanded its footprint in Western Africa.

These banks were specifically set up to support colonial export trade and expatriates, and dominated banking and economic activities in their respective territories on the continent, with little or no competition from local or foreign operators. In several countries, indigenous banks emerged to serve Africans and local businesses; however, many did not survive, as the playing field was uneven economic and regulatory wise. In Nigeria, for example, of the 24 indigenous banks established between 1929 and 1952, only about four were still in existence in 1960 (Uche, 1997). This era laid the foundation for the decades-long dominance of foreign banks on the African continent.

The Europeanization of banking in Africa, specifically the introduction of European institutional arrangements for the practice of banking and regulation of banks and commercial activities, led to the formalization of the industry, which had hitherto been dominated by informal indigenous players, trade networks and kingdoms. The banking sector in Africa was "modernized" and became more fully integrated into the global economy.

Nationalization and Indigenization Era: 1960s–1970s

During the colonial era, there was much clamour across Africa for indigenous banks that would cater to Africans and local economic development since the colonial banks had failed to provide these services. As the independence wave swept across the continent in the 1950s and 1960s, African political leaders pursued interventionist economic policies, with banking as a major target for reforms. The most consequential of these

reforms was the nationalization of the European banks, with states taking significant equity in them. Société Générale, for instance, had to reorganize its banking franchise in the region along national lines in the 1960s, with governments in Côte d'Ivoire, Senegal, Cameroon and Morocco becoming shareholders. Several other anglophone countries like Ghana and Kenya also adopted this less aggressive approach, taking up only minority interests, and allowing the foreign banks to retain their franchises. In countries like Nigeria, however, the government took 60 per cent equity, and renamed the nationalized banks, imposing credit allocation and priority sector funding requirements. A similar approach was adopted in Malawi.

In addition, many public sector commercial and development banks were set up, and licenses granted to local private sector operators. The foreign banks largely remained on the continent, although their dominance had been checked. Clearly, this transformation increased the participation and relative power and importance of indigenous banks across Africa, and also increased lending to Africans and local developmental projects increased. In many countries, this "development" came at a cost, as government takeovers appeared to have stifled competition, encouraged mismanagement, and ultimately led to the insolvencies and failures that plagued the industry in many African countries in the 1980s and 1990s (Adeyemi, 2002).

Liberalization and Privatization Era: 1980s–1990s

The aggressive interventionist policies implemented in post-independence Africa did not yield the desired results in many countries, as economic growth was sluggish and development was elusive. The problems were exacerbated by global commodity crises and economic shocks. The nationalization and indigenization of banks, as highlighted earlier, had created several problems in the industry. In many countries across the region, for instance, non-performing loans accounted for up to 80 per cent of the overall loan portfolio of public sector banks (Beck, Fuchs, Singer, & Witte, 2014).

Desperate to address the mounting economic challenges, many states embraced neo-liberal reforms instituted to roll back the developmental state, including currency devaluation, removal of price controls and privatization of state-owned enterprises. In the banking sector, these reforms included: liberalization of banking licenses to lower entry barriers for new local and foreign private sector players; removal of interest rate controls; and privatization of nationalized and public sector banks. One immediate effect of these reforms was the upsurge in the number of banks. In Nigeria, for example, the number of banks tripled from about 40 in 1985 to nearly 120 in the 1990s (Lewis & Stein, 2002), with local privately owned banks outnumbering the state-owned and foreign banks.

Many of the privately owned banks established during this period were led by entrepreneurial founders, and a number of them (for example, the Mali-based Bank of Africa, Guaranty Trust Bank of Nigeria, and Ecobank) have today have become domestic and regional champions. Foreign banks also benefited from the liberalization, with banks like Citi and Société Générale expanding their footprint on the continent. In the key markets of Nigeria, Kenya and South Africa, there was a substantial decline in presence and competitiveness of foreign firms (Beck et al., 2014). South Africa's situation was unique, as the two large British banks (Barclays and Standard Chartered) were pressured to disinvest in protest against the oppressive apartheid regime. Even in Ethiopia where the government embraced the developmental state model, local privately owned banks were allowed to operate from 1994, although the sector remained closed to all foreign banks. Overall, this era laid the foundation for the increasing dominance of African banks, especially in the larger economies in the region.

Recapitalization and Internationalization Era: Post-2000

The rapid liberalization of banking created several problems of its own. Not only did the sector become overcrowded in many countries, it was also beset with poor management and corporate governance standards,

and lax oversight. In Nigeria alone, nearly 60 banks had been declared distressed by the regulator by the end of the 1990s, with 26 having their licenses revoked (Lewis & Stein, 2002). There were similar bank failures in Benin, Cameroon, Côte d'Ivoire, Ghana, Guinea, Kenya, Senegal, South Africa, Tanzania, Uganda and Zambia.

In response to the high number of bank failures and distress, regulators imposed more stringent measures to stabilize the sector, most notably an increase in banks' minimum capital requirements. Nigeria had the sharpest increase, from N2 billion to N25 billion ($190 million) in 2004; this led to a flurry of mergers and acquisitions and capital raising deals, and a reduction in the number of banks from 89 to 24. In the aftermath of the global financial crisis of 2007–2009, many African countries fast-tracked capital build up towards levels outlined by BASEL III, an international regulatory framework on bank capital adequacy and stress testing. In Ghana, for example, banks were required to increase their capital from $1.9 million to $16.7 million in 2012 (OBG, 2017b); in Ethiopia, it went up from $3.4 million to $22 million in 2011 for new banks, and up to $90 million for all banks by 2020; in Kenya, from $3.3 million to $12.5 million by end of 2012; and in Zambia from $0.4 to $2.2 million (Oduor, Ngoka, & Odongo, 2017).

These recapitalization initiatives, as well as increasing regional integration across the continent, have facilitated cross-border expansions. In Kenya, the two leading banks—KCB and Equity Bank—have expanded across East Africa in the last decade. Likewise, Nigerian banks such as First Bank, UBA, GTBank, Zenith, Access Bank and Diamond Bank have established subsidiaries in West Africa and beyond (Ngwu, Adeleye, & Ogbechie, 2015). In the south, besides the Standard Bank, which has expanded to 20 countries, competitors like Nedbank and FirstRand have expanded throughout the southern Africa region and are heading north. From the north of Africa, Moroccan banks have also expanded southwards rapidly, with BMCE (18 countries), Attijariwafa (13) and BCP (11) embarking on large mergers and acquisitions (Beck et al., 2014). Clearly, pan-African banks from all over the continent have become bigger and stronger, and appear to have a solid competitive footing as they challenge the foreign multinational banks for market share in the region.

"The New Scramble for Africa": Competitive Dynamics Between African Challenger Banks and Foreign Banks

As globalization intensifies, there is increasing interest in investing in, and trading with Africa by the world's economic powerhouses; Africa has become "strategically important" for countries such as the US and China, unleashing "a new scramble" for the continent's resources and markets (Carmody, 2016). The banking sector has been at the frontlines of this new scramble, as European, American, Chinese, Indian and other foreign banks establish operations and alliances in an increasingly sophisticated and competitive industry.

An interesting phenomenon in this competition is the rise of pan-African banks challenging foreign multinationals for market share in a region historically dominated by foreign players (Leon, 2016). About a century late to the game, these African banks are fighting for market share with the colonial-era European banks, and now make up about two-thirds of the 104 cross-border banks in Africa (Beck et al., 2014). In addition to the European banks, they face competition from global banks like US-based Citigroup, which operates in 15 countries, and the Dutch Rabobank, which now operates in five countries (Beck et al., 2014).

Given their latecomer status, the African challenger banks appear to be performing well. In the top three Sub-Saharan Africa (SSA) economies—South Africa, Nigeria and Kenya—the industry is dominated by local banks. In South Africa, all the top five banks are local; likewise, the top 10 in Nigeria, and the three market leaders in Kenya. Most of these banks have also emerged as champions in their respective sub-regions (Beck et al., 2014). This trend is also evident in several small and mid-size economies. In West Africa's nine-country francophone monetary union (WAEMU), for example, the combined market share of the five largest African banks has climbed up from 18 per cent in 2003 to 44 in 2010, while those the top five non-African banks fell from 40 to 17 per cent (Leon, 2016).

In this section we discuss the competitive dynamics between African and foreign banks, focusing on six of the ten leading cross-border banks identified in Table 5.2: Standard Chartered, Société Générale, Barclays, Ecobank, Standard Bank and United Bank for Africa.

Table 5.2 List of leading cross-border banks in Africa

	Bank	Home country	Year of 1st Africa cross-border entry	Subsidiaries in Africa	Regional strength in Africa	Employees in Africa
1	Standard Chartered	UK	1862	15	Anglo West, East & South	8000
2	Société Générale	France	1913	18	Franco North, West & Central	11,000
3	Barclays	UK	1917	12	Anglo South, East & West	41,200
4	BNP Paribas	France	1940	13	Franco West	10,000
5	Ecobank	Togo	1988	36	West, Central & East	12,700
6	Standard Bank	South Africa	1988	20	Southern, West & East	35,000
7	BMCE Bank of Africa	Mali/Morocco	1990	18	North, Central, Franco West & East	8300
8	Guaranty Trust Bank	Nigeria	2002	9	Anglo West & East	6500
9	United Bank for Africa	Nigeria	2005	19	West, Central & East	12,300
10	Equity Bank	Kenya	2008	6	East	6000

Sources: Authors' analysis, based on data from companies' financial statements and websites

Standard Chartered Bank: "Here for Africa"

A British colonial bank, Standard Chartered Bank (SCB) is the result of the 1969 merger of the Chartered Bank of India, Australia and China, founded in 1853 in London, and the Standard Bank of British South Africa, founded in London in 1862. Standard Bank began operating in Port Elizabeth, South Africa, in 1862 and played a leading role in financing the development of the diamond fields in Kimberly. It later extended its operations to Johannesburg in the late nineteenth century, and by the 1950s had expanded across southern, central and eastern Africa. In 1965, Standard Bank entered West Africa through a merger with the Bank of West Africa. Following the divestment campaign against apartheid in South Africa, SCB sold its local subsidiary in 1987, and Standard Bank became a South African-owned bank (Standard Chartered, 2017).

Today, SCB has a presence in 15 countries across west, central, east and southern Africa. The bank has 180 branches and over 8000 employees in Africa, a significant proportion of which are in anglophone countries where it has strong decades-long ties. SCB is somewhat unique in the sense that it decided to focus on the emerging markets of Africa, Asia and the Middle East, with a tiny presence in the developed world—even in its home country, UK.

The bank has positioned itself as a key player in facilitating trade between Africa and the rest of the world. In 2012 alone, SCB financed $7.2 billion of Africa's trade (Standard Chartered, 2017). Like most of the other global banks, it has a strong corporate and wholesale banking franchise, serving large local and multinational corporations. To strengthen its wholesale banking business, the bank has completed several mergers and acquisitions with regional corporate finance and investment management firms over the last decade. The bank is also building its consumer banking business in Africa, with a focus on high-net-worth and middle class customers.

SCB faces intense competition from other global banks, especially Citi, which operates in mostly the same countries, has a similar strategy and target market, and an impressive global reach. Competition from pan-African banks is also intense, especially in the bank's key anglophone markets (Nigeria, South Africa, Kenya, Ghana and Botswana), where

challenger banks are aggressively expanding in their respective countries and sub-regions. Ecobank and Standard Bank are serious competitive threats to SCB.

Société Générale: "A Solid and Historical Presence in Africa"

Société Générale (SG) was founded in 1864 by a group of industrialists and financiers to support the growth of trade and industry in France. It established branches in France's colonies in Africa several decades after; first into Morocco in 1913, and then Senegal, Côte d'Ivoire, Cameroon and Algeria in the early 1960s (Société Générale, 2017). Like other colonial banks, it was forced to reorganize its branches along national lines following independence, and in many markets had to partner with national governments that had taken equity in it. A third wave of expansions was concluded in the 1990s, to Burkina Faso, Equatorial Guinea, Tunisia, Algeria, Madagascar, Chad, Benin and Ghana. In 2015, it acquired Mauritius Commercial Bank in Mozambique, strengthening the bank's presence in Southern Africa and Indian Ocean, where it also has operations in Reunion Island and Madagascar (Scala, 2015). Today, SG has 1000 branches and 11,000 employees in 18 African countries, with strong franchises in francophone north, west and central regions.

SG has a competitive corporate banking franchise in Africa, leveraging on its global network and deep connections in the region. The bank is building its consumer banking business, competing with technology and innovation. In 2013, it launched a mobile banking product which was aimed at lower income earners in Senegal, and it recently acquired a stake in a French fintech company to strengthen its mobile banking offerings to the unbanked segments of the African market (Business Wire, 2016).

SG is very competitiveness in francophone Africa, with at least 10 per cent market share in more than half of the countries it operates. It has a market share of over 20 per cent in Cameroon, Guinea, Senegal and Côte d'Ivoire (where it also ranks as either number 1 or 2), and it is the largest bank in the francophone West African Economic and Monetary Union (UEMOA). The bank's most serious competitive threat appears to be

Ecobank, since it is also a strong player in francophone west and central Africa. Moroccan banks (BMCE, Attijariwafa and BCP) have also expanded into this space in recent years, and can mount a significant competitive challenge.

Barclays: "Focused on Our Goal to Be the Financial Services Group of Choice in Africa"

Barclays Bank (BB) is a British bank with a long history dating back to 1690. The bank entered into an alliance with Colonial Bank in 1917 to partner with it in West Africa and the Caribbean, and in 1925 merged Colonial Bank's operations with those of Anglo-Egyptian Bank and National Bank of South Africa to form Barclays Bank (Dominion, Commercial and Overseas), known as Barclays Bank DCO later Barclays Bank International. Although it lost control of some of its subsidiaries to nationalization (e.g. Ethiopia, Malawi and Nigeria) and disinvestment (South Africa), the bank has built a strong presence in Africa, especially in the anglophone countries. BB has a presence in all the regions of the continent, with over 1200 branches and 40,000 people in 12 countries (Barclays, 2017).

In 2005, BB embarked on an ambitious acquisition of one of South Africa's big four banks, ABSA, and in 2013 combined ABSA with its other subsidiaries in the region (except Egypt and Zimbabwe) to form Barclays Africa Group (Reed, Croft, & Davies, 2005). The new entity positioned itself for market leadership in the retail and corporate banking space, aiming for a top three revenue position in its five key markets (Botswana, Ghana, Kenya, South Africa and Zambia) and a revenue share of 20–25 per cent from the rest of Africa (Barclays, 2017). In a dramatic turnaround in 2016, the bank's new CEO announced the decision to sell its entire operations in Africa and focus on the UK and US markets (Arnold & Jenkins, 2016).

BB has since sold its Egypt and Zimbabwe subsidiaries to two pan-African banks: Morocco's Attijariwafa Bank, and Malawi's First Merchant Bank. A partial sale of Barclays Africa Group was also completed in May 2017, making it a standalone, integrated pan-African bank owned by

local and international shareholders. Given the dominance of South Africa's ABSA in the group, and a likely unwillingness to approve the sale of a major bank to a foreign operator again following Barclays second exit from the country, there is a possibility that the new entity is likely to be distinctively South African. If this were to be the case, it would fit into a long pattern of pan-African groups acquiring European banks exiting the continent due to nationalization, political or strategic reasons, and would most certainly increase the relative strength and competitiveness of challenger African banks.

Ecobank: "The Pan-African Bank"

Founded in 1985 by individuals and institutions from 14 West African countries, Ecobank's vision was to facilitate private sector development and contribute to the economic development and integration of the West Africa region (Ecobank, 2012). From inception, the bank aimed to be a world-class institution, and signed a technical assistance agreement with Citibank. The first CEO joined from Citi, and long-time former CEO Arnold Ekpe, and the current CEO are also ex-Citibankers. The bank also wanted to play in the retail and SME banking space, unlike many of the multinationals that provided niche services to high-net-worth individuals and large corporations.

Between 1988 and 1990, Ecobank expanded to five West African countries, and another seven between 1997 and 2001. The bank then set its sights beyond West Africa and entered 18 countries between 2006 and 2010. Since then, the focus has been on consolidation and global alliances. Representative offices were opened in France, UAE, China, US and UK and an alliance was signed with ICICI Bank of India (Ecobank, 2012). The bank established a strategic alliance with Nedbank in 2008, with the South African bank acquiring a 20 per cent stake in Ecobank in 2014; the Ecobank Nedbank Alliance is by far the largest banking network in Africa, with more than 2000 branches in 39 countries. Ecobank by itself is the leading pan-African bank in terms of geographical spread, with over 12,000 employees in 36 African countries (Ecobank, 2016).

Ecobank has a well-developed retail and corporate banking franchise, and it continues to invest heavily in technology to drive market penetration. The bank has introduced an award-winning payment card and first pan-African payment gateway that allows customers to withdraw cash and make online payments and purchases across all the countries in its network. It has also recently launched a mobile banking product aimed at financially empowering 100 million new customers by 2020 (Ecobank, 2016).

The bank faces intense competition in francophone Africa where it has a strong presence from the French banks (Société Générale and BNP Paribas), and other emerging pan-African banks, including Moroccan banks (BMCE, Attijariwafa and BCP). With its two major acquisitions in Nigeria and Ghana around 2012, it has become a top-tier bank in these two anglophone markets; the bank faces serious competitive challenges in these and other markets from other pan-African banks likes Standard Bank and UBA.

Standard Bank: "Moving Africa Forward"

Standard Bank Group (SBG) was established in 1862 as Standard Bank of British South Africa, a colonial bank. Following a 1969 merger with Chartered Bank, an Asia-based British bank, a new bank emerged: Standard Chartered Bank (SCB). SCB was forced to sell off its South African subsidiary in the apartheid era in 1987; SBG subsequently became a South African bank, separated from the rest of the SCB group in Africa (Standard Bank, 2017).

SBG then embarked on a regional expansion of its own, competing against SCB. In 1988, it expanded into Swaziland and then Botswana in 1992; that same year it acquired the African franchise of the ANZ Grindlays Bank, expanding its footprints in eight countries. To differentiate itself from SCB, SBG used the Stanbic Bank brand in these new locations. SBG continued to expand its portfolio in the region, and made two major acquisitions in Nigeria in 2006 (IBTC Chartered) and Kenya (CFC Bank) in 2008. In this same period, it expanded to the emerging markets, and acquired banks in Eastern Europe, Middle East and Latin America (Grosse, 2015). SBG also entered into a strategic partnership

with one of China's top banks, ICBC, which paid $5.5 billion to gain a 20% equity ownership in SBG in 2007.

In the aftermath of the global financial crisis of 2007–2009, SBG adopted an "African-focused growth strategy" in 2011, and scaled down its operations outside the continent (Standard Bank, 2017). Today, SBG is the largest bank in Africa by asset and balance sheet size with more than 35,000 employees in 20 countries (Standard Bank, 2016).

SBG is a strong player across SSA, especially in the southern region where it holds more than 20 per cent of banking assets in 4 countries (Beck et al., 2014). Being a major player in Africa's largest and most sophisticated banking market, it is able to fend off competition from other African banks in its sub-region, while being able to fight for market share in other regions. However, it faces serious competitive threats from the global banks (e.g. SCB and Citi) in anglophone countries, and from Ecobank and other pan-African banks in the francophone countries.

United Bank for Africa: "Africa's Global Bank"

United Bank for Africa (UBA) was incorporated in 1961 to take over the business of the British and French Bank (BFB), which had been operating in Nigeria since 1948. BFB had been set up as a subsidiary of a French bank and incorporated in London with two British investment banks as shareholders; their goal was to compete with the two British banks that dominated the Nigerian banking industry. Following Nigeria's independence in 1960, a consortium of five international financial institutions took over BFB, but saw their equity significantly diluted when the bank was forced to "indigenize" and list on the Nigerian Stock Exchange in 1970 (UBA, 2017).

UBA remained one of the "big three" banks in Nigeria for several decades, and in a consequential merger with Standard Trust Bank (STB), a smaller dynamic bank in 2005, became an even more formidable player. Post-merger, notable Africapitalist Tony Elumelu of STB became the CEO of UBA, and embarked on an audacious transformation of the bank, acquiring three smaller local banks and specialized financial institutions (UBA, 2017).

More than four decades after rebranding to United Bank for Africa, the bank changed its vision to becoming "the undisputed leading and dominant financial services institution in Africa", and commenced the journey to becoming a pan-African bank; surely a case of *nomen est omen* ("the name foretells"). The execution was swift. After taking over STB's Ghana subsidiary that had commenced operations just before the merger in 2005, the bank entered Cameroon in 2007, followed by greenfield investments in 2008 in Côte d'Ivoire, Liberia, Sierra Leone, and Uganda. That same year, it acquired banks in Benin and Burkina Faso, and then entered into Kenya, Chad, Senegal and Tanzania in 2009. In 2010, it entered Zambia, Gabon and Guinea, and then Mozambique, DR Congo and Congo Brazzaville in 2011 (UBA, 2017). Today, UBA employs more than 12,000 people in 19 African countries and has branch offices in France, UK, and the US (UBA, 2016).

As is evident from the bank's rapid internationalization, it is a dynamic and highly competitive institution. The bank has positioned itself as a one-stop financial services institution, competing strongly in the retail, SME and corporate banking segments. The bank faces strong competitive threats from the other pioneering pan-African banks (e.g. Ecobank and Standard Bank) in virtually all the markets it operates in. Being a relatively young multinational in a complex, dynamic and challenging region poses several organizational and market challenges, in addition to the liability of country of origin (Ngwu et al., 2015).

Conclusion: Can African Banks Outcompete Their Global Rivals in the Future?

Since the arrival of European banks in Africa nearly two centuries ago, there have been dramatic changes in the relative power and competitiveness of foreign and African financial institutions. The rise of pan-African banks across the continent in the last two decades has transformed the competitive terrain, as these relatively new players position themselves to become major players in an industry and region historically dominated by global players. Can the African challenger firms outcompete the global banks in the future?

In the larger economies—Nigeria, South Africa and Kenya—the local and pan-African banks will likely continue to dominate. With Barclays Africa Group becoming a standalone pan-African group following the recent divestment by the parent company, the top five South African banks, accounting for 90 per cent market share, are all local. More importantly, perhaps, these banks have huge pan-African ambitions, and are best positioned to compete with local and multinational banks in the region, given their impressive size and sophistication. In Nigeria, where the recapitalization of banks triggered a pan-African expansion in the last decade, the two foreign-owned banks have somewhat lost their preeminence as many of the 19 local banks have become bigger and stronger, holding over 94 per cent market share. In Kenya as well, the industry leaders—Equity and KCB—are local banks, and they are becoming notable players in the sub-region as they expand to neighbouring countries (OBG, 2017a). In sum, pan-African banks pose a serious threat to foreign multinationals, as they are increasingly able to fend off competition in their home economies while fighting for market share regionally.

In the rest of the Africa, competition is likely to be much more intense, particularly in the smaller markets (e.g. Botswana, Ghana, Cameroon, Senegal and Burkina Faso) where foreign-owned banks have maintained a competitive advantage for several decades. As pan-African banks expand into these countries, buying up local franchises, the only predictable outcome is that local banks would become marginal players. Ghana epitomizes this emerging competitive scenario. International banking groups—Ecobank, Standard Chartered, Stanbic and Barclays—now control more than half of the sector, in terms of the number of institutions (15 out of 28) and total assets, making them four of the five largest banks. Ecobank became the leading player after acquiring a local bank in 2012. Ghana Commercial Bank, number two in terms of assets, is now the only local bank in the top five, as two pan-African banks compete for market share with two established global banks (OBG, 2017b). The entry of seven Nigerian banks into Ghana in recent years (Ngwu et al., 2015) will only intensify competition in the future.

The situation is similar in Côte d'Ivoire and francophone West Africa, where Ecobank and Bank of Africa are growing aggressively alongside market leader, Société Générale; between them, these three

banks hold about a third of assets in the area (Leon, 2016). In Côte d'Ivoire, two French banks hold nearly a quarter of banking assets; two Moroccan banks hold just over 20 per cent, Ecobank holds 12.5%, while local banks NSIA and BNI hold 9.5 and 7 per cent respectively (OBG, 2017c). The French banks have historically dominated banking in this region, but are likely going to struggle to defend their market share in the future. The trend in the past decade (the top five non-African banks' market share was halved from 40 per cent; Leon, 2016) lends credence to this.

It is becoming clear across Africa that banks cannot continue to focus on just niche banking to affluent customers and large corporations. Many global and large commercial banks have successfully adopted this strategy, Citi being a great example, as it has cut its retail banking business in Africa and around the world (Onaran, 2016). Not many players can afford to focus narrowly on this increasingly overcrowded segment; hence, banks are now seeking to use technology to drive their retail banking business. So far, the pan-African banks have appeared more successful in the digital banking innovation space (Verhoef, 2017), and have generally shown more interest in reaching lower end and SME customers—even as they upgrade their corporate banking capabilities. If this trend continues, they are likely to have a significant competitive advantage as the retail segment grows.

Barclays' exodus from Africa could be a sign of things to come. In announcing the decision to pull out of the continent after nearly a century, the bank cited increasing costs and risks and the need to focus on the US and UK markets (Arnold & Jenkins, 2016). Though somewhat surprising, this is not exceptional as European banks tend to be sensitive to the high costs of their relatively small franchises in Africa—especially following periods of crisis (Verhoef, 2017). Several French banks, for example, have exited the region in the last two decades or so (Leon, 2016); Crédit Agricole sold its African subsidiaries in 2008 to Attijariwafa Bank, the same pan-African bank Barclays sold its Egyptian franchise to. With global banks seeking cash to meet new capital requirements in their home countries, while also facing environmental and strategic risks in Africa, the temptation to sell increases. Pan-African banks tend

to be willing to pay a premium to acquire these "legacy" franchises, which would most likely help them establish a more solid competitive footing in the region.

In concluding, pan-African banks have the potential to compete successfully in the twenty-first century as the cross-border banking war intensifies in Africa. Realizing this potential, however, requires building a strong position in their home market, adopting a long-term perspective (McKinsey, 2016), and paying attention to the not-so-obvious cultural barriers (Nartey, 2015). While a lot of progress has been made in the last decade, they cannot afford to be complacent as much work remains in the journey to become a really competitive pan-African firm; in the three banks studied in this chapter, for instance, none has achieved up to 30 per cent revenue contribution from outside their home market/region. Furthermore, their global rivals are formidable players with robust capabilities for performance, and do not face the internationalization constraints and liabilities confronting them, including liabilities of smallness, newness, country-of-origin and *Africanness* (Ngwu, Adeleye, & Ogbechie, 2015).

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6

Enhancing Hospitality and Tourism Industry Competitiveness in Sub-Saharan Africa

Emerging Trends, Challenges and Strategies

Adun Okupe, Trevor Ward, and Ogechi Adeola

Introduction

Tourism involves unique and fulfilling experiences, and there has been a shift in the types of demand from the traditional relaxation tourism experiences towards more niche, special interest and customized experiences. Tourists have an increasing desire for adventure, to interact with locals and to understand more about the lived experiences of others. The modern tourist is also interested in sustainable and authentic experiences, which are as close to nature as possible. Africa can offer tourists all of the above, and the continent can actualize its tourism potential and position itself to meet the new forms of tourist demand.

A. Okupe (✉)
Africa Tourism Institute, Lagos, Nigeria

T. Ward
W Hospitality Group, Lagos, Nigeria

O. Adeola
Lagos Business School, Lagos, Nigeria

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The "Africa Rising" narrative of the late 2000s (*The Economist*, 2011) has resulted in a deeper interrogation of what type of growth Africa needs and how this growth will occur, together with the industries that will contribute to the growth of the African economy. Coupled with this, is the realization that development in terms of GDP growth alone will not result in sustainable and equitable development but will rather create and propagate inequality as evidenced in other rapidly developing economies such as China and India (*The Economist*, 2011). In addition, there is the question of what Africa can contribute to the world economy, what makes Africa different and how this difference can be translated into sustainable development on the continent. The United Nations designated 2017 as the international year of sustainable tourism for development, a timely recognition of the importance of tourism and how the industry can contribute to economic and social value for developing economies.

Tourism has been purported to be a vehicle for economic growth and social integration (Heath, 2002; Muangasame & Khunon, 2013). Despite the economic downturn in some economies and geopolitical conflicts in some regions, the global travel and tourism industry is the world's largest employer and one of the fastest growing industries in the world (Cucculelli & Goffi, 2016; World Economic Forum, 2017). The industry contributed 10.2 per cent to global GDP in 2016, which is higher than the growth in the other industries: financial sector, manufacturing, and retail and transport sectors (World Economic Forum, 2017). This is an indicator that the major GDP growth contribution has shifted from goods and products toward the service industry, with the tourism industry comprising a significant portion of this (Ministry of Tourism: Republic of South Africa, 2016).

In Africa, the tourism industry contributed 3.1 per cent of GDP in 2016 and is forecast to rise by 4.5 per cent per annum to 2027 (World Economic Forum, 2017). The industry supported 8.35 million jobs, 2.6 per cent of total employment in 2016 and more people are set to join the industry as it grows and comes to be seen in a more appealing light on the continent (World Economic Forum, 2017).

Tourism provides a means for nations to diversify their economies, and increase their revenue (World Economic Forum, 2015). It enhances development by contributing to economic growth employment, female

empowerment and cultural and heritage preservation, as well as creating an appreciation of cultures. The industry is resilient, adaptable and dynamic, which means it can be tailored to suit the needs of tourists, and therefore requires a deep and concerted effort to understand in detail how the industry works. This is because tourism is a multifaceted sector with its political, economic, social and environmental aspects typified by diversity and the number of organizations within the tourism industry (Elliot, 1987).

The potential for tourism in Africa, with its 54 diverse countries and a broad range of tourist attractions from cultural and historical sites, beaches, hills, wildlife and flora, amongst others, is immense. According to the World Travel & Tourism Council (WTTC), Angola, Uganda and Mozambique are forecast to be among the 10 fastest growing destinations for leisure travel between 2016 and 2026. As such, looking at tourism as an industry for sustainable development may be an important "silver bullet" the African continent has underappreciated.

International tourism has grown and will continue to grow, particularly with travellers looking for new destinations to travel to, where their money can travel; this positions the continent to attract domestic, regional and international tourism demand. It presents the rationale for a focus on Africa and the tourism opportunities that can be realized on the continent. Conversely, Africa is a heterogeneous continent. While the continent as a whole has not realized its tourism potential, some countries, like South Africa, Gambia, Tanzania, Cape Verde and Kenya, have to a large extent understood and appreciated the contributions of tourism to their development trajectory. Other countries, such as Uganda, are embracing tourism as a potential income earner, while many African countries lag in their appreciation and realization of tourism's potential to contribute to their economic and social growth.

The potential and contributions of the tourism industry presented, the growth of the industry in Africa needs to be effectively managed to ensure that the continent can harness the potential from the industry. Indices, such as competitiveness, provide a useful matrix by which to understand the factors that influence the attractiveness of destinations.

This chapter explores the meaning of tourism competitiveness as a measurement tool with which to analyse the performance of the tourism

industry in sub-Saharan Africa (in this chapter, references to the continent refer to sub-Saharan Africa). We provide a summary of the challenges to the tourism industry and proffer some solutions that can enhance the tourism competitiveness on the continent.

Tourism Competitiveness

Competitiveness, a concept adapted from economic theory, refers how an organization can be better compared to another (Porter, 1990). Porter's (1990) definition is useful to examine and analysis current levels of competitiveness. However, a more comprehensive definition of competitiveness is required to understand how competitiveness may be understood within the tourism industry, comprising several interconnected parts, to include attractions, transportation, services, marketing and promotion (Gunn & Var, 2002); which contributes to the complexity inherent in the tourism industry, being connected to and comprising of, several other sub-sectors: destinations, transportation, leisure activities, and hospitality (Hassan, 2000).

In this regard, competitiveness as it relates to tourism, can mean the relative attractiveness of a destination in terms of its economic and qualitative factors, including tourist products, when compared to other destinations. Destination attractiveness includes considerations for price, value and experiences. Competitiveness can be viewed from the demand-side, for tourists, and also the supply-side, to include productivity levels, price and costs of capital and labour (Perles Ribes, Rodríguez, & Jiménez, 2011). The demand and supply-side aspects of tourism are dyadic in nature seeing as investors are more likely to invest in destinations perceived to have good tourism products, and investing in a tourist destination improves its appeal to tourists.

Introducing sustainability into the equation, Hassan (2000, p. 240) posits that competitiveness is a "destination's ability to create and integrate value-added products that sustain its resources while maintaining market position." As such, competitiveness requires the destination to satisfy and exceed expectations of customers and other stakeholders, while in the same vein ensuring that future opportunities are harnessed and threats

are mitigated within the destination (Mostafa, Sadegh, & Zainab, 2010), to ensure it continues to remain competitive. Tourism competitiveness is, therefore, an important concept to understand the economic and social value that a destination can contribute to the country (Ritchie & Crouch, 2000).

Traditionally, the competitiveness literature focuses at the level of the firm, to understand competitiveness between firms, in the same industry. Tourism competitiveness, on the other hand, is an industry-level analysis of competitiveness between nations. This means that within a country, the focus needs to be on understanding what works best for the destinations in the country. Consequently, competitiveness requires a destination-level analysis that feeds into the country-level analysis. Global indexes attempt to provide this information, looking at the country-level analysis to assess competitiveness.

Indexes are prepared from data that provide empirical evidence that can aid timely policy and investment decisions (World Economic Forum, 2017). They provide a way to understand what is happening in a destination, and a basis for comparing the performance of various destinations. The concept of tourism competitiveness has been largely successful because indexes are based on an aggregate of several factors rather than a single determinant. The indexes also allow for comparisons to be made within and between countries, for benchmarking, prioritization and making investment decisions for academic, public and private sector users. Various indexes have been developed that attempt to appraise the competitiveness of destinations into a number, ranked on a scale using various methodologies (Pulido & Sanchez-Rivero, 2009).

The Travel and Tourism Competitiveness Index (TTCI), developed by the World Economic Forum (WEF), is one of the most recognized and reputable for academic and practitioner audiences, given that it covers several components of tourism competitiveness. The report incorporates complementary information about key economic indicators from the World Bank, and country indicators from the World Travel and Tourism Council.

The TTCI provides a useful set of indicators that can be used to analyse the strengths and weaknesses of destinations, and understand their comparative performance and ranking. It is based on an extensive

framework that examines and analyses the components of a destination's competitiveness. It is a useful tool to understand what is needed to enhance the tourism competitiveness of destinations in Africa (World Economic Forum, 2015). Published biannually, it measures the performance of a given country in each of its specific sub-index and provides them with scores from 1 to 6, with 1 being the lowest and 6 being the highest.

This requires the ability to see things holistically at the country level of focus, and then the destination level (for countries with more than one tourist destination) of focus and specifically, being able to drill down into the state of the components of the tourism system, and how they can be made more attractive.

Indexes can be used as a measurement tool with which to compare the drivers of competitiveness and evaluate performance to determine the areas for government intervention. Nevertheless, appraising competitiveness, and the use of indexes are not without criticism. Competitiveness is a relative value and not an absolute value seeing as it is gathered in relation to other destinations (Cucculelli & Goffi, 2016). We have used the TTCI as the basis for our analysis in this chapter as it is the most respected tourism competitiveness measurement tool.

The appendix details the categories that comprise the sub-indexes and pillars of the TTCI.

Tourism Competitiveness in Sub-Saharan Africa

The first edition of the Travel and Tourism Competitiveness Report was published in 2007 by the World Economic Forum. The Report comes out every two years and it is prepared using economic indicators obtained from the World Bank and the World Travel and Tourism Council (WTTC). The number of countries covered by the report has risen, from 124 in 2007 to 141 economies in 2015, although the number of countries decreased to 136 in 2017, when the latest report was published, due to the non-availability of data from some countries.

The tourism and competitiveness report of 2017 highlighted that the tourism industry in Africa has significant potential, with some improvement in the continent's 2015 performance (World Economic Forum, 2017). The continent has a richness in cultural and natural resources, which can be further developed to appeal to tourists. However, Africa has longstanding development challenges such as infrastructure and health and hygiene that continue to limit growth in the tourism industry as well as other industries too.

In this section, we provide an overview of the current state of tourism competitiveness in sub-Saharan Africa highlighting the TTCI results of eight countries selected from East, West, Central and South Africa, to give a sense of the nature of the tourism industry in Africa. Burundi, Cameroon, The Gambia, Kenya, Nigeria, South Africa, Uganda and Zimbabwe were selected to present a representative sample of the sub-regions in sub-Saharan Africa. Although these countries are at various points in their tourism development trajectories, they provide a useful sample and means by which to understand the state of travel and tourism in sub-Saharan Africa, and the opportunities for enhancing competitiveness. North Africa is not represented in this analysis as it has been grouped together with the Middle East in the TTCI. As such, references to Africa and the continent refer to sub-Saharan Africa.

From the 2017 TTCI, sub-Saharan Africa lags other continents in the world. No sub-Saharan African country is ranked within the top 50 destinations in the world. The region just slightly gets past the 3-score mark (on a scale of 7), representing a 0.5 per cent improvement from 2015. This pales in comparison to top performers like Europe, Eurasia and Asia-Pacific with scores over 4; evidence that Africa has some way to go (World Economic Forum, 2017).

Table 6.1 below shows the rankings of the eight countries together with the scores for the respective TTCI pillars, in brackets.

Below, we present an overview of the performance of the countries in the TTCI and their demographics (obtained from CIA Factbook and TTCI report 2017) to show how they rank on their bid to be more competitive.

Table 6.1 Ranking and scores—2017 TTCI report

Pillars 2017	Burundi	Cameroon	The Gambia	Kenya	Nigeria	South Africa	Uganda	Zimbabwe
Business environment	122 (3.9)	117 (4.0)	90 (4.2)	70 (4.4)	84 (4.3)	21 (5.3)	87 (4.3)	134 (3.0)
Safety and security	111 (4.2)	110 (4.3)	52 (5.6)	129 (3.4)	132 (3.1)	120 (3.9)	104 (4.6)	60 (5.5)
Health and hygiene	111 (3.8)	121 (3.1)	116 (3.6)	120 (3.2)	132 (2.7)	113 (3.8)	130 (2.8)	128 (2.9)
Human resources and labor market	119 (3.9)	88 (4.4)	114 (4.0)	76 (4.5)	126 (3.6)	63 (4.6)	115 (4.0)	127 (3.6)
ICT readiness	136 (1.6)	122 (2.7)	110 (3.3)	106 (3.4)	114 (3.2)	68 (4.4)	119 (2.8)	117 (2.9)
Prioritization of travel & tourism	134 (2.5)	132 (2.8)	46 (4.8)	21 (5.3)	126 (3.2)	59 (4.7)	99 (4.1)	105 (3.9)
International openness	128 (1.8)	127 (1.8)	120 (2.1)	70 (3.0)	124 (1.9)	110 (2.4)	69 (3.0)	82 (2.9)
Price competitiveness	95 (4.7)	58 (5.0)	36 (5.3)	74 (4.8)	68 (4.9)	43 (5.2)	60 (5.0)	53 (5.1)
Environmental sustainability	74 (4.1)	70 (4.1)	83 (4.0)	26 (4.7)	96 (3.9)	117 (3.6)	46 (4.3)	68 (4.1)
Air transport infrastructure	130 (1.6)	127 (1.6)	119 (1.8)	72 (2.5)	108 (2.0)	46 (3.4)	121 (1.8)	116 (1.9)
Ground and port infrastructure	115 (2.3)	120 (2.2)	84 (3.0)	70 (3.1)	126 (2.1)	59 (3.4)	117 (2.3)	110 (2.4)
Tourist service infrastructure	136 (1.8)	119 (2.4)	107 (2.8)	95 (3.2)	108 (2.7)	108 (4.4)	100 (3.0)	106 (2.8)
Natural resources	129 (2.0)	80 (3.3)	111 (2.3)	15 (4.7)	105 (2.4)	23 (4.4)	44 (3.7)	48 (3.6)
Cultural resources and business travel	130 (1.1)	114 (1.3)	128 (1.2)	77 (1.6)	61 (1.9)	19 (3.4)	79 (1.6)	93 (1.5)

Source: WEF: Travel & Tourism Competitiveness Report 2017

Burundi

Burundi is ranked 134th out of the 136 countries in the 2017 report, moving one place higher from 135 in 2015. This is a gradual but continual progress that started in 2013, when it was ranked 138th. Burundi is ranked strongly for its environmental sustainability and price competitiveness, ranking within the top 100 in the two pillars. However, travel and tourism does not appear to be important to the government as the country is ranked poorly (134th) for its prioritization of the tourism industry. Highlighted challenges include the lack of infrastructure, ICT readiness, human resources and business environment (Table 6.2).

Cameroon

Cameroon is the 126th country in the ranking, dropping from 122nd in 2015 and 121st in 2013. However, the country performs strongly for its natural resources and price competitiveness and environmental sustainability. Key areas for intervention are infrastructure, safety and security, human resources, health and hygiene, ICT readiness, international openness and the prioritization of travel and tourism in the national agenda (Table 6.3).

Table 6.2 Relevant tourism indices—Burundi

Burundi	
Population	11,099,298
GDP per capita	$800 (2016 est.)
Resources	Agriculture accounts for over 40% of GDP and employs more than 90% of the population. Burundi's primary exports are coffee and tea.
Revenue	$525.1 million (2016 est.)
Expenditure	$656.9 million (2016 est.)
International tourist arrivals	131,000
International tourism receipts	$2.2 million
T&T industry employment (% of total)	37,829 jobs (1.9%)
T&T industry GDP (% of total)	$68.9 million (2.3%)
TCCI ranking	134/136 (2017), 135/141 (2015)

Sources: CIA Factbook and WEF: Travel & Tourism Competitiveness Report 2017

The Gambia

The Gambia attains 112th position overall, dropping 3 places from 109 in 2015 and 20 places from 92nd in the 2013 ranking. The country finishes in the top 50 in prioritization of travel and tourism (46th) and price competitiveness (36th). The country also scores 5.2 to finish 52nd in safety and security, doing better than many of its regional counterparts. However poor performances in infrastructure, natural resources and cultural resources continue to hold back the country (Table 6.4).

Table 6.3 Relevant tourism indices—Cameroon

Cameroon	
Population	24,360,803
GDP per capita	$3300 (2016 est.)
Resources	Modest oil resources and favorable agricultural conditions.
Revenue	$4.765 billion (2016 est.)
Expenditure	$6.497 billion (2016 est.)
International tourist arrivals	812,000
International tourism receipts	US $450.0 million
T&T industry employment (% of total)	141,724 jobs (2.7%)
T&T industry GDP (% of total)	$899.1 million (3.1%)
TCCI ranking	126/136 (2017), 122/141 (2015)

Sources: CIA Factbook and WEF: Travel & Tourism Competitiveness Report 2017

Table 6.4 Relevant tourism indices—The Gambia

The Gambia	
Population	2,009,648
GDP per capita	$1700 (2016 est.)
Resources	Agriculture provides for one-fifth of GDP.
Revenue	$231.5 million (2016 est.)
Expenditure	$323.6 million (2016 est.)
International tourist arrivals	135,000
International tourism receipts	$120.0 million
T&T industry employment (% of total)	49,063 jobs (6.9%)
T&T industry GDP (% of total)	$69.2 million (8.4%)
TCCI ranking	112/136 (2017), 109/141 (2015)

Sources: CIA Factbook and WEF: Travel & Tourism Competitiveness Report 2017

Kenya

Kenya ranks 80th in 2017, dropping 2 places from 78th in 2015. This is in contrast to 2 years ago when the country moved up 18 places from 96 in the 2013 ranking. Natural Resources (15th) are the country's strength. The wildlife and UNESCO heritage sites that dominate the Kenyan landscape continue to attract visitors. The importance attached to travel and tourism is also evident in its 21st place ranking for its prioritization of the sector. However, fundamental regional issues of safety and security (129th), and health and hygiene (120th) are clear obstacles. Efforts are also still required to develop the country's ICT readiness (106th) (Table 6.5).

Nigeria

Nigeria is ranked 126th overall in 2017, moving up 5 places from 131st in 2015 and one position higher than its 127th ranking in 2013. At a time when the country is experiencing an unprecedented economic

Table 6.5 Relevant tourism indices—Kenya

Kenya	
Population	46,790,758
GDP per capita	$3400 (2016 est.)
Resources	Agriculture remains the backbone of the Kenyan economy, contributing 25% of GDP. About 80% of Kenya's population of roughly 42 million work at least part-time in the agricultural sector, including livestock and pastoral activities.
Revenue	$12.89 billion (2016 est.)
Expenditure	$17.85 billion (2016 est.)
International tourist arrivals	1,114,100
International tourism receipts	$723.0 million
T&T industry employment (% of total)	592,300 jobs (3.5%)
T&T industry GDP (% of total)	$2296.0 million (3.8%)
TCCI ranking	112/136 (2017), 109/141 (2015)

Sources: CIA Factbook and WEF: Travel & Tourism Competitiveness Report 2017

Table 6.6 Relevant tourism indices—Nigeria

Nigeria	
Population	186,053,386
GDP per capita	$5900 (2016 est.)
Resources	Oil has been a dominant source of income and government revenues since the 1970s.
Revenue	$11.4 billion (2016 est.)
Expenditure	$21.21 billion (2016 est.)
International tourist arrivals	1,255,000
International tourism receipts	$403.9 million
T&T industry employment (% of total)	650,836 jobs (1.6%)
T&T industry GDP (% of total)	$8282.8 million (1.7%)
TCCI ranking	126/136 (2017), 131/141 (2015)

Sources: CIA Factbook and WEF: Travel & Tourism Competitiveness Report 2017

challenge, failure to exploit the abundant natural resources (61st) is an opportunity missed. The tourism sector in the country requires a holistic makeover as the country finishes outside the top 100 in 10 of 14 pillars. Government prioritization of the sector is very low (Table 6.6).

Uganda

Uganda is the 106th nation on the standings, a significant improvement from 2015 when it was ranked 114th globally. However in 2015, the country still moved up 2 places from 116th in 2013, meaning the country has moved up 10 places in the last four years. These forward strides are backed by strong performances in price competitiveness (60th) and environmental sustainability (46th). Infrastructure is one of the main drawbacks with air transport (121st), ground and port (117th), and tourist service infrastructure (100th) still posing strong challenges (Table 6.7).

South Africa

South Africa drops 5 places in 2017 to 53rd from 48th in 2015. However, this is still better than 2013 when it was 64th. South Africa remains on top of the sub-Saharan African log and this can be traced to

Table 6.7 Relevant tourism indices—Uganda

Uganda	
Population	38,319,241
GDP per capita	$2100 (2016 est.)
Resources	Uganda has substantial natural resources, including fertile soils, regular rainfall, small deposits of copper, gold, and other minerals, and recently discovered oil.
Revenue	$3.748 billion (2016 est.)
Expenditure	$5.41 billion (2016 est.)
International tourist arrivals	1,303,000
International tourism receipts	$1149.0 million
T&T industry employment (% of total)	464,305 jobs (3.1%)
T&T industry GDP (% of total)	$920.0 million (3.7%)
TCCI ranking	106/136 (2017), 114/141 (2015)

Sources: CIA Factbook and WEF: Travel & Tourism Competitiveness Report 2017

strong performances in cultural resources (19th), business environment (21st), and abundant natural resources (23rd). However, concerns remain over longstanding issues of safety and security (120th) and environmental sustainability (117th), areas where the country is making little or no improvement (Table 6.8).

Zimbabwe

Zimbabwe is ranked 114th out of the 136 countries moving up one place from 115 in 2015. The country also moved up 3 places in 2015 from 118th in 2013. The country is ranked relatively safe and secure (60th) and price competitive (53rd). Challenges include business environment generally (134th) and health and hygiene (128th) (Table 6.9).

From the above, sub-Saharan Africa is lagging in terms of competitiveness, with similarities across the components, highlighting the main challenges to be those of leadership, infrastructural provision, and destination development as well as human capital development; key challenges that need to be addressed to develop its tourism industry, harness its tourism potential and enhance its competitiveness.

Table 6.8 Relevant tourism indices—South Africa

South Africa	
Population	54,300,704
GDP per capita	13,200 (2016 est.)
Resources	Exports include gold, diamonds, platinum, other metals and minerals, machinery and equipment.
Revenue	$76.62 billion (2016 est.)
Expenditure	$86.45 billion (2016 est.)
International tourist arrivals	8,903,773
International tourism receipts	$8234.7 million
T&T industry employment (% of total)	702,824 jobs (4.5%)
T&T industry GDP (% of total)	$9339.9 million (3.0%)
TCCI ranking	53/136 (2017), 48/141 (2015)

Sources: CIA Factbook and WEF: Travel & Tourism Competitiveness Report 2017

Table 6.9 Relevant tourism indices—Zimbabwe

Zimbabwe	
Population	14,546,961
GDP per capita	$2000 (2016 est.)
Resources	Zimbabwe's economy depends heavily on its mining and agriculture sectors.
Revenue	$3.4 billion (2016 est.)
Expenditure	$3.9 billion (2016 est.)
International tourist arrivals	2,056,588
International tourism receipts	$886.0 million
T&T industry employment (% of total)	180,028 jobs (3.1%)
T&T industry GDP (% of total)	$703.0 million (5.2%)
TCCI ranking	114/136 (2017), 115/141 (2015)

Sources: CIA Factbook and WEF: Travel & Tourism Competitiveness Report 2017

Key Challenges and Strategies to Enhance Tourism Competitiveness

In this section, we focus on the key priority challenges together with recommendations to enhance tourism competitiveness in Africa. These are not all the challenges, but rather, addressing these challenges will galvanize the tourism industry and signal national commitment to the tourism industry, which will stimulate investment in the sector, and catalyze the growth of the industry.

Leadership

The main impediment to tourism development in Africa is the lack of political will to prioritize the industry and actualize the implementation of tourism master plans. Leadership from the public as well as private sectors is required to catalyze the industry to what it can be (Heath, 2002). The potential role of tourism for economic development is known to most countries in the region but a lack of implementation of strategic and master plans continue to limit the progress in this sector. This can be traced to a lack of understanding of how to go about implementing and a lack of political will, which is made more challenging as a result of the fragmented nature of the tourism industry.

Enhancing the competitiveness of the tourism industry in Africa first and foremost requires the right type of leadership at all levels, but it needs to start at the highest level. Individuals in the highest positions of power need to be positive about the sector, and strategically decide and actualize the vision and objectives for the industry in their countries. These strata of leaders exist in both public and private sector organizations, and precipitates the need for collaboration between both private and public sector, to articulate and define what the tourism industry in their countries can look like. While the focus of this chapter is on competitiveness, at a destination and country level, there will be the need for cooperation between sub-regions to jointly innovate, develop and promote their destinations (Centre for Strategy and Evaluation Services, 2013).

Leadership is required to make decisions based on the availability of data, with which to set the vision for tourism and develop the requisite infrastructure needed to position the industry for success.

The right type of leader, individuals with a passion for, and understanding of, the nuances of the tourism industry, and the ability to see the tourism system holistically, given its multiple and somewhat fragmented nature in Africa. This requires a level of dynamism, innovation and adaptability to be able to set the vision for the industry/destination within the country. Government at the various levels needs to work together. Leaders also need to identify and work with various stakeholders to actualize the set objectives. Leadership is required to activate multi-level coordination and cooperation amongst the various tourism providers in a destination, and a country (where the country has several

destinations). Tourism associations and bodies have members who operate within the industry in the country. In many cases, these remain active, although they feel they are fighting a losing battle because of the fragmented nature of the industry. The tourism bodies can act as clusters, and amplify the voice of their members, as well as gain synergies from their shared interests, and utilize these to refine the objectives of the associations further.

Government intervention and extensive conversations with members of tourism associations and bodies can provide a useful way for learning, obtaining information, and multi-level engagement with private sector tourism providers. In this way, development plans will be developed with the contribution of existing tourism associations, with lessons to be shared and learnt that will inform future strategies.

Tourism leadership needs to be responsible, visionary and transformational, leadership that is able to understand multiple perspectives, accommodate them and motivate others to transcend their own purpose, by creating a common sense of purpose and provide a strategic focus for a destination and/or country (Bass, 1985). Without visionary leadership, the other strategies and suggestions provided below will not be attainable.

Infrastructure Development

Sub-Saharan Africa underperforms on its infrastructural provision. According to the 2017 TTCI, the three major sub-regions, namely Southern Africa, East Africa and West Africa all performed very poorly as shown in the table below. The table also compares the performances with Europe, a top-performing region (Table 6.10).

The lack of adequate infrastructure, referring to power, and transportation, amongst others, is a major impediment to improving the current state of several industries, including tourism in Africa. Focusing on tourism, the continent lacks adequate air transportation and ground transportation infrastructure. Health and sanitation issues are a consideration for tourists, and the quality of available healthcare provided, and sanitation levels for water and sewage, is inadequate. There is a real

Table 6.10 Comparative analysis: infrastructure development

Regional averages	Southern Africa	East Africa	West Africa	Western Europe
Air transport infrastructure	2.3	2.0	1.9	4.3
Ground and port infrastructure	2.7	2.6	2.5	5.5
Tourist service infrastructure	3.3	2.7	2.7	5.8

Source: WEF: Travel & Tourism Competitiveness Report 2017

need for political will, together with allocation of funds, cooperation and collaboration between inter-governmental ministries and the private sector, on how to develop infrastructure to stimulate the growth of industries, including the tourism industry (World Economic Forum, 2015).

In this sense, the provision of infrastructure is the single most important factor that can capitulate the growth and competitiveness of the industry in sub-Saharan Africa.

Destination Development and Management

The first step in developing a vibrant tourism industry is to identify the destinations within the country that can be developed to be attractive to tourists. These can be historically important sites and communities, areas of outstanding natural beauty or leisure attractions, events and festivals that are designed to appeal to tourists, or a combination of some or all of these. According to the TTCI, Africa has abundant cultural and natural resources, although these are not always in a good enough state to be enjoyed. Therefore, the first step is to identify and scope out the tourist destinations in a country, evaluate its current state and undertake extensive research to determine the feasibility of various development options that are available to the destination.

Gathering and analysing the data is important to ensure that the decision-making process is one that is informed by empirical evidence. Relevant data categories include the state of the destination, the activities available to visitors beyond visiting the site(s) alone, the state of the

hospitality facilities in the destination, the number of visitor arrivals to a destination, average spend, trained personnel at the destination and guest feedback.

Destination development should be focused on increasing the attractiveness of the destination in a sustainable way. Attractiveness in this regard can relate to the educational, cultural and historical appeal of the destination. Coupled with this is the availability of ancillary activities at the destination, so that tourists visiting the main destination can also have several other locations within the destination with which to occupy their time, in this way contributing to the richness of tourist experience (Heath, 2002). Many tourist sites in Africa have a single main attraction with little to no leisure or hospitality services provided for the tourists to the site.

The destination once developed also requires management to ensure that the destination continues to be in good condition and that the activities available at the destinations provide tourists with a variety of options that will contribute to their overall experience. Data collected to monitor the visitor satisfaction will also contribute to effectively managing the destinations.

Human Capital Development

The tourism industry is anchored on exceptional service delivery and hospitality. The quality of service, an intangible factor, received at various attractions in a destination may be a reason behind the attractiveness of one destination relative to another (Erdly & Kesterson-Townes, 2002). The tastes of travellers are becoming increasingly sophisticated, together with this, the need to provide quality service. As such, human resources at destinations needs to be developed. A destination may be made or broken by the quality of people that provide services to it. This is the need for human capital development.

The tourism industry in Africa is still in its developmental mode and this is evidenced by how working in the industry is perceived to be low-paid, informal and casual labour. Intensive job-specific training should be provided in all the components of the tourism system for staff, who will

provide the services required for a successfully run destination—ranging from tour guides, airport staff and customer service officers, to hotel and restaurant staff, as well as marketing, IT staff and finance professionals—to do so effectively. These, together with training on key skills such as interpersonal communication and team working skills, will contribute to the quality of service tourists receive (Tarlow, 2016).

Such training, together with a well-defined career path for all levels of staff, ensures tourism staff are equipped to provide good service. Moreover, it helps industry to attract and retain talent for technical and managerial professions, which will elevate the profile of tourism jobs and professions, as well as contribute to the further development of the tourism industry, in terms of people coming together to work on long-term planning, strategy and development of tourism destinations (World Economic Forum, 2015, p. 24). Countries should consider the provision of training and university courses and programmes aligned with their country's strategic tourism objectives (Anu Singh, Shalini, & Sona, 2009). Together with the change in perception and staff training, the working conditions for staff in the industry also need to be improved to prevent exploitation of staff, contributing to the improved perception of the industry (Tarlow, 2016; World Economic Forum, 2015).

Expanding the Tourist Demand Market

Domestic and regional tourist demands are key markets that have not always received the attention they deserve across the continent, although there are some exceptions, including Kenya, which has promoted domestic and regional tourism. While the World Economic Forum argues that the focus of the tourism industry should be on attracting international tourists, given that the average GDP per capita in sub-Saharan Africa is less than US $4000 (World Economic Forum, 2015), we argue that a focus on developing the tourism industry for international tourists alone is not sustainable in the long run. Ghimire (2001) makes a case for domestic and regional tourism, arguing that it contributes about 80 per cent of world tourism flows. Jumia Travel's report (2017) estimates that domestic and regional travel in Africa generated 63.7 per cent to tourism GDP in

2016, significantly higher than foreign visitor spending of 36.3 per cent. In South Africa for example, domestic tourism contributed to 56.4 per cent of total tourism spending in 2015 (Statistics South Africa, 2016).

As such, the focus on enhancing tourism competitiveness should be widened to domestic and regional, as well as international tourists. According to the Tourism Alliance's 2016 report, domestic tourism in the United Kingdom accounted for £22.2 billion of tourism expenditure, while inbound tourism accounted for £21.7 billion. This shows the potential for domestic tourism, which should not be overlooked in the development and promotion of the tourism industry in Africa.

Africa has a growing middle class, who are increasing their demand for travel to visit friends and relatives, experience nature, travel to learn more about other parts of a country or another country, and for relaxation. Domestic and regional tourism can contribute to social cohesion and aid rural development, providing employment in rural areas and stemming the rural to urban migration, together with the resultant negative social impacts that plague many developing countries. International tourism is usually seasonal, and domestic and regional tourism can be encouraged to counter this seasonality (Skanavis & Sakellari, 2011).

Domestic and regional tourism presents an important focus for consideration, moving the strategic tourism planning from focusing on international tourists from the global "North", who are argued to have spent more money, although the lack of reliable statistics means that the income and volume generated from national and regional tourists may be understated (Ghimire, 2001). The lack of consistency in classifying and separating regional tourists from international tourists also means that quantifying the number of regional tourists is difficult. We discuss later in the chapter, the importance of data collection and reliable statistics to decision-making for tourism development.

Other Challenges to Be Considered

From the results of the TTCI above, other key areas for enhancing tourism competitiveness are international openness, safety and security, health and hygiene, ICT readiness and cultural resources.

Segmentation of the Tourist Market

The first step towards enhancing the competitiveness of a destination is for the destination to define its intended tourist. This is linked to destination development and management. This will enable it to present strategies that will contribute to meeting the tourist needs of its target audience. Often, people are told to visit Africa, visit Nigeria, or visit Ghana. Yet, there is no unique tourist product advertised as the reason for which people should visit, as compared to destinations like Kenya, which markets its safari holidays; Zanzibar, known for its beach holidays and as a wedding destination; Northern Tanzania for the Serengeti; and so on. Uganda has made several advances in this regard by defining its tourism strategy towards luxury ecotourism and therefore appealing to tourists who seek to see its gorillas. This specific definition will enable it best communicate with its target tourists, those seeking wildlife and eco-luxury holidays.

It is important that destinations see the tourist as a co-creator of value and experience as opposed to a static person. In this way, destinations will need to continue to tell and re-tell their stories, looking at new and strategic ways to market and package tourist products to tourists. The focus of tourism destination development should be for the intended tourist. However, satisfying the interests of the tourist alone is not sufficient. Rather, destination development should also consider the issues and interests of other stakeholders including the local communities, employees of the industry and other tourism organizations that exist on the supply-side of the destination. Prior to marketing a destination, defining who its intended audience is essential in order to influence its development strategies and determine the marketing messages that follow.

Safety and Security

While Africa appears to be attaining levels of relative political stability, the historical cases of military coups, post-election violence and terrorism attacks have marred its appeal as a tourism destination. Countries will

need to consider political stability and good relations within and between states to ensure potential tourists perceive the destination country (and the continent) to be a safe one. A concerted focus on improving security and communicating this across various media channels will contribute to enhancing the tourism competitiveness of destinations in Africa.

Perception Management and Marketing

The media's stereotyping of the African continent over the years has affected the image the world, including Africans, have about the continent, its possibilities and its future. Tourist destinations seeking to attract demand will need to work together with public relations and government officials on how to change the perception people have of Africa, and inform them about what the continent has to offer its tourists. Destinations can work with the Africa Travel Association, which works to showcase the diverse destinations in Africa to a global audience.

Innovative marketing strategies have emerged in the industry, where marketing is tailored to various segments of the market. In this vein, the tourism destination needs to decide and outline their target market and identify the various mediums that will act as distribution channels to provide awareness of the image, quality, positioning, branding and services of the tourist products on offer. The marketing communication messages should be accurate and depict the true nature of the destinations, so as not to mislead the tourist (Crouch & Ritchie, 1999; Mihalič, 2000).

Tourists need to be made aware of the tourism products available in the destinations. The Internet has made it possible for destinations to promote themselves to a global audience very effectively and at a low cost, and destinations in Africa need to incorporate targeted marketing into their agenda. Destinations can market to a global audience in a sophisticated manner, tailored to the various audiences, using various portals to ensure that together with perception marketing, the destination is made as attractive as possible. This can convert awareness to demand and to a sale for a particular tourist destination, thereby enhancing the competitiveness (Mostafa et al., 2010; Poon, 1993).

Africa has diverse products ranging from its history, which can be repackaged to be engaging and priceless: its wildlife, natural beauty, colourful culture and traditions. Countries should look to the engagement of skilled storytellers who can present and retell the stories of the destinations in Africa to intended markets, and also bring the destination to life for tourists. Together with marketing, there need to be dedicated online resources providing information about the destination, how to get there and any activities happening at the destination and nearby, together with information about where to stay and eat. It would be useful to include the feedback received from guests in the form of videos that articulate what tourists—who should be from various origin markets—found enjoyable about the destination.

Feedback forms should be made available at the various exit points to provide a means through which tourists can leave comments, both positive and negative. This feedback needs to be taken on board and used to inform future decisions about the destination.

Visa Policies

One of the factors inhibiting the travel of Africans within Africa is the lack of visa openness, which in some cases makes it easier for holders of European and American passports, among others, to travel more freely on the continent than can holders of passports issued in Africa.

In 2016, the first edition of the Africa Visa Openness Report, a report published by the African Development Bank (AfDB), reveals that on average an African national requires a visa on departure for 55 per cent of other African countries, can get visas on arrival in only 25 per cent, and does not need a visa for only 20 per cent of countries in Africa. The African Union's (AU) 2063 agenda calls for the creation of a single continental African passport by 2020. However, before the actualization of that plan, it calls for a visa policy that grants African nationals a visa-on-arrival in all African countries, which allows staying in the country for a minimum of 30 days, by 2018. Should it be successful, the AU's 2063 Agenda could have a profound impact on the growth of the tourism industry, as freer movement will contribute to an increase in demand for tourism on the continent.

The Need for Data

The lack of reliable data in the tourism sector is another factor impeding its growth. Data is important to show how a destination is performing in terms of tourist numbers, receipts and the experience of the activities in the destination. Data is important in order to understand the factors, qualities and potential of a destination, to understand its limitations and to guide policy interventions and investment decisions. Investors can also count on reliable data as an assessment tool for determining areas with the best potential.

There are some data available on tourism in Africa, but in most cases, there is a lack of focus, incomplete categories and overall, the data is of poor quality. This dilemma has inhibited the ability of African destinations to monitor trends and patterns of tourism arrivals and as such cannot create a suitable strategy. The lack of data has also affected the assessment of the economic, social or environmental impact of tourism on the environment.

The TTCI is a useful measuring tool for countries in the tourism industry. However, to get a more objective evaluation of performances as well as growth assessment, African countries will need to produce their own reliable data. This can be done by engaging local researchers, who will source the data and gather feedback from visitors. This exercise will help boost accuracy of current data, track the development, management and sustainability of destinations, and monitor the effectiveness of marketing strategies, amongst others. The data obtained will also be useful in providing investors with reliable information as well as track the effectiveness of tourism leadership.

Suggestions for Future Research

Given the increase in tourism activities in sub-Saharan Africa, it is surprising that the level of tourism research remains at an embryonic stage. Research is important to provide decision-makers with information gleaned from data collected. Yet, there is a scepticism towards research,

with the resultant effect on the amount of funding made available for tourism-related research projects. Other challenges to tourism research include the inadequate communications infrastructure and the need for reliable data collection methods for various fields ranging from population size, number of visitor arrivals and the foreign exchange earned from tourists by a destination (Moswete & William, 2012).

Tourism research in sub-Saharan Africa significantly lags behind those of developed countries with researchers expressing concerns over the concentration of scholarship and research in developed countries (Nunkoo, 2015; Nunkoo, Gursoy, & Ramkissoon, 2013; Tribe et al., 2013). In an investigation of the geographical location of authors of a leading tourism journal within a two-year period (2010–2011), Tribe et al. (2013) noted the under-representation of the African continent. Analysing recently published articles on the nature of knowledge in hospitality studies, Nunkoo et al. (2013, p. 269) noted that "results indicated that research is highly concentrated in the developed world, while the voices of developing nations are marginalized." According to the authors, the pattern provides "some indication of underlying power dimensions in the production of hospitality knowledge" (p. 269).

What is required is greater cooperation amongst various governments, private–public partnerships and other supporting institutions for increased interest in tourism and hospitality research on the continent. We advocate for research at a more granular level focusing on some of the established TTCI criteria encompassing the internal and external factors that can enhance the competitiveness of a destination. Researchers can work together with the ministries of tourism to provide relevant and up-to-date research material that can inform future tourism policies and relevant agencies on implementation strategies.

Concluding Remarks

Our chapter has provided an in-depth analysis of the tourism competitiveness of sub-Saharan Africa using data from the World Economic Forum Travel and Tourism Index. Tourism is a driver of socio-economic

development and can be a valuable industry to tackle some of the sustainable development challenges in Africa. However, political will is required to ensure that each country is able to develop its tourism industry in a focused manner that can enhance the tourism competitiveness of sub-Saharan Africa.

Concerted planning is essential. Destinations usually have several tourism master plans drawn up, showing the planning stage is correctly identified as crucial. Yet, planning must give way to implementation and it is in this light the tourism industry in sub-Saharan Africa continues to lag.

If we are to summarize the crux of our chapter in one sentence, it will be the need to develop holistic approaches to destination planning and management, to anticipate and meet the needs of tourists, to encourage collaboration between public and private sector organizations, and the need for a deeper understanding and appreciation of the role tourism can play in the economic, social and environmental spaces of nations. All these factors point to the need for visionary tourism leadership. A good example of how political will, together with visionary leadership and investments, can change a country's tourism industry is Dubai. The focus to create an alternative source of income for the country other than oil by concentrating on tourism has brought a lot of benefits. Dubai is now one of the most visited cities in the world and its tourism industry is expected to grow at an annual rate of 5.4 per cent over the next decade (The First Group, 2016). Following on from this improved perception of Dubai as a destination, several financial services organizations now have their head offices for the Middle East and Africa regions operating out of Dubai.

Many of the challenges identified in this chapter are longstanding. Enhancing the competitiveness of the industry requires the ability to learn from the past and look towards the future. Increased recognition of the importance of tourism and the exigent need to diversify will serve to expedite growth in the sector. It is our hope that tourism will play a major part in the economy of many African countries in upcoming years.

Appendix: Pillars of tourism competitiveness by sub-indexes (2017)

Pillars of tourism competitiveness by sub-indexes (2015)	Definition according to the World Economic Forum
Sub-Index A: Enabling environment	
Pillar 1: Business environment	The extent to which a country has in place a conducive policy environment for companies to do business.
Pillar 2: Safety and security	The level of safety and security, as danger deters tourists.
Pillar 3: Health and hygiene	This includes access to improved drinking water and sanitation, together with provision that in the event that tourists do become ill, the country's health sector is able to ensure they are properly cared for, as measured by the availability of physicians and hospital beds
Pillar 4: Human resources and labour market	The availability of quality human resources in an economy. It relates to how destinations develop skills through education and training, and enhance the best allocation of those skills through an efficient labour market.
Pillar 5: ICT readiness	ICT is important for all sectors and contributes to the enabling environment of a country. Online services and business operations are important for planning itineraries, booking travel and accommodation.
Sub-Index B: T&T policy and enabling conditions	
Pillar 6: Prioritization of travel & tourism	This relates to the extent to which the government prioritizes the T&T sector, in terms of how funds are channelled to development projects and the coordination of the resources necessary for the development of the sector. Stable government policies are also important.
Pillar 7: International openness	This relates to the degree of travel facilitation and openness in terms of visa requirements, access to the destinations and bilateral trade agreements.
Pillar 8: Price competitiveness	Price competitiveness relates to the cost of accessing a destination and includes airfare ticket taxes and airport charges, which can make flight tickets much more expensive; the relative cost of hotel accommodation; the cost of living, proxied by purchasing power parity; and fuel price costs, which directly influence the cost of travel.

(*continued*)

(continued)

Pillars of tourism competitiveness by sub-indexes (2015)	Definition according to the World Economic Forum
Pillar 9: Environmental sustainability	This relates to how the natural environment is enhanced to ensure the destination provides an attractive location for tourism. It includes policies and enforcement of environmental regulations, and assessing the status of the natural environment.
Sub-Index C: Infrastructure	
Pillar 10: Air transport infrastructure	This pillar relates to air connectivity, which is essential to tourism. It measures the quantity of air transport, using indicators such as available seat kilometres, the number of departures, airport density, and the number of operating airlines, as well as the quality of air transport infrastructure for domestic and international flights.
Pillar 11: Ground and port infrastructure	This pillar relates to the availability of efficient and accessible transportation to key business centres and tourist attractions. It includes an extensive comfortable and secure road and railroad network.
Pillar 12: Tourist service infrastructure	Quality accommodation, resorts and entertainment facilities together with access to services such as car rentals and automated teller machines (ATMs).
Sub-Index D: Natural and cultural resources	
Pillar 13: Natural resources	This includes the number of UNESCO natural World Heritage sites, the quality of the natural environment as measured by the total known species of animals, and the percentage of nationally protected areas.
Pillar 14: Cultural resources and business travel	Cultural resources are another critical driver of T&T competitiveness. This pillar includes the number of UNESCO cultural World Heritage sites, large stadiums that can host significant sport or entertainment events. It also includes a new measure of digital demand for cultural and entertainment—the number of online searches related to a country's cultural resources can allow the level of interest to be inferred. The number of international association meetings taking place in a country is included to capture some level of business travel.

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7

Measuring Agribusiness Competitiveness: An Application to African Countries

Suresh Chandra Babu and Mahika Shishodia

Introduction

Despite strong growth trends over the past decade, the trade competitiveness of African countries is amongst the lowest in the world (WEF, 2015). The Global Competitiveness Index (GCI) created by the World Economic Forum (WEF) indicates that while some countries, such as Côte d'Ivoire and Ethiopia, have increased the competitiveness of their economies, others have experienced stagnation or decline. Much of the sub-Saharan Africa region, for instance, has been on a steady decline in this regard (WEF, 2015). Infrastructure deficit, low levels of health and education outcomes, and weak institutions emerge as the common reasons for low competitiveness in global agricultural trade by African countries. Since agriculture employs over half of the continent's population, greater competitiveness in agriculture and trade would not only boost economic growth but also support the needed structural transformation. It will

S.C. Babu (✉) • M. Shishodia
International Food Policy Research Institute (IFPRI), Washington, DC, USA

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allow factors of production to move away from agriculture to the service sector (Webber & Labaste, 2009).

Agriculture in Africa is dominated by staple crops such as maize, rice, sorghum, millet, cassava, yams and sweet potatoes, and a few traditional cash crops such as, coffee, cotton, cocoa, oil palm, sugar, tea and tobacco. However, there are large variations in competitiveness across crops and countries. Furthermore, African agricultural sector is characterized by a high percentage of smallholder farmers (80 percent) cultivating low-yield staple food crops on small plots with minimal use of modern inputs (Rapsomanikis, 2015). Additionally, post-harvest losses in sub-Saharan Africa alone are worth over USD 4 billion each year (Africa Competitiveness Report, 2015). Among other things, the high percentage of smallholders and post-harvest losses make the continent's food production, supply, and consumption systems function sub-optimally. African countries import staple food valued at about USD 25 billion annually (Byerlee et al. 2013). Value addition and crop processing of agricultural commodities are also quite low across the continent (Africa Renewal Online, 2014).

In this context, agribusiness and value chain development could play a major role in transforming African agriculture. Success in trade of processed agricultural products, relative to competitors in the international markets, could help farmers increase their income and improve livelihoods. Increased competitiveness would also push farmers to innovate and find ways to increase their productive capacity. Even though some African countries have been able to develop competitive value chains, the majority of them have a long way to go. Many studies argue that, while farm level agricultural output in African countries is competitive, the opportunity for value-addition is quite constrained (Esterhuizen, 2006; Sefoko et al., 2008). While there have been several efforts in measuring agribusiness competitiveness, they have been restricted to country-specific or value chain-specific analysis. The World Bank's efforts in measuring the *Enabling the Business of Agriculture (EBA)* has developed a cross-country measure on the business environment for agriculture; however, it focuses on measuring the extent of regulations and laws for agribusiness. Agribusiness competitiveness is a broader concept and depends on the productivity and efficiency of agricultural value chains. While increasing

agribusiness competitiveness of developing countries is key to the growth of their economies, a number of questions arise with this issue. What makes agribusiness competitive in a country? How does it relate to food security and poverty within the country? How can we measure agribusiness competitiveness? How can policymakers use measures of agribusiness competitiveness for strategic decision-making? These are some questions that we address in this chapter. However, in order to understand competitiveness in the context of Africa, it is important to first measure it.

The objective of this chapter is to develop an indicator for agribusiness competitiveness that enables objective comparison across countries and time. This would also help policymakers to strategically make decisions on value chain development. Applying it to the African context, we rank countries on their agribusiness competitiveness scores, and suggest ways in which their position can be improved.

The first section reviews the definitions of competitiveness and discusses how agribusiness competitiveness can bring about agricultural transformation, and therefore structural transformation. The second section discusses the existing measures of competitiveness and discusses their applicability to agribusiness. In the third section, we describe our measure for agribusiness competitiveness and rank African countries. In the final section, based on the rankings we summarize the opportunities and challenges faced by African countries in increasing its competitiveness, and conclude by giving policy recommendations.

Conceptual Framework

In this section, we present our conceptual framework, which forms the basis for our analysis. Through the framework, we show the theoretical relationship between agribusiness competitiveness, agricultural transformation, and structural transformation. We argue that competitiveness of the agricultural sector is an important ingredient in enabling transformation of a country. Once the potential of the agricultural sector is reached, it gives a solid base to grow the manufacturing and services sector, allowing for a smooth transition to economic prosperity.

Currently, due to the large number of smallholder farmers, subsistence agriculture is the mainstay of the majority of the African agricultural sector. These farmers usually have few resources and use traditional technology with high level of manual labor. This leads to low productivity, low agricultural yields, and a low standard of living. Subsistence farmers are often the most vulnerable to weather changes and fall in and out of poverty throughout the year. Along with this, African food systems are also experiencing a 'Quiet Revolution' in its food supply chains, with increase in the number of agribusiness enterprises across the continent. Several examples, such as Karuturi Global Limited for production and export of cut roses from Kenya and Ethiopia, Bakhresa grain millers in Tanzania, Pioneer Foods Group selling cereals and juice products in South Africa, and Zartech chicken producers in Nigeria, stand to testify the success of agribusiness enterprises in Africa (Badiane & Makombe, 2015). With increasing urbanization and creation of a large middle class, the potential for agribusiness growth is enormous. Further, Diao, Hazell, and Thurlow (2010) argue that, "there is little evidence to suggest that these (African) countries can bypass a broad-based agricultural revolution to successfully launch their economic transformations". In fact, the authors show that growth in the industrial sectors is unlikely to be substantial or inclusive for most African countries. Similarly, in the context of South Asia too, currently agribusiness accounts for a third of the GDP and has the potential to almost double in the next 15 years (Chodavarapu, Giertz, & Jaeger, 2016). Zooming in further, Yogesh and Chandrashekar (2014) argue that low productivity and post-harvest losses are key constraints to improving the agribusiness competitiveness in India. In order to identify country and region-specific challenges to improving agribusiness potential, there is a need for a structured comparative analysis. The framework presented in this section is a step in that direction.

Since agricultural growth cannot be bypassed, transformation of the agricultural sector is essential. Hence, transformed agriculture is characterized by specialized production, technology intensive practices, and commercial farming systems. We argue that for agricultural transformation, a focus on agriculture competitiveness is a must. Countries should leverage returns from agricultural products that they have a comparative advantage in producing. If many other countries can produce the same

agricultural product, the home country should invest in developing its value chain for processing or using such agricultural produce for making other products. Another option in this case could be to export surplus agricultural produce to other countries that have competitive value chains for it. This would help countries to specialize in products they are good at producing, and import the others to remain food secure. A strategic focus on building competitiveness is important very important for countries to make these decisions. Further, a focus on competitiveness helps to achieve other outcomes, such as improving productivity, improving livelihoods, and stability in markets, which facilitate agricultural transformation. Additionally, productivity and competitiveness require efficient allocation of resources. Finally, focusing on competitiveness also forces countries to maintain internal peace collectively, for stability of international markets. Hence, agriculture competitiveness needs to be a key area of focus to achieve agricultural transformation.

Further, as economies move from agriculture to industry, and finally to a service sector-driven economy, there is a need to improve the competitiveness of its agribusiness sector. Developing agribusiness competitiveness provides a natural progression towards development of the industrial and service sector. As most developing countries are agriculture-based economies, Figure 7.1 shows how structural transformation takes place and what the role of competitiveness plays in enabling it. The figure also explains the transition countries experience to show the role of agriculture and agribusiness competitiveness in this process. As shown, a country starts from subsistence agriculture, where it experiences low agricultural yields, use of traditional technology, and a low standard of living. In order to experience agricultural transformation, it is important for the country to gain agricultural competitiveness. This stage is characterized by specialized production technology, institutional reform, and commercial farming systems. During this stage, countries typically have a few agricultural products that can face international competition. For further development, countries would need to increase their agribusiness competitiveness in order to experience structural transformation. At this stage, countries tend to move beyond agriculture, towards manufacturing and services. During this phase, agribusiness development plays an important role in paving way for the manufacturing sector, hence

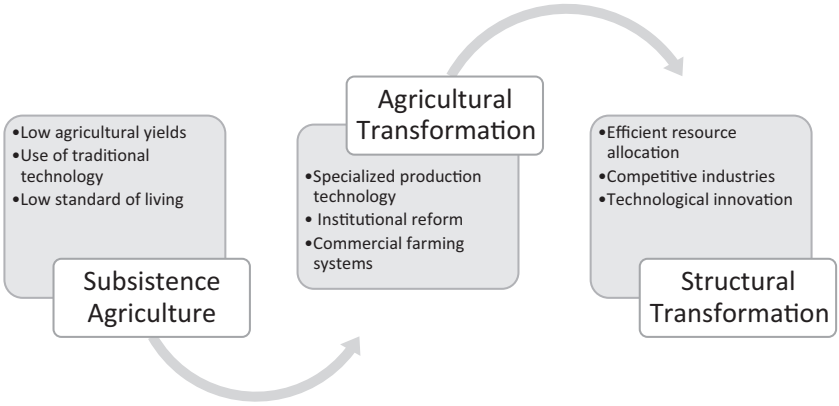

Fig. 7.1 Competitiveness and structural transformation. Source: Authors compilation

enabling structural transformation. In this figure, we show the transformation pathway of economies and explain the role of competitiveness in the process. Agriculture and agribusiness competitiveness are important facilitators of economic transformation from one stage to another. It must be noted that competitiveness of the agricultural sector is an important facilitator of the transformation process, and by no means the only factor enabling it.

In Africa, most countries are at the first stage and second stage described in the framework. This means there is both scope and need for the agricultural sector to develop more, before African countries can experience structural transformation. It should be noted that the same country can be at different stages for different agribusiness products. For instance, Kenya's flower agribusiness is competitive but its dairy value chain is not. Measuring the agribusiness competitiveness can help policy makers understand the gaps in the agricultural sector, and highlight the areas in which there is potential for growth. This framework provides an understanding of the pathway towards structural transformation, and forms the basis of our analysis. This conceptual framework describes the importance of agribusiness competitiveness; however, in order to apply it we need to develop a way to measure and compare competitiveness status of

different countries. In the next section, we review methods of measuring competitiveness and develop our own measure of agribusiness competitiveness and apply it to the African context.

Methods for Measuring Competitiveness

Competitiveness lacks a universally accepted definition; hence its measurement remains a contentious issue. Siudek and Zawojska (2014) give a comprehensive overview of the various methods of measuring competitiveness at both the macro and micro level. Competitiveness can be measured as a static concept or a dynamic one (WEF, 2015). As a static concept, it is measured at a point in time, and in its dynamic form it involves assessment of competitiveness over time. Additionally, competitiveness indicators can be positive or normative. While positive indicators are based on observable evidence, normative indicators involve some level of value judgement. Similarly, competitiveness measures can be ex-post or ex-ante. Ex-post measures are based on past performance and include, market share, current account balance. Ex-ante measures determine the capacity for competitiveness on the basis of technology, prices, and cost (Siudek & Zawojska, 2014). Hence, competitiveness measurement involves many different approaches that vary with the unit of analysis. There is a range of indicators devised to measure competitiveness; however, their comparison remains a matter of serious debate.

Since our concern is agribusiness competitiveness in this chapter, it is important to have a supply chain focus. This means that competitiveness should be measured at every stage at which value is added to the agribusiness product to determine a country's relative advantage (Esterhuizen, 2006). There are a number of instances where, at one stage of the supply chain, the agricultural product may be competitive; however, at another stage the same product may be less competitive. Below we present some of the traditionally used methods of measuring competitiveness and discuss their application to the agribusiness context. The macro and micro level measures presented below have been adapted from a forthcoming publication by Jambor and Babu (2016).

According to them, competitiveness measures can broadly be of two types: micro or firm-level competitiveness, and macro or economy-level competitiveness.

Micro Level Measures

Traditional financial indicators are the simplest and the most straightforward way to measure firm-level competitiveness. Some popularly used financial indicators include: profitability growth, return on assets (ROA), return on equity (ROE), earnings before interest, taxes, and depreciation and amortization (EBITDA). While these indicators give an idea of the competitiveness of firms, they indicate information only about the finances of the firm.

Measures related to production costs are another group of popular micro level competitiveness measures. One such measure is the domestic resource cost (DRC) ratio, which compares the opportunity costs of domestic production of a product with its associated value added (Gorton & Davidova, 2001). Other measures in this category include, bilateral resource cost (BRC), private cost ratio (PCR), and social cost–benefit ratio (SCB) indices to measure firm level competitiveness. Unit labor cost (ULC) is another widely used measure in this category. It is defined as the cost of labor required to produce one unit of output (Felipe & Kumar, 2011). More broadly, cost ratios assess cost differentials amongst firms and depend on the structure and strategy of the firm (Latruffe, 2010). Masters and Winter-Nelson (1995) provide more details on these measures and discuss other such measures in their research.

Profitability measures are another group of firm level competitiveness measures. Although the way profitability is defined varies on the context, Harrison and Lynn Kennedy (1997) suggest that profitability and competitiveness are closely related. All the micro level methods are applicable to agribusiness competitiveness of a few firms. Using them for cross-country comparison would require a large investment in data collection, which is outside the scope of this chapter. Hence, for the purpose of our analysis, we use macro level measures of competitiveness, which are described in the next subsection.

Macro Level Measures

International trade indices are the most common measures used for macro level competitiveness analysis. Some examples of such measures include terms of trade, unit values, trade concentration, net export index, and so on. Since these measures are very simplistic, other methods are preferred over these.

Revealed comparative advantage (RCA) is the most widely used measure for competitiveness of countries. The measure calculates a country's export share of a single commodity to all commodities compared to that of a group of countries. The measure can easily be applied to the agribusiness sector by restricting the pool of commodities chosen to include only those produced by the agribusiness sector. In this case, it would also be important to segregate by the value added in each stage of production. Balassa (1965) expressed this as follows:

$$\text{RCAij} = \left(\frac{X_{ij}}{X_{it}}\right) \Big/ \left(\frac{X_{nj}}{X_{nt}}\right) \tag{1}$$

where, X stands for export, i for a given country, j for a given product, t for a group of products and n for a group of countries. To interpret the measure, one must note that if the RCA index is greater than 1, the country has a comparative advantage in a given product group.

The issue with this index is that it neglects the effects of economic policies, by focusing solely on the export values. However, since trade structure is distorted by various government interventions and trade limitations, the index becomes less revealing. Further, the measure yields asymmetric values, which extends from one to infinity if a country has a comparative advantage, and between zero and one in the case of a disadvantage, resulting in an overestimation of the sector's relative weight.

Vollrath (1991) suggested three different specifications of this index to overcome these problems. The specifications are, the index of relative import advantage (RMA), the index of relative trade advantage (RTA), and the index of revealed competitiveness (RC). The RMA index is

similar to the RCA, except that it takes imports rather than exports into account:

$$\text{RMAij} = \left(\frac{M_{ij}}{M_{it}}\right) \Big/ \left(\frac{M_{nj}}{M_{nt}}\right) \tag{2}$$

where, M stands for imports, i for a given country, j for a given product, t for a group of products and n for a group of countries. For interpretation, contrary to RCA, the index of RMA less than 1 indicates higher competitiveness.

The second index proposed by Vollrath (1991) takes the difference between (1) and (2), and is expressed as follows:

$$\text{RTAij} = \text{RCAij} - \text{RMAij} \tag{3}$$

Here, a positive value for RTA shows a comparative advantage, while a negative value shows a disadvantage.

The third index proposed by Vollrath (1991) takes the logarithm of revealed export advantage (RXA) and RMA and difference between the RCA and RMA, resulting in a symmetric index of revealed competitiveness (RC), expressed as follows:

$$\text{RCij} = \ln \text{RCAij} - \ln \text{RMAij} \tag{4}$$

In this, a positive value for RCA means revealed competitiveness and this indicator, compared to Vollrath's other indexes, is symmetric to the pole.

Dalum, Laursen, and Villumsen (1998) developed another way to treat the asymmetric values of the RCA to create the revealed symmetric comparative advantage (RSCA) index, which is expressed as follows:

$$RSCA_{ij} = \left(RCA_{ij} - 1\right)/\left(RCA_{ij} + 1\right) \tag{5}$$

The RSCA takes values between −1 and 1 and between 0 and 1 indicating a comparative export advantage and a disadvantage respectively. Similarly, Yu, Cai, and Leung (2009) also transformed the original index

to treat asymmetric values creating a normalized revealed comparative advantage (NRCA) index, which is defined as follows:

$$NRCA_{ij} = \frac{X_{ij}}{E_i E_j X_{ij}} - \frac{\left(E_i X_{ij}\right)\left(E_j X_{ij}\right)}{\left(E_i E_j X_{ij}\right)^2} \tag{6}$$

Here, X_{ij} represents actual exports and $\left(E_i X_{ij}\right)\left(E_j X_{ij}\right)$ stands for the comparative-average-neutral level in exports of commodity *j* for country *i*. For positive NRCA values, the country would have a comparative advantage, and for negative values, a disadvantage.

Lastly, some economic literature interlinks the model of revealed comparative advantages with new streams of trade theories. An example of one such approach was developed by Gehlhar and Pick (2002). This approach distinguishes price and quality competition by taking the difference between export and import unit values.

Moving to the next group of measure, the theory of constant market shares (CMS) helps to measure competitiveness at the macro level. The method helps to analyze trade trends in order to determine factors affecting a country's export performance. The basic presumption underlying the CMS model is that a country's export share in the market remains constant at the same level of competitiveness (Ahmadi-Esfahani, 2006). Consequently, any change in a country's exports can be traced back to changes in the composition of competitors and/or competitiveness.

Another group of macro level competitiveness measures focuses on prices of goods being imported and exported. Some of these indices do not directly measure competitiveness but have an influence on it. The most popular index in this category is the real exchange rate (RER), is defined as follows:

$$\text{RER} = \frac{p^T}{p^{NT}} \tag{7}$$

where, p^T is the price index of tradable commodities and p^{NT} is the same for non-tradable ones. However, it should be noted that if the demand for currency of the competitive country is high, it strengthens that cur-

rency's exchange rate according to Brinkman (1987). To overcome this issue, the real effective exchange rate (REER) is often used. This is the nominal effective exchange rate divided by a price deflator or index of costs. This measure is easy to interpret—if REER increases, exports (imports) become more expensive (cheaper), indicating lower competitiveness (Latruffe, 2010).

Besides of all these, the widely used competitiveness indices at the macro level come from world competitiveness reports. IMD's World Competitiveness Yearbook (WCYB) is an example of one such report. Published annually since 1989, the WCYB ranks and investigates the ability of nations to create and sustain a competitive economic environment. The method groups 250 measures of competitiveness into eight different categories; namely, domestic economy, internationalization, government, finance, infrastructure, management, science and technology, and people. It then measures country performance on each dimension. This report also helps in tracking competitiveness of nations over the long term.

Another well-known source of global competitive positions is the World Economic Forum's Global Competitiveness Report (GCR). The report assesses the competitiveness of 144 economies, across different aspects captured in 12 pillars (indicators), relating to: institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation. The first four pillars are essential for factor-driven economies, pillars 5–10 are important for efficiency-driven economies, while the rest are the engines of innovation-driven economies. WEF assumes that economic development of developing countries is factor-driven where well-functioning institutions, infrastructure, macroeconomic environment, and health and primary education (pillars 1–4) are key for future growth. In the next stage when incomes and prices rise, quality and efficiency become engines of growth, so factors such as higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, and market size matter (pillars 5–10). In the final phase, dif-

ferentiation and innovation helps in keeping standards of living high, so factors such as business sophistication and innovation (pillars 11–12) prove to be central to economic development.

Although IMD's and WEF's approaches similar identical results, there are a number of differences between them. Loo (2012) argues that differences exist in terms of definition, measurement and objective of the measures. While the WEF and IMD method of calculating, competitiveness is comprehensive, there is a need to track agribusiness competitiveness more specifically. For the agribusiness sector, the RCA method is the most commonly used for measuring competitiveness of individual subsectors. While there have been a number of studies assessing competitiveness of particular value chains, there is very little done to measure overall agribusiness competitiveness of nations. We use composite indicators, such as IMD and WEF approaches, and apply them to the agribusiness sector as shown in the next section.

Measuring Agribusiness Competitiveness

The Global Competitiveness Index (GCI), developed by WEF is the most comprehensive and widely used multidimensional measure of competitiveness. It comprises dimensions such as institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation. This measure of overall competitiveness is applicable to agribusiness sector because it indicates the general health of the economy. However, the measure at best gives a broad picture. There is a need to specifically measure competitiveness of the agribusiness sector to enable policy makers understand the how resources should be allocated across different value chains. This indicator is more useful in developing countries that are agrarian in nature.

As shown in the sub-sections above, measuring agribusiness competitiveness across countries and over time is tricky with the exiting measures of competitiveness. In this paper, we present a method to measure competitiveness, which brings together various existing measures and depicts

Table 7.1 Measuring agribusiness competitiveness in Africa

S. no.	Variable	Indicator	Data required	Data source
1	Competitiveness	Global Competitiveness Index	Score on the GCI scale from 0 to 5	World Economic Forum
2	Agriculture competitiveness	Ballasa Index	Exports and imports of a country	Jambor and Babu (2016)
3	Ease of doing business	Ease of Doing Business Index	Getting credit; Electricity; enforcing contracts	World Bank

Source: Authors' compilation

an accurate picture of the relative competitiveness position of countries. In our measure, we combine three measures, the Global Competitiveness Index, Agriculture Competitiveness, and the Ease of Doing Business Indicators (Table 7.1).

Our indicator takes a simple average of the normalized score of each country to come to a measure for competitiveness. A higher number would indicate higher agribusiness competitiveness. The Global Competitiveness Index is a comprehensive measure, which combines 114 indicators that are grouped into 12 pillars, namely, institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation. The index gives a score to countries from zero to five, with higher number indicating more competitiveness. Further our measure includes the Ballasa Indices, calculated by Jambor and Babu (2016) using World Bank WITS software with 739 agri-food products for the period of 1991 to 2014. This index too indicates higher competitiveness as the number increases. Finally, we use the Distance to Frontier of the Doing Business Index, which is an index created by the World Bank Group. Higher rankings (a low numerical value) indicate better, usually simpler, regulations for businesses and stronger protections of property rights. We take these three scores, normalize them and take a simple average, giving each of them equal weight. The aggregate score of all African countries using this data is shown in Table 7.2.

Table 7.2 Measures of agribusiness competitiveness among African countries

Country	Global competitiveness review (WEF)	Agricultural competitiveness (Jambor & Babu, 2016)	Doing business (overall DTF)	Normalized comp	Normalized_ agricomp	Normalized_ doingbus	Agribusiness competitiveness
DRC	n/a	0.16	38.14		0.08	0.22	0.30
Angola	n/a	n/a	39.64			0.25358347	
Chad	3	n/a	38.22	0.125		0.22365093	0.35
Djibouti	n/a	n/a	44.25			0.35075885	0.35
Central African Republic	n/a	0.28	36.26		0.17	0.18	0.35
São Tomé and Príncipe	n/a	0.21	45.5		0.11538462	0.37710793	0.49
Mauritania	3	0.22	44.74	0.125	0.12307692	0.36108769	0.61
Niger	n/a	0.39	46.37		0.25	0.40	0.65
Zimbabwe	n/a	0.44	48.17		0.29230769	0.43338954	0.73
Cape Verde	3.7	0.29	n/a	0.5625	0.17692308		0.74
Burkina Faso	n/a	0.54	50.81		0.37	0.49	0.86
Burundi	3.1	0.36	48.82	0.19	0.23	0.45	0.87
Comoros	n/a	0.64	48.22		0.44615385	0.43444351	0.88
Guinea	2.8	0.73	45.54	0	0.51538462	0.3779511	0.89
Togo	n/a	0.71	49.03		0.5	0.45151771	0.95
Equatorial guinea	n/a	n/a	40.03			0.26180438	
Eritrea	n/a	n/a	27.61			0	
Gabon	3.8	0.06	45.99	0.625	0	0.38743676	1.01
Nigeria	3.5	0.38	44.69	0.44	0.25	0.36	1.04
Benin	3.5	0.38	47.15	0.44	0.25	0.41	1.10
Mozambique	3.2	0.46	53.98	0.25	0.31	0.56	1.11

(*continued*)

Table 7.2 (continued)

Country	Global competitiveness review (WEF)	Agricultural competitiveness (Jambor & Babu, 2016)	Doing business (overall DTF)	Normalized comp	Normalized_ agricomp	Normalized_ doingbus	Agribusiness competitiveness
Mali	3.4	0.39	50.81	0.38	0.25	0.49	1.12
Guinea-Bissau	n/a	n/a	40.56			0.27297639	
Cote D'Ivoire	n/a	n/a	n/a				
Algeria	4	0.07	45.72	0.75	0.01	0.38	1.14
Gambia	3.5	0.4	48.99	0.4375	0.26153846	0.45067454	1.15
Liberia	3.4	n/a	40.19	0.375		0.26517707	
Libya	n/a	n/a	31.77			0.08768971	
Malawi	3.2	0.63	51.03	0.25	0.44	0.49	1.18
Cameroon	3.7	0.48	44.11	0.56	0.32	0.35	1.23
Madagascar	3.3	0.77	45.68	0.31	0.55	0.38	1.24
Seychelles	3.9	0.1	61.05	0.6875	0.03076923	0.70489039	1.42
Ghana	3.6	0.45	57.69	0.50	0.30	0.63	1.43
Ethiopia	3.7	0.77	49.73	0.56	0.55	0.47	1.57
Cote d'Ivoire	3.9	0.6	50.93	0.69	0.42	0.49	1.59
Zambia	3.9	0.34	60.5	0.69	0.22	0.69	1.60
Senegal	3.7	0.93	48.57	0.56	0.67	0.44	1.67
Lesotho	3.7	0.72	57.69	0.5625	0.50769231	0.63406408	1.70
Tanzania	3.6	0.99	51.62	0.50	0.72	0.51	1.72
Botswana	4.2	0.29	64.98	0.875	0.17692308	0.78773187	1.84
Uganda	3.7	0.93	56.64	0.56	0.67	0.61	1.84
Tunisia	3.9	0.7	64.88	0.69	0.49	0.79	1.97
Sierra Leone	3.1	n/a	49.69	0.1875		0.46543002	
Somalia	n/a	n/a	n/a				
Namibia	4	0.77	60.17	0.75	0.55	0.69	1.98

(*continued*)

Table 7.2 (continued)

Country	Global competitiveness review (WEF)	Agricultural competitiveness (Jambor & Babu, 2016)	Doing business (overall DTF)	Normalized comp	Normalized_ agricomp	Normalized_ doingbus	Agribusiness competitiveness
South Sudan	n/a	n/a	34.78			0.15113828	
Sudan	n/a	n/a	46.97			0.40809444	
Swaziland	3.4	n/a	59.1	0.375		0.66378583	
Egypt	3.7	1.36	54.43	0.56	1.00	0.57	2.13
Kenya	3.9	1.12	58.24	0.69	0.82	0.65	2.15
Rwanda	4.3	0.59	68.12	0.94	0.41	0.85	2.20
Mauritius	4.4	0.36	75.05	1	0.23076923	1	2.23
Morocco	4.2	0.98	64.51	0.88	0.71	0.78	2.36
South Africa	4.4	1.17	64.89	1.00	0.85	0.79	2.64

Source: Authors' compilation

We are aware that the methodology developed and used in this chapter has a number of limitations. Firstly, the Global Competitiveness Index and the Ease of Doing Business Index have several overlaps on measure of infrastructure, financial market development, labor market efficiency, and the macroeconomic environment. However, since the aggregated numbers serve as a tool to rank countries, this overlap should not make a difference to our results. Secondly, the trade data used in the Balassa index is not completely reliable. Countries often report trade data classified in different ways, making the comparison of aggregate values less precise. Furthermore, countries also tend to under- and over-report their trade values, which often do not coincide with their trading partners. However, based on the literature review and previous empirical work, our results are plausible.

Results and Discussion

In this section, we describe the agribusiness competitiveness status of African countries based on the scores we generated using the methodology described above. The results reveal some interesting insights. Countries can be classified into high, medium and low agribusiness competitiveness. Countries that have low agribusiness competitiveness include Mauritania, Burundi, and Guinea. These countries have some serious issues in their agricultural sector. They are often in a resource crunch and have a large number of smallholder farmers with very limited resources. These countries require the government and international community to place greater focus on them. For instance, 90 percent of Burundi's farmers practice subsistence agriculture. In fact, competitiveness is big issue in the country as it ranks amongst the lowest in the world. With good geographic conditions and a suitable climate to production, the country has the potential to be a strong participant in the regional agricultural market. Yet, after years of conflict, the country faces important productivity, infrastructure and institutional challenges that continue to undermine the development of a market-oriented sector, and agriculture remains a primarily subsistence activity, dominated by smallholders with poor knowledge of modern agricultural practices and weak

connections to the formal economy. All these constraints have limited the possibility of the country to participate in the global agribusiness value chain. However, Burundi is experiencing slowly rising incomes, growing domestic demand for foodstuffs and a need to formalize the country's economy, placing pressure on the agricultural sector to modernize and organize to create productive, off-farm employment opportunities, generate revenues and—importantly for the short term—contribute to the country's food security. Countries with low agribusiness competitiveness have similar features to Burundi.

The second category of our classification includes countries with medium agribusiness competitiveness. While most countries fall in the medium category, some are better off than others. Countries like Nigeria, Mozambique, Malawi, Madagascar, and Ghana fall in the medium-low agribusiness competitiveness category, whereas, Ethiopia, Cote d'Ivoire, Zambia, Senegal, Tanzania, Botswana, Uganda, Tunisia, and Namibia fall in the medium-high category. Countries in the medium-low category are competitive in a few agribusinesses, but have potential to increase within that subsector and to other products. For instance, Ethiopia is competitive in cut flowers, but looking at the international market and competition with Kenya, there is need to improve the quality of its production and packaging. Countries in the medium-high category perform very well in the agribusiness they are competitive in, but have the potential to diversify and increase profitability. For instance, even though Botswana is competitive in beef production, it has immense potential to increase the sector profitability by reduction in feed prices and other input costs (Bahta & Baker, 2015). Further, nations in this category need to transform their agricultural sector by increasing mechanization and commercialization further. Attracting greater foreign investment would also help in giving countries in the medium category a bigger push.

Future increases in agricultural productivity must come from intensification rather than exploitation of additional natural resources. Agricultural systems must use natural resources more efficiently and repair past damage to ecosystems. Since most countries also have low or medium agricultural productivity, gains from agribusiness competitiveness will be limited. Productivity gains through increased mechanization

and commercialization of agriculture are important for countries in these categories. Most countries with low agricultural productivity show low agribusiness competitiveness too. However, it is important to note the case of countries such as Rwanda, Kenya, Morocco, and Nigeria. These countries show high agribusiness competitiveness with low agricultural productivity. This is plausible as agricultural productivity accounts for all the crops grown in the country, using a given amount of land and labor resources. That said, one cannot deny that two concepts are closely interlinked. Low productivity in the agricultural sector discourages private investment and value chain development for certain crops. For instance, Kenyan wheat production is one such example. Due to low agricultural productivity, the country relies on import of wheat, limiting the scope for agribusiness development for the wheat value chain. Similarly, low productivity of indigenous crops also provides an opportunity for agribusiness development.

Finally, countries that stand out in the continent include Egypt, Kenya, Rwanda, Mauritius, Morocco and South Africa, with high agribusiness competitiveness. High agribusiness competitiveness has changed the agricultural sector in these countries immensely in the past decade. These countries are making significant gains from trade with European countries. Kenya is highly competitive in horticulture and dairy and Rwanda in coffee and tea production. For these countries, it is important to ensure that they sustain their competitiveness position and invest in innovation to diversify into other agribusiness ventures. It only means that relative to the other African nations, they are better off. For instance, Esterhuizen (2006) argues that South Africa's agribusiness has potential to increase in a sustained manner if its business environment is dynamic, stimulating, and intensely competitive.

Through the typology presented above we find that most African nations have medium agribusiness competitiveness. While some value chains, such as dairy, horticulture, coffee, and tea have had a major role to play in improving agribusiness competitiveness of certain countries, low agricultural productivity keeps the gains limited. Box 7.1 focuses on the tomato value chain in Kenya and presents an application of our results.

Box 7.1 Case Study: Improving the Competitiveness of the Tomato Value Chain in Kenya

In Kenya, tomatoes play a critical role in meeting domestic food and nutritional requirements, generating income and foreign exchange earnings, and creating employment. Despite this importance, the tomato industry faces myriad constraints along the product value chain. These include agronomic constraints, such as incidence of pests, diseases, and physiological disorders (cracking, sunburn, or scald); institutional constraints, such as poor postharvest technologies that hasten perishability; and poorly organized rural and urban market infrastructure that causes unpredictable price fluctuations. These constraints adversely affect the production and marketing of quality tomatoes. According to Byerlee and Kelley (2004), an estimated 60 percent of Africa's rural population live in areas with good agricultural potential but face poor market access for agricultural produce. Therefore, improving market infrastructure by providing better and more affordable transportation is necessary for enhancing commercialization in Kenya (Shilpi & Umali-Deininger, 2008). Kenya's entire tomato production is marketed within and around East African countries, with nothing left for the international market. The key constraints that cause the dismal export market of Kenyan tomatoes include poor quality, poor health standards, and a constant supply of relatively high quantities of the commodity in western markets (Humphrey, 2007). If the tomato value chain were to be developed, Kenya could increase its foreign exchange revenues through export of canned tomatoes, tomato paste, and other tomato products.

Source: Geoffrey, Hillary, Kibe, Mariam, and Mary (2014).

Policy Implications

The agribusiness competitiveness indicators developed in this chapter can help policymakers in classifying and ranking countries based on their performance. The policy implications that emerge from our results are discussed in this section.

Firstly, most African countries fall in the low to low-medium category of agribusiness competitiveness. This means that there is scope for countries to gain from increasing their competitiveness and there is a need for governments and development partners to increase investment and funding towards it. Increased agribusiness competitiveness can not only increase income for farmers and owners of agribusiness, but can also help in addressing food security and natural resource sustainability issues of the country.

Secondly, there is a need to improve the general business environment in African countries, in order to increase investment from private sector and their involvement in agribusiness. A stable policy and a regulatory and legal framework that minimizes corruption and allows businesses to run in a fair and equitable manner is needed. These are major bottlenecks that restrict the growth of the agricultural sector and prevent the private sector from entering new areas of agribusiness.

Thirdly, there is a need to increase capacity at the individual, institutional and system levels for improving overall competitiveness of the agricultural sector and more so in the agribusiness sector. Key actors and institutions in the agribusiness sector need to be identified through a comprehensive capacity needs assessment. This would help in identifying capacity gaps and areas in which the government could increase its investment for strengthening the value chains.

Fourthly, physical capacity in terms of infrastructure (roads and transportation), timely availability of inputs, and market access are also major bottlenecks in the African agricultural sector. Lack of infrastructure for transporting agricultural produce cost-effectively excludes smallholder farmers in particular, from gains that could be obtained from increased competitiveness.

Finally, the measures developed in this chapter to rank the countries based on their agribusiness competitiveness is just the beginning in creating a system of effective comparison between the countries and guiding the process and to guide the process of setting priorities among them. Deeper analysis of in-country factors that are context- and commodity-specific should be undertaken for guiding country-specific processes for strengthening the competitiveness of their agribusiness sectors.

Conclusion

In this chapter, we explored how African countries are placed in terms of their agribusiness competitiveness. We find that most countries in the continent fall in the low to medium agribusiness competitiveness category, showing major potential to improve and gain from improved competitiveness.

Policymakers often focus on agricultural productivity and food security issues in developing countries, with little importance given to developing the competitiveness of agribusiness. In this chapter, we argue that African countries have a very high potential to transform their agricultural sector by increasing the competitiveness of agriculture. Further, agribusiness competitiveness can help in accelerating structural transformation. A robust and enabling policy framework will help remove existing constraints on agro-industrialization and to encourage investments. African countries' governments should ensure that the right combination of agricultural, industrial and trade policies are in place to encourage sufficient production of raw material as well as the efficient distribution of produced products. They should strategize and encourage production and processing of agricultural products, for which the country has the potential for gaining an absolute advantage. There is a need to ensure that rights to land and natural resources are recognized and enforced to encourage productive use of land and boost investor confidence.

African countries should pursue new and alternative sources of funding such as sovereign funds and domestic resources, creating incentives for the private sector to make investments to diversify funding channels for initial investment in developing agribusiness. Finally, there is a need for countries to leverage public-private partnerships to finance agribusiness and facilitate capacity building through technical and entrepreneurial skills training.

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8

Why Are So Many African Companies Uncompetitive on the Global Stage? Insights from the Global Airline Industry

Joseph Amankwah-Amoah

Introduction

Over the past century many companies domiciled in the wealthiest nations have developed a sustainable competitive advantage across an array of industries and sectors (Hennart, 2012; *The Economist*, 2008). In recent years, this dominance has been challenged by firms originating from emerging economies, including Brazil, China, India, Indonesia and Turkey (see *The Economist*, 2008; Thomas, Eden, Hitt, & Miller, 2007). These firms often possess capabilities and resources such as a low-cost base and cutting-edge technologies, which enable them to outclass their counterparts from developed markets when entering other emerging markets (Lall, 1983). Despite being situated in a continent dubbed "resource-rich" with an abundance of natural resources and commodities (Ika & Saint-Macary, 2014; Kaplinsky, McCormick, & Morris, 2007), many African companies have not only failed to fully capitalise on the

J. Amankwah-Amoah (✉)
Kent Business School, University of Kent, Canterbury, UK

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location advantage to capture domestic opportunities, but also lost out to Western and Asian rivals, both on the African and global stages (Clark, 2014).

Recently, however, the lack of competitiveness of many African airlines has become more pronounced in the global airline industry when we look at the fact that around 80% of intercontinental traffic between Africa and the rest of the world is controlled by non-African airlines (Clark, 2014; *The Economist*, 2016c). This means that African airlines accounted for only 20% of passengers on inter-African routes (*The Economist*, 2016c). This is further exemplified by the fact that the top airlines in terms of capacity on flights between Western Europe and Africa are Air France, British Airways and KLM (Clark, 2014). Although EgyptAir, Royal Air Maroc and South African Airways are among the top airlines operating in Africa, a large part of the inter-African market has been carved out by non-African airlines largely due to the lack of competitiveness of many African airlines (Clark, 2014). By the same token, the African and Middle Eastern routes are mainly dominated by Qatar Airways and Etihad Airways with EgyptAir exerting pressure on their dominance (Clark, 2014). The historical underperformance of many African airlines in recent decades has been an issue of growing concern amongst public policymakers, governments and the African Airlines Association.

In 2016, the International Air Transport Association (IATA) projected the airline industry's profits growth from $35.3 billion in 2015 to $39.4 billion by the end of 2016 (IATA, 2016a). Although all regions of the world are expected to make significant contributions to the $4.1 billion improvement over 2015 profits— with North America accounting for around $22.9 billion of the profit—surprisingly, African carriers were projected to generate an overall loss (−$0.5 billion), which was an improvement on the $700 million lost in 2015 (IATA, 2016a). In sharp contrast with North American, Middle Eastern, Asia-Pacific and European airlines, African airlines have posted overall losses very year from 2012 to 2015 (IATA, 2016b). Although global data indicate that airlines make around $10.42 per departing passenger, this has failed to translate into higher profitability for many African airlines (IATA, 2016a, 2016b). Indeed, the issue of competitiveness of Africa and African firms

in the global economy is anchored in the recent African Union's Agenda 2063 (African Union, 2014).

Although some African companies have emerged at the frontier of global competition, many are largely uncompetitive (Clark, 2014). Indeed, across an array of industries many African firms have often failed to not only capture market share in the global marketplace, but also collapsed and exited their industries (for a review, see Amankwah-Amoah & Debrah, 2010). In spite of the importance of the competitiveness issue, an unanswered question is why so many are uncompetitive in global markets. The assertion that many African firms are unprepared for global competition is no longer a critique but increasingly a reality, which warrants further scholarly attention. The dearth of research is surprising given that the question of why some firms situated in a particular geographical jurisdiction consistently underperform relative to others is at the heart of strategic management and global business strategy research (see Peng, 2014a).

Against this backdrop, the main purpose of this chapter is to address this lacuna in our understanding by examining why so many African airlines underperform on the global stage. Using insights from the global airline industry, a unified framework is advanced to shed light on the underlying factors.

This chapter offers several contributions to strategy and international business research. First, the study integrates insights of the dynamic capabilities perspective (Teece, Pisano, & Shuen, 1997) and institution-based perspective (Peng, 2002) to develop an integrated framework to account for different types of firm performance in the global marketplace. Second, the chapter contributes to international business literature (Peng, 2002, 2014a, 2014b) by explicating how institution-based factors such as protection from competition and slow market reforms can over time create conditions which curtail firms' incentives to improve their competitiveness. Thus, the study extends our understanding of why some companies domiciled in a particular region are often uncompetitive at the global stage.

The remainder of this chapter is structured as follows. In the next section, a review of the literature on the resource-based and institution-based perspectives is presented. This is followed by an examination of the

changes in the airline industry in Africa and factors that have interacted to determine the limited competitiveness of African airlines. The final section presents the theoretical and practical implications of the analysis.

The Dynamic Capabilities and Institution-Based Perspectives: An Integrated Review

The international competitiveness of different firms in different geographical jurisdictions can be explained by the following two theories. First is the institution-based perspective (Peng, 2002), which argues that a firm's ability to compete is shaped by the institutional environment within which they are situated (Peng, Sun, Pinkham, & Chen, 2009). By institutions, we are referring to "the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction" (North, 1990, p. 3). Scholars have indicated that firms' environment can curtail or amplify their access to resources, markets and opportunities (Peng, 2014a, 2014b). It is widely acknowledged that environmental factors, such as government controls, regulations, and legal and political systems shape a firm's ability to compete (Peng et al., 2009). Recent scholarly works have highlighted that these factors influence firms' ability to internationalise to improve their competitiveness (Peng, 2014a; Yamakawa, Peng, & Deeds, 2008).

Another line of research has demonstrated that governments play an instrumental role in creating an atmosphere conducive for firms to innovate and thrive (Doganis, 2006; Peng, 2014a, 2014b). It has also been established that the governments can also initiate and facilitate market reform agendas, which helps indigenous firms to develop cutting-edge capabilities to improve their competitiveness (Doganis, 2006; Koh & Wong, 2005). For nations seeking to occupy a pivotal position at the frontier of global innovation, implementing policies that foster capacity building and firms' competitiveness is essential (Koh & Wong, 2005). Indeed, capacity building and skills formation have been found to be particularly effective in this direction (Debrah & Ofori, 2006; Kamoche, Debrah, Horwitz, & Muuka, 2004). Related to the above is the notion of

institutional advantage, which can be a source of sustainable competitive advantage, rooted in firms' ability to acquire or secure superior resources and institutional support (Li & Zhou, 2010, p. 857). These advantages can be environment-specific including local government support, and access to land and capital (Li & Zhou, 2010; Luo, 2007).

The second stream of research is entrenched in the dynamic capabilities perspective which argues that competitive advantage stems from development, possession and utilisation of unique resources and capabilities (Augier & Teece, 2009; Teece et al., 1997; Wollersheim & Heimeriks, 2016). Broadly speaking, dynamic capabilities refer to the capacity of a firm to build, utilise and reconfigure internal and external competencies to respond to change in the business environment (Teece et al., 1997). Although it has been well established that a mere possession of resources and capabilities does not necessarily translate into an advantage, resources provide a starting point towards developing a sustainable competitive edge (Sirmon, Hitt, & Ireland, 2007; Teece et al., 1997).

A related body of research underlined the importance of human capital such as skills and knowledge in not only firms' ability to fend off global and regional competitors, but also in their ability to exploit market opportunities (Gardner, 2002). Some studies have indicated that the ability to identify and capture market opportunities is also partly rooted in the quality of human capital and resources (Amankwah-Amoah, Ottosson, & Sjögren, 2017; Short, Ketchen, Shook, & Ireland, 2010). The quality of human capital can also serve as a springboard for global expansion. Indeed, prior research suggests that highly skilled individuals can equip organisations to be able to identify and exploit international market opportunities, and respond to threats stemming from the external environment (Amankwah-Amoah & Debrah, 2011b). A growing body of research has suggested that it is rather the ability to utilise, leverage and replenish resources and capabilities that ultimately leads to sustainable competitive advantage irrespective of the geographical context (Sirmon et al., 2007; Sirmon, Hitt, Ireland, & Gilbert, 2011; Teece, 2009). In other words, human capital is viewed as a strategic resource with potential to impact on a firm's bottom line and competitiveness.

According to Teece et al. (1997, p. 514), resources can be "sticky" and "firms are, to some degree, stuck with what they have and may have to

live with what they lack". Although expanding into a new territory can bring knowledge gaps to the fore (Petersen, Pedersen, & Lyles, 2008), firms can over time acquire and utilise resources in unique ways which can help them to close knowledge and expertise gaps, thereby enhancing their competitiveness (Ketchen, Wowak, & Craighead, 2014; Petersen, Pedersen, & Lyles, 2008). One conclusion drawn from the literature indicates that firms originating from emerging markets are often constrained by weak firm-specific factors such as brand and technology, as well as location-specific factors, which limit their ability to out-compete developed country rivals (Peng, 2014a; Rugman & Oh, 2008).

Notwithstanding these important insights, the dynamic capabilities explanations are inward-looking and fail to account for the effects of external factors in shaping the competitiveness of firms (see Peng, 2002). It can be deduced that the ability to leverage firms' internal resources and capability to respond to threats or capture opportunities in the marketplace helps to differentiate star firms from underperforming firms. As shown in Fig. 8.1, there is an array of internal and external factors that help to explain why some firms are more competitive than others. An aspect of the framework is a set of internal factors such as quality of resources and capabilities. The external factors include industry-based and institution-based factors such as competition and regulation.

The Evolution of the Airline Industry in Africa

From 1957, when Ghana became the first sub-Saharan African nation to obtain independence, to 1988, when the first major endeavour towards liberalising African aviation took place, multiple events occurred which have shaped the direction of the aviation industry (see also Amankwah-Amoah & Debrah, 2014a, 2014b, 2016). First was the disintegration of the West African Airways Corporation following the decision by Ghana in 1958 to opt out of the collaborative arrangement, which included Nigeria, Sierra Leone and The Gambia (Amankwah-Amoah & Debrah, 2011a, 2011b). This was followed by the fragmentation of other multination alliance airlines such as Central African Airways and East African Airways on the continent (Mutambirwa & Turton, 2000).

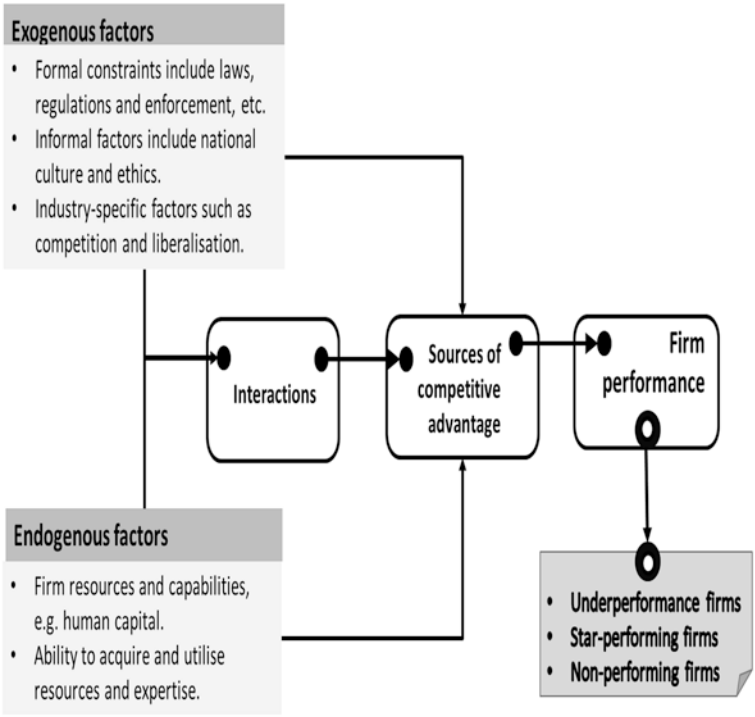

Fig. 8.1 A framework of firm performance in the global marketplace

These fundamentally led to the formation of many weak airlines with limited national resources to support their operations and internationalisation. Yet the adoption of the Yamoussoukro Declaration (YD) at the Yamoussoukro Convention on Market Access for Air Transport in Africa in 1988 as a blueprint for liberalisation on the continent was partly seen as a way of improving the competitiveness of the national airlines, as well as creating conditions for a higher degree of competition to flourish (Njoya, 2015).

By 1999, around 44 nations had signed the agreement to help create an "open-skies regime" to allow for unrestricted frequencies between nations, improved safety standards and international investment in civil aviation (Clark, 2014, p. 8). The nations further reaffirmed their commitment to ease the bilateral restrictions, which were seen to be

curtailing the operations of airlines on intra-African routes (Rivers, 2016). The recent African Union's Agenda 2063 recognised the implementation of the YD and air connectivity as key pillars towards creating a more competitive, efficient and thriving African aviation sector (African Union, 2014). It has been demonstrated that cross-border liberalisation between only 12 African countries can create around five million new passengers, $1.3 billion in annual GDP and 155,000 jobs (Rivers, 2016).

In 2016, the African Civil Aviation Commission noted that around 13 nations had reiterated their commitment towards implementing the YD within a year (Rivers, 2016). A good example of the actions taken by a few nations is the case of the bilateral open-skies deal between South Africa and Zambia, which led to growth in passenger numbers as the price of fares decreased (The Economist, 2016b). At this point in post-colonial African history, the much-heralded shift from reliance on bilateral deals towards full regional liberalisation anchored in the YD had failed to materialise.

Despite the potential benefits that can be accrued from liberalisation and decades having passed, coupled with multiple changes in governments and a shift towards more democratic regimes, the Yamoussoukro Decision remains a working project with no clear plan for full implementation (Njoya, 2015). Although there is an African Union Common African Civil Aviation Policy that encompasses liberalisation, many countries still associate civil aviation with national sovereignty and believe that liberalisation would lead to loss of control (Clark, 2014; Njoya, 2015). Another barrier has been the historical support and protection of flag carriers, which not only distort competition but also hamper the emergence of new airlines (see Clark, 2014; Njoya, 2015). As Rivers (2016, pp. 48–49) puts it so eloquently:

> *Empowering the private sector, although beneficial in the long term, tends to have a disruptive short-term effect on the public sector. Today, the reality is that most African flag carriers still rely on state bailouts and restrictive bilateral agreements to shield them from competition. Open skies would instantly tear down the latter while gradually drying up the former, pushing these parastatals towards either painful restructuring or bankruptcy.*

In a bygone era, when colonial rule was still in existence, identifying a consensus for a common aviation area failed to materialise due to the conflicting interests of the colonial powers. In contemporary Africa, the conflicting interests of nation states and the desire by nations to protect state-owned airlines have become major barriers in the quest for a common aviation area and full liberalisation. Although state ownership does not necessarily equate to poor performance, many state-owned airlines have become an obstacle to liberalisation.

Besides the growing demand for low-cost travel, very few regions of the continent, including North and Southern Africa, have benefited from the emergence of low-cost airlines. The growth of this type of airline has largely been hampered by the failure to implement the YD. In the wake of these obstacles and constraints to expansion, many African airlines have faltered, often attributed to weak sources of competitive advantage. By the end of the first decade of the twenty-first century, many of the promises following the waves of post-African independences from the 1950s–1970s had failed to materialise. Many state-owned airlines established with the purpose of projecting their national image had either collapsed or were in a much weaker competitive position (Amankwah-Amoah, 2015). In the decades leading up to the demise of Africa's iconic airlines, such as Air Afrique and Nigeria Airways in the 2000s, the question of competitiveness of African airlines in the face of global competition had been brewing for some time. These factors culminated in the collapse of the iconic airlines. In recent years, the underexploited aviation market is now seen as a promising avenue for fostering growth and economic development (Pirie, 2014).

Some deregulations of domestic markets have occurred with varying outcomes. To illustrate the effects of the emergence of new low-cost airlines, we turn to the case of Ghana. Prior to the early 2000s, flying in and out of the country was extremely expensive and beyond the reach of the emerging market middle class. However, the emergence of new and expanding airlines including Starbow and Africa World led to lower prices. The *Financial Times* noted that the overall passenger traffic in 2012 on the key Accra–Kumasi route increased by 500% over the previous year for the airlines (Rice, 2012). This created opportunities for businesses and also substantially reduced the journey time, thereby

attracting more customers. One of the advantages enjoyed by such start-up airlines is a lack of or limited involvement of unions in their affairs, thereby creating conditions to act with greater latitude. Although domestic deregulation has occurred in many countries including Nigeria and Ghana, these are insufficient in fostering regional competition and impacting the high price of air transport.

The implementation of the YD has been slow, igniting and mobilising national resources to ensure full implementation would help to energise growth and improve intra-African connectivity (Clark, Dunn, & Kingsley-Jones, 2015). For African countries seeking to compete at the global frontier, liberalisation to ease the restrictions on airlines' internationalisation and access to market opportunities has become a pressing issue. Below, we examine the internal and external environmental factors that have contributed to the limited competitiveness of many African airlines in the global marketplace.

Data Collection and Analysis

The study relied mainly on archival sources. In order to assemble data for this chapter, the industry magazines such as *Airline Business* and *Flight International* were consulted. IATA and Africa Civil Aviation Authority reports on the global industry, in general and Africa, in particular were consulted. Additional sources such as *The Economist, African Businesses*, local newspapers and websites were consulted. In order to shed light on the issue, content analysis was used. By content analysis, we are referring to "a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use" (Krippendorff, 2012, p. 18). It encompasses summarising and comparing insights from the archival data (Smith, 1975).

External Analysis: Industry and Institutions

The external factors include competition, liberalisation and government subsidies.

Government Protection, Subsidies and Competition

In the immediate post-colonial Africa, most nations opted for "socialist philosophies", which emphasised greater involvement of government in aviation, manufacturing and all sectors of the economy (Bewayo, 2009; Kiggundu, 1989). In countries such as The Gambia and Ghana, the number of state-owned enterprises in major industries such as mining and manufacturing increased (Bewayo, 2009). Backed by government funds, these enterprises survived and hampered competition until the 1980s when a weak economic situation, declining financial base of most states and pressures from international bodies, including the International Monetary Fund and the World Bank, forced states to privatise and move to a free market economy (Bewayo, 2009; Kiggundu, 1989).

Historically, the national flag airlines were viewed concurrently as engines for growth and symbols of national sovereignty (Doganis, 2006). For instance, in the immediate post-colonial Ghana, Ghana Airways, the then national airline, was viewed as not only an engine for economic development but also as a symbol of national and African sovereignty (Amankwah-Amoah & Debrah, 2010). As time went on, Ghana Airways became more of a symbol of national sovereignty and less as a catalyst for economic growth. Over time, many countries across the continent have come to view national airlines as symbols of national sovereignty and afforded them protection from market competition, thereby distorting the competitive playing field (Morris & Edmond, 2012). The flag carriers have developed competitive advantage which relies on state subsidies and impeding liberalisation reforms to shield them from global and regional competition (Rivers, 2016).

One of the outcomes is that many such airlines direct their resources and attention towards protecting the status quo rather than developing competitive advantage such as developing state-of-the-art technological capabilities, unique customer experiences, high-quality customer services, and reduced delays and frequent cancellations. In the case of the failed national airlines such as Ghana Airways, Nigeria Airways and Air Afrique, for decades their competitiveness was hampered by their respective

governments' tendencies to tolerate losses, and grant vast subsidies and preferential treatment, which shielded them from the forces of market competition and hampered their incentives for renewal (Amankwah-Amoah, 2015; see also Debrah & Toroitich, 2005). The problem is compounded by the fact that a large number of airlines are still state-owned and preferential treatment, subsidies and protected from free market competition (*The Economist*, 2016b). A renewed drive towards liberalisation is more likely to render the traditional "ways of doing business" obsolete.

Across the continent, with notable exceptions, such as that of Ethiopian Airlines, state-owned airlines are generally associated with government interference, inept management and depletion of national resources to back their operations (Amankwah-Amoah, 2015; see also Doganis, 2006; *The Economist*, 2016a). Another effect of government protection and subsidies is that the emergence of low-cost carriers is often hampered, as are their activities (Rivers, 2016). In spite of multiple historical attempts to curb competition to protect domestic and national airlines, and prepare them for global competition, many airlines remain uncompetitive in the global arena after enjoying decades of government protection and subsidies (see Ford, 2014).

Another factor that explains their lack of competitiveness can be traced to the YD. For decades, promises have been made with regard to implementation but to date they remain largely unfulfilled. One of the consequences is that the old fashion bilateral arrangements still govern access to air transport markets and play a dominant role, thereby curtailing many airlines' ability to expand. Indeed, in 2015, Africa was one of the few regions where airlines continued to lose money largely due to their inability to compete with constraints in the face of competition from European rivals such as KLM, Air France and British Airways. In general, African airlines faced intense competition from Western airlines and former colonial powers including Air France and British Airways. However, in recent years, many airlines have emerged from the east including China, presenting a formidable challenge to them on key routes (Endres, 2011).

Firm-Level Analysis: Resources, Capabilities and Activities

As previously noted, African airlines account for a mere 20% of all air traffic on inter-African routes, with many profitable routes dominated by non-African operators (Ford, 2014). This is particularly important given that in spite of the promising potential of the intra-African aviation market, it remains largely untapped (Amankwah-Amoah, 2014). Although unique resources and capabilities underpin firm success on the global stage (Collis, 1991), many African airlines are often hamstrung by a lack of key resources and expertise, route networks and capital to buttress global operations (Endres, 2011). The ability to utilise firm resources and capabilities such as highly skilled individuals and route networks underpins their ability to gain competitive advantage. Below we examine the other firm-specific factors.

Limited Economies of Scale

In the last two decades, one of the factors that has accounted for the limited competitiveness of many African airlines is limited economy of scale. Indeed, in the airline industry, scale and reaching critical mass are key sources of sustainable competitive advantage (Morris & Edmond, 2012). Many of the world-leading airlines are members of the global airline alliances grouping, leaving many African airlines operating on the margins (Amankwah-Amoah & Debrah, 2011a). Indeed, in 2009 Africa was home to around 125 airlines compared with 88 operators in North America, a market that was eight times the size in terms of passenger traffic (Morris & Edmond, 2012, pp. 16–17). Most of the route networks are point-to-point, lacking elements of networks and associated benefits of economies of scale. Among the numerous airlines, very few African airlines except Ethiopian Airlines, Kenya Airways and South African Airways, are members of the global airline alliances (see Table 8.1) and it can be concluded that they "have reached a stable and economically efficient scale of operation" (Morris & Edmond, 2012, pp. 16–17). The

Table 8.1 Airline alliances groupings and features

7.2.Features	Star Alliance	SkyTeam Airline Alliance	Oneworld Alliance
Formation	In 1997, it became the first global airline alliance	It was founded in 2000	It was launched in 1999 and the founding members included American Airlines, British Airways, Cathay Pacific and Qantas
Members and network	Star Alliance has 28 member airlines include Egyptair (joined in Jul 2008), Ethiopian Airlines (joined in Dec 2011) and South African Airways (joined in Apr 2006) It operates to 98% of the world's countries and 330 airports	It has 20 member airlines including Kenya Airways (Africa). Access to 1057 destinations worldwide. Annual passengers of 665.4 million to 179 countries	It includes 15 of the world's leading airlines with 30 associate carriers. Operates more than 14,000 daily flights to around 1000 destinations across the globe

Data sources: Synthesised from: Amankwah-Amoah & Debrah (2009, 2011a), Oneworld (2016), SkyTeam (2016), Star Alliance (2016)

ability to spread risks and costs associated with serving large number of routes with the same aircraft can enhance a firm's competitiveness.

Besides accumulating synergistic benefits, the global airline alliances also allow member firms to share resources and facilities, which ultimately enable them to reduce costs. One of the consequences is that non-member African airlines are unable to accrue the synergistic benefits stemming from such alliances including sharing of facilities and joint marketing. Consequently, airlines belonging to such groups are able to tap into the opportunities offered to enhance their competitiveness. One of the problems is that many African airlines are relatively very small compared with their European and American counterparts and often lack the economies of scale and extensive route networks required to compete successful.

Coupled with non-global airline alliances status, the fragmented nature of the African market means that many small-scale airlines have emerged with limited ability to compete internationally. Many of the African

airlines, such as Starbow and Africa World in Ghana, operate very few point-to-point services and lack the networks required to feed into their operations; as such, their ability to expand and compete against major airlines is extremely limited. In this global industry, it has been demonstrated that strategic alliances, joint ventures and other collaborative arrangements actually improve the efficiency and increase consumer choice (IATA, 2016a). In this regard, consolidating airlines' activities and route networks through alliances is pivotal in improving intra-African connectivity, cost efficiency, quality of services and overall competitiveness of African airlines.

Quality of Services

Historically, the poor safety record of the African aviation industry and high fatality rates have attracted the attention of the international media which in many instances tarnished the image of security and safety compliance of airlines and their ability to attract passengers on routes where they compete against Western airlines (Amankwah-Amoah & Debrah, 2016). In 2011, Africa accounted for around a third of all deaths in air crashes around the world (*The Economist*, 2016c). This was surprising given that the continent accounted for around 3% of the global air traffic. By 2016, the European Union had banned more than 108 airlines from 14 African nations including Zambia, Sierra Leone and Mozambique largely due to poor security and safety concerns (*The Economist*, 2016c). Such safety concerns make it difficult for even the best African airlines to attract non-African passengers on inter-African routes.

Over time, the name "an African airline" has become synonymous with poor security and safety records in some quarters in spite of the fact that some African airlines possess the highest security and safety records in the world (see Morris & Edmond, 2012). Although stereotype accounts for the damaged reputation of many African airlines, the poor security and safety concerns help to reinforce the negative perception (Amankwah-Amoah & Debrah, 2016). One of the consequences of buyer behaviour is that many passengers travelling on inter-African routes opt for "non-African" airlines and in so doing, hamper the chances of national and

emerging airlines attaining high-speed internationalisation (Morris & Edmond, 2012). An article in *The Economist* (2016c, pp. 35–36) stated,

> *When given a choice of airlines on international routes, passengers almost always opt for foreign carriers over African ones.*

Furthermore, operating costs stemming from government constraints, delays, antiquated infrastructures and national policies have also created conditions to stifle the development of entrepreneurial airlines. It is also worth noting that the cost of jet fuel is about 20% more in the continent than elsewhere in the other developing or developed worlds (see *The Economist*, 2016c). This imposes an additional burden on airlines' operations and their ability to compete.

Discussion and Implications

This chapter has sought to examine the internal and external factors that have contributed to the limited competitiveness of so many African airlines. An integrated framework and key arguments were advanced which suggest that firm-level and external factors have interacted to help explain why so many African airlines underperform on the global stage. The chapter offered an array of external factors including slow implementation of the YD and protection of state-owned airlines, which have distorted the nature of competition and hampered exposure of many airlines to "genuine" or fair competition. When shielded from competition, such firms' ability to transition to the global stage and outwit rivals is hampered.

Furthermore, the study indicates that internal factors such as limited economies of scale and quality of service have affected some airlines' ability to compete. With notable exceptions of African airlines such as Ethiopian Airlines, South African Airways and Kenya Airways, the vast majority of airlines have struggled to compete. This has accounted for the fact that African airlines account for a mere 20% of all air traffic on inter-African routes. This unified approach offers a more comprehensive picture of the factors that have accounted for the limited competitiveness of many airlines.

Regarding the outcome of limited competitiveness in the global industry, many national airlines such as Ghana Airways, Nigeria Airways and Air Afrique have collapsed in recent decades. Thus, the study highlighted the relevance of the possession of unique resources and favourable institutional environments in determining firms' ability to expand as well as compete at the frontier of global competition (see Yamakawa et al., 2008). It complements prior scholarly works, which have demonstrated that integration of firm-level and external analysis offered a more robust explanation as to why some firms underperform or fail (see Mellahi & Wilkinson, 2004).

Implications for Practice

Regarding practical implications, our findings suggest that by combining forces through strategic alliances, many African airlines would be able to share risk, speed up expansion and gain access to new intra-African routes. Accordingly, greater economies of scale would enable them to gain market power and eliminate overlapping activities. For African airlines seeking to be at the frontier of global competition, developing an extensive regional route network and low cost base could serve as a springboard for global expansion. As the forces of liberalisation are expected to advance, airlines are more likely to face new sources of competition which will require a shift from reliance on protection from competition towards developing exceptional capabilities and resources. In addition, by complying with the highest global standards of safety and security, airlines would also be able to repair the tarnished image of many African airlines as well as enhance their own competitiveness. From a public policy standpoint, our analysis indicates that full implementation of the Yamoussoukro Decision would help to ease restrictions on many African airlines and provide them with opportunities to expand on intra-African routes.

Directions for Future Research

There are some limitations of this chapter that need to be borne in mind. First, the data are largely secondary in nature. This offers no insight into the experiences of airline managers in improving the competitiveness of

their organisations. Future research could extend our analysis by incorporating some primary data from airline executives on the best way to enhance their competitiveness beyond the factors noted above. In addition, the conceptual nature of this study means that there is lack of in-depth analysis of the illustrative case organisations. The study also offers limited insights on strategic renewal attempt by airlines to avert underperformance. Future research should also examine the experiences of African airlines in strategic renewal to enhance their competitiveness.

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Part III

Human Capital and International Competitiveness in Africa

9

Human Capital, Innovation and International Competitiveness in Sub-Saharan Africa

Yaw A. Debrah, Raphael Oriaghe Oseghale, and Kweku Adams

Introduction

The end of the natural resource boom in the early part of this decade and the consequent decline in regional economic growth from an average of 5 per cent to about 3.3 per cent has created many challenges for firms in sub-Saharan Africa (SSA) (International Monetary Fund, 2016). Organisations in this region as a matter of urgency will need to develop the capabilities required to create and sustain the competitive advantage they need to compete in the ever-changing global environment. Thus, they have to improve their processes, capabilities and be in the position to offer quality products and/or services. One crucial source of developing competitive advantage is, therefore, to have employees with knowledge, skills, abilities and other characteristics required to be innovative in

Y.A. Debrah (✉) • R.O. Oseghale
Swansea University, Swansea, UK

K. Adams
York Business School, York St John University, York, UK

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their work (Czajkowski, Kowalski, Michorowska, & Weresa, 2013). Human capital and a firm's ability to come up with innovation are critical for creating and sustaining competitive advantage (Czajkowski et al., 2013), which, in turn, is vital for a firm's international competitiveness.

According to Porter (1990), Tung (2016) and Thunnissen (2016), outstanding talent is scarce in every nation; hence, it needs to be nurtured. In this regard, organisations need to invest in human capital development activities to enhance their capabilities. This is because developing human capital generally leads to innovation and thus international competitiveness.

Recent global surveys of human resource (HR) managers of multinational corporations (MNCs) increasingly point to talent shortage as the most important challenge confronting MNCs (Tung, 2016). Interestingly, the problem of skills shortage seems worst in developing and emerging economies where the teeming youthful population is lacking in the skills which employers value (Budhwar & Debrah, 2004; Elegbe, 2010; Horwitz, 2014). Thus, just simply employing and retaining a graduate workforce will not necessarily provide the human capital that firms operating in SSA require to innovate and create competitive advantage in the current global environment (Aryee, Walumbwa, Seidu, & Otaye, 2016). In relation to this, Fredriksen and Kagia (2013) indicate that African youths fare much worse in terms of education and training than those of the other regions of the world. The Word Economic Forum's (WEF) Human Capital Index (HCI) and National Competitiveness scores and rankings further highlight how badly SSA performed in terms of maximising and leveraging their human capital endowment. We argue that this has negatively impacted on SSA's level of global competitiveness. Table 9.1 presents a comparison of HCI scores of selected African countries in relation to countries from other regions of the world. In view of this trend, we argue that SSA seems to have lost its way towards the harnessing and development of its human capital which will enable them to become internationally competitive and sustain the success of their businesses and economy.

The main purpose of this chapter, therefore, is to identify some novel ways through which MNCs (both foreign and domestic) operating in the SSA can develop their human capital to innovate and create the relevant

Table 9.1 Global HCI and global competitiveness scores and ranking

Country	HCI score	HCI ranking	Competitiveness score	Competitiveness ranking
Finland	86.81	1	5.44	10
Norway	84.64	2	5.44	11
Switzerland	84.64	3	5.81	1
Japan	83.64	4	5.48	8
Sweden	83.29	5	5.53	6
Germany	81.55	11	5.57	5
United Kingdom	80.04	19	5.49	7
United States	78.86	24	5.70	3
Russia	77.86	28	4.51	43
China	67.81	71	4.95	28
Brazil	64.51	83	4.06	81
Ghana	64.76	84	3.68	114
South Africa	62.97	88	4.47	47
Zambia	62.66	90	3.60	118
Kenya	57.90	102	3.90	96
Mali	49.33	126	3.46	125
Nigeria	48.86	127	3.39	127

Source: World Economic Forum HCI and National Competitiveness Report (2017)

advantage they need to compete in the global marketplace. The chapter focuses on MNCs for two main reasons. First, Miyamoto (2013) argues that MNCs are active providers of education and training in developing countries and are more likely to respond to policy recommendations relating to human capital investment than their local counterparts. Besides, given the increasing number of service and high-technology MNCs in SSA seeking employees with high-level skills, MNCs would be interested in the availability of highly skilled workforce in SSA countries where their mode of production is relatively skilled-biased. Rovai (2005) and Osabutey, Nyuur, and Debrah (2015) also maintains that investment in training is even more important for MNCs, who often have to grapple with the challenge of workforce localisation in the face of severe shortage of skilled workers in SSA countries. For example, MNCs in the Nigerian oil and gas industry are required by legislation to hire around 75 per cent of Nigerians into management and other professional positions after 10 years of being granted the licence to operate (Playfoot,

Andrews, & Augustus, 2015). To this end, MNCs have more access to training resources as well as the capability to reduce labour turnover by providing attractive compensation packages to keep the employees after the training. Second, the World Development Report (2000) confirms that MNCs have a relatively good record of providing training for their employees working in their subsidiaries compared to domestic firms. As a result, it would be useful to explore how MNCs can strengthen their human resource development activities in the SSA context.

The chapter proceeds by examining the concepts and approaches to human capital, the impact of human capital development on innovation and how these factors enhance international competitiveness. The section that follows explores how these factors can enhance the international competitiveness of SSA firms. This is accompanied by the conclusion and implications for future research.

The Meaning of Human Capital

Whilst much scholarly work has been done on human capital, a consensus is yet to be formed on the definition of human capital (Wright, Coff, & Moliterno, 2014). Different authors have defined human capital in different ways to suit the focus of their studies. From an individual-level perspective, Coff and Kryscyncki (2011, p. 1430) defined human capital as: "An individual's stock of knowledge, skills and abilities". Ployhart, Nyberg, Reilly, and Maltarich (2014, p. 376) agree with the above definition, but added "other characteristics" to knowledge, skills and abilities as components of human capital (KSAO). In their words: "Human capital is an individual's KSAOs that are relevant for achieving economic outcomes." The authors consider human capital as inherent to individuals, and not the physical persons themselves. Emphasis in this context is on the specific components (Wright et al., 2014); that is, the knowledge, skills, abilities and other characteristics (KSAOs) (Ployhart & Moliterno, 2011), which individuals bring to their workplace as employees (Davenport, 1999). According to Wright, Coff, and Moliterno (2014, p. 363), Becker (1962, 1964), Scarbrough and Elias (2002, p. 3) and Wright et al.

(2014), these KSAOs are acquired through employee's investment in education prior to employment and this is further developed in the workplace through professional training. According to this perspective, knowledge represents the factual information relevant for performing a specific job responsibility (Nyberg, Moliterno, Hale Jr., & Lepak, 2014; Ployhart et al., 2014) and serves as the foundation upon which skills and abilities are developed (Nyberg et al., 2014; Ployhart et al., 2014). Skills refer to the individual capabilities and proficiencies required to carry out specific job (Nyberg et al., 2014; Ployhart et al., 2014). Ability refers to a more enduring capability that is usually cognitive and needed by individuals in order to perform their specific job responsibilities (Nyberg et al., 2014). Finally, "other characteristics" often refers to attributes and personality traits that affect an individual's ability to perform a specific job (Nyberg et al., 2014). Studies in this context have linked KSAOs to individual performance in the organisation (Ployhart et al., 2014).

In contrast to the above view, some studies have also defined human capital as a firm-level resource (i.e. Huselid, Jackson, & Schuler, 1997; Somaya, Williamson, & Lorinkova, 2008). From this perspective, Huselid et al. (1997, p. 171) defined human capital broadly as "employees' collective knowledge, skills and abilities". Similarly, Somaya et al. (2008, p. 936) confirmed this definition specifying that human capital is "the cumulative knowledge, skills, talent, and know-how of the firm's employees". In this context, human capital refers to a firm-level resource, something that is held by the firm, namely, the aggregate of knowledge, skills, abilities, and other characteristics held by the firm that is linked to firm-level performance (Nyberg et al., 2014; Ployhart & Moliterno, 2011). The emphasis here is on the firm and not the individual employees. Therefore, when a talented employee leaves his/her employer to join a new firm, such a move may decrease the human capital stock of the initial organisation (Somaya et al., 2008).

Although, human capital is also conceptualised as a firm-level resource, it is created from individual human capital (Ployhart & Moliterno, 2011). In this vein, Ployhart and Moliterno (2011) maintains that human capital is an aggregate of the KSAOs held by the unit,

but created from the KSAOs of individual employees within the unit. In this regard, the focus of the unit-level construct is on "people" and how they act and interact with each other to produce a unit-level result (Ployhart et al., 2014). However, a unit-level result originates from the KSAOs of individual employees. Ployhart and Moliterno (2011), therefore, described how unit-level resources are created from individual level KSAOs. They explain that task complexity and emergence enabling states (i.e. affect, behaviour, and cognition) interrelate for unit-level human capital to emerge from individual KSAOs. In another study, Ployhart et al. (2014) and Nyberg et al. (2014) introduced another dimension to the unit-level resource analysis postulating that anything beyond human capital at the individual level should be classified as "human capital resource". Along the same lines, Ployhart et al. (2014, p. 374) extend the argument by defining human capital resource as: "individual or unit-level capacities based on individual KSAOs that are accessible for unit relevant purpose." From this standpoint, human capital resources differ from human capital in the sense that human capital resources exist as a specific unit feature and contribute to the attainment of a unit's goal.

The definition of human capital by Ployhart, Nyberg, Reilly, and Maltarich (2014, p. 376) is more in line with the focus of this study and has been adopted. Thus, "human capital is an individual's KSAOs that are relevant for achieving economic outcomes".

The advantages of this definition are clear. First, it enables us to think of how firms can develop highly skilled and knowledgeable employees who can utilise their knowledge and skills to achieve greater productivity for both their employers and the societies where they live. Besides, human capital is considered not only at the firm level but also at the societal level. Second, individual-level perspective is based on expert opinion which suggests that anything beyond human capital at the individual level is human capital resource (Nyberg et al., 2014; Ployhart et al., 2014). Moreover, the real owner of human capital is not the firm but the employees themselves who tend to take their human capital with them when they leave the firm (Santos-Vijande, Lopez-Sanchez & Gonzalez-Mieres, 2012). The next section focuses on the relevant approaches needed to develop human capital resource.

Approaches to Human Capital Development

The extant theories suggest that there are two major approaches to human capital, namely education and on-the-job training. Scores of studies argue that education and training are a useful investment for developing human capital (Baron & Armstrong, 2007; Becker, 1962, 1964, 1975, 2009; Bouchard, 2006; Budhwar & Debrah, 2004; Schultz, 1961). Moreover, the role of human capital in enhancing company performance and growth by extension determines the competitiveness of firms. Thus, organisations seeking to create and sustain the competitive advantage required to compete in the present business environment will need to emphasise employee capability development (Santos-Rodrigues, Figueroa & Jardon, 2010a). This is particularly true as the important elements of the present competition among organisations are people, their knowledge and creativity in terms of their ability to convert resources into innovation (Czajkowski et al., 2013). Therefore, organisations generally require investment in the training (and education) of their employees to be able to innovate and create the competitive advantage they need in today's highly competitive global market.

Education

Several studies have shown that formal education is very relevant for the development of specialised knowledge and abilities in people (Becker, 2009). Levels of education in the literature on human capital include education at primary, secondary, college and higher education (Schultz, 1971, p. 79; Sweetland, 1996). Universities (and colleges) are the quintessential repositories of human capital (Brymer, Molloy, & Gilbert, 2014). Accordingly, it is during university (and college) education that people acquire the relevant "capital" that they can rent out to employers in exchange for good wages (Becker, 1964).

Although education is useful in the development of human capital, some human capital analysts suggest that traditional approaches to education (i.e. university education) no longer fit the demands of the present time (Bouchard, 2006; McCracken, Currie, & Harrison, 2015). This

means that some young graduates may complete their university education without developing the required competencies that employers desire in their employees. The issue focuses on the quality of education which universities provide for their undergraduate students (Becker, 2009; Dore, 1976). Becker (2009, p. 20), and McCracken et al. (2015), for example, observed that some graduates are not well prepared for employment when they complete their university educations. Many recent graduates are lacking the soft skills that employers need in their employees (McCracken et al., 2015; Schultz, 2008). In the field of business and management, for example, commentators argue that much of the present management curricula in universities only provide limited opportunities for management students to learn about management practice and become competent in the behavioural skills essential for good management (Paglis, 2013). As mentioned earlier, the problem of skills mismatch of graduates is said, however, to be more acute in the developing countries of Africa and other emerging countries (Elegbe, 2010; Ibeh & Debrah, 2011). The reason for this is that education in SSA is mainly theory-based and there is limited emphasis on teaching critical thinking skills, interpersonal skills and practical experience in terms of team working (Dore, 1976; Economist, 2008; Elegbe, 2010; Farrell & Grant, 2005). Part of these soft competencies, namely team working skills, critical thinking skills, relationship skills and communication skills as well as technical competencies are key determinants of employees' ability to innovate (Mortara, Shawcross, Mills, Napp, & Minshall, 2009; Podmetina, Hafkesbrink, Templov, Dabrowska, & Petraite, 2015) and create the competitive advantage that firms require to compete.

In addition, the move to a more knowledge-based economy and a network organisation structure as a way of responding to economic shifts have increased organisations' quest for knowledge workers (Beechler & Woodward, 2009; Grove, 2010; Schuler, Jackson & Tarique, 2011). The implication is that many workers in the workforce no longer have the skills required by manufacturing and service delivery firms to carry out the different task assigned to them in their work environments. Hence, there is a need for employees to acquire new competencies to carry out such jobs effectively (Rich, 2010). Based on the shortcomings of current university education, there is the need to upgrade the skills of employees overall. Several studies

suggest that organisations should consider how best they can help their employees to acquire the relevant skills needed for work within a particular industry (Cappelli, 2011; Connor & Shaw, 2008; Farndale, Scullion, & Sparrow, 2010; Farrell & Grant, 2005). By extension, addressing these issues would enable the SSA region to become competitive.

To address the inadequacy of university education, MNCs are now providing on-the-job training for their workforce to teach the competencies graduates (and longstanding employees) need in order to be innovative at work (Kumar & Chadee, 2002; Scullion & Collings, 2006). On-the-job training is often associated with some set of competencies useful for a particular industry or firm. For instance, Becker (1962) argues that on-the-job training designed to provide employees with the relevant human capital needed to perform well is a worthwhile investment. The study now turns to consider firms' on-the-job training.

On-the-Job Training

A major way of coping with the challenges in the present competitive business environment is through the effective utilisation of a firm's human resource which plays a critical role in creating the sustained competitive advantage organisations need to compete in a global environment (Samuel, 2015). One effective way of achieving this is through regular provision of training to organisations' workforce. Some analysts argue that, this process is necessary if they are to compete and survive in markets where competitors constantly innovate to meet changing customer needs (Samuel, 2015). Analysing this from the human capital lenses, training complements formal education. Moreover, most practical skills and knowledge are better developed by the firms. For example, Becker (1962) cites that the best training in recent industrial skills and practices are usually provided at the workplace. This is because firms tend to be the first to be aware of their value. While new hires (including fresh graduates) take their skills to the workplace, their potential must be further developed through on-the-job training that prepares them to increase productivity (Baron & Armstrong, 2007; Becker, 1962, 1964, 1975, 2009). Similarly, longstanding employees require training to upgrade

their existing competency levels to be able to increase productivity and to innovate and create the competitive advantage needed to succeed in a global environment.

Recent studies suggest that most organisations adopt on-the-job training methods that include mentoring, coaching, job rotation, international assignments, self-development activities, job assignment and special projects in the development of their employees' human capital (Connor & Shaw 2008; Hayman & Lorman, 2004; Hegarty & Johnston, 2008; Jenner, 2008; McGettingan & O'Neil, 2009; O'Donnell, Karallis, Sanderlands, Casin, & O'Neil, 2008). In addition to the above, organisations also provide formal off-the-job training including in-house training, MBA and diploma programmes. For example, Hayman and Lorman (2004) and Jenner (2008) suggest that in-company training courses, seminars, workshops, and self-development activities have become common for the development of employees. Moreover, organisations seeking to develop the human capital base of its employees to innovate and create the sustained competitive advantage need to pay attention to the fundamental issues of content, rigour, and the expertise required to deliver the training programme.

These studies agree that talent, not capital, is the leading factor linking innovation, competitiveness and sustained economic growth. The implementation of sustainable human capital development approaches is, therefore, vital for SSA. In 2015, the United Nations through the Sustainable Development Goals (SDG) re-emphasised the role of quality education and continuous training in developing highly knowledgeable individuals who are equipped to advance new initiatives aimed at enhancing innovation and sustaining economic growth and development (Mitter, 2016). The SDG 4, in particular, advocates for quality education and lifelong learning opportunities for all in both developing and developed economies by 2030 (United Nations, 2015). As a result, governments, private firms and other stakeholders in several countries are tailoring the framework to meet the demands of the contextual realities in their various nations (United Nations, 2015). But, Mitter (2016) avouched for the application of an integrative approach in the implementation of this framework, if the full benefits are to be achieved. The integration of appropriate

formal and informal education approaches is crucial in this regard. Thus, achieving the Herculean task of developing the skilled and knowledgeable workforce needed for innovation in SSA countries require that lessons from SDG 4 must be learned and advanced. One of the notable lessons is that highly knowledgeable and skilled workforce underpins every function of the economy and that the development of workforce through quality education and continuous training is central to gaining and maintaining international competitiveness (Freer, 2017). The next section examines how inclusive and equitable quality education could enhance innovation at the micro and macro levels in SSA.

Human Capital and Innovation

Afuah (1998) refers to innovation as the use of new knowledge to offer a new product or service that customers want. This, therefore, entails the application of ideas that are new to the adopting organisation. The distinctions between technical and administrative innovation have been explored by scores of studies as the former focuses on processes (acquired technical skills through training and availability of advanced technology) that enhance product and service delivery. The latter also encompasses organisational structure, administrative processes, skill acquisition and human capital development (see Almeida & Phene, 2004; Damanpour, 1987; Ibarra, 1993; Jaskyte, 2011, etc.). Both types of innovation do not have the same attributes and do not relate to the same organisational factors equally (Damanpour, 1987; Jaskyte, 2011). Similarly, the implementation of different types of innovation is not necessarily the same within organisations (Damanpour, 1987).

Furthermore, administrative innovation should complement technical innovation efforts in order to optimise a firm's strategic outcomes (Santos-Vijande et al., 2012). The recognised relationship between administrative and technical innovation (Santos-Vijande et al., 2012) supports the positive relationship between human capital development, innovation and international competitiveness (Santos-Vijande et al., 2012).

In this study, our focus is on both types of innovation because the creation of knowledge and skills within organisations is an inventive activity relevant for improving productivity. Whilst, innovation involves developing new products and services rapidly and efficiently, innovativeness involves the novel recreation of existing knowledge and/or the complete creation of new knowledge (Santo-Rodrigues, Figueroa-Dorrego & Fernandez-Jandon, 2010b) which is a key constituent for enhancing international competitiveness. The capability to develop new products and/or services and processes rapidly depends on an employee's level of skill and knowledge. Thus, firms with highly skilled and knowledgeable employees are more likely to make the correct decisions and create new knowledge that will result in organisation innovativeness. In a related study, Jin, Hopkins, and Wittmer (2010) argue that employees with sufficient knowledge and skills create the foundation for firm flexibility. Firm flexibility is the firm's ability to respond to changes in customer needs by altering different functions effectively and efficiently (Judge, Klinger & Simon, 2010). Firms can successfully compete in a global business environment when they can respond to changes in customer needs effectively and efficiently.

However, the mere possession of knowledgeable and highly skilled employees alone may not bring about innovation in firms (Aryee et al., 2016). Firms will need to create an environment and organisational culture that will stimulate the employees to utilise their knowledge and skills in the creation of new products and/or services and processes in response to changing market needs. Correa, Camacho, and Mosqueda (2015), for example, argue that whilst the KSAOs embedded in firm's employees allow their precise comprehension of organisational function and the subsequent efficient execution of such function in a timely manner, organisations must provide them with the processes, technology and systems they need. The employees must also be given the opportunity to be fully involved towards supporting organisational competitiveness (Correa et al., 2015). The creation and utilisation of human capital for innovation will increase productivity, reduce costs, create better product and/or services and increase customer value (Correa et al., 2015).

Human capital and the innovation which it creates are key determinants of SSA's global competitiveness. This is because it serves as the support system for the creation of core capabilities which would position

firms in the region above its competitors in the market (F-Jardon & Gonzalez-Loureiro, 2013). In this regard, the success story of one SSA country (Mauritius) aptly describes the influence of human capital development on innovation. Through government initiatives such as the Human Resource Development Council (HRDC), private firms in the hotel sector in Mauritius have been encouraged (through the provision of training grants) to invest in the development of their staff to enhance innovation (African Economic Outlook, 2008; Prayag & Hoseny, 2013). The embrace of staff training and development has subsequently led to an increase in employees' human capital levels and innovation in different organisations and sectors in the Mauritian economy (Prayag & Hoseny, 2013). Following the successes recorded in the hotel industry, the HRDC of Mauritius launched other initiatives such as the National Human Resource Development Plan (NHRDP) to coordinate human capital development across various targeted sectors (see www.hrdc.mu). These initiatives have enhanced the economic outlook and competitiveness of the Mauritian economy and positioned them as a human capital development and innovation success story of Africa. The next section expounds the relationship between human capital development and economic outcomes.

Human Capital and International Competitiveness

Giegiel and Wildowicz (2014) define competitiveness as the collection of factors, policies and institutions which determine the level of productivity and prosperity that can be attained by a given economy. The Institute for Management Development's (IMD) World Competitiveness Yearbook (2015) also defines it as competencies that facilitate long-term value creation. We assert that this is because of individual, firm and government productivity. Key factors used by the World Competitiveness Yearbook (WCY) include economic performance, infrastructure, government and business efficiency. Considering these key dynamics, we can also identify two types of competitiveness. First, result competitiveness, which focuses on a country's macroeconomic performance and share of global trade

compared with the rest of the world. Second, factor competitiveness, which deals with the long-term competitive ability of an economy based on labour efficiency. In fact, Bienkowski (2006) indicates that labour market efficiency is required to keep pace with international competitiveness. Additionally, the essence and economic significance of human capital emerges from the notion that individuals' accumulated skills and competencies are the most important components of a nation's wealth (Debrah & Smith, 2002).

Since the introduction of General Agreement on Tarrifs and Trade (GATT), there has been a trend towards liberalisation in trade policy among most countries because it is deemed as the most significant factor that promotes wealth of nations. In developing countries, however, structural adjustments and economic liberalisation have justified the consistent decline of average trade tariff along with the movement towards greater openness in the trade of goods and services (IMF, 2001). Nonetheless, it is necessary to acknowledge the fact that whilst the movement of capital is increasingly free and well encouraged, this has not been the case for labour. International labour mobility has tended to concentrate on the highly skilled, which has not favoured developing economies and particularly the SSA. Umpiring this phenomenon from the macro level, Giegiel and Wildowicz (2014, p. 60) argue that human capital is a decisive growth factor, and differentials in its accumulation account for existing gaps in GDP per capita between countries. Similarly, at the micro level, resource-based view (RBV) protagonists indicate that it is the primary source of a firm's sustained success (see Barney, 1991).

An interesting study by Muhlberger (2012) for Deutsche Bank indicates that SSA accounts for 12% of the world's total population, 60% of the world's uncultivated arable land, 60% of the world's diamonds, more than 5% of the world's oil, and 30% of the world's cobalt resources. Despite these resource advantages, SSA accounts for only 1% of total world manufacturing, 3% of total world FDI, 2% of total world gross domestic product (GDP) and 2% of total world trade. In 2012, for example, some SSA countries such as Ghana, Congo, Gabon and South Africa had a GDP per capita ratio below $200,000. These countries also had a low record of domestic export percentage as a share of total global exports when compared to their Eastern European and Central Asian

counterparts such as Poland, Hungary, Romania, Hungary and Turkey (IMF, 2016). Nonetheless, Angola and Nigeria, with higher rates of domestic exports in the region, are not significantly different from the other SSA countries because of their high dependence on oil and gas exports (*The Economist*, 2016).

In view of these trends, many questions about economic and business competitiveness in SSA remain unanswered despite abundant literature on human capital development. For example, how can frameworks and models that have been utilised to achieve considerable success in Asia, Latin America, Brazil, Russia, India and China (BRIC), and more recently, some of the MINT countries (Mexico, India, Nigeria and Turkey) be adapted to support growth and development initiatives in SSA countries? How can firms operating in SSA support the provision and delivery of training programmes at universities (and colleges) to support their growth agenda? And how do they provide the indispensable training and skills to their employees to function in an environment of constant innovation and competitive pressures? To answer these critical questions, we discuss the processes and strategies for enhancing the international competitiveness of SSA firms and, by extension, the SSA region.

Means of Enhancing SSA's International Competitiveness

There is one main approach for enhancing the international competitiveness of sub-Saharan African firms and the competitiveness of the region. This approach is training (both on-the-job learning and formal off-the-job training/education) that takes place in the context of employment (Acemoglu & Pischke, 1998). However, lessons from SDG target 4.4, which emphasise relevant skills for the world of work through continuous lifelong learning, must be heeded. Training and development activities can be provided in partnerships with higher education institutions, such as the mainstream and technical universities. Moreover, universities (through the support of governments in the various countries where they operate) in the region should embrace SDG 4 education initiative, which emphasises quality education and outcomes as argued by Mitter

(2016). The stagnation of SSA firms is ascribed to the lack of skills and information to effectively innovate (Fukunishi, 2004). The training policies of these SSA firms lag behind that of firms in the other regions, a practice that offers the opportunity to initiate significant training policy change in SSA firms. If firms stop training temporarily and divert money meant for training to other activities, as some Nigerian firms reportedly do (Obisi, 2011), then the message is clear: some SSA firms do not attach high value to employee training and development. In fact, a major World Bank survey that investigated training in SSA firms suggests that about half of the sampled firms had not invested in training at all for about three years (Funkunishi, 2004).

Along this line, Portugal, after lagging behind most of the European Union, embraced investment in the development of human capital to increase productivity and enhance competitiveness (Gibson & Naquin, 2011). Individuals were provided with opportunities to go for internships, learn on-the-job and attend workshops/short and undertake courses through the government's HC development scheme (Gibson & Naquin, 2011). Efforts made to develop individuals later led to the development of 'learning organisations'. This embrace of investment in human capital development in Portugal led to the innovation which later enhanced their level of international competitiveness.

Training and Human Capital Development in Sub-Saharan African Firms

SSA firms have the potential to create firms that are more intelligent and flexible than competitors, through training and development programmes. There is a consensus among experts that in-house company training can help develop employees with the relevant KSAOs, which can form the basis for sustained competitive advantage (Poole & Jerkins, 1996), if managed properly. Thus, to be successful and to be able to access new technology, SSA firms need highly skilled and knowledgeable workforce. This is particularly important, as higher education institutions in SSA countries are reportedly not producing "work-ready" graduates (Elegbe, 2010; Ibeh & Debrah, 2011). Moreover, competitive

advantage is not based on generic skills acquired during higher education but rather on firm-specific skills that are unique and rare (Barney, 1991). Thus, we admonish that SSA firms should provide in-house training, which comprises both on/off-the-job training for their employees when the development of specific skills, knowledge and work attitude are involved.

SSA firms can adopt on-the-job training such as rotational assignments, structured mentoring and coaching programmes, and international assignments, to help both their longstanding employees and new hires to acquire the skills, knowledge and attitude required to gain the flexibility for innovation. On-the-job training offers employees the opportunity to learn through actual job tasks that take place at work; thus, competencies gained during training can be easily transferred back to work (Noe, 2010, p. 264). In any case, on-the-job training programmes should be well structured to deliver requisite industry skills and knowledge to employees. This is highly important for SSA firms, as a good number of employees undertake training in some SSA countries. Although managers provide most of the training, there may be some who lack the competencies and knowledge to impart them in order to increase productivity. Providing employees with well-structured on-the-job training programmes, as well as training for their managers on how to conduct on-the-job training, is a good way of addressing this challenge (Noe, 2010, p. 264; Ugoji & Mordi, 2014).

Further, SSA firms can adopt off-the-job training such as vestibule training, distance learning, computer-based training and formal classroom courses; that is, seminars that may involve hands-on learning experience such as case studies, role play, action learning, group exercise, simulation, behaviour-modelling business games, and so on, to help their employees acquire relevant novel competencies they need to do their job. Computer-based training is particularly important for employees working with SSA firms in the present knowledge-based economy. In many SSA countries (e.g. Nigeria, Ghana, Sierra Leone, Cote d'Ivoire) some employees do not get the opportunities to make use of computers during university education (Arenyeka, 2012). Thus, the responsibility falls on employers to sharpen employee use of computer skills in the present technological age.

The off-the-job training method has some demerits, such as low participant involvement and meaningful connection to the work environment. These factors inhibit learning (Noe, 2010, p. 261). To overcome these problems, off-the-job training techniques, such as case studies, could enhance active participation. SSA firms can also make use of intermediaries, such as consultant firms, as well as universities to provide off-the-job training for their employees. Consultancy firms with qualified, well-trained and experienced staff, as well as universities, could be useful for the design and implementation of training courses (Holden, 2004, p. 327). Additionally, development of best occupational practices should be integrated with relevant local knowledge and experience (Oppong & Gold, 2013). In Duit's (1991) view, learning can achieve the desired outcome when there is construction of similarities between the new and existing knowledge as learning is an active construction process that can only take place based on previous acquired knowledge (Duit, 1991).

Employee training and development should be carried out regularly if SSA firms seek to remain strategically positioned in the global market or to be efficient in providing quality products and services. SSA firms also need to evaluate training efforts periodically using evidence-based assessment evaluation techniques to ascertain whether training efforts have yielded the expected outcomes.

The acquisition of relevant work competencies alone is not sufficient for employees. SSA firms would, therefore, need to use a bundle of HRM practices including financial and non-financial rewards, flexible working arrangements, and employee involvement schemes to attract and retain employees in the long term (Donate, Peña & Sanchez de Pablo, 2016; Kumar & Chadee, 2002). Within the SSA context, employees' involvement is particularly important as it provides them with the opportunity to innovate and create sustained competitive advantage (Correa et al., 2015).

Influence of SSA Firms' Training on Innovation

Crocker and Eckardt (2014) and Kumar and Chadee (2002) assert that highly skilled and knowledgeable workforce is associated with job performance and innovation. In the view of Pulakos, Arad, Donovans, and

Plamondon (2000, p. 612), job performance emphasises what employees do that can be observed and measured based on each employee's level of contribution or proficiency. Accordingly, well-structured training in SSA firms will help them to develop highly skilled and knowledgeable employees whose capacities have been built up with relevant competencies they need to innovate. Such capacity building techniques have the potential to increase employee absorptive capabilities.

With the relevant KSAOs, some decision-making responsibilities and motivation, employees can quickly apply their knowledge and skills for the development of new product offerings and novel ways of offering services. In the European Innovation Scoreboard (EIS), one of the various indicators for measuring innovation performance in organisations is through their outputs such as sales, new product development and utilising novel ways of delivering quality services to customers (Carayannis & Grigoroudis, 2014). In the context of SSA firms, however, any new product or service developed by firms must meet and satisfy the needs of customers more than those of their superior rivals from more developed contexts. This feat can only be achieved through human capital development efforts. Szivas (1999) argues that only highly skilled, knowledgeable and motivated employees can deliver high-quality products and services.

Influence of Training & Innovation on International Competitiveness Within SSA

Authors, such as Doz and Prahalad (1987), Bartlett and Ghoshal (1989), Hamel and Prahalad (1990) and Donate et al. (2016) argue that organisational competitiveness is associated with the human capital of their employees as well as their ability to perform and innovate. This implies that the ability to develop and deploy world-class talent more effectively can lead to world-class competitiveness (Smith, 1995). Thus, a firm is said to be competitive when it can provide products and services more efficiently and effectively (Giegiel & Wildowicz, 2014). Measures of such kinds of competitiveness include profitability, quality of new products and services, foreign sales of the company divided by output, regional or

global market share (Giegiel & Wildowicz, 2014). Within the SSA, it is pertinent to note that international competitiveness can be a useful measure for both firms operating across borders as well as those operating in the domestic markets (Fukunishi, 2004).

The new products and services offered by firms within SSA through their highly skilled and knowledgeable employees can help them compete with rival firms both domestically and internationally. Thus, the improved performance of trained employees and the new quality products and services provided by these firms would increase profitability, regional and global market share, productivity, brand recognition, and many others. However, this is only possible if their new products and services offered provide more value to customers than that of their foreign competitors.

In sum, the degree of competitiveness of nations and regions ultimately depend on the capabilities these firms have developed to be able to compete in the domestic and international markets. To sustain the competitive advantage and competitiveness level of both SSA firms and the SSA region, SSA firms must regularly develop and deploy their employees for optimal level of performance. SSA firms can also collaborate with universities in order to enable universities develop more "work-ready" graduates for industries. Whilst governments in SSA countries can also support universities to provide education that fits the twenty-first-century context, they could strive to create an environment that is favourable for business by providing the needed support in terms of infrastructural development, in view of success stories from Mauritius and Portugal.

Implications

This chapter has policy implications from which employers seeking to enhance their capabilities by developing human capital can benefit and compete in a global business arena. First, MNCs seeking to acquire and retain the required human capital needed to compete in the global market should design well-structured formal training and development as well as mentoring programmes to meet individual graduate employee

needs and career progression aspirations. For instance, the embrace of human capital development has helped the hospitality industry in Mauritius to enhance productivity and the competitiveness of the industry and that of the country amongst other nearby island destinations such as Seychelles and Maldives (Prayag & Hoseny, 2013). Second, MNCs should develop their middle and senior level managers by providing them with relevant training programmes required to develop the human capital needs within their respective industries. Additionally, managers need to enhance their own skills to be able to transmit knowledge to trainees during training sessions. These will help the MNCs develop the human capital relevant for creating the sustainable competitive advantage required to compete in a global business environment. To get the best of training, SSA firms must intertwine and entrench their training and development programmes into the SDG target 4.4. framework which emphasises continuous lifelong learning. Lifelong training and development will provide employees with the most recent techniques and methods relevant for enhancing productivity in a fast-changing global business environment.

The chapter also has some policy implication for governments in SSA countries seeking to become competitive in today's global market. We suggest that governments in SSA countries should support universities to provide education that is "fit for purpose" in the present age. Again, lessons from the SDG 4 framework on education to employment must be implemented. Specifically, efforts should be made to promote collaborative partnerships between firms and higher education institutions for the purpose of designing and implementing education programmes that can cater for the needs of the various national contexts and industries. We expect involvement with training to vary across the various countries in SSA region, due to financial constraint (Giegiel & Wildowicz, 2014). We further recommend that SSA countries should allocate 26 per cent of annual budget to the education sector based on the UNESCO recommendations for developing countries. In addition, they should create an environment that is favourable for business by providing relevant infrastructure, institutions and the right policies that support business.

Conclusion

This chapter has enhanced our understanding of the challenges that countries in SSA face in developing their human capital. We have also established that human capital development and innovation are key determinants of international competitiveness. Most developing countries and SSA, in particular, do not have the capability to compete successfully in this more demanding global system partly because of inadequate relevant talent and skills to drive innovation. Besides, training interventions provided by organisations operating in SSA can help develop the competencies of employees and for the wider development of management and talent. It is also a well-noted fact that until recently, most organisations operating in SSA did not have HR departments endowed with appropriate training systems and practices to support employees' career progression.

It is expected that this practice would expose employees to best practices used elsewhere. But as to whether they will heed to these best practices of human capital development and innovation that has the potential to lead to growth, development and international competitiveness, it is only time that will tell.

Directions for Future Research

We have demonstrated in this chapter the importance of conceptualising the key approaches to human capital development and innovation and how these could support the improvement of international competitiveness of countries in the SSA region. The findings of this study have provided fresh insights on a very important but marginalised subject in the extant literature. In this regard, this study has enhanced our understanding of how human capital development initiatives could lead to innovation, innovativeness and international competitiveness of firms that operate within SSA. This study is, however, limited for a few reasons. First, prior studies have identified evidence of underinvestment in training amongst SSA firms (Miyamoto, 2013). This chapter was not able to examine the

reasons why most local firms in SSA underinvest in training and development. Hence, it would be useful for future research to explore the reasons for underinvestment in training and development in SSA. This would enable researchers to identify relevant policies for addressing the reasons for the underinvestment in training. Second, Osabutey et al. (2015) suggested that human capital with the skill set ready to *incorporate global perspectives* with *local adaptation*, in a business environment of continuous learning and innovation, is an urgent requirement in SSA countries. We support this call by confirming that it would be useful for future research to empirically investigate how SSA firms can tap into global knowledge and human capital stock from subsidiary networks to develop local workforce. Finally, it would be interesting to undertake an empirical comparative analysis of how successful countries in other emerging markets have succeeded in their attempt to improve their level of international competitiveness through human capital development and innovation.

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10

Improving Africa's Competitiveness Through Knowledge Transfer: Lessons from Partnerships with China and the Way Forward

Abdoulkadre Ado

Introduction

For Africa to increase its odds for greater and sustainable development and for its companies' competitiveness, a more strategic approach to trade negotiations is needed and, according to the Report on Economic Development in Africa (UNCTAD-UNIDO, 2014), such approach must be elaborated both at the bilateral and multilateral levels to ensure that the outcomes support mutual development goals. This perspective is directly linked to Africa's engagement with its major partners, such as China. Africa's ties with China have increased significantly during the last two decades. According to the US International Trade Commission (2014), Africa's trade with China accounted for only $6 billion in 1995, but the figure rose to over $200 billion in 2014. The trade volume is expected to rise further to a new record this year (Adolph, Quince, & Prakash, 2017). China is now leading foreign investments in Africa. Currently, there are thousands of Chinese companies doing business in

A. Ado (✉)
University of Ottawa, Ottawa, ON, Canada

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Africa, often by entering local partnerships (Dollar, 2016). Such partnerships are opportunities for Africans to develop infrastructural capacities and to gain knowledge from the Chinese.

Studies on the state of African countries' learning through partnerships with emerging countries such as China are rare. Limited research explored the subject of African learning through joint ventures (JVs) to any significant scale. Several studies have addressed knowledge management processes within wholly-owned African private companies (George, Corbishley, Khayesi, Haas, & Tihanyi, 2016; Kolk & Rivera-Santos, 2016), but a few authors, such as Auffray and Fu (2015), have referenced Africa's foreign partnerships; namely, in Ghana's construction sector. Moreover, the findings are often commentaries on the management of Africans' meager existing knowledge rather than mechanisms for learning additional skills and gaining new technologies through foreign partnerships (Ado, Su, & Wanjiru, 2017; Ahmed, 2007; Ahmed, Ghoneim, & Kim, 2008). In both cases, the literature indicates inefficiency in African knowledge management and poor learning and knowledge transfer. Generally, scholars have argued that African countries are marginalized with limited access to key technologies and learning because they have not exploited major international collaborations (Mbhalati, 2014) but also because expats and foreign investors do not have a good understanding of the process of knowledge diffusion within the African context (Anibaba, 2015; Kamoche & Harvey, 2006) and face challenges in reconciling cross-cultural differences (Kamoche & Siebers, 2015).

Gaining strategic knowledge is even more challenging because this type of knowledge is difficult to replicate and has been neglected in Africa (Wolfe, 2009). The reasons for the failure in knowledge transfer include Africa's lack of knowledge management curriculum in schools, poorly equipped employees, and lack of effective learning methods (Ondari-Okemwa & Minishi-Majanja, 2007). The literature also noted that underdevelopment of a knowledge base in African businesses is attributable to the recurrent incongruent choices in foreign partners and a failure to adapt working methods to those of the partners. Further, Africans have not demonstrated the necessary proactive attitude required to search for foreign expertise. Additionally, Osabutey, Williams, and Debrah (2014)

pointed out significant weaknesses in technology and knowledge transfer between foreign and African firms due to dissimilar resource and knowledge bases as well as the absence of coherent government policies. All these factors have led to inadequate knowledge transfer to Africa.

Despite the high expectations from the South-South partnerships, many Africa-China JVs failed in knowledge transfer. We, therefore, decided to explore the reason for such poor achievements. This chapter examines African weaknesses both at the government and partner level, and the failure in gaining significant strategic knowledge from Chinese partners. After identifying the African weaknesses, the chapter proposes a normative but practical approach for effective knowledge transfer by juxtaposing strategic and institutional perspectives and outlining key conditions for adequate policy and strategy formulation.

Africa-China Emerging Partnerships

International collaboration models are increasingly diversified between emerging countries and have greater significance as more countries are looking to industrialize. Specifically, the framework for economic collaborations seems to be based on a relationship that considers exploring mutual advantages even though African countries are sometimes at a disadvantage with respect to negotiating from a strategic standpoint because they are seeking more development and a higher-level of expertise. Ajakaiye and Kaplinsky (2009) suggest that Africa must exploit the opportunities from the emergence of Southern economic powers such as China. This represents a rising perspective on South-South partnerships and economic cooperation for African partners. China, as the leading investor in Africa, has injected significant funds into Africa's growing sectors such as infrastructure, for boosting development and capacity building. Investments are often in the form of joint partnerships and inter-firm alliances. Although China's total investment in the African infrastructure sector accounted for 28% in 2012, higher than all other countries including the advanced economies (AfDB, 2014), Chinese engagement in Africa has taken a more diversified approach, with investments focusing on energy, transportation, and information

and communication sectors (Nartey & Mezias, 2015). Africans' perceptions on China and its investments in Africa vary across countries on the continent (Wang & Elliot, 2014).

With increasing economic rapprochement between Africa and China, can Africa count on China to boost its industrial development? The answer depends on how Africa and China engage in partnerships. Marysse and Geenen (2009) indicated that it is unlikely that Chinese engagement will significantly benefit Africa's development and knowledge transfer in the long term if it continues in the present form. Further, the authors noted that Chinese products, such as textiles, are often in direct competition with locally produced goods, and that African businesses, unless they cooperate in a thoughtful manner with competitive Chinese companies, will not survive. Hence, rather than creating a win-win situation and transferring knowledge, Chinese enterprises will displace local businesses while employing imported labor (Broadman, 2007). For the defenders of the Africa-China lose-win view, the current engagement cannot meet Africa's knowledge transfer needs to the extent necessary for its development (Yin & Vaschetto, 2011). In contrast, Chinese partners continue to argue for the win-win theory and state that their commitment to economic cooperation with Africa is mutually beneficial for technology transfer to Africa. Additionally, Bräutigam and Xiaoyang (2011) indicated that this is the decisive moment for African partners to seize this new Africa-China cooperation opportunity. Therefore, there is potential to support knowledge transfer to Africa by developing strategic skills and by creating more jobs for Africans.

Several studies published on the Africa-China relationship have focused exclusively on trade and China's investment in Africa's infrastructure and manufacturing (Ado, Chrysostome, & Su, 2016; Ado & Su, 2016; Foster, Butterfield, Chen, & Pushak, 2009; Kaplinsky & Morris, 2008; Sandrey & Fundira, 2008; Schiere, 2010). Most studies did not examine the Africa-China inter-firm partnerships. Some researchers believe that Africa-China studies have focused on political analysis such as China's influence on Africa (Bräutigam, 2010; Paulo & Reisen, 2010; Wang & Bio-Tchane, 2008) rather than on trade, commercial partnerships, and inter-organizational collaborations. However, collaborations such as JVs are increasingly popular because of their role in gaining

knowledge and conquering foreign markets in a dynamic context of global opportunity and competition (Ozorhon, Arditi, Dikmen, & Birgonul, 2010). Beamish (1985) argued that knowledge transfer in JVs depends on the prior experience of the partners involved. Therefore, JVs will operate singularly in different environments, and knowledge transfer occurs according to the dynamics within the environments in which the entities operate. Harrigan (1984) supported the argument and stated that the macro and micro environments have significant impact on the configuration and effective functioning of the JV and the learning processes.

When African firms enter partnerships with the Chinese, it is often with the objective of gaining knowledge (Ado & Su, 2015). However, to gain knowledge, partners, particularly the Chinese who hold the knowledge at stake, must be willing to collaborate and to share their knowledge and expertise. However, the Chinese have often behaved in an opportunistic and uncooperative manner with respect to knowledge transfer (Ado, Chrysostome et al., 2016). In some cases, the Chinese exploited conditions to prevent African partners from learning (Ado & Su, 2015). For instance, they established clear behavioral differentiation whereby they customized their knowledge management practices to suit francophone versus anglophone settings. Moreover, in French-speaking countries, the Chinese imposed English as the official language despite the irony that several Chinese supervisors refused to speak neither English nor French, even though it was the JV's official language. Consequently, in a learning context, language barriers created a dialogue of the deaf and the Chinese opportunistically acted in an uncooperative manner. Additionally, the Chinese customized their tactics based on the knowledge specificities and whether or not it was a first learning experience for local Africans (Ado & Su, 2015). This Chinese behavioral and strategic customization disturbed the learning context, and there is sufficient evidence that a friendly context plays an important role with respect to learning and is often a factor in improving trust and collaborative communication between partners (Chrysostome & Su, 2002; Harrigan, 1986).

Additionally, African partners described the Chinese top managers as knowledgeable concerning lobbying and influencing the local government's

decision-making process. For instance, a high-positioned African government official identified that in most of the contracts he had signed, articulations such as "The African party must … The Chinese party can" were common in the agreements, and once the document arrived in his office, he had no power to change, renegotiate, or delay the agreement. Such contracts left several breaches in favor of the Chinese because very often they were the initiators and leaders of the negotiations for establishing the JV. African engineers often emphasized that the Chinese have already made up their minds and once a decision is made it is difficult to change it, as mentioned by a Cameroonian construction engineer:

> *Chinese are like Robots. They are well programmed in their heads and once they have decided, it is extremely hard to change it unless you are a psychologist in which case you'll still have hard times with them. [Cameroon, I-58; August 18, 2014]*

Increasingly automated processes in the JVs also made it difficult for locals to benefit from interpersonal communications whereby they could pose questions directly to their Chinese colleagues. Moreover, the Chinese partners exploited the lack of local technical standards in Africa and applied their own norms—a practice that many African employees said did not help them gain knowledge and understanding of key processes. Additionally, the refusal by many skilled Africans to assume lower level positions and the humility to perform labor tasks, although they are highly qualified engineers, prohibited learning and knowledge transfer for local partners. Some African partners have accused the Chinese of artificially erecting barriers within segments with high added-value potential, especially when strategic knowledge is at stake such as product concept, innovation, R&D activities, and high-end marketing. The Chinese strategy varied depending on the sector and knowledge segment and type (Ado & Su, 2015). Moreover, some local managers felt that Chinese managers who did not want to communicate in English deliberately used an accent that was difficult for African employees to understand. China's opportunistic attitudes seemed to have prevented Africans from gaining significant knowledge.

In studies on Africa-China partnerships, the controversy is often about whether the Chinese are extending the necessary effort and sacrifice to meet African partners' expectations on knowledge transfer (Ado, Su et al., 2017). However, it is rare to find a paper in which this central question is posed from an African perspective to determine the efforts and sacrifices Africans have made to learn from the Chinese. The Chinese knowledge control strategies were obvious (Ado & Su, 2015), but the second question deserves attention because the reason Africans have not gained significant knowledge lies in the weaknesses of the receiving partners or the Africans themselves, their governments, and policy loopholes exploited by foreign partners. For instance, the literature shows sufficient evidence that when the receiving partner (the learner) does not possess significant learning skills and absorptive capacity (Cohen & Levinthal, 1990), knowledge transfer may not occur as desired. Therefore, missing answers to this fundamental question expose the crucial knowledge gap and explain why many African partners failed to gain knowledge from the Chinese. This study aims to provide a comprehensive analysis of the phenomenon. Therefore, the research questions are: What are the factors that have prevented African partners from gaining significant knowledge through their partnerships with their Chinese counterparts? How can the knowledge transfer dynamic be improved? Thus, by collecting response elements to these fundamental questions, this chapter contributes to a better understanding of the areas of improvement for significant knowledge transfer to Africa.

Research Approach

This study adopts a multiple case study approach. The research includes 29 Africa-China partnerships located in 12 west, central, and east African countries—Benin, Burundi, Cameroon, Chad, the Democratic Republic of Congo, Ghana, Côte D'Ivoire, Niger, Nigeria, the Republic of the Congo, Rwanda, and Togo. These are the only partnerships that accepted to participate in this research although additional partnerships may exist in these 12 countries. There were budget constraints and, therefore, the researchers settled for only 12 countries and 29 cases. Industries were not

specifically selected as we were looking at the knowledge transfer phenomenon from an exploratory and broader perspective in Africa. The partnerships included only African and Chinese partners. The 29 cases are classified by sectors as follows: Telecom/media (10), aviation services (3), mining & refining (4), water & sanitation (1), manufacturing (2), power & energy (3), construction (3), and textiles (3).

The fieldwork was conducted in 2013–2014 in China and Africa. During a six-month period, the researchers traveled to all 12 African countries to conduct face-to-face, semi-structured interviews. We visited China and collected Chinese investor-related information concerning the partnerships before visiting Africa for the interviews and remaining fieldwork. Based on rigorous selection criteria, we contacted participants in the field through several channels including LinkedIn profiles, through a snowball effect, and our personal network because we had previously participated in similar projects in China. Since the study objective was to understand knowledge transfer from the recipients' standpoint, we recruited only African respondents. Interviews were conducted with (1) Africans working in or for the partnerships (that were either 100% private or partially state-owned), (2) Africans working for African parent companies, and (3) Africans working in host country government ministries and agencies, such as local government officials participating in the negotiation, establishment, and management of the partnerships.

Many of the partnerships involved several African government partners. Thus, in all the 12 African countries, we visited individuals directly managing the partnerships at the ministries and agencies that signed or monitored the agreement. Relevant country ministries included infrastructure and transport; economy and commerce; foreign affairs; industry and commerce; mining and energy; petroleum; planning, and other important government coordinating agencies. We obtained valuable information from government officials, other public servants, and key private sector representatives involved in the Africa-China partnerships. Additionally, we obtained data from official reports and national policy documents. In some cases, we interviewed consultants and major shareholders. We also conducted interviews with a major multilateral financing organization in charge of Chinese investments in Africa.

Participants included ministers or their deputies, CEOs, members of the board of directors, managing directors, engineers, operators, technicians, managers, and translators/interpreters. Some participants occupied multiple positions simultaneously because they worked for both the government and the company. Therefore, in some cases, participants were appointed to the position by their government, but sometimes independently by the parent companies or the JV. We contacted 86 individuals for interviews; 11 refused to participate. Data collection was extremely challenging in Africa because the project required several local trips in the African environment, a place where academic research is difficult to conduct (Lages, Pfajfar, & Shoham, 2015; Rogerson & Rogerson, 2010). Table 10.1 describes the profiles of all the interviewees.

Overall, we interviewed 75 consenting people and obtained contributions from all 12 African countries. Fourteen interviewees did not authorize a recording of their interview, but allowed note taking. In total, we tape-recorded and transcribed 61 interviews. Interviews lasted from 40 to 100 minutes. Participants possessed between 5 and 19 years of work experience. Moreover, we used official documents, such as the terms of the partnerships signed by the Chinese and African partners, corporate

Table 10.1 Profiles of the interviewees

Respondents' titles	Number	Appointment status
Government ministers	2	Government
Deputy government ministers	3	
Government counselors	2	
Ministerial directors	3	
CEOs	3	Government/private
Managing directors	4	
Senior managers	3	Private
Department heads	4	
Human resources officers	3	
Engineers	21	
Technicians/operators	15	
Administrative officers	2	
HR delegates	2	
Translators/interpreters	3	
Consultants	3	Government/private
Shareholder representatives	2	
Total	75	–

brochures and annual reports, newspaper reports, and other documented and specific collaborative arrangements as relevant sources of information to provide a more rigorous analysis. We also consulted statements related to organizational and public policies, which allowed us to sharpen our analysis. We used these various data sources for triangulations when certain interviewees provided problematic, questionable, or incomplete information. To ensure data reliability, we asked interviewees to confirm our transcripts' accuracy, and we used content analysis (Lincoln & Guba, 1985) to analyze the data.

In this research, the most relevant segments of the interview transcripts were answers that focused on respondents' collaborative experience with the Chinese, where we discussed the conditions that prevented African partners from gaining knowledge, and which the respondents considered critical for knowledge transfer. Segments in which interviewees explained the significant factors that allowed them to internalize their Chinese partner's best practices, skills, and methods were also of interest in this research. Finally, we were conscious of possible bias in our own cultural beliefs in interpreting the data, which prompted an objective analysis of the transcripts. Indeed, this study involved several researchers from different international backgrounds (Canadian, African, and Chinese), which helped to control cultural and interpretative bias in the data analysis.

Toward a Corporate Strategic Perspective of Knowledge Transfer

Through our analysis, we discovered that the Chinese used various strategies to manage the knowledge that they possessed and the knowledge transfer process. Although these strategies appeared to work for the Chinese, this was not necessarily because of the Chinese actions. The African partners also contributed to the expansion and strengthening of knowledge barriers because of their specific shortcomings, as detailed in the next paragraphs. We identified major organizational and institutional

factors from the data analysis that supported Chinese knowledge retention strategies. Based on the identification of factors that relate mainly to the overall context of African participants, governments, institutions, policies, and partner organizations, we recommend strategic and institutional approaches for better knowledge transfer for Africans.

Our data indicate that, from the outset, African partners, both public and private, often did not identify their learning and knowledge transfer priorities, and the partnership agreements did not specify key details. The local negotiators appeared to lack commitment. This was evident when, for example, an African negotiator unwittingly informed us before an interview that a contract draft was too lengthy to read while, in the following hours, he was supposed to have an important meeting with the Chinese on the JV's strategic planning. Also, there were redundant complaints of some local partner delegates that Africans from control missions were undisciplined and absent during night shifts and on holidays. African partners often lacked expertise in the relevant JV sector and suffered from insufficient technological absorptive capacity and experience in learning and knowledge transfer mechanisms. An African national director comments that:

> *As long as we do not develop our capacity too, particularly in the research and development, it will be hard to get industrialized and do things in Africa by Africans … local content and training are crucially important, and they are missing. [Nigeria I-27; July 31, 2014]*

Also, Africans often did not have the ability to recognize and capitalize on new knowledge to facilitate its assimilation and application (see Cohen & Levinthal, 1990). Moreover, African partners often did not choose competent people during the negotiation and implementation stages of the JV. This was the case when we went to visit a joint venture in Accra at its early stage of operations and discovered that all employees were Chinese. Also, a Cameroonian engineer and head of department at a government ministry mentioned that negotiations were often conducted by Chadians that are politically appointed and not necessarily based on their competence.

From a labor perspective, many African managers complained that their local employees refused to be assessed by African engineers after the training period. This would occur when the Chinese appointed a qualified African engineer to train and assess his local colleagues' learning performance. However, local employees often questioned the legitimacy of such an appointee and, thus, refused to be assessed by a local who they described as unqualified for the position arguing that, in some cases, sociologists were hired as engineers because of an opaque recruitment process undermined by political appointment of incompetent people to strategic learning positions.

Local employees were also portrayed by their African supervisors as having inadequate academic backgrounds and lacking crucial learning skills and the right tools, such as computers, to explore, for example, online company documents. Several African managers described local employees as lazy, undisciplined, and lacking the humility and will to learn. Also, African managers commented that they had cases where a local regularly arrives late or drunk to work, thus missing learning opportunities. Moreover, some locals confessed that they sometimes lost focus during work because of personal financial and family burdens, such as how to feed the family during the days before they receive their next paycheck. Ironically, in many JVs, human resource managers complained that several African employees had the habit of skipping work the day following their paycheck.

> *There are always bad apples … when wages are paid, some workers do not come because they just had their salary and they have to drink a little bit. When they finished the feast, they return to work. But, among the Chinese, it does not work because they run behind time to meet deadlines, so it penalizes a little. [Congo I-12; August 25, 2014]*

Also, some African employees' unawareness of the equities is advantageous for the Chinese because the locals consider the JV to be solely owned by the Chinese, thus conceding more unofficial bargaining power to the Chinese while increasing fear associated with asking "stupid questions" and "being ridiculed." This causes locals to adhere to the information they receive from their Chinese co-workers. Finally, local employees

seemed to be naïve with respect to Chinese knowledge control strategies, and they were not always aware of the advantage and strategic utility of any knowledge they gain for the future either for themselves, the local partner, or overall development of Africa.

Recommending a New Approach to Knowledge Transfer

For African employees to correct the situation and gain knowledge, certain conditions are required. Nationally and institutionally, governments and policymakers may need to increase the availability of skilled Africans by creating more schools with a technical curriculum. This will provide training to locals who are then adequately prepared with the necessary learning skills and abilities for work with Africa-China partnerships. For countries that have a high number of skilled expatriates (e.g., Nigeria), governments have the opportunity to take advantage of sharpening and improving national and local strategies to attract highly qualified expatriates. Governments should encourage African integration so that labor can easily move across national borders in Africa to complement frequent shortages of qualified labor. These actions could cause African employees to take priority over Chinese imported labor in all African countries. Moreover, African countries may gain by setting up favorable laws, such as mandatory ratios of local employees to Chinese employees in Africa-China partnerships. This legislation should be accompanied by state laws that impose professional qualifications for Chinese working in Africa. African strategies should emphasize national incentives that will encourage Africans to learn the Chinese language and, conversely, require Chinese employees to learn and master English. For instance, African employees who understood the Chinese language seemed to have more learning opportunities. A couple of managers explained:

> *I have more opportunities than others because I am a manager. There are things that necessarily go through my office. So, at least, I can know that you did this or that. It's true that most files are in Chinese, still I usually get an idea of what it is because I fairly understand the language. And when working with our local partner, the Congolese government, I have the documents in French. [Congo I-24; August 21, 2014]*

In Cameroon, we make sure that locals who collaborate with Chinese understand the stakes of gaining knowledge and improving their skills. That's why we decided to impose language training in the company for both Cameroonians and Chinese to ensure mutual understanding. [Cameroon, I-17; August 20, 2014]

It is also crucial that Africa establishes an ambitious R&D agenda for its knowledge needs and invests appropriately to develop local absorptive capacities. African countries must define common technical standards and request full compliance with such local standards from the Chinese. This will enable African partners to transplant knowledge that is compatible with local requirement and gain useful and easily adaptable learning for further exploitation.

Organizationally, and based on overall data analysis, African partners need to specify detailed contract terms regarding learning and the objectives of knowledge gain. Targets must be determined and measured during normal time frames and consistent with the establishment of clearer JV handover programs from Chinese to Africans. This approach was central to cases where African partners gained significant knowledge from the Chinese as described in these comments:

The company itself has a program that, over a period of time, the leadership of the company should be gradually given to Ghanaians. So, we are trying to push that agreement forward. The Chinese are gradually training our local people. [Ghana I-52; June 17, 2014]

We don't have the same business culture at all. So, when we sign a contract, we scrutinize clauses well, we search the details because Chinese are very meticulous and look for the slightest flaw to enjoy. [Benin I-48; July 16, 2014]

Regarding the main issue of poor communication among Chinese and African employees, Africans should negotiate a convenient number of translators and draft learning manuals and procedural documents in the partnership's official language. Further, JVs may gain in improving Chinese language training for Africans and sensitize locals on the importance of knowledge gain for Africa's overall development, and the significance of subsequent opportunities for future use of knowledge gained. African

partners need expert consultants on partnership formation when engaging with the Chinese to determine ways to capitalize on knowledge transfer. Such an approach would benefit Africans by negotiating, for example, the lifting of Chinese restrictions on giving locals access to some JV facilities. Africans have the opportunity to capitalize on spin-offs by gaining broader knowledge rather than only core skills. Even though Africans are targeting a specific type of knowledge, this should not prevent them from gaining expertise in other areas even if it is unrelated to the partnership. More importantly, Africans should exploit all opportunities to improve their bargaining power with respect to their partners by adopting some of the strategies used by the Chinese; for example, lobbying and holding better positions within the company:

Initially, each high position had a deputy local person… There has been knowledge transfer because for most technical positions occupied by Chinese expatriates, Beninese have been trained and have now taken over. It is only in the field of electronic engineering that we still have Chinese assistance. [Benin I-48; July 16, 2014]

Local Burundians always occupy key positions in our company. As the CEO, I make sure that the power goes to my fellow country mates first because that's the best way we can gain Chinese expertise. I hire more Chinese just to make sure that I bring in the expertise that our local people can learn. [Burundi I-1; August 30, 2014]

In a few cases where African partners did gain significant knowledge, some key positions within the JV were held by local officials appointed by the country's government to work concomitantly for the JV and the state. A Beninese and a Congolese recognized that their status as government representatives and senior managers in the JV had given them power and generated collaboration from the Chinese.

Out of the 1200 employees, I am the only government official … Personally, I am in a situation of "privileged" in the sense that I represent our State … So, Chinese people respect me more … I was at the ministry before landing here … Under work, we share meals together several times … we have very appeased relations with them … they do collaborate … here, I have to admit that they

transferred knowledge because, for almost all positions previously held by Chinese expatriates, they have trained Beninese who have now taken over. [Benin I-48; July 16, 2014]

As a supervisor, I can go anywhere within the company, to look, to control what the Chinese do, how he did it. So, I get to know everything and learn how to do it, and to also have an idea on how to fix technical problems and even how to design processes. [DR Congo I-28; August 28, 2014]

Our data also indicate that African partners who established JVs with Chinese by acquiring an already existing Chinese company operating in China and relocating it to Africa gained more strategic knowledge than greenfield JVs in Africa. Therefore, Africans should consider the opportunities to explore and even favor the relocation of partnerships from the acquisition and repatriation of plants, machines, and key Chinese employees from China to Africa. Additionally, from the perspective of strategy and global competitiveness, the smiling curve analysis, following Mudambi's (2008) outlook, offers interesting insights. Africans can select partners to gain strategic and sophisticated knowledge to upgrade their know-how to higher added-value segments in the global value chain. Some partners have already underlined the importance of such an approach.

At the state level, our diplomacy is really to attract good partners, make sure there are no problems and live in harmony with the Chinese while learning from our own experiences: Where we come from, with whom we have partnered, in what areas, what we gained, where we want to go and with which partner, to avoid always being the loser. [Congo I-51; August 25, 2014]

To further this winning approach, our smiling curve analysis suggests that Africans must support their companies in gaining strategic knowledge consistent with the global value chain principle. The key recommendation from such an analysis is that, to benefit from the Africa-China rapprochement, African companies must gain knowledge and expertise through strategic partnerships with Chinese companies that are on the high added-value segment of the smiling curve. A strategy to move from

low to high added-value activities will enable Africa to build winning companies and a competitive economy while ensuring sustainable African industrialization.

Strategic knowledge is often described as knowledge that allows the holder to generate higher added value for its business activities. It is the type of knowledge required to conceive new products and generate prosperous patents based on heavy R&D activities. Product development, patents, and high-end marketing are among the activities with the greatest value-added potential. This type of knowledge is sophisticated, systemic and complex, uncodified, and significantly affects the learner's operations once obtained (Wong, Ho, & Lee, 2008). Strategic knowledge is unique because the resource is rare outside the organization, and its possession confers a strategic advantage to the owner as a source of greater added value (Roper & Arvanitis, 2012). Strategic knowledge is difficult to obtain and, once its significant components are acquired, the new holder can permanently adjust and exploit the knowledge without radical changes. In the context of Africa-China partnerships and based on our smiling curve analysis (see also Mudambi, 2008), we recommend that Africans focus their efforts toward gaining strategic knowledge from the Chinese. This will enable African partners to position their activities at the higher end of the smiling curve. Figure 10.1 describes how to proceed conceptually and practically. Consider that enterprises from both China and Africa could potentially establish a partnership. The smiling curve's basic principle is to always perform activities that create more added values for the business. First, from an African perspective of gaining knowledge, African partners must target Chinese partners that operate within the high-value segments.

African Enterprise (AE) 3, located on the lower added-value activity segment, should seek alliance partners such as Chinese Enterprise (CE) 1 or 2 to gain strategic knowledge required for higher added-value activities. However, this choice should also consider the knowledge gap between the two partners. To ease the knowledge transfer process, Africans must be able to absorb their Chinese partner's targeted knowledge. African capacities must thus be compatible with the desired knowledge. For instance, if an African partner wants to learn a new technology, that

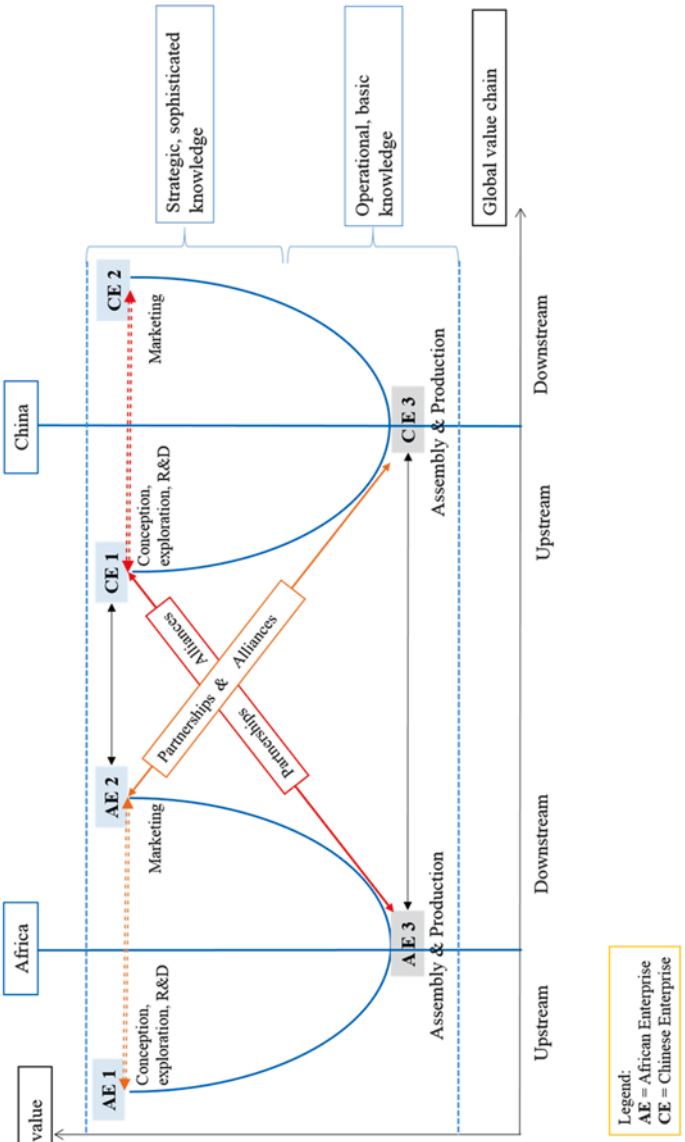

Fig. 10.1 Partner and knowledge choice: smiling curve analysis

partner must possess the basic prerequisites to operate the technology, such as up-to-date software and a basic understanding of the individual technology components.

Additionally, AE1 or AE2 are already positioned at the higher end of the added-value segments. Although such enterprises are rare in Africa, AE1 or AE2 can enter into an alliance with the already well-positioned Chinese Enterprises CE1 or CE2 to upgrade their strategic knowledge. Thus, African enterprises can consolidate and strengthen their competitive advantage with high added-value activities. An African enterprise that is positioned at a high added-value activity segment does not have to refrain from partnering with Chinese enterprises that are at a lower added-value segment (e.g. AE2 with CE3). However, this type of partnership should be based on the identification of significant potential areas of mutual interest and incremental upgrading opportunities for the African partner. The same logic applies to an African enterprise positioned at a lower added-value segment than its targeted Chinese partner. For example, AE3 can partner with a Chinese enterprise that is between CE1 and CE3. Therefore, the African partner can still engage in a partnership with a more experienced Chinese partner, but with the objective of incremental and radical upgrading of the African partner's knowledge base.

All these various combinations of partner choice can occur at the upstream and the downstream end of the global value chain, as long as one of the central considerations is upgrading strategic knowledge-related activities and achieving a position in a higher added-value segment. Finally, the objective of the African partners must ultimately include improvement in competitiveness based on organizational and environmental advantages. For instance, African partners who operate in the energy sector located in African countries with abundant sunshine, such as the Sahel region, should favor Chinese partners from whom they can gain strategic and competitive knowledge in cutting-edge solar and renewable energy technologies.

To improve learning and knowledge transfer in Africa, local partners, both private and public, must identify and prioritize technical and managerial knowledge needs and negotiate strategic partnerships based on Africa's industrial aspirations, while prioritizing training that empha-

sizes greater value-added knowledge development. An African partner describes this strategy:

> *We ensure that the dependency is reduced. We send our people abroad for training to learn how to design, manufacture and install equipment. As soon as they come back, we give them the means by putting in place the structures because training is necessary but not sufficient. We do not send our students necessarily to China, but Europe and the United States as well. [DR Congo I-20; August 29, 2014]*

Africans need to create specialized training centers based on the advantages and strategic choices of each African country or region to coordinate knowledge transfer processes and take advantage of those partnerships. Additionally, institutional support and established coordination structures are required to manage learning, knowledge transfer, and sharing of experience at national, regional, and pan-African levels.

Toward a Pan-African Institutional Perspective of Knowledge Transfer

A recurrent weakness in partnership hosting countries is lack of technical curricula and schools that prepare local employees for learning. When Africans were sent to China for study and training, African government agencies did not effectively negotiate the scholarships. As a result, some competitive curriculum and majors were not open to African students in China, causing a constant shortage of qualified local labor for the partnerships. A government officer noted a crucial Congolese weakness:

> *We have very few vocational schools in Congo. Technical curricula are rare here, so there are very few technicians in this country. The engineering majors hardly exist in Congo. Even the private schools we have here are rather those with majors in management, marketing, finance, or accounting … my country's policy is less oriented toward technology-related skill development. I got my degree in engineering, abroad, inevitably. [Congo I-14; August 22, 2014]*

Additionally, when the government acted as the local partner, the agreements were not well negotiated because of a multi-sectoral team default and lack of African representatives (technicians, engineers, and officials) with a command of Chinese negotiation tactics and business culture. Also, political instability led to the replacement of local officials and managers involved in the early stages of the partnership negotiation, thus reducing the effective and constant support of local authorities to the local partner.

> *The reality is that our ministers do not remain long in their positions. It's rare that a minister stays for three, four, five years due to constant government rearrangements. So, what happens is that, often the minister does not conclude the deal before he gets replaced. This benefits the Chinese … the political instability does not allow the initial negotiator, who happens to master the details, to finish the negotiation. [Chad I-30; August 14, 2014]*

We discovered that in some cases, such as the China-Niger JV, African partners remain in vulnerable positions because projects were predominantly financed by the Chinese who also supported the local partner's equity. Besides, lack of state laws and control of local to Chinese ratios resulted in fewer African employees in the JVs and weaker power to influence knowledge flow, as stated by this Togolese engineer:

> *The Chinese basically own everything in this business; therefore, we operate under their dicta and must comply with their rules of the game. We cannot change it much as long as we do not change the ownership structure of the business and this is out of our control, we, engineers. [Togo I-10; July 1, 2014]*

Government weaknesses are also related to low levels of support from public authorities to locals and projects of African attempts to cope with Chinese dominant power and opportunistic behaviors such as unjustifiably dismissing potential local trade union leaders. Employees are not protected by local laws related to trade union involvement. Although the Chinese regularly use opportunities to block local trade union initiatives, their behavior contradicts the core principles of JV operation in China. According to Article 7 of JV law in China, "Staff and workers of joint

ventures shall establish their trade union organizations, conduct trade union activities and safeguard their lawful rights and interests according to the law. JVs shall provide necessary conditions for the activities of the trade unions."

In many African countries, this law either does not exist or is not implemented, placing locals in uncomfortable positions. Africans have appointed inexperienced negotiators from ministries. Other weaknesses include the tendency of African politicians with governmental power to locate JVs in their native provinces rather than in strategic regions where knowledge and spin-off potential are significant. There is misalignment of national strategies and policies with learning priorities. Host countries' lack of logistical and infrastructural agendas has made learning less attractive because of the unlikelihood of the future applicability of the gained knowledge and unawareness of the value and usefulness of any acquired knowledge, as stated by this technician in Niger:

> *I don't see any benefit in learning something that I wouldn't be able to transfer in other fields or use it as a starting point. Most of what we can learn is for very advanced technologies compatible to only Chinese device, therefore, it doesn't motivate me to commit entirely. [Niger I-54; August 5, 2014]*

The Africa-China rapprochement and the aspiration of African partners to obtain knowledge from their Chinese partners are realities. Cooperation between Africa and China is reaching new heights, as China has become Africa's largest trading partner. Trade volume between the partners has surpassed $200 billion. However, to better negotiate cooperation with China, Africa has opportunities to reflect on its partner's history and learn from the Chinese experience of the 1980s.

Following the economic reforms and opening up in 1979, China established a negotiation platform for its cooperation policy for Sino-Western partnerships. Implementation of international JVs played a significant role in knowledge transfer before and after China joined the WTO in 2001. For instance, in 1990, the predominant part of foreign direct investment (FDI) in China was through JVs and, in 2000, JVs accounted for approximately 50% of China's inward FDI (Bishop, 2007). China's JV policy

and overall government support to local firms played a significant role in assisting local companies in gaining knowledge from their foreign partners. To achieve this, China's technological capabilities were a competitive advantage.

China and its companies managed to learn and transfer technology from several of their Western alliance partners including Japan, the US, and Western Europe countries. Since the early 1980s, the Chinese have constantly established their own conditions when negotiating partnerships with foreign governments and companies, particularly those from advanced countries. China's strategy has remained clear and consistent: investment in China requires significant capital and acceptance of the joint partnerships that allow transfer of expertise, knowledge, experience, and technologies to local Chinese partners.

During its opening up policy, China favored JVs as a means of knowledge transfer. Several provisions in China's JV laws and implementing regulations gave the Chinese government and its companies the power to impose technology transfer during JV establishment (Bishop, 2007). For instance, Article 5 of the Law on Chinese–Foreign Contractual Joint Ventures states that "The technology and the equipment that serve as the investment of the foreign partner in a joint venture must be advanced technology and equipment that suit our country's needs." This law coupled with the government's institutional tools and support allowed China, through its state-owned companies that collaborated with foreign firms, to build a thriving economy based on industrial development. The subsequent knowledge gain enabled many Chinese companies to become outstandingly competitive in various sectors at the national and international levels.

China's background of negotiation with Western partners with expertise in specific fields of interest shows China's determination to address its development needs and priorities. China has constantly insisted on the core principle of learning and transferring knowledge from its foreign counterparts. In 1979, China initiated a strategy of offering incentives to foreign companies that favored JVs while ensuring that the Chinese partners enjoyed a favorable balance of power by retaining majority equity shares. This bolstered Chinese negotiations and increased gains from foreign partners.

Clearly, entering JVs is not sufficient to achieve learning and knowledge transfer. An institutional mechanism must be supportive of the local partners. Since the Fifth National People's Congress of July 1, 1979, the Chinese government has adopted a fundamental law for Chinese foreign JVs. The Regulations for the Implementation of the Law on Sino-foreign Equity Joint Ventures (2001) requires that Sino-foreign JVs integrate the purpose of promoting China's economic development and technological upgrading. There is even a provision that requires approving authorities to consider the expected level of technical and managerial training and to ask partners to document JV technological contribution and impact on China's development.

Concomitantly, China has constantly favored its state-owned enterprises (SOEs) as partners for foreigners rather than its private enterprises. China's SOEs enjoy official and unofficial support from both the provincial and central government, which in terms of official and unofficial authority, positions them to gain knowledge and benefit from partners' expertise through the JV. Some African countries like Rwanda appear to adopt this path by engaging more state-owned enterprises to collaborate with the Chinese and, therefore, making sure that they enjoy government support as mentioned in Rwanda's national policy framework, as cited by this respondent:

> *We strictly believe in the idea that state-owned companies are the most convenient way to engage collaboration with the Chinese because we can cope with many challenges that a local private company may not be able to cope with. [Rwanda I-61; August 31, 2014]*

African countries have many shortcomings regarding knowledge, development policies, and strategies. Enhancements and redesign of laws and technical tools are necessary to systematically strategize to support African partners in gaining knowledge through partnerships with foreign firms, as indicated by this Ivorian respondent:

> *I think the biggest part of the job must be done by our government to make sure that the partnership context is highly conducive to knowledge gain for us Africans. We lack strict laws that can give us the advantage and power of asking more from our Chinese partners. [Côte D'Ivoire I-56; June 9, 2014]*

Therefore, China's partnership policy and strategy, both at the governmental and organizational level, are models from which Africa can learn. China's strategy embodies the type of institutional and regulatory support that African companies require from their governments and regional institutions to gain knowledge from their alliances with the Chinese. Bansal (2011) indicated that Africa still needs a pan-African coherent policy for cooperating with China. The problem of policy harmonization facing Africa must be addressed to create an effective and sustainable learning experience for Africans to ensure that partners are gaining the most valuable knowledge for African company and industry competitiveness.

The 2013 UN Economic Report on Africa outlined that Africa's future depends fundamentally on continental leadership in designing and implementing policies that promote African industrialization. Consistent with the role and objectives of the New Partnership for Africa's Development (NEPAD), and to develop the necessary continental leadership to gain more knowledge from its partnership with China, Africa must create the conditions that define effective pan-African policies. Among its objectives, NEPAD aims to promote investments in agriculture, human resources development, and economic diversification in manufacturing and mining industries. Therefore, NEPAD's goals could be fully aligned with national and pan-African knowledge transfer policies. This requires a profound commitment towards rethinking African countries' cooperation policies with allies including China.

To achieve these objectives through cooperation with emerging countries such as China, NEPAD can encourage and support Africans in gaining strategic knowledge, experience, and transfer of technologies from their counterparts. As NEPAD becomes increasingly influential with significant impact and voice across the continent and beyond, the pan-African organization in conjunction with African governments, regional organizations, and the private sector must lead the development of institutional mechanisms that will enable African companies to enjoy bargaining power with the Chinese. For instance, a Congolese partner stated that a law on foreign capital ownership in strategic partnerships can give local partners a significant advantage in terms of negotiating technology transfer.

Ideally, we should have negotiated for higher capital ownership. Then, the power could have been somewhat balanced … currently, the fact that Chinese hold most of the capital is a handicap for us. [Congo I-9; August 25, 2014]

This would help African companies gain the strategic knowledge necessary to assume higher added-value activities and global competitiveness. Such a law would boost Africa's growth based on potential, comparative advantage, internal resources, and supported by regional and national specificities. Africa must address cooperation and knowledge transfer in a single voice. Speaking univocally will ensure that Africa's cooperation with China is consistent and coordinated at the continental level and, thus, improve bargaining power with China. For instance, a single voice at the negotiation table was successful in the adoption of the African Consensus for the 2015 agenda of the UN's Sustainable Development Goals.

Leadership by the African Union (AU) and regional economic communities is essential for dealing with China and in ensuring that Africa's cooperation and negotiating knowledge transfer position with the Chinese reflects Africa's overall development priorities. However, for Africa to speak in a single voice, some challenges must be addressed. Integration efforts and compromises from each country coupled with sacrifices from regional blocks and organizations on the African continent are required. Pan-African and regional institutions such as the AU, the NEPAD, the Economic Community of West African States (ECOWAS), and advocating organizations such as the UN Office of the Special Adviser on Africa (OSAA) could play fundamental and consolidating roles by supporting Africa in developing a unified approach towards a more integrated Africa. This would create a common development vision with a harmonized cooperation agenda for the continent for knowledge and technology transfer when negotiating with China and non-African partners.

Cheru and Obi (2011) emphasized that in the absence of effective African concerted leadership, the relationship with emerging Southern powers such as China could be disadvantageous for Africa in the upcoming years. Accordingly, Africa requires a strategic negotiation approach with emerging countries. The required knowledge transfer for industrialization

has to be the pivotal point for Africa's negotiating framework with China. As per a statement from a Congolese deputy minister:

> *The president turned to China because Westerners no longer have the means to accompany us. Our country is therefore obliged to turn to the highest bidding partner which is China … We need the Chinese, however, they know our weaknesses, and that's our weakness … The political line of Congo, set by the government, is under the direction of the president. That political line pushes Congo to target industrialization by 2025 and the necessary parameters were defined according to that vision … We turned to the Chinese because they are partners able to execute our projects, and lend us the money. [Congo I-51; August 25, 2014]*

Africa-China partnerships vary in forms and number across African countries. China's leading economic trading partner is South Africa (Ado, 2015; UNCTAD-UNIDO, 2014). Several partnerships between the two countries exist at the macro and micro business levels. Therefore, during recent years, several Chinese companies have entered into JVs with Africa's major economies such as South Africa. The China-South Africa JVs are increasing and exploiting synergies towards mutual benefits. Harrigan (1986) found that partners, particularly those from developing countries, enter alliances to learn, develop new expertise, and leverage potential synergies. South African partners are increasingly engaging with their Chinese counterparts to develop and exploit mutually beneficial markets, while gaining valuable knowledge. The last decade has seen increasing China-South Africa JVs in South Africa. There is significant opportunity for partners from other African countries to learn from the experience of South Africa vis-à-vis China. However, for other African countries to capitalize on the South African experience in engagement with Chinese companies, a pan-African approach to inter-partner knowledge transfer and an intra-African knowledge sharing network is crucial. Figure 10.2 conceptually materializes this idea by proposing a map for an intra-African integrated network of knowledge transfer and experience sharing.

Our proposition for an interconnected African knowledge-sharing map is based on the premise that when a South African company has

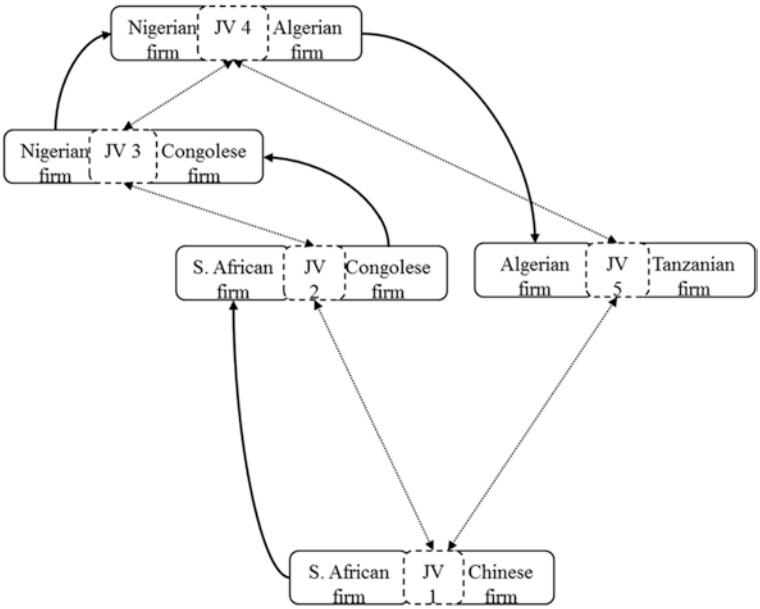

Fig. 10.2 Interconnected African knowledge-sharing map

established a successful JV with the Chinese and gained significant knowledge from the partnership, there is an opportunity to collaborate and share that knowledge with other potential African partners. There is simplicity in the idea of other African partners entering JVs with a South African partner that has already learned from the Chinese, rather than entering into a JV directly with the Chinese. Practically, as Fig. 10.2 shows, we recommend that the South African firm that gained knowledge through a JV with the Chinese be the catalyst for a new JV with, for instance, a Congolese firm that is looking for that same type of knowledge. Thus, instead of the Congolese firm looking for a new Chinese partner in China, the South African partner could be a compatible partner to the Congolese because both African parties are familiar with local realities and share a similar African business culture, environment, and needs. Therefore, a South African-Congolese new JV should be preferred to a brand new Sino-Congolese JV. This same process can be replicated with any other experienced African partner when

entering a JV with another interested African country's partner. Our example proposes only five cases of this scenario, but the combinations can be expanded to a pan-African scale to favor a genuine intra-African knowledge transfer and an experience-sharing chain. This can make African partners avoid an ineffective JV if the Chinese partner is opportunistic and does not share the African partner's knowledge transfer objectives or philosophy.

To ease the knowledge flow across national borders in Africa, a new mechanism can be developed as indicated in the figure by the arrows between JVs to link JVs in a genuine intra-African network of experience and knowledge sharing. To implement this recommendation, we require engagement and political determination from the African public and private partners/actors, private sector professional organizations, national governments and agencies, policymakers and, above all, strong leadership from the regional and pan-African institutions such as NEPAD and the AU. This will support internal capability and regional, national, and local institutional networks for superior knowledge transfer.

We present an analysis framework for a strategic approach for knowledge transfer and development in Africa. Figure 10.3 describes the systemic process by proposing an integrating analysis framework.

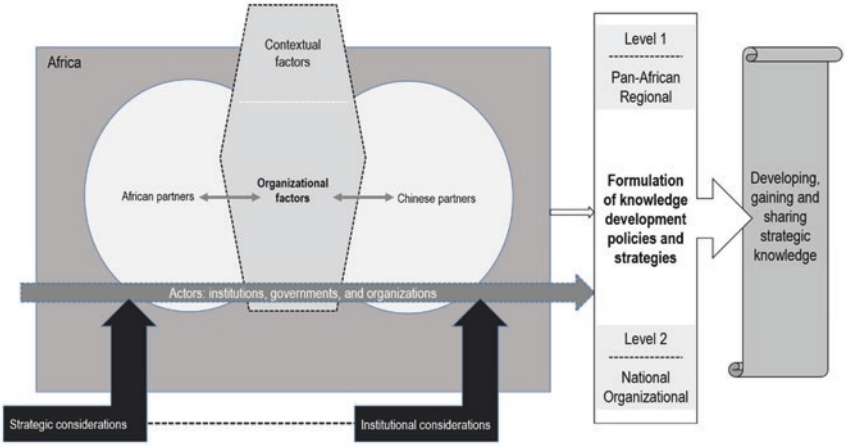

Fig. 10.3 Knowledge transfer: policy and strategy formulation framework

The framework considers the strategic and institutional perspectives towards effective knowledge gain for Africans. Therefore, we first consider Africans' shortcomings at the government, policy, and organizational levels. We also consider Chinese opportunistic behaviors that prevent Africans from gaining knowledge through partnerships. Therefore, by capitalizing on these factors and experiences, African actors must take strategic actions to support their knowledge quest by developing new and convenient tools for effective partnership negotiation and implementation. These actions and tools should be developed based on targeting specific knowledge segments on the global value chain. Moreover, these actions and tools should integrate and support the development of a pan-African networking map that allows African partners to share knowledge and experience across national borders within the continent. This dichotomous and systemic approach leads to the development of knowledge policies and strategies at the pan-African and regional levels (level 1) and at the national and organizational levels (level 2). This process, if properly implemented in conjunction with African states, regional and pan-African organizations, and major private and public participants, it will boost Africa's ability to gain and share strategic knowledge and to enhance competitiveness, industrialization, development, and position on the global value chain.

Conclusion

This chapter has identified challenges that African firms face in joint venture and alliances with Chinese firms in transferring knowledge from China, as shown at the individual, partner, and institutional levels. We have proposed recommendations to address the weaknesses and improve conditions for knowledge transfer to African partners. We have proposed a juxtaposition of strategic and institutional perspectives to overcome the challenges at all levels. From a global value chain perspective, we recommended that African partners target value-adding knowledge types, particularly by choosing strategic Chinese partners positioned at the higher end of the value chain. Additionally, we have suggested that an intra-African interconnected knowledge-sharing network be created. An integrated knowledge transfer analysis and policy frameworks are

also proposed for effective knowledge gain. Changes are required concomitantly at the organizational, national, and pan-African levels. The pan-African networking proposition requires political determination and support by African leadership from both the private and public domains and demands unprecedented political courage and pan-African institutional engagement for effective inter-African knowledge sharing.

Avenues of research include exploring ways to align African countries' knowledge transfer and learning strategies with the overall dynamics of development and knowledge-seeking priorities. Additionally, further research is needed on the proposed mechanisms for knowledge transfer and experience sharing between African partners to leverage the continent's industrialization, especially in terms of the significant differences in the levels of knowledge gained across the industries and countries we analyzed. Researchers can explore opportunities for identifying priority skills based on the specific strengths of each African country or region. This will help in acquiring appropriate knowledge for the targeted and exact global value chain segments. Overall, answers to these questions will support the development of Africa's knowledge base and the establishment of better ways to strategically position African economic activities within the most valuable segments of the global value chain. However, because this study is conducted only in 12 African countries, the generalizability of our recommendations is limited. Future research can compare other African countries and partnerships with our sample to improve the understanding of the subject.

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Part IV

Cases on the Global Competitiveness of Africa's Economic Powerhouses

11

Nigeria: Oil and Competitiveness

Doyin Salami, Malcolm Fabiyi, and Ifedapo Adeleye

On October 1, 2016, Nigeria's 56th Independence Day anniversary, President Buhari addressed the nation as it experienced its worst economic crisis in a quarter century. Unlike his inaugural address a year earlier, which was full of hope, this was one of reassurance. A Gallup Poll showing that his approval rating had fallen to 44% from a high of 67% the preceding year reflected the mood of an anxious nation, and highlighted the urgent need to fix the crisis. Expectations were high, as Buhari's historic election victory, the first time an incumbent president was defeated in Nigeria, was largely due to his populist anti-corruption and transformation agenda.

The reality of the great plunge in oil prices was catastrophic, as revenues from oil accounted for over 70% to government revenue and

D. Salami (✉)
Lagos Business School, Lagos, Nigeria

M. Fabiyi
Hydromantis, Inc., Hamilton, ON, Canada

I. Adeleye
Haslam College of Business, University of Tennessee, Knoxville, TN, USA

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more than 90% to the country's exports and foreign earnings. The incredible 75% price fall since 2014 exposed the fragility of the Nigerian economy, as well as the apparent failure of successive governments to diversify the economy away from oil and plan for a rainy day. Meanwhile, Nigeria's oil sector was broken. The state-owned refineries operated well below capacity, and oil thefts and pipeline vandalization were rampant; consequently, Nigeria had to import petroleum products to meet domestic demand.

The import-dependent country was suddenly faced with a currency crisis and inflation. The Nigerian naira faced significant devaluation pressure and was subsequently floated in June 2016 after futile attempts to peg it at N197/$. The naira tumbled 30% after the peg was removed, and in the ensuing foreign exchange scarcity, the US dollar was trading at over 450 in October 2016. This led to a spike in inflation from 15.6% in May 2016, before the floating of the exchange rate, to 18.9% in September 2016.[1]

Painfully, the performance and competitiveness of the non-oil sectors had deteriorated sharply, and there were fears of serious crises in the banking and manufacturing industries. The recently released World Economic Forum Global Competitiveness Index had Nigeria falling three places to 127th in the world (out of 138 economies), largely due to its weaker macroeconomic environment (see Table 11.1 below).

Perhaps more problematic was the fact that Nigeria's competitiveness had remained largely stagnant for a decade (Table 11.1), whereas countries such as Côte d'Ivoire, Ethiopia, Rwanda, and Tanzania had improved significantly.

Table 11.1 Nigeria's global competitiveness index ranking (2006–2016)

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Score	3.45	3.69	3.81	3.65	3.38	3.45	3.67	3.57	3.44	3.46	3.39
World position	101	95	94	99	127	127	115	120	127	124	127
No. of countries ranked	125	131	134	133	139	142	144	148	144	140	138

Source: Compiled by authors using data from World Economic Forum Global Competitiveness Index, 2006–2016

President Buhari had to move swiftly and boldly to combat these challenges as Nigerians and the international community were running out of patience. A year after his landslide victory, which also saw his All Progressives Congress firmly in control of both houses of the legislature, the stakes were high for him as the country's crisis had gradually gotten worse under his watch, and things appeared to be falling apart. There was no easy formula to fix the country's colossal competitiveness and economic problems. As the president sought to appoint a high-powered Industrial Policy and Competitiveness Advisory Council comprising of business magnates and "super ministers", it was clear that enhancing Nigeria's competitiveness was critical to realizing the transformation agenda that had swept him into power. But how?

> *We are at a time of monumental challenges and tough choices, but also a time of incredible opportunities for achieving competitiveness, inclusive growth and sustainability*.—President Muhammadu Buhari[2]

Nigeria: The "Giant of Africa"?

Nigeria lies along the Gulf of Guinea on the West African coast. Geographically, it is bordered by Benin in the west, Cameroon in the east, and Chad, and Niger in the north. Nigeria is rich in mineral resources, including crude oil, iron ore, tin, limestone, lead, zinc, and natural gas. Oil has, however, become the mainstay of the economy since its discovery in commercial quantities in 1956.

With a population of 182 million, Nigeria was the most populous black nation on earth. Nigerians speak close to 400 indigenous languages and belong to over 250 ethnic groups; three territorially separated ethnic groups make up about 70% of the country's population.[3] Religion often intersected with ethnicity, with a predominantly Islamic north and a more Christian south. Politics is also entwined with ethnic and religious identity, and sporadic attacks and protracted conflicts with destruction of life and communities were common.

Nigeria was also Africa's largest economy, with a 2015 Gross Domestic Product (GDP) of US$ 486 billion, ahead of Egypt

($330 billion), South Africa ($314 billion), Algeria ($165 billion), Angola ($103 billion), and Morocco ($100 billion); its GDP was about 30% of the entire sub-Saharan Africa region. Nigeria's Gross National Income (GNI) per capita of US$2790 however lagged behind those of Mauritius ($9780), Botswana ($6460), South Africa ($6080), Namibia ($5190), Algeria ($4850), Angola ($4180), Egypt ($3340), Swaziland ($3280), and Morocco ($3030). Nigeria also didn't rank in the regional top 10 in the WEF 2016–2017 Global Competitiveness Index. At 127th (out of 138 countries), it was way behind regional leaders: Mauritius (45th), South Africa (47th), Rwanda (52nd) and Botswana (64th).[4]

The British Colonization Era: Pre-1960

Nigeria officially became a British colony in 1900. Prior to that, the geographical area now called Nigeria was made up of empires and indigenous communities that traded with one another. Trade was extended across the Atlantic with the advent of the Europeans. Locals traded in commodities and slaves with Europeans. After the Berlin conference of 1884 that ceded the area around rivers Niger and Benue to Britain, the British administered the area under separate protectorates at different times, finally cumulating in two protectorates, the northern and southern protectorates. The two protectorates were ruled independently before their amalgamation in 1914. The resulting territory from the amalgamation was named after the Niger River by Flora Shaw, the wife of the first Governor-General of Nigeria, Lord Frederick Luggard. Nigeria obtained independence from Britain in 1960.

Post-Independence Blues and Civil War: 1960s

Nigeria adopted its own constitution in 1963, declaring itself a republic and a sovereign nation. Nigeria's First Republic was headed by Prime Minister Tafawa Balewa, a Muslim from the north, and President Nnamdi Azikiwe, a Christian from the east. Although the country operated a multiparty system, political regionalism held sway as most political parties

were mainly aligned to each of the three main regions: east, west, and north. Each of these three regions specialized in the cultivation and exportation of various agricultural produce. Marketing boards that had been established during the colonial era helped to ensure farmers were able to sell their cash crops and generated huge revenues for the government. Agriculture contributed the largest share to the country's GDP and foreign exchange earnings.

Despite some progress in the agricultural sector in the different regions, in the first few years of independence as a sovereign nation, there were widespread concerns about corruption and mismanagement of the political class. This appeared to be especially rife in the Nigerian military. In January 1966, in a bloody military coup d'état led by Major Nzeogu, Prime Minister Balewa was overthrown, and Major General Aguiyi-Ironsi was pronounced head of the Federal Military Government of Nigeria. This would mark the first of several military interventions in the country.[5]

Though the military had seized power, there was disunity in their ranks. There were allegations that the 1966 coup d'état was based on tribal sentiments, and not executed with the best interests of the country at heart. In July 1966, Aguiyi-Ironsi was murdered, and General Yakubu Gowon was appointed head of the military government. Challenges with managing the conflicts around ruling the country spiraled out of control, culminating in a protracted civil war in which the Eastern region seceded from Nigeria, declaring itself a sovereign nation called the Republic of Biafra. By the end of the three-year war in 1970, over a million lives had been lost. Biafra was then reabsorbed into Nigeria.

The Wasted Decades of Military Rule: 1970s–1990s

Another coup ousted the government of Yakubu Gowon in 1975 as Brigadier Murtala Muhammed took over power, promising to hand over power to civilians in 1979. A year later, he was assassinated in an unsuccessful coup attempt, and his deputy, General Olusegun Obasanjo, became head of state. Obasanjo honoured his predecessor's timetable to return to civilian rule and handed over to democratically

elected president, Shehu Shagari, in 1979. Shagari was ousted in a military coup shortly after his re-election in 1983, and the military were in firm control of the nation until 1999.

The Oil Boom and Military Era of the 1970s

A prominent feature of this era was the rise in the prices of crude oil, which began in response to the oil embargo placed by the Arab country members of the Organization of Petroleum Exporting Countries (OPEC) during the Arab-Israeli war of 1973. Crude oil prices increased by over 300% between October 1973 and March 1974 and remained high all through most of the 1970s. Having joined OPEC in 1971, the sharp rise in the price of oil saw Nigeria's revenue increase to new heights and economic prosperity beckoned to the country. It became the wealthiest country in Africa and focus shifted from agriculture, which had hitherto been the mainstay of the economy, to oil. However, increased government revenues also led to increased government expenditure, which fueled inflation.

One result of the singular focus on oil was a reduction in food production within the country and an increase in the importation of basic foods. The contribution of agriculture to the country's GDP reduced from 48.23% in 1971 to 21% in 1977. Foreign exchange earned from the export of oil was utilized in importing food for the country. In an attempt to stem the decline in agriculture, "Operation Feed the Nation (OFN)" was launched in 1976 by Obasanjo, the then military head of state. OFN aimed to steer the nation towards self-sufficiency in food production and encouraged Nigerians to grow their own food and take pride in agriculture. Although OFN succeeded in bringing the decline in agriculture and food production to the awareness of Nigerians, the success of the programme was, however, in doubt. The focus of the government continued to be on oil revenue.

The Oil Bust and Return to Democracy: The 1979–1983

Amidst the oil boom, Nigeria returned to a brief period of civilian rule with Shehu Shagari as the democratically elected president in 1979.

Shagari rode on nation-building sentiments and his campaign focused on uniting Nigerians as "one people with one destiny". On the economic front, oil revenues continued to increase with the world oil crisis of 1979, which was sparked by the Iranian revolution that led to panic buying and shortages in the international market.

Buoyed by the continual increases in oil prices, Shagari's government continued with huge expenditure and investments. In an attempt to boost industrialization, the Nigerian government made massive investments in steel and petrochemicals.[6] Prominent amongst these investments were the construction of two steel companies in Ajaokuta and Aladja, which began in 1979. These investments were, however, steeped in controversies and allegations of corruption, as the economics of carrying out such huge steel investments was questionable.

In a dismal turn of events, oil prices slumped in mid-1981 following a supply glut. However, public spending was not cut, and Nigeria's debts spiraled as government rushed to borrow to finance the shortfall from oil earnings. Inflation soared, even as importation of food and other commodities continued. In a renewed attempt to revive the agricultural sector, the government abolished the OFN programme and launched the "Green Revolution". This sought to correct the lapses of OFN by providing fertilizers and adequate storage facilities to farmers. Nigerians were encouraged to take up farming and other agricultural activities not only for self-sufficiency but also for sales and exports. Like the OFN, however, the Green Revolution did not meet with much success.

Oil, Structural Adjustment and Return to Military Dictatorship: 1983–1999

Shagari's presidency came to an abrupt end on December 31, 1983, following a coup led by General Muhammadu Buhari. On taking over the reins of power, the military government carried out investigations of top political leaders, accusing them of corruption and mismanagement. Many political leaders were given prison sentences while some were placed under house arrest.

Meanwhile, the price of oil continued to fall. In an attempt to resolve the resultant crisis, severe restrictions were placed on imports and foreign exchange. Many local manufacturing companies that relied on imported raw materials either shut down or reduced their capacity. Many public servants were retrenched to reduce government expenditure. These measures led to massive unemployment, and were accompanied by shortage of basic food items and essential commodities. Two million immigrants, mostly from neighbouring Ghana, were expelled from the country in a futile attempt to create jobs for Nigerians.

Barely two years after Buhari came to power, he was ousted by General Ibrahim Babangida in 1985. The economy continued to underperform with the Naira losing value. In 1986, Babangida embarked on the World Bank sponsored Structural Adjustment Programme (SAP), with deregulation of the agricultural sector, privatization of public enterprises, devaluation of the naira, and promotion of foreign investment. SAP was very unpopular as Nigerians experienced severe economic strain.

Upon seizing power in 1985, Babangida had announced plans to return to civilian rule in 1990. The date was subsequently moved to 1992; a transition programme was inaugurated and the ban on political activities lifted in 1989. Elections were held in 1993, but Babangida annulled the presidential election won by business magnate Moshood Abiola, even though the elections were adjudged to be relatively free and fair. Abiola was charged with treason and incarcerated after he declared himself president, and passed away under suspicious circumstances. The civil unrest that followed the annulment of the elections led to Babaginda's resignation in August 1993 and the installment of an interim national government headed by Ernest Shonekan. However, the transitional government was short-lived as General Sani Abacha seized power in November 1993. General Abacha was a brutal dictator, and planned to hold on to power as a civilian leader. Following his sudden death in 1998, General Abdulsalami Abubakar led a transitional government that returned the country to democratic rule in 1999 with the election of former military leader, Olusegun Obasanjo, as President.

During the military era between 1983 and 1999, Nigeria's GDP grew at an average of just 1.8% annually, with many years recording a negative growth rate. Corruption was rife and the nation experienced gross

violations of human rights and the loss of democratic values and the rule of law. These were wasted decades in Nigeria's economic and political history.[7]

Oil, Diversification and Dividends of Democracy: 1999–2015

Following Obasanjo's inauguration as Nigeria's president in 1999, he and his Peoples Democratic Party (PDP) immediately sought to deliver the dividends of democracy to Nigeria. Perhaps surprisingly, Nigeria experienced uninterrupted democratic governance, and the PDP went on to lead the country for the next 16 years under the governments of Olusegun Obasanjo, Umaru Musa Yar'Adua, and Goodluck Jonathan. Successive administrations struggled to initiate reforms and rebuild the badly destroyed institutions and the economy. Nigeria, however, experienced several positive changes, but reforms aimed at reducing the dependence on oil were somewhat unsuccessful.

The Telecoms Revolution

The Obasanjo administration took economic reforms as a top priority, and made Nigeria's telecommunications revolution happen. In 2000, the $50 million industry was grossly underperforming as it contributed less than 1% to the GDP, with less than 500,000 active lines nationwide. Following a transparent bidding process, three new operators emerged in 2001, each paying $285 million. By 2015, telecoms had become a $32 billion industry with over 150 million active subscribers, accounting for about 8% of the country's GDP.[8]

The Paris Club Debt Relief

As of 2004, Nigeria owed a staggering $30 billion to the Paris Club, an informal group of major creditor countries that lent to developing nations. In 2005, the Obasanjo administration reached a historic agreement that

saw the write-off of approximately $18 billion, or 60% of the value of Nigeria's debt. The success of the negotiations with the Paris Club was based on the presentation of extensive economic reform programmes that were to be monitored by the IMF.

The GDP Rebasing and Economic Diversification

In 2014, President Goodluck Jonathan's administration decided to rebase the country's GDP, for the first time in a quarter of a century, to reflect the true size and composition of the economy. The outcome was surprising, as the country's 2013 GDP went from $270 billion to $509 billion, making it the 26th largest economy in the world. The services sector (36%, previously 20%) became the single largest component of the economy; the contribution of telecoms jumped to 8.6% (from 0.8), and Nollywood, the film industry, which had never been accounted for, was 1.4%. The contribution of the oil sector fell sharply from 32.4% to 14.4%, as did agriculture (34.6% to 21.6%) and industry (36.2% to 25.6%).[9] The rebasing exercise raised Nigeria's profile as the economic powerhouse within the region, as it had taken the title of Africa's largest economy from its longstanding rival, South Africa.

Old Problems Persist, New Problems Emerge

Yet, alongside these positive developments, several challenges remained. The PDP, with its firm control of the federal government and most of the 36 states, struggled to implement essential economic and political reforms.

Unrest in the North and South

In the northeast, a militant Islamist movement, Boko Haram, emerged in the early 2000s. The group wreaked havoc through a campaign of bombings and shootings, and by 2015 was responsible for the deaths of over 8000 people and the internal displacement of over 1 million people.[10] The group's most infamous attack came in April 2014 when it abducted

240 girls from a secondary school in the town of Chibok. Meanwhile, conflict was beginning to return to the oil-rich Niger Delta, with a group named Movement for the Emancipation of the Niger Delta (MEND) embarking on a campaign of sabotage and guerrilla-type attacks that disrupted oil production.

Currency Devaluation

On the economic front, oil prices, which had averaged $110 per barrel in the four-year period up to 2014, had crashed to about $52 in 2015. As a result of declining oil earnings, the naira faced significant devaluation pressure. In the official market, the naira fell within a few months from about N154/$ to N196/$ by May 2015. In the "parallel" or "black" market, where most Nigerians acquired their foreign currency, the exchange rate fell to N220/$.

Hope Rising in 2015: The Second Coming of Buhari

In the period leading up to 2015 elections, President Goodluck Jonathan and the ruling party had suffered significant setbacks. The fight against Boko Haram was going terribly for the Nigerian Army, and there was anger that the government was not able to secure the release of the 240 captured Chibok girls; further, the country's economic crisis was getting worse. There were also allegations of widespread corruption of public officials. Sensing an opportunity, many opposition parties created a new mega party, the APC, to challenge the PDP. Buhari, who had earlier lost three presidential elections to the PDP, led the political movement on a change and anti-corruption ticket. He promised to bring a swift end to the Boko Haram menace, stabilize the naira, diversify the economy, and create millions of jobs. Buhari defeated the incumbent president in a historic landslide, with some opinion polls showing an approval rating as high as 70% for the new president in 2015. Buhari was the man of the moment, and hope was rising in Nigeria.

Hope Dashed?

Buhari inherited a huge crisis, with the country faced with its worst economic crisis in a quarter of a century. The volatility in the oil market continued, and domestic terrorism threats remained. Buhari had his work cut out for him.

Economy Declines, Naira Collapses

Since oil accounted for over 70% of government revenue and more than 90% to the country's exports and foreign earnings, the great plunge in oil prices had a debilitating effect on the economy. Nigeria was using its built up foreign reserves to defend the Naira, as Buhari ruled out devaluing the currency. The Nigerian Stock Exchange, which had lost about 20,000 basis points between its high point in mid-2014 and December 2015, was showing no signs of recovery as of October 2016. Inflation rose from 9.2% in July 2015 to 12.8% in March 2016, partly due the removal of the fuel subsidy in 2015 and the resultant increases in transportation and food costs.

More Security Challenges in the Niger Delta

In 2016, there was a rise in the number of militant group activities in the oil-rich Niger Delta. This led to a considerable fall in the oil production, and Nigeria lost its position as Africa's largest oil-producing nation to Angola. The government initially made attempts to dialogue with leaders of the militant groups, but subsequently resorted to the use of military force. The situation in the Nigeria Delta remained volatile, and there were concerns that the military approach was not effective.

The Persistent Infrastructure Challenge

Nigeria had a huge infrastructure deficit. The World Economic Forum's Global Competitiveness Index 2016–2017 report identified this as a

critical factor holding back Nigeria's competitiveness as "Inadequate Supply of Infrastructure" was rated the most problematic factor for doing business in the country (Nigeria ranked 132nd out of 138).[11] The road and rail network had fallen into a state of disrepair, and the nation's airports were generally dilapidated and in urgent need of upgrade. Electric power supply was still very epileptic, and barely 4000 megawatts was generated for distribution whereas the national requirement was estimated at between 28,000 and 31,000 megawatts.[12] Meanwhile, the country's dwindling revenues meant the government could not embark on infrastructure projects, to the frustration of many citizens.

Enhancing Nigeria's Competitiveness: Getting the Elephant to Dance

Despite the many challenges facing Nigeria, Buhari and his administration remained undeterred. The president was focused on delivering on his campaign promise of achieving competitiveness, inclusive growth and sustainability. Three broad priority areas needed to be tackled swiftly and boldly: increasing local production, attracting foreign investments, and boosting non-oil revenues.

Make in Nigeria

Nigeria was heavily dependent on imports, which averaged about $60 billion annually between 2006 and 2014.[13] Many firms and industries had declined and/or shut down operations, as it was often cheaper and more profitable to import than manufacture locally. President Buhari wanted to reverse this:

> *We wasted our large foreign exchange reserves to import nearly everything we consume. Our food, our clothing, our manufacturing inputs, our fuel and much more. In the past 18 months when we experienced low oil prices, we saw our foreign exchange earnings cut by about 60%, our reserves eroded and our consumption declined as we could not import to meet our needs.*[14]

Increasing local production would help to preserve the country's dwindling foreign exchange reserves and ease the devaluation pressures on the naira. Further, it could reduce unemployment, and increase non-oil exports earnings. There was talk of increasing the contribution of industry/manufacturing to GDP by 250% over a five-year period.

Attract Foreign Direct Investment

Foreign direct investment (FDI) into Nigeria averaged $6.6 billion between 2006 and 2014. There had been an uptick between 2006 and 2011, but a noticeable decline thereafter (Fig. 11.1).

As the largest economy and most populous country in Africa, Nigeria was an attractive investment destination. Many multinational enterprises like MTN, Airtel, P&G, Diageo, Coca-Cola, Heineken, Chevron, ExxonMobil, Lafarge, Nestle and Unilever had invested heavily in Nigeria, and were thriving. But Nigeria also had a reputation for being a difficult place to do business due to corruption, red tape, policy inconsistencies, and macroeconomic headwinds. Many (potential) investors were especially concerned about foreign currency risks, given the volatility of the naira and the inability of many firms to repatriate profits. Attracting foreign investments could help to stimulate growth and development, reduce unemployment and foster technology transfer and knowledge spillover to local firms.

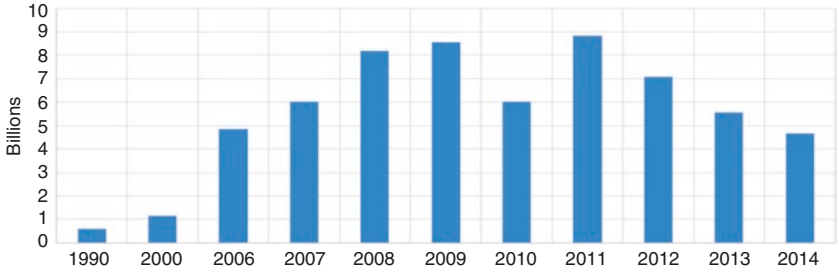

Fig. 11.1 Foreign direct investment net inflows into Nigeria: 1990–2014. Source: World Bank

Boost Non-Oil Revenues

Nigeria depended heavily on oil earnings and had been lax about collecting taxes. Tax revenues averaged a mere 3% of GDP over the period from 2006 to 2012, compared to South Africa's 26%. Although tax revenues had risen sharply (N455 billion in 2000; N1.7 trillion in 2005; N2.8 trillion in 2010; N3.7 trillion in 2015), non-oil tax receipts often accounted for less than 30%.[15] There was a huge opportunity for the government to expand the tax net to cover small and medium-sized enterprises and individuals, as well as close the loopholes in the collection of customs and exercise duties. This would help cushion the impact of oil shocks and provide the necessary funding for capital projects.

Nigeria on the March Again

Nigeria was grappling with colossal competitiveness and economic challenges, and President Buhari had no time to waste. There was talk of appointing a high-powered Industrial Policy and Competitiveness Advisory Council to identify specific policy and implementation priorities to put the economy on fast track. Nigeria's poor performance on the global competitiveness ranking was a source of concern and embarrassment, and it was clear that targeting the key enablers for building national competitiveness was critical. But how? What growth poles could be leveraged to deliver both quick wins, and medium/long-term results? What would the country have to do different this time to break the historical vicious circle of excessive public spending, exchange rate depreciation and inflation?

Notes

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10. Council on Foreign Relations Nigeria Security Tracker. Available: https://www.cfr.org/nigeria/nigeria-security-tracker/p29483.
11. World Economic Forum (2016) Global Competitiveness Index, 2016–2017. Geneva, Switzerland.
12. http://www.energy.gov.ng.
13. Statistics from the World Integrated Trade Solution of the World Bank.
14. http://www.vanguardngr.com/2016/12/president-buhari-speech-at-the-presentation-of-2017-budget-of-recovery-and-growth/.
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12

The South African Renewable Energy Cluster

Mark Esposito, Months Raut, Laura Lanzoni Broccoli, Nasma Harrachi, Yann Claudel, Yang Yang, and Melina Balliard

Overall Economic Performance

Macro Performance

South Africa is a middle-income market that has been emerging during the last few years. The country's main assets are its natural resources and its increasingly developing financial, energy and transport sectors. Also, South Africa's stock exchange is the largest one in Africa and is ranked among the top 20 in the world. All these elements make South Africa one of the fastest-growing economies in the African continent. Furthermore, the South African GDP has been growing (Trading Economics, 2015a) at a steady rate during the last decade, and is ranked 115th worldwide (CIA, 2015).

M. Esposito (✉)
Harvard University, Cambridge, MA, USA

M. Raut • L.L. Broccoli • N. Harrachi • Y. Claudel • Y. Yang • M. Balliard
Grenoble Ecole de Management, Grenoble, France

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The South African economy is very diverse and invests in different sectors. Nonetheless, it is noticeable that the country has made an effort into switching from a mainly industrial to a more service oriented one during the last few years. Following is a chart describing the breakdown of the south African GDP between the different sectors (Alexander, 2015).

Despite all the progress South Africa has made to develop its economy, the country still faces several issues, which are discussed here. In the first place, unemployment is still a delicate matter. In 2014 over 24.3% of the South African population was unemployed, and 31.3% was below the poverty line (Trading Economics, 2015b). As stated by the International Labour Organization (Businesstech, 2015), South Africa had one of the highest unemployment rates by the end of 2015, and was the 8th worldwide. Furthermore, as a consequence of apartheid, inequality in the country is still rampant, along with the downfall of wages. The country is also seriously in debt. With its external debt amounting to over 38.2% of GDP (Colombo, 2015), the South African economy is, consequently, heavily dependent on foreign investments. Around $60.6 billion of South Africa's external debt is in foreign currency, thus exposing investors to possible currency fluctuations against the US dollar. Further, a direct consequence of the introduction of the National Credit Act was the rapid decrease of unsecured loans. The main purpose of this act was to enable free access to credit, with a ban on any form of discrimination, and extending support to small businesses (Acts Online, 2015a). Consequently, as reported by the National Credit Regulator in its 2012–2013 report, 20 million South African citizens have over $140 billion worth of personal debt. Hence, South Africa might be exposed to the risk of a credit bubble. In fact, the country witnessed two periods of low interest rates, from 2004 to 2006, and a second one starting in 2009 and still ongoing (Colombo, 2015).

On the whole, the South African economy, despite being one of the most promising and attractive to investors in the world, and especially in the African continent, still faces challenges regarding policies in place, mainly concerning loans, employment and foreign investments. Nonetheless, the country is working towards practical solutions, also by nurturing the renewable energy sector. As a matter of fact, South Africa

views green economy as a sustainable development path, "based on addressing the interdependence between economic growth, social protection and natural ecosystem" (Environment.gov.za, 2015). The ultimate objective is progressive economic growth, thanks to a constant flow of FDI and the creation of increasing number of jobs, hence strengthening the level of competitiveness of the renewable energy cluster, and South Africa as a whole. There is also a requirement for reforms to reduce environmental impact and for the development of cleaner sources of energy, as the country is heavily dependent on coal. For instance, the Renewable Energy Market Transformation Project was signed in 2007 in order to put in place policies and regulations for renewable energy development in South Africa, for which the government spent over $ 17, 3 million (Banquemondiale, 2015). The aim of the project is to develop new methods of energy creation and distribution, to further attract foreign and national investors and to consolidate the renewable energy industry as pivotal part of the country's identity.

Micro Performance

Trade

South Africa has been a member of the World Trade Organization (WTO) since January 1st, 1995, and a member of the General Agreement on Tariffs and Trade (GATT) since June 1948. For trade in merchandise, South Africa's main trading partners are the European Union, China, the United States, Japan, Saudi Arabia, India and Botswana. Between 2011 and 2013, the ratio of trade to GDP was 62.2%, and trade per capita was $4511 (WTO, 2015). South Africa's top exports include agricultural products, diamonds, metals and minerals. Machinery and transportation equipment, on the other hand, account for 30% of the country's imports, along with fuel, mining products, manufactured goods, and a share of agricultural products the country is unable to produce directly (WTO, 2015); the country is ranked 100th in trading across borders among 189 countries, based on time, cost and documents required, in order to export and import (World Bank's Doing Business, 2015a).

Foreign Direct Investment

Foreign direct investment (FDI) plays a pivotal role in development and consolidation of South Africa's economy at an international level. As reported by the Organization for Economic Co-operation and Development (OECD), when considering the Restrictiveness Index, South Africa ranks among the most flexible jurisdictions for FDI in the world (OECD, 2015). Furthermore, as at 2015, South Africa's stock of FDI currently accounted for around 42% of the country's GDP. In addition, over the course of the 2010, South Africa is witnessing a considerable flow of investments from the United States, several European countries, and increasingly from China, India and other Asian countries (Davies, 2015). The country attracted around 24% of all the FDI projects in Africa between 2007 and 2013, and was voted as the best investment destination in the African continent for two consecutive years, by the *Global Financial Times Magazine* (OECD, 2015).

Education

UNESCO reports (UNESCO, 2015) that the youth literacy rate in 2015, considering both sexes and individuals aged 15–24, is 99.02%. There are three bands of education in South Africa, as recognized by the South Africa's National Qualifications Framework (NQF) (SouthAfrica.info, 2015a): General Education and Training, Further Education and Training, and Higher Education and Training. Following the 2009 division into Basic Education, and Higher Education and Training, the national Department of education has been strenuously working since 2004, in order to uniform the level of education across the country, often merging small universities into larger institutions, while each province (nine in total) has its own decentralized education department. Concerning public universities, South Africa has 23 so far, 6 of which are universities of technology. The government also developed, and promulgated in 1999, a financial aid scheme aimed at students in higher thanks to which over 1 million of them have benefited in 2015 (SouthAfrica.info, 2015). The country has been subject to a 40-year

apartheid, whose discriminatory education system had been benefiting only white South African children, who were granted free quality education, in contrast with black children, who were given the so-called "Bantu education". Taking its name from the Bantu Education act passed in 1953, it dictated what knowledge and skills the black children could be imparted with to enable them to conform to the role in society the government had envisaged for them, that of factory workers (Overcoming Apartheid, 2015).

Patents

According to the South African Patent Act 57 of 1978, the Companies and Intellectual Property Commission (CIPC) is responsible for all new patent applications filed within the country's physical borders. Thanks to its membership of the Patent Co-operation Treaty (PCT), individuals are able to file national and international applications; the latter allows to select "the countries in which the applicant seeks protection" (CIPRO, 2015). The term of patent, that is, the maximum period during which it can be maintained, is 20 years from the filing date, in conformity with the WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (WTO, 2015).

Clusters

There are many clusters associated with mining and metals, natural resources South Africa is widely recognized for. In fact, the mineral industry plays a vital role in the country's economy, as well as the manufacturing and agricultural industries. Other notable clusters can be found, namely wine, tourism and biotechnology clusters. Yet another pivotal cluster in the development of the country's economy and national identity is the renewable energy sector, the main topic of discussion of this chapter. The country's Department of Energy has been implementing policies to foster this cluster, including the possibility for private investors to contribute to the production of power through renewable energy sources in the country (SouthAfrica.info, 2015).

Global Competitiveness

According to the Global Competitiveness report 2014–2015, released by the World Economic Forum (WEF), South Africa ranks 56th out of 114 countries on the Global Competitiveness index, 89th on the "Basic Requirements" rank, including institutions, infrastructure and macroeconomic environment, 43rd on the "Efficiency Enhancers" index, regarding higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness and market size and, finally, 37th in "Innovation and Sophistication Factors", thus proving its competitive strength. Nonetheless, South Africa is still plagued by several social problems, such as high income inequality, youth unemployment and inadequate access to healthcare (World Economic Forum, 2015).

Business Environment and Policy

Legacy

History

South African History is divided into two main eras: colonialism and apartheid. The Dutch India Company were the first Europeans settlers to land in the southern tip of Africa in 1652, looking for the port of Cape Town, in order to resupply their trading expeditions that were passing the Cape of Good Hope, between the Netherlands and the Far East (CIA, 2015). At the beginning of the eighteenth century, the Cape settlement was taken over by the British, while the Dutch, also known as Boers or Afrikaners, made their "Great Trek" up north (Country Studies, 2015a). In 1867 and 1886, diamonds and gold were discovered, which led to consistent investments and immigration, boosting the economy as well as increasing the domination over the native population (Country Studies, 2015). The sudden gold rush inevitably resulted in conflicts, which eventually came to an end in 1902, during which the Dutch were defeated, in the Second Anglo Boer War. Eight years later, the Boers and the British

were ruling together under the Union of South Africa, which officially became a republic in 1961, voted and ruled by whites only. The National Party passed the policy of apartheid segregating infrastructures, public services and residential areas in favor of the white minority over the black majority (Our Africa, 2015). Internal opposition led by the African National Congress (ANC), as well as boycotts and other sanctions from Western nations and institutions, forced the government to negotiate a co-operation with the ANC.

In South Africa's first democratic elections in 1994, the ANC's victory and Nelson Mandela's presidency that followed put a definite end to apartheid. The ANC has since then kept a strong position as majority party in all elections.

Today's Society

During the course of his mandate, Mandela successfully introduced a new constitution to reshape South Africa as a whole. However the country is afflicted with severe inequalities, in terms of housing, education and healthcare (CIA, 2015). If the Gini coefficient as a measure of inequality among values of a frequency distribution is taken into account, for the levels of income, it is noticeable that South Africa's coefficient is amongst the highest in the world. Although it has changed politically, racial discrimination is pervasive and entrenched in the country's economy (DeSilver, 2013). In fact, the end of apartheid has brought greater benefits to the white population than to the black and mixed race populations. Despite the fact that the vast majority (about 80%) of the national population of South Africans is black (CIA, 2015), the 2011 census revealed that the average annual household income of black citizens was 60,613 rand, roughly $8700 at the then-current exchange rate. This was about an astonishing one-sixth of the average annual income among white households, and a quarter that of the other minorities (2.5%) including Asian households. The wide gap of wealth distribution between ethnic groups, then, should not come as a surprise. South Africa is also very diverse in terms of languages—having 11 official ones—and religions, particularly in Christian branches (CIA, 2015).

Geography

South Africa and the Cape of Good Hope are at the crossroads of sea lanes between the Atlantic Ocean and the Indian Ocean. South Africa neighbors with Botswana, Lesotho, Mozambique, Namibia, Swaziland and Zimbabwe, all countries from which refugees seek asylum and protection, and whose economies rely heavily on trade with South Africa. Until 2012, South Africa had the highest GDP among African countries (*The Economist*, 2014). Regional cooperation has been formalized by the Southern African Development Community (SADC), with a common regional market and an agreement concerning the distribution of water (Country Studies, 2015).

Policy Choices

South Africa has been working hard towards a more balanced economy and society. Mandela's government promulgated the Reconstruction and Development Programme (RDP) in 1994, the aim of which was to promote a competitive economy through socioeconomic policies (SA History, 2015), particularly with a focus on human resource capacity, fighting racial discrimination, especially in the workplace, developing a regional economy in Southern Africa, and democratizing the society. The country has since benefited from the policies put in place, specifically for accessibility of health care and reduction of inequality, although the economic development is still a major concern for the government.

Following the RDP, the Growth, Employment and Redistribution (GEAR) program was introduced in 1996, but was replaced shortly after by the Accelerated and Shared Growth Initiative for South Africa (ASGISA), that worked towards poverty reduction and employment creation. The ASGISA is now known as the New Growth Path (GNP) (SA History, 2015). With this policy, the government has successfully attempted to fuel the country's economic development, by providing resources to meet social investment needs. While there was an impressive decrease of fiscal deficit to only 2.2% by 2000 (SA History, 2015), poverty, inequality and unemployment are nonetheless causes of concern.

In an attempt to improve the overall situation, the National Development Plan (NDP) was launched in 2013, a long term strategic plan that aims to redress economic issues by 2030. The current president of South Africa, Jacob Zuma, announced his interest in pursuing a framework similar to the one unveiled in 2010 by the Malaysian government, the Government Transformation Program (PMO, 2015), in an effort to obtain the same "big fast results" (SA News, 2014).

It is, however, important to note that South Africa is still ranked first among the sub-Saharan African countries. Its economy, compared to other African countries, is relatively stable, and the country possesses well-developed institutions. Moreover, South Africa's financial market is prominent and, thanks to clusters such as the renewable energy cluster, its scientific sector is prolific. Concerning the business environment as a whole, South Africa was ranked 43rd in the Ease of Doing Business in 2015 (World Bank's Doing Business, 2015b). On the downside, the country is still struggling to overcome the lack of labor market efficiency, its flawed hiring and firing practices, unequal wages determination and, finally, poor worker-employer relations. Additionally, the university enrollment rate is alarmingly low, with only 15% of new students in 2010, thus limiting the potential for further development and innovation, particularly in scientific sectors (Centre for Global Competitiveness and Performance, 2010). Finally, the lack of proper infrastructure and national security continues to affect South Africa's productivity and attractiveness for international investors.

Business Environment

A preliminary analysis of the nation's diamond shows strengths and weaknesses across four main indicators: factor conditions, rivalry, demand conditions and lastly, related and supporting industries. These four drivers analyze the level of local and international competition, the structure of the home-market demand, the density and distribution of supplier industries, and finally, the key factors of production needed to compete in the chosen industry (Fig. 12.1).

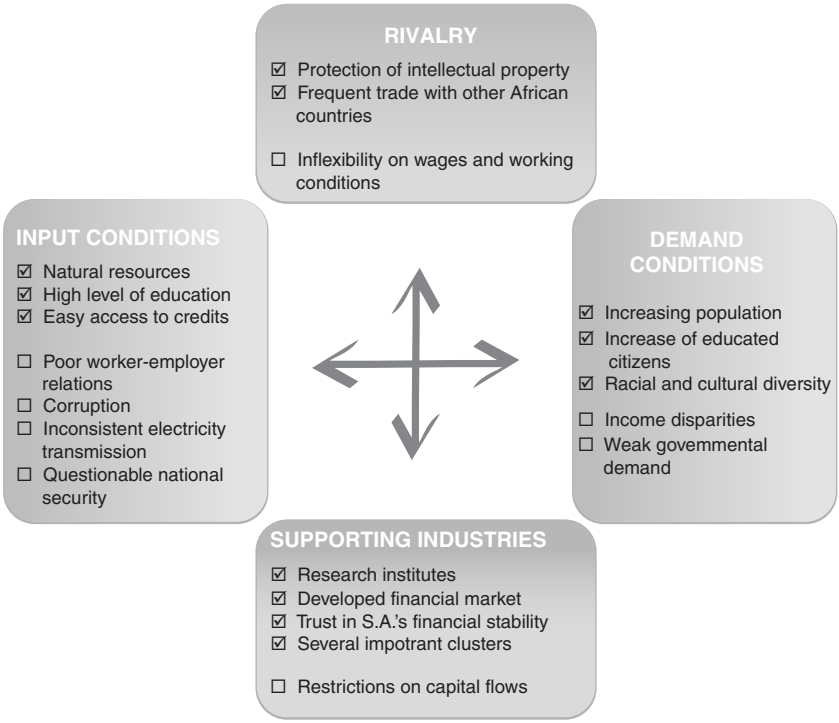

Fig. 12.1 South Africa's business environment

A similar framework of analysis will be adopted in the following section of this chapter, to delineate the business environment specific to the renewable energy cluster.

Regarding factor conditions, South Africa is characterized by pervasive corruption, ranking 67th out of 176 countries in 2014, in the Transparency International Corruption Perceptions Index (Transparency International, 2014). The diffusion of electricity across the country is uneven due to lack of proper infrastructure in certain areas. On the other hand, the country can benefit from a considerable amount of natural resources, a boost in the education sector that will hopefully translate into continuous innovation and availability of credits for enterprises. Concerning rivalry, there is an extensive jurisdiction in the matter of intellectual property protection, and dynamic business relationships with other African countries; both positive aspects that are inevitably limited by the inflexibility

on labor matters, such as wages and working hours. Demand conditions have been improved by a growing population that reached 50 million inhabitants in 2012, a vast majority of which possess good to high level of education (Transparency International, 2014). The great diversity in ethnicities and cultures is also an extremely positive factor. The income inequality, however, affects the full potential of such a diverse and dynamic population. Related and supporting industries within the country benefit from quality research institutes, entwined with local businesses. The financial market is, as previously noted, well developed and stable, resulting in increasing flows of FDI and, finally, the country is home to multiple, extremely differing clusters like wine and tourism. There are still some restrictions on capital inflows and outflows, which constitute a threat for development of businesses in need of high investments, such as the renewable energy-related industries (Incompass Forex, 2015).

Analysis of the Cluster

History of the Cluster

The renewable energy conglomeration that is blossoming in South Africa is still an emerging cluster, as its inception dates back to only a little over 17 years ago. Nevertheless, through the years, it has gone through several important changes, which have contributed to its success, and consequent expansion.

In 1998, the former Department of Minerals and Energy released a White Paper on Renewable Energy (Department of Minerals and Energy, 1998) that was approved by the then government. This was the start of a long-term commitment to the development of renewable energy, and energy efficiency, in the country. In fact, South Africa's energy efficiency is significantly lower than the average. In 2009, following the split of the Department of Minerals and Energy into the Department of Energy (DoE) and the Department of Minerals, a more detailed, fiscal and legislative oriented policy was drafted. Along with the further promotion of the development of the renewable energy sector, the guidelines of the new policy also focused on which measures to adopt, in order to reduce

carbon dioxide (CO2) emissions. As a matter of fact, in the same year, the U.S. International Energy Information Administration (IEIA) estimated that South Africa is Africa's leading carbon dioxide emitter, and contributes to 1.49% of total global CO2 emissions (EIA, 2015). This is due to the fact that the country is still heavily dependent on coal, and whose total consumption amounted, according to IEIA (Bp.com, 2015), to a staggering 72% in 2012.

An important milestone in the development of the cluster was the approval of the White Paper on Renewable Energy (Energy.gov.za, 2015) in 2003, the main target being the production of 10,000 GW of energy by 2013, originating from renewable sources; namely, biomass, wind, solar and small hydro. A number of strategies were then developed, including the 2004 National Cleaner Production Strategy (Rogers and Banoo, 2004) that stressed the importance of the organic development and establishment of "practices of sustainable consumption". The Biofuels Industrial Strategy, introduced in 2007, proposed a 5-year program to gradually introduce biofuels, such as bioethanol and biodiesel, and aimed to supply 2% of the country's liquid fuel requirement, thus contributing to 35% of the renewable energy targets (Energy.gov.za, 2015). The 2008 Energy Act further supported the renewable energy planning, ensuring the availability of diverse energy resources, in sustainable quantities and at affordable prices, in an attempt to increase the diffusion and consumption of renewable energies, and assure future growth of the sector (Acts.co.za, 2015b). Along those lines, the Department of Energy released, in 2011, the Integrated Resource Plan (IRP), a 20-year additional plan targeting the electricity sector, with 11.4 gigawatts (GW) of renewables as the objective (Energy.gov.za, 2015). The South African renewable energy cluster is an example of a conglomerate of actors and institutions, adequately supported by the government, that work in excellent synergy towards common goals. The result is a dynamic environment capable of becoming, in the near future, a key player in the global renewable energy sector.

Cluster Today

From December 2011 to the present day, the South African government has initiated 64 projects for renewable energy, representing foreign and

domestic investment of over $100 billion that will add 3900 megawatts (MW). Following this, South Africa was rated as the 12th most attractive investment destination for renewable energy. Now with the current pace of investments and the growth of the renewable energy sector, its contribution is expected to grow from 1% in 2012 to 12% by 2020. Once of the biggest benefits is the creation of opportunities in the job sector and for local companies the projects would involve up to 56% local content (SA Info Reporter, 2015).

Today, South Africa's renewable energy cluster, also known as Green Cape, is expanding rapidly, and contributes to the energy production of several sources, such as solar photovoltaic, wind, concentrated solar, small hydro, landfill gas, geothermal, biomass and, finally, biogas (Mulcahy, 2014). Government officials estimate a contribution of total 18.2 GW by 2030, 42% of new build (Moodley & Van Weele, 2013), with a dramatic increase in the total available potential of renewable energies, with solar energy being by far the biggest contributor with 548 GW. Wind energy and hydropower follow, with 14.6 GW and 13,560 megawatt (MW) respectively. Forecasts for geothermal energy, estimated to be around 50 MW biomass, is expected to increase from 7.2 to 10.8 terawatt-hours (TWh) by 2040 and wave energy to increase progressively by a substantial 33 TWh per year by 2050 (Belward, Bisselink, & Bódis, 2011).

Value Chain

The inflow of FDI for boosting the renewable energy sector in South Africa is going to be very beneficial for the local vendors and citizens. For construction and setup of infrastructure for power generation plants, companies heavily depend on local sources for civil work. For instance, hydropower projects stem from 65% of local sourcing that also accounts for over 50% for geothermal power, and 60% for concentrated solar power (CPS) (International Renewable Energy Agency, 2015).

In addition to these benefits, the renewable energy sector has also resulted in the development of basic infrastructure, such as roads, several construction projects employment opportunities, research and development (R&D), manufacturing, construction, and installation and mainte-

nance, as well as engineering. From the analysis of the value created by this sector, it is possible to conclude that the benefits generated by the clusters are both vertical and horizontal, hence, hybrid.

Cluster Map

Fig. 12.2 gives a graphical representation of the renewable energy cluster map in South Africa and its main actors.

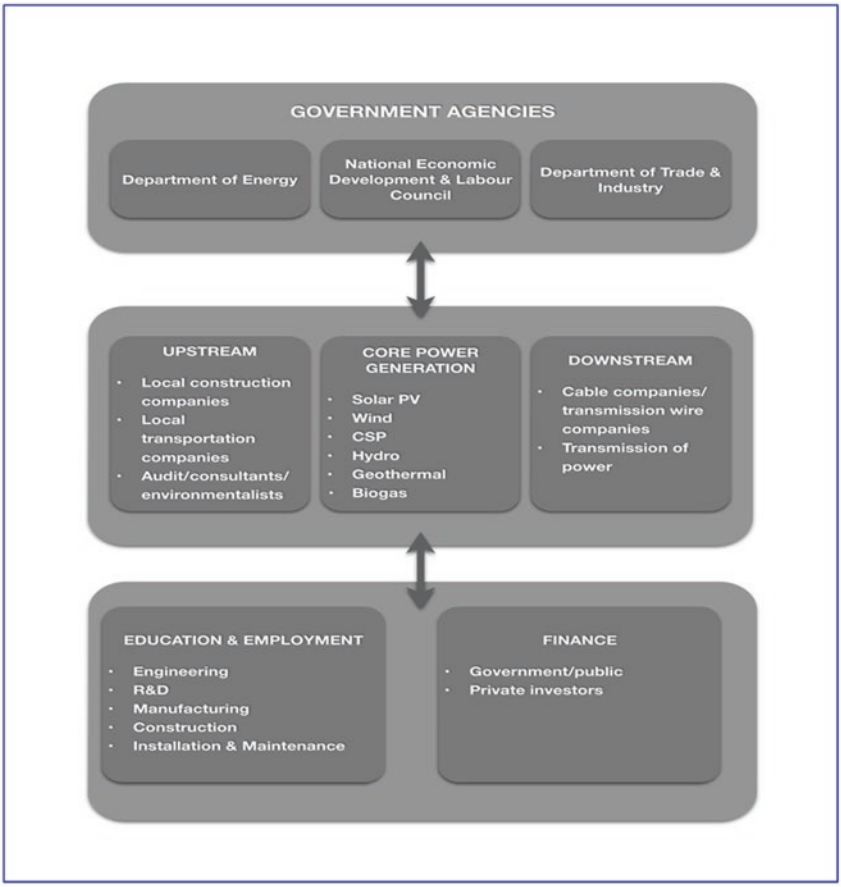

Fig. 12.2 South Africa's renewable energy cluster

Principal Actors

South Africa's renewable energy sector has created lots of opportunities for:

a. *Upstream*:

1. Local construction companies, due to the fact that these projects require a high amount of work.
2. Local transportation companies, because the technology required to produce renewable energy is manufactured in countries outside South Africa; most of the material is then imported, resulting in an increase of the local transportation companies' business activities.
3. Consultants, to satisfy the need of specialists to identify and suggest suitable locations to start developing the project, in order to gain maximum output and reduce the overhead costs involved.

b. *Downstream*:

1. Transmission cable manufacturing companies. Power requires a physical medium in the form of wire or cable in order to be delivered to the end user. The establishment of several projects scattered across the country, has resulted in an increase in the amount of cable required, due to the remote location of the said projects. These cables cannot be imported, mainly due to costs, and are consequently sourced locally as per the requirements. The outcome is an increase in business opportunities for the local companies.

c. *Education and jobs*: Power-generating stations require local workforce, to ensure smooth operation of the units and prevent breakdowns. All the required workforce cannot be sourced from outside the country, hence the increase in the demand for local employees with engineering background, "Research and Development" (R&D), manufacturing, construction, installation and maintenance. Further, the increase in demand for specific positions has resulted in a boost to the education sector as an increasing number of locals wish to become eligible for the available positions.

d. *Related clusters*: The finance sector is also greatly benefiting from this cluster, considering that the vast majority of projects require financing and loans.
e. *Government agencies*:

1. The Department of Energy (DoE) is responsible for the progressive inclusion of renewable energy resources, along with nuclear energy, in order to meet the country's future electricity needs and reduce its carbon dioxide (CO_2) emissions (Gov.za, 2015).
2. The National Economic Development and Labour Council provides support for researchers and local labor unions, thus amplifying the amount of available information and increasing the standards for labor hours and pay scales (NewNedlac.org.za, 2015).
3. The Department of Trade and Industry overviews the regulation of taxes and governmental concessions for projects concerning renewable energies (KPMG, 2015).

Cluster Diamond

The diamond model, introduced in the second section of this chapter, identifies different dimensions of microeconomic competitiveness, also referred to as drivers, and offers an interpretation on how they interact (The Diamond Model, 2015). Concerning this cluster in particular, the structure of the South African market demand is certainly the most determining factor, although all four drivers need to be carefully examined to determine the dynamics within the cluster itself (Fig. 12.3).

Concerning related and supporting industries, there are several construction, logistics and service companies, as well as raw material manufactures. Thanks to the availability of these companies, it is relatively easy to establish power-generating stations. On the downside, significant initial investment is required. Despite a lack of skilled workers, the input conditions are overall satisfying as of now. Government financing of the education sector will certainly produce qualified workforce in line with the constant growth of the renewable energy sector. The demand conditions are also excellent, aside from the hopefully temporary lack of infrastructure.

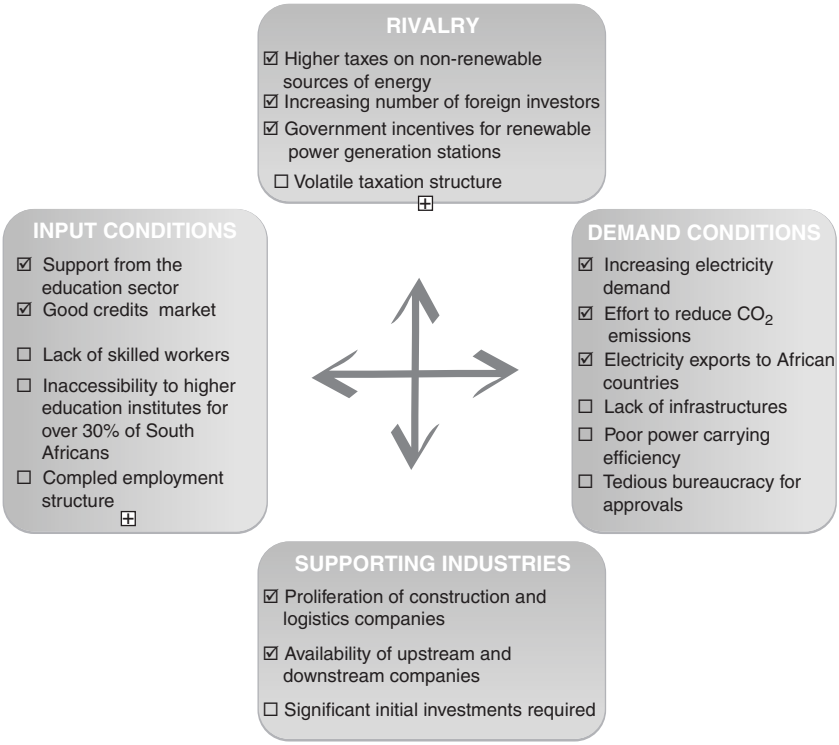

Fig. 12.3 Cluster diamond

As the demand for electricity is always increasing, the government is focused on reducing CO_2 emissions, and on fostering the now blooming renewable energy sector. In fact, not only is this sector now considered as high priority, but also South Africa has begun exporting electricity to other African countries, thus improving the quality of life and possibly the productivity of the continent as a whole. There has been an increase of taxation on the trade of electricity not generated from renewable sources and an increasing number of international investors seeking opportunities in South Africa. However, the taxation structure is flawed and exposed to volatility, and the at times overzealous regulations approved by the government constitute a limit to the worker policies adopted by companies already struggling with the rising cost of labor.

Strategic Issues

Policies in Place

Despite its undeniable attractiveness and promising future, the renewable energy cluster has several obstacles to overcome, the vast majority of which are a direct consequence of the policies established by the government, or lack thereof, and inherent to South Africa. It is, however, important to note that these limitations do not affect exclusively the renewable energy cluster and industries, but the country as a whole, and will hereby be addressed as national issues, rather than cluster-specific only.

Job Market

The job market suffers from both an increasing unemployment rate and the need for a skilled workforce to occupy newly available positions resulting from the country's economic growth. Human resources (HR) departments seem to lack, in most organizations, the skills necessary to conduct smooth and balanced hiring/firing processes. As a result, it is hard for otherwise perfectly employable citizens to find a stable position, and upon being full-time employed, to avoid being abruptly fired and quickly replaced. This clearly shows a major flaw in the system, as it produces educated and capable workers, while at the same time failing to offer adequate support in terms of job stability. Needless to say, this will most likely harm the country's productivity and the now booming industries, such as the ones in the renewable energy sector. It could even preclude the country from benefiting from all the resources invested in the education sector, as more and more South Africans might seek better opportunities and job conditions abroad.

In the long term, a "brain drain" will also tarnish the country's image and reputation, harming its attractiveness for foreign investors, and reducing the much-needed flow of FDI. In this case, then, it is not so much an issue of policies in place, but rather the lack of regulations and the lack of synergy between the education sector, and the job market that is incapable of employing the increasing number of skilled workers on offer.

Corruption and Security

As previously mentioned, South Africa is still considered as a highly corrupt society. This is yet another topic the government needs to address in order not to diminish the country's attractiveness and threaten the development of local industries. Furthermore, foreign companies looking for new countries to outsource their activities, and establish partnerships, might opt against South Africa for a less corrupt and safer country.

FDI Inflow

The lack of a homogeneous pricing and tariffs framework negatively affects international trade, as the government has not yet produced policies aiming for common tariffs on imports (South African Institute of International Affairs, 2012). The interest foreign investors have shown in the South African market should not be taken for granted. Rigid, and most of the time fruitless, policies can in fact discourage investors. As relates to today still, South Africa still heavily relies on FDI to sustain its continuous growth and cannot afford a decrease in inflow.

Infrastructure

Another already widely discussed issue is the lack of proper infrastructure in the country. According to the World Bank, infrastructure is, and should be considered as, the principal leverage for the country's economic growth (Juma, 2012). This clearly holds true for South Africa, as it prevents promising industries and businesses from exploiting their full potential, and severely affects their level of competitiveness, especially on an international scale. Further, the signs of positive growth that the country has been showing even during recession, namely the 2008–2009 crisis, need to be properly sustained by acceptable infrastructure, failing which all the reforms and initiatives undertaken to allow the country to grow will be of no use.

National Debt

South Africa has been gathering capital through debts, a heavy burden for the government to sustain in the long term. Considering its appeal to foreign investors, amidst concerns regarding its actual attractiveness the government should focus on FDI rather than further expanding the country's debt.

Parts of the Diamond

The four drivers identified in the third section of this chapter, concerning the cluster diamond, are certainly not lacking in flaws either.

Heavy initial investment is required for establishing a renewable energy generating plant, especially when considering them on a cost-per-unit basis (i.e. $/kW) (Beck & Martinot, 2004). The government does provide incentives to support the renewable energy sector; however, the amount of initiatives undertaken depends mainly on the country's GDP and economic results. If the country were to suffer a decrease in productivity, the incentives offered to support the growth of the sector might drastically diminish as well.

In order for the renewable energy cluster to flourish, skilled workers are mandatory (Sajs.co.za, 2015). Due to the dichotomy the country faces concerning the job market, it is still difficult to find skilled workforce suitable for the more technical positions, which poses a threat for the country's overall productivity and the survival of the renewable energy cluster.

Further, the efficiency of the power grid records a loss of 8–10% in transmission of electricity (World Bank, 2015), resulting in an increase in the cost of electricity per unit for customers. In addition, due to the lack of proper infrastructure and the, at times, remote locations of renewable energy projects, it is fair to estimate even greater losses for the government and the economy in the short and long term.

The quality and quantity of infrastructure required in the renewable energy sector constitutes probably the biggest threat to the development of the sector. In particular, it is important to note how delays in the launch of new projects impose constraints that the government cannot afford.

Finally, the continuous outsourcing of technology from advanced economies poses another problem for the renewable energy sector, as it prevents it from developing its own technology, thereby implying increasing initial investment, and reduction in the autonomy of the cluster's principal actors.

Policy Recommendations

Government

There are several ways the government can improve the overall situation of the country; for instance, in the area of unemployment, supporting manufacturing exports and labor-intensive services could boost employment creation (Edwards and Lawrence, 2012). On this note, the government has promoted interesting initiatives, such as the New Growth Path, whose objective is the creation of 5 million new jobs by 2020 (Economic Development Department, 2011), with a particular focus on younger generation. However, there is definitely room for improvement in the relationship between unions and employers.

Highly individualized tariffs are more likely to harm the economy and the country's competitiveness than common tariffs. Nevertheless, other African countries, particularly those neighboring with South Africa, should be offered more incentives, at least at the very beginning of business relationships, to fuel cross-border transactions, as the country can exert first mover advantages in these emerging economies. Additionally, a good synergy amongst African economies could improve the overall economic situation of the African continent as a whole, allowing a more even distribution of resources across African countries. In fact, this could also result in the development of unity on a continent basis, which can only increase the attractiveness of South Africa.

Infrastructure is an omnipresent and intra-sectoral issue, constituting one of the biggest threats to South Africa's development (SA CommercialProp News, 2015). The government is well aware of this problem, and has launched the National Development Plan, to improve the quality and distribution of infrastructure within the country. A possible

way to further improve the situation would be that of involving the private sector in the development of infrastructure, as consistent investments are required to obtain good results in the shortest lead time possible.

Private Sector

The private sector should consider working for national objectives as the government offers attractive incentives, which are extremely useful to assure a steady growth. For example, South Africa's Department of Energy has approved 13 new renewable Independent Power Producer bids (South Africa Info, 2015).

Further, South Africa has one of the highest rates of public investment in education in the world, with 7% of gross domestic product (GDP) and 20% of total state expenditure spent on education. Nonetheless, higher education is neither easily accessible nor affordable for an increasing number of citizens (South Africa Info, 2015). The cost of education rose by 9.3%, as of March 2017, constituting an insurmountable barrier for over 33% of South Africans aged 5–24 (Statistics South Africa, 2015). It is fair to assume that South Africa still has a dysfunctional education system that sees consistent investments, but whose accessibility is in constant decline. In order for the country to fully benefit from the investments made in the education system, all those who wish to enroll in university courses should be able to do so at reasonable fees, and more financial aid should be available as well. Racial discrimination, which still seems to be the principal cause of social inequality in the country, should be slowly eradicated and the economy will surely benefit from the increase in skilled workers. Besides, companies in the renewable energy sector, which are in desperate need for educated workers with specific skills and knowledge, could partner with universities, and develop programs in accordance with their needs and possibly offer scholarships too. Universities will then be able to mitigate risks and share costs, and more would-be students will have easier access to higher education institutions.

In South Africa, there is one major apolitical trade association, the South African Chamber of Commerce and Industry, whose objective is

to strengthen and develop South African businesses. It encompasses the four largest trade associations in the country: the South African Chamber of Business (SACOB); the Foundation for African Business and Consumer Services (FABCOS), whose members are mainly micro-enterprises and businesses in the informal sector; the National African Federated Chamber of Commerce (NAFCOC), whose primary goal is to sustain black economic empowerment; and, finally, the Afrikaanse Handelsinstituut (AHI), a multi-sectoral employer organization. Moreover, there are also regional business chambers in the all nine provinces (Common Wealth, 2015). Each one of these trade associations has a peculiar mission and—understandably—different objectives. However, a combined effort of all four is likely to improve the overall situation of all groups in each association. Good cohesion at a trade association level can only empower citizens and will result in better socioeconomical conditions both for disadvantaged South Africans and the government as well.

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13

Kenya's Blooming Flower Industry: Enhancing Global Competitiveness

Ogechi Adeola, Abel Kinoti Meru, and Mary Wanjiru Kinoti

Introduction

In 2011, a World Bank analysis of Kenya's flower industry found that the leading players in the world's fast-growing and dynamic flower export business were the Netherlands, Colombia, Kenya, Ecuador, Ethiopia, China, Egypt, India, Israel, South Africa, Tanzania, Uganda and Zimbabwe.[1] Kenya had claimed a significant portion of this economic sector, supplying about 38 per cent of all cut-flower imports into the EU, especially Holland, the United Kingdom, Germany, France, and Switzerland.[2] Roses made up over 70 per cent of Kenya's cut flower and plant-related exports.[3]

O. Adeola (✉)
Lagos Business School, Lagos, Nigeria

A.K. Meru
Riara University School of Business, Nairobi, Kenya

M.W. Kinoti
University of Nairobi, Nairobi, Kenya

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The success of the Kenya cut-flower sector was attributable to its favourable and stable climate, access to large import markets, fertile land, abundant water, and a workforce experienced in floriculture. The Kenyan government had encouraged this sector by creating intellectual property rights and product quality controls and through the provision of accessible loans.[4] Agriculture accounted for over 60 per cent of export earnings and was the Kenyans' primary source of income.[5] The export of flower products had overtaken tourism as the largest earner of foreign exchange.[6]

Despite these natural and economic advantages, the Kenyan Flower Council (KFC) recognized the intense competition with other countries to occupy the flower markets in Europe, Russia, and North America.[7] Tax exemption agreements between the East African Community (EAC) and the EU had helped the Kenyan flower industry remain competitive and flourish. In September 2014, after rebasing her economy,[8] Kenya's GDP was found to be 25% larger than previously indicated, moving the country to a lower middle-income status, but with decreased market access and donor support privileges. The European Partnership Agreement (EPA) between the EU and EAC granted EU exporters greater access to East African markets in exchange for tariff-free access to the European markets.[9] The EPA was set to expire in late 2014; renewal required ratification by all East African countries.[10] The agreement was more important to Kenya, being classified as a developing country, than its East African counterparts which, being classified as least-developed countries, could enter the EU markets without tariff imposition, irrespective of the EPA.[11]

By October 2014, ratification of the EPA had failed. The EU began to impose tariffs on Kenya's cut flowers, making its blooms significantly more expensive than those from the European market.[12] Between October and December 2014, Kenya's exports to EU were subject to import duties of between 5 and 8.5 per cent. The Kenya Flower Council estimated that in those three months its exporters incurred costs of about €3 m (£2.3 m).[13]

However, from January 2015 the European Parliament and EU returned Kenya to the privileged list, reinstating market access regulation agreements for Kenyan exports with the expectation that the EPA would be signed by August 1, 2017.[14] By this move, Kenya continued to enjoy duty-free access to the EU markets for its agricultural produce.[15]

Some members of EAC were reluctant to sign the agreement, believing it favoured the EU. They argued that free trade and EU imports could endanger existing EAC industries, which were likely to be less competitive than the more advanced competitors from the EU.[16] Andrew Mold, the United Nation's economic analyst for East Africa, agreed with this position:

> African countries cannot compete with an economy like Germany's. As a result, free trade and EU imports endanger existing industries, and future industries do not even materialise because they are exposed to competition from the EU.[17]

EU proponents of the EPA defended the agreement, pointing out that African countries were not obligated to fully implement EPA requirements for 20 years, giving them the opportunity to build up infrastructure, strengthen the African market, and catch up with the European economy.[18]

By March 2017, three EAC members—Tanzania, citing negative implications on industrialization, Uganda, and Burundi—had yet to sign the EPA.[19,20] This uncertainty over the final ratification, together with the impending exit of the United Kingdom from the EU as a result of the June 2016 Brexit referendum, put the Kenya floriculture export industry in a state of ambivalence.[21]

According to Jane Ngige, CEO of KFC:

> *There has been anxiety over the pound tumbling and the impact Brexit could have on our business viability, but we have not seen any cancelled orders from the UK yet; the demand is still there in Europe.*[22]

Increased global competition and changing economic conditions, including falling commodities prices,[23] meant that Kenyan floriculture industry survival depended on securing an improved competitive position and greater bargaining power in global politics.[24]

Against this backdrop, the Kenya Flower Council had to devise a plan to increase the competitiveness of the dynamic Kenyan flower industry and recommend key strategies aimed at growth and sustainability.

Kenya

On Valentine's Day, many people across the globe receive flowers from loved ones. Roses are very popular, especially red roses, which are generally regarded as a symbol of love. The fragrance of a rose pervades the atmosphere, lifting moods, calming nerves, and bringing smiles to the beholders. It is unlikely that the recipients consider the source of these beautiful flowers, some of which would have been shipped thousands of miles from Kenya in eastern Africa.

Located in the east of Africa, Kenya was surrounded by savannah, lake lands, valleys, mountain highlands and abundant wildlife with land and water surface area of 580,609 and 11,362 square kilometres respectively. Kenya was indeed a beautiful country, one of only 14 countries in the world on the equator, one of the seven on the equator with a warm sea front and the only one on the equator with beaches and a snowy mountain. The east coast of Kenya's 580,367 km territory enjoyed a 536-km coastline on the Indian Ocean. Mount Kenya was Africa's only equatorial mountain that had a permanent snowcap. In 2015, Kenya's population of 44.4 million people made up about 29 per cent of the East African Community (EAC) 153 million inhabitants.

Kenya was the ninth largest economy in Africa with a GDP of over US$50 billion, the highest (36%) of the EAC countries; the only low middle-income economy in the region; and an economic growth rate of 5.6 per cent.[25] Kenya was one of 10 economies worldwide that made remarkable progress on the World Bank's 2014/2015 *Doing Business* quantitative indicators of business regulations. To achieve these advances, Kenya reduced the cycle time for paying stamp duty, digitized land registry, improved access to credit information by enabling the formation of credit reference bureaus, reduced electricity connectivity wait time, and offered government services under one roof, commonly known as Huduma Centres.[26] Overall, however, Kenya ranked 108 of 189 countries included in the World Bank study.

Kenya National Bureau of Statistics (KNBS), 2016 report[27] showed that Kenya's gross added value in 2015 for building and construction stood at 13.6%, transport and storage (6.4%), agriculture (6.2%), and

manufacturing 3.5%. The Kenyan economy relied heavily on agriculture, and the horticulture sub-sector was one of the largest foreign exchange earners with an annual revenue of US$1billion, 1.45 per cent of the nation's GDP.[28] By the end of 2015, Kenya's total exports were US$581 million compared to US$1578 million total imports, comprising tea (US$123 M), horticulture (US$101), apparel and accessories (US$ 28 m), and coffee (US$21 m) among others.[29]

The story of the horticulture sector, particularly the cut flower industry, was the most fascinating. Kenya emerged as a key producer in the world floriculture market in the late 1980s, with exports of 10,946 tonnes by 1988, which increased to 86,480 tonnes by 2006, 120,220 tonnes by 2010 and 133,685 tonnes by 2016[30] as illustrated in Fig. 13.2. Figure 13.1 tracks the growth of cut-flower volumes and values in millions of Kenya shillings.[31] Of the 110 varieties of flowers farmed in Kenya and exported to 60 destinations around the world,[32] the most popular were roses (85.6%), carnations (2.5%), and alstroemeria (0.73%). Flowers exported during summer included gypsophila (1.31%), hypericum (1.13%), statice (0.65%), lilies eryngiums (0.16%), and arabicum (0.09%).[33] In 2015, Kenya's flower export revenues totalled over US$120 million, 59 per cent of that from Holland (see Fig. 13.3).

KFC reports revealed that 88 per cent of Kenya's flowers were sold to Europe and only 2 per cent to the United Arab Emirates,[36] a clear signal that the Middle East could emerge as a flower market frontier. KFC also found that for every 10 flower stems sold in Europe on Valentine's Day, three were imported from Kenya. Export inroads had been made to the

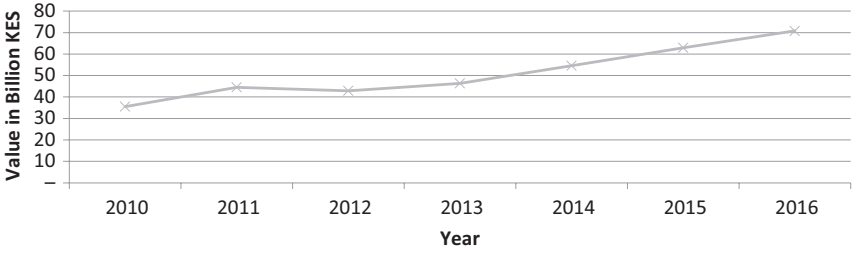

Fig. 13.1 Flower export values 2007 to 2016. Source: Kenya Flower Council (2017).[34] *101 shillings = 1 dollar

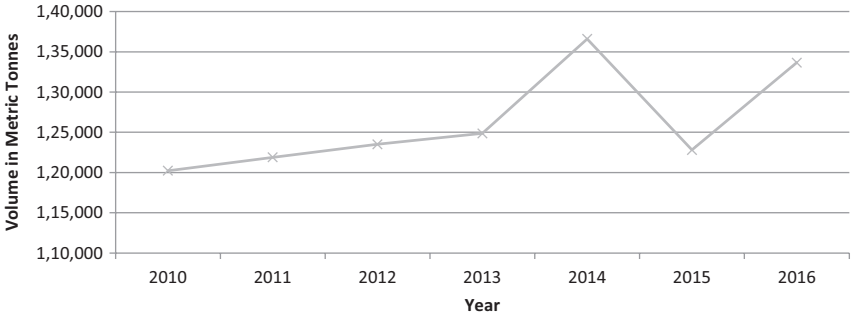

Fig. 13.2 Flower export volumes 2007 to 2016. Source: Kenya Flower Council (2017)[35]

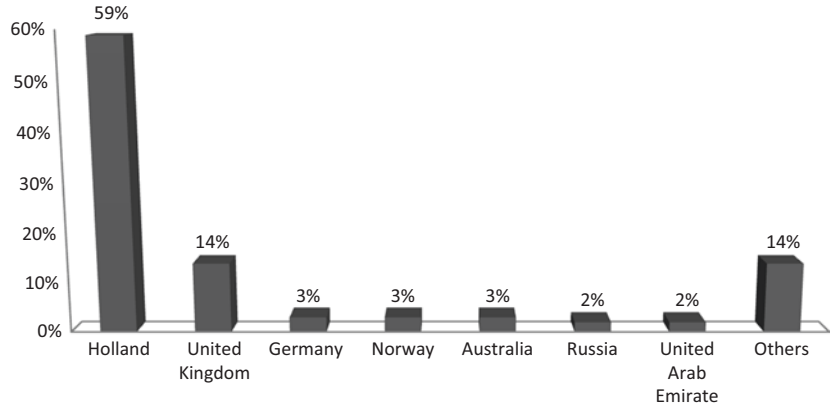

Fig. 13.3 Flower exports by destination 2015. Source: Kenya Flower Council

lucrative United States of America, Eastern Europe, and Japanese markets. Despite the robust global distribution, the local market remained largely untapped, though an increasing demand for flowers for weddings was showing potential for growth in this sector. In addition to favourable land and climate, costs of labour and energy were low and European countries, Kenyan floriculture's largest market, waived import tariffs.

An estimated 500,000 people were employed in Kenya's floriculture industry, supporting over two million households.[37] Challenges to the growth of the Kenyan flower industry included political instability,[38] economic crises, drought, weakened Euro value, high freight costs, and sometimes heavy rains.

Kenya's Floriculture Competitors

Although its trade exports doubled between 2010 and 2016 when the value of fresh-cut flowers rose from US$355 million to US$708 million (see Fig. 13.1), Kenya still faced intense competition from the Big Five in the world floriculture industry: the Netherlands, Colombia, Kenya, Ecuador, and Ethiopia.[39] Prior to 2004, Israel was one of the Big Five, with United Nations' Comtrade Data showing that the Big Five were the Netherlands, Colombia, Ecuador, Kenya, and Israel, in order of market size.[40] By 2004, the floricultural industry had become more competitive, and Italy replaced Israel. In 2008, Ethiopia moved from the 9th position, replacing Italy. Though the performance of all the countries in fresh cut-flower exports increased every year, Ethiopia was forced out of the Big Five in 2009 when Belgium experienced an astronomical increase in trade value. Belgium maintained the 5th position until 2012. In 2013, Ethiopia's exports rose from US$1.69 billion to US$5.27 billion, an increase of more than 300 per cent, which placed the country in 4th position, ahead of both Belgium and Kenya.

In 2014, Kenya's biggest competitors were The Netherlands, Colombia, Ecuador, and Ethiopia[41]:

The Netherlands

The success of the Netherlands' floriculture business is linked to the availability of reliable infrastructure, a good auction system, a quest for creativity, and a deep sense of collaboration.[42] Farmers have access to research and development services that promote improved production techniques. A good transportation system connects them with consumers globally. The Netherlands has long been a major player in the floriculture industry, but high production costs, the international economic crisis, and strong government policies have had an increasingly negative effect on production.[43] Notably, the competitive dynamics of the floriculture industry changed significantly between 2003 and 2013 with the Netherlands export share dropping from 69 to 58 per cent. Nevertheless, the Dutch position in the global cut-flower industry remains significant as a major flower producer and exporter.

Colombia

Colombia's cut-flower farmers thrive in a country with ample water, a favourable climate, and cheap labour to support production, as well as good air transport connections. The floriculture industry established in Colombia in the 1960s[44] is now the leading supplier of flowers to the North American market, which waives import tariffs under the 2012 Free Trade Agreement. After the Netherlands, Colombia is the number two exporter worldwide.[45] One-tenth of the world's flower exports come from Colombia.[46] In 2005, Colombia's flower exports to 89 countries totalled US$906 million, increasing to US$1.34 billion in 2013. Colombia remains one of the world's foremost producers of flowers, increasingly targeting the European markets.[47] The major challenges it has to overcome to achieve greater economic success in the flower industry are to find ways to lower production costs, streamline transportation systems, enhance marketing techniques, and broaden markets to countries outside the US, such as the UK, Mexico, Japan, and Russia.

Ecuador

Ecuador's floriculture industry is blessed with a temperate climate, soil especially suitable for particular varieties of roses, and good business management. However, many farmers went bankrupt when faced with inflation, which reached a high of 91 per cent in 2000, and an unfavourable sucre to dollar exchange rate. In 2010, about 31 per cent of Ecuadorian flowers went to Russia, a significant increase from 23 per cent in 2004.[48] This increase in revenues helped to fund infrastructure improvements to roads, airports, and transport systems, facilitating movement of goods within and outside Ecuador. Transport costs, especially airfreight, declined as competition for business increased. Ecuador exports flowers, especially hypericum, gypsophila, and carnation species, via airlines and ocean-going vessels. The US market is also important, though the Colombian growers dominate that market.[49] Though economic challenges have had an adverse effect on exports of roses and other flower products, the US demand for summer flowers, especially gypsophila, remains high.

Ethiopia

Ethiopia is a newcomer to the floriculture industry's Big Five. Floriculture became an important revenue earner when exports increased sharply in 2004.[50] By 2011, rose farms occupied about 1600 hectares of land.[51] New products such as hypericum, gypsophila, lilies, and freesias have since been added. Ethiopia's economic success in floriculture is due in part to labour costs being lower than Kenya's. The intervention of foreign investors also played a major role.[52] An Indian investor collaborated with specialists from Israel to become the first large-scale producer of roses in Ethiopia. The Netherlands soon followed with a Dutch company, Sher-Ethiopia, now the largest developer of greenhouse production in Ethiopia. The major obstacles encountered by the Ethiopian floriculture industry were strict regulations on exports, weak environmental monitoring, lack of adequate pesticide regulations, and lack of breeders' rights protection.[53] The economic crisis sent several producers into bankruptcy. Most severely hit were local companies that lacked floriculture experience. Sher-Ethiopia helped some farms continue operation during the recession, revitalizing the Ethiopian flower industry. Ethiopian investors benefited as they emulated the innovative models, such as selling directly to wholesalers. Most Ethiopian roses were sold through the Dutch auction system.

Key Players in the Kenyan Flower Industry

Flower farming in Kenya was supervised by state Department of Agriculture, Livestock, and Fisheries, three government agencies (Horticultural Crops Development, Kenya Horticulture Council, and Kenya Plant Health Inspectorate Services) and two umbrella associations, being the Fresh Produce Association of Kenya and the Kenya Flower Council.[54] The state Department of Agriculture was responsible for safeguarding plant protection, quality control, sanitary and phytosanitary regulations and quality assurance standards nationally together with other national and international agencies. Horticultural Crops Development managed the growth and production of agricultural pro-

duce, while Kenya Plant Health Inspectorate Services was tasked with seamless surveillance of plant health and prevention of foreign plant insects, viruses and weeds.[55] Among the two umbrella organizations, the Kenya Flower Council (KFC) was directly involved in cut flower production and marketing.

The KFC was organized in 1996 as a charitable association of sovereign producers and exporters of cut flowers and ornamentals. The KFC mission statement was "To promote economic, social and political interests of the floriculture industry through active participation in the determination and implementation of policies governing sustainable development of the sector."[56] As at 2016, Kenya Flower Council members are responsible for about 80% of the national volumes of flowers exported.[57]

KFC lobbied local and international government; shared information through trade unions, media, development partners, and non-governmental organizations; and scouted for global markets. Locally, KFC was a member of Kenya Private Sector Alliance, Federation of Kenya Employers, and the Agricultural Employers' Association. KFC worked closely with the Ministry of Foreign Affairs and International Trade in bilateral and multilateral trade discussions with the EU/Economic Partnership Agreement for East African Communities, and the Common Market for Eastern and Southern Africa. KFC worked with the international groups such as Europe-Africa-Caribbean-Pacific Liaison Committee (COLEACP), GLOBAL G.A.P., and Union Fleurs. This was in conjunction with other stakeholders in the flower business including UK supermarkets TESCO, Waitrose, and Sainsbury; various foreign flower auctions; the UN International Labour Organization; and Ethical Trade Initiative.[58] In November 2015, the Kenya Flower Council joined hundreds of exhibitors from all over the world at the International Floriculture Trade Fair at Vijfhuizen, Netherlands, with 12 exhibitors sharing the Kenyan Pavilion at the event.[59]

KFC's working model comprised of a board, certification committee, service and product providers, associate members and stakeholders, a technical committee, and secretariat. Accredited Quality System Regulations articulated the KFC management, auditing, and certification process. Producer members subscribed to the Flowers and

Ornamental Sustainability Standard (FOSS) and, upon annual audit, they were awarded silver or gold quality assurance certificates. FOSS standards addressed governance issues, good farming practices, sound human resource and welfare policies, health and safety requirements, environment management and conservation, and post-harvest management. Adherence to the Floriculture Sustainability Initiative basket of sustainable standards placed FOSS. on the International Trade Centre Standard Map.[60]

KFC ensured compliance with International Trade Centre standards that addressed environmental, social, and economic concerns that previously were the focus of the media, global competitors, human rights activists, and local communities. Certified auditors ensured KFC compliance with environmental standards set by the ISO (International Organization for Standardization) 17,065 certification guidelines. KFC farms produced minimal carbon emissions with the technologically savvy use of green houses, drip irrigation, hydroponics, water management, and energy conservation systems.[61]

KFC members were either Producer Members (direct production of flowers and ornamentals) or Associate Members (suppliers of products and services to the industry).[62] In 2016, Producer Members included 97 farms with land sizes measuring 0.10 to 230 hectares.[63] By June 2016, of 86 KFC farms, four were gold certified Producer Members (Oserian Development Company, Finlay Flowers, Flamingo Horticulture, and Tambuzi Limited), 38 were silver certified, and Global GAP certified members, four were silver certified members, and 40 others were non-certified members. KFC also worked with 71 local and international Associate Members who supplied farm inputs and consultancy services.[64] In 2016, there were over 150 registered flower farms and 100 active exporters within the greater Lake Naivasha region (78%), Mount Kenya, Nairobi and its environs, central, and Rift Valley areas.

Oserian Development Company, with over 200 hectares set aside for cut flowers, exported one million rose stems every day was the pioneer flower farm. Hans Zwager, founder of Oserian Farm, hailed from the Netherlands. He served as a marine during World War II and later became a banker. An entrepreneur at heart, Zwager came to Kenya where he met and married June, and settled down near Lake Naivasha.[65] He started

growing vegetables, particularly asparagus, then in 1982 got into floriculture, growing statice, spray carnations, delphiniums, euphorbias, molecellas, and alstroemerias. Over time, economies of scale persuaded him to concentrate on roses. Oserian, an eco-friendly and technologically advanced farm, received the 2014 Innovative African Producer award from Sainsbury's for meeting the company's 20 by 20 Sustainability Targets. Sainsbury, the largest supermarket in the United Kingdom, received over 300 million pounds of fresh produce from Oserian every year.

Finlay Flower farmed across 100 hectares of flowers (roses, carnations, matthiola and alstroemeria) in Kenya since 1989 that produced over 141 million stems per annum for the UK, Europe, Australia and South Africa markets. Finlay, a wholly-owned subsidiary of John Swire and Sons Limited, founded in 1750,[66] started growing flowers within its tea plantation in Kenya in 1989, is one of the largest flower producers in Kenya distributing flowers into the UK and across European markets.[67] Sustainability is key to the operation of Finlay Flower with the company's sustainability report of 2015 emphasizing a keen awareness of the total environmental impact of their activities across their entire value chain.[68]

Flamingo Farms, established in 1982, covered a combined total of 1856 hectares in the Mt. Kenya and Lake Naivasha region and sold from Africa over 280 million flower stems to the UK and Europe markets annually. In addition to Kenya, Flamingo's farms in Africa are also situated in South Africa (near Johannesburg). Flamingo Farms described itself as being devoted to sustainable and responsible sourcing through maintenance of strategic partnerships with their growers and customers.[69]

Tambuzi Limited, a 64-hectare farm established in the foothills of Mount Kenya by Tim and Maggie Hobbs in the mid-1990s, specialized in traditional garden scented roses.[70] Tambuzi describes itself as an ethically run business with the goal of producing the finest garden scented roses that money can buy.[71]

A central theme running through the highlighted KFC member farms is their commitment to sustainability by utilizing environmentally friendly farming methods. Evans Gichuhi, head of Finance and Administration/Project Officer at KFC, in a 2016 interview offered these comments:

KFC member farms enjoy duty-free greenhouses and enormous support from the government and associations. The farms are scientifically managed allowing synchronized production and access to global markets. A good number of the farms hire sustainability managers and directors to bring innovation and sustainable farming methods.

The Future of the Kenyan Flower Industry: Bloom or Gloom?

Though Kenya's climate and natural resources offered a competitive advantage over the European floriculture industry, a saturated flower market and rising costs for labour and materials forced farmers to seek innovations that would generate more revenue per square metre. Lack of proximity to the market was a persistent challenge as freight costs increased and commodity prices fell. Farmers learned that by growing specialized products for which customers were willing to pay a premium they would have greater control of the value chain. Cold storage, though a high cost, ensured the preservation of delicate flowers that travelled four hours overland from Naivasha to Nairobi, then 9000 kilometres to the markets in the Netherlands.

KFC recognized the strong link between sustainability and competitiveness. Sustainability—meeting current needs without undermining the needs of the future—required a high level of management commitment to the goals defined by the 3Ps of Sustainability: people, planet, and profit.[72] How well a country managed these resources determined how well they could compete with other nations and achieve organizational growth and success. Well-cared-for workers (people) contributed to increased productivity, continuous improvement in the use of environment (planet) increased production, and the efficient use of resources (profit) optimized growth and revenues.

Kenya, like Ethiopia and Colombia, examined requirements for compliance with the environmental sustainability practices and social standards established in Europe and North America, but only a few producers in these developing countries focused on these initiatives as they faced competition with producers from developed countries where certification was less of a challenge.[73]

KFC advocated for sustainable business practices that could help Kenya achieve greater competitiveness in the global marketplace. Industry stakeholders, NGOs, and accreditation bodies in Kenya have taken steps to improve farm working conditions and decrease undesirable environmental impact. These efforts have contributed to establishing improved sustainability outcomes for even some non-accredited farms as workers benefit from the introduction of best practices.[74]

Though Kenya's accredited farms were shrinking their environmental footprint and observing sustainability practices, it was of concern that the number of farms complying with accreditation standards was too low to achieve long-term sustainability of the flower industry.[75] KFC perceived its primary challenge to be ensuring successful sustainability practices across all stakeholders involved in the Kenya floriculture industry, thereby enhancing competitiveness in the global terrain. It was understood that the benefits and incentives accrue to a greater extent to medium and large producers than to small-scale producers; a challenge for KFC as it seeks to identify incentives that encourage more farms to become competitive in the industry by joining accreditation bodies and other industry-focused schemes.[76]

From 2010, cut flowers was one of the fastest growing sectors of the Kenyan economy and a major foreign exchange earner.[77] The cut flowers agricultural sector provided jobs to many people in Kenya, jobs that pulled them out of poverty and made them active contributors to the nation's Gross Domestic Product. Kenya was an emerging economy, and the floriculture industry was contributing to that growth. In addition to a favourable climate and fertile land that supports its flower production, Kenya's government, through the KFC and other related bodies, created an enabling environment for the flower industry to become a strong competitor in the global market.

The reluctance of some EAC member countries to sign the EPA, an agreement under which Kenya enjoyed a privileged trading status with the EU before the rebasing of their economy, and the impending exit of the UK from the EU, cast a shadow over half a century of flower trading tradition. The August 1, 2017 deadline to sign the EPA was fast approaching. How would the Kenya flower industry fare in the face of tough EU trade policies? Perhaps the key to continued growth and profitability lay

in export diversification beyond the EU and increased visibility in emerging flower markets, particularly the UAE. At the core of any strategies, KFC might adopt are policies for sustainable development of Kenya's entire floriculture sector.

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14

Poultry Tariffs in South Africa: Levelling the Playing Field or Rewarding Inefficiency?

Jacklynne Hobbs, Peter Draper, and Claire Beswick

On 27 March 2013, the South African Poultry Association (the Poultry Association) brought an application for import tariffs to be imposed on five categories of frozen chicken originating outside the South African Development Community (SADC) and the EU. The Poultry Association claimed that increased tariffs were necessary to stem a surge in cheap imports that was endangering the survival of local producers (see Table 14.1). The Association of Meat Importers and Exporters (the Meat Association) opposed the application on the grounds that it intended to protect a sector with questionable ethics and an outdated business model.

On 30 September 2013 South Africa's Department of Trade and Industry (DTI) announced that the Poultry Association had got its wish for two of the five broiler products under consideration—those consumed mainly by high-income earners and/or constituting only a small

J. Hobbs • C. Beswick (✉)
University of the Witwatersrand, Johannesburg, South Africa

P. Draper
South African Institute of International Affairs, Johannesburg, South Africa

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Table 14.1 Import volumes for the broiler products listed in the poultry association's application for tariff increases, 2008–2012

	Whole frozen		Boneless cuts		Bone-in cuts		Offal		Carcasses	
Year	Quantity (tons)	Change (%)	Quantity (tons)	Change (%)	Quantity (tons)	Change (%)	Quantity (tons)	Change (%)	Quantity (tons)	Change (%)
2008	6025		14,521		56,483		20,236			n/a
2009	16,537	174	18,983	31	66,803	18	20,834	1		n/a
2010	20,367	23	21,075	11	76,852	15	19,917	(–)4		n/a
2011	25,084	23	24,973	18	125,871	64	26,434	32		n/a
2012	11,925	(–)52[a]	21,211	(–)15[a]	162,251	29	30,914	17	12,317	n/a

Source: ITAC (2013d)

[a]The decrease in the volume of imports of whole bird and boneless cuts in 2012 is due to the uncertainty that the anti-dumping investigation against Brazil had created and the consequent provisional payments that were imposed for six months on imports from that country

proportion of imports. Compromise tariffs were introduced for the remaining three products, which were deemed to be an important source of protein for lower income groups.

In response, a comment in *Business Day* provided a succinct analysis of the travails in the broiler sector during 2013, and proved prophetic for the future. "The poultry industry's never-ending requests for government assistance highlight the fact that South Africa simply cannot compete on the world poultry stage, and brings into question whether it is a viable industry in the first place," it said. "But the costs of leaving the industry to stand on its own two feet are simply too great for the government, given that it is a substantial employer. With job creation high on the government's agenda, it seems certain that the industry will continue to be propped up, despite its fragility."

The South African Broiler Industry

Chicken meat was the principal source of protein for most South Africans at the time of the Poultry Association application and was the most economical meat on offer, being more than 5 rand (R5—about 50 US cents) per kilogram less than pork, which was the next cheapest meet. Broiler production constituted the largest part of the poultry industry. This industry, in turn, accounted for 36.9% of all animal products in the country and formed the largest single share of South African agriculture overall: 17.4%. The market for chicken products was dominated by sales of individually quick-frozen (IQF) cuts, with South Africans preferring bone-in portions to the more expensive white meat. Bone-in cuts accounted for about 70% of local production.

Almost half of commercial broiler production in South Africa was in the hands of two firms: Rainbow Chicken Limited and Astral Foods. Rainbow Chicken produced 24% of broiler meat, Astral 22% and Country Bird 7%. The seven leading poultry companies supplied approximately 75% of chicken meat in South Africa, with the remainder produced by hundreds of smaller operators. The poultry sector provided 48,000 jobs directly, while an additional 60,000 people were

employed in industries dependent on this sector. Crop farming to produce feed for poultry accounted for 18,000 workers. The industry was the biggest single consumer of yellow maize in South Africa, and the broiler sector was responsible for using about one third of yellow maize annually.

The production of chicken meat for mass consumption was a highly specialised process that took approximately 22 months and featured a number of stages:

- The production of "primary genetic stock". As indigenous breeds of chicken had not proved suitable for commercial broiler production, the necessary strains were imported from overseas as day-old chicks, and then reared to produce "parent" stock.
- The incubation of parent stock at hatcheries and subsequent rearing of the birds at parent farms to produce eggs for hatcheries that would furnish the industry with day-old broiler chicks.
- The rearing of the chicks at broiler farms.
- The delivery of broilers to abattoirs to be slaughtered and processed.

Feed, consisting mainly of maize (about 60%) and soybean meal, presented the biggest expense in the poultry sector. It accounted for up to 70% of production costs for birds, and some 50% of the cost of finished products. Maize was obtained locally for the most part; however, almost all soybean meal had to be imported. To maximise efficiency, major chicken firms were vertically integrated and included subsidiaries which performed the range of activities required for broiler production: from crop farming for sourcing feed, to the marketing and distribution of broiler meat.

Key Trends

Demand in South Africa for poultry had risen substantially in the years before the Poultry Association application. Between 2000 and 2012, annual per-capita consumption had increased by 70% from 21.69 kg of 36.81 kg. A forecast of agricultural trends for 2012–2021 indicated that

consumption was likely to continue growing, albeit at a slower rate of about 4.5% per annum, and to exceed the growth of all other varieties of meat.

In response, local broiler production had risen by 50% between 2002 and 2012 to a record number of 982.4 million birds, and the gross value of broiler production from under R10 billion in 2001/2002 to some R25 billion in 2010/2011. Broiler production was expected to grow by 2.8% per annum between 2012 and 2021, to reach 1.8 million tonnes.

Still, the local industry was not producing sufficient chicken to meet demand and imports covered the shortfall. Imports grew by 57% between 2000 and 2011. Imported chicken (including mechanically deboned meat, which was not produced in large quantities in South Africa) accounted for almost 20% of consumption in South Africa in 2012, compared with 10% in 2002 and 4% in 1990 (see Fig. 14.1). Most imports in 2012 came from Brazil (51.6%), followed by the Netherlands (14.8%) and Argentina (7.7%). The European Union (EU) as a whole accounted for 34% of imports.

Chicken meat exports from South Africa were small, amounting to only 7,422 tonnes in 2012. Nonetheless chicken exports had increased by 25% between 2002 and 2011.

Despite rising demand, the profit margins of the five leading broiler companies in South Africa dropped from double-digit figures in 2006 to between 2.4% and 5.9% in 2012. Competition Commission economists Sunél Grimbeek and Bongisa Lekezwa suggested that this trend could be ascribed to the fact that Country Bird had introduced a new strain of parent stock, the Arbor Acres bird in 2007. They argued that the arrival of the strain had sparked rivalry among breeders—which, in turn, had led to greater competition at all levels of the sector. Before the advent of the Arbor Acres breed, independent broiler producers had mostly been obliged to obtain stock from the Astral group.

The economic recession of 2009 presented a further challenge to the chicken sector. In December 2009, chicken sales at supermarkets were 6.6% less than in December 2008. In addition, producers were feeling the effects of a chicken surplus: “Retailers have absolute power. They know the market is oversupplied, so they play producers off against each

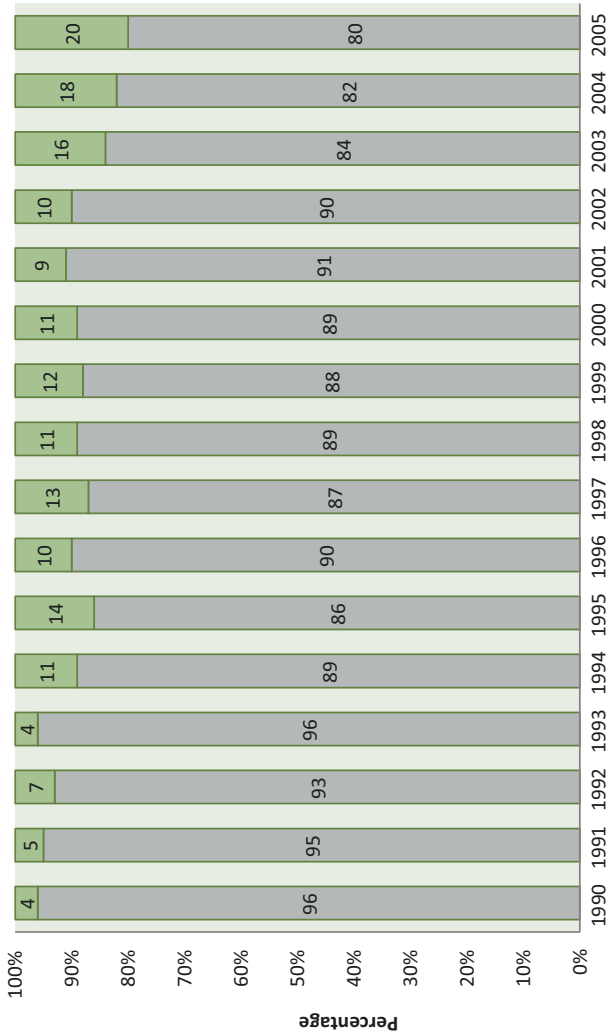

Fig. 14.1 Market Share of Chicken Meat Imports, 1990–2005. Source: Coetzee, Meyer, and De Beer (2007)

other. Local producers are fighting for every cent and battling to find a way out," said Russell Hanger, managing director of Merlog Foods, a frozen food distributor, and executive director of the Meat Association.

Tariff Regime Ahead of the Poultry Association Appeal

In terms of commitments made under the General Agreement on Tariffs and Trade (GATT), South Africa could raise import duties on broiler meat to a maximum of 82% of import price of the product (termed the "bound rate of duty").

At the time of the Poultry Association appeal, all imports of mechanically deboned meat, fresh cuts and offal, and chilled cuts and offal were duty-free. In addition, in terms of agreements with the Southern African Development Community (SADC)[1] and the EU,[2] all chicken imports from SADC and the EU were duty-free. Frozen imports from non-SADC and non-EU countries were subject to a range of ad valorem and specific tariffs of between 5% and 27%. In addition, anti-dumping duties were in place on imports of bone-in portions from the United States (US).

The Global Broiler Trade

The US was the largest producer of chicken globally (16.6 million tonnes in 2012) and the second largest exporter (3.3 million tonnes). Brazil was the largest exporter in 2012 (3.5 million tonnes) and the third largest producer (12.6 million tonnes). The EU was also a large producer and exporter.

International trade in chicken meat was the largest of any meat (12.5 million tonnes in 2011). However, this trade sometimes came at the expense of domestic producers. For example, there were reports that certain Senegalese farmers had been put out of business by a flood of cheap imports from the EU, among others. In Ghana, domestic producers supplied only about 10% of broiler meat consumed in that country in 2012, as imported chicken tended to be 30–40% cheaper than the local equivalent. The low value placed on certain chicken cuts in the EU had created a situation where African markets were profitable outlets for these portions.

The Poultry Association Application

On 27 March 2013, the Poultry Association brought an application for import tariffs on five categories of frozen chicken originating outside the SADC and the EU: carcasses, whole birds, boneless cuts, offal and bone-in portions. The Poultry Association claimed that increased tariffs were necessary to stem a surge in cheap imports that was endangering the survival of local producers (see Table 14.1).

If granted, tariffs on all five categories would be increased to a maximum of 82% of the import price, with minimum tariffs on frozen boneless cuts, frozen offal and frozen bone-in portions being 12%, 65% and 52% respectively. (See Table 14.2 for details of the tariff requests.). The Poultry Association added that poultry be declared a "designated product" to prevent the government from using imported broiler meat in catering contracts. South Africa's five biggest poultry producers, Rainbow, Astral, Sovereign Food Investments Ltd., Afgri Poultry (Pty) Ltd. and Country Bird, provided evidence to support the claims that the industry was in distress.

Table 14.2 Tariffs requested by the poultry association

Broiler product	Current duty	Requested duty
Frozen carcasses	27% (ad valorem tariff)	R9.84/kg (about US$1), subject to a maximum of 82%
Frozen whole birds	27% (ad valorem)	R11.07/kg (about US$1.05), subject to a maximum of 82%
Frozen boneless cuts	5% (ad valorem)	R2.31/kg (about 23 US cents) or 12%—whichever is the greater—subject to a maximum of 82%
Frozen offal	27% (ad valorem)	R3.28/kg (about 33 US cents) or 65%—whichever is the greater—subject to a maximum of 82%
Frozen bone-in cuts	R2.20 per kg (specific tariff) Ad valorem equivalent: about 17%	R6.25/kg (about 63 US cents) or 52%—whichever is the greater—subject to a maximum of 82%

Source: ITAC (2013e)

Pointing to declining profit margins in the sector, the Poultry Association said that a number of small and medium-sized producers had already gone out of business, while others had had to shutter parts of their operations. Writing for the *Mail & Guardian*, Poultry Association chief executive officer (CEO) Kevin Lovell noted that some 2,000 positions had been shed as a result of five small and medium-sized firms going under or entering business rescue during 2012 and the first half of 2013. Larger producers had cut 3,000 jobs. A Poultry Association survey in December 2012 of 270 small farmers had indicated that 170 had ended operations in the preceding four months.

If current trends continued, said the Association, 20,000 jobs might be lost in the short term among those directly employed by the poultry industry and support sectors. The result of industry failure, it added, would be reduced food security, discouragement of investment in the poultry sector and, ultimately, lower contributions to gross domestic product. Were cheap imports to be removed from the equation, the Poultry Association forecast that growing demand for local broiler meat would lead to the creation of an estimated 11,995 jobs in the chicken sector, 14,892 in support industries and 4,525 in feed production.

Reasons for the Rise in Imports

The Poultry Association asserted that chicken-exporting nations were targeting South Africa and other developing states to dispose of certain products, notably bone-in portions, for which there was limited demand in other markets. Such cuts, said the Poultry Association, were being sold in South Africa and neighbouring states at very low or dumped prices that local producers could not match. Profits that exporters made on white meat were effectively subsidising the sales of bone-in cuts.

The Poultry Association further attributed increasing imports to declining demand in certain "traditional export markets" of major producers, as a result of import restrictions or moves towards food self-sufficiency.

The Poultry Association's application noted that factors such as currency fluctuation enabled imports to be "shipped opportunistically". By contrast, the near two-year production cycle in the local broiler trade

prevented the industry from making significant last-minute adjustments to supply. This, the Poultry Association asserted, led to price suppression and depression that compromised the financial position of local producers, particularly small- and medium-sized firms. "The production cycle is so long that once production decisions are made, producers are locked into it for 22 months, with no way of reducing production in the face of unexpected declines in demand, other than to slaughter broiler stock at a huge loss," said Lovell.

Industry Constraints

The Poultry Association's application stated that flock management in the local broiler industry was on a par with global standards. However, the organisation maintained that domestic producers had to deal with a range of structural disadvantages, including:

- Electricity cost increases of between 75% and 140% against an anticipated decrease of up to 32% in Brazil.
- High transport costs, in part because of shortcomings in the South African railway system.
- Problems with labour productivity and remuneration.
- Costs associated with HIV prevalence, crime and other negative societal trends.
- The relatively high cost of disease control among chicken flocks.
- Lack of economies of scale.

An additional hurdle was feed expenses. The application noted that the cost of feed had increased by 28.4% between September 2011 and September 2012. This was because a devaluation of the rand in 2011 had led to unexpectedly high maize exports. In addition, a drought in the US in 2012 had led to an increase in the price of maize on the international market. Market fluctuations notwithstanding, US and Brazilian producers were still paying markedly less than their South African counterparts for maize and soybean meal, said the Poultry Association.

The association said that it was not unusual for countries to offer significant protection to poultry producers to ensure food security, citing examples of both wealthy and developing nations that had substantial tariffs in place. The US and the EU, for example, imposed import tariffs that were in excess of WTO minimum market access commitments, while Brazil imposed a 10% duty, India a 100% duty and Mexico a 234% duty.

The Long-Term Solution

In its application, the Poultry Association had to provide a strategy that would ultimately enable broiler producers to compete without tariff protection. Accordingly, the association indicated that it was in the process of setting up a development plan for the industry, with the focus over the medium to long term of making South Africa an important poultry exporter.

For this to occur, however, a number of impediments to export development would have to be addressed:

- Lack of government support in the establishment of export markets. Astral Foods CEO Chris Schutte noted that he struggled to get erstwhile Agriculture Minister Tina Joemat-Pettersson "to look at an e-mail, let alone attend a meeting". In contrast, "at the 22nd Brazilian Poultry Congress … both the minister of agriculture and the deputy president of Brazil were in attendance. It is high on their agenda that the poultry industry succeeds and becomes the largest exporter and producer of chicken in the world."
- Inadequate state monitoring of sanitary and phytosanitary measures, as well as other technical barriers to trade.
- Obstacles to procuring maize, soya and other goods more cheaply. According to the Poultry Association, the South African Futures Exchange did not enable domestic producers to obtain raw materials at the rates enjoyed by their global competitors.

On matters not strictly related to exports, the Poultry Association noted in the application that a countrywide programme to contain dis-

ease in the poultry industry would yield enormous benefits to producers (bird mortality figures in South Africa were said to be 50% higher than those of "benchmark countries").

Opposition to the Application

The most vocal opponent of the Poultry Association's proposals was the Meat Association, which was joined in its lobbying efforts by the Boxer supermarket chain and Merlog Foods.

In building its case, the Meat Association initiated urgent court proceedings against ITAC and the Poultry Association in June 2013 to obtain access to data that the Poultry Association had classed as confidential in its application. The Meat Association suspected this data was inaccurate and that ITAC had accepted the information without verification. A compromise agreement bound ITAC to providing a verification report on the data in question, although the Meat Association subsequently announced that it had found mistakes in the Poultry Association's calculations, which had significantly affected the determination of proposed tariffs.

Figures in Dispute

The battle over statistics mirrored that which raged over information in the public sphere. The Meat Association asserted that it was misleading of the Poultry Association to play on the fact that imports held a 20% share of the domestic market, as this statistic included mechanically deboned meat, which was not produced locally in quantities of any significance. Excluding mechanically deboned meat, said the Meat Association, imports accounted for only 10–12% of poultry consumption in South Africa. "We are not a threat to local industry, and we are hardly an import-dominant industry," said the Meat Association CEO David Wolpert.

The Meat Association claimed that imports from non-EU states had fallen by 35% between 2006 and 2013—indicating that there was no need for more customs protection—and that a 25% depreciation in the rand was already providing the industry with added cover.

Moreover, Wolpert queried the time frame chosen by the Poultry Association (2008–2012) to make its case. The Poultry Association's decision to use 2008—a year of global economic crisis—as its starting point was "disingenuous", he said, noting that the picture looked somewhat different if the start date for comparison was 2006, when the South African economy was performing well. Whereas imports (excluding mechanically deboned meat) grew by some 145% between 2008 and 2012, the Meat Association asserted that between 2006 and 2012 they had only grown by about 31%. The Meat Association added that over the previous seven years, domestic broiler production had itself increased by 24%: "a sign of a healthy … industry."

The Meat Association said that tariff rises could lead to job losses among importers and downstream firms, where 15,000 people were employed. In a *Financial Mail* column, Lawrence Edwards, an associate professor in the school of economics at the University of Cape Town, raised the possibility of job cuts in the food-processing and fast-food sectors in the event that tariff-led price increases caused consumers to reduce spending on chicken takeaways and products.

On the topic of increased feed prices, Meat Association executive committee member George Southey said that costs were expected to fall 30% by the end of 2013, as the causes of the recent increases were only temporary. Southey maintained that unusual circumstances of a temporary nature should not be factors in the discussion about tariff hikes.

An Imperfect Business Model

The Meat Association asserted that most of the local industry's problems stemmed from a poor business model that did not maximise broiler yields. The Association criticised the domestic poultry sector for not having established a successful export programme—something that was key to getting the best returns. Wolpert added that local firms didn't rear broilers of a globally competitive size, which lowered both farm yields and abattoir productivity. As a result, local birds delivered smaller breast portions that tended to be included, at a discount, in brined IQF packs, even though these cuts could have been exported at greater profit.

The Meat Association also noted that domestic poultry firms, oriented towards the production of brined products, were not taking advantage of local demand for unbrined, boneless portions—a demand of some 20,000 tonnes annually that was currently met with imports.

Southey added that inasmuch as certain chicken producers had become less profitable, there were also success stories: Sovereign Foods, for instance, had increased net profits for shareholders by 25% in 2012. Rainbow Chicken—with a market capitalisation R12.99 billion at the time—was sufficiently robust to acquire a 64.2% stake in Foodcorp Holdings in 2013 for over R1 billion. Elsewhere, Wolpert queried whether the poultry sector really was an industry in distress, when listed broiler producers were still managing to provide executives with multimillion-rand remuneration packages, "Why … protect industries which have only the next dividend or management bonus as a priority against the needs of the average citizen? … Will it be business as usual, or are we actually going to force industries to invest and compete globally?" he asked.

The Larger Context

Beyond the conflicting positions of the Poultry Association and the Meat Association, additional factors were at play in shaping opinion about the merits of tariff increases.

Effect on the Poor

The Meat Association predicted that increased tariffs would cause chicken prices to rise by between 30% and 50%: substantially more than the Poultry Association's projections of between 10% and 15%, and at odds with its claim that factors such as increased market share, economies of scale for local firms, greater domestic competition and the will of retailers to curb costs would "ultimately [balance] the scales in the consumers' favour".

However, even minimal price rises could negatively affect low-income consumers, given that the poor already spent upwards of a third of their income on food. The price of chicken sold to the very poor would increase by more than 50%. As the most affordable source of protein for many South Africans, chicken was a product of particular significance in the diet of poorer communities, according to Helenya Fourie of economics consultancy Econex. While wealthy households spent less than 1% of their income on chicken products, the poorest 10% of the population spent as much as 15%.

Anti-Competitive Conduct in the Domestic Industry

South African poultry producers did not have a clean record when it came to pricing. In 2012, following investigations initiated in 2009 into Rainbow Chicken, Astral Operations, Pioneer Foods (Pty) Ltd., Country Bird, Afgri Ltd., the Animal Feed Manufacturers Association and the Poultry Association, the Competition Commission concluded that certain major producers had engaged in market allocation and price fixing. In November 2012, the Commission announced that it had reached a settlement with Astral that saw the company fined approximately R16.7 million (about US$6.7 million) for various illegal activities. Astral had been found to have colluded with a division of Pioneer Foods to raise the price of fresh poultry in the Western Cape and to have used its dominant position in Elite Breeding Farms—a joint venture established to supply parent birds to partners, including Country Bird—to undermine the competitiveness of Country Bird.

In 2010, Pioneer Foods had received a fine of R1 billion, in part for settlement of the company's involvement in poultry and egg cartels. The fine, which also addressed anti-competitive behaviour in the bread, flour and other markets, was the largest such settlement in South Africa's history.

Addressing the Portfolio Committee on Agriculture, Forestry and Fisheries (PCAFF) meeting, the then-Competition Commission head Shan Ramburuth noted that vertical integration in the local broiler industry constituted a significant barrier to entry into the sector, and that imports thus served as the major competition for domestic firms. In the

absence of imports, the industry would have no incentive to improve performance or reduce prices, he said, adding that it was unlikely that companies would be able to hold their own in the export market if they were not obliged to deal with competition at the local level.

Brining

Debate about the ethics of the South African poultry industry extended to the matter of brining—the injection of water containing salt, phosphates, flavourants and the like into chicken products ahead of freezing. Supporters of the practice said that it maintained the succulence and flavour of the chicken after defrosting. However, opponents claimed that, in many instances, producers used brining to provide deceptive bulk to chicken products.

Regulations had been introduced to cap brining of whole chickens at 8% of weight. No limit had been set for IQF chicken portions (the most popular chicken product on the market), however. This reportedly enabled brining levels as high as 30% and more in these cuts. A study commissioned by *City Press* found that a well-known brand of chicken weighed just over 48% less once cooked, after brine had drained from the meat.

Producers were required to disclose levels of brining on the packaging of their broiler meat. However, in September 2012, the Department of Health warned that certain companies' labelling of IQF portions was inadequate. The issue of product labelling was not simply academic. Research conducted by the Agricultural Research Council indicated that the procedure resulted in nutrient dilution and high levels of sodium that could put the health of consumers at risk. Overall, the abuse of loopholes in the regulatory framework for brining constituted a "threat to consumer safety and value for money", said the Department of Agriculture, Forestry and Fisheries.

For its part, the Meat Association took the opportunity to question the advisability of giving added tariff protection to "botoxed" chicken. "We have no problem with the principle (of brining), providing that there is added value to the consumer; but we believe the current level of injection

is excessive, and is effectively supplying consumers with expensive water instead of cheap chicken," said Wolpert. "We should point out that total brining volumes exceed 500 million litres per annum, which is more than double the total annual chicken imports into South Africa."

Dismissal of an Anti-Dumping Case Against Brazil

In mid-2011, the Poultry Association lodged an application with ITAC for protection against the alleged dumping of frozen whole chickens and breast meat by Brazilian producers that was leading to a substantial decline in the market share of local companies (see Tables 14.3 and 14.4). In January 2012, ITAC issued a report giving preliminary findings that dumping was taking place and imposing provisional anti-dumping duties on these two categories of imports, in addition to the duties that were already in place. On 12 June 2012, ITAC made a final determination to impose anti-dumping duties.

However, later that same month, facing possible losses of US$70 million annually, the Brazilian government challenged ITAC's stance at the World Trade Organisation (WTO). Brazil claimed that South Africa's

Table 14.3 Market share (frozen whole birds) of allegedly dumped products and applicants in the 2011 anti-dumping action against Brazilian imports, 2008–2010

Sales volume	2008	2009	2010
Applicant market share	100	74	60
Rainbow	100	79	58
County fair	100	50	50
Earlybird	100	60	80
Other SACU	100	74	57
Alleged dumped imports	100	200	217
Other imports	100	130	165
Total imports	100	156	184
Total SACU market	100	100	100

Source: ITAC (2012b)
Note: This table was indexed using 2008 as a base year

Table 14.4 Market share (frozen boneless cuts) of allegedly dumped products and applicants in the 2011 anti-dumping action against Brazilian imports, 2008–2010

Sales volume	2008	2009	2010
Applicant market share	100	80	73
Rainbow	100	75	81
County Fair	100	91	64
Earlybird	100	50	50
Other SACU	100	80	73
Alleged dumped imports	100	113	117
Other imports	100	200	400
Total imports	100	116	122
Total SACU market	100	100	100

Source: ITAC (2012c)
Note: this table was indexed using 2008 as a base year

actions were in breach of its obligations under GATT. In a non-exclusive list of 18 contraventions, Brazil stated, among other things, that South Africa had:

- Accepted at face value and without proper examination import statistics from the Poultry Association that allegedly overstated imports for the products in question.
- Included products that were not in the scope of the investigation when estimating imports.
- Not made a fair comparison between export prices and the normal values of whole birds and chicken breasts.

- Erroneously used sales of just one product of whole bird and only one of boneless cuts to reach conclusions on normal values for all whole bird and boneless cut products sold in the SACU.
- Not provided sufficient opportunity for interested parties to review all non-confidential information relevant to this matter to enable them to prepare their response.

Brazil queried whether local firms had indeed suffered as a result of the imports of whole birds and boneless portions. ITAC's own investigations leading up to the imposition of provisional anti-dumping duties in January 2012 had found that while domestic producers of whole birds had suffered from price undercutting and declining market share, output had increased at the same time, as had sales volumes, profits, productivity, employment and wages. With regard to breast meat, ITAC's findings had been similar: price undercutting by imports and increased price suppression had occurred, along with decreases in output, sales volumes, profits, utilisation of production capacity, inventory levels and market share, but at the same time, sales value, productivity, employment and wages had all increased.

Davies referred ITAC's final recommendation on duties back to the commission. The provisional duties subsequently lapsed and, in December 2012, the Department of Trade and Industry (DTI) indicated that anti-dumping tariffs would not be imposed.

US Challenge at the WTO

In the US, the National Chicken Council (NCC) and the USA Poultry & Egg Export Council (USAPEEC) were calling for a separate WTO challenge against anti-dumping duties that South Africa had imposed on certain cuts of US poultry in 2000.

The challenge related to longstanding claims that South Africa had used a flawed approach—a theory referred to as weighted average cost of production—in determining whether US poultry producers were dumping leg quarters in South Africa. The Poultry Association had made the application about these portions in 1999. Using weighted average cost of production, the Board on Tariffs and Trade (predecessor to ITAC) concluded that dumping was taking place, and imposed duties of up to R7.25 (about 73 US cents) per kilogram (in addition to the existing tariff of R2.20—about two US cents—per kilogram) on leg quarters imported from the US. The effect of this tax was to reduce US chicken exports to South Africa to a trickle (2% in 2012). As early as 2001, the cost of leg quarters in South Africa had increased by 30%.

"Action in the WTO against South Africa is long overdue," noted the NCC and USAPEEC in a July 2012 letter of appeal to US trade representative Ron Kirk. "At every step, the South African government acted on the assumption that it could violate WTO rules with impunity, and US inaction has confirmed and rewarded that approach … It is time for the US government to show the same commitment to its poultry export industry that Brazil is showing to its [own industry]."

Significantly, the WTO ruled in August 2013 that China's 2010 imposition of anti-dumping duties on US poultry imports based on weighted average cost of production calculations was in contravention of global trade rules.

Tariff Effectiveness

There was some debate about whether the proposed increases would have a significant effect on import flows, given that countries in the EU—the source of 34% of imports overall in 2012, and of 70% of imports in the critical bone-in portion market—were exempt from duties. Moreover, the chicken exports to South Africa that had shown the most vigorous growth ahead of the application were those from the EU. So vigorous was this growth that it had prompted fears of "round tripping"—the shipping of exports via a third country to disguise point of origin and circumvent tariff barriers. By mid-2012, certain members of the domestic poultry sector suspected that the sudden growth in Dutch broiler exports was the result of Brazilian chicken being sent to the Netherlands for repackaging and export to South Africa. Fourie predicted that increased tariffs on non-EU broiler meat were likely to prompt imports from Europe to increase. Similarly, anti-dumping duties imposed on US chicken meat in 2000 had been to the advantage of Brazil (see Table 14.5).

In an analysis of the dynamics surrounding the Poultry Association's application, *Business Day* reporter Jana Marais questioned whether tariffs were giving the local chicken industry breathing space to become more competitive—or whether, once in place, increased duties were difficult to reverse and simply paved the way for further hikes. The R2.20/kg duty

Table 14.5 Market share for exporters of leg quarters to South Africa, 1998–2002

	1998 (tonnes)	1999 (tonnes)	2000 (tonnes)	2001 (tonnes)	2002 (tonnes)
Leg quarter (USA)	37,583	31,072	19,574	1,245	2,032
Leg quarter (Brazil)	4,562	8,798	10,925	28,694	40,022
TOTAL IMPORTS (from all sources)	68,020	69,644	64,899	60,942	73,496
USA market share	55%	45%	30%	2%	3%
Brazil market share	7%	13%	17%	47%	54%

Source: Kulkarni and Strear (2005)

on bone-in cuts that had been introduced in 1997 was intended to continue for just two years. However, it remained in place in 2012, and had not served as an obstacle to the imposition of the anti-dumping tariff on US imports in 2000. This latter tariff, in turn, was initially intended to be in effect for five years, but it was still in place. Indeed, in February 2012, the tariff had been increased to a rate of R9.40 (94 US cents) per kilogram and extended for another five years.

The Minister's Decision

Following the DTI's decision against imposing anti-dumping duties on frozen whole birds and boneless cuts from Brazil, the minister had already declared that a "comprehensive strategy" was required to address the competition posed by growing imports—and had proposed a general tariff increase within the scope afforded to the country under its trade obligations. He had taken this a step further by saying to farmers at a meeting held in Paarl in February 2013 that they would be "pushing at an open door" if they came to him with a "consistent message" that tariffs were needed to support poultry production against the imports that were coming into the country.

Thus, it was little surprise when he agreed, at least in part, to the Poultry Association's request. The duty on imported frozen whole birds (less than 1% of poultry imports over the preceding year) was raised from

27% to 82% of the import value. Likewise, the duty on frozen boneless cuts (11% of imports) was increased to the requested 12%. However:

- The tax on bone-in portions (54% of imports) was increased to 37% (requested tariff at least 52%).
- The tax on frozen carcasses (2% of imports) to 31% (requested tariff a maximum of 82%).
- The tax on frozen offal (5% of imports) to 30% (requested tariff a maximum of 82%).

"It is the view of the Minister that the level of the tariff increases strikes an appropriate balance in limiting the price raising effects on poor households while ensuring that domestic producers are placed on an improved competitive footing as compared to their foreign counterparts," noted the DTI.

"Some of our trading partners won't like it, I know some of them won't like it," said Trade and Industry Minister Rob Davies. But, he added, "We operated clearly and squarely within the rules."

Davies attached a number of conditions to the adjusted positions:

- There would be an early review of the increased duties to evaluate their effect.
- Local producers would reduce brining in anticipation of new brining rules being developed by the Department of Agriculture, Forestry and Fisheries (DAFF).
- Established players in the domestic industry would undertake "meaningful" actions aimed at supporting small-scale farmers.
- The sector would encourage fair competition.

Protection Continues

This was not the end of the matter, however, and government protection of the industry continued, to the extent that, in March 2016, David Wolpert, the CEO of the Association of Meat Importer and Exporters (Meat Association), accused the Poultry Association of being "addicted to protectionism".

Further Tariffs Introduced

In September 2013, just days after the DTI's announcement of the tariff increases, ITAC began an investigation into claims by the Poultry Association that the United Kingdom (UK), Germany and the Netherlands were dumping frozen bone-in chicken cuts in the South African market. The Poultry Association had requested that an anti-dumping duty of 91%[3] be imposed on imports from Germany and the Netherlands, and one of 58% on imports from the UK—possible in terms of safeguard measures in the Trade, Development and Co-operation Agreement between South Africa and the EU.

In July 2014, ITAC imposed provisional anti-dumping duties against the three EU members. It finalised its decision in March 2015, introducing anti-dumping tariffs of between 3.86% and 73.33% on frozen bone-in poultry portions originating from a number of companies in the Netherlands, the UK and Germany. ITAC noted that it had found sufficient evidence to indicate that dumped imports were causing "material injury" to the local poultry industry, and that although there were other factors that could have contributed to this injury, these were "not sufficient to detract from the causal link between the dumping of the subject product and the material injury".

Taking AGOA to the Brink

Poultry associations in the United States (US) remained aggrieved over the anti-dumping duties that South Africa had imposed on bone-in chicken portions imported from that country. An opportunity to press their case emerged when the US Congress started deliberations in July 2014 over whether to reauthorise the African Growth and Opportunity Act (AGOA), which was set to expire in September 2015.

AGOA, which came into effect in 2000, gave preferential access to the US market to 6,000 goods in certain sub-Saharan African nations. South Africa was among the beneficiaries. The Act was not a trade pact, in that it did not require preferential access for US products in return. Its intention was to provide a more effective way of uplifting poor countries than

simply providing donor funding. However, in deciding whether or not to include a country, the US president had to consider he country's record in eliminating barriers to entry for US trade and investment.

A number of South African industries had benefited substantially from the agreement: South Africa's automotive exports to the US had increased almost fourfold, from R4.7 billion in 2001 to R17.1 billion in 2014; citrus growers had exported about US$ 60million a year to the US over the period of the agreement, generating 5,000 new, permanent jobs and 3,000 temporary jobs; wine exporters paid US $0.63 less per litre in duties.

AGOA negotiations began in earnest in August 2014 and in November 2014, the NCC and USAPEEC embarked on a campaign to persuade the US Congress that South Africa's inclusion in the AGOA should be contingent on the dismantling of the anti-dumping duties. Restrictions on US exports of beef and pork were also at issue in the appeal.

An agreement to allow 65,000 tonnes of US poultry into South Africa duty-free was reached in June 2015. But the process of actually implementing the agreement was so slow that in November 2015 President Barack Obama threatened to suspend some of the privileges that South Africa enjoyed under AGOA. In January 2016, after insufficient progress had been made, President Obama said that he would suspend South Africa's inclusion in AGOA with effect from 15 March 2016 if the obstacles to US poultry being available in South Africa were not removed. The US trade representative, Michael Froman, said that the "final benchmark" would be that South African consumers could buy US poultry in local stores.

At the end of February 2016, frozen chicken from the US became available for sale in South African stores and the country's inclusion in AGOA was secured. Froman said that resolution of this issue could be worth US$160 million to the US poultry industry.

Slow Progress on Brining Regulations

In early 2014, DAFF set about establishing new and more comprehensive limits for brining. It said that it would cap the brining of individual

portions at 15% of final retail weight (a percentage required in the production processes of certain fast food suppliers) and of whole birds at 10%. It gave the poultry sector, which had requested a cap of 25%, until 2015 to adjust its production processes accordingly. By March 2016, no amendments to the regulations had been gazetted, despite a DAFF announcement that regulations would be gazetted in October 2015.

Import Shifting

Poultry consumption continued to increase, reaching 2,023 million tonnes in 2014, as did poultry imports. Total imports of poultry grew from 389 million tonnes in 2013, to 392 million tonnes in 2014 and 476 million tonnes in 2015.

In this context, there were indications that changing tariff structures were causing import shifting. In 2013, Dutch and British poultry exports to South Africa reportedly doubled after the non-EU duties increased, with chicken products from Germany also registering a substantial increase. Those from Brazil dropped. However, in 2015, after the government finalised the anti-dumping duties on poultry from the Netherlands, the UK and Germany, poultry imports from these countries dropped substantially and imports from Brazil and three EU states, Belgium, Spain and France, took up the slack (the latter three off a low base).

In February 2016, as the AGOA agreement was about to be finalised, the Poultry Association applied for anti-dumping duties to be imposed on imports of frozen, bone-in chicken portions from all EU member states.

Conclusion

Whether or not the South African poultry industry is "addicted to protectionism" and is simply using the fact that it has the government's ear to prop itself up unfairly, as Lovell claims, is probably a moot point. The South African government is unlikely to test whether removing barriers to trade would spell the end of the industry or force it to become more

competitive, because the consequences of the former may be too devastating. Whatever it does to protect the industry in the future, however, this case starkly illustrates how governments have to balance their desire to support and protect local industry and the potential consequences this can have for international trade relations.

Notes

1. The Protocol on Trade in the Southern African Development Community was signed in 1996, and entered into force in 2001. [Source: Southern African Development Community (n.d.), "Protocols", available at: www.sadc.int/index.php/documents-publications/protocols?sortBy=34&pageSize=4&doc_q_0=&sortOrder=desc&filterByKey=&filterByVal=&page=7 (accessed 8 February 2015).]
2. The Trade, Development and Co-operation Agreement was signed in 1999, and entered into force fully in 2004. [Source: Europa (n.d.), "Trade, Development and Cooperation Agreement (TDCA)", Summaries of EU legislation, available at: http://europa.eu/legislation_summaries/development/south_africa/r12201_en.htm (accessed 8 February 2015).]
3. Note that a tariff of 91% was in excess of South Africa's bound rate for broiler meat of 82%. If applied, such a tariff would open the door to disputes against South Africa at the World Trade Organisation (WTO). [Source: World Integrated Trade Solution (n.d.), "Types of Tariffs", available at: http://wits.worldbank.org/WITS/wits/WITSHELP/Content/Data_Retrieval/P/Intro/C2.Types_of_Tariffs.htm?AspxAutoDetectCookieSupport=1 (accessed 29 May 2014).]

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