



# NATIONAL ICT POLICY REVIEW AND E-COMMERCE STRATEGY FOR BOTSWANA





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## NOTE

The Division on Technology and Logistics of UNCTAD (DTL) carries out policy-oriented analytical work on the development implications of information and communications technologies (ICTs) and the digital economy, and is responsible for the biennial production of the Information Economy Report. UNCTAD promotes international dialogue on issues related to ICTs for development, such as e-commerce and entrepreneurship in the technology sector, and contributes to building developing countries' capacities to design and implement relevant policies and programmes in these areas.

UNCTAD's national ICT Policy Reviews aim to support accelerated economic growth and development through effective diagnostics, national assessments, strategy development and policy advice to countries requesting technical assistance in areas such as e-commerce and ICT planning.

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## PREFACE

Information and communications technologies (ICTs) have become critical drivers of productivity, innovation and growth. They also have the potential to enable more inclusive development and support job creation in countries that articulate supportive policy and regulatory frameworks and are able to invest in the physical and human capital needed to close the digital divide.

In spite of the rapid evolution and growing complexity of digital technologies, e-commerce remains a basic but essential application for the development impact of ICTs through its effects on business and industrial competitiveness, the opportunities it opens to access new markets and the emergence of entirely new products and services.

E-commerce has been expanding rapidly in many developing countries. While known primarily for its ability to serve as a channel to market and to empower entrepreneurs and enterprises, e-commerce can also play an important role in helping developing countries grow trade and industry, boost productive capacity and facilitate integration into global value and supply chains. E-commerce fosters the flow of digitalized content and information, goods, services, and data, which can support the growth of a knowledge-based economy. As the world continues to grapple with the COVID-19 pandemic, ICTs and e-commerce are also playing a role in supporting countries' post-pandemic recovery efforts and helping them "build back better."

UNCTAD supports countries in formulating their national e-commerce strategy through comprehensive diagnostics, policy advice and customized strategy development. This ICT Policy Review and National E-Commerce Strategy of Botswana, prepared at the request of the Ministry of Investment, Trade and Industry, aims at leveraging Botswana's strengths while tackling the bottlenecks and challenges that impede the expansion of e-commerce in the country. The publication lays out five strategic thrusts and recommendations for strengthening Botswana's performance in key policy areas.

To support Botswana in achieving its Vision 2036, NDP11 and the SDGs, the ICTPR e-commerce strategy model was expanded to take into account priority areas of Botswana's development agenda, including growing the country's export markets, private-sector development, citizen empowerment, job creation, productive capacity, global competitiveness, diversification and building a knowledge based economy.

On behalf of UNCTAD, I would like to express our appreciation for the excellent collaboration of MITI and its partners on the strategy. The strategy development has also benefitted from partnerships and cooperation with the World Bank, UNDP, ITU, ITC and private-sector research partners. My hope is that the analysis and recommendations contained in the report will make a valuable contribution to Botswana's efforts at leveraging e-commerce for economic growth and inclusive prosperity.



**Isabelle Durant**  
Deputy Secretary General of UNCTAD

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## FOREWORD

Botswana's Vision 2036 lays out a transformational agenda that defines our aspirations and goals as a people. It includes transforming Botswana from an upper-middle-income country to a high-income country by 2036. It also includes a compelling vision of what our future looks like. In that future, Botswana has chosen a path of prosperity, one that not only moves us toward prosperity as a nation but aligns with the SDGs and our vision for inclusive growth and prosperity that benefits all of our people.

Our Vision 2036 also paves the way for navigating a transformational path that will enable Botswana to diversify its economy and eliminate the barriers that have mired our businesses in low competitiveness and our industry in low productivity. By overcoming these challenges, we aspire to become a nation impassioned and driven by a culture of excellence, with a top-performing workforce, businesses and industries operating at full throttle, efficiency and productive capacity at the apex of global excellence, standards of quality, competitiveness, learning and innovation.

Botswana has long recognized that information and communications technologies (ICTs) can play a critical role in the achievement of this vision. Over the past few decades, beginning with the creation in the 1990s of Botswana's Government Computer Bureau and the country's first compelling ICT roadmap, the 2007 National Information and Communications Technology Policy (also known as Maitlaimo), Botswana has laid the ICT foundations for executing its enduring transformational vision.

This includes investing in building its ICT infrastructure, liberalizing the telecommunications sector, enacting key laws to create a favourable ICT legal and regulatory environment, launching IT modernization in its public sector, mounting major e-government initiatives, launching population-wide ICT education and literacy efforts and boosting the capacity to harness ICT technologies to spur sustainable economic development, bring life-enriching information and services to its people and catalyze diversification of the economy.

Today, Botswana is ready to harness ICTs to empower businesses, grow the private sector and support the accelerated growth of trade and industry. The convergence of the Internet with commerce has given rise to the rapid growth of e-commerce among developed and developing countries alike. In addition, in the past year, e-commerce has played an important role in reducing the infection rates and risks to life endangered by the 2020 global COVID-19 pandemic and supporting the post-pandemic economic recovery.

Committed to creating an environment that supports e-commerce, Botswana's Ministry of Investment, Trade and Industry (MITI) requested technical assistance from UNCTAD in developing a national e-commerce strategy. The strategy described in this publication is a comprehensive strategic planning work based on a thorough diagnostic of Botswana's e-commerce landscape and five key strategic thrusts aligned with Botswana's Vision 2036. I would like to commend UNCTAD for giving us a strategy that is comprehensive yet user-friendly. It provides a solid foundation to build on and is a very important component of the Botswana Government's current policy for driving post-COVID-19 recovery and transformation. Botswana stands to benefit considerably from the strategy. I would like to thank UNCTAD for producing this invaluable document.



**Mmusi Kgafela**  
Minister of Investment, Trade and Industry  
Government of Botswana



## ACKNOWLEDGEMENTS

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## ACRONYMS

<b>ADSL</b>	asymmetric digital subscriber line
<b>AfCFTA</b>	Africa Continental Free Trade Agreement
<b>AGOA</b>	African Growth and Opportunity Act
<b>B2B</b>	business-to-business
<b>B2C</b>	business-to-consumer
<b>B2G</b>	business-to-government
<b>B2P</b>	business-to-people
<b>BAB</b>	Bankers Association of Botswana
<b>BCCARO</b>	Botswana Consumer Center for Advocacy, Research and Orientation
<b>BDC</b>	Botswana Development Corporation
<b>BISS</b>	Botswana Interbank Settlement System
<b>BITC</b>	Botswana's Investment and Trade Centre
<b>BITRI</b>	Botswana Institute for Technology Research and Innovation
<b>BIUST</b>	Botswana International University of Science and Technology
<b>BoB</b>	Bank of Botswana
<b>BOBS</b>	Botswana Bureau of Standards
<b>BOCRA</b>	Botswana Communications Regulatory Authority
<b>BoFiNet</b>	Botswana Fibre Networks
<b>BOTEC</b>	Botswana Technology Centre
<b>BTA</b>	Botswana Telecommunications Authority
<b>BTC</b>	Botswana Telecommunications Corporation
<b>BTCL</b>	Botswana Telecommunications Corporation Limited
<b>BURS</b>	Botswana Unified Revenue Service
<b>C2C</b>	customer-to-customer
<b>CEDA</b>	Citizen Entrepreneurial Development Agency
<b>CEEP</b>	Citizen Economic Empowerment Policy
<b>COMESA</b>	Common Market for Eastern and Southern Africa
<b>CPMI</b>	Committee on Payments and Market Infrastructures
<b>DIT</b>	Department of Information Technology
<b>EASSy</b>	Eastern Africa Submarine Cable System
<b>ECHB</b>	Electronic Clearing House Botswana
<b>EDI</b>	electronic data interchange
<b>EFT</b>	electronic funds transfers
<b>EFTA</b>	European Free Trade Association
<b>EPA</b>	European Union on an Economic Partnership Agreement
<b>EU</b>	European Union
<b>FDI</b>	foreign direct investment
<b>FNB</b>	First National Bank of Botswana
<b>HRDC</b>	Human Resource Development Council
<b>ICT</b>	information and communications technology
<b>IDP</b>	Industrial Development Policy
<b>ISP</b>	internet service providers



<b>IT</b>	information technology
<b>ITC</b>	International Trade Centre
<b>ITU</b>	International Telecommunication Union
<b>KYC</b>	know-your-customer
<b>LDC</b>	least developed countries
<b>LEA</b>	Local Enterprise Authority
<b>LED</b>	Local Economy Development
<b>MITI</b>	Ministry of Investment, Trade and Industry
<b>MNO</b>	mobile network operator
<b>MSEs</b>	micro and small enterprises
<b>MSMEs</b>	micro, small, and medium enterprises
<b>MTC</b>	Ministry of Transport and Communications
<b>NBS</b>	National Broadband Strategy
<b>NDP</b>	National Development Plan
<b>NES</b>	National Export Strategy
<b>NHRD</b>	National Human Resource Development
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>PPADB</b>	Public Procurement and Asset Disposal Board
<b>PSP</b>	payment service provider
<b>RTGS</b>	real time gross settlement
<b>SACU</b>	Southern African Customs Union
<b>SADC</b>	Southern African Development Community
<b>SAP</b>	services and applications provider licence
<b>SSKIA</b>	Sir Seretse Khama International Airport
<b>STEM</b>	science, technology, engineering, and mathematics
<b>UNCTAD</b>	United Nations Conference on Trade and Development
<b>xDSL</b>	digital subscriber line

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# CONTENTS

- PREFACE ..... 4**
- ACKNOWLEDGEMENTS ..... 6**
- ACRONYMS ..... 7**
- LIST OF BOXES, EXAMPLES, FIGURES AND TABLES ..... 11**
- EXECUTIVE SUMMARY ..... 13**
- CHAPTER 1: INTRODUCTION ..... 23**
  - A. E-commerce for national growth and development in Botswana ..... 24
  - B. Objective and methodology of the diagnostic and strategy development ..... 30
  - C. Roadmap to the Report ..... 33
- CHAPTER 2: BOTSWANA'S E-COMMERCE MARKET ..... 34**
  - A. Botswana's e-commerce market size and forecasted growth ..... 35
  - B. Botswana's e-commerce market by segment ..... 37
  - C. Botswana's consumer market for e-commerce ..... 41
  - D. Key pillars for the development of e-commerce in botswana ..... 49
- CHAPTER 3: ICTS AND E-COMMERCE FOR PRIVATE SECTOR DEVELOPMENT AND DIVERSIFICATION ..... 72**
  - A. ICTs and e-commerce in support of trade and industry ..... 73
  - B. ICTs and e-commerce for local job creation, citizen empowerment and rural development ..... 89
- CHAPTER 4: E-COMMERCE, THE IT SECTOR AND THE KNOWLEDGE ECONOMY IN BOTSWANA ..... 100**
  - A. Botswana's IT industry ..... 102
  - B. Growing Botswana's knowledge capacity ..... 111
  - Conclusions ..... 115
- CHAPTER 5: A NATIONAL STRATEGY TO SUPPORT BOTSWANA'S E-COMMERCE VISION AND GOALS ..... 117**
  - A. Botswana's e-commerce vision ..... 118
  - B. Overarching strategic objective ..... 118
  - C. Strategic goals and substrategies ..... 120
  - Goal 1: Build a world-class ICT and IT sector leveraging e-commerce, including services ..... 120
  - Goal 2: Grow business through e-commerce ..... 125
  - Goal 3: Empower citizen capacities through ICTs and e-commerce ..... 128

Goal 4: Building our knowledge economy .....	132
Goal 5: Reduce non-tariff barriers to e-commerce .....	136
Implementation, governance and monitoring of the strategy.....	138
<b>ANNEXES .....</b>	<b>140</b>
Annex 1: List of people consulted and interviewed during UNCTAD missions (2019) .....	141
Annex 2: Forecasting Methodology (provided by Statista).....	154
Annex 3: Summary of the Vision Workshop: National E-Commerce Strategy for Botswana (May 2019, Gaborone).....	157
<b>REFERENCES .....</b>	<b>159</b>
<b>NOTES .....</b>	<b>160</b>

---

## LIST OF BOXES, FIGURES AND TABLES

### Boxes

1. Public Servants Survey on Technology, E-commerce, and COVID-19 Recovery .....	28
2. Skymart and Covid-19 .....	29
3. Types of E-commerce .....	39
4. Reducing the Access Gap in Kenya .....	51
5. Measuring Quality of Service (QoS) Provided by Telecommunication Networks .....	53
6. Internet Cost Reduction Measures in Botswana .....	55
7. ICT and telecom costs and pricing in Botswana .....	56
8. Digital Nomads .....	57
9. Fast payment systems around the world .....	58
10. Provision of payment services by Botswana Post .....	60
11. Enhancing electronic payments acceptance and financial inclusion in Uruguay .....	62
12. Startup-friendly Light Corporate Structures and Digital Ecosystems.....	63
13. E-commerce and tax avoidance .....	64
14. Focus Groups of Botswana Businesses and Entrepreneurs on E-commerce .....	66
15. Integrating into the E-commerce Supply and Value Chain: Manufacturing and the White Label and Private Labels Markets .....	79
16. Export Promotion Initiative to Promote Thai-Korean Online Trading .....	88
17. Knowledge Transfer: Japan's Journey toward Excellence and the Case of Kaizen.....	90
18. E-commerce Customer Acquisition and Using Data to Grow Small Businesses .....	93
19. Botswana Basket Weavers Prepare for E-commerce .....	98
20. Strengthening IT Execution in Great Britain .....	108
21. Mining Knowledge through Knowledge Entrepreneurship .....	112

### Figures

1. ICTPR E-commerce Enabler and Assessment Framework .....	31
2. Phases for Developing a National E-commerce Strategy.....	32
3. Development of National E-commerce Strategy for Egypt: First Four Phases .....	32
4. Botswana e-commerce revenue estimation from 2017 to 2024 – two scenarios (in US\$ millions) .....	36
5. Online Shoppers in Botswana – 2014 .....	37
6. Botswana's e-commerce purchases by country (2014) .....	38
7. Historical penetration of mobile telephony and broadband in Botswana .....	43
8. Stakeholders in the ICT statistical system .....	44
9. Active mobile broadband penetration in comparison with selected countries .....	45
10. Active mobile broadband subscriptions by year .....	45
11. Historical fixed telephony and broadband penetration .....	46
12. Use of email and social networks by Internet users in Botswana and selected reporting countries.....	48
13. Use of e-commerce by internet users in Botswana and selected reporting countries .....	48
14. Integrated Framework for ICTs and E-commerce in Trade and Industry.....	74

15. Botswana's key trade agreements in Africa .....	76
16. Trade Performance of Botswana, 2013-2017 .....	76
17. Channel configurations for consumer and industrial products .....	80
18. ICT and E-commerce-driven Model for Diversification: Main Thrusts .....	119
19. Governance and implementation organization .....	138
20. Futures Triangle .....	157
21. Cone of Possibilities .....	158

## Tables

1. E-commerce Platforms Used in Botswana .....	40
2. Indicators of access to ICT technologies (as of 2017) .....	42
3. Mobile subscriptions .....	43
4. Fixed telephony subscriptions and penetration and fixed broadband (ADSL and Fixed Wireless Access).....	47
5. Internet activities of Internet users, 2014 .....	47
6. Share of adult population (15 years and older) with a transaction account .....	59
7. Distribution of Botswanan IT firms by establishment date .....	104
8. Identified IT and business consultancy services firms .....	104
9. Size distribution of firms .....	107
10. Breakdown of services trade in 2016 .....	111
11. Goal 1: Ignite our ICT and IT sector .....	120
12. Goal 2: Grow business through ICTs and e-commerce .....	125
13. Goal 3: Empower Citizen Capacities through ICTs and E-commerce .....	128
14. Goal 4: Building our knowledge economy .....	132
15. Goal 5: Reduce Non-Tariff Barriers to E-commerce .....	136

## EXECUTIVE SUMMARY

### A. E-commerce for National Growth and Development in Botswana

E-commerce, or commerce conducted through electronic networks or platforms, offers developing countries real opportunities for inclusive economic growth.<sup>1</sup> Effectively leveraging e-commerce to boost economic growth and exploit economic opportunities requires approaches that vary from country to country, depending on the unique characteristics, strengths, gaps, and weaknesses of the country. E-commerce offers countries with small populations opportunities to tap larger developed markets and promote exports. It can also enable developing countries to further grow their private sectors by facilitating local businesses' internationalization, boost their competitiveness and more aggressively tap potential business opportunities and knowledge transfer by engaging with businesses in more developed private sectors in international markets.

E-commerce can also stimulate local empowerment, boost private sector development for local and rural growth and increase the efficiency of domestic entrepreneurship, by lowering barriers to business entry, making it easier to run a business and putting an array of simple, accessible business development tools and resources at the disposal of local small businesses and entrepreneurs. Microenterprises, particularly those owned by women, generate critical income for households. Leveraging e-commerce to buttress the economic viability of these businesses helps not only the business but the members of the household, with potential economic and social benefits for children and the larger community.

The COVID-19 pandemic has accelerated the deployment of ICTs which are playing a fundamental role in dealing with the crisis, facilitating social distancing and helping to curb the pandemic's spread. ICTs also played a vital role in supporting business continuity and driving the economy, despite the catastrophic shutdown of business activity and consequent economic contraction caused by the virus. COVID-19 and the need for social distancing have accelerated the digitalization of economies and the growth of a critical mass of ICT-connected consumers with a growing interest in digital processes and online purchasing in many countries.

E-commerce channels have deepened and expanded during the crisis, among other things through the even faster proliferation of mobile phones, laptops, tablets and other ICT devices and the shift of many activities to an online channel. Global e-commerce has seen dramatic growth during the pandemic, increasingly becoming an imperative and new norm for people to mitigate COVID risks in everyday life and help small businesses, including women-owned businesses, survive and thrive despite the pandemic's constraints on running a business and its adverse economic impact. As the world continues to grapple with the COVID-19 pandemic, ICTs and e-commerce are also playing a role in supporting countries' post-pandemic recovery efforts and helping them "build back better."

### B. Development of e-commerce in Botswana

Since its founding as a nation in 1966, Botswana has made significant development progress, taking only three decades or so to become the first country to graduate from LDC status (1997). By 50 years of nationhood in 2016, the country had transformed itself from one of the poorest nations in Africa, with an average per capita GDP of US\$70, to an upper middle-income country with an average per capita GDP of US\$7,727 (2017) and average annual growth rate of approximately 9 per cent, making it one of the fastest growing economies in the world. Botswana's development success has been largely due to its prudent national leadership, macroeconomic policies and public planning aimed at channelling major resource endowments to finance the growth of basic infrastructure, education, health and human capacity; its good governance, fostering a democratic and open society; and its low levels of corruption.<sup>2</sup> However, aware that the country's reliance on extractive industries makes its economy vulnerable to market downturns, Botswana has for some time been pursuing economic diversification.

Today, Botswana has set out to achieve its new Vision 2036. The vision is an ambitious one, seeking to transform the nation from an upper middle-income country to a high-income country by 2036. Vital to Vision 2036 is Botswana's aspiration to become a knowledge-based economy anchored in the development of a cutting-edge ICT sector, infrastructure and workforce. The vision carries forward the government's ICT commitments set forth in Maitlaimo, Botswana's first National ICT Policy (2007), to harness the capacity of ICTs to catalyze national transformation for socioeconomic and cultural growth to make Botswana a globally competitive sub-Saharan ICT hub – these commitments are further embedded in Botswana's National Development Plan 11 (2017) and National Diversification Strategy (2011) to:

- Shift from resource-driven growth to growth based on high productivity, innovation and competitiveness.
- Leverage ICTs and the ICT sector to spur high levels of efficiency to support socioeconomic development and be a key contributor to economic growth, diversification, export promotion, FDI attraction and employment creation.
- Utilize the ICT sector as a critical enabler of efficient product and service delivery across all economic sectors, including government services.
- Empower micro, small and medium-sized Botswana enterprises and create a supportive environment for entrepreneurship and enterprise development through the ICT sector and ICTs.

In the past two decades, Botswana has made extensive investments in ICT infrastructure – especially broadband – to build its national backbone, coupled with market liberalization measures and initiatives to set up ICT service centres throughout the country. This has led to significant progress in promoting universal access to ICTs and the embrace of these technologies. In the past decade in particular, Botswana has witnessed dynamic growth in ICT use, driven largely by mobile devices but also by the rising use of landlines, the Internet and personal computers, especially in urban areas. Further initiatives are currently under way to provide last-mile connectivity and broadband wireless technologies connecting business, hospitality, government office parks, shopping centres and industrial areas.

While e-commerce has been on Botswana's development agenda for the past two decades, progress to date has generally lagged and faced challenges gaining momentum. Today, however, with a solid national backbone, widespread use of mobile phones and rising Internet penetration rates, Botswana now stands well-positioned to leverage its investments in the national backbone and broadband into greater Internet usage by individuals, households, businesses and industries and vigorous growth of its e-commerce sector.

E-commerce's emergence in Botswana has been gradual. Improvements in Internet connectivity and pricing have given rise in the past decade to greater Internet usage by both consumers and businesses. In 2018, approximately 36.7 per cent of the Botswana population was using the Internet, and close to 5 per cent were making online purchases. Botswana's retail sector has increasingly moved toward the online environment with the emergence of a number of small online shopping companies, as well as growing efforts by some of the country's largest retailers to launch online shopping initiatives.

Although e-commerce is still in the relatively early stages in Botswana, growing e-commerce awareness among micro, small and medium-sized Botswana enterprises in traditional and budding technology-related sectors has led to efforts to venture into ICTs and e-commerce in order to improve efficiencies and enter new markets. E-commerce offers potential benefits to Botswana enterprises in the form of increased participation in international value chains, greater market access and reach and improved internal and market efficiency, as well as lower transaction costs. However, many of these potential benefits have yet to be fully tapped by Botswana businesses.

For consumers, online shopping facilitates price comparisons and features a wider range of products. It also allows consumers to shop at their leisure and have products delivered to their homes. As discussed in chapter 2, emerging e-marketplaces in Botswana are tapping into a growing market of increasingly regular e-commerce consumers. However, this group is still a minority, and there is considerable scope for expanding this segment of the consumer market.

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The government is playing an important role in encouraging citizens' and businesses' online transition and laying the groundwork for e-commerce, a knowledge society and the digital economy. Various measures necessitating the use of electronic platforms to obtain government services – for example, government e-procurement and electronic tax filing – are helping to acclimate the population to the online environment and making more efficient and expeditious government services possible. Mobile commerce is also growing, with rising numbers of new app innovations and introduction of mobile e-marketplaces. Government-led mobile apps for utilities – for the purchase of electricity units, for example – are fuelling this growth. Moreover, government efforts are under way to leverage Botswana's ICT infrastructure development for more effective and rapid growth of its industrial sectors.

## **C. Botswana's strengths and challenges to grow e-commerce**

### **Botswana's strengths for leveraging economic growth through e-commerce**

Botswana is well-positioned for e-commerce growth. It has a large number of e-commerce-ready users with smartphones, who use mobile broadband and can serve as the initial segments of the population that will spearhead the spread of e-commerce. The country has a growing middle class and large segment of social media-using youth who can serve as the early adopters of e-commerce.

Botswana has a world-class, globally competitive diamond industry, which has been the country's main FDI and foreign exchange earner and played a critical role in growing the economy, generating revenue and jobs. The country's high-end tourism industry has been developing and shows strong growth potential.

Botswana's proximity to a large economic market, South Africa, and its geographical location at the crossroads of the Southern Africa subregion is also a strength that can be leveraged. Its membership in SACU gives Botswana-based companies duty-free access to the entire Southern Africa subregion.

Moreover, preferential trade agreements provide Botswana with market access to large developed markets. This access, facilitated through trade agreements, can benefit Botswana e-commerce businesses. In addition, the closer geographical proximity of Botswana and the entire African continent to certain markets, such as the United States and the European Union, also offer the opportunity for lower logistics costs – should these shorter trade routes be capitalized on, optimized and made cost efficient – for international trade with these markets, in contrast to Asian countries, which must cover the logistics costs for far longer distances.

Botswana's high literacy rate and high percentage of the population with at the least a secondary school education also help to ensure a population that is e-commerce-ready. Widespread use of English and exposure to ICT devices also position Botswana workers and citizens to be able to plug into global networks.

Botswana's well-developed legal and regulatory environment for electronic payments, its robust ICT and e-commerce-related laws and recently updated regulations also constitute an important pillar for creating an environment favourable to e-commerce development.

### **Challenges faced by Botswana**

At the same time, the country is faced with a number of challenges and weaknesses when it comes to e-commerce. While Botswana has made commendable progress in developing its ICT and telecommunications infrastructure, lowering Internet cost and trying to address the infrastructure challenges of landlocked countries, it continues to have problems with quality of service and high Internet data costs. Consultations with a number of stakeholders yielded reports of problems with Internet and e-government service operations. The location of hosting services and broadband access to e-commerce sites are potential problems.

There is limited awareness, use and experience with ICTs and e-commerce among micro, small and medium-sized enterprises. This underscores the basic need for awareness and expertise in e-commerce among companies and professionals.

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Botswana has a relatively underdeveloped IT and innovation sector, a lack of FDI in the IT sector and the absence of a large number of major IT players, especially when compared with neighbouring South Africa, which serves as the regional headquarters for many of these companies and related FDI. Botswana is often eclipsed by South Africa or perceived as an extension of the South African market by much of the international investment community. This constrains the growth of supply-side players in e-commerce.

Botswana's small talent pool is also a constraint to e-commerce growth. In the past, it has not been large enough for the country to be seen as possessing sufficient IT talent and the startup ecosystem to make it a potential contender for major tech FDI.

While Botswana has certain robust sectors – especially the mining and extraction industry, which accounts for the highest percentage of GDP, and to some extent, its beef and tourism industry – it has long struggled to grow its private sector. The economy is primarily government-driven, with the government being the country's major employer. There is a relatively small business sector outside of government procurement-generated business. Botswana's fledgling businesses and business sector have also struggled to compete in the highly competitive Southern African market, which is dominated by tough regional players. This constrains the growth of e-commerce and limits the ability of Botswana businesses to be competitive in e-commerce.

With regard to its payments sector, Botswana has no domestic switch that could process other payment instruments. This limits the use of e-commerce, especially for services and digital products. While the country has a strong financial services sector, its financial market is shallow compared to other emerging markets and advanced economies.

It is hard to obtain startup finance, and there are few business incubators and limited numbers of individuals and businesses supported through government financing programmes. This limits the ability of entrepreneurs to exploit e-commerce opportunities.

Botswana's small consumer market may pose a challenge to attracting certain types of FDI, especially FDI aimed at tapping large consumer markets. Extra efforts may be needed to attract global e-commerce retailers. However, it should be noted that in the past, Botswana's retail market was already considered one of the highest potential growth markets in Africa, and it features some of the continent's top retailers.<sup>3</sup> In recent years, however, continental African competition in the retail market has intensified, with competition from other regions of Sub-Saharan Africa.

Botswana's large geographic land mass with a highly dispersed population in certain areas also requires large ICT, logistics and other forms of investment to ensure full national coverage, and this can pose a cost challenge for infrastructure development as a whole, including ICT.

As a landlocked country, Botswana lacks access to ports and maritime trade and relies heavily on its neighbours, especially South Africa, for much of its international logistics and international trade. Both of these factors pose challenges for e-commerce infrastructure development, logistics and low cost services and delivery. Nonetheless, the country has made great strides in overcoming some of these obstacles.

Interviews with the Consumer Protection Office and the Cybercrimes Unit of Botswana Police indicate that consumers shopping online have encountered different types of fraud, ranging from non-delivery of products ordered online to fake electronic wallet messages and tax avoidance activities. Most fraud reportedly originates in South Africa.

A significant weakness in developing trust in e-commerce is the lack of coordinated consumer protection and cybercrime-fighting in the region. Botswana is a small country and is heavily reliant on commerce with South Africa and its other neighbours. By its nature, e-commerce is frequently conducted across national borders, and effective policing of misrepresentation and outright fraud therefore must also be regional and international in scope. Decisive action by the SADC and other regional institutions to address this issue is required.

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Like most of SACU, several of Botswana's business sectors are dominated by large retailers and regional players, especially from South Africa. Similarly, there is the risk that Botswana's local e-commerce market will be dominated by larger retailers and companies. Botswanan businesses must differentiate themselves from their competitors.

Botswana faces competition from surrounding SADC countries, in particular South Africa, for IT, ICT and e-commerce-related FDI. Though proximity to South Africa has also had FDI-related advantages, since South Africa has been a large investor in Botswana and Botswana has benefited from the expansionist drive of South African businesses in certain sectors. Botswana will need to demonstrate that it is an attractive location for foreign investment to boost its capacity to attract IT, ICT and e-commerce-related FDI.

Public e-procurement can have both pros and cons in terms of driving business. Since the government is the country's largest employer, in the absence of a vibrant private sector, government contracts can play a role in driving business in the country. However, over time, unless private-sector business opportunities arise, there is a risk of Botswana's business sector becoming over-dependent on public sector procurement. This can have the effect of disincentivizing the development of competitiveness among Botswana businesses. After providing the initial impetus for business, weaning businesses off public contracts and moving them toward other types of contracts would be an important step forward in fostering a sustainable private sector.

In countries with a robust entrepreneurial culture, e-commerce can often lead to a rapid increase in the number of B2C e-commerce retailers. This can lead to an increase in e-commerce uptake by engaged consumers, which, in turn, can incentivize further entrepreneurship. By leveraging this dynamic, there is an opportunity to create a virtual cycle helping to drive the growth of the private sector and further diversification.

#### **D. E-commerce in support of private sector development, enhanced productive capacity, and diversification**

The Government of Botswana has made private-sector development a key component of its economic development strategy. The Botswana Industrial Development Policy (2014) specifically stated that the private sector should drive the country's industrialization programme and identified key areas for private-sector development, including: capacity building to develop entrepreneurs; skills development to meet private-sector needs; technology adaptation training; and public-private partnerships, particularly in infrastructure development. In 2013, Botswana launched its Private Sector Development Strategy as part of Botswana's Economic Diversification Drive. Its aim is to create a business environment conducive to private-sector growth and to boost the growth and competitiveness of the sector.

The private sector is vital to driving economic growth, generating employment, improving livelihoods, reducing poverty and stimulating economic diversification. Private-sector businesses provide critical capital, knowledge, innovation, taxes, opportunities for partnerships and risk mitigation essential to a country's economic development. A dynamic private sector is key to the sustainable growth of an economy and, working hand-in-hand with the public sector, can help it better fulfil its mission.<sup>4</sup>

Opportunities are available to leverage ICTs and e-commerce in support of private-sector development. ICTs have emerged as powerful tools to support business growth, increasing operational efficiencies and productivity across sectors, complementing pro-poor growth activities, enhancing citizens' livelihood capacities and helping to address developing countries' extensive barriers to growth.<sup>5</sup>

While known primarily for its ability to serve as a channel to market and to empower entrepreneurs and enterprises, e-commerce can also play an important role in helping developing countries grow trade and industry, boost productive capacity and facilitate integration into global value and supply chains.

The strategy report examines the role of ICTs and e-commerce in supporting private-sector development in Botswana. It examines this in the context of two approaches. It first approaches private-sector development through the lens of leveraging ICTs and e-commerce to promote trade and industry, adopting a more macro-level

and market-based approach to promoting economic growth. In addition, it examines private sector development by adopting a micro level lens which focuses on ICTs and e-commerce to promote local livelihoods and job opportunities, including for Botswana's smallholder farmers and people in rural areas. These issues are examined in-depthly in Chapter 3 of the report.

## **E. E-commerce, the ICT and IT Sectors, and the Knowledge Economy in Botswana**

Botswana's Vision 2036 is ambitious, aiming to transform Botswana from an upper middle-income country to a high-income country by 2036. Vital to Vision 2036 is Botswana's aspiration to become a knowledge-based economy anchored in the development of a leading-edge ICT sector, infrastructure and workforce. The vision carries forward the government's ICT commitments set out in Maitlaimo, Botswana's first National ICT Policy (2007), to harness the capabilities of ICTs to catalyze national transformation for socioeconomic and cultural growth and to make Botswana a globally competitive Sub-Saharan ICT Hub.

The IT sector plays a critical role in providing crucial technology services required to drive and to support the growth of e-commerce. By providing technology and services for the e-commerce sector, it can help facilitate e-commerce adoption by businesses and consumers, including through outsourcing from other countries. By marketing e-commerce solutions, the IT sector can inform businesses about the benefits and opportunities offered by B2B and B2C e-commerce. There is growing demand on IT-related functions from Botswana's local market. In addition, the Government is expected to provide more support for training initiatives, SMMEs and innovations that could be scaled up to support e-commerce. Yet, while Botswana's telecommunications sector has grown over the past two decades and is making good progress, its IT sector remains fragmented and largely small-scale despite the country's high number of IT graduates.

As development of the ICT and IT sectors play a key role in the achievement of Botswana's Vision 2036, Maitlaimo, and is vital to driving e-commerce, Chapter 4 of the report provides an overview of progress in the telecommunications sector to date and examines in-depthly the current status of the IT sector, discusses where some of the current bottlenecks are and considers measures that can be adopted to advance its development. The chapter also examines the role of e-commerce in the knowledge economy. As e-commerce fosters the flow of digitalized content and information, goods, services, and data, it can support the growth of a knowledge-based economy.

## **F. The Strategy and Its Key Policy Recommendations**

UNCTAD proposes a strategy plan comprised of five key strategic goals for the National E-commerce Strategy for Botswana, each with its own set of recommendations integrated collectively. The strategy is supported by an action plan that outlines its implementation and includes key performance indicators (KPIs) to aid Botswana in monitoring progress over time.

A vision of the future serves as the starting point for strategies and plans to realize that future. To develop the national e-commerce strategy for Botswana, some 100 national stakeholders participated in a Vision Workshop in May 2019 to identify an e-commerce vision for Botswana's future. Employing futures methodology, the workshop explored the future and the forces that may shape it to gain insights to facilitate change and realize that desired future (see Summary of Vision Workshop in Annex). The futures methods – also known as foresight – has been used for several decades as a strategic planning method by private corporations, government, think tanks, educational institutions and academia. The results of the workshop discussions and brainstorming fueled the development of the following vision and goals for the national e-commerce strategy for Botswana.

### **Botswana's e-commerce vision**

Botswana has many strengths that can be leveraged for e-commerce, but its potential is still far from being fully tapped. The country should take the necessary steps to leverage e-commerce to empower its citizens and

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entrepreneurs, improve the quality of life and well-being of its people, grow its private sector and create jobs, diversify its economy and ensure inclusive, sustainable development and accelerated economic growth.

In the national e-commerce strategy, Botswana has embraced a vision for expanding e-commerce for growth and development to the benefit of its people and businesses. That vision seeks to tap Botswana's strengths and comparative advantages for e-commerce and overcome key obstacles and bottlenecks.

Botswana's vision and goals are embedded in and aligned with its Botswana's Vision 2036, which is:

**By 2036, Botswana will be a high-income country, with an export-led economy underpinned by diversified, inclusive and sustainable growth driven by high levels of productivity.**

The vision for Botswana's National E-commerce Strategy is:

**By 2026, we will have harnessed the power of our private sector, the talent and capabilities of the Botswana people, our mastery of ICTs, and our vibrant e-commerce sector to make our products and services a Botswana brand of excellence across the world.**

### **Overarching strategic objective**

**Overarching strategic objective: Leverage e-commerce to accelerate economic growth and diversification, unleash Botswana's productive capacity and reach high-income country status**

Greater efficiencies, trade and cross-sectoral and industrial cooperation around e-commerce will synergize to propel Botswana into a virtual cycle of increased and sustained economic growth, diversification, revenues and job creation.

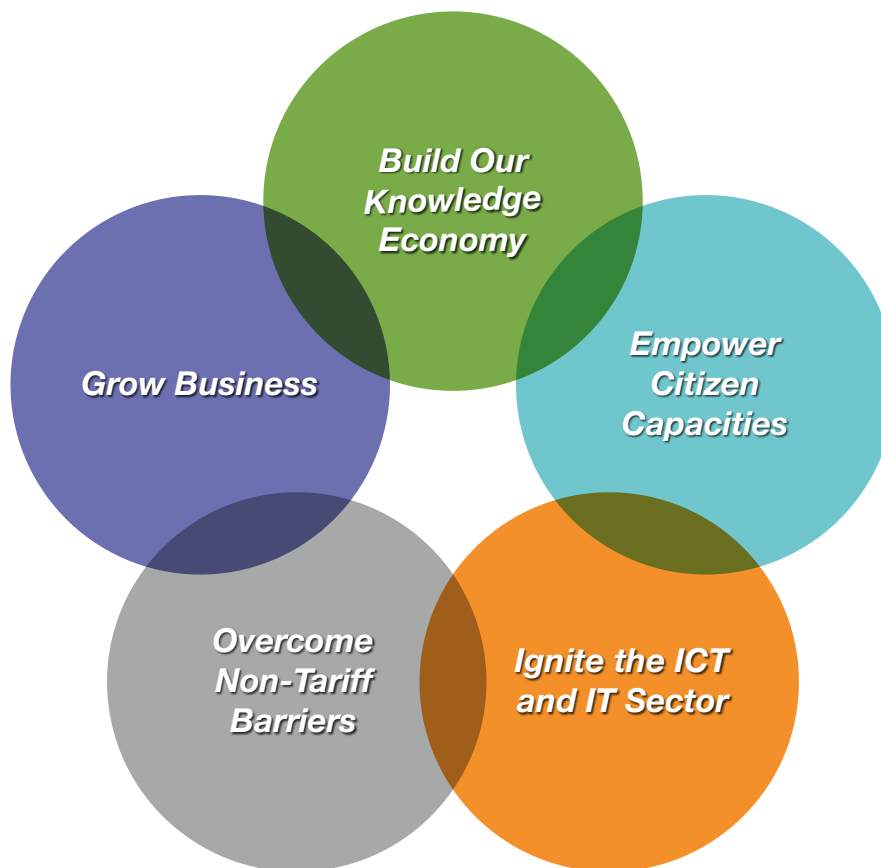
Based on the diagnostic of Botswana's foundational pillars, its national e-commerce strategy is based on a five-point thrust model with strategic focus on the following key areas for growing e-commerce and driving diversification in Botswana:

- Leveraging ICTs and e-commerce for business growth and private-sector development
- Promoting citizen empowerment and rural development through ICTs and e-commerce
- Powering the IT sector for e-commerce growth, including services
- Building a knowledge-based economy
- Eliminating non-tariff barriers to e-commerce

This model below aims to leverage Botswana's strengths and address weaknesses to set in motion the momentum and dynamic needed to propel ICT and e-commerce growth in support of diversification, national development and prosperity (see model below).

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## ICT and E-commerce-driven Model for Diversification: Main Thrusts



Source: UNCTAD

The report examines each of the thrust areas individually and the dynamics involved in leveraging each to grow ICTs and e-commerce and drive diversification in Botswana. The following recommendations underlie the proposed strategic interventions:

### Goal 1: Build a world-class ICT and IT sector leveraging e-commerce, including services

Goal 1 is designed to support the building of Botswana's ICT sector, including its infrastructure, by leveraging e-commerce. In addition to building on the strengths and opportunities of the ICT sector, the goal will also leverage the following aspects of the sector:

- Its potential to help make most sectors more competitive
- Local software development to meet the needs of Botswana businesses.

E-commerce should be leveraged to help strengthen and to tap opportunities in Botswana's ICT sector. This will involve investment in and continuing modernization of infrastructure. Growing opportunities to more effectively leverage the country's IT talent, for example in software, and to strengthen IT execution will be crucial. IT talent should also be harnessed for greater exports of IT and IT-enabled services. New and innovative digital products from Botswana's IT sector can facilitate greater government revenue. Botswana's technology sector is a key driver for promoting entrepreneurship and innovation. Fostering high-calibre IT talent, attracting skilled talent from abroad, strengthening knowledge transfer and learning processes can further foster e-commerce.

## **Goal 2: Grow businesses through e-commerce**

Goal 2 is designed to strengthen businesses through e-commerce. The performance of Botswana businesses of all sizes in the adoption of ICT and of e-commerce lags behind the average reported performance for upper-middle-income countries in placing and receiving orders. There is a need for greater Internet adoption among MSEs and greater uptake of e-commerce by enterprises of all sizes.

This use of e-commerce will enable Botswana's businesses to:

- Increase market reach, especially in export markets
- Enhance service delivery to consumer markets in Botswana and abroad
- Strengthen their linkages to multinationals and firms in other countries
- Improve their participation in domestic and international supply chains.

The goals will build on a number of features already present in Botswana's IT sector and IT-using sectors. This includes the IT sector's growing capacity to bring new IT and software applications to Botswana businesses and the IT systems already in place in large businesses, which will form the back-office applications for e-commerce, and the IT literacy training programmes for SMMEs provided by LEA, CEDA and other agencies. Business use of e-commerce will also require a business environment conducive to investment, the adoption of e-commerce and enabling conditions that encourage businesses of all sizes and sectors to adopt e-commerce.

Empowering businesses is at the core of the e-commerce strategy. Botswana aims to double the number of companies that do business online. B2B e-commerce remains largely unexploited by both large and small businesses in Botswana. With rapid advances in technology, converting manual processes to digital ones is not as costly and complicated as in the past. B2B – whether through direct selling or a B2B e-marketplace – can give Botswana businesses the advantage of reduced transaction costs, greater efficiencies, and higher productivity and profitability. While the infant e-commerce market is growing, its full potential is far from exploited. Many established Botswana retailers do not have an online presence. Few small businesses are online or making use of an e-marketplace. B2B and public e-procurement are greatly underused. Strategic investments and financing for e-commerce companies are hence crucial. Creating a favourable regulatory environment for e-commerce and skills development are important for empowering businesses to expand in domestic and international markets.

## **Goal 3: Empower citizen capacities through ICTs and e-commerce**

The third goal is designed to leverage e-commerce to empower citizen capacities. The Botswana Government has long sought to ensure that Botswana citizens can actively participate in the growth of the economy and enable Botswana to fully tap their potential and talents. The Government has also recognized the informal sector's importance and contribution to the economy.

Botswana aims to achieve the following goal:

### **Through e-commerce, unlock and empower the business and entrepreneurial capacities and talents of Botswana citizens**

With its rapidly growing population of Internet users, in particular among the youth, Botswana's consumer market has untapped potential and opportunities which can be capitalized by enterprising local entrepreneurs. Building Botswana's consumer market for e-commerce will require multi-stakeholder cooperation cutting across several policy and strategic areas. Awareness-raising and skills development are as important here as is building a favourable regulatory environment, including consumer protection. Developing local language content and fostering rural e-commerce would help accelerate the process. In addition, the sheer size of Botswana's market collectively within SADC, as well as Botswana's proximity to the large South African consumer market, creates opportunities for building consumer market-based industries – such as digital marketing and advertising and consumer market research – and create a potential advantage that Botswana business could subsequently leverage in other SADC countries.

The digital economy also offers opportunities to include microenterprises in the informal sector. In the absence of formal sector employment, informal enterprises absorb the bulk of livelihood activities. Formal microenterprises account for up to 80 per cent of employment in many developing countries. As micro and small enterprises (MSEs) in the informal sector are not captured in national reporting, the actual contribution of the MSE sector to the economy is even larger. The informal sector helps to absorb work capacity and to stimulate entrepreneurship. However, it also strains the economy, creating unfair competition for formally registered small businesses. E-commerce can serve as a channel for incentivizing informal MSEs to formalize with the help of appropriate incentives.

#### **Goal 4: Building Botswana's knowledge economy**

In addition to building on Botswana's current strengths, efforts will leverage the following aspects of Botswana's service and technology sectors, as well as on its knowledge workers:

- the financial services and payments, tourism, marketing and other key service sectors and industries that are likely interested in shifting to more ICT and e-commerce-based systems
- high-tech industries in Botswana, including the mining and extraction, diamond beneficiation, retail, banking and payments and agricultural industries, where advanced IT and 4IR has fully or partly taken hold in segments of the business operations.

#### **Goal 5: Reduce non-tariff barriers to e-commerce**

Goal 5 is designed to reduce non-tariff barriers to e-commerce, especially those related to logistics and payments. Botswana is also well-placed as a potential logistics hub, as it sits geographically at the crossroads of the SADC region. By building its basic infrastructure and land transport corridors, Botswana can build up its capacity at Francistown as a logistical hub and in infrastructure to support e-commerce and other sectors.

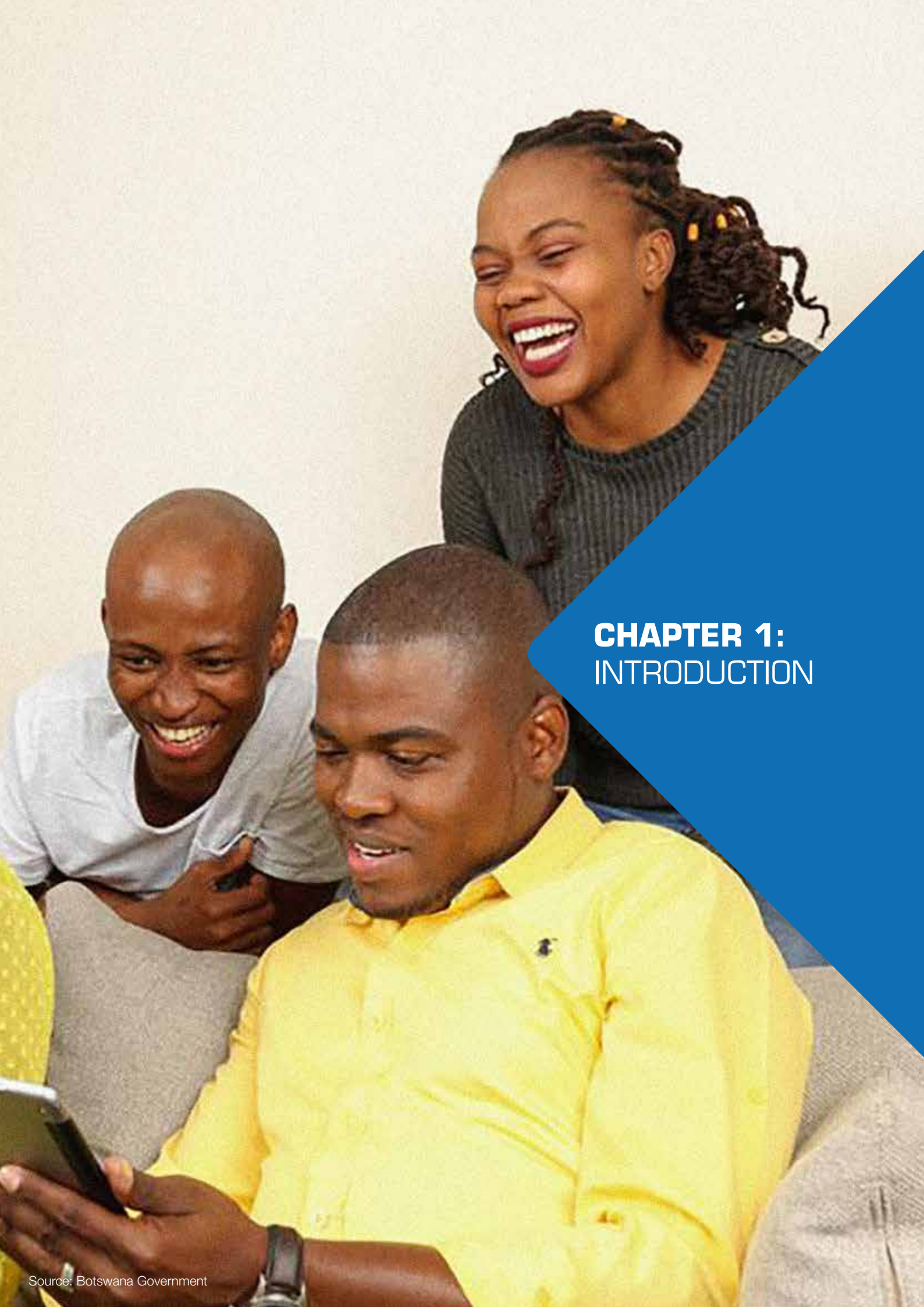
Achievement of this goal can be supported by:

- Increasing the efficiency and ease of use of customs and trade facilitation services.
- Developing and leveraging the full capacity of Botswana Post to support e-commerce.
- Developing a fulfilment and logistics sector with the necessary scale to support a rapidly growing distance-selling culture within Botswana, SACU, the SADC subregion, the African region and cross-border areas.
- Ensuring that the underlying transport infrastructure allows for affordable deliveries to any inhabited locations.
- Positioning Botswana to be able to reduce overall logistics costs .

Botswana should leverage e-commerce to galvanize growth in the logistics sector. As highlighted above to help launch the country as a regional logistics hub. Several key steps are needed. Customs clearing needs to be simplified and accelerated. Domestic logistics capabilities and service delivery levels should be strengthened to enhance regional and international logistics and supply chain efficiency. Making use of trade agreements to facilitate exports to trading partners will be crucial, including through the installation of automated exports systems. Botswana Post can play a big role due to its penetration throughout the country and its ability to deliver. The cooperation of Botswana Post and domestic and international logistics partners is key in this context.

While Botswana has a sound payments system in place and a base of people holding credit cards, debit cards and access to other forms of e-payment, such as mobile payments, encouraging the use e-payment and its acceptance among retailers remains crucial. Expanding the number of people with access to e-payments, particularly in rural areas, and increasing e-payment methods for e-commerce are necessary. This will require effective cooperation among the banks, the postal sector and the retail industry. It will be necessary to increase the percentage of the population with access to transaction accounts. Elimination of barriers to e-payment usage is necessary for boosting e-commerce. Fostering security and trust in e-payments and incentivizing e-payments is important. With the high penetration of mobile phones, mobile payments, in particular in rural areas, are also an opportunity to further exploit for e-commerce.

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## **CHAPTER 1:** INTRODUCTION



## A. E-COMMERCE FOR NATIONAL GROWTH AND DEVELOPMENT IN BOTSWANA

### ***Policy rationale***

E-commerce, or commerce conducted through electronic networks or platforms, offers developing countries real opportunities for inclusive economic growth.<sup>6</sup> Effectively leveraging e-commerce to boost economic growth and exploit economic opportunities requires approaches that vary from country to country, depending on the unique characteristics, strengths, gaps, and weaknesses of the country. E-commerce offers countries with small populations opportunities to tap larger developed markets and promote exports. It can also enable developing countries to further grow their private sectors by facilitating local businesses internationalization, boost their competitiveness and more aggressively tap potential business opportunities and knowledge transfer by engaging with businesses in more developed private sectors in international markets.

E-commerce can also stimulate local empowerment, boost private sector development for local and rural growth and increase the efficiency of domestic entrepreneurship, by lowering barriers to business entry, making it easier to run a business and putting an array of simple, accessible business development tools and resources at the disposal of local small businesses and entrepreneurs. Microenterprises, particularly those owned by women, generate critical income for households. Leveraging e-commerce to buttress the economic viability of these businesses helps not only the business but the members of the household, with potential economic and social benefits for children and the larger community.

As a channel for the purchase and sale of goods e-commerce plays a key role in the supply and value chain, including the distribution channel. In this context, the dynamics involved in e-commerce and trade can boost imports and exports and fuel production processes supporting the acceleration of industrial development.

Viewed through this lens, e-commerce has a bearing on a number of trade factors related with industry, including: the direction of trade flows; target markets for exports; where raw materials or intermediary products are sourced; value addition; distribution channels; rules of origin, logistics and trade facilitation and non-

tariff barriers; and the cost of factors of production. Leveraging e-commerce and its effectiveness as a channel to market to help grow industry involves the consideration of its interplay with the aforementioned factors.

Since Michael Porter first introduced the concept of value chains in 1985, the importance of identifying opportunities within the supply chain to add value for the customer has emerged as a critical factor for building national and business competitiveness. Leveraged effectively, e-commerce can open up opportunities for value addition and boost competitiveness. Hence the importance of identifying where these opportunities may be in the supply and value chain and where ICTs and e-commerce can exert some leverage to support export growth, and enhanced value addition.

The COVID-19 pandemic has accelerated the deployment of ICTs which are playing a fundamental role in dealing with the crisis, facilitating social distancing and helping to curb the pandemic's spread. They also played a vital role in supporting business continuity and driving the economy, despite the catastrophic shutdown of business activity and consequent economic contraction caused by the virus. COVID-19 and the need for social distancing have accelerated the digitalization of economies and the growth of a critical mass of ICT-connected consumers with a growing interest in digital processes and online purchasing in many countries.

E-commerce channels have deepened and expanded during the crisis, among other things through the even faster proliferation of mobile phones, laptops, tablets and other ICT devices and the shift of many activities to an online channel. This has resulted in the accelerated uptake of telecommuting, remote learning, video conferencing and other digital processes in many countries. With the rapid uptake of ICTs and virtual channels in more countries, global e-commerce has seen dramatic growth during the pandemic, increasingly becoming an imperative and new norm for people to mitigate COVID risks in everyday life and to help small businesses – including women-owned businesses – survive and thrive despite the pandemic's constraints on running a business and its adverse economic impact.

### ***Development of e-commerce in Botswana***

Since its founding as a nation in 1966, Botswana has made significant development progress, taking only three decades or so to become the first country

to graduate from LDC status (1997). By 50 years of nationhood in 2016, the country had transformed itself from one of the poorest nations in Africa, with an average per capita GDP of US\$70, to an upper middle-income country with an average per capita GDP of US\$7,727 (2017) and average annual growth rate of approximately 9 per cent, making it one of the fastest growing economies in the world. Botswana's development success has been largely due to its prudent national leadership, macroeconomic policies and public planning aimed at channelling major resource endowments to finance the growth of basic infrastructure, education, health and human capacity; its good governance, fostering a democratic and open society; and its low levels of corruption.<sup>7</sup> However, aware that the country's reliance on extractive industries makes its economy vulnerable to market downturns, Botswana has for some time been pursuing economic diversification.

Today, Botswana has set out to achieve its new Vision 2036. The vision is an ambitious one, seeking to transform the nation from an upper middle-income country to a high-income country by 2036. Vital to Vision 2036 is Botswana's aspiration to become a knowledge-based economy anchored in the development of a cutting-edge ICT sector, infrastructure and workforce. The vision carries forward the government's ICT commitments set forth in Maitlaimo, Botswana's first National ICT Policy (2007), to harness the capacity of ICTs to catalyze national transformation for socioeconomic and cultural growth to make Botswana a globally competitive sub-Saharan ICT hub – commitments that are further embedded in Botswana's National Development Plan 11 (2017) and National Diversification Strategy (2011) to:

- Shift from resource-driven growth to growth based on high productivity, innovation and competitiveness.
- Leverage ICTs and the ICT sector to spur high levels of efficiency to support socioeconomic development and be a key contributor to economic growth, diversification, export promotion, FDI attraction and employment creation.
- Utilize the ICT sector as a critical enabler of efficient product and service delivery across all economic sectors, including government services.
- Empower micro, small and medium-sized Botswana enterprises and create a supportive

environment for entrepreneurship and enterprise development through the ICT sector and ICTs.

In the past two decades, Botswana has made extensive investments in ICT infrastructure – especially broadband – to build its national backbone, coupled with market liberalization measures and initiatives to set up ICT service centres throughout the country. This has led to significant progress in promoting universal access to ICTs and the embrace of these technologies. In the past decade in particular, Botswana has witnessed dynamic growth in ICT use, driven largely by mobile devices but also by the rising use of landlines, the Internet and personal computers, especially in urban areas. Further initiatives are currently under way to provide last-mile connectivity and broadband wireless technologies connecting business, hospitality, government office parks, shopping centres and industrial areas.

While e-commerce has been on Botswana's development agenda for the past two decades, progress to date has generally lagged and faced challenges gaining momentum. Today, however, with a solid national backbone, widespread use of mobile phones and rising Internet penetration rates to serve as the bedrock for the growth of e-commerce, Botswana now stands well-positioned to leverage its investments in the national backbone and broadband into greater Internet usage by individuals, households, businesses and industries and vigorous growth of its e-commerce sector.

E-commerce's emergence in Botswana has been gradual. Improvements in Internet connectivity and pricing have given rise in the past decade to greater Internet usage by both consumers and businesses. In 2018, approximately 36.7 per cent of the Botswana population was using the Internet, and close to 5 per cent were making online purchases (Household Survey). Botswana's retail sector has increasingly moved toward the online environment with the emergence of a number of small online shopping companies, as well as growing efforts by some of the country's largest retailers to launch online shopping initiatives.

Although e-commerce is still in the relatively early stages in Botswana, growing e-commerce awareness among micro, small and medium-sized Botswana enterprises in traditional and budding technology-related sectors has led to efforts to venture into ICTs and e-commerce in order to improve efficiencies and enter new markets. E-commerce offers potential benefits to Botswana

enterprises in the form of increased participation in international value chains, greater market access and reach and improved internal and market efficiency, as well as lower transaction costs. However, many of these potential benefits have yet to be fully tapped by Botswana businesses.

For consumers, online shopping facilitates price comparisons and features a wider range of products. It also allows consumers to shop at their leisure and have products delivered to their homes. As discussed in chapter 2, emerging e-marketplaces in Botswana are tapping into a growing market of increasingly regular e-commerce consumers. However, this group are still a minority, and there is considerable scope for expanding this segment of the consumer market.

The government is playing an important role in encouraging citizens' and businesses' online transition and laying the groundwork for e-commerce, a knowledge society and the digital economy. Various measures necessitating the use of electronic platforms to obtain government services – for example, government e-procurement and electronic tax filing – are helping to acclimate the population to the online environment and making more efficient and expeditious government services possible. Mobile commerce is also growing, with rising numbers of new app innovations and introduction of mobile e-marketplaces. Government-led mobile apps for utilities – for the purchase of electricity units, for example – are fuelling this growth. Moreover, government efforts are under way to leverage Botswana's ICT infrastructure development for more effective and rapid growth of its industrial sectors.

### **Impact of COVID-19**

While growing e-commerce has long been a priority in Botswana, the coronavirus pandemic that emerged in the first quarter of 2020 has led to a crisis among many small businesses, which have struggled to survive, and affected the economy as a whole. At the same time, it has played a role in accelerating e-commerce uptake and digitalization in Botswana.

As of the end of 2020, Botswana had 42 reported COVID-19 deaths, and the Government had imposed three major lockdowns and a national curfew to curb the spread of the virus. While Botswana has strong macroeconomic fundamentals, the economy experienced a COVID-related contraction in 2020. Year-on-year (y-o-y) annual GDP growth in Botswana fell to -4.2 per cent in Q2 2020 from +2.6 per cent y

o-y in Q1 2020. There was a significant contraction in the mining, trade, construction and manufacturing sectors, which had growth rates of -18.6, -7.9, -6.8 and -5.8 per cent, respectively, in Q2 2020. Hotels and restaurants subsector output fell by 13.6 per cent y-o-y during the quarter, which was heavily impacted by the country's lockdown and travel restrictions. The tourism sector suffered from travel restrictions and many businesses had to retrench, unable to meet their wage bills. The agriculture sector, being the backbone and accustomed niche in the lives of Botswana, witnessed low harvests, coupled with challenges emanating from the lockdown.<sup>8</sup> Nonetheless, the sector recorded growth in Q2 2020 (0.2 per cent y-o-y), up from -0.7 per cent y-o-y growth in Q1 2020.<sup>9</sup>

International trade activity significantly slowed with Botswana's first closing of its borders at the end of March 2020. During Q2 2020, imports fell by 23.0 per cent over Q2 2019. Total exports plummeted, dropping by 75.0 per cent over the same period. The same held true for diamond exports, which fell by 77.8 per cent over Q2 2019.<sup>10</sup> Botswana's rough diamond exports fell by some 66 per cent in the third quarter of 2020, compared with the same period in the previous year.

Botswana closed its borders in March to curb the spread of the virus, locking out international buyers from countries such as India, Belgium and China, who traditionally travel to Gaborone many times a year to view and buy diamonds.

De Beers' rough diamond production fell by 18 per cent to 25.1 million carats in 2020, compared to 30.8 million in 2019, in response to the lower demand stemming from the pandemic and COVID-19 restrictions in southern Africa in the first half of the year. In Botswana, where the company sources nearly 70 per cent of its rough diamonds, production fell by 29 per cent to 16.6 million carats in 2020<sup>11</sup>.

According to central bank data, Debswana, a joint venture of Botswana and Anglo American's De Beers Group, exported rough diamonds worth US\$287 million in the third quarter of 2020, versus US\$863 million in the same quarter of 2019.<sup>12</sup> The slowdown in diamond trading activity has had a significant negative impact on the national budget due to the decline in mineral revenues. Mineral revenues in Q2 2020 were down by 56.9 per cent over the same period in 2019. However, there were signs of some recovery in the diamond market in the Q3 2020. De Beers cut the prices of both its larger and smaller diamonds during

that quarter, resulting in rough diamond sales valued at US\$450 million in Q3 2020.

To offset the pandemic's adverse economic impact, the Government devised assistance plans, including the introduction of a moratorium and subsidies from Botswana Unified Revenue Services (BURS). The Government further introduced a farmer's permit, giving farmers time to visit their agricultural sites to avoid further losses.<sup>13</sup> In a bid to revive the tourism sector, the country's second most important foreign exchange earner, the authorities launched a phased reopening of borders, allowing the gradual resumption of air travel as of 9 November. Private and commercial banks in the country came on board to assist businesses hit hard by the pandemic. Among other interventions, the Letlhabile programme of the Citizen Entrepreneurial Development Agency (CEDA) granted interest-free loans to the informal sector during the difficult season.

In addition, Botswana introduced a number of technology-related measures, reflecting a global trend emerging from the coronavirus crisis that was characterized by greater use of digital technologies to ensure social distancing, continue operations despite shutdowns, and enable teleworking, remote

schooling, telemedicine and a host of other digital applications. Though the challenges and risks of the pandemic still loomed, in 2020 Botswana also moved toward growth opportunities linked with technology adaptation to better cope with COVID-19. With the massive shift by much of the world's population to online and virtual channels, Botswana similarly tapped growth opportunities by accelerating digitalization and building its e-commerce capabilities. Botswana's efforts to support digitalization can be seen in the public sector, for example (see Box 1. Public Servants Survey on Technology, E-commerce, and COVID-19 Recovery).

Informal reports from some of the country's largest banks such as Absa (formerly Barclays Bank) indicate that there appears to have been growth in the number of bank accounts opened for e-payments in 2020 as a result of COVID-19. In addition, the private sector in particular among Botswana's major e-marketplaces, reported dramatic growth in Q2 2020 as a result of COVID 19 (see Box 2. Skymart and Covid-19). Sustaining and accelerating this momentum toward digitalization into 2021 can further support Botswana's efforts to combat COVID-19 and support the country's ongoing development agenda toward diversification and building a knowledge-based economy.

**Box 1 Public Servants Survey on Technology, E-commerce and COVID-19 Recovery**

In order to assess the extent to which the coronavirus pandemic has impacted Botswana's public servants, especially with regard to ICTs and e-commerce adoption, and to help identify technology-related measures that could support Botswana in its post-Covid-19 recovery efforts, a survey was designed and conducted by UNCTAD and MITI as part of UNCTAD technical assistance in the development of a national e-commerce strategy for Botswana. The Public Servants Survey on Technology, E-commerce and COVID-19 Recovery, designed in the second quarter of 2020, was launched and disseminated electronically through MITI across Botswana's public service sector in mid-December 2020.

While the data collection cycle is not yet completed and was still in progress as of March 2021, a preliminary analysis of the survey results to date, based on approximately 130 responses, provides a glimpse of COVID 19's effect on technology perceptions and use within Botswana's public service as the pandemic crisis unfolds. Composed of three broad groupings of questions – (1) Specific COVID-related questions; (2) general ICT access and use; and (3) e-commerce and Internet access and use – the survey collected data on an array of topics ranging from personal views on how to survive the pandemic to how public service workers used ICT and technology during the crisis. Data was also collected on how COVID-19 changed e-commerce use, including public servants' online and offline shopping habits across several product categories such as music and entertainment products, health-related services and products, food and grocery purchasing, banking and financial services, etc.

Though not yet conclusive due to the survey's ongoing data collection process, the results point to some clear trends. COVID-19 has spurred greater ICT and technology adoption among Botswana's public servants, as well as positive perceptions of technology in dealing with crisis. More than 90 per cent of survey respondents believed that ICT and digital technologies play an essential role in enabling people to handle the coronavirus crisis. Nearly 100 per cent of survey respondents reported that they used the Internet for personal or work purposes since the advent of COVID-19. Most of them reported using the Internet several times a day. Some 90 per cent of survey respondents reported that the crisis had increased their digital technology use. For more than half of these survey respondents, this increase has been dramatic. Lack of electricity access had not been a technology constraint for most public servants. Some 98 per cent of the survey respondents stated that they had full access to electricity in their homes, and the majority of them claimed that electricity in their homes was very reliable.

Survey responses indicated that many government offices had launched technology-based initiatives and innovations to cope with the crisis, accelerating digital transformation within the public sector. Movement permits and Lekgetho by BURS were cited as among the most-used government e-services during the pandemic. Approximately 50 per cent of the survey respondents also reported having teleworked during the pandemic.

With regard to Internet use during the pandemic, the Internet activities most cited by survey respondents included applying for government permits, accessing government information and updates on the pandemic, sending and receiving emails, using social networks, participating in online meetings and conferences, paying bills and using other financial services online (Q53) and watching or downloading videos. E-commerce was also reported as one of the most frequent activities on the Internet during COVID-19. More than 70 per cent of survey respondents stated that the crisis had changed their in-store or online purchasing habits and patterns. Food and groceries, cleaning and hygiene products, clothing and shoes and telecommunication services were cited as the most popular types of goods and services purchased.

Source: UNCTAD

**Box 2 Skymart and Covid-19**

Skymart ([www.skymart.bw](http://www.skymart.bw)) is Botswana's first e-commerce marketplace launched in 2012. Today, it sells approximately 9,000 products and features more than 300 active sellers and about 15,000 active buyers. The company operates throughout southern Africa (Botswana, South Africa, Zambia, Zimbabwe, Namibia, Lesotho and Swaziland) and is expanding to regional and international markets, allowing Botswana sellers to list their products in outside markets. The company's mission is "to reimagine commerce in ways that build a more fulfilling and lasting world and to use the power of business to strengthen communities and empower people". Skymart helps to promote Botswana-made products, while offering a wide range of seller services and tools that help entrepreneurs start, manage and scale their e-commerce businesses. As a member of the Botswana Innovation Hub, it also seeks to introduce innovation in its e-commerce operations.<sup>14</sup>

While Skymart has grown its clientele since the company first entered the market about nine years ago, it has faced challenges tapping a larger market share due to pervasive suspicion and discomfort among large swaths of Botswana about transacting online. In recent years, Skymart has taken steps to build consumer confidence, including safeguarding the e-commerce platform's transactions through third-party banking security protocols, which has led to a reduction in fraud in online shopping. This has helped to build trust among consumers, leading to more and more people shopping on the platform. This trend was sharply accelerated when the COVID pandemic hit the country in March 2020.

According to Mr. Christopher Benn, CEO of Skymart, the e-commerce company experienced a surge in growth as a result of COVID-19. As he reported during a press conference in September 2020, Skymart experienced a 300 per cent growth rate between April 2020 and September 2020. In addition, the upward trend in sales appears to have continued after September 2020 due to the ongoing COVID-19 restrictions in the country.<sup>15</sup>

Source: Skymart

**Regional context for e-commerce**

The creation of Botswana's e-commerce strategy is also taking place within the context of the regional development of the Southern African Development Community (SADC) through its Regional Indicative Strategic Development Plan.

Information and communication technologies are considered a key part of SADC's work and infrastructure to ensure that every citizen of a SADC member State has full access to these vital resources. SADC has recognized that information and communication technologies (ICTs) have become "the lifeblood of the knowledge economy or, as some have observed, the electricity of the 21st Century." Consequently, a coherent regional ICT policy and strategy are needed that promote sustainable economic development and technology and bridge the digital divide within the region and with the rest of the world. In 2001, Botswana became a signatory to the SADC Declaration on Information and Communication Technology, committing to the following five areas for ICT development in the SADC region: (1) Regulatory Environment for ICT; (2) Infrastructure for

ICT Development; (3) Community Participation and Governance in ICT Development; (4) ICT in Business Development; and (5) Human Resource Capacity for ICT Development, with special consideration of the following cross-cutting issues: development of rural and remote areas, underprivileged urban areas, education, health, gender and media groupings.<sup>16</sup>

In May 2010, Botswana became a member of the SADC regional ICT development strategy, known as the e-SADC Strategic Framework, to facilitate the use of ICT for socioeconomic development and regional integration. One of the objectives stipulated in the e-SADC Strategic Framework is the deployment of e-commerce to empower SADC members to become part of the global marketplace. In 2012, a SADC regional e-commerce strategy recommended regional cooperation to grow e-commerce, including the development of a national e-commerce strategy by each SADC member State. In 2019, Botswana became the first of the SADC member States to begin working on the development of a national e-commerce strategy within this context.

Botswana's e-commerce development is further taking place within the context of the emerging Africa Continental Free Trade Agreement (AfCFTA) aimed at creating a single market for goods and services in the continent, projected to grow by 2030 to a population of 1.7 billion with a combined GDP of US\$6.7 trillion. The AfCFTA will have a significant impact on e-commerce and the growth of e-commerce markets, both regionally within the African region and in African trade with other regions.

## **B. OBJECTIVE AND METHODOLOGY OF THE DIAGNOSTIC AND STRATEGY DEVELOPMENT**

Committed to creating an environment conducive to supporting e-commerce, the Government of Botswana, represented by Botswana's Ministry of Investment, Trade and Industry (MITI), requested UNCTAD to develop a national e-commerce strategy. Pursuant to this request, UNCTAD, in close cooperation with MITI, conducted a thorough diagnostic of the status of e-commerce in Botswana in order to formulate the national e-commerce strategy in alignment with the country's current social, economic and political environment. The strategy development for Botswana was funded through the SADC Trade Related Facility (TRF) Fund, financed by the EU, and constitutes the first SADC national e-commerce strategy to be financially supported by the EU through the TFT Fund.

Pursuant to the Government of Botswana's request, the national e-commerce strategy aims to support the government in meeting the following objectives, some of them from Botswana's current National Development Plan, NDP11:

- Diversified sources of economic growth, including support for the creation of a conducive environment for the private sector to grow the economy and employment creation.
- Enhanced competitiveness of its MSMEs to open new markets and opportunities for production and improve MSME performance to create jobs.
- Promoting local economic development (LED) aimed at creating a conducive local investment climate and the promotion of MSMEs.
- Export-led growth strategy, which will have benefits that include the following: attraction of significant foreign direct investments and transfer of modern and evolving technology.
- A regulatory framework for doing business and global competitiveness that helps to increase the ease of doing business and boosts Botswana's global competitiveness.
- A legislative and regulatory environment that facilitates the growth of B2B, B2G and B2C e-commerce, both nationally and internationally.
- Ensuring that ICT will continue to play a pivotal role in the development and diversification of the economy.

The national e-commerce strategy builds on and aligns with Botswana's existing trade development strategies and plans. The Government has produced, or is in the process of producing, a number of key policy documents containing measures to inform the country's trade development strategy – in particular, Vision 2036, NDP 11 and the National Transformation Strategy. Botswana also has the following key strategies, plans and policies with which the strategy will be aligned: the National Trade Policy (NTP), the National Export Strategy (NES), the Competition Policy (CP), the Botswana Citizen Economic Empowerment Policy (CEEP), the Private Sector Development Strategy, the Botswana Industrial Development Policy (IDP) and the Special Economic Zones Policy (SEZ).

The team is conducting a comprehensive diagnostic and assessment of the status of e-commerce in Botswana, based on UNCTAD's ICTPR E-commerce Enabler and Assessment Framework (see Figure 1). The growth of e-commerce requires the development of an enabling environment involving a number of policy areas. The framework is grounded in eight key policy areas of strategic importance:

- ICT infrastructure and telecom services
- logistics and trade facilitation, including postal services
- the legal and regulatory environment
- electronic payments
- electronic platforms
- skills development and talent building
- awareness-raising, including consumer awareness
- e-procurement

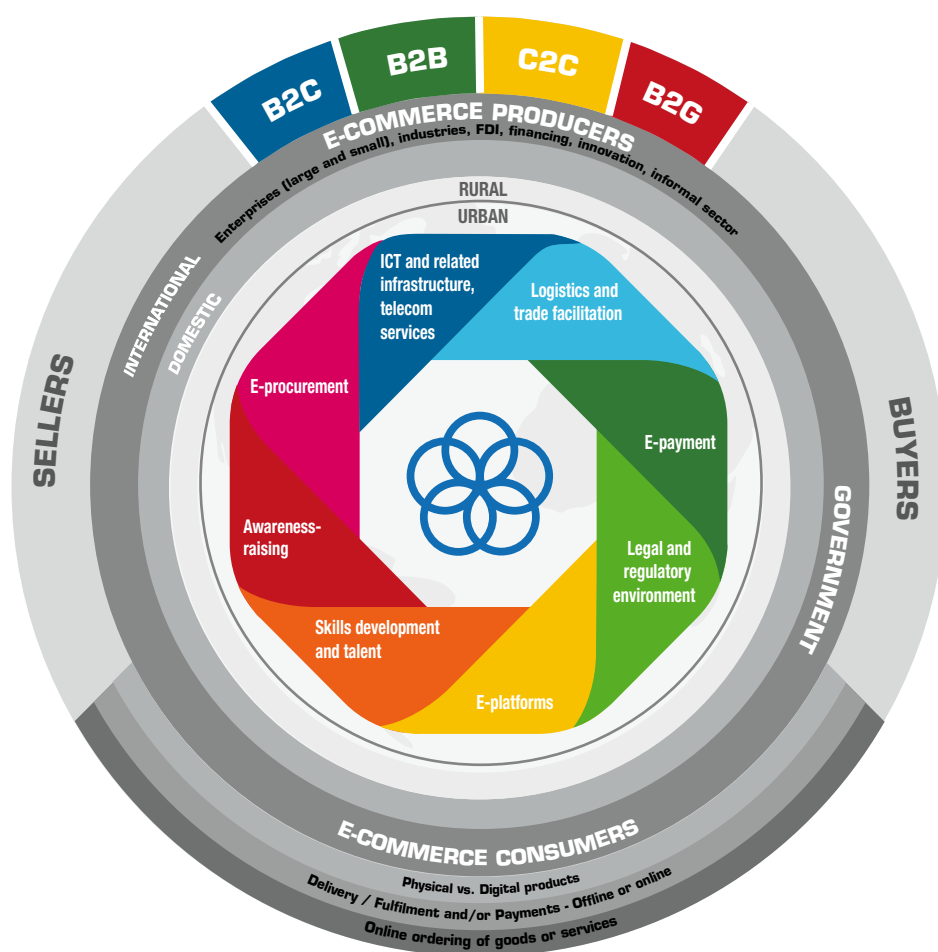
The framework also integrates drivers and factors such as SMEs, new innovations, investment, sector specific dimensions, etc.

The Framework methodology is designed to serve a triple purpose for Botswana’s strategy development, namely to provide (a) a systematic integrated and holistic analytical framework for the e-commerce diagnostic; (b) an organizing structure for the formation of interagency partnerships for the work; and (c) a framework for key performance indicators for benchmarking and monitoring e commerce progress in Botswana.

Several fact-finding missions to Botswana, desk research and analysis interviews and consultations with approximately 100 government officials and

other key stakeholders were conducted. A preliminary SWOT (strengths, weaknesses, opportunities and threats) analysis of the country’s e commerce potential, challenges and opportunities given the current trends and best practices in Botswana was completed and presented to the Government. Surveys on e-commerce to feed into the diagnostic were undertaken. Preliminary versions of the diagnostic and draft strategy were shared with the Government and stakeholders for consultation prior to the finalization of this document. The strategy was validated by government officials and key stakeholders at a Validation Workshop (virtual) in November 2020. The final strategy was also launched and presented (virtually) to Minister Mmusi Kgafela and his office in April 2021 prior to publishing.

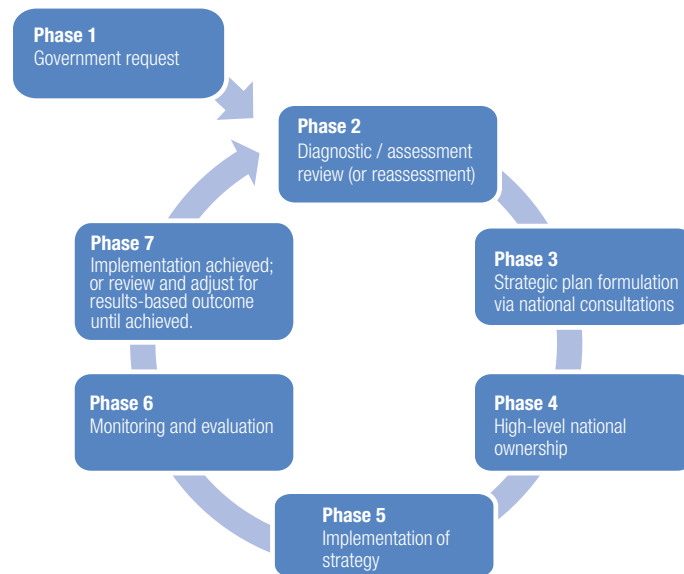
Figure 1 ICTPR E-commerce Enabler and Assessment Framework<sup>17</sup>



Source: UNCTAD

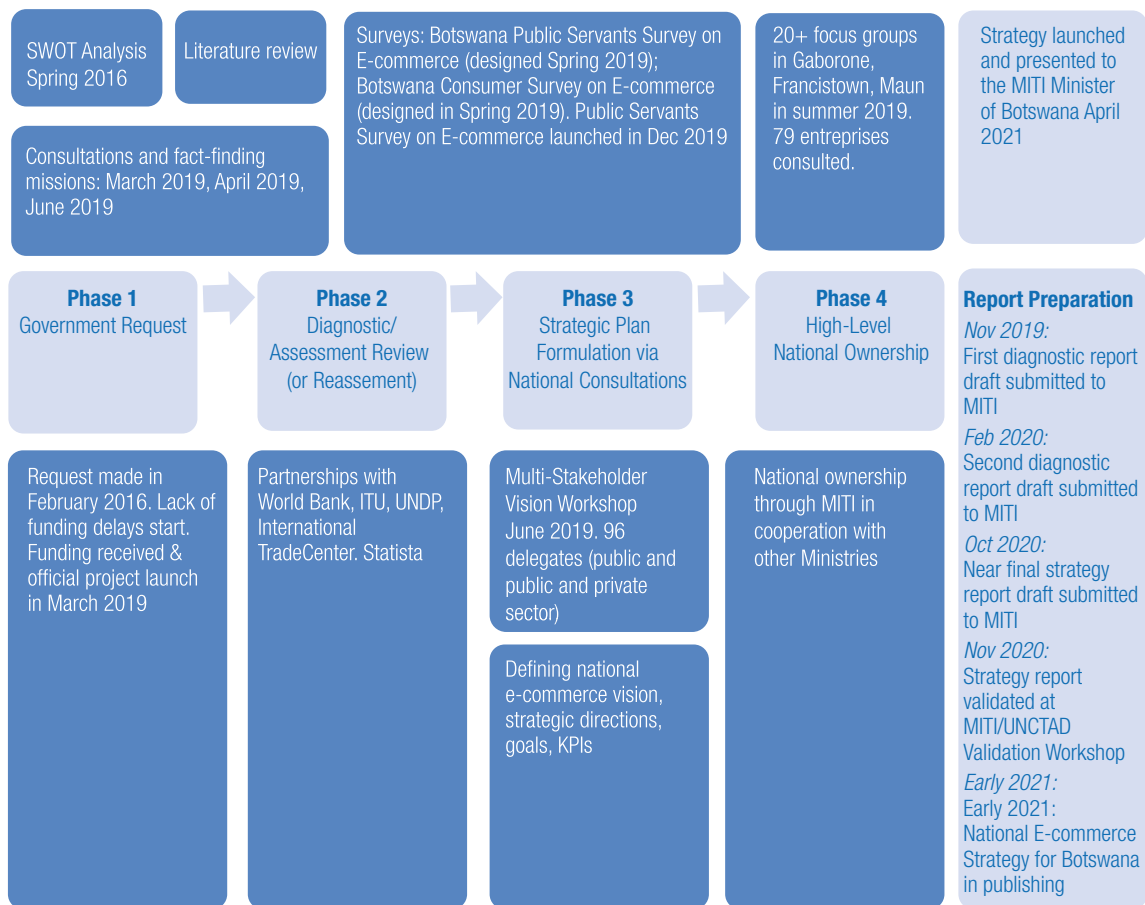


**Figure 2 Phases for Developing a National E-commerce Strategy**



Source: UNCTAD

**Figure 3 Development of National E-commerce Strategy for Botswana: First Four Phases**



Source: UNCTAD

## C. ROADMAP TO THE REPORT

The report for the National E-commerce Strategy for Botswana provides an assessment of the current status of e-commerce in Botswana, considering the state of play in areas of strategic importance for the growth of e-commerce. The strategy identifies key strengths and opportunities for e-commerce that Botswana can leverage and build on. It also identifies the main weaknesses and bottlenecks requiring further attention. On this basis, the strategy identifies key measures and formulates a plan to enable Botswana to improve its e-commerce performance in a way that supports the development objectives identified by the Government.

Chapter 1 of the report provides an introduction to the strategy. Chapter 2 provides a snapshot of Botswana's e-commerce market size and segments, including its consumer market, and the e-commerce sector analysis. Chapter 3 describes e-commerce for private sector development in Botswana. Chapter 4 is on e-commerce and the IT sector and the knowledge economy in Botswana. Chapter 5 lays out a National Strategy to Support Botswana's E-commerce Vision and Goals.



## **CHAPTER 2:** BOTSWANA E-COMMERCE MARKET

## A. BOTSWANA'S E-COMMERCE MARKET SIZE AND FORECASTED GROWTH

While obtaining information on Botswana's total e-commerce market size is a challenge, to help address the scarcity of data on Botswana, market data research company Statista has collaborated with UNCTAD to prepared estimates on Botswana's e-commerce market size and forecasted growth for the purpose of the development of the national e-commerce strategy for Botswana. As a first attempt to fill the data gap on these vital e-commerce indicators for Botswana, these initial Statista estimates should be followed up by surveys and data collection of Botswana's e-commerce companies to further refine the data.

Statista estimates that e-commerce revenue has grown substantially, from US\$44.7 million in 2017 to US\$83.2 million in 2019<sup>18</sup>. Revenue in the country's e-commerce market is projected to reach US\$117m<sup>19</sup> in 2020, with a compound annual growth rate (CAGR) of 15.8 per cent between 2017 and 2024<sup>20</sup>. By 2024, e-commerce revenue in Botswana is projected to reach US\$210 million<sup>21</sup>. In 2019, the B2C e-commerce market accounted for an estimated 0.44 per cent of national GDP<sup>22</sup>. Policymakers can also benefit from referring to the UNCTAD B2C E-commerce Index 2020.<sup>23</sup>

In 2019, there were approximately 630,000 e-consumers in Botswana, with an average revenue per user (ARPU) of US\$132 annually, making Botswana the country with the sixth highest revenue in all of Africa.<sup>24</sup> Nonetheless, the country still lags far behind more mature e-commerce markets such as that of the United Kingdom (US\$1,492), the United States (US\$1,390) and China (US\$1,009). If the current trends continue, ARPU in Botswana is poised to increase to more than US\$207 by 2024.<sup>25</sup>

In 2019, key e-commerce industries in Botswana included fashion (US\$25 million), furniture and appliances (US\$16.9 million) and toys, hobbies and do-it-yourself (DIY) (US\$16.2 million)<sup>26</sup>. Due to growing demand in response to COVID-19, the food and personal care industry is projected to see the highest growth in revenue in 2020, at 48.28 per cent<sup>27</sup>.

Although e-commerce revenue almost doubled between 2017 and 2019, less than one third of Botswana's population purchases goods online,

indicating a substantial opportunity for growth. E-commerce penetration rates in Botswana are forecast to grow from 27.4 per cent in 2019 to 36.8 per cent by 2024<sup>28</sup>. E-commerce users in Botswana have been forecast to reach 0.7 million in 2020<sup>29</sup>, with year-on-year growth of 10.8 per cent over 2019<sup>30</sup>. At 53.6 per cent, Internet penetration in Botswana was slightly below the global average (57.6 per cent) in 2019 but is forecast to see a strong CAGR of 5.65 per cent (2017-2024)<sup>31</sup>.

### ***Botswana's E-commerce Market: Five-year forecast (2019-2024)***

In 2019, with a total Internet penetration rate of 53.6 per cent, Botswana was ranked 98th globally by Statista's Digital Market Outlook<sup>32</sup>. Although the e-commerce user penetration rate in Botswana is forecast to increase significantly from an estimated 27 per cent in 2019 to 37 per cent by 2024<sup>33</sup>, it is still lower than that of some other African nations, including South Africa, Egypt and Namibia. The global average for e-commerce user penetration is forecast to increase from 43 per cent in 2019 to 60.3 per cent by 2024<sup>34</sup>. E-commerce user penetration is a measurement of the share of a total population that purchases goods through e-commerce, differing from Internet penetration, which measures the share of individuals that have Internet access.

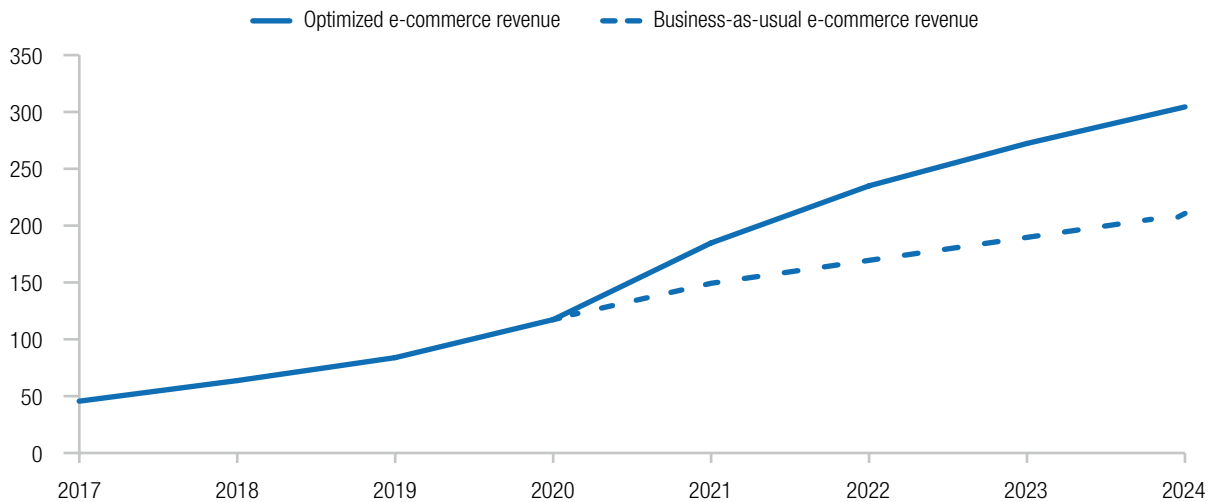
### ***Forecasts for potential growth scenarios***

Statista forecasts estimate that in a business-as-usual scenario, which takes into account the ongoing effects of the COVID-19 pandemic without the adoption of optimized measures, B2C e-commerce revenues in Botswana will grow from US\$83.2 million in 2019 to US\$209.7million by 2024. In an optimized scenario, e-commerce revenues would be forecast to reach US\$304.9 million by 2024. See Figure 4 for both forecasts.

In 2019, B2C e-commerce accounted for roughly 0.44 per cent of national GDP, indicating significant growth potential. In contrast, the B2C e-commerce market in the United States in 2019 was over 1.5 per cent of GDP<sup>35</sup>.

In 2019, Botswana had the fifth highest B2C e-commerce revenue of the southern African nations<sup>36</sup>. Namibia and Tanzania, which have relatively comparable e-commerce revenues slightly above that of Botswana, also had higher CAGR forecasts for the period 2019–2024.

**Figure 4 Botswana e-commerce revenue estimation from 2017 to 2024 – two scenarios (in US\$ millions)**



Source: Statista Digital Market Outlook 2020

According to the International Trade Centre (ITC), Botswana had 22 active online business to consumer marketplaces for physical goods in 2019<sup>37</sup>. The online market in Botswana is currently dominated by classified sales sites. As cited in Box 2, an e-commerce site worth mentioning is the Skymart.bw B2C platform, which connects 200 sellers to some 120,000 consumers<sup>38</sup>.

There is an opportunity for Botswana to successfully grow the size of its e-commerce market beyond current projections. The country has a young and growing urbanized population<sup>39</sup> that has almost as many mobile phones with Internet access as it does people<sup>40</sup>. Botswana has also made recent improvements to its postal service. By linking with MyUniversalShop.com, BotswanaPost<sup>41</sup> will have the ability to bring faster, cheaper, to-the-store and even to-the-door deliveries of e-commerce purchases from across the globe, an essential aspect of growing an online market.

### ***Impact of the coronavirus on Botswana's growth forecast***

With the ongoing global COVID-19 pandemic, Botswana's economy is poised to take a significant hit to its GDP in 2020. All 2020 estimates and forecasts beyond 2020 have been calculated to include the impact of the coronavirus. Due in large part to its heavy dependence on the mining sector, Botswana is expected to see as much as a 9.1 per cent contraction in GDP in 2020<sup>42</sup>. Notwithstanding, it is forecast to experience overall growth from 2020 onwards, with a CAGR of 3.1 per cent between 2019 and 2024<sup>43</sup>. This growth is slower than that of the pre-COVID period from 2009 to 2019, when the country had a CAGR of 4.7 per cent<sup>44</sup>. Per capita, real GDP in Botswana was the 64th highest globally in 2019, at US\$8,117.40<sup>45</sup>, with current consumer spending increasing from US\$3,607.20 in 2016 to US\$4,235.60 in 2019<sup>46</sup>. In 2018, household expenditure on goods and services in Botswana was 49.5 per cent, making it lower than the average for southern African nations (67 per cent)<sup>47</sup>. The latest figures show that its income per capita is higher than the regional average, although e-commerce user penetration is lower.

### **Growth opportunities offered by COVID-19**

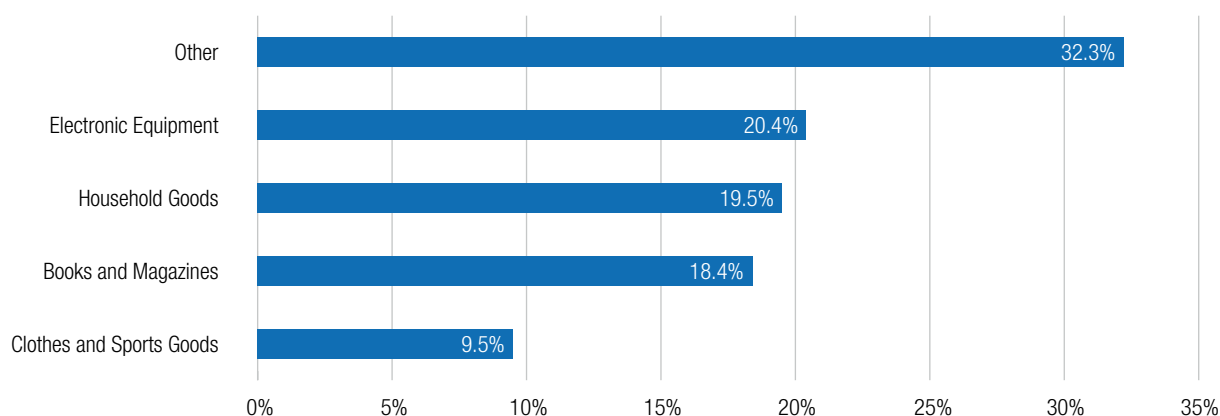
In 2020, several grocery providers in Botswana began operations in the e-commerce home delivery sector. While home delivery and/or collection services in Gaborone and surrounding areas are still in their infancy, several supermarkets, including Spar Botswana, Sefalana Hyper Gaborone, Choppies and Batsh Grocery Delivery Service offer such services<sup>48</sup> via online shopping, WhatsApp, email or phone call. Of the nine companies identified as offering home delivery of goods to consumers, only two supported orders through an online shop. In response to the coronavirus, increased consumer demand for cleaning and sanitization products has caused the food and personal care industry to leapfrog over other sectors in forecast revenue growth. In 2020, B2C e-commerce food and personal care are forecast to have grown by 45.9 per cent. While all industries experienced a decline in year on year growth in 2020 due to COVID-19, all industries outside of fashion are forecast to see a spike in 2021.

## **B. BOTSWANA'S E-COMMERCE MARKET BY SEGMENT**

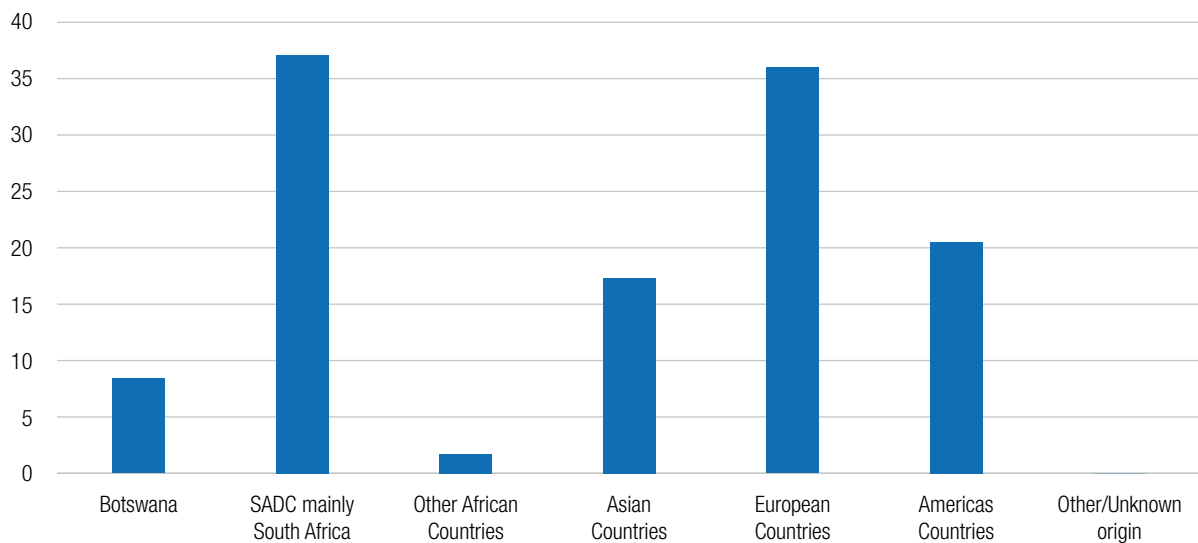
### **Consumer e-commerce (B2C and C2C)**

While at an early stage of development, e-commerce in Botswana has been exhibiting growth. Due to the lack of regularized survey data on e-commerce, obtaining information on Botswana's e-commerce market over time is a challenge. However, information extracted from Botswana's first official ICT Household Survey, the 2014 ICT Survey by Statistics Botswana, provided a first snapshot of e-commerce use nationwide and serves as an initial baseline for benchmarking e-commerce growth in the country. According to the survey, some 4.6 per cent of the country's total population used e-commerce. As seen in Figure 5, the most popular purchases were clothes and sports goods (9.5 per cent), books and magazines (18.4 per cent), household goods (19.5 per cent) and electronic equipment (20.4 per cent). The greatest number of e-commerce transactions were purchases from SADC (mainly South Africa), the North America and South America and European countries, as seen in Figure 6.

**Figure 5 Online Shoppers in Botswana - 2014**



Source: Statistics Botswana 2014

**Figure 6 Botswana's e-commerce purchases by country (percent) (2014)**

Source: Statistics Botswana 2014

### ***E-commerce across sectors and popular e-commerce websites in Botswana***

Botswana is already adopting e-commerce across a number of sectors. In addition to offering B2C e-commerce to Botswana consumers, many companies across different sectors also make use of B2B e-commerce to run their businesses. B2C e-commerce involves e-commerce transactions between businesses and consumers, whereas B2B e-commerce involves transactions between businesses (See Box 3. Types of E-commerce). The B2B component of these companies is covered in the section below on B2B e-commerce.

In the retail sector, South African retail and wholesale chains that offer e-commerce commonly provide an e-commerce service in Botswana as well as South Africa. Such outlets include Cashbuild, and Builders' Warehouse in the building supply sector.

In retail fashion, MyOkavangoshop is an online retail startup company comprised of a handful of local and foreign partners. With operations based in Gaborone, Botswana, it has been serving customers in Botswana for three years. The company offers women's and men's clothing, as well as shoes, handbags, jewelry and accessories. Customers who live in Gaborone can have their purchases delivered to their home.

Options is another Botswanan fashion retailer with an online presence.

In the area of food retail, large national food retailer Sefalana has made initial forays into online shopping through the company website and has plans to roll out a full e-commerce system. Choppies, the Botswana supermarket chain, makes use of B2B e-commerce. In addition, a number of companies in the restaurant and food services industry have adopted both B2C and B2B e-commerce, among them Nandos, KFC and MyFoodness.

In electronics, Botswana Weekly calls itself Botswana's home-grown online shopping site. Electronics, computers, accessories and home and office gadgets can be purchased online through the site for delivery in Gaborone, as well as other parts of Botswana. Samsung sells electronics online; however, buyers must contact the company by email. Jumia Deals provides a small advertisement service, but buyers must contact sellers by email. Many products are marketed, purchased and sold through social media, although the transaction may take place offline. This increasingly includes the sale of fresh foods, including vegetables.

International cross-border e-commerce currently takes place through international e-commerce and

**Box 3 Types of E-commerce****1. Business-to-Business (B2B)**

Business-to-Business (B2B) e-commerce involves e-commerce transactions between companies.<sup>49</sup> This often entails the purchase of goods and services needed to run the businesses or to produce the products and services sold to final consumers. Due to its recurrent nature and the higher volume and value of products and services per transaction, the value of B2B e-commerce tends to be considerably higher than that of B2C e-commerce.<sup>50</sup>

**2. Business-to-Consumer (B2C)**

Business-to-Consumer (B2C) e-commerce involves e-commerce transactions between businesses and final consumers. Whereas in the traditional retail model, businesses typically sold products to consumers through brick-and-mortar stores, the advent of the Web has made B2C e-commerce possible through sales of products to consumers through virtual stores on the Web.<sup>51</sup>

**3. Consumer-to-Consumer (C2C)**

Consumer-to-Consumer (C2C) e-commerce involves e-commerce transactions between consumers. These transactions are generally conducted through a third party that provides the online platform where the transactions actually take place.<sup>52</sup> Consumer-to-Consumer (C2C) e-commerce activity is more recent and usually requires a business to serve as middleman. Companies like eBay and Amazon have made C2C more popular. It works by individuals listing their products to sell on a third-party site. Consumers looking to purchase products visit the site and search the available products. The consumer purchases the product and the seller is responsible for delivering it. The business that serves as middleman usually requires the seller or buyer to pay a transaction fee.<sup>53</sup>

**4. Consumer-to-Business (C2B)**

In C2B e-commerce, a large number of individuals make their services or products available for purchase by businesses or companies seeking such services or products. This type of e-commerce is common in crowdsourcing-based projects. Other examples are freelancing e-marketplaces like UpWork, Fiverr and niche market e-marketplaces such as iStockphoto, which enables artists, designers and photographers worldwide to contribute their work to iStock collections sold online in return for royalties.<sup>54 55</sup>

**5. Business-to-Government (Administration) (B2G)**

This form of e-commerce involves an e-commerce transaction between the business sector and government/public administration.<sup>56</sup> Public e-procurement is a standard form of B2G. Government agencies and public-sector bodies often make purchases through framework agreements, pre negotiated standing contracts with vetted vendors/suppliers to supply certain types of products and services under specific terms. Buyers and suppliers still need to sign a contract (a "call-off contract"), however, for each service procured by a public agency through a framework agreement. Increasingly, public services and frameworks are being transacted through digital e-marketplaces. For example, in the UK, the government has launched the Digital Marketplace, which enables all public sector organizations to find cloud technology and specialist services for digital projects.<sup>57 58</sup>



related search engine platforms such as Amazon and Google, which are available in Botswana. However, it is not apparent that Botswanan retailers are using these platforms. DHL provides an app, Africa eShop, that enables customers to shop on U.S. and UK e-commerce sites with express delivery by DHL.

### **Popular e-commerce websites and e-commerce companies**

Initial consultations with stakeholders point to burgeoning use of e-commerce platforms by enterprises and individuals in Botswana. Table 1 shows some of the most popular ones cited.

### **B2B E-commerce**

Recently released ICT- and e-commerce-related data from Botswana's 2016/2017 Census of Enterprises and Establishments (CEE) for the first time provide official detailed information on B2B among Botswana businesses. Apart from the recent census data, however, there is generally little official information or data on B2B in Botswana. UNCTAD consultations

from 2019-2020 with a number of large, medium-sized, small and micro-businesses indicate, that with the exception of some of the larger internationally-oriented operations, B2B is largely undeveloped in Botswana and is a potential growth area that could help drive e-commerce. While fledgling, B2B adoption in Botswana to date appears to be based largely on the size of the business and area of sectoral activity. Large businesses, franchisees of international chains and multinationals primarily in the retail, tourism and hospitality sector, as well as other sectors<sup>59</sup>, had begun availing themselves of B2B to some extent. Some of the types of B2B are in the form of sourcing, related in particular to business conducted with South Africa; integrated inventory, purchasing and order systems; the use of call centres and agents, fleet management systems, point-of-sale systems, etc.

Choppies procures fast-moving consumer goods (FMCG) through its distributor, PST, using PST's SAP app.<sup>60</sup> Choppies is also considering using EDI with its suppliers<sup>61</sup> and has plans to launch a B2B e-commerce website.<sup>62</sup>

**Table 1 E-commerce Platforms Used in Botswana**

E-Commerce Category	OWNERSHIP		
	Botswana	Foreign, Botswana-based	Foreign
1 Online travel, ticketing, etc.	Air Botswana	Qatar Airways (Qatar), South African Express (South Africa), Ethiopian Airlines (Ethiopia)	
2 E-retailer	Lion tutoring (e-learning), My Foodness (food delivery service), Bidfood (food products), SkyMart.bw (technological, fashion and beauty products), Sefalana Holdings (grocery store), Shop360 (music, tickets, electronics, clothing and accessories), Lovebosh (fashion store), Mr. Veg (fruit and vegetables), Botswana craft (arts and crafts), G4G IT (fashion, electronics, sportswear, etc.), Webmart (website development), Dichi Media (digital marketing agency), Mpotsa (information), BUYBDUB (local and indigenous products)		AliExpress (China), Amazon (USA), Aramex (Shop and Ship, UAE)
3 E-marketplace		Bidorbuy (South Africa)	Alibaba (China), Amazon (USA)
5 Online portals classified	HRMC (jobs), BotswanaPost (Postal Services)	PNet (South Africa)	eBay (USA)
6 E-banking Services	FNB (banking), Barclays (banking), Stanbic (banking), Standard Chartered (Banking)		

Source: UNCTAD

While catering to both individuals and business clientele, high-end retailers and major wholesale chains from South Africa, such as Cashbuild and Builders' Warehouse, are offering online sales of construction materials to the home DIY and commercial construction markets.<sup>63</sup>

Nandos intends to roll out e-commerce using an online system developed by its franchiser in South Africa.<sup>64</sup>

MyFoodness has an established a presence and is using its tech platform to work closely with other businesses, KFC for example, to make home food deliveries. KFC products can be purchased through MyFoodness.<sup>65</sup>

In addition to selling its clothing through an online portal, Premier Clothing also hosts an e marketplace containing the call off (framework) contracts that buyers enter into with the company, through which they can purchase goods wholesale.<sup>66</sup>

There is some use of B2B among small businesses, though B2B is largely not prevalent. Low-level informal e-commerce is also being conducted through social media and virtual groups. This includes the sale of vegetables, for example, through Facebook horticulture groups.<sup>67</sup>

### C. BOTSWANA'S CONSUMER MARKET FOR E-COMMERCE

Spread out over a large territory of 520,000 km<sup>2</sup> (roughly the size of France), Botswana's relatively small population of over 2 million is relatively young. With a median age of 24.4 years, Botswana has one of the youngest median ages in the world.<sup>68</sup> In comparison, the median age in virtually all European countries is over 40. In most upper-middle-income countries in Latin America, it is above 30, and in South Africa, 27.4.

As a member of the Southern African Customs Union (SACU) and SADC, Botswana also benefits from preferential market access to the Southern African region. With a burgeoning number of Internet users in recent years, growing ICT literacy and popular use of social media, Botswana is poised to achieve a critical mass of tech-savvy youth who can help drive e-commerce both domestically and regionally, along with Botswana's transition to a knowledge-based economy.

### ***Socioeconomic characteristics of the Botswana population***

Botswana's gross domestic product (GDP) was US\$18.341 billion in 2019 in current prices and, with a current GDP per capita of US\$7,961 in 2019, it is classified as an upper-middle-income country.<sup>69</sup> The population is concentrated primarily around the main cities of Gaborone, Francistown and Molepolole. Most of the population lives in the north-eastern part of the country, where rainfall is more abundant. Outside the few major cities, Botswana is sparsely populated, and settlements are generally small. The country's urban population is estimated at about 70.2 per cent and its rural population at 29.8 per cent, giving it one of the highest percentages of urban population in Sub Saharan Africa.

ICT access, as well as access to essential services among Botswana's population, is more heavily concentrated in urban areas. In 2016, an estimated 60 per cent of households nationwide had access to electricity, albeit with supply disruptions.<sup>70</sup> Around 77.7 per cent of the urban population had access, while only 37.5 of the rural population did.

Despite its small population, Botswana has a relatively well-developed retail market and, while it has declined in recent years, it has been considered one of the retail markets with the greatest potential in Sub-Saharan Africa. In 2012, AT Kearny ranked it among the top three markets. Its market access as part of the larger SACU and SADC markets of roughly 400,000 million people further position it favourably. The country has great potential for online retail. The past few years have seen growth in Botswana's retail and fast-food sectors, and increasingly more Botswana consumers, including youth, have become brand conscious, drawn to popular brands and convenient service.

### ***Extent of Information and Communication Technology Use and Uptake by the Botswana Population***

Table 2 presents basic data for Botswana on its citizens' use of the Internet and mobile phones, as well as other indicators compiled by the International Telecommunication Union (ITU). It also includes comparisons with other SADC countries and countries in other regions. Within SADC, Botswana performs relatively well in terms of the indicators in this table. However, a significant difference is seen when it is compared with upper-middle-income countries in other regions.

Table 2 Indicators of access to ICT technologies (as of 2017)

Variable	Botswana	Lesotho	Namibia	South Africa	Zimbabwe	Costa Rica	Uruguay
Individuals using the Internet	41.4%	29.8%	36.8%	56.2%	27.1%	71.6%	68.3%
Fixed broadband subscriptions per 100 population	3.61%	0.22%	2.62%	1.98%	1.13%	15.17%	27.57%
Mobile phone subscriptions per 100 population	160.04%	70.9%	105.8%	156.0%	85.3%	180.2%	147.5%

Source: ITU

Other relevant ITU data show that as of 2014, almost 95 per cent of households in Botswana had access to a mobile phone, and slightly more than 40 per cent had access to the Internet at home. Regarding this latter indicator, the average for developing countries that year was 37.7 per cent and the world average, 48.9 per cent.

### **Mobile subscriptions**

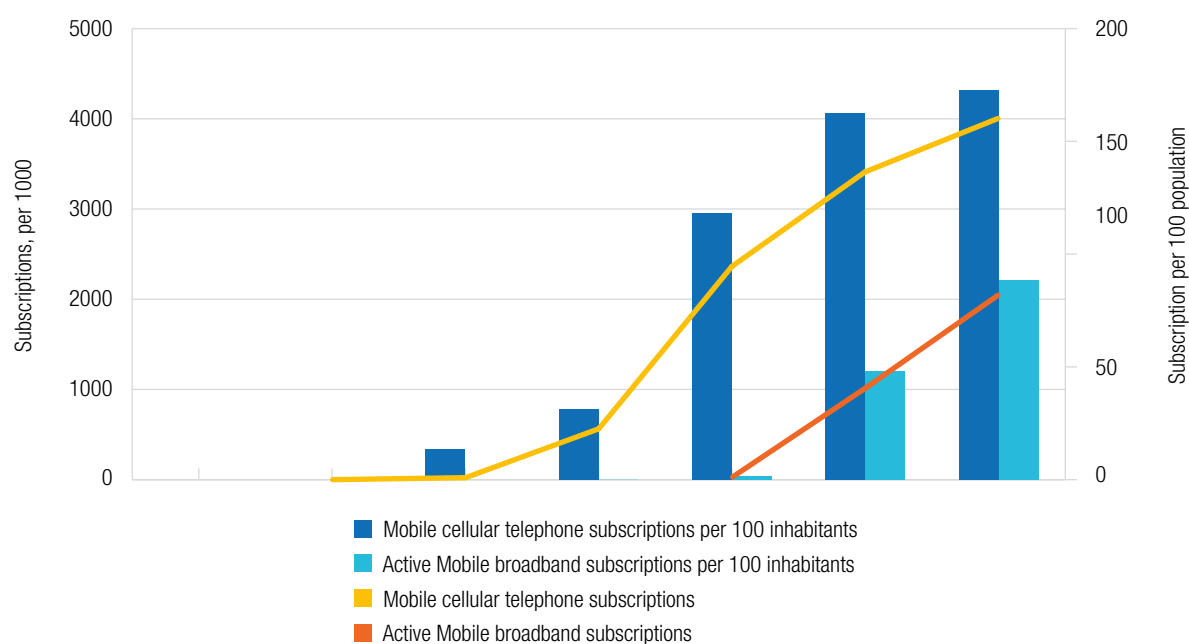
A large proportion of the population has access to and is using Internet services through smartphones and other wireless technologies as operators continue to increase mobile broadband coverage. The use of mobile technology has surpassed the use of fixed technology, reportedly due to its convenience. Coverage with mobile broadband technologies such as 3G and 4G/LTE is mostly prevalent in urban areas. Other Internet access technologies such as GPRS and EDGE are widely deployed throughout the country, giving most mobile subscribers access to mobile Internet.<sup>71</sup>

Figure 7 below describes the historical penetration of mobile telephony and broadband up to 2019. It shows that mobile phone availability has grown rapidly over

the past 20 years, and mobile broadband, just starting out in 2010, had grown to over 2 million subscribers by the end of 2019.

Table 3 shows more recent mobile telephony and broadband uptake, indicating that for mobile telephony and active mobile broadband, the number of subscriptions and penetration in terms of the number of subscriptions per 100 population by year stood at 169 mobile subscriptions per 100 population in 2020.

The number of active mobile broadband subscriptions, in contrast, has grown at an average rate of 8.6 per cent per annum since 2015, though its early growth has not remained at the same level. This may indicate latent demand that has now been satisfied. Nevertheless, growth is likely to continue, as penetration is around 70 per cent and therefore not saturated, and most new phones will be able to support LTE. LTE will permit higher-speed Internet access, with speeds of up to tens of megabits per second, whereas 3G and 3G+ services are provided at lower broadband speeds. Feature phones with 2G only are not able to access the Internet at broadband speeds, and their use for data is therefore limited.

Figure 7 Historical penetration of mobile telephony and broadband in Botswana<sup>72</sup>

Source: ITU World Telecommunication/ICT Indicators Database (July 2020 edition)

Table 3 Mobile subscriptions<sup>73</sup>

Operator	Mar-12	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17	Mar-18	Mar-19	Mar-20
Mobile subscriptions									
Total	2,953,116	3,095,894	3,204,869	3,405,887	3,460,331	3,226,389	3,181,591	3,353,337	3,778,701
Per 100 population	144	150	153	161	162	150	146	146	186.61%
Active mobile broadband subscriptions									
Total	-	-	993,725	1,188,640	1,360,236	1,404,065	1,523,545	1,752,547	2,037,359
Per 100 population	-	-	-	56	64	65	70	76	*86

Source: BOCRA, UNCTAD calculations  
\*calculated by UNCTAD

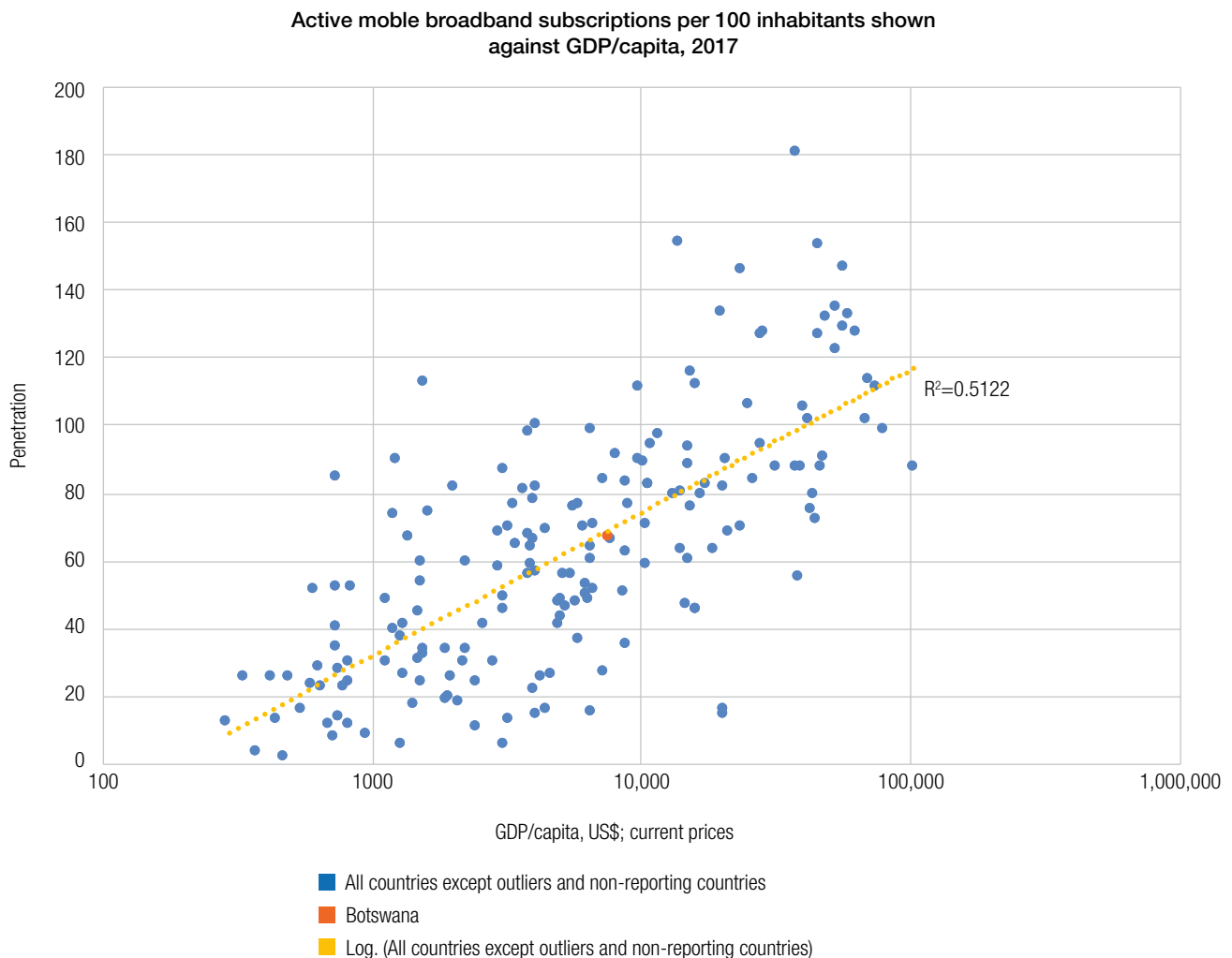
Figure 8 illustrates how Botswana is performing in comparison with other countries in terms of mobile broadband. Figure 9 shows active subscriptions per 100 population mapped against GDP per capita for all reporting countries. This indicates that Botswana is performing as expected relative to its GDP per capita.

A benchmark of selected countries was also prepared. Botswana's performance against the benchmark is shown. Botswana's position largely follows the general trend exhibited by countries in the chart. All countries in this benchmark had implemented 4G mobile services by 2015. Botswana is slightly below the trend line with respect to its active mobile broadband users but not to a significant extent, and 67 per cent

penetration in Botswana provides an opportunity for mobile phone-based e-commerce, since all but some of the late adopters of mobile broadband are already subscribing, and those late adopters are unlikely to be enthusiastic users of e-commerce in its early days.

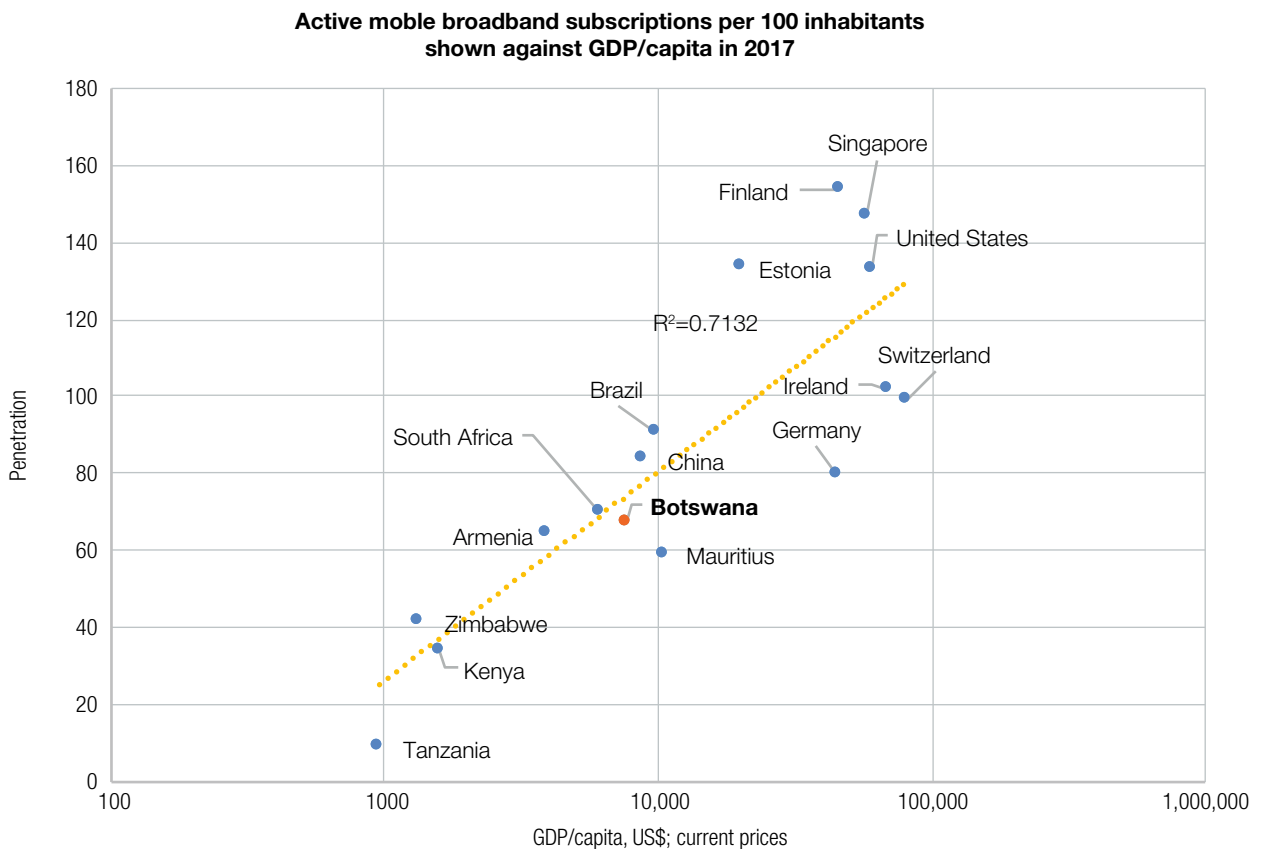
Figure 10 shows the adoption of mobile broadband over time in the benchmark countries. Figures for Botswana in 2012 were not available. The figures suggest that while Botswana began experiencing dramatic growth in mobile broadband in around 2010, the mobile broadband growth rate began levelling off in the years approaching 2017, the latter of which saw a more significant growth rate, however.

**Figure 8 Active mobile broadband penetration in comparison with all other countries<sup>74</sup>**



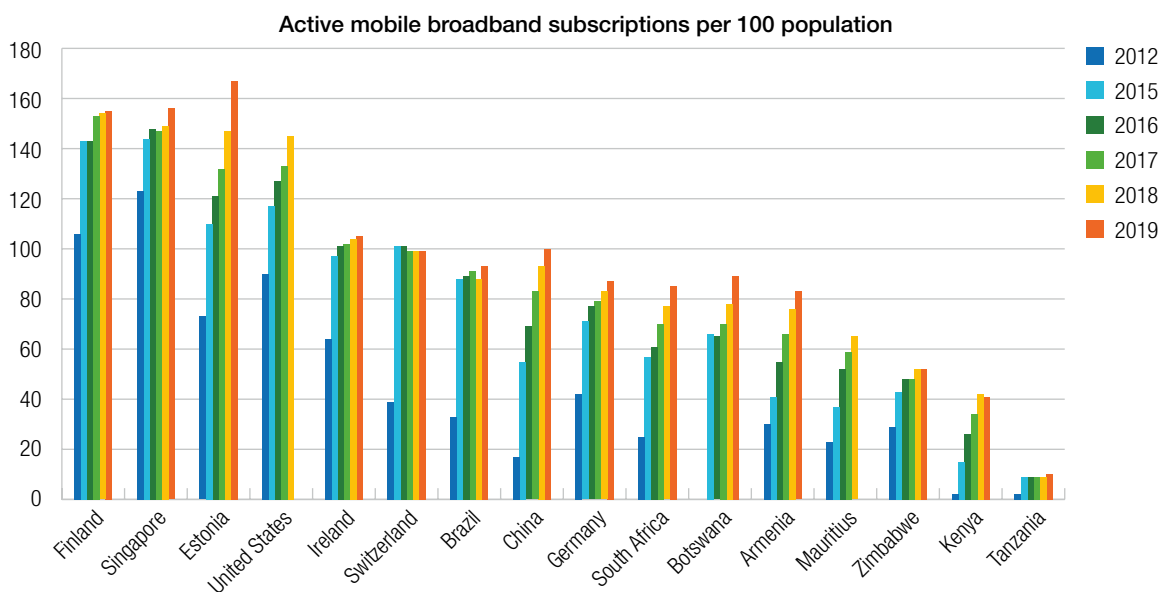
Source: World Bank, ITU

Figure 9 Active mobile broadband penetration in comparison with selected countries<sup>75</sup>



Source: World Bank, ITU

Figure 10 Active mobile broadband subscriptions by year<sup>76</sup>



Source: ITU World Telecommunication/ICT Indicators Database (July 2020 edition)

### Fixed market segment

Figure 11 shows the historical penetration of fixed telephony and fixed broadband as of 2019. This shows that fixed phone availability has grown rapidly since 1990 but decreased between 2014 and 2019. Fixed broadband was just starting out in 2005 and remained available to only around 45,000 families in 2019.

Table 4 shows the uptake of fixed telephony subscriptions since 2012. Despite their rapid rise over the previous two decades, fixed telephony subscriptions peaked at 174,992 in March 2014. Subscriptions began to decline in March 2015, reaching 140,873 in March 2017, and then marginally increasing by about 0.7 per cent between March 2017 and March 2018. Teledensity for fixed telephony is 7 per cent. Broadband grew steadily until 2017 when it experienced a downturn. This downturn may be a consequence of strong growth in mobile broadband serving as a substitute for fixed broadband. However, the total fixed broadband subscription rate rose again from 40,475 in 2019 to 55,592 in 2020.

### Types of consumer ICT use

Table 5 shows the Internet services used by Internet users in order of uptake in 2014. Clearly, social media and other forms of interpersonal communication – email, etc. – are dominant. Obtaining information

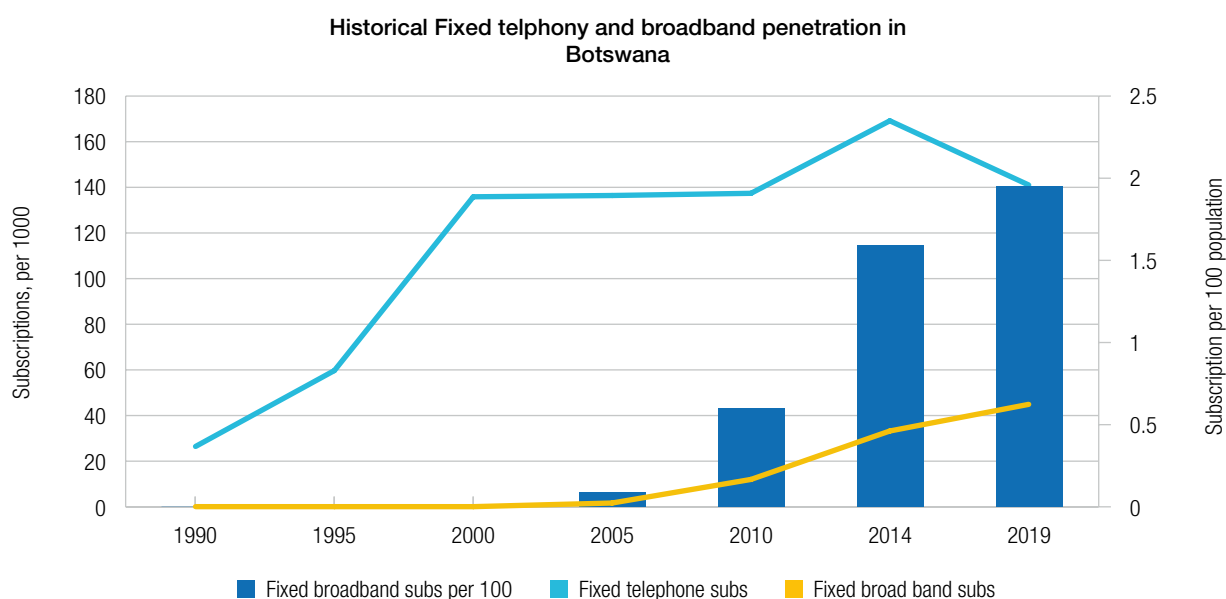
about different subjects is also an important use. Internet banking and goods or services ordering or purchasing are used by 7 to 8 per cent of Internet users. They therefore represent early adopters of these services. Due to the lack of more up-to-date official statistics, making use of the 2014 data and given the level of mobile broadband penetration in 2018, this suggests that at least 5 to 6 per cent of the population was using Internet banking and goods or services ordering or purchasing in 2018. Thus, in terms of dissemination, all innovators are likely to be using banking and e-commerce services and early adopters will just be starting to use them.

Figure 12 shows Botswana compared to benchmark countries that have reported on email and social network use. Botswana Internet users are above average for social networking, but not email. Figure 13 shows use of e-commerce by Internet users in Botswana and selected countries.

In terms of obtaining information and then ordering or purchasing goods or services, Botswana is lagging, according to its 2014 data. How much of this performance is due to the lack of LTE services in Botswana in 2014 and the effect of using older data for the Botswana results is not clear.

In 2014, over 30 per cent of Internet users in Botswana were using the Internet to find out about products and services.<sup>77</sup>

**Figure 11** Historical fixed telephony and broadband penetration



Source: ITU World Telecommunication/ICT Indicators Database (July 2020 edition)

**Table 4** Fixed telephony subscriptions and penetration and fixed broadband (ADSL and Fixed Wireless Access)<sup>78</sup>

Subscriptions	Mar-12	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17	Mar-18	Mar-19	Mar-20
Fixed telephony	150,559	162,718	174,992	169,474	161,641	140,873	141,835	140,202	140,722
Total broadband	17,196	22,786	28,628	34,435	38,574	68,587	50,514	40,475	55,592
ADSL	16,298	19,388	24,069	32,554	35,394	59,590	65,009	29,532	32,240
Fixed Wireless	3,645	3,398	2,576	1,881	1,208	8,997	10,350	10,943	33,618

Per 100 households	Mar-12	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17	Mar-18	Mar-19*	Mar-20*
Fixed telephony	24.4	26.1	27.8	26.6	25.1	21.7	21.6	21.0	20.4
Total broadband	2.8	3.7	4.5	5.4	6.0	10.6	7.7	6.1	8.1
ADSL	2.2	3.1	4.2	5.1	5.5	9.2	6.1	4.4	4.7
Fixed Wireless	0.6	0.5	0.3	0.3	0.5	1.4	1.6	1.5	3.4

Source: BOCRA, Statistics Botswana  
\*calculated by UNCTAD

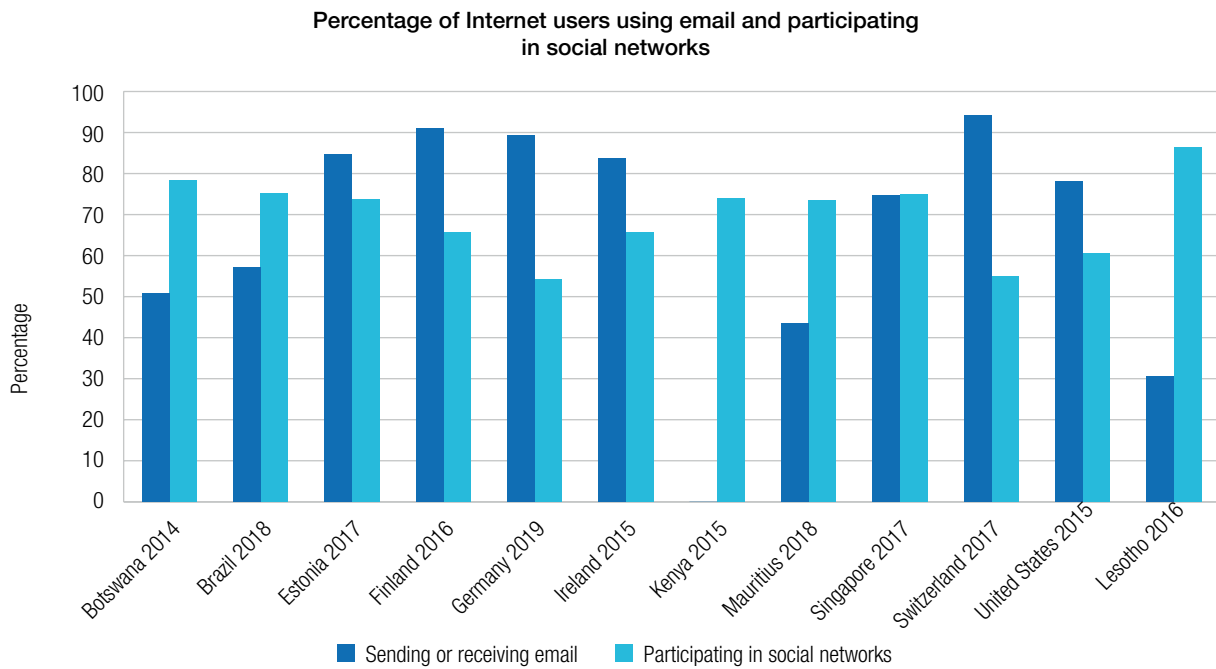
**Table 5** Internet activities of Internet users, 2014<sup>79</sup>

Activity	Percentage of internet users
Participating in social networks	78.4
Reading or downloading online newspapers or magazines, e-books	56.6
Sending or receiving email	50.8
Seeking health information (on injury, disease, nutrition, etc.)	37.9
Obtaining information about goods or services	33.1
Obtaining information from general government organizations	21.1
Interacting with general government organizations	10.4
Telephoning over the Internet/VoIP	9.7
Internet banking	8.6
Purchasing or ordering goods or services	7.4
Using services related to travel or travel-related accommodations	6.9
Taking a formal online course	6.4
Selling goods or services	3.1
Making an appointment with a health practitioner through a website	0
Accessing chat sites, blogs, newsgroups or online discussions	0

Source: ITU

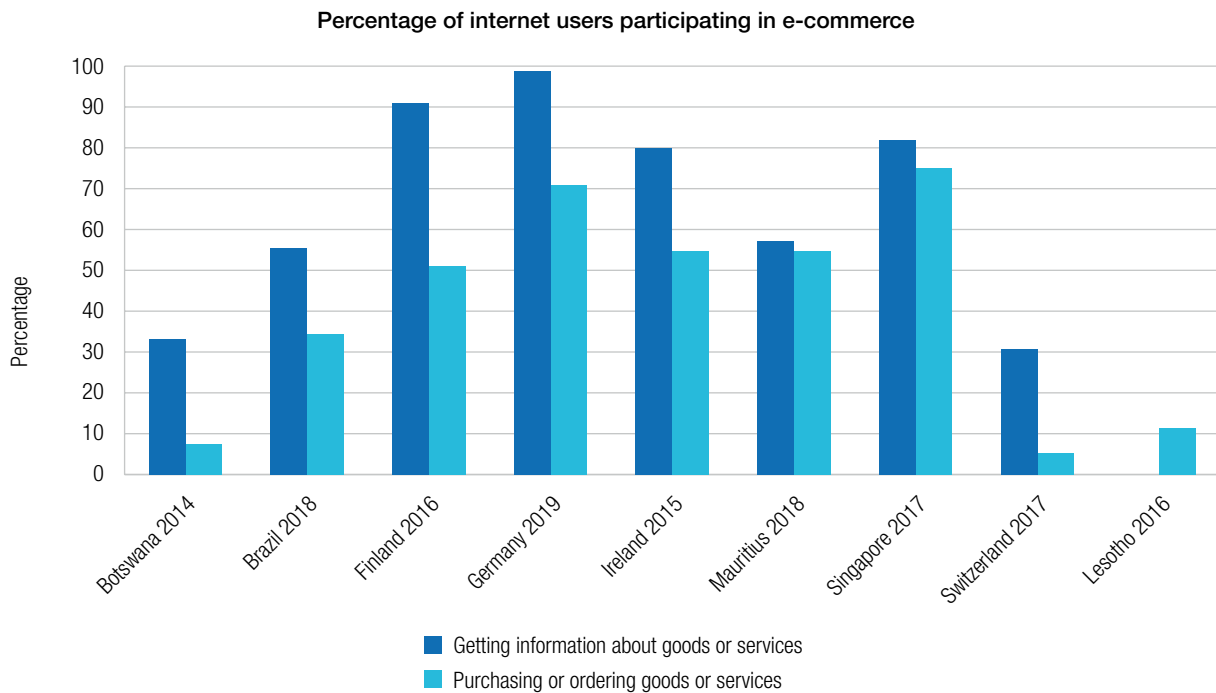


**Figure 12** Use of email and social networks by Internet users in Botswana and selected reporting countries<sup>80</sup>



Source: ITU

**Figure 13** Use of e-commerce by internet users in Botswana and selected reporting countries<sup>81</sup>



Source: ITU

## D. KEY PILLARS FOR THE DEVELOPMENT OF E-COMMERCE IN BOTSWANA<sup>82</sup>

### ***Botswana's Development Journey and the Diversification Imperative***

Often cited as a star performer demonstrating effective execution of pro-growth strategies, Botswana transformed itself from one of Africa's poorest, landlocked LDCs at its birth as an independent nation to a middle-income country within a span of less than 25 years. With national GDP growing at an average annual rate of 14.5 per cent from 1966 to 1980, the country quintupled its per capita income within 20 years and was the world's fastest growing economy from 1966 to 1989.<sup>83 84</sup>

Botswana's development trajectory has constantly been evolving. After 80 years as a British protectorate, it started out as a debt-ridden independent nation struggling with hunger and water shortages in the midst of a severe multi-year drought. Its first primary industry was agriculture, in particular beef exports. A slaughterhouse was built, and the beef industry operated through the centralized government-run Botswana Meat Commission. Until the development of the diamond industry, the beef export sector had served as the country's only foreign exchange earner. Agriculture accounted for 80 per cent of the economy.

With the discovery of diamonds, Botswana launched into a major period of economic growth, built through a joint-venture partnership with the private sector (De Beers), becoming the world's largest producer of gem diamonds. Particularly from the 1970s to the 1990s, FDI in the mining sector laid the foundation for the development of Botswana's diamond industry. Downstream linkages with the growth of the diamond industry spurred a doubling of value added for trade and finance in the economy. Botswana's service sector saw a surge in growth due to activities related to the diamond industry, such as trading, sorting, management, and holding. The electricity and water sectors, as important support for mining operations, also experienced a surge in growth. The diamond industry contributed to three key sectors: mining, construction, and finance and business.<sup>85</sup>

The development of the diamond industry led to a significant shift in Botswana's economy from a purely agrarian and beef-exporting economy to a mining and extraction export- and service-based economy.

It played a critical role in facilitating Botswana's first phase of significant economic change and diversification from a purely agricultural economy.<sup>86</sup>

In the mid-1990s, however, the country's high growth rate began to slow. In the past decade, its average growth rate has been about 5 per cent per annum. Today, Botswana is grappling with income inequality and high unemployment.

While Botswana has made progress in developing other sectors of its economy, including its retail and financial sectors, government revenues continue to rely heavily on diamond extraction. In 2017/18, mining and quarrying, particularly for diamonds, still accounted for approximately 23 per cent of national GDP and 33.8 per cent of government revenues.<sup>87</sup> Economic diversification has been a challenge.

While the extent of the economic costs to GDP are still being estimated, it is clear that the 2020 coronavirus pandemic has had a heavy adverse impact on Botswana's economy. The global slowdown and its effect on global demand for luxury goods, combined with trade and travel restrictions, have been serious economic blows, especially to Botswana's diamond and tourism industries. The growing rise in synthetic diamonds, often portrayed to millennials as produced through environmentally friendly production processes, are further threats to Botswana's diamond extraction industry. Thus the drive for the next phase of major economic diversification has intensified.

### ***Foundations laid for e-commerce***

Growth in the e-commerce sector can support Botswana's economic diversification. The growth of e-commerce in Botswana will be contingent on a foundational infrastructure cutting across and converging several industries and sectors. Botswana has built solid foundations for the growth of e-commerce.

ICT infrastructure and telecommunications services and the IT sector, Internet services, IT hardware (including computers, mobile phones, routers, servers and other supporting hardware and ICT devices, as well as software) serve as the bedrock for building the country's capacity for e-commerce development.

Support services that enable buyers and sellers to conduct business will be essential. These include payment services, e-platforms, advertising and other intermediary services. Electronic platforms such as

e-procurement platforms that promote business linkages for small business can also play a role in driving SME adoption of e-commerce.

For both B2C and B2B, as well as B2G e-commerce involving the sale of physical products, the logistics and trade facilitation sector – including package delivery, customs and freight forwarding services, fulfilment services, warehousing and packaging – are also critical.

A tech-savvy consumer population and workforce proficient in technical as well as soft skills will be needed to optimally grow e-commerce. These skills include basic IT/computer literacy; technical skills to support ICT and Internet infrastructure; client-orientation skills to deliver software and other support services to e-commerce businesses; business skills to launch and run e-commerce start-ups and companies.

Since many consumers and small businesses often have little information on e-commerce or its potential benefits and value, initiatives to raise awareness play a key role in encouraging Internet use and e-commerce. By the same token, raising awareness is also important for heightening consumer and business vigilance and mitigating potential threats to e-commerce such as fraud and cybersecurity threats.

Cutting across all these areas, the legal and regulatory climate plays a role in creating an environment conducive to e-commerce uptake and growth.

While many of the aforementioned areas were once separate sectors, over the past three decades or so the Internet has played a major role in converging them and blurring sectoral lines, particularly in commerce. Since its initial take-off in the 1990s, e-commerce has been a prime example of this trend toward convergence. Simultaneous development and synergy across each of these sectors and areas is important for optimal e-commerce growth and can spark the dynamic needed to catalyze the e-commerce sector.

A simplified distillation of the above-mentioned e-commerce dynamics, UNCTAD's ICTPR E-commerce Enabler and Assessment Integrated Framework establishes eight key e-commerce pillars for laying the preliminary foundations for e-commerce growth:

- ICT infrastructure, telecom and related services such as the power sector

- logistics and trade facilitation, including postal services
- the legal and regulatory environment
- e-payments
- electronic platforms
- skills development and talent building
- awareness-raising, including consumer awareness
- e-procurement

The next section examines Botswana's progress to date in laying the foundations in each of these strategic pillars of e-commerce and is a distillation of in-depth diagnostic reports in each area.

### ***ICT infrastructure, telecom and related services such as the power sector***

Botswana has made considerable progress in recent years in strengthening its ICT infrastructure and telecommunications services and sector. As noted in chapter 2, mobile phone subscriptions in the country have grown rapidly over the past 20 years, and mobile broadband began taking off in 2010. Efforts to liberalize the market, the privatization of the former monopoly BTC, the creation of telecom wholesaler BoFiNet, and the opening of the market to competition to include local players and foreign service providers such as the French-owned Orange and MTN-backed Mascom has helped to advance the spread and uptake of mobile telephony and mobile broadband.<sup>88</sup> As a result, today a large proportion of Botswana's population has access to internet services through Mascom smartphones.

Measures to bring down wholesale broadband prices, expand and upgrade the network infrastructure (for example, for 4G), and lower the cost of international bandwidth connectivity are helping to reduce consumer costs and drive growth of the broadband market. Mobile broadband remains the dominant Internet access technology for the majority of Botswana, including newer subscribers in lower-income areas. Nonetheless, issues remain in villages with a population of less than 5,000 with 2G mobile access, as well as 3G and 4G services and electricity. Additional measures are needed to reduce access gaps in small villages and rural areas (see Box 4. Reducing the Access Gap in Kenya).

**Box 4 Reducing the Access Gap in Kenya**

Like many developing countries, Kenya has faced an “access gap” in telecommunication services. Large urban centres have had relatively good fixed and mobile phone and Internet access, whereas smaller towns and rural areas have had little or no fixed phone access and only partial mobile phone access. Internet access has not been available in many rural areas. Kenya has approached the access gap issue in a number of ways.

1. By commissioning an access gap study to document the problem and provide a portal for reporting changes and improvements in access. Access was defined at the ward level, enabling very localized conditions to be monitored.
2. By implementing a unified licensing framework that allows any suitable company to provide telecommunications services. This licensing framework prices licences at a relatively low rate, sufficient only for licence administration and to cover the cost of the regulator’s operations and not as a tax on operators or to constrain market entry. The result of the historical licensing framework, carried through to the new unified licensing framework, has been substantial competition at the national level in fixed and mobile telecommunications.
3. Through the unified licensing framework, to provide local licences at a lower cost for operators wishing to serve only a local area. This enables local telecommunications operators to enter the market. Once established, they can then obtain additional local licences or a national licence.
4. Enabling and encouraging utilities such as Kenya Power and Light Corporation and Ketraco to offer spare optical telecommunications fibre to telecommunications operators so that telecommunication services can be delivered everywhere electricity is provided. This has allowed fixed and mobile operators to build competing transmission networks across the country without a major investment in long distance fibre.
5. Setting a low price for transmission fibre through low prices for government-owned fibre infrastructure, which means that utilities are unable to profiteer from a monopoly. Nevertheless, the utility fibre is less prone to failure because it is better protected and therefore preferred over the government fibre.
6. Through a telecommunications policy that has encouraged the roll out of fixed networks in county towns, enabling e-government and the provision of telecommunication access in schools, other institutions and local businesses. This policy has encouraged the private sector to install fibre in central business districts and government and local authority offices and institutions.
7. A universal service fund that focuses on community-based universal access through buildings in the community such as schools and hospitals.

The result has been that many county towns now have a fibre-based telecommunication infrastructure that provides up to 1Gbps to business users and WiFi from lamp posts. There is some competition at this local level, with at least four operators providing services. One second-tier operator, Liquid Telecom, covers 42 out of 47 county towns.

Typically, an operator will take space on poles carrying an electricity distribution network for its own fibre and connect to the utility’s fibre at a substation. This shared-infrastructure approach minimizes the cost of service delivery and, moreover, creates an alternative revenue stream for the utility. The use of utility fibre for long-distance transmission means that operators can use their own funds for a wider roll-out of local infrastructure.<sup>89</sup>

Source: Communications Authority of Kenya<sup>90</sup>

Fixed broadband – especially fixed broadband services to broadband power users of home or enterprise broadband in higher-income urban centres and towns – also plays an important role in growing the market and enabling operators to offset costs and diversify their revenues.

According to Fitch, there are opportunities in Botswana's commercial fibre services for operators to tap consumers' heavy data demand and move into converged services. In 2018, Mascom launched the country's first fibre-to-the-home (FTTH) services to around 500 homes in the capital, Gaborone. High-speed data is increasingly in demand in Botswana. On this basis, Fitch forecasts that, supported by both fibre and 4G investments, broadband penetration can grow from 7.9 per cent in 2020 to 29.0 per cent in 2030.<sup>91</sup>

Botswana has come a long way toward meeting the goal of providing universal service and access to ICT facilities established in its first major National Policy for ICT Development in 2007, also known as Maitlaimo. This has been accomplished through initiatives such as the Connecting Communities Programme, completed in 2011; e-government initiatives; ThutoNet (development of ICT skills in children and young adults); e-Health Botswana; enhanced ICT laws and policies; in ICT and telecom infrastructure enhancement initiatives; and ICT measures to promote economic diversification.

Parallel to efforts to reduce inequality and lower Botswana's Gini coefficient from 64.7 per cent in 2002/2003 to 53.3 per cent in 2015/2016 (World Bank), measures to support universal ICT access and use among the lower deciles of Botswana's socioeconomic market play an important role in improving living conditions among large swathes of Botswana's population and promoting social inclusion, economic empowerment and poverty reduction, including in rural areas.

Botswana is positioned for e-commerce growth on multiple tracks. With the growing availability and penetration of mobile broadband, early adopters and early majority users have already embraced e-commerce, making Botswana ripe for growth among later adopters. IT integration into the production and administrative processes of multinational and large national corporations means that the largest businesses are also either using e-commerce or that its adoption is likely in the near future.

At the same time, the widespread availability and high degree of mobile telephony penetration offers real opportunities for USSD-based e-commerce services that are inclusive and accessible to all. Consultations with stakeholders indicated that USSD services in Botswana play an important and useful enabling role for e-commerce and related services in areas where broadband services are unavailable or not used – for example, among the country's lower socioeconomic quintiles and in rural areas; among the country's more affluent urban population, as a convenient alternative when broadband services are momentarily inaccessible; or for specific types of services (i.e., mobile payments).

While Botswana is characterized by flat rolling tableland and is spared some of the infrastructure problems faced by countries with more challenging topographies, its large land mass coupled with its small population – living primarily in the east, though in many cases scattered unevenly around the country – makes economies of scale in the infrastructure investment and service delivery needed to ensure full ICT and telecom coverage for its population hard to achieve. Since the small villages scattered throughout Botswana have a low volume of Internet traffic and this traffic must travel over long distances, the cost per unit of traffic can be rather high in comparison with the cost for larger cities and towns. For telecom and internet service providers, business is a function of numbers; thus, to a certain extent, overall, there are thresholds for the extent to which reductions in telecom tariffs, including Internet, can be implemented while guaranteeing enough profit in revenues to cover operating costs in a small population and market share. As a landlocked country absorbing transit costs to reach the coast for international connectivity, Botswana faces further challenges to lowering ICT and telecom pricing and costs.

Botswana has instituted a series of measures to minimize the cost of service delivery, including the assignment of spectrum to operators at low cost, passive infrastructure and national roaming (see Box 6. Internet Cost Reduction Measures). Access to international submarine cables is improving, and the cost of international telecommunications has been reduced through BoFiNet investments in Namibia and South Africa. Operators also offer a wide range of service packages designed to appeal to small market niches and make services affordable to low-income customers.

The diagnostic for strategy development found that ICT pricing and cost in Botswana continue to pose a challenge to expanding Internet use in the country (see Box 6 on Internet Cost Reduction Measures and Box 7 on ICT and Telecom Costs and Pricing in Botswana). Issues related to the affordability of telecommunication services for individuals and businesses in Botswana appear to indicate that both groups tend to ration their usage and buy lower-capacity services (capacity in terms of the data budget and transmission speed). The impact on e-commerce may be high, because many e-commerce websites require significant capacity for downloading product images and high-resolution graphics. This is a threat to the adoption by business of IT in general and e-commerce in particular.

Quality of service (QoS) remains a challenge. BoFiNet periodically conducts QoS surveys and publishes the

results to increase transparency and accountability. There is need for BOCRA to investigate whether QoS in international telecommunications is satisfactory and take whatever action it can to ensure satisfactory performance (See Box 5. Measuring Quality of Service). There is a need to increase the reliability of national and international networks for business users. Utilization of the international capacity purchased by individual ISPs needs to be reviewed. Completion of the transit routes in South Africa to provide dual facilities and extra capacity will enable further reductions in transit costs and improve reliability. Resilient links to the submarine cables across Namibia and South Africa are needed to provide resilient diverse routing. BoFiNet also needs peering points and points of presence in Asia – i.e., India and the Middle East – to facilitate good-quality end-to-end services to Asia and the Middle East.

#### Box 5 Measuring Quality of Service (QoS) Provided by Telecommunication Networks

The ITU Expert Group on Telecommunication/ICT Indicators (EGTI) has been developing methodologies for the international benchmarking of QoS for fixed, mobile and, more specifically, broadband networks. ITU is currently collecting the following QoS indicators:

- *Mobile-cellular unsuccessful call ratio*: The ratio of unsuccessful mobile-cellular calls to the total number of mobile-cellular call attempts in a given year. An unsuccessful call is an attempted call to a valid number where (a) the call is not answered, (b) there is no called party busy signal, and (c) there is no ring on the caller's side within 40 seconds of the moment the last digit of the called number is received by the network.
- *Mobile-cellular telephony dropped call ratio*: The proportion of incoming and outgoing mobile-cellular calls, which, once they have been connected and therefore have an assigned traffic channel, are dropped or interrupted prior to their normal completion by the user.
- *Service activation time for fixed broadband service*: The time from the date of application to the date of service activation. The average service activation time for all new applications received while in coverage area within the given year should be provided

The 2020 meeting of EGTI agreed to add new indicators to specifically measure the quality of fixed- and mobile-broadband services. The initial data collection for the following new indicators is foreseen for 2021:

- *average download/upload throughput*, which measures the volume of data (in bits) uploaded/downloaded in one second. The data is collected measuring download as well as upload for both fixed and mobile broadband services.
- *packet latency*: the roundtrip time taken for a packet to reach its destination and return to the source, measured in milliseconds, for fixed and mobile broadband networks.
- *Customer fault resolution period for fixed-broadband service*: the number of working hours taken to clear all customer faults divided by the total number of faults in a year.

Some countries are also providing information on the following indicators, which ITU no longer collects at the international level:

- *Complaints per 100 mobile-cellular subscriptions*
- *Complaints per 100 mobile broadband subscriptions*
- *Complaints per 100 fixed broadband subscriptions*
- *Faults per 100 fixed-telephone lines per year*
- *Percentage of fixed-telephone faults cleared by the next business day.*

Telecommunications regulatory agencies around the world have proposed different ways of providing statistics and qualitative insights on quality of service at the operator level and by different geographical, temporal or technological disaggregations and enabling users to make informed choices when selecting a service provider or operator. To illustrate, the Federal Communications Commission in the United States allows users to explore and easily access complaint data for various technologies (Internet, telephony, etc.) at the interactive Consumer Complaint Data Center [URL: <https://www.fcc.gov/consumer-help-center-data>]. Ofcom, the communication service regulator of the United Kingdom, regularly publishes data and analytical reports on customer experiences with mobile, home broadband and landline services [The latest report of September 2020 is available at the following URL: <https://www.ofcom.org.uk/phones-telecoms-and-internet/advice-for-consumers/quality-of-service/report>].

Further methodological details on QoS indicators, data collection and examples can be found in the ITU Handbook for the collection of administrative data on telecommunications/ICT, section III. 8.

In January 2020, Botswana implemented guidelines on quality-of-service indicators for mobile and fixed broadband. All licensed enterprises providing broadband services in Botswana must follow the new guidelines. BOCRA has differentiated between mobile and fixed broadband indicators in the guidelines. Fixed broadband indicators defined by BOCRA are access network utilization, throughput, latency, and packet loss.

Although ITU and BOCRA both employ latency and throughput indicators, BOCRA proposes two more QoS indicators for fixed broadband that the ITU does not employ (access network utilization and packet loss). Furthermore, the ITU customer fault resolution period indicator is not employed by BOCRA of Botswana. Mobile broadband QoS indicators of Botswana proposed by BOCRA are also different than the ITU indicators. BOCRA's mobile broadband QoS indicators are HTTP Set-up Time, FTP (download/upload) Setup Time, FTP Drop Rate, and web radio tune-in success rate.

*Source: ITU and UNCTAD*

Improving the reliability of national and international networks is also important from industry's point of view. More reliable national and international telecommunications networks can lead to a reduction in both production system and PoS system downtime, which have a negative impact on many businesses. Greater reliability can positively influence the adoption and use of e-commerce, as in electronic payments, where trust in the network connection is essential.

Botswana is beginning to become a data industry centre, hosting several large content and media services. A number of data centres with good connections to telecommunications networks are already present in Botswana, with caching already

done in the country by international media companies. Localization of traffic through major content providers' use of local data centres has stabilized the requirement for international bandwidth, which should lead to lower service delivery costs and better performance.

While some cloud services are currently available, there is an opportunity for BoFiNet and other telecommunications operators to construct data centres in Botswana to serve central Africa, offering a comprehensive portfolio of data centre services, including cloud services and software as a service for enterprise applications that include e-commerce.

Botswana's IT sector plays an important role in enabling start-ups and MSMEs to engage in e-commerce (see chapter 4 on Botswana's IT Sector). Ensuring that Botswana's IT sector is able to provide the professional services needed to implement and support cloud services, software as a service, enterprise applications and e-commerce applications will be critical to creating a positive environment for businesses to invest in new IT applications that can spur e-commerce adoption.

Aligning economic incentives to launch major FDI incentives for the IT sector and attract large FDI IT players can further galvanize the sector. The dramatic growth of remote working worldwide as a result of the coronavirus pandemic also offers opportunities for Botswana's ICT and IT sectors to establish the country as an attractive remote working location for "digital nomads" (See Box 8 on Digital Nomads).

### Box 6 Internet Cost Reduction Measures in Botswana

Botswana has made substantial progress in reducing internet prices, cutting prices in half by December 2019. In 2020, it made one of the greatest leaps in the Affordability Drivers Index (ADI), a composite measure that captures the extent of progress, improvement or strength in achieving internet affordability in various countries in a single score, moving up nine positions in the ADI, the closest that a Sub-Saharan African country has come to the Top 10 in the ADI.<sup>92</sup> It also received the highest ADI score in Africa for broadband strategy. In large measure, Botswana's leap was fueled by the adoption of a new broadband strategy in mid-2018 that has been an exemplar for the region. ADI was developed by the Alliance for Affordable Internet (A4AI) initiative, hosted by the World Wide Web Foundation, and in 2020 covered 72 countries. Higher ADI scores have been driven by steady improvements in countries' internet infrastructure, broadband adoption and equitable access policies

BOCRA, BoFiNet and the Government of Botswana succeeded in dramatically reducing prices through a number of measures to lower the cost of service delivery, including:

- Mobile spectrum charging to encourage use rather than maximize its value to the Government
- Passive infrastructure-sharing, including cell sites
- Optimized use of access technology
- Implementation of a shared backbone and distribution network
- Purchase of dark fibre in Namibia and RSA to access undersea cables and data centres in RSA
- BoFiNet ownership of capacity on undersea cables
- Minimization of the use of international capacity through local hosting of international content services
- Reductions in interconnection fees
- Introduction of price controls for wholesale bandwidth for backhaul – e.g., National Leased Lines.

The National Broadband Strategy (NBS) argues that "To reach the levels of affordability target as set out by the ITU, significant decreases in retail tariffs by operators is required. Having said that, it will be important to find a balance so that operators can decrease tariffs... but still make sufficient revenues to continue investing in the network expansion and service delivery required for Botswana."<sup>93</sup> It appears that many of these cost reduction measures have already been introduced. A final measure may be needed to reduce costs even further, and that is to enable active infrastructure sharing, network sharing (as in Rwanda) or national roaming so that only one wireless infrastructure is installed in high-cost areas.

A further increase in the adoption of broadband services would reduce unit costs. However, at the current levels of adoption, it is likely that the constraint on increased adoption is now one of affordability (see Box on Affordability). Therefore, an adoption increase can only result in significantly higher revenues through a thorough examination and understanding of the price dynamic intervening in the consumer market and its interplay with the cost of service delivery.

Source: UNCTAD



**Box 7 ICT and telecom costs and pricing in Botswana**

As high broadband pricing can be a constraint on e-commerce growth, and stakeholder consultations pointed to a perception by both individual consumers and businesses of high pricing on broadband services, in 2019, the ICTPR Team undertook a comprehensive analysis of ICT and telecom costs for development of the national e-commerce strategy.<sup>94</sup> The analysis considered two earlier pricing studies: a pricing analysis for Botswana's National Broadband Strategy (NBS), benchmarking Botswana with several developing and developed countries, and a regional pricing study, benchmarking Botswana's telecom costs with those of other SADC countries. A new study for the strategy development was also conducted that, in contrast to the two previous studies, focused primarily on the affordability of services and sought to benchmark Botswana's operating costs for broadband delivery with those of several developed and developing countries.<sup>95</sup>

In the first study for the National Broadband Strategy, pricing was analyzed, benchmarking countries that included Ghana, Rwanda, Mauritius, Morocco, Australia and France. For broadband to be affordable, the ITU has recommended that developing countries' pricing for entry-level broadband services be less than 5 per cent of monthly Gross National Income (GNI) per capita. The NBS study found that tariffs in Botswana at the time of publication exceeded the ITU target pricing of 5 per cent GNI, standing at 9.2 per cent of monthly GNI for fixed broadband services and 9 per cent of monthly GNI for mobile broadband services. Subsequently, considering the ITU target pricing criteria and differences in purchasing power in the countries, the study showed that prices for mobile and fixed broadband services in Botswana were high compared to those of other African, European or Middle Eastern countries. In the second study – a regional benchmarking of Botswana's 2016 and 2017 ICT price trends for 1 GB with pricing of other SADC countries – Botswana was not among the least expensive countries in the SADC region; however, its pricing appeared to have decreased overall during the period 2016-2017.<sup>96</sup>

While the two preceding studies sought to benchmark Botswana's broadband and ICT service affordability to the general population, the new analysis focused primarily on determining whether Botswana's broadband service delivery was cost-oriented. The study was conducted using nominal exchange rates reflecting the absolute prices paid in each country (rather than purchasing power parity) and benchmarked Botswana in fixed and mobile prices based on an Ofcom 2017 study in the following countries: UK, France, Germany, Italy and Spain, and the United States. The analysis found that Botswana's entry-level pre-paid tariffs, including for broadband, are low compared with those of the benchmark countries. At higher-speed services, however, Botswana pricing is high in comparison with that of the benchmark countries. Furthermore, the study found that for very-high-speed fixed broadband services, Botswana's are considerably more expensive than those in the benchmark countries. It should be noted, however, that according to BOCRA, while high-end power users pay more for service, they get the lowest price per Mb in the high-end package.<sup>97</sup>

According to the study findings, while prices are low for users of entry-level pre-paid services – including broadband – tariffs in Botswana are relatively high for internet power users, especially compared to the low prices available in the UK and France. The overall conclusion is that insofar as possible, prices in Botswana are geared to affordability without incurring losses. The prices for higher-speed services may therefore be cross-subsidizing the lower-speed services. Botswana has made significant progress in reducing costs (see Box on Cost Reduction Measures).

The high cost of faster services has a number of implications, however. While pricing facilitates the use of lower-speed services, higher costs are imposed on businesses and power users most likely to use higher-speed services. The migration of users from lower-speed services (2 or 4 Mbps) to higher-speed services (10 Mbps and above) may be slowed or limited. As higher-speed services are necessary for users to access video and a growing number of websites that make extensive use of graphics, the result is that as Botswana Internet users become increasingly sophisticated or have rising Internet expectations, users may perceive Internet performance as inadequate for their needs. However, the higher-speed services remain unaffordable to them.

The price differential may discourage subscribers from upgrading to higher-capacity services and discourage usage overall, given the short duration of prepaid broadband bolt-ons (additions to the standard tariff). The consequences of this may account for user perceptions of high Internet costs in Botswana and consumer behaviour exhibiting a degree of frustration with the available level of service. Further measures to reduce

costs, better measure and track the Botswana consumer market's potentially growing level of Internet user sophistication, and design broadband pricing packages better customized for these consumer segments can help facilitate migration to higher-level broadband services. Data collection on appropriate indicators can help Botswana effectively gauge and understand the degree of Internet user sophistication in its market. These indicators may include: number of e-commerce users, number of online gamers, number of video-on-demand user, etc.

Source: UNCTAD

### Box 8 Digital Nomads

Digital nomads are people who use telecommunication technologies to work remotely from any location in the world. By dramatically increasing the number of remote workers, the coronavirus pandemic has spurred the rapid growth of digital nomads often seeking locations offering good telecommunication connectivity, social distancing and pleasant lifestyles. A number of countries have sought to position themselves as havens for digital nomads. Estonia and Dubai, for example, have created a special digital nomad visa. In 2021, Portugal will be launching the first digital nomad village in Europe in its Madeira Islands.<sup>98</sup>

Source: UNCTAD

### **Transport, logistics and trade facilitation**

Botswana has a functioning logistics market servicing Gaborone and key cities. BotswanaPost, a parastatal regulated by BOCRA, has a large network of post offices throughout Botswana and uses an Internet platform to deliver its services, which include freight forwarding and courier services. Botswana Railways operates freight and passenger service on one north-south rail line in the eastern part of the country that runs from the South African border and Lobatse in the southeast, through Gaborone and Francistown in the northeast, connecting with Bulawayo in Zimbabwe. While planning to privatize Air Botswana has been under way for some time, the airline is still publicly held. Three freight villages and an operational dry port in Gaborone currently provide bonded customs facilities and materials handling equipment and systems for logistics operators. Two additional dry ports are planned. According to the Special Economic Zone (SEZ) Authority, eight SEZ sites have been identified in Botswana. Construction of the Kazungula Bridge is currently in progress and was expected to be completed by 2020. When completed, the 923-meter bridge will span the confluence of the Zambezi and Chobe Rivers at the intersection of Zambia, Zimbabwe,

Namibia and Botswana. It is anticipated that the bridge's construction could serve as a catalyst for an intraregional trade boom by strengthening logistical and transport connectivity within the region.

However, the cost of shipments between cities and to poorer regions is sometimes prohibitive and bringing them down is a precondition for the development of e-commerce in the country. Phytosanitary compliance and other non-tariff barriers must be addressed as well. Botswana should develop and leverage the full capacity of BotswanaPost to support the E-commerce Modernization Program. Implementation of the Single Window System and enabling legal framework and Customs Act for cross-border e-commerce should be accelerated. Cooperation with South Africa on cross-border trade should also be accelerated to ease customs bottlenecks affecting Botswana MSEs.

## E-payments

Botswana has adopted a National Payments System Vision and Strategy 2020-2024, as well as a Financial Inclusion Roadmap and Strategy 2015-2021, both of which are aimed at further developing the country's payment ecosystem and promoting financial inclusion.

Botswana has core payment infrastructure crucial for a robust modern national payment system (NPS). This includes the backbone of Botswana's NPS, the Botswana Interbank Settlement System (BISS) and the Botswana Automated Clearing House (BACH). At the regional level, the SADC RTGS – designed for high-value cross-border payments and used primarily for interbank and corporate payments denominated in South African rand and U.S. dollars – is hosted and operated by the South African Reserve Bank (SARB) on behalf of SADC member countries. A regional ACH is also being developed for SADC Common Monetary Area (CMA) countries.

However, certain payment infrastructure is lacking. In particular, Botswana does not have a “payment card processing platform,” also known as a “payment card switch.” There is need for greater interoperability, including for wallet-to-wallet interoperability across different mobile money providers. A payment system catering specifically to real-time retail payment, often called a “Fast Payment” or “Instant Payment” system, could also be beneficial by providing more payment alternatives to consumers (See Box 9) on fast payment systems around the world).

The establishment of a transaction switch and fast payments system should be considered in the context of an ongoing initiative to establish a national switch aimed at creating a comprehensive retail payments system infrastructure for fast payments, card payments, alias-based payments, bill payment aggregation, mobile money and agent interoperability and perhaps a KYC registry. It is also important for the local switch not only to process the transaction but to work on the related chargeback processes.

### Box 9 Fast payment systems around the world

A defining characteristic of a “fast payment” system is the ability to complete a payment almost immediately at any time. To achieve this outcome, all fast payment systems require immediate clearing<sup>99</sup> between the PSPs of the payer and payee. Fund settlements between the PSPs, however, do not necessarily need to occur immediately for each payment order. Payee fund availability and inter-PSP settlement can either be coupled (i.e., real-time settlement) or decoupled (i.e., deferred settlement).

As of early 2019, it was estimated that 40+ countries had implemented a fast payment system. Some examples of fast payment systems include:

**India** - The Immediate Payment Service (IMPS) went live as a new instant mobile payment system in 2010. The system allows mobile phone subscribers and Internet-connected devices to send and receive payments. Payees typically receive funds in less than 30 seconds. As of 2017, the service provided access to fast payments through 190 PSPs.

**Mexico** - The Sistema de Pagos Electrónicos Interbancarios (SPEI) is Banco de Mexico's main payment system, providing both wholesale and retail payment services. Since November 2015, the service has offered 24/7 availability. Funds are available to the payee in less than 15 seconds for mobile payments and less than 60 seconds for other online payments. Banks and non banks can participate in SPEI as direct members to provide their customers with fast payment services.

**Sweden** - BiR/Swish, introduced in 2012, is a real-time settlement system for mobile payments in Sweden. The typical time between payment initiation and the availability of final funds to the payee for a successful fast payment transaction is one to two seconds. More than half of the country's population uses the Swish mobile app to make fast payments

**United Kingdom** - The Faster Payments Service (FPS) is a deferred net settlement system for credit transactions in the form of single, immediate payments, forward-dated payment, or standing orders for households and corporates. The service, which was launched in 2008, allows a payer to initiate a payment simply by using the payee's mobile phone number. Funds are typically available to the payee within seconds of the payer initiating the transaction.

Source: UNCTAD, adapted from BIS Quarterly Review, March 2017, pg. 59

National switches are structures that can allow access to a broader section of players (including non banks) and as an infrastructure of public good that can advance financial inclusion. Implementation of the national switch for the integration of national payment system players will also allow for financial deepening. Discussions on establishing a national switch in Botswana are in the early stages, and Terms of Reference are being developed for the Task Force. To ensure smooth “buy-in,” strong inclusive collaboration will be required that involves all relevant stakeholders in discussions on the model, governance, ownership, etc.

Botswana’s legal and regulatory framework for NPS is sound and underpinned by key laws such as the Bank of Botswana Act, the National Clearing and Settlement Systems (NCSS) Act, the Banking Act, AML regulations and financial intelligence regulations relating to KYC requirements. As the NCSS Act is outdated, a comprehensive review of the Act should be conducted to identify gaps and means to address them in a contemporary revision. Regulation of MDRs, including through mandated publishing of MDRs applied in the market, could help encourage greater use of electronic payments. There are challenges, however, related to the availability and publishing of useful payment-related data, for example on MDRs. The issue of data protection and information sharing is particularly relevant, as it has a bearing on the extent to which data is disclosable, including granular data on bilateral payment transactions. A cooperative framework to ensure smooth cooperation among regulatory authorities – such as Bank of Botswana, BOCRA, NBFIRA, FIA, etc. – will be critical, including in data protection and information sharing. Strengthening consumer protection, cybersecurity and fraud prevention measures and fostering the adoption of industry best practices in data security across e-commerce sites, payment gateways, system operators and service providers is also critical. Other important legal and regulatory matters related to NPS include establishing a national digital ID framework,

which is critical to the development of Botswana’s financial services environment.

Botswana has made progress in growing its transaction account penetration rate in recent years. Increasing the share of adults with transaction accounts and offering consumers and producers more ways to pay continues to be a critical approach for improving the current e-payment situation in Botswana. According to FINDEX 2017,<sup>100</sup> the share of adults (age 15 and above) that had a transaction account as at 2017 was 51 per cent (of this figure, 45 per cent of adults in Botswana have an account with a financial institution). This is a significant improvement when compared to the 2011 figure, which stood at 30 per cent, but it is still below the 73 per cent average for upper-middle-income countries<sup>101</sup> or even the world average of 69 per cent. Table 6 shows a comparison of the penetration of transaction accounts in Botswana compared to neighbouring countries and also to other countries relatively similar in terms of the size of their population and World Bank income category classification.

With regard to payment instruments, debit cards are the main type of payment card in Botswana. According to Findex, in 2017 approximately 27 per cent of adults in Botswana had a debit card and 10 per cent had a credit card. BotswanaPost and SmartSwitch have also issued payment cards to support the disbursement of social assistance grants to beneficiaries. Both of these instruments are pre-paid cards with a microchip that holds biometric information on the account holder, i.e., fingerprints. The government is currently launching a programme to migrate the disbursement of government payment programmes to a “Pula Card,” a pre-paid, open-loop card issued under Visa. The use of cards at POS terminals with merchants have almost doubled in the past four years, with 82 per cent growth over the period.

There has been growth in the use of electronic fund transfers (EFTs). Executed primarily by bank account holders through Internet banking primarily for B2P

**Table 6** Share of adult population (15 years and older) with a transaction account

Year	Botswana	Lesotho	Namibia	South Africa	Zimbabwe	Costa Rica	Uruguay
2017	51%	46%	81%	70%	55%	68%	64%
2011	30%	18%	59%*	54%	40%	50%	24%

Source: FINDEX 2017  
This figure corresponds to 2014

(payroll) and B2B payments, in 2018 there were 8.5 million bank account based EFTs, with a 41 per cent growth rate compared to 2014. Although there are no official data on internet banking usage in Botswana, the largest commercial banks indicated that approximately 80-90 per cent of their corporate customers and between 60-70 per cent of individual clients have already registered for Internet banking and use the service regularly.<sup>102</sup> As EFT is built to achieve a full settlement finality, this may not always work well with e-commerce where the levels of returns and claims may be high. Subsequently, setting robust consumer protection for EFT usage on e-commerce is important.

In 2017, 24 per cent of adults in Botswana had a mobile money account.<sup>103</sup> While statistical data on mobile money transfers is not available from the Bank of Botswana or other reliable sources, on the basis of consultations with MNOs, there are an estimated 600,000 and 800,000 mobile money transfers per month. The three mobile network operators with the most popular mobile money products are: Orange Botswana (Orange Money); Mascom (MyZaka Mascom Money); and BTC (Smega). BotswanaPost is also an important player in providing payment services (see Box 10 on Provision of payments services BotswanaPost) and is also piloting a mobile money product called “Poso Money”. A significant share of

adults in Botswana has both a bank account and a mobile money account.

Despite financial coverage of a good amount of the population by banks and post offices, however, according to the Ministry of Finance and Economic Development, a 2014 Finscope survey found that 30 per cent of Botswana's population lives in settlements that are not served by any financial service provider. To address this situation, the Financial Inclusion Roadmap has set several goals for 2021. They include: (1) reducing the percentage of adults who are financially excluded from 24 per cent to 12 per cent; and (2) to increase those with access to more than one formal financial product from 46 per cent to 57 per cent.

Improving financial inclusion/bancarization levels is an important prerequisite to giving people access to electronic payment instruments that can enable them to shop online. In this context, there is need in Botswana for a framework supportive of digitized processes for customer verification, which can increase efficiency and security in the delivery of digital financial services. Putting safe KYC processes in place is also essential for increasing bancarization levels or selling innovative financial services.

#### Box 10 Provision of payment services by BotswanaPost

BotswanaPost is not in itself a financial institution but has been leveraging its network of nearly 140 post office branches to offer a variety of payment services to the public.

Among these are agreements with many companies to act as a collection agent for them, enabling any individual to go to a post office branch and pay bills (e.g., water, electricity, pay TV, etc.) with cash or cards. BotswanaPost offers similar services through its website and, in the future, will do so through a mobile phone app.<sup>104</sup>

Furthermore, BotswanaPost has long been involved in providing money transfer services through money orders (i.e., in cash). Funds in amounts of up to P10,000 per money order can currently be transferred to other individuals or companies within Botswana or in Lesotho, South Africa, Swaziland and Zimbabwe. In October 2018, it launched Poso Money, which is similar to a mobile money product that can be topped up in cash at post offices to effect money transfers and/or pay bills.

BotswanaPost has also supported the Government of Botswana with programme pay-outs, whereby the government provides cash grants to certain disadvantaged individuals, such as older citizens, etc.<sup>105</sup> A few years back, it also developed the prepaid “Poso Card” to gradually replace the paper vouchers previously issued to some of these beneficiaries.

In 2018, it began piloting Poso Money, which is a mobile money product that can operate in any mobile network. As with other mobile money products, it allows for P2P transfers and bill payment.

Source: UNCTAD

Merchant acceptance of payment cards has been growing but remains limited and is concentrated in larger cities and towns. Only a few banks (First National Bank, Barclays, Bank ABC (forthcoming) currently provide card-acquisition services to merchants, including for e-commerce, through payment gateways. Obtaining a merchant account is also contingent on merchants undergoing a credit check or credit review, which can be challenging for small merchants. Further measures are needed to facilitate the opening of merchant accounts and merchant of payment cards.

Further measures to strengthen e-payments include using incentives to promote an increase in the number of e-commerce adopters that use online payments (rather than cash) and identifying ways to fund these incentives. For example, spurred by COVID-19, in 2020 Italy launched a new cashback initiative offering an automatic refund from the State to citizens making in-store purchases with a bank card or smartphone app in order to incentivize electronic payments over cash.<sup>106</sup> (See Box 11 on Enhancing electronic payment acceptance and financial inclusion in Uruguay). Expansion into regional markets can also potentially increase the number of e-commerce adopters. A regional payment processor can help tap markets for local products beyond Botswana's borders. Moreover, Botswana should tap into business intelligence by leveraging data generated through the payment process to improve business decision-making.

### **Legal and regulatory environment**

Botswana has already adopted several key legal and regulatory measures critical for e-commerce in several areas. In 1996, the government passed the Telecommunications Act, aimed at reorganizing the telecommunications sector. The government has also adopted the E-Signature Law and established that electronic signatures and electronic documents are as valid as their paper equivalents. Botswana is a signatory to several international and regional treaties and has formulated new regulations in the field of digitization, e-commerce and IP rights. In 1998, the country joined the WIPO Berne and Paris Conventions, which regulate intellectual property rights, patents and trademarks. Botswana is also a member of the African Regional Intellectual Property Organization (ARIPO), which covers 19 African countries. The country has accelerated the adoption of digitalization and e-commerce-related regulations, particularly since 2014. These instruments include the Electronic Communications and Transactions Act (2014), the Electronic Records Act (2014), the

Customs Act (2018), the Consumer Protection Act (2018), the Cybercrime and Computer Related Crimes Act (2018), the Data Protection Act (2018) and the Competition Act (2018).

Overall, Botswana's legal framework is favourable to e-commerce, and key laws are in place. However, for recently enacted legislation, measures are needed to ensure the proper enforcement essential to achieve solid results. Measures could also be adopted to buttress e-commerce regulations. For instance, a section addressing deceptive online practices could be added to the Botswana Consumer Protection Act of 2018.

Also, Botswana has no laws specific to e-commerce. Adopting a consolidated regulation governing all aspects of e-commerce could be a major step in e-commerce development in Botswana. The government should review how laws authorizing the use of electronic procedures for government agencies (customs, tax, public procurement, tourism, etc.) can be further strengthened.

At the same time, corporate law in the Trade Act could be enhanced and modernized by adding startup friendly corporate structures (see Box 12 on Startup-friendly Corporate Structures and Digital Ecosystems). It would be important to ensure that the competition law, other regulatory laws and FDI incentives in Botswana work together and that they uphold the combined objective of maintaining an open and competitive market and ensuring that there are no entry barriers for potentially beneficial international ICT players in Botswana's market. The pros and cons of restrictions on the transborder flow of personal data should be considered in the data protection law. More information dissemination among Botswana entrepreneurs to clarify the data protection law is also needed, as many of them are unclear about how the law affects their business. Botswana was the first SADC country to successfully introduce identification cards with AFIS (Automatic Fingerprint Identification Systems) and is in the process of upgrading this system into a single, multi-biometric and multi-use new-generation platform.<sup>107</sup> Further progress in implementing digital ID would be beneficial. With regard to taxation, Botswana may wish to put a tax policy and mechanism for tax collection in place. The government may also wish to adopt measures to reduce tax avoidance in e-commerce (See Box 13. E-commerce and Tax Avoidance).

Moreover, regulatory measures should be adopted to address cybercrime and cybersecurity. Regional cooperation to combat e-commerce fraud, especially between Botswana and South Africa, would be important. Botswana may also wish to pass legislation for electronic registered mail to facilitate business growth along the lines of the European eIDAS regulation or AR24 in France.

### Box 11 Enhancing electronic payment acceptance and financial inclusion in Uruguay

In 2012, the Government of Uruguay began implementing generalized incentives for payers to use electronic payments.<sup>108</sup> A permanent reduction of 2 percentage points in the value-added tax (VAT) was approved, but this would become effective only for individuals paying electronically. Then there were additional VAT reductions for payment with debit cards and fund transfers (4 percentage points) and credit cards (2 percentage points). These additional VAT reductions decreased by 0.5 percentage points every year.

Importantly, to make these tax refunds highly visible to payers, they were provided in the form of credits, in money, to the card/account from which the payment had originated.

Incentives were also provided for payees (i.e., merchants) and POS networks. Incentives essentially targeted SMEs and included:

- The weighting of new sales made with electronic payments at less than 100 per cent for determining taxable income: 40 per cent in 2017; 60 per cent in 2018; 80 per cent in 2019 (Decree 388/2016).
- An immediate deduction of up to 100 per cent of investments in infrastructure supporting electronic payment acceptance and billing systems (Decree 200/018). The upper limit applies to infrastructure installed in rural and semi-urban areas, low-income urban areas and certain specific business sectors (e.g., taxi cabs).

The authorities also issued regulations in various areas, with objectives such as: i) promoting the reduction of merchant discount rates (MDRs); ii) reducing the length of time in which acquirers credit the account of merchants; iii) ensuring the interoperability of ATMs and POS terminals; iv) ensuring that interbank fund transfers function effectively; and, v) enabling for pensioners and beneficiaries of social programmes to receive their funds in an account issued by the PSP of their choice.

In 2018, some of these objectives were reflected in an agreement between authorities, the industry (POS networks in their role as acquirers, the bankers' association representing issuers) and various merchant associations. A notable example is the agreement to reduce MDRs gradually, based on specific increases in the volume of card payments: the MDR is reduced by 15 basis points for every 30 per cent increase in volume.<sup>109</sup>

In terms of results, the Programme has had a significant impact on the use of electronic payments:

- Growth in the POS terminal network occurred across the country and is particularly evident in SMEs.
- The volume of credit and debit card payments increased by 200 per cent from 2014 to 2018 (and about 1,200 per cent for debit cards alone).
- In per capita terms, back in 2012, Uruguay recorded about 28 annual payments per inhabitant with means of payment other than cash. This figure is estimated to have reached more than 110 in 2018.

Some of these results are due to more individuals having an account, but also to the fact that the accounts and cards that existed prior to the programme are being used more intensively for electronic payments.

Finally, the Government of Uruguay estimates that the taxpayer money invested in these measures was "recovered" (through a larger taxpayer base) by 2018.

*Source:* UNCTAD, based on documents available at (<http://inclusionfinanciera.mef.gub.uy>) and <http://www.bcu.gub.uy/Sistema%20de%20Pagos/Reporte%20Informativo/repspagos0618.pdf>

**Box 12 Startup-friendly Light Corporate Structures and Digital Ecosystems**

Certain types of corporate structure have been found to be particularly startup-friendly. Light corporate structures can be conducive to startups, including digital startups. Light corporate structures generally seek to eliminate bureaucracy, have no board, can have only one shareholder and have flexible rules with regard to attracting investment. For example, in France, the Société par actions simplifiée (SAS) or “simplified joint stock company” (similar to the limited liability company) is considered the most flexible form of business, allowing shareholders to tailor the company to their needs. Its flexibility affords it many advantages. The law does not require a particular management structure for an SAS, and there is more freedom to organize SAS governance and operational structures.<sup>110</sup>

In an SAS, only the president is authorized to act on behalf of the company. An SAS can have a supervisory board, an oversight committee, audit committee, and so on. The manager can be an individual or a legal entity. An SAS is a suitable structure for both holding companies and startups with great potential. SAS shares cannot be admitted to the regulated market, as such companies are not allowed to go public.<sup>111</sup> While the roles and powers of these legal entities can be freely defined in decrees, they are nevertheless subject to certain mandatory provisions governing the powers of the president and shareholders’ assembly.<sup>112</sup> The SAS is a limited liability company. Partners do not commit their personal wealth in the company. Their only risk is losing their initial investment and what they subsequently invest in the company. In most cases, an SAS does not allow for an external auditor until the company reaches a certain size. Furthermore, its governance can be changed in later stages of its lifecycle.<sup>113</sup>

As an adjunct to startup-friendly light corporate structures, other measures can help to create a favourable digital startup ecosystem.<sup>114</sup> In 2014, the Estonian government launched the E-residency Programme, which enables non-EU digital entrepreneurs to start and manage an EU-based company online. According to Estonia’s E-residency website, Estonia is the first country to offer e residency, a government-issued digital identity and status that provides access to Estonia’s transparent digital business environment, a digital ecosystem providing simplified accelerated business-creation procedures and resources and supports enabling e-residency digital entrepreneurs in managing business from anywhere entirely online. In order to facilitate this remote business administration, the E-residency Programme offers an online Marketplace that lists local Estonian service providers offering various services necessary for obtaining the e-residency and facilitating company creation, including company establishment and management services, tax accounting, legal, banking and payment providers and other business services, as well as access to Estonian government digital e-services. It should be noted that in order to set up this type of initiative, a country will need to achieve a similarly high level of sophistication to Estonia in digital and governance structures. To date, over 15,000 companies have been established by foreign citizens through Estonia’s E-residency Programme.<sup>115</sup>

In addition to creating startup-friendly corporate structures and major digital startup initiatives, introducing an accelerated procedure to create a company online, as well as tax incentives, can also help create a favourable digital startup ecosystem. For example, Estonia’s E-residency Programme makes it possible to start a company in three hours. The United States offers an accelerated procedure for creating a company online in 24 hours. In addition, creating a favourable tax regime for capital gains can also facilitate the creation of startups. If capital gains are heavily taxed, no investors are going to invest in early-stage startups. Creating an environment where investors are not taxed or are lightly taxed for investment in early-stage startups can provide an additional incentive for investors to invest in early-stage startups.

Source: UNCTAD



**Box 13 E-commerce and tax avoidance**

Some countries have expressed concern that the growth of e-commerce can make it easier for businesses to conduct business outside the taxation rules governing traditional brick and mortar establishments and engage in tax avoidance, resulting in the loss of significant tax revenue. The following highlights some of the prevailing forms of tax avoidance related to e-commerce today and measures that countries have adopted to address it.

Tax avoidance activities can be broadly divided into domestic and international activities. A VAT system can generally streamline the tax system and help reduce tax avoidance and tax leakage. The system is often described as self-policing. Businesses, ideally supported by IT systems, cannot claim tax credits unless they have tax paperwork for the transactions with both their suppliers and customers, and the paperwork filed by all parties must match up. If businesses work only with suppliers and resellers who can provide proper tax documentation, it makes tax avoidance more difficult and provides small operators with an incentive to participate in the system.

Domestic tax avoidance most commonly refers to tax avoidance activities by local buyers or suppliers that occur within national borders. For instance, in many developing countries, there is a flourishing informal sector where businesses make use of social media platforms such as Facebook Messenger and WhatsApp to sell and buy products. In contrast to businesses in formal e-commerce channels, these informal businesses do not pay tax on sales they make through social media. In India, to combat this, the government has been working on an initiative known as Project Insight, which seeks to curb this type of tax avoidance by monitoring information from social media posts to identify discrepancies between lifestyle/spending patterns and the reported income in tax declarations. Similarly, in China, some online sellers seek to avoid paying tax by not providing their real names and identification numbers on the shopping platforms where they have their online stores. To minimize such attempts, China's State Administration for Industry and Commerce issued "interim measures" in 2010 that now require online sellers to provide their real names and ID numbers to the shopping platforms where they open their online stores.<sup>116</sup>

International tax avoidance mainly occurs when sellers beyond a country's borders avoid paying taxes on goods they sell to citizens of that country. This can occur when there is a lack of well-defined cross-border e-commerce taxation rules. However, even countries with strict domestic e-commerce tax rules may be exposed to tax avoidance by outside sellers. Undervaluation of e-commerce packages at importation was a major form of tax avoidance identified by the EU. Since there was a VAT exemption threshold of EUR 22 for e-commerce packages (*de minimus*), it was profitable for businesses to supply into the EU and declare the value of the parcels imported into the EU as less than EUR 22. To reduce undervaluation, the EU changed its rules for VAT e-commerce and abolished the EUR 22 threshold. Since prices are indicated online and can be used to cross check pricing for customs valuation purposes, e-commerce sites can also play a role in increasing pricing transparency and serve as a resource for reducing undervaluation.

As of 1 July 2021, marketplaces in the EU will become liable for ensuring that the VAT is paid on sales facilitated through their platform. They will be required to take steps to ensure that taxable persons wishing to use their platform to sell into the EU fulfil their VAT obligations in the EU. At the same time, to improve customer experience, the EU introduced a simplification mechanism called the Import One-Stop Shop. Under this system, the supplier charges the VAT upfront at the time of sale to the EU customer. The supplier must register for VAT in one EU Member State of choice and meet all VAT obligations related to all sales to customers in the EU in a single VAT return and a single payment of all VAT due to the Member State of VAT registration. This way, the VAT collected at the time of sale will be remitted to the tax authorities in the Member State of record. The mini One-Stop Shop (MOSS) is a trade facilitation measure for businesses providing e-commerce services within and to the EU. Thus, registration for MOSS is voluntary. EU traders can register for the EU's MOSS system in the Member State where they have established their business or, when this is not the case, have a fixed establishment. Non-EU traders can register for the non-EU system in any Member State of their choice. If traders do not register for MOSS, they must register for VAT in each Member State where the consumer of the services is established.<sup>117</sup>

To combat tax avoidance in international e-commerce, Australia requires foreign e-commerce suppliers to have identification numbers and proper registration procedures.<sup>118</sup> In Sweden, a reverse charge method of taxation is applied in which the buyer pays the VAT instead of the seller, provided that the seller is physically located outside the country's borders.<sup>119</sup> Similarly, in France, when a non EU taxable person imports goods into France in his own name, he must register for VAT purposes, and a fiscal representative must be appointed. A taxable person or trader in another EU Member State can register directly for VAT or by appointing a tax representative. Appointing a tax representative is not obligatory in this case.<sup>120</sup>

Source: UNCTAD

### **Skills development and talent building**

Botswana has long placed a high priority on education and human resource development, investing heavily in education to the tune of 8.5 per cent of its GDP. Botswana is one of the leading countries in Africa in terms of enrolment, with a gross secondary enrolment rate of roughly 86 per cent. Systematic integration of ICT skills into Botswana's education system was introduced by Maitlamo through the Thuto-Net School Connectivity Initiative, launched in 2014. The Thuto-Net programme was an expansive project that included the School Connectivity Initiative, aiming to link all secondary schools to the Internet. As a result, all secondary schools in Botswana have computer laboratories.

For the general population, there is still a need for e-commerce-related skills training in Botswana. This includes general literacy, e-literacy and ICT skills to use the Internet, shop online and make online payments. The public school system and initiatives such as the Kitsong Centres can play a role in meeting this goal. Institutions of higher education can play a role in providing skills training in areas relevant to e-commerce, including online store management, digital marketing, social media marketing, shipping and fulfilment, payment and related financial services and data analytics.

E-commerce training is also critical for Botswana's micro, small and medium-sized businesses (MSMEs), which account for some 95 per cent of businesses in Botswana.<sup>121</sup> Only a few Botswana MSMEs are currently using the Internet. Many small businesses lack awareness of e-commerce and how to use it to support their operations (See Box 14. Focus Groups of Businesses and Entrepreneurs).

MSMEs need training in how to make the best use of different e-commerce channels to markets, including websites, social media, e-marketplaces and other distribution channels. Micro, small and medium-sized enterprises could also benefit from training in areas such as how to export through e-commerce and online entrepreneurship. Sector-based training on e-commerce (e.g., handicrafts) and specific issues (payments, fulfilment) (with the private sector) should be provided to relevant enterprises. Creating e-marketplaces and virtual communities for MSMEs should be Botswana's next target.

The Government has established several Business Development Support (BDS) institutions for implementing policies, programmes and initiatives aimed at supporting micro, small and medium sized enterprises, including CEDA, LEA and other institutions, which could play an important role in e-commerce training.

**Box 14 Focus Groups of Botswana Businesses and Entrepreneurs on E-commerce**

In order to assess the uptake of e-commerce among entrepreneurs and enterprises, main barriers to e-commerce and general use of ICT among MSMEs, focus group meetings were held in the second quarter of 2019 with 79 MSMEs, as well as large enterprises, in three regions of Botswana as part of the ICTPR strategy development: National E-commerce Strategy for Botswana. This included 34 enterprises located in Gaborone, 19 in Maun, and 26 in Francistown.

The focus group meetings were organized through UNCTAD cooperation with the Ministry of Investment Trade and Industry and the parastate organizations LEA, CEDA and BITC. SMMEs were identified and mobilized in the three regions – Gaborone, Maun and Francistown – on the basis of several criteria, including the size and type of business. Focus groups were comprised of entrepreneurs and businesses from a range of business sizes and in the following types of business: manufacturing, ICT, agricultural, tourism, arts and crafts, and other export-oriented sectors and enterprises with e-commerce potential. A questionnaire and structured questions were used to guide the discussions. Meetings were also held with stakeholders and key informants to understand the state of e-commerce in the country. The following provides some highlights from the comprehensive report on the focus group findings.<sup>122</sup>

Focus group discussions revealed that very few businesses in Botswana currently utilize e-commerce. Only recently were a few enterprises beginning to develop e-commerce solutions for their businesses and use e-commerce to purchase goods and services. Entrepreneurs and enterprises faced several barriers to the adoption of e-commerce. The main ones were: lack of knowledge and understanding of e-commerce, high Internet costs, poor-quality Internet, lack of trust, fear of fraud, lack of appropriate payment gateways, limited infrastructure to support e-commerce, cultural constraints (the preferred purchasing method is the physical purchase of goods). A number of enterprises considered e-commerce risky and prone to fraudulent transactions and subject to transport and logistical challenges and cumbersome customs procedures.

The findings from focus group interviews showed that MSMEs in Botswana have adapted relatively slowly to changing and new communication methods. Although many MSMEs utilize mobile phones, social media and emails in their businesses, overall, uptake of the Internet and other forms of communication is still relatively low among MSMEs. MSEs lacked basic ICT skills, did not have Internet access and lacked knowledge of ICT tools. They also lacked financial resources to purchase ICT tools for their businesses. The businesses are too small to hire their own technology staff and usually cannot afford to hire an IT consultant.

The enterprises consulted in the focus groups largely lacked knowledge of how e-commerce can be used to boost their businesses. Discussions showed that very few businesses have websites of their own or have tried to develop one. Those that do have websites are not fully utilizing them to grow their businesses. Most of the SMMEs were aware of e-payment methods, but lack of knowledge and trust kept them from embracing innovative payment solutions.

There were also regional differences in ICT and e-commerce uptake. Enterprises in Gaborone were more likely to be informed about e-commerce than those in the other two regions. The enterprises consulted in Gaborone primarily represented the manufacturing and services industries (including IT services). Those in Maun were mostly tourism enterprises, while in Francistown, manufacturing and tourism sector enterprises were mostly consulted. Findings showed that the SMMEs in Gaborone were more tech savvy and utilized the Internet and email communication. Those in the Francistown and Maun areas, in contrast, primarily used mobile phones for their business operations.

The entrepreneurs consulted were aware of a number of government e-services – in particular, the Botswana Unified Revenue Service (BURs), the Public Procurement and Asset Disposal Board (PPADB) and the Companies and Intellectual Property Authority (CIPA). However, a number of them reported challenges to using these platforms. Enterprises in the tourism sector reported being able to submit tourism statistics and pay their tourism levy online and that this online system had made the process easier. A number of entrepreneurs and enterprises indicated that they would like more government parastate organizations to provide e-services. Enterprises in Gaborone utilized current e-services more than those in Francistown and Maun. This was attributed to limited access to information and Internet accessibility outside Gaborone.

To support e-commerce development in Botswana, entrepreneurs and enterprises requested that the government modernize the ICT infrastructure to ensure quality broadband connectivity, improve the e payment environment, develop e-commerce training and skill development strategies, develop e-commerce training activities for youth, women and people living in rural areas, enhance Botswana's logistics and supply chain efficiency, simplify and accelerate customs clearance procedures for e-commerce, develop e-government services, etc.

Source: UNCTAD

Small businesses play a critical role in Botswana's economy, contributing significantly to employment creation, poverty eradication and economic diversification. As part of the strategy development, focus groups were held in three cities in Botswana (Gaborone, Maun, Francistown) in 2019. Seventy-nine entrepreneurs were interviewed. Discussions with the focus groups found that the use of e-commerce in Botswana is greatly inhibited by lack of knowledge and awareness of e-commerce. Many of the SMEs interacted with during the focus group sessions understood the potential benefits associated with e-commerce adoption but did not know how to reap them. Moreover, they did not know about the technology required to make use of e-commerce. Many were fearful of the potential challenges associated with e-commerce, especially security, privacy, cybercrime and regulatory issues.

Most MSMEs across sectors had not yet begun using e-commerce in their businesses. E-commerce was still largely a new concept among these businesses. Of the enterprises interviewed, only 11 per cent in manufacturing, 28 per cent in tourism, 38 per cent in ICT, 27 per cent in other services<sup>123</sup> and 0 per cent in agriculture and retail services believed that e-commerce could possibly be important to their business. When asked about their experiences with e-commerce at the business level, around 95 per cent had not used it. Those who had, had purchased some machinery and equipment from China or India

Most of the MSMEs had little understanding of e-commerce and how it could benefit their business. In the ICT sector, four of the companies interviewed<sup>124</sup> had developed some sort of e-platform to market local products. However, due to reasons such as the costs associated with current payment systems, these companies had not yet begun using e-commerce to sell these products.

Email, mobile phone and Internet use is common across all sectors. Some 71 per cent of enterprises in the manufacturing sector believe that email use is very important to their business, while 72 per cent in tourism, 88 per cent in ICT, 82 per cent in other services and 77 per cent in agriculture believe it. Only 33 per cent of enterprises in the retail sector believed that email was important. Internet use is high among the ICT, other services and tourism sectors, with 100, 91 and 78 per cent of enterprises in these sectors, respectively, having reported that the Internet is very important to their business. In the manufacturing sector, 58 per cent of the enterprises reported that the use of internet was very important, while 66 per cent in the retail sector did. Thirty-three per cent of enterprises in the agriculture sector reported that internet was important to them.

When enterprises were asked whether they had websites, the majority reported that they did not. Thirty-two per cent of enterprises in the manufacturing sector and 44 per cent in tourism, however, reported that they do find navigating websites, especially those of their suppliers, important in their business, as this enables them to find equipment and raw materials suppliers. Seventy-five per cent in ICT, 64 per cent in other services and 66 per cent in retail found suppliers' websites to be important to their business.

### ***Awareness-raising, including consumer awareness***

Internet awareness and digital skills have significantly improved in Botswana in recent years with the proliferation of mobile devices, smartphones, mobile broadband and social media, enabling large numbers of Botswanans to gain familiarity with the use of ICT devices and applications. This includes the rollout of mobile app packages providing access to Facebook, WhatsApp and other applications that have enjoyed wide uptake.

While e-commerce in Botswana is currently underdeveloped, it has great market potential. There is a need to translate Internet and social media awareness into e-commerce awareness and engagement. With a growing overall smartphone penetration rate and a relatively high smartphone penetration rate among Botswana youth, the country has a large consumer population that could potentially be converted to the use of e-commerce.

The lack of awareness, including a resistance to change traditional ways of doing things, suspicion of technology, mistrust of online payments and concerns about online fraud continue to pose a major barrier to the adoption of e-commerce in Botswana. Furthermore, many consumers currently do not see value of engaging in e-commerce.

Consumer awareness initiatives and campaigns that include consumer rights education should be launched, targeting consumers and all stakeholders involved in e-commerce. Consumer awareness of e-payment mechanisms should also be raised through targeted campaigns. Botswana consumers and businesses could both benefit from the development of a consumer market research industry in the country.

While Botswana's Consumer Protection Act of 2018 prohibits false, misleading and deceptive conduct, the Act contains no specific provision on online advertising. A section on online deceptive practices could strengthen e-commerce regulations.

There is wide scope for regional cooperation to combat online fraud, particularly between Botswana and South Africa, which engage in considerable cross-border e-commerce.

Lack of e-commerce awareness among businesses is also a major barrier to e-commerce growth. Many businesses are unaware of the benefits offered by

e-commerce. Empowering Botswana's micro and small enterprises (MSEs) to tap the opportunities offered by e-commerce has the potential to drive economic growth, create livelihoods and jobs and revitalize and empower economically disadvantaged segments of the population, including youth, women and people in rural areas.

### ***E-platforms***

E-platforms and e-marketplaces and portals can be especially important for countries like Botswana, because IT skills and payment and logistics services (which may often be through e-platforms and e-marketplaces) are generally not accessible to smaller businesses.

While still in their early stages, a growing number of e-marketplaces have emerged in Botswana in the past few years, particularly in niche areas. Skymart, the first national e-commerce platform, is reported to have been launched in 2012. This online e-commerce retail mall focuses on a wide range of products, such as electronics, home goods, watches, jewellery, fashion, baby products, etc. Since 2010, AutoGuide Botswana has been an e-marketplace that advertises used cars and other types of vehicles across the country. Recently launched Careerpool Botswana is Botswana's first registered online job website, showcasing all of Botswana's employment opportunities.

Growing the critical mass of users of e-platforms and e-marketplaces in Botswana demands increased awareness among small retailers of the opportunities offered by national and international electronic marketplaces. Many supplier and producer businesses are unaware of e-commerce's benefits and mechanisms. Some may also have difficulty accessing payment services. Domestic and regional B2B e-platforms and e-marketplaces can help Botswana business leverage these opportunities.

### ***E-government services, including e-procurement***

A number of e-government services are available. Through an online taxation platform of the Botswana Unified Revenue Service (BURS), Botswana citizens can pay their taxes online through their banks. Through a partnership with BotswanaPost, they can also renew their driver's licences online. A number of stakeholders have reported problems, however, as the online service for a number of e-government

services is often down. Addressing the technical IT and connectivity issues at the root of these problems is essential for ensuring easy online access and the smooth operation of these e-government services.

The Government of Botswana's e-procurement system for public tenders, the Integrated Procurement Management System, is operated by the Public Procurement and Asset Disposal Board (PPADB). Prospective government contractors can register online to bid for government contracts. The Central Medical Store in the Ministry of Health currently uses an Inventory Management System to schedule purchases under individual framework agreements, and the Ministry is implementing a system to enable online store requisitioning.

The Government may consider the establishment of an e-marketplace, where suppliers with framework contracts can put their goods or services up for purchase by government entities.

### ***Assessment of Botswana's strengths and weaknesses for e-commerce***

Botswana is well-positioned for e-commerce growth. It has a large number of e-commerce-ready users with smartphones, who use mobile broadband and can serve as the initial segments of the population that will spearhead the spread of e-commerce. The country has a growing middle class and large segment of social media-using youth who can serve as the early adopters of e-commerce.

Botswana has a world-class, globally competitive diamond industry, which has been the country's main FDI and foreign exchange earner and played a critical role in growing the economy, generating revenue and jobs. The country's high-end tourism industry has been developing and shows strong growth potential.

Botswana's proximity to a large economic market, South Africa, and its geographical location at the crossroads of the Southern Africa subregion is also a strength that can be leveraged. Its membership in SACU gives Botswana-based companies duty-free access to the entire Southern Africa subregion.

Moreover, preferential trade agreements provide Botswana with market access to large developed markets. This access, facilitated through trade agreements, can benefit Botswana e-commerce businesses. In addition, the closer geographical proximity of Botswana and the entire African continent

to certain markets, such as the United States and the European Union, also offer the opportunity for lower logistics costs – should these shorter trade routes be capitalized on, optimized and made cost efficient – for international trade with these markets, in contrast to Asian countries, which must cover the logistics costs for far longer distances.

Botswana's high literacy rate and high percentage of the population with at the least a secondary school education also help to ensure a population that is e-commerce-ready. Widespread use of English and exposure to ICT devices also position Botswana workers and citizens to be able to plug into global networks.

Botswana's well-developed legal and regulatory environment for electronic payments, its robust ICT and e-commerce-related laws and recently updated regulations also constitute an important pillar for creating an environment favourable to e-commerce development.

At the same time, the country is faced with a number of challenges and weaknesses when it comes to e-commerce. While Botswana has made commendable progress in developing its ICT and telecommunications infrastructure, lowering Internet cost and trying to address the infrastructure challenges of landlocked countries, it continues to have problems with quality of service and high Internet data costs. Consultations with a number of stakeholders yielded reports of problems with Internet and e-government service operations. The location of hosting services and broadband access to e-commerce sites are potential problems.

There is limited awareness, use and experience with ICTs and e-commerce among MSMEs. This underscores the basic need for awareness and expertise in e-commerce among companies and professionals.

Botswana has a relatively underdeveloped IT and innovation sector, a lack of FDI in the IT sector and the absence of a large number of major IT players, especially when compared with neighbouring South Africa, which serves as the regional headquarters for many of these companies and related FDI. Botswana is often eclipsed by South Africa or perceived as an extension of the South African market by much of the international investment community. This constrains the growth of supply-side players in e-commerce.

Botswana's small talent pool is also a constraint to e-commerce growth. In the past, it has not been large enough for the country to be seen as possessing sufficient IT talent and the startup ecosystem to make it a potential contender for major tech FDI.

While Botswana has certain robust sectors – especially the mining and extraction industry, which accounts for the highest percentage of GDP, and to some extent, its beef and tourism industry – it has long struggled to grow its private sector. The economy is primarily government-driven, with the government being the country's major employer. There is a relatively small business sector outside of government procurement-generated business. Botswana's fledgling businesses and business sector have also struggled to compete in the highly competitive Southern African market, which is dominated by tough regional players. This constrains the growth of e-commerce and limits the ability of Botswana businesses to be competitive in e-commerce.

With regard to its payments sector, Botswana has no domestic switch that could process other payment instruments. This limits the use of e-commerce, especially for services and digital products. While the country has a strong financial services sector, its financial market is shallow compared to other emerging markets and advanced economics.

It is hard to obtain startup finance, and there are few business incubators and limited numbers of individuals and businesses supported through government financing programmes. This limits the ability of entrepreneurs to exploit e-commerce opportunities.

Botswana's small consumer market may pose a challenge to attracting certain types of FDI, especially FDI aimed at tapping large consumer markets. Extra efforts may be needed to attract global e-commerce retailers.<sup>125</sup> However, it should be noted that in the past, Botswana's retail market was already considered one of the highest potential growth markets in Africa, and it features some of the continent's top retailers. In recent years, however, continental African competition in the retail market has intensified, with competition from other regions of Sub-Saharan Africa.

Botswana's large geographic land mass with a highly dispersed population in certain areas also requires large ICT, logistics and other forms of investment to ensure full national coverage, and this can pose a cost challenge for infrastructure development as a whole, including ICT.

As a landlocked country, Botswana lacks access to ports and maritime trade and relies heavily on its neighbours, especially South Africa, for much of its international logistics and international trade. Both of these factors pose challenges for e-commerce infrastructure development, logistics and low cost services and delivery. Nonetheless, the country has made great strides in overcoming some of these obstacles.

Interviews with the Consumer Protection Office and the Cybercrimes Unit of Botswana Police indicate that consumers shopping online have encountered different types of fraud, ranging from non-delivery of products ordered online to fake electronic wallet messages and tax avoidance activities. Most fraud reportedly originates in South Africa.

A significant weakness in developing trust in e-commerce is the lack of coordinated consumer protection and cybercrime-fighting in the region. Botswana is a small country and is heavily reliant on commerce with South Africa and its other neighbours. By its nature, e-commerce is frequently conducted across national borders, and effective policing of misrepresentation and outright fraud therefore must also be regional and international in scope. Decisive action by the SADC and other regional institutions to address this issue is required.

Like most of SACU, several of Botswana's business sectors are dominated by large retailers and regional players, especially from South Africa. Similarly, there is the risk that Botswana's local e-commerce market will be dominated by larger retailers and companies. Botswanan businesses must differentiate themselves from their competitors.

Botswana faces competition from surrounding SADC countries, in particular South Africa, for IT, ICT and e-commerce-related FDI. Though proximity to South Africa has also had FDI-related advantages, since South Africa has been a large investor in Botswana and Botswana has benefited from the expansionist drive of South African businesses in certain sectors. Botswana will need to demonstrate that it is an attractive location for foreign investment to boost its capacity to attract IT, ICT and e-commerce-related FDI.

Public e-procurement can have both pros and cons in terms of driving business. Since the government is the country's largest employer, in the absence of a vibrant private sector, government contracts

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can play a role in driving business in the country. However, over time, unless private-sector business opportunities arise, there is a risk of Botswana's business sector becoming over-dependent on public sector procurement. This can have the effect of disincentivizing the development of competitiveness among Botswana businesses. After providing the initial impetus for business, weaning businesses off public contracts and moving them toward other types of contracts would be an important step forward in fostering a sustainable private sector.

In countries with a robust entrepreneurial culture, e-commerce can often lead to a rapid increase in the number of B2C e-commerce retailers. This can lead to an increase in e-commerce uptake by engaged consumers, which, in turn, can incentivize further entrepreneurship. By leveraging this dynamic, there is an opportunity to create a virtual cycle helping to drive the growth of the private sector and further diversification. This is the focus of the next chapter of this report.

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A man with short dark hair, wearing a white short-sleeved button-down shirt, is seated at a dark desk. He is holding a black mobile phone to his left ear with his left hand, which also features a silver ring on the ring finger and a black leather watch with a blue dial. He is looking down at a laptop in front of him. On the desk, there is also a closed black notebook. The background consists of light-colored curtains. A large blue diagonal shape is overlaid on the left side of the image, containing white text.

**CHAPTER 3:**  
ICTS AND E-COMMERCE  
FOR PRIVATE SECTOR  
DEVELOPMENT AND  
DIVERSIFICATION

The private sector is vital to driving economic growth, generating employment, improving livelihoods, reducing poverty and stimulating economic diversification. Private-sector businesses provide critical capital, knowledge, innovation, taxes, opportunities for partnerships and risk mitigation essential to a country's economic development. A dynamic private sector is key to the sustainable growth of an economy and, working hand-in-hand with the public sector, can help it better fulfil its mission.<sup>126</sup>

The Government of Botswana has made private-sector development a key component of its economic development strategy. The Botswana Industrial Development Policy (2014) specifically stated that the private sector should drive the country's industrialization programme and identified key areas for private-sector development, including: capacity building to develop entrepreneurs; skills development to meet private-sector needs; technology adaptation training; and public-private partnerships, particularly in infrastructure development.

In 2013, Botswana launched its Private Sector Development Strategy as part of Botswana's Economic Diversification Drive. Its aim is to create a business environment conducive to private-sector growth and to boost the growth and competitiveness of the sector. In the years since the country's independence, Botswana's private sector has exhibited gradual growth, seen in the growing number of businesses in the country. Overall, however, despite numerous growth promotion initiatives, with the exception of the mining and extraction sector, Botswana's private sector remains relatively small.

Much of it remains dependent on government contracts and consumption spending by civil servants to drive business.

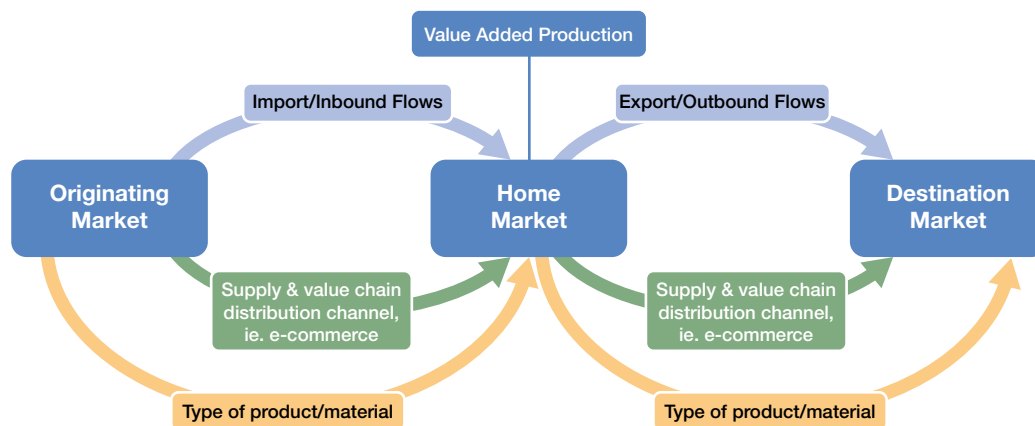
Opportunities are available to leverage ICTs and e-commerce in support of private-sector development. ICTs have emerged as powerful tools to support business growth, increasing operational efficiencies and productivity across sectors, complementing pro-poor growth activities, enhancing citizens' livelihood capacities and helping to address developing countries' extensive barriers to growth.<sup>127</sup>

This chapter will examine the role of ICTs and e-commerce in supporting private-sector development in Botswana. It will be divided into two parts. Part A will approach private-sector development through the lens of leveraging ICTs and e-commerce to promote trade and industry, adopting a more macro-level and market-based approach to promoting economic growth. Part B will adopt a micro level lens and focus on ICTs and e-commerce to promote local livelihoods and job opportunities, including for Botswana's smallholder farmers and people in rural areas.

## **A. ICTs and e-commerce in support of trade and industry**

ICTs and e-commerce can serve as a nexus for private-sector development and trade and industry and can play a role in catalyzing the private sector in support of trade and industrial growth. This section makes use of an Integrated Framework on ICTs and E-commerce in Trade and Industry (see Figure 14 below) to analyze the role of ICTs and e-commerce in Botswana's trade and industry dynamic. The new framework model builds on the diagnostic methodology of the ICTPR Integrated E-commerce Enabler and Assessment Framework<sup>128</sup>, grounded in eight foundational pillars, and expands the analysis to consideration of ICTs and e-commerce integrated into the country's international trade flows and national production processes.

Figure 14 Integrated Framework for ICTs and E-commerce in Trade and Industry



Source: UNCTAD

\*In addition to international trade flows, the framework can alternatively be used to apply to intracountry regional (inbound/outbound) flows for domestic commerce.

The rest of this section will provide a brief overview of trade and industry in Botswana, highlighting the country's key import and export flows (by industry and trading partner) and their links with industrial production, manufacturing in particular. The section will then proceed to consideration of some of the supply and value chain and distribution channel factors at play in Botswana that are interrelated with these trade flows.

Opportunities are available to leverage ICTs and e-commerce for businesses to boost business growth, productivity and competitiveness, and the model framework can apply to e-commerce across the full spectrum of the supply and value chain. However, since Botswana's Exporter Development Programme addresses supply side constraints, due to limitations in scope, this chapter builds on what already exists and focuses primarily on the right-hand side of the model – that is, the role of e-commerce as a channel to market for growing exports.

### **Overview of trade and industry in Botswana**

There is a close connection between the growth of the private sector and the promotion of trade and industry. Private-sector growth helps spur trade and industry. It can launch new industries and expand or make existing industries more competitive. Export-oriented economic growth models adopted by Asian Tigers, for example, spurred massive manufacturing and

industrial growth through trade. Import substitution strategies have been adopted by other countries to promote the domestic economy and industrial growth.

Botswana's Private Sector Development Strategy is built on the following four priorities: (1) trade expansion; (2) improving labour productivity; (3) support to trade institutions; and (4) improving the business climate. Botswana's 2009 National Trade Policy had a single overarching goal: to increase Botswana's participation in the world trading system. Botswana's National Export Strategy launched last May 2019 prioritized the following sectors for exports: arts and crafts; garments and textiles; jewellery and semi-precious stones; leather and leather products; meat and meat products; light manufacturing (including glass and glass products); indigenous products; and services.

Trade-led growth through the development of competitive export industries in the private sector has been a strategy pursued by Botswana for several decades. Botswana's meteoric growth in the decades since it achieved statehood has historically been export- and FDI-led. Under government stewardship and through rapid expansion of the diamond industry, especially during the period 1970–2000, diamond exports created a pipeline for GDP growth and provided revenues that the government prudently invested in infrastructure, education, health and other socioeconomic development initiatives for the country. In the past two decades, however, diamond export contributions to the economy have been declining. As

noted by UNDP, in the mid-1980s, diamond revenues contributed over 50 per cent of Botswana's GDP; by the early 2000s, the figure had fallen to 40 per cent of GDP; and by 2018, it had fallen to 24 per cent of GDP.<sup>129</sup>

### ***Botswana's trade enhancement measures***

Botswana has adopted a number of trade enhancement measures to support trade. They include negotiating free trade agreements with its neighbours and other countries. Botswana is a member of the Southern African Customs Union (SACU), the oldest customs union in the world, originally created in 1910 and headquartered in Namibia. It has five members: Botswana, South Africa, Namibia, Lesotho and Swaziland (Eswatini). SACU redistributes customs revenue collected by the five members each year based on a revenue-sharing formula.

While the SACU trading regime and tariff structure is highly complex, especially when bilateral and regional trade agreements are taken into account, SACU members are largely bound under a single tariff and apply a common external tariff to non-SACU members. Trade within SACU is duty-free, and some measures have been put in place to reduce non-tariff barriers among SACU members. For example, import permits are not required for goods entering Botswana from other SACU members, with the exception of some foodstuffs.<sup>130 131</sup> Nonetheless, certain key non-tariff trade policy measures, such as quantitative restrictions, customs procedures, standards and technical regulations, sanitary and phytosanitary measures, competition policy and internal taxes, continue to be unharmonized within SACU.<sup>132</sup>

Imports to SACU countries are subject to tariffs and taxation based on the origin and type of product. In addition, imports to SACU countries are subject to excise taxes (for certain products), levies, and value added tax (VAT) or sales tax. Each of the SACU countries sets its own VAT or sales tax. As an original WTO member, Botswana, like each SACU member, imposes most favoured nation (MFN) tariffs on all products entering the customs union. The exception is products originating from the EU, the European Free Trade Association (EFTA), SADC, and the Southern Common Market (MERCOSUR), which are taxed in accordance with these countries' trade agreements with SACU. In this context, as a member of SACU, Botswana is a signatory to the SACU-MEROSUR Preferential Trade Agreement and the SACU-EFTA

free trade agreement. The SACU Agreement does not cover trade in services.<sup>133</sup>

Botswana is also a member of the Southern African Development Community (SADC), headquartered in Gaborone and comprised of 16 countries.<sup>134</sup> SADC includes the SACU members and 11 other regional States. SADC members have entered into a free trade agreement aimed at creating a Free Trade Area in the SADC region that is currently being implemented. SADC is also actively working on eliminating non-tariff barriers in the region and on other regional integration issues. As a member of SADC, Botswana is a party to the SADC-EU Economic Partnership Agreement (EPA). Botswana is also an active party in the current negotiations on the COMESA-EAC-SADC Tripartite Free Trade Agreement (FTA).

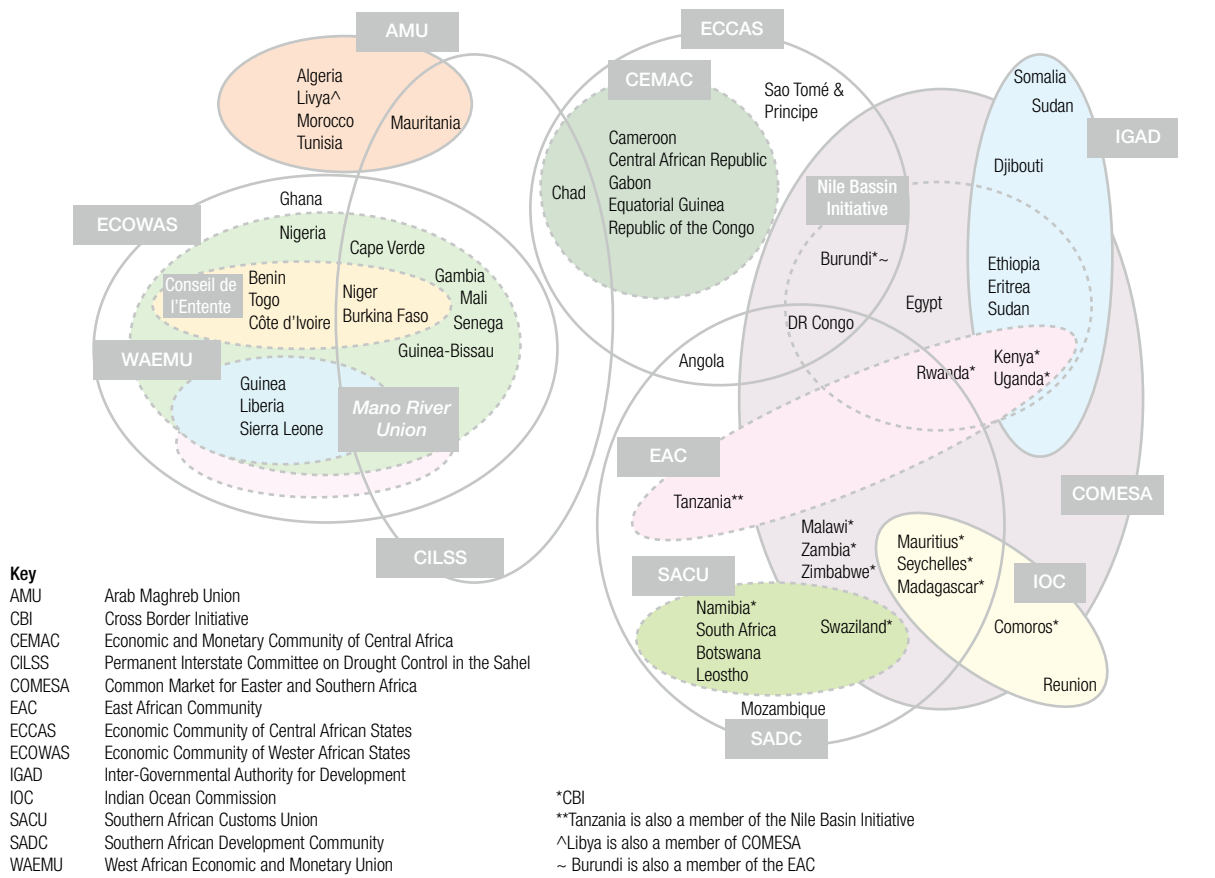
Botswana currently enjoys preferential market access to the United States under the African Growth and Opportunity Act (AGOA) (to 2025), which allows qualifying exports from Botswana duty-free access into the United States. Botswana has a number of bilateral trade agreements in the region – for example, with Zimbabwe and Malawi.

In addition to the above-mentioned trade agreements, Botswana has signed, but not ratified, the African Continental Free Trade Agreement, which entered into force on 1 January 2021. When implemented, this Agreement will address regional trade barriers by providing duty-free trade throughout Africa – the analogue to the European Union in Europe and the North American Free Trade Agreement in North America. Figure 15 below illustrates Botswana's key trade agreements in Africa.

### ***Botswana's trade performance and links with industry***

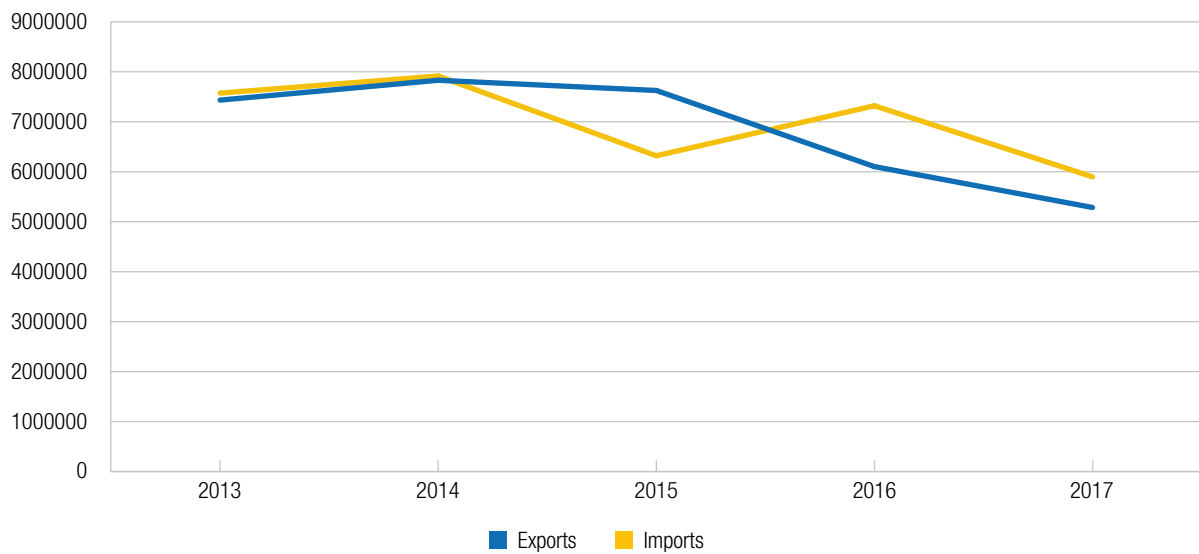
Over the past decade Botswana has witnessed a marked increase in exports, moving from just over US\$4 billion in 2005 to nearly US\$8 billion in 2014. Imports exhibited a much larger increase in the same period, moving from around US\$3 billion in 2005 to US\$8 billion in 2014 (ITC). After 2008, the trade surplus turned into a deficit, reaching a record US\$2 billion in 2012 before reaching balance in 2014. Since 2014, however, overall trade volumes have been on the decline, with exports falling faster on average than imports. By 2017, both imports and exports hovered around US\$5.5 billion. Figure 16 below shows Botswana's trade performance between 2013 and 2017.

Figure 15 Botswana's key trade agreements in Africa



Source: USAID

Figure 16 Trade Performance of Botswana, 2013-2017



Source: ITC data, 2018

### **Exports**

In 2018, the principal commodities constituting Botswana's main exports were: diamonds (86 per cent of the value of total exports); machinery and electrical equipment (4.4 per cent); meat and meat products (2.5 per cent); salt and soda ash (1.9 per cent); and vehicles and transport equipment (1.3 per cent). Botswana's major trading partners in terms of exports were Asia, accounting for 52.2 per cent of the value of total exports – in particular, to Singapore (18.7 per cent) and India (12.7 per cent). Other main trade partners in Asia were: the UAE (7.9 per cent); Hong Kong (7.8 per cent); and Israel (4.7 per cent). Nearly 100 per cent of the exports to Asia were diamonds.

Botswana exports to the SACU region accounted for 23.5 per cent of total exports. Within SACU, Botswana's main trading partners for exports were South Africa (16.7 per cent of total exports) and Namibia (6.8 per cent). Diamonds were also the main commodity exported to these countries.

Botswana exports to the EU accounted for 17 per cent of total exports, in particular to Belgium (15.3 per cent) and the UK (1 per cent). Exports to Belgium consisted of diamonds only. Exports to the UK consisted of meat and meat products only.<sup>135</sup>

The EU has been an important export market for Botswana beef since 2007, when Botswana was first able to benefit from preferential treatment under the EPA. While beef exports to the UK are only a small part of Botswana's total exports, they support the livelihoods and jobs of the majority of Botswana's population, especially in rural areas.

### **Imports to Botswana**

In 2018, official statistics from Statistics Botswana showed that the principal commodities among Botswana imports were: diamonds (35.1 per cent of total imports); machinery and electrical equipment (12 per cent); food, beverages and tobacco (11.8 per cent); and fuel (11.3 per cent). Botswana is a major importer of consumer goods and fuel. In recent years, Botswana has relied heavily on food imports due to constraints to the expansion of production on arable land. Botswana's main trading partner for imports was South Africa, which provided 60.6 per cent of Botswana's total imports. The main imports from South Africa were food, beverages and tobacco, as well as fuel.<sup>136</sup> Diamond imports reflect the importation of unprocessed diamonds as part of the aggregation

of diamonds under the Diamond Trading Company, which was relocated from the UK to Botswana in 2012 to establish the diamond beneficiation business in Botswana.

### **Industry in Botswana**

The capital-intensive nature of diamond extraction and the limit on the number of jobs that the sector creates has made manufacturing development an important part of Botswana's industrial policy. The government has targeted the manufacturing sector as a potential driver of growth to promote private sector development, job creation and diversification. Apart from mineral extraction, however, Botswana does not have an extensive industrial base. Today, there is generally no heavy industrial production in Botswana. Botswana has experienced growth, however, in light manufacturing (less than 15 per cent of GNP).

From the country's independence in 1966 to 1975, manufacturing was limited to the beef industry through the Botswana Meat Commission. After 1975, Botswana saw growth in manufacturing in other sectors, including textiles, breweries, construction, etc. in its earliest pursuit of import substitution. From 1993 to 2001, South Korean car manufacturer Hyundai's opening of an automobile assembly plant in Botswana saw rapid growth potential in Botswana's completely knocked-down (CKD) automobile assembly capacity and spurred rapid manufacturing growth through exports of the cars to South Africa. From 1996-1998, car exports became Botswana's second major export commodity after diamonds and peaked at 10-14 per cent of total exports after diamond's 70-71 per cent share of total exports. However, the growing industry was abruptly halted in 2000 and shut down in 2001, primarily due to rules of origin-related issues.<sup>137</sup> By 2002, automobile exports had fallen to less than 3 per cent of Botswana's total export share.

Light manufacturing in support of South Africa's motor vehicle industry has grown, however – in particular, Botswana's burgeoning wire harnessing industry, providing intermediate products to South Africa's car manufacturing industry. In 2017, PASDEC, a major Malaysian wire harness company opened a manufacturing plant and relocated to Botswana.<sup>138</sup> South Africa's Kromberg Company and Schubert's major wire harness factory in Botswana have been expanding 2017.<sup>139</sup>

For a number of years, Botswana's textile industry was also able to achieve some growth, driven

largely through AGOA. Over 10 textile/apparel firms in Botswana were exporting under AGOA, peaking in 2011; however, in subsequent years, production plummeted, dropping from US\$17.1 million in 2011, US\$ 8.26 million in 2015, US\$2,889 in 2016 and almost US\$ 0 in 2018.<sup>140</sup>

### ***E-commerce in supply and value chains and their distribution channels in Botswana***

Supply and value chains and their distribution channels are an essential conduit for international trade and play an important role in strengthening imports and exports and growing industry and productivity. According to the integrated framework on e-commerce for trade and industry model mentioned above, e-commerce can come into play at various junctures in the supply and value chain and its distribution channel. From the perspective of a home market such as Botswana, this is largely through two main mechanisms:

1. via the supply and value chain, as a mechanism for sourcing, supply and value-added production: e-commerce as import flows into the country (or inbound flows, if domestic) of raw materials, intermediate or finished goods from suppliers in originating markets (commonly foreign countries with low-cost supply production), either to be further value added transformed in the home country or sold or re-exported for final consumption as a finished good.
2. via the distribution channel, as a mechanism for channel to market: e-commerce as export flows (or outbound flows if domestic) of materials or products (raw materials, intermediate or finished goods), either out of the home market to foreign destination markets or within the home market, making use of the channel to market to distribute to consumers or buyers.

One demonstration of the first mechanism – where e-commerce operates via the supply and value chain as a main channel for sourcing, supply and value added – is the rise of online wholesale supplier markets. The spectacular success of Alibaba's B2B e-marketplace in the late 1990s and subsequent growth of B2B-driven exports and export-oriented manufacturing in China, for example, were based on a radical disruption of the traditional supply chain and distribution channel in China, when much of the face-to-face, telephone and relationship-based business between U.S. and European wholesalers and retail buyers and Chinese

sellers and manufacturers transitioned to an online wholesale marketplace.

Alibaba's B2B platform created an opportunity for many more Chinese suppliers – normally excluded from the traditional mechanism due to geographical remoteness or marginalization from established commercial networks – to participate in the wholesale supply market. In a business environment wracked by language and cultural barriers and transport and logistical hurdles, it facilitated the ease with which Western wholesale and retail buyers and qualified Chinese manufacturers and suppliers could locate, interact and transact with each other. While China's experience demonstrates one way in which Chinese businesses in the manufacturing sector were able to become an important part of the e-commerce supply and value chain, there are several mechanisms by which Botswana manufacturing businesses can integrate into the e-commerce supply and value chain (see Box 15. Manufacturing and Integrating into the B2B E-commerce Supply and Value Chain)

The second mechanism, where e-commerce operates via the distribution channel as a channel to market, is the mechanism by which e-commerce is perhaps most famously known in the consumer market and exemplified by e-commerce giants such as Amazon and eBay, as well as myriad online retail stores. This mechanism focuses on the ways that a business can make its products available to customers, primarily by selling and marketing.

As one of the newest types of distribution channels to emerge, e-commerce has transformed the traditional distribution system through which all trade is transacted. Prior to the emergence of e-commerce, traditional distribution channels operated exclusively by means of a chain of businesses or intermediaries through which the final buyer or consumer purchases a good or service. This is either through direct selling (direct to the consumer) or indirect selling (through an intermediary).

Traditional distribution channels include wholesalers, retailers (including retail stores), distributors, trading houses, government buyers and other intermediary trading companies (See Figure 17 below). Channel configurations for consumer and industrial products can vary widely. As seen in Figure 17, these configurations can range from elaborate multilevel channels employing many types of intermediaries to direct, producer-to-consumer types of channels, such as door-to-door salesmen, mail order catalogues or e-commerce.<sup>141</sup>

**Box 15 Integrating into the E-commerce Supply and Value Chain: Manufacturing and the White Label and Private Label Markets**

The ease with which e-commerce has made it possible to launch a company and market products has spawned legions of new entrepreneurs worldwide who aspire to run their own e-retail shops, also called e-retailers. In some cases, these e-retail enterprises are businesses that produce products for which e-commerce serves as a channel to market the enterprise's own self-produced products. In other cases, the e-retailer may run part of its production process locally, but rely on third-party suppliers for important parts to its production line. In a popular trend in recent years, the e-retailer sells e-commerce products manufactured entirely by a third party, also known as "white label products," or manufactured by a third party and slightly modified to make it a new value added product, also known as "private label products."

E-commerce has multiplied the number of entrepreneurs and enterprises running businesses through the white label and private label products markets. White label and private label products are sold by retailers with their own branding and logo. The generic products, however, are manufactured by a third party.<sup>142</sup> From the manufacturer's perspective, white labelling or private labelling is a form of B2B commerce, where a manufacturer produces a product and then sells it to another business that, in turn, brands the product or slightly modifies it before branding and then sells it to its own customers as its own branded product.<sup>143</sup>

In some developed countries, the existence of highly developed e-marketplaces – for example, Amazon in the United States – offering very convenient and affordable fulfilment services, has made the launch and running of an e-shop a very attractive type of business for many day workers seeking supplementary income, a more flexible lifestyle, and/or an escape from the drudgery of their day jobs. This has resulted in a surge of aspiring entrepreneurs, particularly in the United States and Europe, tapping the white label and private label manufacturing markets to find good products to sell in their e-shops and create niche e-commerce market brands. These aspiring e-retailers, largely small e-commerce business owners with high growth potential located and kickstarted in developed countries with extensive knowledge and strong ties with large affluent consumer markets, are seeking white label and private label manufacturers, most of whom are located in developing countries, to partner with to help them develop brand products to sell online and grow their e-retail businesses.

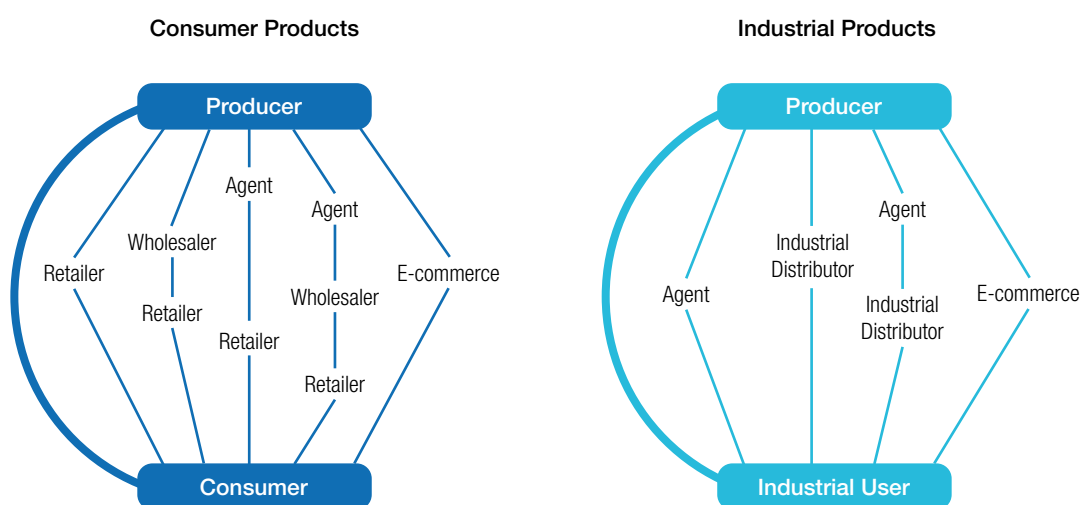
Currently, e-retailers in developed markets have tended to pursue partnerships with Chinese white label and private label manufacturers due to the speed, reliability, quality, low cost and affordability of the products delivered. Asia, especially China, is widely perceived among these small e-retailers as the most reliable supplier market and has dominated this e-commerce supply and value chain. Despite certain advantages, such as closer geographical vicinity to developed markets, the potential for faster logistics and lower logistics costs, prospective business contact affinities due to shared heritage and diaspora dynamics, etc., to date the supplier market in other regions such as Africa has largely been perceived as risky by these generally risk averse e-retail entrepreneurs.

Taking the initiative to counter these negative perceptions through active steps such as building a reputation for credibility, reliability and professionalism; building trust among these e-retailers; gaining an understanding of this B2B client market's needs and reaching out to meet these needs; and growing manufacturing capacity known for reliability, speed, efficiency, quality, low cost, affordability and customer service in the production and delivery of contracted product orders, can enable Botswana's manufacturing sector to capture some of the growth partnerships with these small and medium-sized businesses in developed countries and leverage opportunities in these burgeoning e-retailer white label and private label markets to integrate into the e-commerce supply and value chain.

Source: UNCTAD



Figure 17 Channel configurations for consumer and industrial products



Source: Czinkota. Adapted by UNCTAD

E-commerce offers various approaches for both direct and indirect (through an intermediary) selling, including direct-to-consumer business-owned websites or e-commerce platform intermediaries. While many traditional distribution channels continue to be major sales channels, to dominate industries and remain vital for running competitive businesses, the emergence of e-commerce as a channel to market has provided one low-cost, relatively easy selling option and approach for businesses, especially small businesses with neither the resources, commercial networks, or the ability to undertake the costly and often tedious work of building traditional distribution and selling channels – for example, opening a physical brick-and-mortar store. In addition, e-commerce is increasingly being used in combination with traditional distribution channels for optimized selling in hybrid forms of the distribution channel, including omnichannel marketing and selling.

Considering the state of play in an industry's or sector's existing supply and distribution channels – both in originating markets where supply for industry or value-added production is sourced, and in destination markets where businesses wish to sell their intermediary or final products – can help to ensure more effective and optimal use of e-commerce to support business and industry growth and expansion.

### ***Supply and value chains and their distribution channels in selected sectors in Botswana***

Supply and value chains and their distribution channels vary widely across Botswana sectors and industries, with some operating at high levels of sophistication and others scarcely developed. While relationships and the human interface remain critical in many supply and value chains and distribution channels, more developed and established chains and channels involving large, well-capitalized market players or multinationals tend to be characterized by highly integrated or increasingly integrated and sophisticated use of IT and e-platforms, making technology adoption a prerequisite for participation. A snapshot across selected Botswana industries and sectors shows the evolving supply and value chain and distribution channel landscape, including some of the links with e-commerce.

Through its joint venture with De Beers, Botswana has a highly advanced and well-developed supply chain in the mineral extraction industry for diamonds. With the relocation of De Beers Diamond Trading Hub from London to Gaborone in 2012, the full supply and value chain and distribution channel is now integrated into Botswana operations as part of the measures to strengthen Botswana's role in the value chain and grow Botswana's diamond beneficiation industry.

As headquarters for the De Beers Trading Hub, the Botswana Diamond Centre is host to the world's premier and most advanced, sophisticated and exclusive distribution channel ever established in diamond trading and sales. While the distribution channel remains highly relationship-based, technology, in addition to the supply chain, is a critical part, as evidenced by the use of technologies such as private extranet for exclusive buyers, blockchain-based diamond tracing and recently, online diamond auctions due to COVID-19 and travel restrictions.

With the growth of shopping malls, large supermarkets that include major local brands and South African brand franchises, Botswana has a healthy retail sector.<sup>144</sup> While its rankings have stagnated in past years, earlier in the decade it had been ranked as one of the top countries globally for retail FDI attractiveness.<sup>145</sup> Overall, however, Botswana does not appear to have large, established distributor networks, especially when compared to the highly developed distribution network in South Africa and often seen in more developed countries. Most established large-scale distributors are in the south or centre of the country, while smaller distributors are in the north. Due to their inability to attract sufficient business, some distributors have resorted to operating as both wholesalers and retailers.<sup>146</sup>

Botswana has its own home-grown major supermarket chains, as well as the multinational Choppies and Sefalana. Multinational grocery and general merchandise retailer, Choppies, operates and owns a centralized in-house distribution network across Botswana, as well as in several other African countries. Choppies also works closely with Botswana distributor, PST, the major distributor in the country's fast-moving consumer goods (FMCG) sector, and makes use of PST's SAP application-based e-procurement software. Choppies also has plans to move to EDI with other suppliers, and, while it already offers grocery ordering via email and WhatsApp, it also intends to launch a B2B and B2C e-commerce website.

Sefalana, Botswana's second largest supermarket chain, operates in Botswana, Namibia, Lesotho and South Africa. It works with a number of distributors and sells and markets its products through a network of 25 cash-and-carry stores, 26 supermarkets and 4 hypermarkets in Botswana. Sefalana was the first major retailer to roll out e-commerce, with the launch of an online shopping website in 2016. It offers grocery ordering via email or WhatsApp and has plans to

introduce e-procurement and strengthen its integration of electronic networks with suppliers. Sefalana is also involved in local food processing and manufacturing through the production and transformation of several agricultural products, including malt, and the manufacture of soaps, cleaning products and edible oil.

Kglagagadi Breweries, Botswana's home-grown brewery founded nearly 50 years ago, manufactures beer and soft drinks. With strong international linkages, the company is part of the world's leading brewer, SAB Miller, and operates several breweries, a sparkling soft drink production plant and several sales and distribution depots in Botswana.<sup>147</sup>

More than 90 per cent of food and groceries consumed in Botswana are imported from South Africa. As a result, a large portion of Botswana's distribution channel for the retail sector consists of distributors for South African producers supplying major Botswana outlets, high-end retailers and major wholesale chains from South Africa.<sup>148</sup> Some of these major distributors include CA Sales for FCMG. On the selling and marketing end of the distribution channel, South African retail and wholesale chains that run e-commerce in South Africa commonly provide e-commerce service in Botswana as well. Such outlets include Walmart-owned Massmart, the owner of Builders' Warehouse, and Cashbuild, both of which operate e-commerce websites in building supplies products in Botswana.

These segments of the Botswana retail distribution channel are more established and either already engaged in the use of electronic sourcing and selling distribution channels, including through e-commerce, or planning to. However, they constitute only one segment of the sector in Botswana, and there are large numbers of businesses and parts of Botswana's retail market for which the supply chain and distribution channel are particularly undeveloped or marginalized from the mainstream distribution channels used by large retailers. These include small local producers of consumer goods, some national wholesalers, small general shop dealers and informal tuck-shops (semausu), which are largely locally-owned. While a more in-depth examination is needed, except for mobile phone and social media use, these players in the retail sector largely appear not to be making use of IT or e-platforms for their businesses.

Since 1965, the government-owned Botswana Meat Commission has been the only entity licensed to export

Botswana beef and has served as the primary selling, buying and distribution channel for beef, primarily to the EU through the EPA and South Africa as part of SACU. While Botswana beef exports account for only a small percentage of total exports, the beef industry has been the primary source of livelihood for more than 50 per cent of the population. BMC, however, has been plagued by operating inefficiencies, old equipment, financial problems and low output. In an effort to boost the output and productivity of the beef industry, measures are currently being adopted to liberalize the industry and privatize BMC. Opening up the industry and lifting price controls while removing price supports to small farmers has the prospect of boosting the country's supply capacity and beef exports. Establishing effective new selling, buying and distribution channels for Botswana's beef industry will play an important role in supporting exports growth as Botswana improves its competitiveness in the global market.

Botswana has several thousand crafts producers, predominantly women, and has been engaged in the commercial production and marketing of handicrafts for several decades. Botswana Craft, the largest handicraft centre in Gaborone, was established in 1970 by the Botswana Development Corporation to develop the country's rural handicraft industry. The operation has a well-designed buying, selling and distribution channel – including a website and retail shop. The industry seeks to expand its market reach, increase sales and utilize ICTs, e-commerce and digital tools to benefit a larger number of handicraft producers in Botswana (See case study on basket weavers).

Botswana's textile market has experienced several periods of growth, first through exports to South Africa and then to the United States under AGOA, under which it hit a peak in textile exports in 2011 and then substantially declined. The textile/apparel sector was the only sector for which Botswana was able to significantly export through AGOA.<sup>149</sup> The sunny employment and livelihood prospects offered through the sector, especially for women, and Botswana's eligibility under AGOA for third country yarn use and duty-free access to the U.S. market make it an ideal sectoral opportunity to exploit.

Efforts to revive the sector and bolster efforts to exploit its manufacturing and trade potential are under way with the recent launch of Botswana's first vocational school for textile and apparel training in 2019. Creating the school and training programme will help address

some of the past challenges faced by the sector, especially those related to supply capacity. Such challenges include the scarcity of trained technicians and supervisors, low productivity, the high cost of raw materials and source inputs, high logistics costs and other non-tariff barriers.

### ***Export-led growth in Botswana***

As seen from the overview of Botswana trade and industrial activities in previous sections, Botswana is heavily geared to exports and export-driven manufacturing in areas ranging from diamonds and beef to steel harnessing to textiles and handicrafts.

Botswana's Vision 2036 and National Development Plan (NDP 11) both highlight export-led growth as fundamental for Botswana's transition to a high-income country. Export growth has been a longstanding pillar of Botswana's national development plan, aimed at making Botswana more internationally competitive, boosting production, diversifying the export base and raising the country's standard of living.

In 2006, Botswana adopted its first five-year National Export Strategy (2006-2010). It has had two national export strategies since then (2010-2016, 2016-2019). Its most recent National Export Strategy (2020-2025) was launched in May 2019.

In 1997, the Government created the Botswana Export Development and Investment Authority (BEDIA), which ran Botswana's first Export Development Programme (2007-2013) to promote export led growth. Following BEDIA's merger with the International Financial Services Center to establish the Botswana Investment and Trade Center (BITC) in 2012, the Government launched the Botswana Exporter Development Programme (BEDP), managed by BITC. The BEDP is responsible for increasing exports through targeted interventions by various agencies and service providers. A Revised Botswana Exporter Development Programme was launched in October 2020.

The country has taken a number of steps to tap global markets to export Botswana manufactured goods and services, encourage value addition at home, drive economic growth and create jobs, especially for youth. Support for e-commerce can play a role in boosting export growth in Botswana and accelerate the country's export development.

### **Export growth and e-commerce**

A number of countries have experienced export-driven e-commerce growth. China, for example, has experienced a year-on-year cross-border e-commerce growth rate of approximately 38 per cent (in terms of value) and in the past decade, has gone from a less than a one per cent share of global e-commerce transaction value to more than 40 per cent.<sup>150 151</sup> In recent years, Vietnam has experienced rapid e-commerce growth averaging roughly 30 per cent per annum from 2017 to 2019, with e-commerce exports accounting for some 21 per cent.<sup>152</sup>

There are several ways to boost export growth through e-commerce. Past studies of country experiences indicate that some countries have achieved greater exports from e-commerce by:

1. Increasing the number of newly launched businesses and firms exporting through e-commerce
2. Increasing the overall number of businesses and firms exporting through e-commerce
3. Increasing the sales volumes of individual businesses and firms exporting through e-commerce
4. Increasing the collective sales volume of businesses and firms exporting through e-commerce in a country.
5. Increasing the number of countries to which businesses and firms export through e-commerce

### **Dynamics driving e-commerce exports**

The dynamics driving e-commerce exports can vary widely within and among countries. E-commerce exports can serve different purposes for different types of businesses, different industries, and across countries.

In some countries, businesses and firms are able to produce more goods than can be consumed at home, leading to a drive to tap foreign markets to sell this “excess” production, also known as “production surplus”.<sup>153</sup> While e-commerce business models are constantly evolving, in the past e-commerce tended to work best under conditions where there was an abundance of good tradeable products and growth-oriented businesses committed to scaling up. Countries with supply capacity for a surplus of tradeable products tend to be well-positioned to

benefit from e-commerce. E-commerce’s ability to accelerate demand creation both domestically and internationally helps to market and exploit this surplus. Its ability to facilitate channel to market accelerates businesses’ ability to find buyers and consumers for this supply capacity and to grow these businesses and industries rapidly. Many developed countries and some developing countries with strong supply and productive capacity, China for example, are primary examples of this type of e-commerce growth.

E-commerce’s ability to reach large, developed or consumer niche markets with disposable income with relative ease is another major business driver. Businesses and firms in a number of countries pursue e-commerce with the aim of selling goods and services to foreign consumer markets at higher prices and profit margins than they can obtain domestically.<sup>154</sup>

E-commerce also offers major opportunities for countries that are in the process of building supply capacity for international trade. In countries with smaller supply capacity and less-developed supply chains, ICTs and e-commerce can play a facilitating role in strengthening this capacity, building these chains and unlocking latent productive capacity.

While the distribution channel – in which e-commerce plays a part – is at the tail end of the supply and value chain, it can play a role in driving the supply and value chain process. Since it is the point in the chain where product value is assessed in the market and where the buyer’s/customer’s bottom line culminates in a decision to buy or not to buy, it is where the value creation of the chain becomes most pronounced. Demand creation as a driving force for export-led manufacturing is illustrated, for example, in the key role of international retail buyers, whose demand was a major factor driving the development of the triangulation schemes that spurred the export-led growth model of apparel manufacturing industries in newly industrializing Asian countries in the 1970s and 1980s<sup>155</sup> and the subsequent Alibaba B2B global wholesale e-marketplace launched in the 1990s. Where e-commerce demand is successfully created and supports further demand creation, ICTs and e-commerce can serve as potential catalysts in moving the gears of the supply and chain machinery toward accelerated trade and production momentum.

### ***Types of businesses in e-commerce exporting***

A wide range of businesses in Botswana can benefit from exporting through e-commerce. This includes retailers, suppliers and producers such as manufacturers, commodity suppliers, independent artisans and other exporters and export intermediaries. In addition to large businesses, small businesses can especially benefit from e-commerce, as it substantially lowers entry barriers, particularly to exporting.

E-commerce can enable many types of businesses that produce or sell a wide variety of products to target foreign markets. These types of products can range from smaller items such as clothing and cosmetics to larger items such as furniture and cars. In addition to physical products, businesses that sell digital products such as software, e-books, music and video can also benefit from e-commerce to export their wares.

E-commerce opportunities for exports also exist for businesses that provide services. The types of services targeting consumer (B2C) and business (B2B) clientele can range from insurance and banking to travel services and airline reservations to education, employment, real estate, freelancing and other knowledge-worker services.

Opportunities are also available for businesses aimed specifically at supporting e-commerce businesses. These types of businesses serve as third-party solution providers, helping domestic businesses export and internationalize through e-commerce. Sales vendors, wholesalers and distributors, key players in the traditional supply chain and distribution network, continue to be important players in the increasingly digitized supply and value chain and distribution channel<sup>156</sup>.

Exports of services such as banking, insurance and transportation are necessary to support product exports through e-commerce. This includes businesses that provide services in areas such as logistics, warehousing and international fulfilment; financing and payments solutions; different types of insurance, including liability, transit, cargo insurance, etc.

The IT sector plays an important role in the provision of e-commerce support services. IT and related businesses in areas such as IT technical support and integration services; online ordering and business inventory integration; web enabling services such as

website creation and design; IT-enabled call centre and customer support services, etc. are critical for promoting exports through e-commerce. The IT sector is covered in more detail in the next chapter.

### ***Exploiting e-commerce's capacity as a sales channel to export markets***

E-commerce is typically most well-known for its role as a sales channel to market. In pre-Internet days, due to the high cost and labour-intensive processes involved in setting up for international trade and sales, it was not commercially viable to sell and export low-value goods. The export trade was dominated by large companies selling and exporting goods in bulk.

E-commerce has changed this. Through the use of Internet platforms connecting businesses and consumers internationally, export trade opportunities in individual low-value goods shipments have become viable. Today, businesses, especially small businesses, are able to leverage e-commerce to sell and export to foreign markets with relatively minimal expense and ease. Effective use of e-commerce can enable businesses to expand their market reach and clientele base, boost sales to consumers in foreign markets and increase purchases from foreign buyers.<sup>157</sup>

### ***Main e-commerce sales channels for exports***

Four key e-commerce sales channels serve as the basic building blocks for businesses to target export markets. They are: (1) a business website; (2) social media; (3) online marketplaces; (4) third party in-country distributors. A number of Botswana businesses may already be using one or more of these channels. While some of the channels entail more cost and knowledge than others, overall e-commerce has facilitated the ease with which businesses can gain access to viable export sales channels at little or no cost.

A number of important steps and considerations are necessary, however, to ensure effective use of each of the channels. In addition, depending on the industry, product or platform, some channels may be more effective than others for a particular business. An optimal approach would most likely involve the use of a mix of channels. Businesses need to gauge which ones to prioritize, how best to make use of e-commerce tools and the appropriate ratio of effort to spend on each channel.<sup>158</sup> The following are some key considerations that businesses may wish to take

into account when integrating these e-commerce sales channels for exporting:

### **Business website**

Having an online presence through a good business website is indispensable for businesses seeking to grow their exports through e-commerce. While large businesses and international companies in Botswana tend to have websites, few small or locally-owned businesses have one. In today's increasingly globalized world, a business website serves as a company's business card to the global community. Prospective international customers and consumers tend to be highly digitally literate and expect to be able to easily find a business website, basic information about the business and a description of its products and services. While an online presence through a social media page, a directory listing, or on an e-commerce platform can be helpful, business websites are normally one of the first online searches that many potential customers will do to evaluate a business's credibility, reliability and trustworthiness and go the farthest in the initial portrayal of a business and its showcasing to prospective foreign customers and buyers, putting it in the best possible light.

Business websites are generally either informational or transactional. Informational websites provide information and help to raise awareness about the business and its products and services. Certain standard information should be on every business website, namely the company name, address, contact information, business registration number, etc. As a corollary, while free social media messaging such as WhatsApp is an important business communication tool, all businesses intending to export to foreign markets in developed countries through e-commerce must have an email address and become adept in the use of email.

Business can export directly to foreign consumers through e-commerce via transactional websites. Transactional websites enable customers to learn about a business and search for, order and pay for the business's products online. Common transactional websites may belong to retailers, for example, brick-and-mortar retailers who have opened an electronic storefront for online shopping. Manufacturers may also have transactional websites that serve as an electronic showroom open to the public, where customers can search through the online product catalogue, order and pay.

Direct selling to foreign consumers through a transactional website requires a business to be ready to invest in and arrange its own website design, payment system, logistics, etc. Technology companies that offer subscription packages to help businesses develop transactional website can be found in a number of countries. Magento and Shopify are examples of some of these companies. In the early stages of a business, direct selling through a transactional website can be a good way to test the market and conduct consumer research on the business's product or service.<sup>159</sup>

### **Social media**

Social media are ICT- and Internet-based technologies, normally web platforms and applications, that enable users to create and share content, information and ideas or participate in social networking through virtual networks and communities.<sup>160</sup> Born in the 1990s, initially through the invention of internet blogging, social media grew rapidly into the early 2000s. Social media sites Friendster in 2001, LinkedIn in 2002, MySpace in 2003, Facebook in 2004, YouTube in 2005, and Twitter in 2006 are probably the first well-known social media sites to hit the market. These platforms attracted millions of users and made email address registration and basic online networking possible.<sup>161</sup>

The use of social media has since exploded worldwide. Botswana has one of the highest levels of social media usage in Africa. Though new social media applications are constantly emerging, the major social media platforms today are primarily Facebook, Instagram, Twitter, LinkedIn, Pinterest, YouTube, Snapchat and TikTok. There are approximately 1 million social media users in Botswana (2020). Social media is actively used by some 37 per cent of South Africa's population (2019).<sup>162</sup> Roughly 66 percent of the United Kingdom's population are active social media users (2020).<sup>163</sup> From 2005 to 2019, social media use in the United States grew from 5 to 72 per cent of the population.<sup>164</sup> With some 882 million social media users, China appears to be the world's largest social media market (2019).<sup>165</sup>

Most people in Botswana are aware of the Internet through the use of social media sites such as Facebook, accessed by mobile connection. About 42 per cent of the population are active social media users.<sup>166</sup> In January 2019, a reported 990,000 were active Facebook users, 110,000 were active Instagram users, 49,600 were active Twitter users, and 230,000 were registered members of LinkedIn.<sup>167</sup> However,

searches on social media sites were primarily related to songs, movies and music rather than online stores and other commercial platforms.<sup>168</sup>

Consumer markets with high levels of digitalization and social media penetration presents an opportunity for businesses seeking to export through e-commerce, particularly in developing countries. While reaching large numbers of consumers and buyers in foreign markets would normally be untenable, expensive and beyond the reach of an average entrepreneur or business in both developed and developing countries, the networks forged by social media provide a ready-made pathway and inroads into these markets. Setting up a shop on Facebook is a fast-growing e-commerce approach. Social media serves as an important channel for connecting with foreign (as well as domestic) consumers and buyers and increasing sales.

While simply having a social media presence can be a good start for a business, effective use of social media to grow e-commerce exports requires substantial planning and training. The use of social media has evolved into a highly developed science and art, and a wide array of approaches and techniques are involved in the use of social media to grow international e-commerce – for example, strategies for the use of social media in conjunction with the business website. The highly saturated and competitive nature of highly developed digital markets also means that the challenges faced by businesses in developing countries seeking to penetrate these markets will differ from the types of challenges faced when attempting to penetrate more “virgin” markets such as foreign consumer markets on the African continent. However, both offer real opportunities for businesses to grow exports through e-commerce.

### **E-marketplaces**

E-marketplaces, as a primary form of electronic platform, count among the key foundational pillars for enabling e-commerce according to the ICTPR e-commerce diagnostic methodology. An e marketplace is a standard e-commerce platform that simulates a physical market space, aggregating products and services from a number of providers. E-marketplaces enable many businesses and individuals (buyers or consumers) to congregate virtually to share information on products or services they wish to buy or sell, negotiate transaction terms, form business or trading networks or do business together in some way. There are different types

of e-marketplaces, and new types are constantly evolving. E-marketplaces can be B2C, B2B, C2C or another variant.

Some examples of e-marketplaces today are Botswana’s Skymart, Alibaba B2B Marketplace (see reference in the previous section), Alibaba Taobao, Amazon Marketplace and e-Bay.<sup>169</sup> Many large e marketplaces are dominant in a particular region. Amazon dominates in the U.S. consumer market, for example. Similarly, Alibaba dominates the Chinese online consumer and business markets.

The past experience of some developing countries with the largest e-commerce markets today shows that e-marketplaces have played a key role in helping to grow e-commerce, both internationally and domestically. Alibaba’s e-marketplaces – both B2B and C2C, for example – have helped spearhead the drive toward e-commerce adoption in China. The availability of e-marketplaces with reliable cost effective fulfilment services can serve to drive a critical mass of MSEs to sell their products online.<sup>170</sup>

E-marketplaces are an important channel for businesses seeking to export through e-commerce, as rather than having to invest in a physical storefront and marketing in a foreign country, businesses can open and operate a fully functional virtual store in a location with heavy traffic flow and high visibility to consumers in a foreign market. Should a business not wish to open a virtual shop itself, it can also opt to have its products listed in the e-marketplace under a distributor.

Businesses with virtual stores or listed under a distributor in e-marketplaces can often avail themselves of catalogue creation tools, ordering and payments processing, fulfilment services (warehousing, packing, shipping and after-sales customer support for sales of a business’s products), data analytics on their products’ sales trends, as well as other business support services offered through the e-marketplace platform.

E-marketplaces’ web technology make it possible for a business to set up an account and a virtual storefront showcasing its products in minutes. For a novice entrepreneur or business, the in-built business set-up of an e-marketplace can spare the business the tedium normally involved in creating an online store. It also spares the business the cost of having to make capital investments in physical storefronts, hire IT support, build transactional websites, create

product catalogues, arrange logistics and delivery, acquire payments systems, etc. This is particularly useful for small businesses with products or services to sell in foreign markets, but little capital, personnel, or IT, marketing, logistics, retail or foreign market expertise.

The benefits of e-marketplaces are not limited to small businesses, however. Today, large businesses and international brands are some of the most active users of e-marketplaces. E-marketplaces are useful for individual consumers and businesses of all types – whether small, medium or large – as they enable users to employ web-based tools to search for and locate desired products and services, vendors and service-providers around the world and to make business contacts and conduct transactions with efficiency and ease, regardless of their geographical location or time zone.

E-marketplaces have also been identified as an effective way to tap hard-to-enter markets. Penetrating the Chinese consumer market, for example, is hampered by a labyrinth of language, cultural and other challenges for international businesses. Using available Chinese e-marketplaces, Alibaba's B2C Tmall platform, for example – has been an approach adopted by a number of international companies and big brands to reach Chinese consumers.<sup>171</sup>

There is a wide range of e-marketplace types and niche e-marketplaces, each targeting a specific type of market, product, demographic, geography, commercial objective. They include buyer-oriented e marketplaces, supplier-oriented e-marketplaces, vertical e-marketplaces for businesses up and down the supply chain for a particular industry, horizontal e-marketplaces to connect buyers and sellers across different industries, e-auctions, etc.<sup>172</sup>

New forms of e-marketplaces are emerging and continue to evolve and innovate. In recent years, for example, a number of service provision-based e-marketplaces, also called freelancer marketplaces, have emerged. One example is oDesk<sup>173</sup> (now called Upwork). This e-marketplace, launched in 2003, has grown rapidly in popularity and connects clients with job opportunities to small contractors and freelancers offering their services from around the world. The e-marketplace operates through a bidding process – typically for remote or online work and services such as IT programming, graphic design, transcription, translation, social media-related work, etc. The platform also has built-in procedures and tools to

initiate business contracts, track work delivery and performance and ensure payment for services.

Businesses seeking to export to a foreign market through e-commerce can benefit from existing e marketplaces. Identifying and navigating appropriate e-marketplaces can be challenging. Moreover, simply being on an e-marketplace is not enough. There are inherent challenges involved in the use of e-marketplaces – for example, an environment where large numbers of competing businesses selling similar items are in one place. Thus, businesses intending to make use of e-marketplaces to export need practical methods and training to identify appropriate e-marketplaces and how to use them, avoid pitfalls, and engage in proper e-marketplace planning for marketing, sales and exporting.

### **Traditional distribution channels**

Traditional distribution channels continue to be important for businesses seeking to export through e-commerce, and, depending on their industry or type of product, it is important for businesses to consider and factor them into their e-commerce sales channels mix. While traditional distribution channels are still characterized by their interpersonal nature and as a chain of businesses or intermediaries – for example, distributors, wholesalers, retailers (including retail stores), trading houses, etc. – these traditional distribution channels, primarily a business-to-business model, have also evolved with the growing use of ICTs and e-commerce.

Many of these intermediaries have become highly digitalized and embraced e-commerce to deliver on their role of selling their business clients' products and services to business buyers and consumers. Many in-country distributors in foreign developed country markets, for example, now use e commerce websites to liaise with business buyers on product inventory and bulk purchases. In addition to trade shows where exporting businesses can make important business contacts to enter foreign markets, the growing digitalization and integration of e-commerce in traditional distribution networks offer additional channels and options for businesses to make important business contacts to tap foreign markets for export sales.

Businesses can work with traditional distribution channel intermediaries to export through e commerce in the following ways:



### ***Export and sell via e-commerce through a nationally-based international distributor***

In a number of countries, businesses can work with a domestic business that is the national office of an international distributor. In this arrangement, the international distributor, through the national office, will bulk import the business's products into the foreign market and sell them there through e-commerce. Careful selection of distributor partners is important in this business arrangement, because, while some international distributors may be able to import the products into the foreign market, they may not have sufficient e-commerce and market knowledge or capacity to sell online in that market.

### ***Export and sell via e-commerce through an in-country distributor***

Alternatively, a business seeking to export to a foreign market through e-commerce can partner with an in-country distributor (distributor based in the foreign market). In this arrangement, the business exports the products in bulk to the in-country distributor in the foreign market specializing in e-commerce. The in-market distributor then sells the products through e-commerce. This enables businesses to benefit from the distributor's understanding of local e-commerce practices in the foreign market.

### ***Direct-purchase platform***

Use of a direct-purchase platform is a third option for exporting to a foreign market through e-commerce. In some countries, there are foreign-based direct purchase platforms that purchase products in bulk from businesses and sell the products to consumers in the foreign market through multiple e-commerce channels. Under this direct-purchase model, the direct-purchase platform takes care of cross-border

logistics, warehousing, online operations and after-sales services.

Direct-purchase platforms, however, do not exist for many countries and to date, exist for only a few, with a focus on specific market segments. Probably the largest direct-purchase platform today exists for the Chinese market. The Kaola.com direct purchase platform, purchases "Western" consumer brand products and sells through multiple e-commerce channels to consumers in China. Launched in 2015, Kaola works with businesses to grow export sales in several ways: as a wholesale buyer; via the Koala e-marketplace; or by integrating sales in the business's own website. Featuring 5,000 brands from 80 countries, Kaola has approximately 30 million active Chinese consumer users, primarily professionals and white-collar workers aged 20-45. Kaola showcases the business's products to consumers through e-commerce channels such as online forums, e-portals and other marketing channels in China.<sup>174</sup> <sup>175</sup> It serves as a channel for foreign manufacturers to enter China's complex and hard-to-navigate market and reach Chinese consumers.

### ***ICTs and e-commerce for export promotion***

In addition to business's use of e-commerce as a channel to market for exporting, ICTs and e-commerce can also be leveraged by the government and private sector as an export promotion tool. ICTs and e-commerce can serve as a channel for linking and showcasing Botswana exporters to the international community. This can be accomplished through the use of e-marketplaces, websites and online export promotion initiatives (see Box 16 on the joint export promotion initiative between Thailand and South Korea).

#### **Box 16 Export Promotion Initiative to Promote Thai-Korean Online Trading**

For several years, Thailand's Thai Trade and South Korea's TradeKorea have run a successful joint export-promotion initiative aimed at promoting Thai-Korean online trading. By hosting a joint "Online Exhibition" featuring a Product Expo and Business Matching through collaboration between two giant B2B e-marketplaces, Thaitrade.com and TradeKorea.com, and showcasing selected businesses and some of the best products the countries had to offer, the two countries have been able to substantially increase trading opportunities and build business partnerships through the e-marketplace and matching activities. The 2015 initiative resulted in 109 successful matchmaking pairings between buyers and suppliers, estimated to have generated about 12.9 million bahts' worth of trade.

Source: Thaitrade

## B. ICTs and e-commerce for local job creation, citizen empowerment and rural development

### ***Jobs and employment landscape***

While the private sector has made strides and experienced growth in the decades since Botswana achieved statehood, the sector currently generates an insufficient number of jobs for Botswana's working population. According to the World Bank, data from 2003-2010 showed that just one new formal private sector job was created for every six labour market entrants.<sup>176</sup> Agriculture is still the biggest job creator. While the government is a major employer and job creator in Botswana, the small size of Botswana's private sector has led to a limited range of jobs, both skilled and low-skilled, for Botswana across industries and sectors. Estimates indicate over a million people employed in Botswana in 2020. However, an estimated half a million people of working age are not working.<sup>177</sup>

According to official Botswana labour force statistics in 2020 (Q1), Botswana had an employment rate of 76.8 per cent and a 23.2 per cent unemployment rate. The economically inactive population – including homemakers, students, the elderly, sick and others – stood at 40.3 per cent, with homemakers constituting the largest percentage (32.8 per cent) of the inactive population. Youth unemployment currently stands at 31.3 per cent.<sup>178</sup>

While the growth of Botswana's working-age population and rising share of youth are factors exacerbating youth unemployment, these characteristics of the Botswana labour force market also signal untapped productive capacity and human resource capital that can serve as a demographic dividend for economic growth should Botswana be able to create more jobs and boost productivity.<sup>179</sup> As youth tend to be social media-savvy, Botswana's high youth share of the overall population indicates a large population share potentially well-adapted for digital jobs.

While government can often be a major employer across all countries, both developed and developing, in Botswana there appears to be a particularly high reliance on government programs and public procurement for jobs. According to the World Bank, Botswana sectors that create jobs and employment are generally in public services and wholesale and retail trade, both in services. Agriculture accounts for

a major proportion of rural employment (approximately 25 per cent). Botswana statistics indicate that formal employment was reported as most prevalent across the following occupational categories: elementary occupations<sup>180</sup> (29.4 per cent); service/sales workers (22.4 per cent); managers and craft and related trades (9.7 per cent).

### ***Citizen empowerment***

Creating job opportunities that support citizen economic empowerment has also been an important national priority. Botswana embarked into independence in 1966 with large numbers of Botswana lacking business exposure and skills, especially given the small, almost non-existent, size of Botswana's commercial sector. While the country has made great strides in education and in growing its social and economic infrastructure and capital, many Botswana continue to lag in skills development. This is particularly apparent in business. Botswana is something of a later entrant in the business domain, and is still in the process of developing a business culture. In many cases, Botswana tend to lag behind non-African business counterparts in the country with much larger, dominant, sophisticated and profitable businesses.

The concept of citizen economic empowerment, originally implied in Botswana's first national plan, the Transitional Plan for Social and Economic Development of 1966-1971, aims to equip Botswana citizens with the necessary competencies and capacities to take better advantage of economic opportunities, make Botswana active participants in the country's economic growth and development and increase opportunities for Botswana's poorest citizens.

In an attempt to bolster Botswana capacities in 2001, the Government created the Citizen Entrepreneurial Development Agency (CEDA) to foster citizen entrepreneurship and citizen empowerment and to encourage the development of competitive and sustainable citizen enterprises. Following CEDA, a Local Enterprise Authority (LEA) was also created to provide business planning assistance to small, micro or medium-sized businesses. In 2012, the concept became official policy with the passage of Botswana's Citizen Economic Empowerment Policy.<sup>181</sup> Furthermore, the Government made the policy of Citizen Empowerment through Excellence part of its Excellence Strategy, to be achieved through "mindset change, reorienting primary, secondary, university and vocational training, as well as creatively incentivizing

advanced in-service training in the private sector, and by combining this approach with simultaneously creating a genuine openness of the economy.”<sup>182</sup> See Box 17. Knowledge Transfer: Japan’s Journey Toward Excellence and the Case of Kaizen.

### **Supporting local development, job creation and livelihoods through ICTs and e-commerce**

According to the U.S. Bureau of Labor Statistics, employment in the U.S. e-commerce sector rose by 80 per cent between 1997 and 2016. Further growth in e-commerce jobs is forecasted and estimated to reach 450,000 jobs in the United States by 2026.<sup>183</sup>

Due largely to the “mobile revolution,” ICT and digital tools, including the Internet, have become accessible to the majority of Botswana. Improvements in ICT infrastructure, broadband access and free WiFi Internet access offerings have also helped increasingly more Botswana to participate in the digital economy.

ICTs and digital technologies have rapidly altered the global landscape, serving as a potent force for shaping and impacting the way people live, work and communicate. This is especially apparent in the areas of business and livelihoods where they have become a necessary tool for running a competitive business, becoming an entrepreneur and gaining access to both traditional and digital jobs.

E-commerce has emerged as one of the fastest-growing ICT-facilitated business applications, offering businesses, entrepreneurs and service-providers new opportunities to start and grow businesses and reach new customers for their services. The range of potential benefits offered by ICTs and e-commerce is extensive and includes lower barriers to business entry, lower business operating costs, the capacity for rapid market expansion – including access to overseas markets– and ease in delivering business services to prospective clientele.

#### **Box 17 Knowledge Transfer: Japan’s Journey toward Excellence and the Case of Kaizen**

Only older generations may remember the time more than half a century ago in the 1950s when Japanese manufactured products “made in Japan” were synonymous with cheap, shoddy products. Emerging from World War II, Japan benefitted from technical assistance and access to some of the top industrialists in the United States, who introduced workshops and technical assistance on quality management in manufacturing. Particularly notable was a two-day workshop on continuous quality improvement offered in 1954 by Deming and Juran to 140 chief executives from the largest manufacturing companies in Japan and followed by technical assistance in the form of training to some 300 senior Japanese managers over a two-week period. While Deming and Juran had delivered this training many times before to audiences in the United States, the difference with the Japanese audience was the extent to which that country’s industrial leadership made it an imperative to absorb, implement and turn the workshop content into action. Senior executives of Japanese companies took the initiative to take personal charge of managing for quality. The companies trained their engineers to use statistical methods for quality control and expanded their business plans to include quality goals. The quality control process, also known as the Deming Cycle, was integrated into mainstream Japanese manufacturing processes and was eventually embodied in the Japanese concept of Kaizen – a word coined by Toyota to capture the importance of and processes for quality control improvement in industrial production processes. Through a combination of factors that included a drive for quality control improvement from the highest echelons of industrial leadership, making integration of quality control improvement in national domestic production processes an imperative, and facilitating its national adoption by embracing the concept, ingraining it into national thinking and making it their own through the creation of the local Japanese concept of Kaizen, the Japanese were able to set a quality revolution in motion and journey toward excellence, completely transforming Japanese industry. Today, the word Kaizen has become so thoroughly and intrinsically Japanese that few people would know it was originally an imported concept. Far from its earliest days associated with cheap, shoddy manufacturing, “Made in Japan” today has come to be associated with excellence, high quality, competitive products and innovation.<sup>184</sup>

Source: UNCTAD

ICTs and e-commerce also play an important facilitating role in increasing critical access to information in areas such as business development, market and pricing information, production technologies, compliance, forecasts and training. By providing affordable means of communication and enabling entrepreneurs to communicate better along the value chain, they have also played an important role in making administration and business operations more efficient and facilitating businesses' participation in global value and supply chains. With the growing trend toward digital-based information and services in both the public and private sector, entrepreneurs without access to this technology or who fail to make use of available ICT and e-commerce tools and platforms are at a clear disadvantage.

### ***ICTs and e-commerce to overcome barriers and constraints in business and entrepreneurship***

As in many developing countries, local citizens, businesses and entrepreneurs in Botswana face an array of barriers – systemic, educational, skills and experience-related, sociocultural, beliefs and norms – that may impede their ability to start, run and grow successful businesses. As highlighted by Botswana's Citizen Empowerment Programme, while substantial progress has been made in recent decades, there tend to be fewer local Batswana in the upper echelons of larger businesses and business management and as business owners of formal, high-growth enterprises driving private sector growth. In addition, a good proportion of local Batswana are clustered in the micro and informal sector, operating their businesses for subsistence purposes in both urban and rural areas, particularly the latter. Measures targeting the specific barriers that these businesses and entrepreneurs face and which are designed and implemented with consideration for their particular needs is critical for success. Effective use of ICTs and e-commerce can help local businesses and entrepreneurs overcome some of these barriers. The following are some broad approaches to leveraging ICTs and e-commerce to overcome some of the key constraints faced by these groups and help build business, foster entrepreneurship and create jobs among local Batswana.

### ***Constraints in exposure to business culture***

Though Botswana's economic growth has been impressive in the years since independence and

the country has made great strides in education, infrastructure and social and economic capital development and becoming a contemporary society, Botswana is a young nation only six decades out from its birth as a nation and scarcely one generation away from the pre-modern society it is today. Botswana's indigenous roots have traditionally been planted in and evolved around a pastoral lifestyle – primarily around farming, herding and cattle raising. Unlike other ethnic groups and peoples with a long history of engagement in business or as traders, indigenous Batswana are relative newcomers to business and entrepreneurship. Thus, many have no background in commerce and lack the skills, knowledge or experience to succeed in business.

In the decades since independence, the Government has made strenuous efforts to ensure that indigenous entrepreneurs share in the country's economic development. These efforts have begun to bear fruit. While education, skills development and training remain critical for building business skills and awareness among Batswana businesspeople and entrepreneurs, a useful adjunct is more effective use of ICTs, the Internet and e-commerce to support informal learning and approaches to encouraging the assimilation of a business culture and business orientation. Effective use of these technologies and tools can help local Batswana overcome the knowledge and experience barrier, bridge the gap in business culture and orientation, and increase awareness and understanding across wider swathes of the population.

### ***Constraints on access to education, skills and training***

With its high literacy rate and near universal education, Botswana has made significant progress in ensuring education and basic literacy skills for its population. The country's achievements in basic education and literacy position local Batswana well for thriving in the digital economy, where literacy skills such as reading and writing are needed to attain digital literacy. Nonetheless, the proportion of Batswana with educational attainment beyond high school remains relatively low. Concerns have been raised about the quality of education and curriculum offered to Batswana students, as many graduates face unemployment after graduation due to poor job-skills fit. In many developed countries, entrepreneurs often begin their entrepreneurial journey after many years working for a company where they see how a business is run. In contrast, many local Batswana

embark on entrepreneurship lacking education, training or work experience in a company. Distance learning, video conferencing technologies and other e-education services and products made possible by ICTs and e-commerce platforms are making it easier for entrepreneurs to access the vital education, skills and training needed for entrepreneurship and business.

### **Constraints in access to financing**

Access to financing for small entrepreneurs is a challenge in Botswana. The Policy on Small, Micro, and Medium Enterprises (SMMEs) (1999) highlights a number of support measures for SMMEs, including access to financing. Financing of SMMEs began with the introduction of the Financial Assistance Scheme in 1982. It was replaced in 2001 by the Citizen Entrepreneurial Development Agency (CEDA), which offers loan finance and funding for capital expenditure, stock or working capital in new and existing business ventures. In addition, the Local Enterprise Authority (LEA) is mandated to promote entrepreneurship and SMME development through a range of measures that include facilitating access to financing. Through these channels, some businesses and entrepreneurs have been able to obtain financial assistance.

Despite the above-mentioned financing schemes and programmes, however, access to financing continues to be a constraint for SMMEs in Botswana. A study by LEA (2009) indicated that 56 per cent of SMMEs in Botswana had no access to finance. Many entrepreneurs have little awareness of financial literacy or their financing options and opportunities. Bootstrapping, where an entrepreneur builds a company from personal finances or the operating revenue of the new company, appears to be common. Nonetheless, a number of entrepreneurs are able to launch businesses successfully through bootstrapping.

With the growing number of financial options and solutions emerging in the market, ICTs and e-commerce can play a role in helping entrepreneurs gain greater access to basic information on financing, financing opportunities, and financial rights. The large and rising number of e-commerce and online small businesses in both developed and developing countries has caused many finance related activities to move online and to mobile channels, leading to new microfinancing schemes, credit-building initiatives and greater exposure to SMMEs across the board to business finance opportunities. Digitally savvy businesses and

entrepreneurs can also explore financing options such as crowdfunding, mobile money microfinancing and insurance schemes, fintech financing, peer-to-peer (P2P) lending platforms, etc.

### **Approaches to empowering businesses and entrepreneurs through e-commerce**

#### **Fostering online entrepreneurship**

By dramatically reducing the cost of starting and running a business, e-commerce facilitates business opportunities for aspiring entrepreneurs lacking financial resources. In contrast to earlier times when starting a business required significant capital, financing and sunk costs, today e-commerce businesses can be started with minimal investment. E-commerce also substantially reduces the operating costs of running a sustainable business. Its ability to expand a business's market reach, particularly into foreign markets, at minimal cost and with minimal effort further alleviate business cost burdens on entrepreneurs with limited access to financing. For example, e-commerce provides several tools that can dramatically reduce the costs normally involved in expanding a business's client base (see Box 18: E-commerce Customer Acquisition and Using Data to Grow Small Businesses). Studies show that resourceful entrepreneurs who recognize the usefulness of ICTs and e-commerce move proactively to leverage them to expand and grow their businesses. As many millennials are digitally savvy, they tend to be a natural fit for online entrepreneurship, and initiatives to support online entrepreneurship among youth would be particularly important. As business turnover and the risk of failure or incompleteness in e-commerce businesses can also be high, proper business planning and the cultivation of diligence and perseverance will also be essential. Awareness-raising and training measures are needed to support businesses and entrepreneurs launching online e-commerce businesses.

**Box 18 E-commerce Customer Acquisition and Using Data to Grow Small Businesses**

While running a successful business involves several factors, conditions, competencies and skillsets, one important ingredient for driving a business's growth potential – whether among businesses in the startup stage or among older, more established businesses – is the ability to grow the number of customers buying the business's products or services. Businesses able to bring in more paying customers and expand their customer base are well-positioned to scale up rapidly, become profitable, accumulate capital and experience rapid growth. In contrast, businesses lacking a sufficient base of paying customers risk failure, stagnation, or the inability to survive in the long run.

However, increasing the number of paying customers, particularly in the business of sales, is no easy task. Businesses can face a wide range of constraints. Some may not have access to potential paying customers (due to geographical constraints or the inaccessibility of prospective customers). Others may have success in engaging prospective, seemingly interested customers, but struggle as customers never actually buy. Still others are able to disseminate information about their products or services to large numbers of consumers but fail to engage any consumer interest, let alone sales.

While challenges of these types have existed in the business of selling and merchant trade for centuries and long pre-date the IT age, ICTs and e-commerce have dramatically changed selling dynamics by providing businesses with tools to strategically tackle some of these constraints to growing their vital customer base. Due to its critical role in enabling success across businesses of all types – from small businesses to multinationals – in many developed markets, the ability to grow a business's paying customer base has evolved into an advanced science and system, known as customer acquisition strategies, methods and techniques.

ICTs and e-commerce have been a boon for the development of advanced and sophisticated customer acquisition strategies that enable businesses to grow and expand their paying customer base through a host of more precise, targeted, efficient, simplified, low-cost customer acquisition approaches and tools than ever before. The key to this has been data.

Even before ICTs and the Internet, effective data use was always an important success factor for resourceful entrepreneurs and businesses to supercharge their customer acquisition and business growth. Well-known, highly successful American entrepreneur Kevin Harrington, for example, known today for his role on the popular U.S. entrepreneurial-themed reality TV show, *Shark Tank*, was an avid data user even as a young entrepreneur. In the 1970s, one of his first businesses was a heating and air-conditioning business. Looking for information sources that could provide him with leads for prospective clients to sell his business products and services to, he would routinely go to the local courthouse to pore through public records on new homeowner transactions in the area. This would provide him with thousands of leads on people who had just purchased a house (implying that they were ready to invest in the home's amenities), the ideal prospective customer for his business. He would manually cross-reference the names of the leads with the telephone directory to obtain their contact information. Proceeding to cold call them by telephone, he would then offer to visit their new home and introduce them to his heating and air conditioning products and services. Using this approach, within one year, his new business went from \$0 to \$1 million in sales revenue.<sup>185</sup>

Effective data use is not something new and has long given a competitive edge to entrepreneurs and businesses who recognized how to use it and were willing to put in the necessary man-hours and work. The manual and labour-intensive nature of data use in the past, however, was prohibitive for many entrepreneurs. Today, ICTs, e-commerce and the digital nature of data have not introduced data use in business and the commercial world but have merely made effective data use for customer acquisition, as well as other business applications, far more user-friendly, convenient, easy and affordable for even the novice entrepreneur. The result has been a surge in the use of digital data across businesses and industries.

Many growth-oriented entrepreneurs quick to spot this opportunity have jumped on the bandwagon to become effective digital data users to skyrocket their customer acquisition and grow their businesses. In

developed markets, many new strategies and techniques for small businesses centred on e-commerce and its ability to amass useful data for customer acquisition have been developed, tested and established a proven track record for effectiveness. Large and small businesses in developing countries also stand to benefit from these e-commerce customer acquisition techniques to target both local and overseas consumer markets.

The high ICT penetration and connectivity rates, critical mass of digitally savvy and digitally engaged consumers, deep and expanded e-commerce channels and rapid speed of ICT information and content flows in many developed countries make them particularly fertile ground for small businesses, both local and foreign, to apply customer acquisition strategies and techniques, most of which have been developed, customized and refined by the local entrepreneurial and business community to specifically target their home consumer market.

While the arsenal of e-commerce customer acquisition strategies and techniques for small businesses is vast, a core set of foundational principles serve as the basis for most of these strategies and techniques. One foundational element focuses on the importance of building digital assets such as a customer database. Ownership by the small business of its own customer database and customer data containing basic, practical information voluntarily provided by both paying and prospective customers – such as contact information, buying preferences, etc. – is a critical first step in building digital assets. This data ownership can enable entrepreneurs to form a systematized, continuing tech-mediated, service-oriented and win-win relationship and connection with customers interested in their product and/or service offering. This, in turn, can potentially be leveraged into immediate and future new and repeat sales.

Another foundational element in e-commerce customer acquisition strategies and techniques is based on the concept of “driving traffic.” Using social media to “drive traffic” in favour of the small business owner has evolved into a high art in customer acquisition. Astute entrepreneurs and small businesses make use of multiple e-platform channels, including social media such as Facebook and Instagram, to sell their products and services. However, greater opportunities exist for entrepreneurs and small business able to “drive traffic” from the social media e-platform to the business’s own e-platform.

While social media is highly popular in many developed markets, e-mail continues to be a standard channel for making direct contact with consumers. Social media can be used in conjunction with email to direct consumers to the small business’s own websites and webpages, a practice also known as “driving traffic.” On visiting the business’s websites and webpages, interested consumers are given the option of entering information/data such as their email address, contact information, purchasing preferences, etc. As a result, the small business has acquired the customer data. Whereas selling through a social media platform means that only the social media company retains ownership of the customer’s data, by “driving traffic” the small business has successfully moved its prospective customers’ data from the social media e-platform to its own e-platform and, thus, attained ownership of the data. This way, small businesses are positioned to become data owners themselves, grow their databases and digital assets and acquire the benefits and advantages proffered by data ownership and rapid customer acquisition-driven growth. Training in e-commerce customer acquisition strategies and methods could potentially empower Botswana entrepreneurs and small businesses to more effectively tap and penetrate both local and international markets and rapidly grow their businesses.

*Source:* UNCTAD

### ***E-platforms for SMMEs***

Appropriate platforms are critical for Botswana SMMEs. E-commerce has been called an industry made for “start-ups,” as it has substantially lowered entry barriers for SMMEs by reducing the costs and investments needed to launch and run a business. For many SMMEs, the primary e-commerce platform sought is an e-commerce “storefront,” a virtual store that normally involves the creation of a website featuring the company’s products as well as standard e-commerce purchasing features such as a shopping cart, e-payment, etc. A number of e-commerce software platforms or “e-commerce solutions” have emerged that offer to create a “storefront” easily and inexpensively for SME business owners. Shopify and Magento, for example, are two of the most popular today.<sup>186</sup> Appropriate tools and technologies should be made available to enable Botswana businesses and entrepreneurs to easily create their “storefronts” and online shops.

Botswana businesses can make use of national e-marketplaces, as well as foreign portals, not only to market their goods but to source raw materials. While Jumia operates and provides services to Botswana from South Africa, Botswana does not appear to have any nationally-based major international e-commerce operators. Attracting FDI in ICT and e-commerce would be beneficial.

E-marketplaces offer particular benefits for SMMEs to reach customers and overseas markets. Some of the major e-marketplaces today – Alibaba, for example – were developed to create a platform that could help small businesses grow and become competitive. It may be beneficial for Botswana businesses and entrepreneurs aspiring to expand into other markets to explore opening an e-shop on the South Africa Jumia site and other e-commerce platforms in the continent or abroad if the platform provides hosting of third-party e-shops and fulfilment services (See case study: “Botswana basket weavers prepare for e-commerce” in the next section). Many small businesses use Facebook to market their products. However, the majority of SMMEs in Botswana generally lack awareness and understanding of e-commerce and its advantages<sup>187</sup>, and this constrains their use of such services.

Myriad new types of e-platforms are emerging, ranging from B2C to B2B to C2B. New platforms are emerging, for example, through cloud technology, which allows firms to outsource services and tasks

ranging from simple e-commerce transactions to comprehensive operations such as marketing management and e-payment. These platforms, called e-fulfilment centres, are especially valuable in boosting the capacity of SMMEs who often do not have the staff, resources or expertise to run these more complex or labour-intensive operations or services themselves. Cloud technologies such as Software as a Service (SaaS) are other e-commerce platforms that also facilitate SMME access to essential IT and software resources that would otherwise be too costly for a small business. It would be beneficial for Botswana – led by the private sector or through a public-private partnership and considering the needs of the small business community and business sectors – to develop a national e-marketplace to support local businesses.

### ***Bring offline businesses online and grow niche businesses***

With the rapid spread of the Internet and the use of search engines for retail shopping, small businesses that do not have an online presence increasingly run the risk of becoming obsolete or invisible. Small Botswana retail businesses and boutique shops must embrace e-commerce if they are to remain competitive.

Botswana niche boutique shops often serve only a limited geographic market because they lack the resources to market more widely and because their customers must visit their premises to purchase their goods. Small businesses and boutique shops can take advantage of e-commerce to extend their market reach nationally and, in some cases, internationally.

E-commerce enables niche producers to compete aggressively to become the largest in their niche and gain the competitive advantage that this position endows. Examples of producers and shops that can benefit from e-commerce range from handicrafts to clothing, spare parts for vehicles and electrical appliances, lighting fittings and bulbs, and horticulture.

### ***Support citizens for online and digital jobs***

Even before the coronavirus crisis, online jobs were on the rise with the growth of the digital economy. As a result of the pandemic, however, the number of digital jobs has increased exponentially (see UNCTAD’s Global Review of Covid-19 and E-commerce<sup>188</sup>). The proliferation of jobs in the virtual world has made possible a wide range of jobs involving remote, online and flexible work and has resulted in growing



employment opportunities for workers across the spectrum, including youth, retirees, women, persons with disabilities.

Many digital jobs may be for workers with careers in the ICT industry. At the same time, there is heavy demand for skilled workers outside the ICT industry and across all industries. According to Solutions for Youth Employment (S4YE), there are three types of digital jobs:<sup>189</sup>

- digital-intensive jobs – jobs created through the ICT sector that make intensive use of ICT, i.e., Mobile app development
- ICT-dependent jobs – jobs that cannot be performed without technology, such as online freelancing work and customer call centres;
- ICT-enhanced jobs – jobs that use digital technologies but could be performed without ICT, such as accounting and graphics design.

Effectively fostering digital jobs in Botswana will require well-targeted strategies in programme design, including assessing key demand drivers for digital jobs and ensuring that citizens are equipped with the skills to perform those jobs.<sup>190</sup>

### ***Specific sectors and areas for ICT and e-commerce measures***

The following are some sectors and areas where integration of ICT and e-commerce measures could serve to bolster entrepreneurship, jobs and/or citizen empowerment.

#### ***Reserved trades***

As part of its regulation of trades and licensing, Botswana's Trade Act also includes stipulations for "Reserved Trades," or trades that have been reserved for Botswana citizens. The manufacturing trades reserved for Botswana citizens or Botswana-owned companies include the manufacture of school uniforms, school furniture, burglar bars, protective clothing; sorghum milling; the manufacture of cement bricks and mud bricks; the baking of bread and confectionary; the manufacture of peanut butter; the bottling of water; and the production of traditional sour milk.

In services, reserved trades for citizens include licensing for auctioneers, car washes, cleaning services, curio shops, fresh produce vendors, cleaning services, general clothing vendors, general dealers, hairdressers, laundromats, takeaway restaurants,

wholesalers, workshops or miscellaneous trade or business.

Many citizens in reserved trades are running small businesses involved in retail, selling or marketing or are sole-proprietor businesses that provide personal services. Through CEDA, awareness-raising, education and skill development training for selected reserved trades could help strengthen citizen businesses or facilitate new businesses or entrepreneurs.

#### ***Beef industry***

The beef industry was originally Botswana's primary industry, and until the discovery of diamonds, the country's main foreign exchange earner. Today, while the beef industry as part of agriculture is small, it is still the source of livelihood for a large percentage of the Botswana population. The parastatal Botswana Meat Commission (BMC) is the government trading body for beef in the country and has an export monopoly on meat, canned meat and live animals. BMC exports about 80 per cent of total beef production, primarily to the EU, which, under the EPA, receives about 55 per cent of Botswana's total production.<sup>191</sup> In order to boost productivity, Botswana is in the process of restructuring the beef and cattle industry with the aim of privatizing it. As part of this effort, it is implementing the Beef Productivity Training Program, which provides training to farmers, herdsmen and extension staff.<sup>192</sup>

The integration of e-commerce awareness-raising, education and training, particularly in sourcing and marketing, in the Beef Productivity Training Programme could support the strengthening of farmer productivity. Moreover, the experience of a number of countries who have successfully boosted their export productivity capacity through privatization has shown that privatization measures and the removal of price supports can exert strong market pressures on smallholder farmers. While those who can adapt take advantage of the market incentives offered to strong producers and increase their productivity, many smallholders will not be able to survive the market pressures. These subsistence smallholders will most likely be forced to search for alternative sources of income and livelihood. This may be an opportune time to offer these smallholders a livelihood and occupational pathway in digital jobs or online entrepreneurship. In order to mitigate the social impact of this cost, the Government may want to create programs to train these people, so that one area in which they may be employable is in digital jobs. The combined push (out of farming) and pull (opportunity for an alternative livelihood pathway) can

be the compelling factor transitioning them toward a digital pathway.

### **Diamond beneficiation**

In 2013, De Beers took major steps to support diamond beneficiation and establish Botswana as a major diamond trading centre by relocating all of its rough diamond sales activity and trading operations from London to Gaborone. It also moved major activities such as rough diamond sorting, valuing, cutting and polishing to Botswana, bringing with it the prospects of increased employment opportunities and diversification through beneficiation activities.

Botswana has created the Diamond Hub to coordinate economic activity in the diamond sector and to oversee beneficiation activities in the cutting and polishing industry, jewellery manufacturing and secondary trading of rough and polished diamonds.<sup>193</sup>

Competition in the diamond trading business is fierce, especially from other diamond hubs such as Dubai, which hosts a number of prominent jewellery manufacturers, retailers and traders that support the diamond business. Diamond beneficiation also takes place in South Africa.

Since the move of the De Beers operation to Gaborone, Botswana has been building up the diamond beneficiation industry, focussing particularly on building up its cutting and polishing industry and attracting international rough and polished diamond traders to strengthen Gaborone's position as an international diamond trade hub.

While the industry is still growing, a combination of factors related to the global economy and fluctuations in diamond prices in the second half of the 2000s has made it challenging for Botswana to establish a lower cost base for diamond processing and to compete successfully in the market, especially with countries with low diamond processing costs.<sup>194</sup>

As of 2019, there also appear to be indications that the number of Botswana citizens who aspire to work in the cutting and polishing industries has been low. Mastering the skills of diamond cutting is a lengthy process requiring an investment of at least six months of costly and closely monitored training. This has posed cost and human resource challenges for diamond cutting businesses seeking to grow their workforce of skilled diamond cutters. Though still in the early stages, there are concerns that the beneficiation drive has not led to more Botswana becoming business owners in this potentially lucrative

field. The lack of skills among Botswana appears to be a barrier to Botswana's greater participation in the beneficiation industry.

The coronavirus crisis accelerated the diamond industry's transition to digital technologies with the use of e-auctions to run global sightholder sales auctions for rough diamonds. Furthermore, the integration of ICTs and e-commerce in the form of an e-platform that brings together key stakeholders and players in the beneficiation industry and jewellery-making industry could be beneficial for growing the industry and helping to boost business and trade in diamond support services and jewellery creation. In addition, the e-platform can host e-learning on the arts of diamond cutting and polishing to spread expertise and skills development and build a flourishing community of artisans.

### **Kitsong Centres**

Kitsong Centres were set up in 2006/2007 by various telecommunications operators and BotswanaPost under Maitlamo. These centres were initially set up in each community, and there are now around 149 of them across the country. They provide access to computers, fax, voice services and Internet access, as well as a range of online information, including local and community information, business information services, government information and services such as school registration, birth certificates, livestock tracking and passport applications. The most advanced of these centres offer broadband, together with related services such as training. However, many provide only basic services (airtime resale, telephony, photocopy services, etc.).<sup>195</sup>

Unfortunately, the current model for Kitsong Centres does not appear to work properly, since the bulk of these centres are operated by village development committees (VDCs), whose members lack computer and business skills. Under the Nteletsa II contracts between the Government and the operators, the operators train personnel to run the Kitsong Centres, but some trainees have left the centres in search of better paying jobs, thus rendering the Kitsong Centres dysfunctional.<sup>196</sup> There are also Botswana Postal Services Telecentres and private telecentres set up as community initiatives.<sup>197</sup> All of these telecentres and telecentre networks would be ideal candidates for delivering training on ICTs and e-commerce, and their staff would benefit from training in these areas (See Box 19. Botswana Basket Weavers Prepare for E-commerce).

**Box 19 Botswana Basket Weavers Prepare for E-commerce<sup>198</sup>**

Basket-weaving is a traditional handicraft in Botswana, long practiced by women in rural areas. The craft has been passed down from mothers to daughters for generations and often generates important income for the household.

Botswana baskets are widely regarded as some of the finest in Africa and certainly the best in southern Africa. Their unique high quality, outstanding workmanship and originality have gained them international recognition. The different types of baskets found in Botswana include, but are not limited to, functional baskets and decorative baskets – e.g., open baskets, closed baskets, harvesting baskets, flat baskets, and carpet baskets.

Leveraging e-commerce to grow the industry is a key interest of the Government of Botswana. Recognizing that local SMEs in the industry are not sufficiently active in e-commerce, the Botswana Investment and Trade Centre (BITC) requested assistance from the International Trade Centre (ITC) to offer a training event to improve knowledge and skills in e-commerce. The BITC aims to develop a support programme for basket-weavers across all relevant areas of support, from the development of skills to improved access to payment solutions, logistics and promotion channels.

A local association of women handicraft artists known as Ngwao Boswa, based in Gumare, was selected to receive support. Already the beneficiary of assistance in the form of working capital financing and advice in design and promotion from the Ministry of Youth Empowerment, Sport and Culture, the basket weavers are enthusiastic about developing new and profitable markets for their products.

A two-day workshop led by ITC was conducted from 22 to 23 August 2019 with the Ngwao Boswa weavers present, serving as a live case study from which the many government and institutional partners could learn. Thirty-two participants were walked through the key steps in understanding and preparing for e-commerce, including five government agencies, DHL and BotswanaPost, in addition to the basket weavers.

The training exercise shed light on some key features of the industry and how e-commerce could be leveraged to grow it. The BITC team made site visits to the basket production areas and reviewed the association's governance structure and production capacity. It was decided that the United States would be the target market: the Government of Botswana has a drive under way to promote U.S. bound exports, taking advantage of the AGOA agreement.

Botswana-woven baskets are currently exported to many countries and regions around the world, among them North America, Europe, South Africa, Australia and New Zealand. The Association does not have any direct presence in online marketplaces.

Interestingly, one of the customers of the Ngwao Boswa basket weavers association actively sells through Etsy, a U.S.-based marketplace specializing in hand crafted goods, having a well-stocked attractive store in the marketplace. In discussions with the basket weavers it was found that this customer is only supplied with lower grades of baskets. Ngwao Boswa would have the possibility of offering a different range of higher-quality baskets.

A preliminary examination indicates that the industry has a number of strengths that favourably position it for business competitiveness through e-commerce. There is an abundance of the main raw material used to produce Botswana baskets, fibre of the "vegetable ivory" palm tree (*Hyphaene petersiana*). Well-trained and skilled, the majority of weavers and crafters are aware of the need for environmental preservation.

However, there is need to expand and diversify weaving techniques, designs and the use of colour to develop new patterns and new products. Basket-weavers also face a number of challenges in the following areas:

- Lack of technical skills and business knowledge
- Expensive membership fees in e-commerce platforms
- High logistics costs and limited choice of delivery service providers
- Limited access to payment solutions
- Finding warehouses on the destination market
- After-sales activities and managing returns

Ngwao Boswa Basket Weavers will serve as a pilot project for learning lessons about e-commerce, particularly through the application of online promotion through e-marketplaces. E-marketplaces can serve to drive a continuous flow of customers, generate more confidence in the brand (than an unknown brand) enhance internationalization and increase profit margins.

By creating an online story for Ngwao Botswana on Etsy, the idea is to learn lessons about working with online markets before opening to others, such as eBay and Amazon Handmade. The Government of Botswana parastatal agency intends to boost the promotion of these goods in outbound and inbound trade missions and at trade fairs. As participation in international e-marketplaces requires the use of e-payments, Ngwao Boswa will also receive support in integrating e-payments capability.


The ITC team researched appropriate marketplaces and payment methods, developing a step-by-step methodology for local producers to open an appropriate e-payment account. During the training, ITC supported Ngwao Boswa by demonstrating how to open a PayPal account, link it to their First National Bank (FNB) account and use this payment solution to open and validate an account on Etsy, the U.S. headquartered arts and crafts marketplace.

Following the training, the team at the Botswana Investment and Trade Centre will continue to guide the women in developing an online presence. The first step is to transmit the key messages from the instruction about e-commerce to the many hundreds of women working for Ngwao Boswa; the leaders of the association need to have the agreement of the members to engage in e-commerce and enter into the appropriate commitments. A necessary first step is to open an account with First National Bank and arrange for a charge card linked to this new account. The women entrepreneurs will need guidance in the use of this new form of payment.

A great deal of work is needed to select products and set up a product naming and identification structure. Working with the Ministry of Youth, Sport and Culture, the weavers will also create attractive descriptions of the origins and techniques behind the baskets and will commission a professional photographer to take studio photos of the products and the women behind their production. Parallel discussions with local transportation partners are under way to offer favourable rates to support promotion of the baskets in the United States.

BITC is working on a promotional plan that will see the online listings promoted in a number of channels – online and in-person events such as trade shows. Potential digital sales channels include e-commerce websites, online marketplaces, social media and chat apps.

*Source: ITC and UNCTAD*



**CHAPTER 4:**  
E-COMMERCE,  
THE IT SECTOR AND  
THE KNOWLEDGE  
ECONOMY IN  
BOTSWANA

Botswana's Vision 2036 is ambitious, aiming to transform Botswana from an upper middle-income country to a high-income country by 2036. Vital to Vision 2036 is Botswana's aspiration to become a knowledge-based economy anchored in the development of a leading-edge ICT sector, infrastructure and workforce. The vision carries forward the government's ICT commitments set out in Maitlamo, Botswana's first National ICT Policy (2007), to harness the capabilities of ICTs to catalyze national transformation for socioeconomic and cultural growth and to make Botswana a globally competitive Sub-Saharan ICT Hub.

Over the past two decades, Botswana has made extensive investments in ICT infrastructure, especially broadband, to build its national backbone. Coupled with market liberalization measures and initiatives aimed at setting up ICT service centres throughout the country, this has enabled Botswana to make real progress in promoting universal ICT access and adoption. In the past decade in particular, Botswana has seen dynamic growth in the use of ICT, driven largely by mobile devices, but also by the growing use of landlines, the Internet and personal computers, especially in urban areas.

While Botswana's telecommunications sector has grown and is making good progress, its IT sector remains fragmented and largely small-scale despite the country's high number of IT graduates. As development of the IT sector will play a key role in the achievement of Botswana's Vision 2036, Maitlamo, and is vital to driving e-commerce, this chapter provides a brief overview of progress in the telecommunications sector to date and then examines the current status of the IT sector, discusses where some of the current bottlenecks are and considers measures that can be adopted to advance its development.

### **Progress since Maitlamo**

Botswana has made progress in growing its telecommunication sector in alignment with Maitlamo's (2007) aim of creating a communications network that meets high international standards and ensures the country has the skills to be an ICT leader. Its key goals were<sup>199</sup>:

- For Botswana to become a Sub-Saharan ICT Hub to make the country's ICT sector globally competitive;
- To create an enabling environment for the growth of an ICT industry in the country;

- To provide universal service and access to information and communication facilities in the country.

In this context, Botswana has partially achieved the second goal and has gone a long way to achieving its third goal of providing universal service and access to information and communication facilities.

Privatization of the incumbent Botswana Telecommunications Corporation (BTC) began under the 2008 BTC Transition Act. BoFiNet was created as a wholesale provider of national and international telecommunications infrastructure under this Act, while BTC remained a retailer of telecommunication services. The privatization process was completed in 2012, when BTC was converted from a statutory body to a public company limited by shares and renamed Botswana Telecommunications Corporation Limited (BTCL). Today, there are three operators at the retail level with a public telecommunications operator (PTO) licence, namely: Botswana Telecommunications Limited (BTCL), Mascom Wireless Botswana (Pty) Ltd (Mascom) and Orange Botswana (Pty) Ltd (Orange).

All urban centres and major villages are covered by the copper local loop. Exchanges are enabled for all types of digital subscriber line (xDSL) service.<sup>200</sup> Nevertheless, it must be underscored that even though a large number of villages are covered with copper local loop, in most cases, coverage is only limited to the centre of the village, while extended parts of the respective village generally do not have copper lines.<sup>201</sup>

The National Broadband Strategy sets a broadband coverage goal of 82 per cent of the geographic area and 95 per cent of the population and covering all settlements with a population of over 5,000.

By end 2018, Fibre-To-The-Business (FTTx) infrastructure had been provided in 11 out of a target of 38 localities: Gaborone, Francistown, Maun, Kasane/Kazungula, Phikwe, Serowe, Palapye, Mogoditshane, Tsabong, Bobonong and Lobatse. This infrastructure has enabled broadband services to 1,045 business customers.<sup>202</sup> In June 2019, in Gaborone the rollout of fibre to the cabinet was almost complete. Other towns where there is demand will be finished by end August 2019.<sup>203</sup>

The FTTx rollout plan for Gaborone and Francistown will provide all commercial and government premises in the two cities with high-speed broadband connectivity

by end 2020. The infrastructure capability is to deliver up to 2.5 Gbits to the customer.<sup>204</sup>

Villages remain a challenge, however. Fixed wireless access using fixed-LTE is being used in villages to connect all government facilities, hotels, schools and local chief system (Kgotla).<sup>205</sup> Most of the villages have electricity, while some have solar power. BTCL will be providing fibre to cabinets with fixed wireless access at 2.3 GHz, using 40 MHz channels and fixed LTE to remote areas at 1.8 or 2.1 GHz. BTCL has rolled out 276 LTE sites in the past six months.

With regard to international connectivity, since 2014, overall IP transit traffic rates on BoFiNet's network by source or destination have increased more than 10 times, leading to a compound annual growth rate of 79 per cent. This reflects the rapid adoption of the Internet and mobile broadband services in Botswana. The national and international transmission networks for Botswana need to be configured to support these levels of traffic and future expectations.

With regard to submarine cable systems, BoFiNet has made direct investments and connectivity to the EASSy and WACS undersea cables landing on the East and West coast of Africa that provide access to BoFiNet's international points of presence and peering points in London and Djibouti. As a result, these provide BoFiNet with access to capacity of 206 Gbps (EASSy) and 98 Gbps, increasing to about 200Gbps (WACS).<sup>206</sup> This represents about 60 times the current IP traffic from Botswana to London. In addition, operators are able to purchase capacity from other undersea cables such as SEACOM.<sup>207</sup>

With regard to cross-border connectivity, Botswana has been able to establish multiple exit routes through the various border posts with neighbouring countries. The multiple routes provide diversification of traffic in and out of Botswana across the region and internationally toward the undersea cables and beyond. BoFiNet has identified an opportunity to provide transit services through Botswana utilizing the high-capacity backbone. The target market is customers who want to pass traffic between various countries in a secure, fast and stable network.<sup>208</sup>

BoFiNet's has also partnered with Paratus and others to lay fibre in the region. These links will enable Botswana to establish itself as a hub for telecommunication services in Sub-Saharan Africa consistent with the Maitlamo goal.

## A. Botswana's IT industry

The IT sector plays a critical role in supporting the growth of e-commerce. By providing technology and services for the e-commerce sector, it can help facilitate e-commerce adoption by businesses and consumers, including through outsourcing from other countries. By marketing e-commerce solutions, the IT sector can inform businesses about the benefits and opportunities offered by B2B and B2C e-commerce. There is growing demand on IT-related functions from Botswana's local market. In addition, the Government is expected to provide more support for training initiatives, SMMEs and innovations that could be scaled up to support e-commerce.

In this context, the IT sector plays an important role in providing the following technology services required to drive e-commerce:

- Consultancy services: expertise in developing an IT solution to satisfy a business requirement for e-commerce, either as a sell side e-commerce website, a phone-based e-commerce service or a procurement application or service.
- E-commerce, procurement, payment and stock control applications, with the expertise to implement them.
- Systems integration services to enable disparate business applications to interact with e-commerce solutions and overall systems management.
- Data centre hosting services.
- E-commerce surround services such as an e-commerce site or service configuration, the development of product catalogues and digital marketing services.

In addition to these IT-focused services, there is also a need for business transformation services. These services are concerned with the overall structure and operation of a business, covering its organization, staffing and the business processes through which it operates. Introducing e-commerce leads to major changes in how a business operates. At the very least it introduces a new marketing channel that must be integrated into the business so that it can co-exist with traditional methods of accessing a market. It is likely, however, that introducing e-commerce acts as a stimulus for the transformation of other parts of the business – through the introduction of call centre services to deliver customer services on behalf of the

business, for example. Thus, e-commerce may lead to significant restructuring that, if not considered early on, may lead to less efficient or less effective e-commerce outcomes.

Due to the lack of recent or up-to-date studies or information on Botswana's IT sector, to assess the sector's current status in Botswana, the UNCTAD team conducted an assessment of the sector in 2019 as part of the strategy development. This section presents the key findings of that assessment.

Anecdotal evidence suggests that the local IT sector has faced challenges in executing and delivering IT projects successfully. This is problematic, as businesses' ICT capital investment in parallel with the company or enterprise reorganization around the new IT technology is crucial for businesses to undergo digital transformation. A lack of confidence in IT sector service providers' capacity to deliver, as well as poor experience or the failure of past ICT capital investments to provide a return on investment, can discourage businesses from making future ICT capital investment and putting in place the enterprise reorganization around technology.<sup>209</sup>

In contrast, strong records of IT execution can help breed greater trust among businesses in IT services providers' ability to deliver and to ensure a strong return on ICT capital investment. This will help drive the uptake of ICT and digital transformation.

This lack of success seems to stem from the following factors:

- Lack of knowledge among medium and even large businesses about the kinds of IT project development services they need to procure and the types of organization that can provide such services. Businesses need an understanding of the process involved in procuring an information system. This understanding would ordinarily be available from professional advisors to the business. In many cases, however, there appears to be a disconnect in communication and information exchange between IT service providers and Botswana businesses, especially SMMEs, which can hinder the extent to which the IT advice dispensed truly meets business clients' needs. Successful execution of IT projects for businesses requires IT sector service providers to gain a better understanding of business's needs and constraints and how to meet these needs and overcome the constraints and to be able to communicate more effectively

with their business clients and reliably deliver IT projects

- Lack of understanding among IT firms about the need for an analysis of the business context for a new computer system. Accounts have been heard of software development projects that went ahead without an initial understanding of the business requirement and context for the projects being defined and agreed with the client.
- Failure by businesses and IT sector service providers to ensure that ICT capital investments are accompanied by a reorganization of the business's/company's operations around the new ICT technology, as well as complementary investments in learning. Business management has an important role in ensuring this. In addition, the IT sector must provide advisory services, training and other support services to support and ensure this.<sup>210</sup>
- Insufficient experience and exposure among many local IT companies in the delivery of large implementation projects and the business analysis, design, implementation and project management skills required to ensure successful IT execution. Putting standards and support measures in place to strengthen IT execution could significantly boost the uptake of ICTs among business and digital transformation by increasing demand for IT services, including e-commerce. In this context, the introduction of a professional development regime and associated standards could be useful. Such a regime might be modelled on the one developed by the British Computer Society.<sup>211</sup> See Box 20. Strengthening IT Execution in Great Britain.

### **Sector structure and key players**

The IT sector consists of a relatively large number of small companies with limited resources and a few larger companies. Some multinational companies are present as sales offices. Table 8 lists 51 identified firms, indicating how long they have been in business, the number of employees and activities.

There is a distinction between IT businesses that sell computers and software licences and those that devoted to business analysis, software development and systems integration.



Overall, of the 29 companies with an identified establishment date, the following proportions of firms had establishment dates in the following periods (see Table 7 below):

This distribution suggests that the majority of firms currently operating have survived for more than 10 years and have the resources and expertise to continue into the future. This suggests that the IT sector is reasonably stable.

**Table 7** Distribution of Botswanan IT firms by establishment date

Establishment date	Number of firms	Percentage of firms
Pre-2000	8	28%
Between 2000 and 2004	5	17%
Between 2005 and 2009	3	10%
Between 2010 and 2014	9	31%
Between 2015 and 2019	4	14%

**Table 8** Identified IT and business consultancy services firms<sup>212</sup>

Company	Date established	Employees	Services
Accelerate IT			IT sales and support networking
Alternative Technologies	2009	11-50	IT hardware and software supply, systems integration
Apex Holdings (Pty) Ltd	2001	1-5	Telecommunications-related devices
App Space Group	2012	1-5	Web design and related services, application development
ASC	2001		Hardware supply
Assertive Solutions, A Mellben Investment Business			Marketing and Brand Management, web hosting, IT services, website development
Atima Creations Group	2003	11-50	Computer and Network Security
Augmenta Cyber Security (Pty) Ltd	2017	6-10	Cyber security testing and consultancy
BDO		Multinational	Consulting services
Cloud Consulting Botswana	2012	1-5	Web design and related services, application development
C-Nest	2014	1-5	Hosting, including cloud services up to SaaS; own data centre in Commerce Park
Corporate Business Solutions	1997	51+	Enterprise applications, enterprise project portfolio management, digital transformation, business process management, enterprise architecture, software development, enterprise applications integration and management consulting
Cyber Logistics (Pty) Ltd	2017	6-10	IT hardware and software supply
Dell		Multinational	
Deloitte		Multinational	Consulting services
Dimension Data	1983	Multinational	Consulting services, cloud, including SaaS, Business solutions, technical solutions, etc
Dreamteam Data Pty Ltd	2018	1-5	Web design and related services
Emage Computing (Pty) Ltd	2009	1-5	IT hardware and software supply
Fundie Communications (Pty) Ltd			We are an IT hardware and software sales, services and solutions provider, wired and wireless network installer, server, server infrastructure installer and management specialist, Dell PartnerDirect Registered Partner, HP Business Partner, Lenovo Registered Partner, EMC Registered Partner, Solarwinds Registered Partner, Microsoft Registered Partner, Symantec Registered Partner, Kaspersky registered Partner and Cisco Select Partner.

Company	Date established	Employees	Services
Go Up Investments (Pty) Ltd	2015	1-5	IT hardware and software supply
Grant Thornton		Multinational	Business, consulting, business process, cyber security
Grant Thornton			Consulting services
Hardpro (Pty) Ltd		51+	Infrastructure technology development, enterprise development and support, and big data analytics, IT development, services and advice.
Hubcore	2014	6-10	Web design and related services
IT Worx		51+	ITWORX is a Value-Added Reseller (VAR). The company is currently focused on computer hardware, software and other IT-related consumable products and services, marketing to over 2,000 companies. In addition, ITWORX is an Authorized Apple Reseller. We provide a range of software from operating systems for servers and workstations to backup and antivirus solutions. By collaborating with us, you can proactively manage the risk of non-compliance and save money through effective use of licensing.
IBM		Multinational	
Information Technology Integrators Pty Ltd		Hardware and systems sales; IT support, some web and software development	
Insync Ltd			Business services
International Computers (Botswana) Ltd (ICL Botswana)		51+	Business analysis, project management and software development, custom solutions, and customizable solutions based on MS Sharepoint, CRM Dynamics, FrontRange HEAT Service and Support and FrontRange Service Management, banking applications and ATM infrastructure, infrastructure services and support, network services, and security services, and project management and systems management training
IT-IQ Botswana	1999	51+	Training, managed services, consulting, IT solutions, IT outsourcing, LAN Care, Cisco Solutions, Microsoft Gold Partner, WiFi deployments, Symantec, Ruckus Wireless, Arbor Networks, Apple reseller, CBP Training, HP Authorized Reseller, Kaspersky, Dell, and Kemp Technologies
Keiko Tech	2013	1-5	Web design and related services
Kolari (Pty) Ltd	2005	11-50	IT outsourcing, business intelligence, data platform, identity and security, collaboration, server platforms, software asset management, systems management, unified communications, virtualization, volume licensing, small business specialist, and cloud solutions
KPMG		Multinational	Consulting services
Longhurst Holdings Pty (Ltd)	2011	6-10	IT hardware and software supply
Microsoft (Botswana)		Multinational	
Modi Investments Ltd	1999	11-50	Supply of computer hardware, software and peripherals, maintenance and support of computer hardware and software, and computer-based and instructor-led IT training
Oracle		Multinational	
PC Net Ltd			Hardware and systems sales; IT support
Procomm			

Company	Date established	Employees	Services
		Hardware, networking, cybersecurity, public and private cloud consulting services	
PwC		Multinational	Consulting services
Ra Consulting Services Ltd	1997	Multinational	RACS deals in hardware/software, integrated electronics development, R&D, and IT sales and services. Our business presence is felt in several vertical markets, including homeland security, health care, tourism, culture, electronics (including PCBs), packaging, textiles, and specialties in horizontal markets software development, systems integration, networking, security and electronic design and production.
SecureIT (Pty) Ltd	2012	1-5	ICT and infrastructure security consulting.
SIL Botswana (Pty) Ltd	2004	11-50	SIL is an expert company with a team of dedicated professionals. Over and above being seasoned experts certified in key technologies, we deliver IT solutions and services with the highest standards by enhancing technical expertise with sound industry knowledge and market acumen for Botswana, Mauritius and Africa, as well as by focusing on our client's present and future needs. SIL has designed, developed and implemented over 100 major software application projects for government and private companies in Mauritius and East/Central Africa, bringing efficiency and opportunity to its clients in business and in serving the public at large, as well as partners.
Systems & Information Technology	1992	51+	Dell-authorized distributor, IT support, hardware maintenance, Microsoft Certified Partner, providing installation and support for Microsoft technologies
TATA Africa Holdings		Multinational	Tata Africa Holdings believes in providing quality to its consumers and at the same time improving the quality of life of the people. The organization has a strong infrastructure base, excellent marketing capabilities, knowledge of local markets and needs, highly qualified manpower and a commitment to community development initiatives. A well-known and respected name in Africa, it is committed to its vision of building and sustaining relationships with cooperation and trust, creating employment opportunities and making its contribution to the social development of local communities.
TATA Consultancy Services Limited		Multinational	Tata Africa Holdings shares the core Tata values of business ethics and commitment to corporate social responsibility. Over a period of three decades Tata Africa Holdings has entered into joint ventures and partnerships with several African companies to help develop local resources and talent. The organization today employs over 1,500 people and operates in major business sectors such as automobiles, steel and engineering, chemicals, information technology, hospitality, food and beverages, energy and mining. It has offices in Ghana, Kenya, Malawi, Mozambique, Nigeria, Senegal, South Africa, Tanzania, Uganda, Zambia and Zimbabwe.
Teamwork (Pty) Ltd		Multinational	Supplier of CRM and employee relationship management software
The Handy Men Co	2003	1-5	Systems management and administration

Company	Date established	Employees	Services
Triton Network Technologies	2013	6-10	IT consulting and services
Ultimate Software (Botswana) (Pty) Ltd.	1994	Multinational	Ultimate Software (Botswana) (Pty) Ltd. offers a range of services to maintain and enhance its client's office automation environment requirements. It supplies, services, and supports an extensive reseller base in centres within Botswana, including Francistown, Serowe, Palapye, Maun and Lobatse. The company provides operating and application software, accounting software, antivirus software, consumables, telecommunications, computers, servers, LAN, WAN, copiers, educational and recreational software, accessories, peripherals, laptops, printers, and CCTV solutions; and point-of sale solutions for retail businesses.
Virinc Solutions (PTY) Ltd	2012		Web design and related services
Wave-Tech (Pty) Ltd	1986	Multinational	Customer experience solutions and financial information display solutions

Table 9 shows the percentage of firms that are either multinational or have employees in the specified size bands of the 53 firms in the table above, where relevant information was available.

**Table 9** Size distribution of firms

Number of employees	Number of firms	Percentage of firms
1 – 5	10	24%
6 – 10	5	12%
11 – 50	5	12%
51+	6	14%
Multinational	16	38%

**Capacity to provide business transformation services**

Business transformation here means the ability to undertake business process improvement projects and implement information systems to support such process improvement. The reason for including firms that can provide services associated with business transformation is to indicate the capacity in Botswana to migrate to a digital economy. The introduction of e-commerce in a brick-and-mortar retailer might be considered a business transformation. Services associated with that transformation would include an initial analysis of the business and the market it wishes to reach through e-commerce, development of a market strategy that includes e-commerce as a channel to the market concerned, revisions to existing

business processes and preparation of new business processes around the introduction of e-commerce, the sourcing and procurement of systems or services to provide e-commerce, the configuration of those systems and services for the retailer and the training of staff to use the new system and related processes.

**Multinationals**

The multinationals present can be divided into the following categories:

- Local offices of management consulting/business services firms: BDO, Deloitte, Grant Thornton, KPMG, PwC and IBM.
- Sales offices of international IT and software firms<sup>213</sup>: Dell, IBM, Microsoft, Oracle, Teamwork, Ultimate Software, Wave-Tech.
- International firms with some technical staff in Botswana<sup>214</sup>: Dimension Data, Tata Consultancy Services, RA Consulting Services.

Multinational professional services and IT firms will have the capacity to provide the services required for the digital transformation of a business. They organize their professional services on a global basis and will be able to source their considerable IT expertise from South Africa, India and other countries in their network of subsidiaries<sup>215</sup>. They will be able to provide expert advice at all stages of an e-commerce development project. However, their fees may be excessive for all but the largest Botswanan firms and multinationals operating in Botswana.

### Box 20 Strengthening IT Execution in Great Britain

The British Computer Society (BCS) has had an important role in strengthening IT execution and raising standards of competence and conduct across the sector in Great Britain. The BCS impresses on its members their responsibility for continuing their own professional development through the development of knowledge, understanding and skills relevant to the work they do in and with IT. The BCS and related organizations offer a number of tools to support its aim of raising standards. This includes:

- A Personal Development Plan. An online Personal Development Plan provides a record of the courses taken, events attended, coaching and mentoring received and other development achievements. This is a record that can be provided to employers or others. It is also a means of accessing development activities and resources registered with the scheme.
- Professional registration. The BCS identifies four levels of professional registration with differing levels of knowledge and competence. An Incorporated Engineer (IEng) is registered with the UK Engineering Council and is someone who can demonstrate competence in knowledge and understanding; design and development of processes, systems, services and products; responsibility, management and leadership; communication and interpersonal skills; and professional commitment. A higher-level Chartered Engineer registration is available to those who have reached a position where they are responsible for individual projects. A Chartered IT Professional registration is available from the BCS for those engaged in “challenging and complex activities” or who are in a position of influence and responsibility. A Registered IT Technician registration is available from the BCS for programmers, help desk technicians, project managers, testers, digital marketers, analysts, cyber experts, etc. Each level of professional registration requires assessment against a professional standard, a supporter who will verify the information provided, and for the higher levels, a meeting with assessors.

Continued professional development is a requirement for those registered in this way. This development can be through on-the-job activities, gaining qualifications, attending relevant events and volunteering.

The BCS also provides RITech qualifications for teachers, support for those offering qualifications in IT and support for programmes offering apprenticeships in IT and accreditation of further and higher education courses related to professional registration.

Source: UNCTAD

### **Large national firms**

Of the six Botswana IT firms with more than 50 staff, three – Corporate Business Solutions, Hardpro (Pty) Ltd and International Computers (Botswana) Ltd – highlighted their services associated with enterprise applications, digital transformation, business process management or the software that can be used in these areas on their websites. In addition, one firm among the five firms identified as having between 11 and 50 employees, SIL Botswana (Pty) Ltd, advertised business transformation services. These firms may be able to provide digital transformation expertise associated with the delivery of e-commerce solutions for the firm. Other smaller companies in the sector, such as Consult IT, also claimed business analysis expertise. Some of those companies reported that

they were in competition with firms from India and South Africa whose prices were lower.<sup>216</sup>

The remainder of the firms with 11 or more staff focus on the IT systems themselves, including technical architecture, servers, cybersecurity and systems management. While these are useful services for organizations with the ability to implement an information systems strategy, an organization without the business transformation skills to implement such a strategy would need to go elsewhere for those skills.

### **Micro, small and medium-sized IT businesses**

The firms with 10 or fewer employees were specialists. Five specialized in web design. They may

be able to create/sell side e-commerce platforms for small and medium-sized businesses. Others were concerned with IT and telecommunications equipment supply, including hardware and packaged software, specialized cybersecurity skills and systems management and operation.

Other firms, those whose staff numbers are unknown, were mainly concerned with IT sales and support. One, Assertive Solutions, provides marketing and brand management services, including website development and hosting. Another provided website design services.

Thus, the survey of IT firms identified a number of Botswana IT firms able to support the development of e-commerce in addition to the multinationals: four claimed to be able to provide digital transformation services or their equivalent for businesses and seven provided website design, development or hosting services. Another provided data centre services. Provided they gained the necessary e-commerce application software experience, this group of firms could form the basis for the development of an e-commerce subsector. The needed software experience would include experience with the application software itself and with the business transformation skills listed above.

### **Availability of e-commerce applications and services**

E-commerce applications can be made available by suppliers as packaged software to be installed on a client's computer systems or in a hosting centre, or as a service provided online. Examples of e-commerce software for SMMEs include BigCommerce (<https://www.bigcommerce.com/>), Shopify (<https://www.shopify.com/>) and Squarespace (<https://www.squarespace.com/>). Most SMME packages are available as a service, whereas software for large corporations may be available as a package or as a cloud service, although there is a clear movement toward cloud-based solutions such as SAP Commerce Cloud. A cloud-based solution eliminates the need to manage computer systems or even the application software itself, except for configuring the software to meet the needs of the business. However, a cloud-based solution requires excellent communications networks and may not readily be modified to meet the particular requirements of a business outside the scope of the service. An in-house e-commerce system using packaged software may permit such modification. However, since e-commerce generally requires access

by multiple users across the Internet, there would still be a need for excellent communications networking.

E-commerce application services in Botswana are generally available from the software suppliers themselves, but local support from IT firms and packaged software may not be so available. This is one area in which local IT firms need to boost their capacity, learning from experienced service delivery firms. Businesses wishing to adopt e-commerce can otherwise acquire support from South Africa, India or elsewhere.

Considerable expertise is available in common business applications, including SAGE Pastel and SAP Business One enterprise resource planning. However, e-commerce and e-procurement applications and SAP modules are not supported by IT firms in Botswana, although this expertise is available internationally. It should be noted that SAP Business One does not have an e-procurement capability.

There will be a need for individual IT firms to identify e-commerce applications and services and partner with firms offering them, gaining training and implementation experience.

There are reportedly high levels of demand for USSD codes from banks, local authorities, VoD and MySpot music payments.<sup>217</sup>

### **Systems integration services**

Systems integration services do seem to be available through the multinational firms and the four local firms that claim to be able to provide digital transformation services.

Nevertheless, there is reportedly little support from international software firms in the implementation of their proprietary software. Furthermore, open-source software is not popular in Botswana.<sup>218</sup> Open-source e-commerce packages such as Shopware (<https://www.shopware.com/en/>) are available but would need local support to enable them to be used in Botswana with local currency and payment mechanisms. Such open-source platforms would enable IT firms in Botswana to join communities of developers and learn from the experience of others in building e-commerce solutions. The free and open-source software approach is supported by UNESCO.<sup>219</sup>

## **Data Centres**

Large international data centre operators do not have a presence in Southern Africa, although Microsoft hosts Azure in a Tier 3 data centre in South Africa. Amazon also hosts in South Africa, as does Facebook and Google, which are in a Dimension Data data centre in Johannesburg.<sup>220</sup> However, Botswana is beginning to become a data centre hub, hosting several large content and media services.

The following data centres have been identified in Botswana:

- BoFiNet/BTCL<sup>221</sup>, hosting Facebook, Netflix, Google Cash and YouTube<sup>222</sup>
- C-NEST provides hosting services including Software as a Service via its own data centre in Commerce Park.
- Dimension Data has representation and has opened a data centre fully outfitted with cabinets to enable it to sell rack space in Botswana. It is designed as a Tier 3 data centre<sup>223</sup>.
- Orange
- Mascom has its own data centre and sees an opportunity to offer hosting services to other businesses. There do not appear to be concrete plans to do so, however.<sup>224</sup>

In addition, BoFiNet intends to build its own data centre near Botswana Innovation Hub.<sup>225</sup> BoFiNet is engaging with Teraco with the intention of migrating content and services hosted in South Africa to its own data centre to serve central Africa. Teraco will be a key partner in building BoFiNet data centre capacity and engaging with content providers and will be a user of the data centre. The data centre would enable cloud services to be located in Botswana, and this would improve the user's experience. BoFiNet will also provide white-label (unbranded) applications for ISPs to package and sell.<sup>226</sup> These could include cloud-based e-commerce services.

The data centre market in southern Africa has not been highly regulated. Pricing of hosting services has not been evaluated. It is important that such services be competitive, with pricing of services provided by large international hosting firms such as Go Daddy and Amazon.<sup>227</sup>

The biggest thing that could work to Botswana's advantage in data centres is to finalize the data protection bill modelled on GDPR. Banks are currently

in South Africa, but the data protection bill may force them to locate their data locally<sup>228</sup> or at least enter into strict agreements to safeguard customer data held in South Africa.

Collocation and rack space may not be appropriate for MSMEs and many large companies due to lack of IT systems expertise. They are not appropriate, as IT systems expertise is required to set up systems in collocation and rack space. Instead, data centre providers need to provide computer systems on which end user organizations can implement their software, or software as a service. Implementing individual software packages will be beyond the capability of most MSMEs. Consequently, software as a service in a cloud environment is essential, given the lack of expertise in information technology and information systems in domestic businesses of all sizes in Botswana. Even in this environment, it is likely that most MSMEs will need support from IT firms with e-commerce experience or with e-commerce business transformation expertise to add an e-commerce channel to market.

## **Power and Electricity**

Of critical importance to building Botswana's ICT and IT industries is the country's access to power and electricity. Electricity is essential to growing the ICT and IT sectors, and data centres are major consumers of electricity. There are major infrastructure projects to ensure the production and delivery of electricity to citizens across the country. Apart from electricity production and delivery issues, however, electricity costs are a major concern. Studies indicate that, due to its high cost, electricity expenses are a major burden on many Botswana businesses and can be an impediment to business growth. Other major issues that need to be addressed in Botswana are inefficiencies in the national power utility and power subsidies to consumers and their (un)sustainability.

## B. Growing Botswana's knowledge capacity

Under its Vision 2036, Botswana has set out to transition from a resource-based economy to a knowledge-based economy grounded in the use of science, technology and innovation to achieve efficiencies, competitiveness and excellence.

Through continuing investment and progress in modernizing and upgrading its ICT and telecommunications infrastructure and strengthening its IT sector, Botswana is laying the foundations for facilitating effective communication and the dissemination and processing of large flows of information, knowledge and data vital to building a technology-based, knowledge-intensive economy.

### ***E-commerce and the services sector***

Botswana's services sector plays an important role in this digital transformation. While the development of e-commerce and a truly digital economy stands to benefit all sectors, the services sector and trade in services will be a major beneficiary and player. Data show that the services sector has become important for Botswana's growth performance in recent decades.<sup>229</sup> The services sector's share in national GDP has grown substantially since the 1990s. According to the Bank of Botswana (2020), from 2010 to 2019, the share of the services sector in real GDP stood higher than the mining, manufacturing and agricultural sectors.<sup>230</sup> It continues to be one of the country's highest-performing non-mining sectors, with trade, hotels and restaurants (including tourism), banks, insurance and business services among the

four major sectors in terms of their contribution to the economy's gross domestic product (GDP).

With regard to trade in services, as a member of the WTO, Botswana has acceded to the WTO's General Agreement on Services (GATS) without exceptions, and is participating in additional liberalization negotiations as part of the "Africa Group".<sup>231</sup> Trade in services in Botswana has been growing substantially, including in ICT, financial services (in particular, banking and insurance), government services, postal and courier services and tourism, especially the sale of vacation packages.

Botswana appears to have particularly strong services export growth potential in travel and tourism, which, while precise GDP share data is hard to find, appears to have grown from around 5 per cent of GDP in 2007 to around 7 per cent in 2018.<sup>232 233</sup> In terms of services export share, in 2016 travel services alone have accounted for the absolute largest share of services exports (77.66 per cent), followed by "other business services" (9.63 per cent).<sup>234</sup> (See Table 10 below).

The services sector also contributes significantly to employment in Botswana. According to a study by Raboloko (2019), estimates showed that the wholesale and retail trade subsector employed more people between 2005 and 2015 than other subsectors separately. The number of people working in this subsector has grown from roughly 40,000 in 2005 to 50,000 in 2015. A 2006 World Bank study also found that the services sector provides substantial employment opportunities, especially for women. According to that study, 61 per cent of total employment and 75 per cent of female employment was absorbed by the services sectors in 2001.<sup>235</sup>

**Table 10 Breakdown of services trade in 2016**

1.4 bn USD of services exported in 2016		0.8 bn USD of services imported in 2016	
Travel +	77.66%	Travel +	35.17%
Other business services	9.63%	Transportation	34.01%
Government services	5.51%	Other business services	13.44%
Construction services	4.60%	Government services	10.33%
Transportation	2.40%	Construction services	3.87%
Insurance services	0.15%	Cultural and recreational services	1.74%
Royalties and license fees	0.04%	Royalties and license fees	0.79%
		Insurance services	0.65%

Source: United Nations Statistics Division



The rapid development of e-commerce in the future should accelerate economic growth, particularly in the services sector, and make Botswana competitive in the global digital economy. The services sector is a key player in growing e-commerce and in building Botswana's knowledge economy. It has an important role in growing knowledge-based services and cultivating knowledge workers.

E-commerce and digitalization also offer enormous opportunities to grow the services sector, strengthen service sector businesses and empower service and knowledge workers.

Some of the service sector segments well-positioned or to be developed for growth through e-commerce in Botswana include:

- The full range of professional services and IT-related support services for executing digital transformation projects, including the transformation of traditional B2B and B2C commerce into e-commerce. Their transformation services need to be targeted, designed and priced for medium and large businesses.
- Financial services, including payments, insurance and other financial services, which play a critical role in supporting business adoption of e-commerce, ensuring secure online payments; providing foreign exchange; and supporting trade and logistics facilitation.
- The tourism sector, which can benefit from the development of e-commerce as local tourist

destinations establish a business presence on the Internet that allow complete functionality and connectivity. With even major hotels in Gaborone having limited websites and reliant on telephone interface with international travellers, the industry stands to benefit from the greater efficiencies, ease and market outreach made possible by e-commerce and digital tools.

- The marketing sector which, while undeveloped in Botswana, can play an important role in helping to grow Botswana's consumer market research industry, an important market to support Botswana's e-commerce business growth and the development of e-commerce in the country.
- Knowledge entrepreneurship or knowledge-based businesses (see Box 21. Mining Knowledge through E-commerce and Knowledge Entrepreneurship).
- Due to the emergence of electronically delivered products and information flows, service sectors involved in information and knowledge production and transmission (media, radio, TV, entertainment) also serve as important agents benefiting from digitalization to grow e-commerce and build the knowledge economy.
- Other services, ranging from retail stores, restaurants, medical, legal, education, logistics and transport providers, construction and other services stand to benefit greatly from e-commerce and ICTs as Botswana shifts to a knowledge economy.

### Box 21 Mining Knowledge through E-commerce and Knowledge Entrepreneurship

While mining commodities have long been the backbone of Botswana's economy, as the country moves toward becoming a knowledge-based economy, it is increasingly harnessing the power of knowledge to create national wealth and positioning knowledge to become its "new diamonds." ICTs have accelerated the speed with which knowledge is being created, shared and applied in all parts of the economy. ICTs are also changing the ways in which knowledge and information in the form of products and services are designed and delivered in the global marketplace.<sup>236</sup> Knowledge entrepreneurship can play a role in galvanizing a knowledge revolution.

The term "knowledge entrepreneur" is probably most known for having been born in the unique technical entrepreneurial ecosystem of Silicon Valley, where scientists, engineers and/or other technical professionals pursuing largely scientific/technological research, often in collaboration with the great universities in the vicinity, pursued entrepreneurialism and created a business out of their technical specialties and research. Silicon Valley was also, and continues to be, characterized by perhaps the highest concentration of venture capitalists in the world. The result was an entrepreneurial ecosystem driven by remarkable technological dynamism, innovation and venture capital investments that evolved into a leading technology hub and startup ecosystem for high-tech innovation. Silicon Valley has given birth to a number of high-tech startups, many of which

scaled up to become multinational tech giants, among them Google, Apple, Oracle, PayPal, eBay, Adobe and Salesforce, to name a few. This type of knowledge entrepreneurship pursued by technical entrepreneurs or entrepreneurs with technical or specialized knowledge, often related to IT and the Internet, has spawned large numbers of technology entrepreneurs and continues to play an important role in cultivating the technological innovation that is driving the growth of a knowledge-based economy.

In recent years, however, e-commerce has given rise to the emergence of a new type of knowledge entrepreneur – one that is broader in scope, notable for its inclusiveness and provides opportunities for the potential engagement of far greater numbers of entrepreneurs beyond the enclaves of technologists, technicians and technical experts. Capitalizing on a growing trend toward self-education and self-learning, in this type of knowledge entrepreneurship, entrepreneurs sell customers online access to knowledge, whether specialized knowledge garnered through their own experience, training and expertise, through the experience, training and expertise of others, or knowledge obtained through the mining of knowledge-rich resources such as the Internet. Internet knowledge mining can include, for example, text and data mining, which is the process of selecting and analyzing texts, data and other content on the Internet in a way that can provide valuable information for clients and meet their needs.<sup>237</sup>

In contrast to the knowledge entrepreneur who possesses technical or technology-oriented knowledge, this type of knowledge entrepreneur offers clients access to any type of knowledge, from basic to more specialized, that may help to improve their lives and does not require an entrepreneur to have any advanced technical knowledge or educational background. In contrast to the knowledge provided by the traditional education system, knowledge entrepreneurs engaged in this type of entrepreneurship generally offer their clientele knowledge of a practical nature, based on real experience and life lessons. As a result, this form of knowledge entrepreneurship is geared to entrepreneurs as ordinary people, offering knowledge solutions to clientele who themselves are ordinary people looking for solutions to everyday problems or issues. This form of entrepreneurship is open and accessible to any aspiring entrepreneur possessing some kind of knowledge that a potential client – from farmers to homemakers – may find useful and be willing to pay for.

Linda Nicol, for example, is a typical knowledge entrepreneur. An Australian small business owner, farm manager for a recently purchased family farm and mother to five toddlers whose husband works away from home during the work week, she provides knowledge services and products on time management and productivity for women entrepreneurs – information particularly relevant for female small business owners trying to run more efficient and profitable farms and busy working mothers trying to manage a farm business while raising small children.<sup>238</sup> Today, her business has evolved to help as many female business owners as possible and to empower every woman.

Drawing from her own life experience and organizational training from her previous day job and accounting career, her successes, challenges and what she has found to work and not work, she has developed systems and techniques for women small business owners and mothers like herself to make life easier, more efficient and enjoyable. She calls herself a “goals catalyst” and runs online workshops, provides individual online coaching and serves as a mentor for her clientele, primarily women business owners with children who want to improve their time management, productivity and goal attainment. Her website (<https://www.lindanicol.com.au>) provides information on her product and service offerings and offers a subscription to her email-based newsletter for interested people.

She has a Facebook account and blog featuring regular topics of interest to her target clientele, such as her daily series “Down on the Farm: Farming tips that you can implement into your life and business immediately to be more productive and eliminate some of your overwhelm.” For this online blog series, she uses social media to produce regular videos in which she shares practical advice and lessons learned from her daily work on her farm, such as productivity tips she has learned from managing her livestock. She runs virtual coffee chats for busy mothers to offer support, encouragement and inspiration and share practical tips. As she is well plugged into other cutting-edge, high-growth-oriented online entrepreneurial communities, she has good exposure to the success stories and success formulas of top online knowledge entrepreneurs and

is well-positioned to share the useful knowledge she acquires with her clientele. As her business has grown and gained more visibility, she has begun writing articles for magazines, offering her tips, contributing as a co-author for books and doing live online interviews with various women's networking groups, many of whose members are "mumpreneurs," her ideal niche clients. As a result, she has garnered growing a following and is building a women's online support community for women small business owners like herself interested in becoming more productive and efficient in their work and family lives.

She is part of a growing number of entrepreneurs making a business out of sharing everyday yet valuable knowledge drawn from their life experience and competencies and uses online communities to learn and share knowledge, information and innovations with other knowledge entrepreneurs, which can support, strengthen and grow her knowledge business.

In a number of countries, knowledge entrepreneurship is increasingly taking place at two levels: (1) more advanced technical knowledge entrepreneurship; and (2) a more inclusive, accessible form of knowledge entrepreneurship geared to ordinary people using ICT tools and platforms to share practical knowledge to help them solve ordinary problems. While knowledge entrepreneurship involving knowledge of a specialized and technical nature continues to serve as an important launching pad for developing high-growth tech sectors critical for building a knowledge-based economy, the latter type of knowledge entrepreneurship – geared to the proliferation of knowledge of a more ordinary nature – plays an important role in helping to prime and actively engage larger numbers of people in the marketplace, both e-service providers and e consumers, in the online world and knowledge society and serves as a more inclusive and participatory type of knowledge entrepreneurship. As people across all socio-economic groupings seek to improve their lives, the demand for useful knowledge is a universal need, and there are myriad opportunities for enterprising entrepreneurs able to seize these niche knowledge business opportunities. Knowledge entrepreneurship has the potential to accelerate greater diffusion of knowledge, ideas and innovation across broader segments of the population through online channels.

Source: UNCTAD

### ***E-commerce, Advanced IT and 4IR in Botswana***

There are emerging lead industries and sectors in Botswana where innovative, knowledge- and data intensive use of advanced IT and 4IR has been fully or at least partly integrated into standard business operations. With the growing convergence of digitalization across sectors and industries, the global e-commerce landscape is increasingly integrating with 4IR, characterized by technologies such as IoT, big data, artificial intelligence, robotics, cloud computing, blockchain technology, augmented reality, virtual reality and others.

Consultations with Botswana stakeholders in the 1st and 2nd quarter of 2019 indicated that these industries and sectors include the following:

### ***Mining and extraction***

Debswana Diamond Mining Company, the joint venture between the Government of Botswana and De Beers, is an advanced IT user with 4IR integrated across its operations and supply chain to include extensive digitalization of operations, where use of advanced technology has made it possible to operate a "no touch" mine, eliminating the need for any manual handling in the processing of the diamonds. This involves the use of big data, real-time data capture, sensors, IoT, wearable devices for maintenance and operator safety, integrated remote operating centres, blockchain technology, etc. Debswana is already using e-commerce platforms to do business, including SAP, Ariba, and eTravel and has significant experience and expertise in information security management. These advanced technologies are behind what has made Botswana's diamond mining industry a powerhouse in global rough diamond production and Botswana's largest foreign income earner with a relatively small number of staff and safe working conditions.

***Diamond beneficiation (diamond cutting)***

While the craft of diamond cutting is still largely done by hand, phases of diamond processing in Gaborone involve the use of highly sophisticated AI-assisted computerized rough planning software and machines. The highly data-intensive machines integrate high-resolution 3D scanning analysis to provide information on an optimal diamond polishing plan, cut and symmetry. While each diamond cutting and polishing company normally has only one machine of this type, it is an advanced IT data intensive application applied in daily operations.

***Banking sector***

Botswana has a robust banking sector, with many banks coming from South Africa or other international locations. Using imported IT technology, the sector has solid IT infrastructure and is playing an important role in supporting payment for the e-commerce sector.

***Retail sector***

Many retailers in Botswana, primarily local branches of South African retailers or South African franchises, have well-equipped and developed technology infrastructure, including e-commerce, integrated payment, inventory and logistics and distribution systems

***Agriculture sector***

While Botswana has a large population of subsistence smallholder cattle farmers, it also appears to have a few commercial farms with highly developed tech-savvy farm operations. They include, for example, sophisticated dairy operations that make use of biometric technologies. Botswana also has one of the world's largest livestock identification and trace-back systems to identify livestock throughout the country, created to ensure livestock phytosanitary compliance for the EU market. Millions of cattle are tagged with an RFID chip in the cow's stomach. Data on the cattle is relayed to a central database and district offices. Through the RFID technology, it is also possible to monitor weight and feed, breeding history, etc.<sup>239</sup>

**CONCLUSIONS**

The ICT environment has many of the characteristics needed for Botswana's businesses to adopt e-commerce. A high degree of mobile telephony penetration will enable both rural and urban populations

to access USSD-based e-commerce services and mobile money services, while the availability and growing penetration of mobile broadband services will give an increasing proportion of the population access to more sophisticated web- and app-based e-commerce. Nevertheless, tariffs for both basic and broadband mobile services will act as a constraint and need attention to ensure widespread and regular use of e-commerce.

Medium-sized and large businesses are often ready to adopt e-commerce. The widespread use of IT in these businesses suggests a level of readiness for the use of B2B e-commerce for buying and selling goods and services. Moreover, supermarkets have already implemented B2C e-commerce. There is some evidence of B2C e-commerce usage in other retail sectors as well. Extending such use to rural businesses, family farms and other micro and small businesses will require initiative, however. In this respect, there is an opportunity to use extension officers for awareness training in e-commerce.

Notwithstanding, the IT and business advisory services sector itself are currently not strong enough to provide the support necessary for widespread adoption of e-commerce. Companies that have done so have tended to be supported from South Africa or elsewhere. The fragmented nature of the sector in Botswana and the lack of business transformation services must be addressed to bolster the sector's professionalism and inspire confidence among its prospective customer base. Companies need to provide support for business analysis and transformation through the introduction of new business processes, IT implementation and the necessary training.

The sector also needs to address the availability of software as a service from Botswana companies. E-commerce and other business IT applications must be made available as a cloud service of data centres in Botswana or elsewhere. Such services represent an opportunity for the IT sector – one that does not rely on the customer having IT skills. Such cloud-based applications would enable medium sized and large businesses to adopt e-commerce without significant upfront investment in infrastructure or skills, thereby lifting two barriers to its adoption.

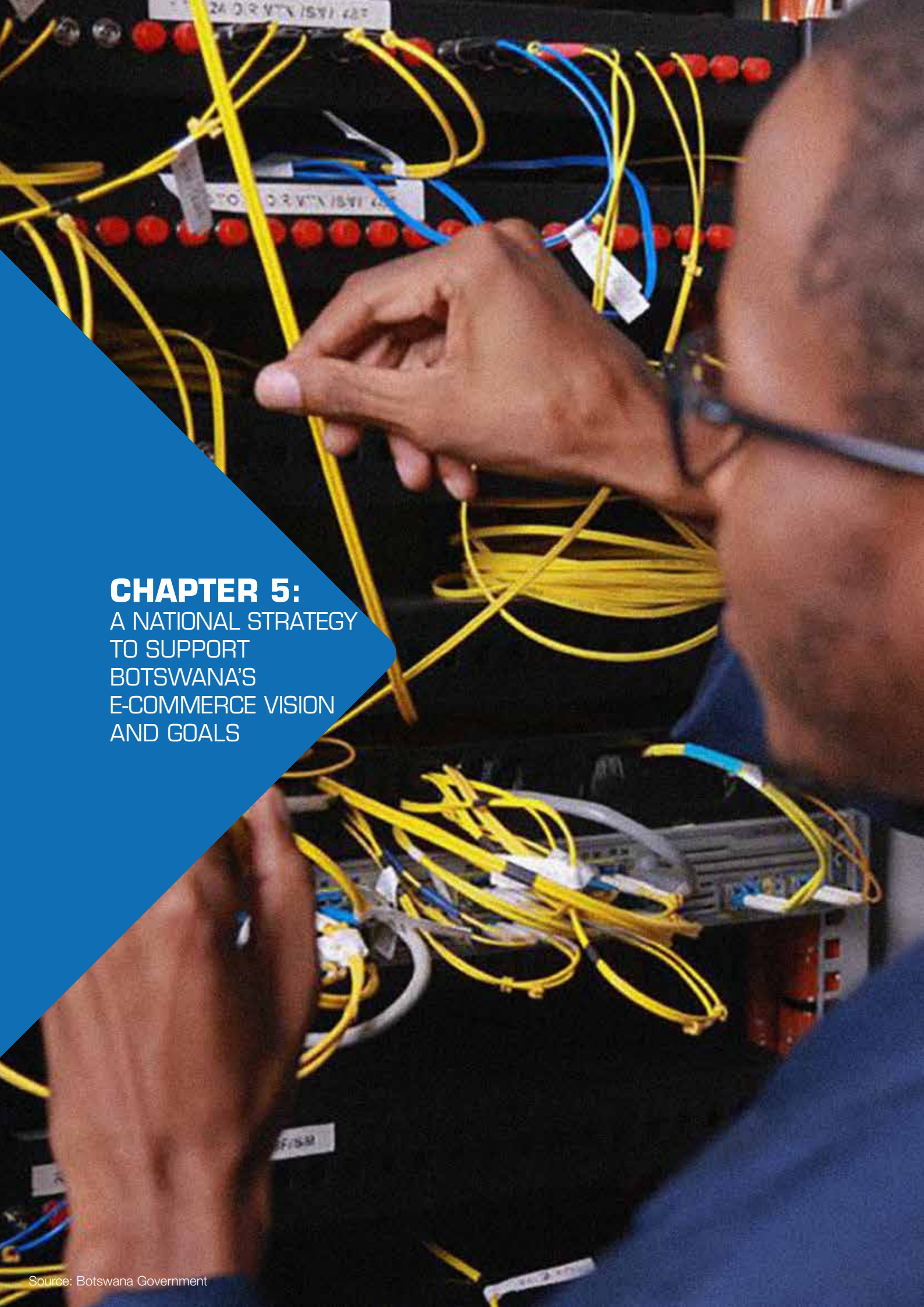
The adoption of cloud computing will nevertheless require improvements in the reliability of national telecommunications networks, since businesses will be relying on remote access for their day to day operations.

The services sector plays an important role in building the knowledge economy and growing the country's base of professional and knowledge workers and can be a major beneficiary of e-commerce. Sectors such as financial services and payments, tourism, marketing and other key service sectors and industries will likely want to shift to more ICT- and e-commerce-based systems

While so far, advanced IT applications and 4IR utilization is limited to a few firms and businesses among Botswana industries and sectors, there are

segments in which these technologies are thriving. These industries and businesses are a wellspring for Botswana's burgeoning digitalization and can serve as Botswana's vanguard in the transition toward 4IR and the construction of a knowledge-based economy. Public-private partnership to grow the knowledge base attained in these industries and firms and expand it to other sectors and industries for greater integration of 4IR in the economy would help catalyze a virtuous cycle in Botswana's technological development and cutting-edge innovation.

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A close-up photograph of a person wearing glasses and a blue shirt, focused on working with a network switch. The switch is densely packed with numerous yellow and blue fiber optic cables. The person's hands are visible, carefully handling one of the yellow cables. The background is dark, highlighting the intricate network of cables and the person's concentration.

## **CHAPTER 5:** A NATIONAL STRATEGY TO SUPPORT BOTSWANA'S E-COMMERCE VISION AND GOALS

A vision of the future serves as the starting point for strategies and plans to realize that future. To develop the national e-commerce strategy for Botswana, some 100 national stakeholders participated in a Vision Workshop in May 2019 to identify an e-commerce vision for Botswana's future. Employing futures methodology, the workshop explored the future and the forces that may shape it to gain insights to facilitate change and realize that desired future (see Summary of Vision Workshop in Annex). The futures methods – also known as foresight – has been used for several decades as a strategic planning method by private corporations, government, think tanks, educational institutions and academia. The results of the workshop discussions and brainstorming fueled the development of the following vision and goals for the national e-commerce strategy for Botswana.

## A. Botswana's e-commerce vision

Botswana has many strengths that can be leveraged for e-commerce, but its potential is still far from being fully tapped. The country should take the necessary steps to leverage e-commerce to empower its citizens and entrepreneurs, improve the quality of life and well-being of its people, grow its private sector and create jobs, diversify its economy and ensure inclusive, sustainable development and accelerated economic growth.

In the national e-commerce strategy, Botswana has embraced a vision for expanding e-commerce for growth and development to the benefit of its people and businesses. That vision seeks to tap Botswana's strengths and comparative advantages for e-commerce and overcome key obstacles and bottlenecks.

Botswana's vision and goals are embedded in and aligned with its Botswana's Vision 2036, which is:

***By 2036, Botswana will be a high-income country, with an export-led economy underpinned by diversified, inclusive and sustainable growth driven by high levels of productivity.***

The vision for Botswana's National E-commerce Strategy is:

***By 2026, we will have harnessed the power of our private sector, the talent and capabilities of the Botswana people, our mastery of ICTs, and our vibrant e-commerce sector to make our products and services a Botswana brand of excellence across the world.***

## B. Overarching strategic objective

Overarching strategic objective: Leverage e-commerce to accelerate economic growth and diversification, unleash Botswana's productive capacity and reach high-income country status

Greater efficiencies, trade and cross-sectoral and industrial cooperation around e-commerce will synergize to propel Botswana into a virtual cycle of increased and sustained economic growth, diversification, revenues and job creation.

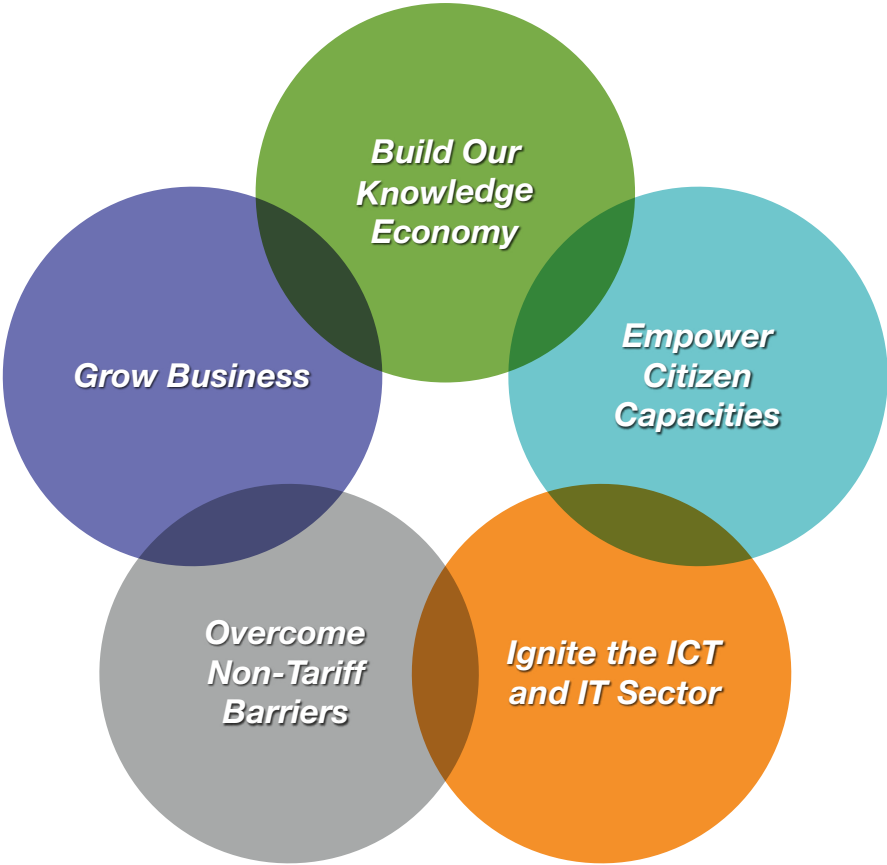
Based on the diagnostic of Botswana's foundational pillars, its national e-commerce strategy is based on a five-point thrust model with strategic focus on the following key areas for growing e-commerce and driving diversification in Botswana:

- Leveraging ICTs and e-commerce for business growth and private-sector development
- Promoting citizen empowerment and rural development through ICTs and e-commerce
- Powering the IT sector for e-commerce growth, including services
- Building a knowledge-based economy
- Eliminating non-tariff barriers to e-commerce

This model below aims to leverage Botswana's strengths and address weaknesses to set in motion the momentum and dynamic needed to propel ICT and e-commerce growth in support of diversification, national development and prosperity (see Figure 18 below).

The next section examines each of the thrust areas individually and the dynamics involved in leveraging each to grow ICTs and e-commerce and drive diversification in Botswana.

Figure 18 ICT and E-commerce-driven Model for Diversification: Main Thrusts



Source: UNCTAD



## C. Strategic goals and substrategies

Achievement of the vision and mission statement is guided by five strategic goals that develop the themes inherent in this vision and mission:

### **GOAL 1: BUILD A WORLD-CLASS ICT AND IT SECTOR LEVERAGING E-COMMERCE, INCLUDING SERVICES**

Goal 1 is designed to support the building of Botswana's ICT sector, including its infrastructure, by leveraging e-commerce. In addition to building on the strengths and opportunities of the ICT sector, the goal will also leverage the following aspects of the sector:

- Its potential to help make most sectors more competitive
- Local software development to meet the needs of Botswana businesses.

The goal aims to enable Botswana to achieve the following:

***By 2026, to achieve the Maitlamo dream and become a globally competitive, cutting-edge ICT hub with a world-class industry focussed on IT systems development, applications for e-commerce and excellent information technology services for many of Botswana's and other countries' major businesses to enable their e-commerce functions.***

Table 11 Goal 1: Ignite our ICT and IT sector

No.	Goal 1: Ignite our IT and ICT Sector	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
1. Modernize ICT infrastructure and measures to ensure quality of service, broadband and affordable pricing						
1	Continue to invest in and build out fibre access infrastructure through its Broadband Strategy.	Targets set in the Broadband Strategy	Targets set in the Broadband Strategy	M	MTC, BOCRA, BOFINET	Determined in national budget for Broadband Strategy.
2	Take regulatory action to ensure that the quality of service provided by telecommunications services meets national requirements and that telecommunications tariffs are affordable for consumers and business: a. Identify quality-of-service issues and causes, and implement proposals to address them. b. Find and implement ways to reduce telecom tariffs for consumers and businesses.	Telecom QoS performance at world-class levels Tariffs set at rates found in similar countries	Telecom QoS performance at world-class levels Tariffs set at rates found in similar countries	S	MTC, BOCRA, BOFINET	US\$250K for studies

No.	Goal 1: Ignite our IT and ICT Sector	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
3	BOCRA should conduct a review of broadband QoS to investigate reasons for alleged poor performance. The study should include an analysis of the amount of spectrum allocated to operators for mobile services; technical, commercial and administrative constraints on the siting of base stations and power levels; availability and pricing of fibre for backhaul from base stations and for trunk networks; availability of capacity and pricing of national transmission services and services for backhaul from base stations; availability of capacity and pricing of access to international cables; and availability of capacity and pricing of capacity on international networks. The study should include international benchmarks of capacity, pricing and regulation of spectrum, provision of fibre and telecommunications services. Once the study is completed, BOCRA should determine the actions needed to improve QoS and work with BOFINET, MTC and the private-sector operators to implement them.	<p>Telecom QoS performance at world-class levels</p> <p>Tariffs set at rates found in similar countries</p> <p>Broadband QoS targets are met. These include:</p> <p>Fixed Broadband:</p> <p>Access to Network Utilization: Uplink utilization must be less than 75% of the uplink bandwidth provided.</p> <p>Throughput: no less than 75% of subscribed level of bandwidth for 90% of the time for ADSL and 95% of the subscribed bandwidth for 100 % of the time for dedicated services</p> <p>Latency: maximum 85ms (milliseconds) 95% of the time</p> <p>Packet Loss: maximum 1% of the total packets sent.</p> <p>Mobile Broadband:</p> <p>HTTP Set-up Time: 95% within 5 seconds</p> <p>FTP (download/upload) Setup Time: less than 2 seconds</p> <p>FTP Drop Rate: less than 1% Web radio tune-in success rate: greater than 98%</p>	<p>Telecom QoS performance at world-class levels</p> <p>Tariffs set at rates found in similar countries</p>		BOCRA	US\$250K for studies
4	BOCRA should continue its monitoring of mobile QoS and fixed broadband speeds.	<p>Telecom QoS performance at world-class levels</p> <p>Tariffs set at rates found in similar countries</p>	<p>Telecom QoS performance at world-class levels</p> <p>Tariffs set at rates found in similar countries</p>		BOCRA	Determined within national budget.
5	BOCRA should conduct a study of pricing for consumer and business broadband services, benchmarking against pricing in other countries, and evaluate against the cost of service delivery in Botswana. Once the study is completed, BOCRA should determine the actions needed to bring pricing into line insofar as possible with affordability while maintaining profitability. BOCRA should then work with BOFINET, MTC and private-sector operators to take the proposed action.	% implementation of actions in the study	Implementation of actions embedded in the study		BOCRA	US\$250K for studies
6	Continue modernizing government IT and data centre infrastructure. Adopt a strategy for the transformation of government services through the use of IT. Implement the strategy.	<p>Strategy for transformation of government services through IT developed</p> <p>KPIs embedded in the strategy</p>	<p>Strategy developed</p> <p>Implementation of KPIs embedded in strategy</p>	M	DIT, BITRI	Dependent on extent of IT modernization
2. Align economic incentives						
7	Launch major FDI incentive for the IT and ICT industry (to attract large FDI IT players)	Number and quality of IT players setting up in the country.	<p>At least one major data centre established</p> <p>At least one business transformation consultancy undertaken</p> <p>Three software suppliers with e-commerce software in their portfolio</p>	M	BITC, BDC, MITI, MTC, BIH	<p>US\$250K pa for salaries and travel expenses</p> <p>US\$1 M to outfit the BIH for the IT cluster</p>

No.	Goal 1: Ignite our IT and ICT Sector	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
8	The outcome would be an IT cluster located at BIH aimed at supporting nascent IT businesses in Botswana through the provision of business, technical and operational support. This IT cluster would support the e-commerce Centre of Excellence	The number and quality of IT players setting up in the country.	At least 15 IT players setting up in the country.		BITC, BDC, MITI, MTC	
9	Continually review the ICT regulatory framework to ensure it is conducive to ICT development and FDI attractiveness. Ensure that the competition law, other regulatory laws, and FDI incentives work together and they uphold the combined objective of maintaining an open and competitive market and ensuring that no entry barriers exist for potentially beneficial ICT players in the Botswana market. Ensure synergies and coherencies between them support Botswana's ICT development, in particular with special consideration to the following. - consider revising sections 47–49 of Part XI on the control of mergers to make this process faster and easier - consider revising sections 31–33 of Part VII on horizontal agreement exemption to make this process more attractive to foreign investment. Soft law tools such as MOUs, joint advocacy programmes etc can also play a useful adjunct role.	Law is amended	Law is amended		Competition authority MITI AG's chambers	
10	Modernize corporate law (Trade Act) to add startup-friendly corporate structures					
3. Stimulate IT sector development of e-commerce applications and solutions						
11	Launch an e-commerce hub and Centre of Excellence specifically for the IT sector that caters to the sector's development needs and aims to raise standards of IT execution within the sector. The IT sector's IT Hub and Centre of Excellence would provide a one-stop shop providing expert advice for both IT service providers and IT procurers about: • Business transformation for e-commerce • Choice of e-commerce software and services • IT execution standards, IT Implementation and project management • Payment services implementation • Digital marketing and catalogue creation • Logistics management	Number of businessesFacilitate the creation of a public-private partnership to produce e-commerce hosting solutions for Botswana businesses and an e-commerce platform, where appropriate, under the auspices of the Centre of Excellence and the IT cluster	10 businesses supported in year 1, 50 in each succeeding year	Immediate set-up and then continued provision	MITI, Ministry of Industry, MTC	US\$1 M pa, potentially recouped through charges for the service

No.	Goal 1: Ignite our IT and ICT Sector	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
12	Facilitate the creation of a public-private partnership to produce e-commerce hosting solutions for Botswana businesses and an e-commerce platform, where appropriate, under the auspices of the Centre of Excellence and the IT cluster	HTML and USSD platforms are available by end of 2022	HTML and USSD based e-commerce platforms are available for micro and small businesses to move online. These platforms would be hosted in commercial data centres in Botswana. Support would be available from the partnership.	M	MITI, Ministry of Industry, MTC, LEA, CEDA, Business Botswana	A contribution of US\$1 M toward set up costs
4. Promotion of tech entrepreneurship and financing						
13	Working closely with SMMEs, startups, incubators and accelerators in the e-commerce and related tech spaces to design and provide specialized training that meets their needs.	The syllabus for the training programme would be completed by end 2021	A training programme for SMEs and startups in e-commerce disciplines.	S	MITI, Ministry of Industry, MTC, LEA, CEDA, training institutions	USD 100k
14	Enact law authorizing the creation of small business investment corporations, private-sector financing institutions formed by individuals with private funds and qualifying them for tax and other benefits.	The law would be enacted by end 2022	An enacted law	M	MITI, MTC, LEA, CEDA	None
5. Foster IT exports						
15	Examine the need to foster software exports among MSMEs, including through new tax incentives and business development support through the new technology parks.	Study launched	Study completed Tax incentives developed	M	MITI, Ministry of Industry, MTC, LEA, CEDA, BURS	
6. Sectoral business development services support						
16	Expand role of extension officers in issuing advice about the use of agricultural and rural e-commerce, including ensuring that extension officers have access to all farms and rural businesses in their locality, are trained in e-commerce and are integrated in service delivery programmes provided through the E-commerce Centres of Excellence.	Number of trained extension officers. The number of micro businesses supported each year.	100 extension officers trained in e-commerce skills in the first year, with updated training in subsequent years. 1,000 micro businesses supported in e-commerce each year.	Immediate set-up and then continued provision	MTC	US\$100k pa
17	Enable Kitsong Centres to provide local support for e-commerce. This includes: reviewing past performance of Kitsong Centres to identify issues that need to be addressed before launching the e-commerce initiative.  Introduce resources into Kitsong Centres to enable them to provide local support for e-commerce. This support would include access to e-commerce services for buying and selling goods and services, as well as access to support services such as assistance in setting up an e-commerce business, the use of technology, e-payments and regulation and access to logistics and digital marketing services.  Support would be provided through the E-commerce Centre of Excellence.	Kitsong Centres receive resources, training and support to provide services  Kitsong Centres implement service delivery	100% of Kitsong Centres receive resources, training and support to provide services  100% Kitsong Centres implement service delivery	Immediate performance review, followed by continued provision of support	Telecommunications Operators with guidance from MTC	

No.	Goal 1: Ignite our IT and ICT Sector	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
	7. IT execution and quality standards					
18	<p>Implement a Continued Professional Development Programme to raise IT execution standards for IT professionals.</p> <p>The programme would provide registration of IT professionals from technical grade through to those in senior management and policy positions. Thus, at the basic skills level, it would be task- and technology-oriented, whereas at the senior level it would be concerned with the application and use of IT while building an understanding of the technology involved. Qualifications would also cover communication and interpersonal skills. The registration system would require periodic demonstration of continued personal development relevant to the qualification.</p> <p>The framework would be linked into specific further and higher education courses.</p>	<p>Number of IT professionals participating in the programme</p> <p>Number of IT businesses participating in the programme</p>	<p>At least 100 IT professionals complete the training in year 1</p> <p>At least, 20 IT businesses complete the training in year 1</p> <p>20% growth in training participation is achieved per year.</p> <p>A framework for continued professional development that includes a standard for each level of registration, a means of assessing applicants, a publicly accessible register, a means of keeping a record of personal development, requirements for training courses by level.</p>	M	Botswana IT association, Business Botswana, Botswana tertiary institutions and academic community	US\$500,000

## **GOAL 2: Grow business through e-commerce**

Goal 2 is designed to strengthen businesses through e-commerce. The performance of Botswana businesses of all sizes in the adoption of ICT and of e-commerce lags behind the average reported performance for upper-middle-income countries in placing and receiving orders. There is a need for greater Internet adoption among MSEs and greater uptake of e-commerce by enterprises of all sizes.

This use of e-commerce will enable Botswana's businesses to:

- Increase market reach, especially in export markets
- Enhance service delivery to consumer markets in Botswana and abroad
- Strengthen their linkages to multinationals and firms in other countries

- Improve their participation in domestic and international supply chains.

The goals will build on a number of features already present in Botswana's IT sector and IT-using sectors. This includes the IT sector's growing capacity to bring new IT and software applications to Botswana businesses and the IT systems already in place in large businesses, which will form the back-office applications for e-commerce, and the IT literacy training programmes for SMMEs provided by LEA, CEDA and other agencies. Business use of e-commerce will also require a business environment conducive to investment, the adoption of e-commerce and enabling conditions that encourage businesses of all sizes and sectors to adopt e-commerce.

***The achievement of this goal would result, by 2026 in doubling the number of businesses selling or sourcing through e-commerce and the number of businesses exporting through e-commerce.***

**Table 12 Goal 2: Grow business through ICTs and e-commerce**

No.	Goal 2: Grow business through ICTs and e-commerce	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
1. Foster exports						
19	Develop and incorporate e-commerce, digital marketing and web tool training modules in the Botswana Export Development Programme, especially for MSMEs	Number of training modules developed Number of trainees trained through modules	Modules are launched and integrated in BEDP trainings. All BEDP trainees receive training.	S	MITI, BEDP, Botswana Exporters and Manufacturers Association, LEA, CEDA	US\$250,000
20	Develop and launch an official Botswana B2B Megaproject to enhance trade opportunities for Botswana exporters and to serve as a virtual community hub and informal e-learning central for Botswana's exporter community. Example: www. Thaitrade.com	E-marketplace developed and launched. No. of exporters registered in e-marketplace	Marketplace is launched 100% of licensed exporters are registered in the e-marketplace	M	MITI, BEDP, Botswana Exporters and Manufacturers Association, LEA, CEDA	US\$250,000
2. Strengthen import businesses						
21	Develop and roll out training on how to use e-commerce and internet to strengthen an imports business	Training is developed Number of trainees trained through modules	The training is developed and launched. 100% of licensed importers receive training.	S	MITI, BEDP, Botswana Exporters and Manufacturers Association, LEA, CEDA	US\$70,000
3. Boost industrial productivity						
22	Develop and roll out training modules on how to use online resources, e-commerce marketplaces and digital tools for effective manufacturing sourcing, niche product development, and networking for business partnerships	Training is developed Number of trainees trained through modules	The training is developed and launched. 100% of licensed importers receive training.	S	Botswana National Productivity Centre	US\$100,000

No.	Goal 2: Grow business through ICTs and e-commerce	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
4. Support new local industries						
23	Develop and launch comprehensive online business resource and industry-specific informational website, virtual community of practice and distribution channel for first-time business owners in selected new industries (bottled water, cement).	Website for each selected industry developed and launched Community of practice for each selected industry developed and launched Distribution channel for selected industries created	Industry-specific informational website, virtual community of practice and distribution channels are established and in active use.	M	MITI, LEA, CEDA	US\$250,000
5. Bring offline businesses online						
24	Leverage TV, radio, social media, print media, classroom/workshop campaigns to promote e-commerce adoption among businesses. Appoint or select e-commerce business owners in each district as champions to promote e-commerce uptake by businesses.	Number and interval of campaigns promoting e-commerce among businesses. Champions are identified, selected and are actively promoting e-commerce	E-commerce adoption among businesses is regularly targeted in media campaigns. Champions are identified, selected and actively promoting e-commerce in each district	M	MITI, LEA, CEDA	US\$250,000
25	Information dissemination, trainings and workshops through Business Botswana and sector-specific business associations, also to be disseminated through small business support services established through Kitsong Centres, LEA and CEDA in all districts.	Number of trainings and workshops/ Number of training and workshop participants Number of Kitsong Centres providing e-commerce training and support services	Information dissemination, trainings and workshops are organized. Each Kitsong Centre provides e-commerce training and support services	S	LEA, CEDA, Kitsongs, Business Botswana, MITI, BEMA and/or sector associations	US\$250,000
6. Upgrade online businesses and foster B2B						
26	Launch an E-commerce Center of Excellence, including an in-person and online community of members with access to research, best practices and networking events designed to give members, including top corporations, an edge in e-commerce. Feature speakers and exclusive events with top brands.	E-commerce Center of Excellence created Community of practice created Number of community members	E-commerce Center of Excellence is launched Community of practice is launched and has active membership At least 2,000 members registered in the community of practice	M	LEA, CEDA, Business Botswana, sectoral associations, MITI and other private-sector operators	US\$300,000
27	Through public-private partnership, host annual ERP conventions featuring speaker programme and ERP supplier booths. Ensure a range of ERP suppliers who can accommodate large and small businesses, Launch a virtual B2B community on ERP and other related topics.	ERP convention organized B2B community of practice launched Number of ERP suppliers hosted at convention. Number of businesses that attend ERP convention	ERP convention is hosted annually The virtual B2B community is launched. At least 50 ERP suppliers hosted at convention At least 1,000 businesses attend the ERP convention	M	Business Botswana, Chamber of Commerce	US\$250,000

No.	Goal 2: Grow business through ICTs and e-commerce	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
7. Raise awareness and celebrate Botswana's small business culture						
28	Launch an annual Botswana Small Business Awareness Month celebrating, honouring and recognizing small businesses in Botswana and their contribution to Botswana's growth and prosperity, including an e-commerce week featuring top e-commerce entrepreneurs.	The first Botswana Small Business Awareness Month (BSBAM) is organized. E-commerce week is organized as part of BSBAM	Botswana Small Business Awareness Month and E-commerce Week are launched and celebrated annually At least 5,000 small businesses register to participate	S	MITI, Chamber of Commerce, CEDA, LEA	US\$200,000
8. Improve data collection for monitoring e-commerce						
29	Pilot and eventually regularize an official retail sector survey, including e-commerce, to ensure data availability and reliability in e-commerce statistics. Partner with the private sector to begin regular e-commerce market surveys in Botswana. Business Botswana to form a Committee on E-commerce Data and Market Research to help facilitate and coordinate this. Botswana may also wish to refer to the UNCTAD Manual for the Production of Statistics on the Digital Economy. <sup>240</sup>	The retail survey is developed, piloted and launched. A partnership with the private sector launches an e-commerce market survey	Retail sector survey is piloted, launched and regularly conducted. Private sector conducts at least two e-commerce market surveys annually	S	Statistics Botswana, Business Botswana	US\$70,000



### **GOAL 3: Empower citizen capacities through ICTs and e-commerce**

The third goal is designed to leverage e-commerce to empower citizen capacities. The Botswana Government has long sought to ensure that Botswana citizens can actively participate in the growth of the economy and enable Botswana to fully tap in their potential and talents. The Government has also recognized the informal sector's importance and contribution to the economy.

Botswana aims to achieve the following goal:

***Through e-commerce, unlock and empower the business and entrepreneurial capacities and talents of Botswana citizens***

**Table 13 Goal 3: Empower Citizen Capacities through ICTs and E-commerce**

No.	Goal 3: Empower Citizen Capacities	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
1. Develop and run trainings on e-commerce and online entrepreneurship across several government and nationwide programmes (see below). Since each training targets different target groups, trainings are to be customized for the specific target group and offered separately.						
30	Integrate training in Botswana youth programmes (National Apprenticeship, Graduate Volunteer Scheme, Mabogo Dinku), Botswana National Service, National Internship Programme, Graduate Volunteer Scheme)	E-commerce training programmes are developed Number of programme participants who have received training	Trainings are developed and provided to participants for each programme.  Training is provided to programme participants	M	MITI, LEA, CEDA	US\$500,000
31	Reserved Trades Occupations	E-commerce training is developed for programme Number of participants who have received training	Training is delivered to programme participants.		MITI, LEA, CEDA	US\$200,000
32	Kitsong Centres	E-commerce training is developed for programme. Number of programme participants who have received training	Training is provided to programme participants.	M	MITI, LEA, CEDA, Kitsong	US\$200,000
33	Incorporate Botswana National Library Service into trainings and programs designed to promote e-commerce activities	E-commerce training is developed for programme. Number of programme participants who have received training	Training is provided to programme participants.	M	MITI, CEDA, LEA, BNLS	-
2. Sectoral area: Diamond Beneficiation						
34	Launch fine gems, jewellery and design creatives e-marketplace, where people in the trade and craft can sell, virtually congregate, share and communicate. It should also serve as an e-learning centrale on diamond cutting and polishing and have a linked virtual community network of jewellery artisans, craftsmen and creative designers.	E-marketplace is developed and launched Community of practice is launched Number of jewellery artisans, craftsmen and designers registered in e-marketplace	E-marketplace is launched. Community of practice is launched. At least 500 members are registered in the community of practice	M	MITI, LEA, CEDA	US\$200,000
3. Sectoral area: vocational trades						
35	Launch e-marketplace for vocational jobs (i.e., carpentry, plumbing). It should also serve as an online community hub for vocational workers, an e-learning centrale and business development channel. A mobile phone or WhatsApp-based online community of practice of vocational workers can be linked.	E-marketplace is developed and launched. Community of practice is launched Number of vocational workers registered in e-marketplace	E-marketplace is launched. Community of practice is launched. At least 500 members are registered in the community of practice	M	MITI, LEA, CEDA	US\$200,000

No.	Goal 3: Empower Citizen Capacities	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
4.Sectoral area: beef smallholding, farmers and agricultural community						
	Launch an e-marketplace for the agricultural community in Botswana that can be used for selling and sourcing. It should also serve as an online community hub for agricultural businesses, workers, farmers, smallholders as an e-learning centrale and a business development channel. A mobile phone or WhatsApp-based online community of practice can be linked.	E-marketplace is developed and launched. Community of practice is launched Number of members registered in community of practice	E-marketplace is launched. Community of practice is launched. At least 500 members are registered in the community of practice	M	MITI, LEA, CEDA	US\$300,000
36	To support small beef farmers, boost productivity during the privatization process, develop and roll out training on how farmers can use e-commerce, the Internet and web tools to operate more efficient and profitable businesses. Group training to be provided through farmers' cooperatives. Create virtual community network for beef farmers to share and communicate with each other on how to strengthen their businesses.	Training is developed and launched Number of farmers trained/ training hours Community of practice is developed and launched	Training is developed and launched. At least 10,000 farmers are trained Community of practice is launched. At least 20,000 farmers registered with the community of practice.	M	MITI, LEA, CEDA, NDB, Farmers' cooperatives, Farmers' associations	US\$250,000
37	Develop and disseminate training on online entrepreneurship and digital job opportunities as a jobs pathway for smallholder beef farmers who are unable to survive on farming as a livelihood following beef market privatization.	Training is developed and launched Number of farmers trained/ training hours	Training is developed and launched. At least 20,000 smallholder beef farmers are trained.	S	MITI, LEA, CEDA	US\$200,000
38	Launch urban consumer cooperative network and e-marketplace to support small beef farmers in securing buyers for their beef during the privatization process.	Cooperative network is developed and launched. Number of urban consumers registered in the network and e-marketplace. Number of small beef farmers registered in the network and e-marketplace	Urban consumer cooperative network and e-marketplace are developed and launched. At least 2,000 urban consumers are registered in the network and e-marketplace. At least 1,000 small beef farmers are registered in the network and e-marketplace	M	MITI, LEA, CEDA	US\$150,000
39	Launch e-marketplace and virtual community network on dry farming and rainfed agriculture. It should be a virtual community hub where small farmers can sell or source products, communicate and share with other farmers and learn to market dry farmed/rain-fed products as niche products.	E-marketplace is developed and launched. Community of practice is launched Number of members registered in the community of practice	E-marketplace is launched. Community of practice is launched. At least 500 members are registered in the community of practice	M	MITI, LEA, CEDA	US\$250,000

No.	Goal 3: Empower Citizen Capacities	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
5. Sectoral area: women entrepreneurs and stay-at-home mothers						
40	Develop and launch website especially for women entrepreneurs and stay-at-home mothers, including an e-marketplace and offering e-learning on Internet entrepreneurial opportunities and a community of practice.	The website is developed and launched. The community of practice is developed and launched Number of members registered in the community of practice	The website is launched Community of practice is launched. At least 2,000 members are registered in the community of practice	M	MITI, LEA, CEDA	US\$200,000
6. Awareness raising, outreach and showcasing of successful transitions through e-commerce:						
41	Launch a roadshow targeting informal businesses in all regions and showcasing business opportunities through e-commerce, success stories and benefits offered to transitioning businesses. Information booths to be set up in markets.	Roadshow is organized and launched. Number of regions in which the roadshow is conducted	Roadshow is organized and launched. Roadshow is conducted in all regions.	M	MITI, LEA, CEDA	US\$250,000
7. Informal sector-targeted financial inclusion measures						
42	Launch major mobile wallet outreach to unbanked businesses. Ensure outreach includes specific measures to reach unbanked women in rural areas. Bundle mobile wallet outreach with introductory information on e-commerce business opportunities made possible through e-payments.	Mobile wallet outreach is successfully launched Number of unbanked businesses reached Number of unbanked women in rural areas reached	Mobile wallet outreach is successfully launched At least 5,000 unbanked businesses are reached At least 5,000 unbanked women in rural areas reached	S	MITI, LEA, CEDA, BotswanaPost, BURS, Ministry of Finance, Bank of Botswana, Banks	Public-private partnership
8. Mobile app for e-learning						
43	Develop and launch an e-commerce training, Internet entrepreneurship and web skills e-learning mobile app. Facilitate national uptake by embedding the app in the standard social media bundle or offer it in a new e-learning app bundle for mobile phones.	App is created and integrated in a mainstream mobile bundle. App is launched nationwide. Number of app downloads	App is created and launched in a bundle nationwide At least 50% of the population downloads the app	S	MITI, LEA, CEDA, Mobile network companies	US\$250,000
Megaproject: Launch a Rural E-commerce Development Campaign						
44	To promote e-commerce in rural areas, the Government should launch a rural E-commerce Development Campaign making use of the post office network of BotswanaPost as well as established Kitsong Centres.	Campaign is launched. Number of post offices and Kitsong Centres involved	E-commerce Development Campaign is launched 100% of post offices are involved 100% of Kitsong Centres are involved.	M	MITI, LEA, CEDA, BotswanaPost	US\$250,000
Megaproject: Develop E-commerce Empowerment Programme for Youth SMMEs						

No.	Goal 3: Empower Citizen Capacities	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
45	The government should introduce E-commerce empowerment programme targeting mainly youth SMMEs. The programme would solicit unemployed university graduates to assist SMMEs in building their own websites or virtual markets/stores.	Youth programme is developed. Youth programme is launched nationwide. Number of SMMEs and university graduates involved in the programme	Youth e-commerce empowerment programme is established Youth e-commerce empowerment programme is launched nationwide 80% of unemployed university grads participate in programme	M	BIH, YDF, MITI, LEA, CEDA, Tertiary Education Institutions, HRDC	US\$800,000

#### **GOAL 4: BUILDING OUR KNOWLEDGE ECONOMY**

Goal 4 is designed to support the building of Botswana's knowledge economy. In addition to building on Botswana's current strengths, the goal will leverage the following aspects of Botswana's service and technology sectors:

- the financial services and payments, tourism, marketing and other key service sectors and industries that are likely interested in shifting to more ICT and e-commerce-based systems
- high-tech industries in Botswana, including the mining and extraction, diamond beneficiation, retail, banking and payments and agricultural industries, where advanced IT and 4IR has fully or partly taken hold in segments of the business operations.

This fourth goal aims to enable Botswana to achieve the following:

***By 2026, to have made rapid advances toward achievement of the Vision 2036 goal of becoming a knowledge-based economy.***

**Table 14 Goal 4: Building our knowledge economy**

No.	Goal 4: Building our knowledge economy	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
1. Strengthen services: Tourism Sector						
46	Megaproject: Launch megaproject strengthening the tourism sector through e-commerce, digital marketing and Web Tools	Megaproject is developed and launched Number of businesses involved. Growth in tourism sales generated through online channels	Megaproject is developed and launched	M	Botswana Ministry of Environment, Wildlife and Tourism, Department of Tourism, tourism organizations and associations	US\$500,000
2. Strengthen services: Financial services and payments industry						
2.1. Prerequisites for Safe and Efficient Electronic Payments						
47	Conduct a study to reconsider the existing policy on access to the BISS and ECHB payment infrastructures. Currently, PSPs, such as MNOs and statutory banks must perform interinstitutional clearing and settlement activity through commercial banks, which puts them at a disadvantage. The study should examine the pros and cons of allowing such PSPs direct access to the BISS and ECHB payment infrastructures.	Study is conducted. Specific recommendations formulated and adopted.	Study is conducted. Study conclusions inform and lead to a decision on whether to revise existing access policy.	M	BoB, BAB	US\$100,000
48	Accelerate implementation of a domestic payment card switch, with a view that it is desirable for it to switch/clear other payment instruments to promote interoperability and efficiency. Employ a holistic approach, focusing on the desired retail payments infrastructure. Ensure a collaborative, inclusive approach in discussing the issue of switching, fast payments and central KYC, the existing infrastructure into account. Creation of a card switch should also be complemented by the creation of local rules and arrangements for processing chargebacks. This is intended to maximize efficiencies related to domestic processing of the transactions.	Domestic payment card switch is developed and implemented.	Domestic card switch is developed and implemented	M	BoB, Commercial Banks, Statutory Banks, MNOs, fintechs such as Smartswitch and other fintechs providing financial services through aggregation.	Determined within national budget.

No.	Goal 4: Building our knowledge economy	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
49	Conduct a study to consider implementation of a "Fast Payment" or "Instant Payment" system that enables real-time EFTs on a 24/7 basis.	Study is completed.	Study is completed. Study conclusions inform and lead to decision on whether to implement a Fast Payment or Instant Payment system.	M	BoB, commercial banks	US\$100,000
50	Conduct a study on how to ensure enactment of a new NPS Act in Botswana that is all-encompassing – covering SIPS as well as retail payment systems, payment services, PSPs and instruments, both domestic and cross-border – and ensures a consistent interpretation of all these concepts (which is currently not the case).	Study is conducted. A new NPS Act is drafted and enacted.	Study is conducted. The act is drafted and enacted	M	BoB, Ministry of Finance and Economic Development, market players in payments services	US\$200,000
51	Conduct a study to boost ownership of accounts through the development of a tiered bank account system with looser KYC requirements for opening accounts with limited transactionality.	Study is conducted. Tiered system is developed	Study is conducted. The tiered system is established. The tiered system is launched.	M	BoB	US\$200,000
52	Channel all types of government payments through transaction accounts associated to an open loop instrument. This should include government payrolls, payments to vendors and suppliers, social assistance transfers and any pay-outs of social security benefits, such as retirement pensions. While many efforts have been made to avoid cash disbursements, in many cases the product used has been a pre-paid card with limited functionality. Instead, payments should be channelled through an account with at least one open-loop instrument associated with it – i.e. A payment card that is open loop.	Process for channelling government payments through accounts with one open-loop instrument is developed. Process is implemented.	Government payments are channelled through these accounts	M	Government, BoB	Determined within national budget.
2.2. Increasing the Use of Electronic Payments						
53	Devise a plan to promote electronic payments among consumers. Specific actions may include: -Encourage all existing bank accountholders to obtain a debit card as soon as possible, and consider waiving any existing fees for obtaining the first debit card. In brief, foster the acquisition, activation and use of debit cards. Debit card fees can be incorporated into the account fees. Despite being a zero-sum game for card issuer, the product is presented as convenient. - Migrate the disbursement of social assistance transfers from cash or prepaid cards with limited payment functionalities to accounts with open-loop payment instruments and/or mobile wallets - Foster trust and confidence in the use of electronic payments through financial education specifically focussed on payment and account holding matters and strong consumer protection. In addition, require PSPs to clearly display the process for consumers to claim their rights.	Plan is developed. Plan is launched. Number of people with access to more than one formal financial product	Plan is developed. Plan is launched. Number of people with access to more than one formal financial product increases from 46% to 57% by 2021.		BoB, Commercial Banks, PSPs Government, BoB, PSPs BoB, Government, commercial banks and non-bank PSPs, BAB	Determined within national budget.

No.	Goal 4: Building our knowledge economy	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
54	<p>Devise a plan for current users to make more intensive use of electronic payments. Some specific actions may include:</p> <ul style="list-style-type: none"> <li>- Increase electronic payments acceptance, especially among SMEs. Foster adoption of light POS and virtual POS which have lower POS rental fees.</li> <li>- Introduce differentiated MDRs for transactions with credit cards vs. transactions with debit cards (i.e., lower for debit cards). Regulation of MDRs will require regular reviews of the fee levels identified to avoid excessive market distortions.</li> <li>- Achieve interoperability between bank accounts, wallet-to-wallet across providers, and mobile money accounts, which can be accomplished by allowing the direct participation of mobile money service providers and eventually other non-bank PSPs in one or more of the key payment infrastructures (e.g., the future Fast Payments system).</li> <li>- Introduce financial and other types of incentives for current accountholders to use electronic payments instead of cash. Also identify ways to fund these incentives.</li> </ul>	<p>Plan is developed Plan is launched</p> <p>Selected KPIs:</p> <p>Payment transactions per POS terminal or other acceptance device. Transactions at POS/Transactions at ATMs.</p> <p>Total expenditure using payment cards/total consumer expenditure Percentage of payment instructions received by PSPs purely through electronic means. Percentage of payment instructions received and processed purely electronically by PSPs. Percentage of government payments made directly to beneficiary accounts. Evolution of the cost of domestic fund transfers versus domestic remittances in cash. Evolution of the fixed monthly cost of maintaining a transaction account Evolution of the cost to accountholders of per transaction charges. Evolution of the merchant discount rate Volume and value of fraud and operational errors</p>	<p>Plan is developed Plan is launched</p>	M	<p>BoB, all bank and non-bank PSPs BoB, Commercial Banks BoB, Commercial Banks, Statutory Banks, MNOs Government, BoB</p>	
55	<p>Bank of Botswana to collect and eventually publish a wide range of payment-related data from banks and non-bank PSPs. Some of the most critical data elements currently unavailable are statistics on the use of payment instruments at the intrabank level (i.e., for EFTs and cheques) and data on the pricing of payment card acquiring services (i.e., interchange fees and MDRs). This can be achieved by mandating the publication of fallback interchange rates and the maximum MDR applied in the market.</p>	<p>Protocol and process for data collection and publishing is developed</p>	<p>Protocol and process for data collection and publishing is implemented</p>	S-M	BoB	
3. Increasing Online Payments in E-Commerce						
56	<p>Create alternatives to payment cards for online payments by enabling the use of real-time EFTs for online payments in e-commerce (linked with the launch of a Fast Payment system). Fostering use of EFT also requires strengthening of consumer protection measures and operational backoffice activities for PSPs. Otherwise, the settlement finality embedded within EFT and the lack of an associated claim/chargeback mechanism could result in inefficiencies. Also, foster the use of mobile wallets.</p>	<p>Online payment alternatives are developed.</p>	<p>Online payment alternatives are implemented.</p>	M	BoB, Commercial Banks, MNOs	

No.	Goal 4: Building our knowledge economy	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
57	<p>Promote an expansion in the number of online payment acquirers through regulations that do not inhibit innovations and offer certainty to service providers involved in this business, whether fintechs or traditional players wishing to innovate. For example, if acquirers are required by regulation to perform all the functions related to the payment-acquiring business (i.e., Merchant acquisition, deploying infrastructure, payment authorization and processing, clearing and settlement), this would stifle innovation, as only some large players (i.e., larger, commercial banks) have the technical capability and funds to do all these together.</p> <p>Subsequently, regulations should be drafted allowing PSPs to perform specific function(s) of the payment-acquiring business in which they believe they have a comparative advantage (e.g., an innovative technology). Such regulation could encourage qualified players, i.e., Fintechs, to enter specific market niches.</p>	<p>Strategy developed on the basis of an analysis of regulations to promote the expansion of online payment acquirers.</p> <p>No. of online payment acquirers.</p>	<p>Strategy is implemented.</p> <p>30% increase in the number of online payment acquirers.</p>	M	BoB	
58	Government to have a greater role in the expansion of e-commerce by fostering e-government with more transactional services that can be paid for online.	Number of e-government services and platforms which accept online payments	100% of e-government services and platforms accept online payments	M	Government	
4. Adapt Regulations to New Payment Solutions						
59	<p>Strengthen an enabling legal and regulatory framework that supports and does not stifle innovation related to new payment solutions. Ensure adaptation of the recently issued regulations on e-payment to the evolving tech landscape.</p> <p>Legal regulations governing electronic wallets and biometric ID technology may become necessary if these technologies become largely used in the context of e-payment.</p> <p>A study should be conducted on these issues with the aim of adapting the regulations.</p>	<p>Study is conducted on adapting regulations to evolving technological landscape.</p> <p>Adaptation of regulations is proposed and implemented.</p>	<p>Study is conducted on adapting regulations to evolving technological landscape.</p> <p>Adaptation of regulations is proposed and implemented.</p>	S-M	Government, BoB, Commercial Banks, MNOs	
5. Improve E-commerce Payment Gateway and Define Consumer Payment Authentication Practices and Requirements						
60	A major concern has been raised about the limited payment gateways in Botswana to support e-commerce. Through Bank of Botswana, the Government should establish an authentication framework for banks that would ensure the safety and efficiency of transactions and use of the debit cards of all banks for e-commerce.	<p>Authentication framework is developed.</p> <p>Authentication framework is implemented.</p> <p>Number of banks actively using the authentication framework.</p>	<p>Authentication framework is developed.</p> <p>Authentication framework is implemented</p> <p>100% of banks in Botswana actively using the authentication framework.</p>	M	Government, BoB, Commercial Banks, MNOs	



### **GOAL 5: Reduce non-tariff barriers to e-commerce**

Goal 5 is designed to reduce non-tariff barriers to e-commerce, especially those related to logistics and payments. Botswana is also well-placed as a potential logistics hub, as it sits geographically at the crossroads of the SADC region. By building its basic infrastructure and land transport corridors, Botswana can build up its capacity at Francistown as a logistical hub and in infrastructure to support e-commerce and other sectors.

The substrategy will support achievement of this goal by:

- Increasing the efficiency and ease of use of customs and trade facilitation services.
- Developing and leveraging the full capacity of BotswanaPost to support e-commerce.
- Developing a fulfilment and logistics sector with the necessary scale to support a rapidly growing distance-selling culture within Botswana, SACU, the SADC subregion, the African region and cross-border areas.
- Ensuring that the underlying transport infrastructure allows for affordable deliveries to any inhabited locations.
- Positioning Botswana to be able to reduce logistics costs by sea in the long term.

The fifth goal aims to enable Botswana to achieve the following:

***By 2026, Botswana's full capacity to supply and support the growth of e-commerce will be exploited through the elimination of non-tariff barriers, the provision and use of integrated payments and logistics services that benefit from efficient national service providers, such as national postal services and other logistics service providers, as well as cross-border customs and trade facilitation processes.***

**Table 15 Goal 5: Reduce Non-Tariff Barriers to E-commerce**

No.	Goal 5: Reduce Non-Tariff Barriers to E-commerce	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
61	Train members of the Botswana Trade Facilitation Committee in the specific needs of cross-border e-commerce so that they are better prepared to include them in upcoming trade facilitation reforms.	Number of hours of training received and number of people trained	At least 90% of the members of the Botswana National Trade Facilitation Committee have received the training in e-commerce	M	Ministry of Trade	US\$100,000
62	Include the department of the Ministry of Trade in charge of the e-commerce portfolio as a member of the Botswana Trade Facilitation Committee. It will make sure that the perspective of cross-border e-commerce is considered in the Committee's decisions.	Number of NTFC meetings attended by the department in charge of e-commerce.	The department in charge of e-commerce attends at least one out of two meetings of the NTFC	S	NTFC and Ministry of Trade (department in charge of e-commerce)	N/A

No.	Goal 5: Reduce Non-Tariff Barriers to E-commerce	KPI	Target (Output)	Short-, Medium-, or Long-term	Responsibility	Estimated budget
63	A specific time release study for the most recurrent e-commerce import and export goods could be conducted to better measure how long e-commerce goods are stuck at the border and why.	The specific time release is produced and distributed to its target audience.	Key recommendations to improve the situation of cross-border e-commerce are included in the report	M	Botswana Revenue Authority	US\$100,000
64	Provide the different trade facilitation stakeholders with the necessary political, financial and human resources support to implement the trade facilitation reforms described in the Botswana Trade Facilitation Roadmap.	Amount of financial and human resources made available for the different trade facilitation activities described in the Roadmap	The Roadmap activities are implemented	L	All border agencies	Determined within national budget.
65	Implement trade facilitation measures beyond the provisions of the WTO Trade Facilitation Agreement aiming at easing, speeding and making cross-border e-commerce cheaper.	Number of measures beyond the WTO Trade Facilitation Agreement implemented.	Additional measures are identified and implemented	L	All border agencies	Determined within national budget.
66	Expedite the drafting and implementation of regulations, procedures and guidelines that will enable the facilitation of cross-border trade, including e-commerce.	Number of regulations, procedures and guidelines published	Regulations, procedures and guidelines facilitating cross-border trade, including e-commerce are in place	L	All border agencies	Determined within national budget.
67	Continue implementation of the trade single window currently in progress. As part of this implementation, seek support for the prompt design of a legal framework for establishing a single window. Ensure that the specificities of cross-border e-commerce are integrated in the system.	Number of legal documents drafted and adopted	The single window is established Legal framework is established and implemented	L	All border authorities Botswana Revenue Authority	Determined within national budget
68	Create a more specific legal framework covering import, export and transit procedures for cross-border e-commerce, including an adequate de minimis regime	Number of legal documents drafted and adopted	Legal framework is established and implemented	M	Ministry of Trade Botswana Revenue Authority	US\$50,000

## D. Implementation, governance and monitoring of the strategy

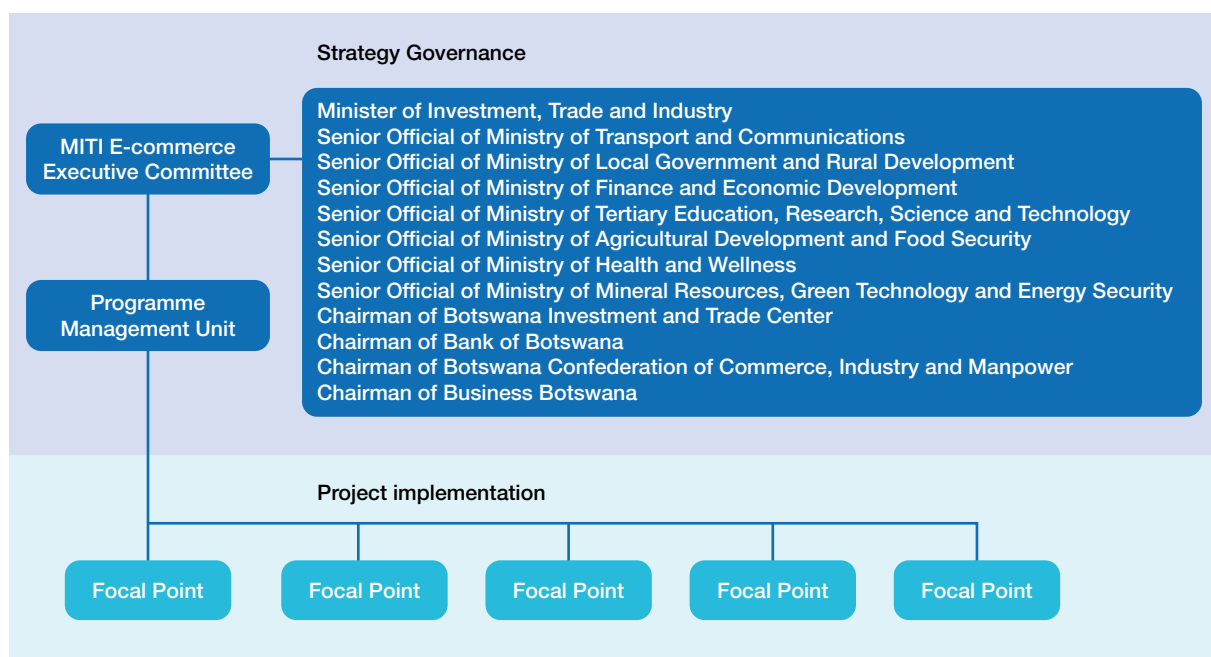
### *Implementation of the strategy*

The strategy vision and goals will be realized through the initiatives, programmes and actions specified under each of the five goals listed above. These are intended to develop awareness, understanding and practical knowledge of e-commerce in different sectors of society and business, remove barriers to the adoption of e-payments and e-commerce by consumers and businesses and put in place the financial, technical and commercial support framework for businesses that wish to trade online, including startups and small businesses. While many of the required resources for the initiatives are available, they need to be effectively coordinated. To this end, this section proposes a framework for governance of the strategy's implementation.

### *Governance and implementation*

The framework for governance and implementation of the e-commerce strategy is presented in Figure 19. Responsibility for implementing the strategy is vested in a newly created MITI E-commerce Executive Committee to be chaired by the Minister of Investment, Trade and Industry and comprising senior representatives of relevant ministries. These are the principal stakeholders who will help drive the vision for e-commerce development in Botswana, set the strategic direction and correct the course when/if needed, elevating proposed policy changes and resource allocations to the Cabinet for various programmes. The E-Commerce Executive Committee will also be responsible for monitoring policy implementation, coordination between different entities, participation in project implementation, and monitoring problem-solving. The programme management unit is responsible for drafting and revising project documents, setting and measuring key performance indicators and monitoring reports. The line ministries and the agencies concerned must be mainly responsible for this. The unit can support them, but each action/programme must be mainly the responsibility of the competent ministry, which will not work on the basis of plans crafted by others.

Figure 19 Governance and implementation organization



It is anticipated that the Committee will meet initially to agree on the Action Plan and governance processes and present a six-month progress report to MITI, identifying key successes, challenges and performance indicators for each project.

The MITI E-commerce Executive Committee will consist of Ministry representatives and representatives from other organizations that have ownership of initiatives/projects. This Committee is responsible for coordinating with stakeholders and will follow implementation of the project substrategies, provide feedback to ministers and receive guidance from ministers. It will be responsible for proposing changes in the Action Plan for approval by the Ministerial E-commerce Committee. The MITI National E-commerce Committee will prepare and deliver a semi-annual progress report, highlighting progress and challenges in relevant areas of the E-Commerce Strategy and recommending updates to the strategic objectives and targets.

The MITI E-commerce Executive Committee will perform follow-up and monitoring and submit reports directly to MITI. Implementation of the strategy

initiatives will be the responsibility of members. The Executive Committee should identify offices that will serve as project owners for each initiative in the strategy and be responsible for establishing indicators, baselines and targets for each initiative, holding them accountable for the progress made. Governance resource requirements should be relatively modest. The Ministerial E-commerce Committee and the MITI E-commerce Executive Committee will require occasional secretariat resources for the Programme Management Unit.

### ***Strategy monitoring, key performance indicators and audit***

Monitoring and auditing of the strategy will take place at the strategic and action plan level. At the strategic level, performance will be monitored against the targets for the goals. KPIs have been incorporated in the goal tables for each recommendation. The MITI, in cooperation with Statistics Botswana and Business Botswana, should be tasked with monitoring progress and collecting relevant information through field surveys as well as statistical information from offices responsible for strategy initiative implementation.

A photograph of a man in a patterned shirt sitting at a desk in an office, looking at a computer monitor. The monitor is an HP model. In the background, there are office cubicles and windows. A blue diagonal graphic is overlaid on the left side of the image.

## **ANNEXES:**

## **ANNEX 1: LIST OF PEOPLE CONSULTED AND INTERVIEWED DURING UNCTAD MISSIONS (2019)**

### **MINISTRY OF INVESTMENT, TRADE AND INDUSTRY**

- Hon. Bogolo J. Kenewendo, Minister, Ministry of Investment, Trade and Industry
- Hon. Moiserale M. Goya, Assistant Minister, Ministry of Investment, Trade and Industry
- Peggy O. Serame, Permanent Secretary, Ministry of Investment, Trade and Industry
- Ontlametse B. Ward, Deputy Permanent Secretary (Trade), Ministry of Investment, Trade and Industry
- Boniface O Tsheko, Acting Director, Department for Cooperative Development, Ministry of Investment, Trade and Industry
- Bonyana Ndubiwa, Policy Coordinator, Competition Authority, Ministry of Investment, Trade and Industry
- Dr. Joel Sentsho, Trade Policy Advisor, Ministry of Investment, Trade and Industry
- Gaoakanye Tapeng, Director for, Research and Policy Development, Ministry of Investment, Trade and Industry
- Linah Mohohlo, Coordinator, Selebi-Phikwe Economic Diversification Unit, Ministry of Investment, Trade and Industry
- M. T. Sitang, Principal Industrial Officer, Doing Business Unit, Ministry of Investment, Trade and Industry
- Phazha Butale, Chief Negotiator, Ministry of Investment, Trade and Industry
- R. K. Gabana Montsho, Senior Systems Analyst, Information Technology, Ministry of Investment, Trade and Industry
- T. M. Motlhabane, Assistant Performance Improvement Committee Coordinator, Strategy Office, Ministry of Investment, Trade and Industry

### **Department of International Trade**

- Boitumelo Sebonego, Principal Trade Officer-Regional Trade, DIT, Ministry of Investment, Trade and Industry
- Gideon Mmolawa, Director, DIT, Ministry of Investment, Trade and Industry
- Mosadinyana G. Nthomiwa, Chief Trade Officer, DIT, Ministry of Investment, Trade and Industry
- Ogaufi Motshwane, Acting Chief Trade Officer, DIT, Ministry of Investment, Trade and Industry
- Tshepho Monyakeng, Assistant Trade Officer, DIT, Ministry of Investment, Trade and Industry

### **Department of Trade and Consumer Affairs**

- Arabang Radifalana, Senior Commercial Officer, DTCA, Internal Trade Division, Ministry of Investment, Trade and Industry
  - Chisina Mualefhe, Chief Commercial Officer, DTCA, Ministry of Investment, Trade and Industry
  - Emmah Moremi, Commercial Officer I, DTCA, Consumer Protection Division, Ministry of Investment, Trade and Industry
  - Golebaone Kinnear, Senior Systems Analyst, DTCA, Ministry of Investment, Trade and Industry
-

- Gorata Moloisi, Principal Commercial Officer I, DTCA, Consumer Protection Division, Ministry of Investment, Trade and Industry
- Kegopotswe P. Moaisi, Principal Commercial Officer I, DTCA, Consumer Protection Division, Ministry of Investment, Trade and Industry
- Kemmony Keitsile, Deputy Director, DTCA, Ministry of Investment, Trade and Industry
- Mokhutli Mochotoane, Senior Commercial Officer, DTCA, Ministry of Investment, Trade and Industry
- Naomi Tshweneetsile, Commercial Officer, DTCA, Internal Trade Division, Ministry of Investment, Trade and Industry
- Obed S. Rankwe, Commercial Officer I, DTCA, Consumer Protection Division, Ministry of Investment, Trade and Industry
- Seipati G. Olweny, Director, DTCA, Ministry of Investment, Trade and Industry

### **Department of Industrial Affairs**

- Mmoloki Phalantwa, Chief Industrial Officer, Department of Industrial Affairs, Ministry of Investment, Trade and Industry
- Thabo Ratshee, Industrial Officer, Department of Industrial Affairs, Ministry of Investment, Trade and Industry

## **MINISTRY OF TRANSPORT AND COMMUNICATIONS**

- Alicia Mokone, Information, Communications and Technology (ICT) Deputy Permanent Secretary, Ministry of Transport and Communications
- Kabelo Ebineng, Permanent Secretary, Ministry of Transport and Communications (MTC)
- Michael Kajane, Deputy Director, Ministry of Transport and Communications
- Moses M. Moreri, Information Communication Technology (ICT) Coordinator, Ministry of Transport and Communications

### **Department of Telecommunications and Postal Services**

- Delight Thebeetsile, Chief Communications Officer, DTPS, Ministry of Transport and Communications
- Kamogelo Kwada, Principal Communications Officer I, DTPS, Ministry of Transport and Communications
- Paul Seakamela, Deputy Director, DTPS, Ministry of Transport and Communications
- Ronald J. Keikotlhae, Principal Communications Officer I, DTPS, Ministry of Transport and Communications

### **Department of Information Technology**

- Boitshepo Mogorosi, Principal Systems Analyst II, Department of Information Technology, Ministry of Transport and Communications
  - Bontle Rakhudu, Principal Systems Analyst, Department of Information Technology, Ministry of Transport and Communications
  - Otsetswe F. Oabile, Head of Projects, Department of Information Technology, Ministry of Transport and Communications
  - Rennatt Maphane, Principal Systems Analyst, Department of Information Technology, Ministry of Transport and Communications
-

## **MINISTRY OF LOCAL GOVERNMENT AND RURAL DEVELOPMENT**

- Dinah O. Lekhane, Senior Management Analyst, Ministry of Local Government and Rural Development
- Mogakolodi G. Segwagwa, Chief State Counsel, Ministry of Local Government and Rural Development
- Mpule Loeto, Principal Systems Analyst, Ministry of Local Government and Rural Development

## **MINISTRY OF FINANCE AND ECONOMIC DEVELOPMENT**

- C. C. Ndutchwa, Principal Accounts Officer, Office of Accountant General, Ministry of Finance and Economic Development
- G. N. Sekwababe, Senior Assistant Accountant General, Office of Accountant General, Ministry of Finance and Economic Development
- Ndulamo Hubona, Assistant Accountant General – Banking, Ministry of Finance and Economic Development
- Reetsang Moreti, Principal Accountant II, Ministry of Finance and Economic Development

## **MINISTRY OF HEALTH AND WELLNESS**

- Paulina T'siu, Pharmacist, Central Medical Stores (CMS)
- Tseleng Bothoko, Systems Analyst, Central Medical Stores (CMS)

## **MINISTRY OF TERTIARY EDUCATION, RESEARCH, SCIENCE AND TECHNOLOGY**

- Dineo Khame, Director – Procurement & Project Management, Department of Tertiary Education Financing (DTEF), Ministry of Tertiary Education, Research Science and Technology
- Edwin Seitshiro, Chief Tertiary Education Officer, Department of Teacher Training and Technical Education, Ministry of Tertiary Education, Research Science and Technology
- Evelyn Reetsang, Principal Research, Science & Technology Officer, Department of Research, Science and Technology (DRST), Ministry of Tertiary Education, Research Science and Technology
- Neo Maruping, Acting Chief Executive Officer – Finance, Department of Tertiary Education Financing (DTEF), Ministry of Tertiary Education, Research Science and Technology
- Thapelo Malope, Information Technology Officer, Department of Tertiary Education Financing (DTEF), Ministry of Tertiary Education, Research Science and Technology

## **MINISTRY OF MINERAL RESOURCES, GREEN TECHNOLOGY AND ENERGY SECURITY**

- Diana N. Moabe, Deputy Director, Diamond Hub

## **GABORONE CITY COUNCIL**

- E. R. Makgatlhe, Principal Commercial Affairs Officer, Gaborone City Council
  - Nathaniel Maphoto, Chief Finance Development and Planning Officer, Gaborone City Council
  - T. D. Kopelo, Principal Systems Analyst, Gaborone City Council
-



## **BOTSWANA CONSUMER CENTER FOR ADVOCACY, RESEARCH, AND ORIENTATION**

- Dr. S.D. Maruapula, Treasurer, Botswana Consumer Center for Advocacy, Research, and Orientation
- Dr. Selinah Peters, Chairperson, Botswana Consumer Center for Advocacy, Research, and Orientation
- Gobagoba Marina R., Secretary, Botswana Consumer Center for Advocacy, Research, and Orientation
- Malebogo Lekgoa, Vice Secretary, Botswana Consumer Center for Advocacy, Research, and Orientation
- Pauline L. Mmola, Member, Botswana Consumer Center for Advocacy, Research, and Orientation
- Shervey O. Thuso, Publicity Secretary, Botswana Consumer Center for Advocacy, Research, and Orientation

## **LOCAL ENTERPRISE AUTHORITY**

- Lesitamang Paya, Director National Branch Network, Local Enterprise Authority

## **BOTSWANA COMMUNICATIONS REGULATORY AUTHORITY**

- Cynthia Phiase, Technical Director, Botswana Communications Regulatory Authority
- Kenaope Pelaelo, Manager – Universal Services, Botswana Communications Regulatory Authority
- Noble Katse, Business Director, Botswana Communications Regulatory Authority
- Seepelo Mahalelo, Business Development Officer, Botswana Communications Regulatory Authority
- Seepelo Malefho, Information Technology Manager, Botswana Communications Regulatory Authority
- Thokozani J. Mlazi, Graduate Trainee – Business Development, Botswana Communications Regulatory Authority
- Tshoganetso Kapaletswe, Chief Technology Officer, Botswana Communications Regulatory Authority

## **BOTSWANAPOST**

- Joseph Moloko, Manager – Development and Innovation, BotswanaPost
- Keletso Botsalano, Applications Developer, BotswanaPost
- Mogomotsi Tebakae, International Mail Coordinator, BotswanaPost
- Tshwanelo Matlhabaphiri, Quality's Statistics Manager, BotswanaPost

## **CITIZEN ENTREPRENEURIAL DEVELOPMENT AGENCY**

- Thabo Thamane, Chief Executive Officer, Citizen Entrepreneurial Development Agency

## **BOTSWANA INNOVATION HUB**

- Alan Boshwaen, Chief Executive Officer, Botswana Innovation Hub

## **BOTSWANA FIBRE NETWORKS LTD**

- Boikarabelo Ramaretlwa, IP (Data Services) Manager, Botswana Fibre Networks Ltd
  - Hendrick Matlhaku, Service Fulfillment Manager, Botswana Fibre Networks Ltd
-

## **SPECIAL ECONOMIC ZONES AUTHORITY**

- Lovely Mogara, Director, Special Economic Zones Authority

## **DEPARTMENT OF TOURISM**

- Arabang Kanego, Deputy Director, Department of Tourism (DOT)

## **BOTSWANA TOURISM ORGANIZATION**

- Condрил Busang, Market Analyst, Botswana Tourism Organization
- Morongwa Koontse, Information Technology Manager, Botswana Tourism Organization

## **BOTSWANA NATIONAL LIBRARY SERVICE**

- Gaorere Kgotla, Director, Botswana National Library Service
- Jouns Mmatli, Principal Librarian I, Botswana National Library Service
- Neo Mosweu, Principal Librarian II, Botswana National Library Service

## **BOTSWANA POLICE CYBERCRIME UNIT**

- Kabelo Edward, Investigator, Botswana Police Service – Serious Crime
- Keogotsitse K, Investigator, Botswana Police Service – Headquarters
- Mokganedi Sisi, Investigator, Botswana Police Service – Serious Crime
- N. Dichabe, Investigator, Botswana Police Service

## **BOTSWANA INVESTMENT AND TRADE CENTRE**

- Boipelo Baakanyang, Trade Portal Manager, Botswana Investment and Trade Centre
- Moabi Phia, Exports Director, Botswana Investment and Trade Centre
- Reginald Selelo, Chief Operations Officer, Botswana Investment and Trade Centre

## **STATISTICS BOTSWANA**

- Ruth K. Mothibi, Manager (ICT), Statistics Botswana
- Stephen R. Pheko, Senior Statistician, Statistics Botswana

## **PUBLIC PROCUREMENT AND ASSET DISPOSAL BOARD**

- Mothusi Moswang, Ag. Divisional Manager, Public Procurement and Asset Disposal Board
- Oteng Raesima, Information Communications Technology Manager, Public Procurement and Asset Disposal Board

## **BANKERS ASSOCIATION OF BOTSWANA**

- Oabile Mabusa, Chief Executive Officer, Bankers Association of Botswana (BAB)
-

## **NON-BANKING FINANCIAL INSTITUTIONS REGULATORY AUTHORITY**

- Mojadi Kwerepe, Deputy Director, Non-Banking Financial Institutions Regulatory Authority
- Queen Nancy Monyatsi, Senior Analyst, Non-Banking Financial Institutions Regulatory Authority
- Thenjiwe Stephen, Senior Analyst, Non-Banking Financial Institutions Regulatory Authority
- Veronica Namate, Deputy Director, Non-Banking Financial Institutions Regulatory Authority

## **BOTSWANA STOCK EXCHANGE**

- Thapelo Moribame, Head – Market Development, Botswana Stock Exchange

## **BANK OF BOTSWANA**

- Patricia Tumed, Director, Payments and Settlement Department (PSD), Bank of Botswana (BOB)
- Patrick Lesotho, Manager, Payments and Settlement Department (PSD), Bank of Botswana (BOB)

## **FINANCIAL LITERACY TRUST**

- Cathrine Sibanda, Founder, Financial Literacy Trust

## **BOTSWANA UNIFIED REVENUE SERVICE**

- Luther Mabona, General Manager – Information Technology, Botswana Unified Revenue Service
- Molemi Pule, General Manager – Technical Services, Botswana Unified Revenue Service
- Segolo Lekau, Operations Commissioner, Botswana Unified Revenue Service
- Vivian Lesedi, General manager – Processing Centre, Botswana Unified Revenue Service

## **BOTSWANA CHAMBER OF MINES**

- Joe Ramotshabi, Projects Manager, Botswana Chamber Of Mines

## **BOTSWANA INFORMATION TECHNOLOGY SOCIETY**

- Malebogo Khandu, Secretary, Botswana Information Technology Society (BITS)
- Pontsho Pusoetsile, President, Botswana Information Technology Society (BITS)

## **MEETING WITH MAJOR STAKEHOLDERS IN THE ICT & IT SECTOR**

- Andina Otsile Moloise, Systems Analyst, Ministry of Investment, Trade and Industry
  - Arthur Modise, Developer, Ministry of Investment, Trade and Industry
  - Lesego Ramokapane, Systems Analyst, Ministry of Investment, Trade and Industry
  - Senwelo Phorie, Chief Systems Analyst, Ministry of Investment, Trade and Industry
  - Tsholofelo Katjimotsiwa, Developer, Department of Trade and Consumer Affairs, Ministry of Investment, Trade and Industry
  - Gloria Jackson, UI/UX Developer, Masama R
  - Larry Motshegwe, Software Sales Agent, Masama R
-

- Sidney Machana, Software Developer, Masama R
- Katlego Ookeditse, Student, Education-HQ
- Keabetswe Kgakololo, Principal Programmer, Education-HQ
- Lawrence Kekwaletswe, Chief Operations Officer, NADRA Botswana
- Thabile Rampa, Chief Technical Officer, NADRA Botswana
- Tshoganetso Kapaletswe, Chief Technology Officer, Botswana Communications Regulatory Authority (BOCRA)
- Moesi Modukwa, Software Developer, MOBISOFT
- Tony Mautsu, Managing Director, Social Light
- Itumeleng Garebatshabe, Managing Director, Intellegere
- Gaokgakala Tubutubu, Founding Chief Executive Officer, Richbase (Pty)Ltd
- Tirelo Moeti, Developer – Managing Director, iTraffic
- Mpule Loeto, Principal Systems Analyst II, Ministry Of Local Government And Rural Development (MLGRD)
- Monica Somolekae, Chief Systems Analyst, Ministry of Agriculture Development and Food Security
- Joshua Oodira, Developer, Inside

## **BOTSWANA INNOVATION HUB**

- Cookie Phirinyane, Commercialization Projects Manager, Botswana Innovation Hub
- Letlhogonolo Malela, Facilities Manager, Botswana Innovation Hub
- Obakeng Segwagwe, Programs Manager, Botswana Innovation Hub

## **BOTSWANA TEXTILE AND CLOTHING ASSOCIATION**

- Annah Kasiya, Secretary, Botswana Textile and Clothing Association (BTCA)
- Botho Chalebgwa, Vice Secretary, Botswana Textile and Clothing Association (BTCA)

## **LEATHER INDUSTRY ASSOCIATION BOTSWANA**

- Gadikgale Jane, Vice Chairperson, Leather Industry Association Botswana (LIAB)
- Lebang Kolagano, Chairperson, Leather Industry Association Botswana (LIAB)
- Thando Nkosana, Treasurer, Leather Industry Association Botswana (LIAB)

## **MINISTRY OF AGRICULTURAL DEVELOPMENT AND FOOD SECURITY**

- Kene Kebalepile, Senior Agricultural Economist, Department of Agribusiness, Ministry of Agricultural Development and Food Security
-

## **NATIONAL FOOD TECHNOLOGY RESEARCH CENTER**

- Isaac Ramabu, Director Corporate Services, The National Food Technology Research Center (NFTRC)
- Lovemore Marire, Senior Research Scientist, The National Food Technology Research Center (NFTRC)

## **BOTSWANA EXPORTERS AND MANUFACTURERS ASSOCIATION**

- Mmantlha Sankoloba, Chief Executive Officer, Botswana Exporters and Manufacturers Association (BEMA)
- Prince Nkwe, Strategist, Botswana Exporters and Manufacturers Association (BEMA)
- DEBSWANA
- Tshepo Mokgethi, Business Transformation Manager, Debswana
- John Baoki, Material Resource Planning Manager, Debswana

## **DIAMOND TRADING COMPANY BOTSWANA**

- Kago Mmopi, Head of Corporate Affairs, Diamond Trading Company Botswana
- Joseph Itlhobogeng, Operations Manager, Diamond Trading Company Botswana
- Robert Boakgomo, Information Management Manager, Diamond Trading Company Botswana

## **PRIVATE SECTOR**

- Boniface Seane, Card and e-Channels Operations Manager, BancABC
  - Tlamele Mothobi, Cards and Partnerships Manager, BancABC
  - Bontle Mokgothu, Head of e-Channels, BancABC
  - Prince Mobita, Head of Wholesale OPS Payments, Barclays Bank
  - Refilwe Ncube, Head of Regulatory Affairs, Barclays Bank
  - Tshepo Gaadingwe, Head of Technology, Barclays Bank
  - Victor Mmolawa, Digital Channels Product Manager, Barclays Bank
  - Beatrice Mbulawa, Support Services Director, Botswana Savings Bank
  - Beauty Bareki, Head – Central Processing, Botswana Savings Bank
  - Kabelo Ngwako, Head – Information Technology and Management Information System, Botswana Savings Bank
  - Kagiso Balopi, Head – Enterprise Risk, Botswana Savings Bank
  - Tshepo Mothoeng, Specialist, Strategy Coordinator, Botswana Savings Bank
  - Ajay Chaudhary, Project Head, First Capital Bank
  - Mathews Phetogo, Head – Operations, First National Bank (FNB)
  - Matshidiso Kereteletswe, Chief Operating Officer, First National Bank (FNB)
  - Canaan Mathendele, Information Technology Head, Standard Chartered Bank Botswana
  - Gift Seabelo, Implementation Manager, Standard Chartered Bank Botswana
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- Ikanyeng Kgosidialwa, Information Technology Manager, Standard Chartered Bank Botswana
  - Mpaphi Maika, Implementation Manager, Standard Chartered Bank Botswana
  - Onkemetse Kgosidialwa, Cash Management Operations Manager, Standard Chartered Bank Botswana
  - Priscah Kenosi, Cash Management Operations Head, Standard Chartered Bank Botswana
  - Thabiso P. Malgas, Partnerships Director, Morofin (PTY) LTD
  - Thelma O'Reilly, Head Banking, Botswana Building Society
  - Thato Gundu, Projects Manager, Botswana Building Society
  - Seabelo Pilane, Director – Orange Money, Orange Botswana
  - David Banda, Technical Support Manager, Orange Botswana
  - Lesego David, Foods Manager, Sefalana Holdings
  - Tshegofatso Mosala, Store Manager, Cotton On
  - Monametsi Kalayamotho, Digital Entrepreneur, Load Africa
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## **VISION WORKSHOP FOR DEVELOPMENT OF A NATIONAL E-COMMERCE STRATEGY FOR BOTSWANA-MAY 2019**

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## ANNEX 2: FORECASTING METHODOLOGY (PROVIDED BY STATISTA)

### Statista Methodology

#### ***E-commerce market sizing for Botswana***

The market estimates for Statista's 46 core countries, the world's largest economies, such as the United States, China, and Germany, are derived from bottom-up market modeling based on data from a broad range of industry-specific and national sources, the Statista Global Consumer Survey, and industry knowledge. Demand-side factors, such as the number of users, are linked to performance factors like user penetration or average customer turnover.

Statista's market data for 104 non-core countries, including Botswana, is generated in algorithmic models. To compensate for the lack of available data and evaluate a country's potential, analysts at Statista use the performance ratios from core countries with similar infrastructure and development conditions as benchmark values. Then they apply an algorithm-based calculation to create market KPI estimations, using the country's key market indicators as drivers.

Over 100 driver datasets for 150 countries have been collected from a variety of sources, including the International Monetary Fund (IMF), International Telecommunication Union (ITU), the World Bank, and many others. The datasets either include a forecast from the source or are forecast by Statista using trend analysis and prediction techniques based on historical data from 2000 to 2019. The drivers are categorized and assigned to the markets so that the top three best correlating drivers can then be selected for each market segment.

The chosen drivers not only have the best mathematical fit but must also have an actual influence on the performance of the markets. If specific drivers are not available for one country, they can be replaced with a set of backup economic development drivers of a more general nature.

The market size of Botswana was estimated in a regression model based on macroeconomic indicators of countries with a similar level of development. The country was modeled using all core-countries as a benchmark, combined with regional clustering analysis, meaning the macroeconomic indicators of neighboring countries weight significantly in the estimation, including the core-countries South Africa, Nigeria, and Kenya.

The KPI's estimated for Botswana are the user penetration for each e-commerce category (using internet penetration, smartphone penetration, average internet connection speed as main drivers) and the average revenue per user (using consumer spending for several categories as main drivers). The total market size of Botswana was calculated based on these two estimated indicators.

#### ***Market forecasts and growth scenarios in Botswana***

To create forecasts for up to 5 years in the future, analysts at Statista combine trend scouting with statistical and mathematical forecasting techniques.

Digital products and services are not embraced by all individuals at the same time but in a time sequence. The market maturity can be evaluated according to the Bass diffusion model, which describes how new products are penetrating the market. The users can be divided into categories based on how long it takes until they will adopt the new product.

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The Bass model is suitable for making predictions for all products and services, despite possible differences in product/service characteristics and complexity – the curve can shift in time and its steepness might differ, but its shape is always similar.

Once the status quo has been established, analysts assess the recent market growth and the macroeconomic environment of the country and its region. Then they move on to trend scouting, looking out for the business-critical developments in the industries that provide the basis for future market growth.

A market growth forecast is generated with the help of our tool, which combines historical market data with the predicted development of key market drivers by creating an S-curve function. The S-curve as a special case of the logistic function is well-suited to forecast digital markets due to the non-linear growth of technology adoption.

The result is an algorithm-backed forecast, based on relevant market drivers (e.g., internet penetration, consumption spending, infrastructure development, the share of the urban population, etc.) and the technology adoption lifecycle in the given market. Data is validated through collaboration with other Statista teams, third-party forecasts, regional comparisons, and the analysis of development cycles in different markets.

To set up the second growth scenario Statista's analysts have integrated an artificial uplift in connectivity and technology drivers of Botswana, including average connection speed, smartphone penetration, mobile cellular subscriptions, and fixed broadband subscriptions. The analysts applied various statistical techniques to capture the sensitivity of the e-commerce market to the changes in digital infrastructure. The algorithmic model employed for this purpose generated estimations on the average revenue per user and e-commerce penetration in Botswana. To properly size these two KPIs, the performance ratios of the market indicators of several countries were used as a benchmark. Benchmark countries were selected across the developed and developing world, covering a diverse range of settings, with diverse economic backgrounds and various e-commerce maturity levels. A special focus was placed on African countries and economies with a similar level of development and infrastructure as Botswana.

The drivers used in the regression analysis were judged to have an actual influence on the performance and Botswana, given its level of development and the nature of the existing e-commerce market. The multiple regression analysis was run for the year 2021 and different trend analysis and prediction techniques were implemented to forecast to 2024. A key success threshold for each indicator metric was determined and a subsequent significant correlation of the compiled drivers and the performance of e-commerce in Botswana was identified.

### ***Impact of COVID-19 on e-commerce in Botswana***

The e-commerce performance indicators and projections capture the effect of COVID-19. Analysts at Statista merged two settings to model the expected impact. The application of these two COVID settings on the e-commerce market in Botswana generates a strong growth uplift across all e-commerce segments in 2020, growth that is forecasted to remain at an elevated level throughout the forecasted years.

First, a driver approach was formulated – meaning the impact that COVID-19 has on the country-specific macroeconomic indicators was transposed on the e-commerce forecast, specifying relevant shock intensities per category. The impact of drivers accounts for months before, during, and after the crisis. The effect on e-commerce is more pronounced or dampened according to the economic environment of a country.

In line with the IMF World Economic Outlook, we expect a massive global recession for 2020 that will directly or indirectly affect e-commerce. Since the recession is caused by an external factor, recovery can be swift once vaccines and treatments are widely available. This v-shaped recovery will lead to higher growth from 2021 onwards until the long-term trend is reached again. Based on this changed macro-economic outlook we have adjusted our forecasts in two ways:

- Our analysts identified markets and segments that are affected directly by the pandemic and the associated containment measures (e.g. a shift from away-from-home to at-home consumption, sped-up
-

adoption of digital services). The forecasts for these markets were then adjusted based on their judgment which in turn is informed by available data from company filings, statistical offices, trade associations, and the trade press.

- Indirectly affected markets and segments are not impacted by the pandemic and its containment itself but are nevertheless experience stress due to the general recession (higher unemployment, reduced incomes). These forecasts have been adjusted based on regressions of historical data (mostly from national accounts and associated household budget surveys)

The second approach integrated into the COVID-19 modeling framework investigates the governmental stringency index (GSI) from the Blavatnik School of Government in Oxford. The stringency index accounts for variations in public responses to COVID-19 and it's rescaled as a measure of 1 to 100 so the online shopping forecast of a specific country will receive a stronger or a weaker boost, depending on its place on the scale. This allows for a more individualized COVID-19 impact that accounts for country-specific particularities. To model the average impact on 2020 a relaxation of measures in the second part of the year 2020 was estimated. The stringency index is a composite of several COVID-19 response indicators on a country level, including:

- school closures
  - public events canceling
  - gathering restrictions
  - public transport closures
  - public information campaigns
  - stay at home measures
  - movement restrictions and others
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## ANNEX 3: SUMMARY OF THE VISION WORKSHOP: NATIONAL E-COMMERCE STRATEGY FOR BOTSWANA (MAY 2019, GABORONE)

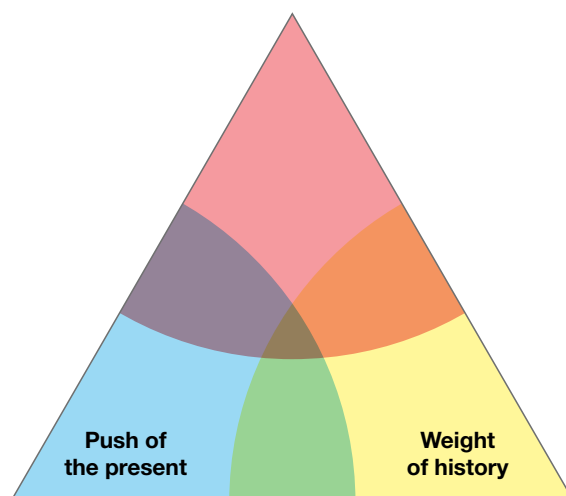
A vision of the future serves as the starting point for strategies and plans to realize that future. To develop the national e-commerce strategy for Botswana, some 100 national stakeholders participated in a Vision Workshop in May 2019 to identify an e-commerce vision for Botswana's future. Employing futures methodology, the workshop explored the future and the forces that may shape it to gain insights to facilitate change and realize that desired future. Futures methods – also known by other names, such as foresight – have been used for several decades as a strategic planning method by private corporations, government, think tanks, educational institutions and academia. The results of the discussions and brainstorming fueled the development of the vision and goals for Botswana's national e-commerce strategy.

In the workshop, futures methods tools such as the futures triangle (developed by Futures Expert Sohail Inayatullah) helped to explore the space of plausible futures through a mapping of the past, present and future. Workshop participants brainstormed the three dimensions that shape plausible futures<sup>241 242</sup>:

### Brainstorming dimensions:

1. Weight of the past:
  - What is holding us back or getting on our way?
  - What are the barriers to change?
  - What are the deep structures that resist change?
2. Push of the present
  - What trends are pushing us toward particular futures?
  - What quantitative drivers and trends are changing the future?
3. Pull of the future
  - What is pulling us toward particular futures?
  - What are the compelling images of the future?

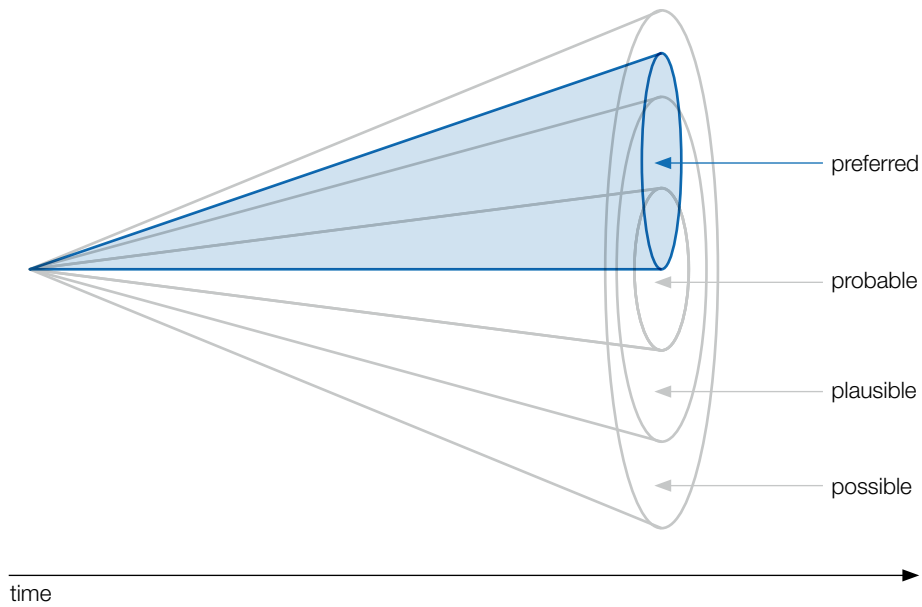
Figure 20 Futures Triangle



Source: Inayatullah (2008:29), with some adjustments by BDO<sup>243</sup>

The discussions and brainstorming from the Vision Workshop were incorporated in the strategy vision and goals of the National E-commerce Strategy for Botswana.

Figure 21 Cone of Possibilities



Source: Inayatullah

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## NOTES

- <sup>1</sup> This report uses the OECD definition of e-commerce: “the sale or purchase of goods or services, conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders. The goods or services are ordered by those methods, but the payment and the ultimate delivery of the goods or services do not have to be conducted online.” OECD Guide to Measuring the Information Society 2011, Paris.
  - <sup>2</sup> [http://web.worldbank.org/archive/website01321/WEB/0\\_\\_CONTE.HTM](http://web.worldbank.org/archive/website01321/WEB/0__CONTE.HTM)
  - <sup>3</sup> AT Kearney 2012 Global Retail Development Index.
  - <sup>4</sup> IFC. International Finance Institutions and Development through the Private Sector.
  - <sup>5</sup> OECD. Dryden, John, 2005.
  - <sup>6</sup> This report uses the OECD definition of e-commerce: “the sale or purchase of goods or services, conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders. The goods or services are ordered by those methods, but the payment and the ultimate delivery of the goods or services do not have to be conducted online.” OECD Guide to Measuring the Information Society 2011, Paris.
  - <sup>7</sup> [http://web.worldbank.org/archive/website01321/WEB/0\\_\\_CONTE.HTM](http://web.worldbank.org/archive/website01321/WEB/0__CONTE.HTM)
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  - <sup>10</sup> [http://econsult.co.bw/tempex/file/Econsult%20Review%202020\\_3rd%20Quarter%20\(Final\).pdf](http://econsult.co.bw/tempex/file/Econsult%20Review%202020_3rd%20Quarter%20(Final).pdf)
  - <sup>11</sup> <https://www.sundaystandard.info/de-beers-sees-glitter-at-the-end-of-the-tunnel/>
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  - <sup>16</sup> <https://www.sadc.int/issues/information-communication/>
  - <sup>17</sup> UNCTAD's ICTPR E-commerce Enabler and Assessment Framework and the Phases for Developing a National E-commerce Strategy were initially published in UNCTAD's Information Economy Report 2015 (ibid.). They have been updated and refined in this report.
  - <sup>18</sup> Source: Statista DMO
  - <sup>19</sup> Source: Statista DMO
  - <sup>20</sup> Source: Statista DMO
  - <sup>21</sup> Source: Statista DMO
  - <sup>22</sup> Source: Statista estimates 2020
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- <sup>23</sup> UNCTAD B2C E-commerce Index 2020. With regard to discrepancies between Statista data and other sources of data, much of the official data (Statistics Botswana, ITU data which is based on Statistics Botswana data) is based on official 2014 Botswana economic census data. There has not been an official data collection on e-commerce in Botswana since 2014. Statista has attempted to fill the data gap by providing more up-to-date estimates for the recent period, as well as projections. Statista's data methodology has been set out in the Annex of the report.
- <sup>24</sup> Statista
- <sup>25</sup> Statista
- <sup>26</sup> Source: Statista Digital Market Outlook 2020
- <sup>27</sup> Source: Statista Digital Market Outlook 2020
- <sup>28</sup> Source: Statista Digital Market Outlook 2020
- <sup>29</sup> Source: Statista Digital Market Outlook 2020
- <sup>30</sup> Source: Statista Digital Market Outlook 2020
- <sup>31</sup> Source: Statista Digital Market Outlook 2020
- <sup>32</sup> Source: Statista Digital Market Outlook 2020
- <sup>33</sup> Source: Statista Digital Market Outlook 2020
- <sup>34</sup> Source: Statista Digital Market Outlook 2020
- <sup>35</sup> Source: Statista estimates 2020
- <sup>36</sup> Source: Statista Digital Market Outlook 2020
- <sup>37</sup> Source: International Trade Centre (ITC) 2019
- <sup>38</sup> Source Skymart BW 2020
- <sup>39</sup> Source: Worldbank 2018
- <sup>40</sup> Source: Statistics Botswana 2019
- <sup>41</sup> Source: BotswanaPost 2020
- <sup>42</sup> Source: Statista country report
- <sup>43</sup> Source: Statista country report
- <sup>44</sup> Source: Statista country report
- <sup>45</sup> Source: Statista country report
- <sup>46</sup> Source: Statista country report
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- <sup>57</sup> <https://gds.blog.gov.uk/2018/03/13/help-the-digital-marketplace-go-global/>
- <sup>58</sup> <https://www.gov.uk/guidance/digital-marketplace-buyers-guide>
- <sup>59</sup> These included KGK Diamonds Botswana Pty Ltd; CA Sales; Kgalagadi Breweries Limited (KBL), a subsidiary of AB InBev; Choppies; Sunita Cables; Dynamic Road Services; Clover Botswana; Multichoice; KFC, and Nandos. A meeting was also held with the Botswana Exporters and Manufacturing Association
- <sup>60</sup> Choppies
- <sup>61</sup> Choppies
- <sup>62</sup> Choppies
- <sup>63</sup> Botswana Exporters and Manufacturing Association
- <sup>64</sup> Nandos
- <sup>65</sup> KFC
- <sup>66</sup> Premier Clothing (Pty) Ltd
- <sup>67</sup> Botswana Exporters and Manufacturing Association
- <sup>68</sup> World Population Review (available at <http://worldpopulationreview.com/countries/median-age/>). The term “median age” means that 50 per cent of the population is that age or younger, while 50 per cent is that age or older.
- <sup>69</sup> World Bank
- <sup>70</sup> Source: The World Bank and Sustainable Energy for All – Africa Hub (information available at <https://www.se4all-africa.org/seforall-in-africa/country-data/botswana/> last visited in late May 2019).
- <sup>71</sup> BOCRA website; BOCRA AR (2018)
- <sup>72</sup> ITU (2015): ITU World Telecommunication/ICT Indicators 2015
- <sup>73</sup> BOCRA website, accessed 30th April 2019; BOCRA AR (2016); BOCRA AR (2018); BOCRA AR (2019); Population: Statistics Botswana Website, accessed 30 April 2019; Statistics Botswana (2017); Statistics Botswana (2020); World Bank Database, accessed 19 December 2020.
- <sup>74</sup> Sources: GDP: World Bank (2019); Mobile penetration: ITU (2019)
- <sup>75</sup> Sources: GDP: World Bank (2019); Mobile penetration: ITU (2019)
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- <sup>76</sup> Sources: GDP: World Bank (2019) Mobile penetration: ITU (2019)
- <sup>77</sup> Note that the data for Botswana and Zimbabwe are relatively old and need updating to provide an indication of the level of e-commerce use.
- <sup>78</sup> Sources: BOCRA website, accessed 30th April 2019; BOCRA AR (2016); BOCRA AR (2017); BOCRA AR (2018); BOCRA AR (2019); Households: Statistics Botswana Website, accessed 30 April 2019; Statistics Botswana (2017); Statistics Botswana (2020)
- <sup>79</sup> ITU (2019)
- <sup>80</sup> ITU (2019)
- <sup>81</sup> ITU (2019); ITU has not reported any e-commerce usage for Estonia, Ghana, Kenya, Mauritius or the United States
- <sup>82</sup> This section is a distillation of the diagnostic report containing in-depth analysis in each of the eight foundational pillar areas.
- <sup>83</sup> C econ-overview
- <sup>84</sup> C econ-overview
- <sup>85</sup> Jerven, Morten. Economic Growth and Measurement Reconsidered: Botswana
- <sup>86</sup> Maipose, Gervais and The Indigenous Development State and Growth in Botswana.
- <sup>87</sup> [https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/2019AEO/REO\\_2019\\_-\\_Southern\\_africa.pdf](https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/2019AEO/REO_2019_-_Southern_africa.pdf)
- <sup>88</sup> Fitch Solutions Country Risk and Industry Research 2020
- <sup>89</sup> ICTPR: National E-commerce Strategy for Egypt
- <sup>90</sup> <https://ca.go.ke/industry/universal-access/ict-access-gap-study/>
- <sup>91</sup> Fitch Solutions Country Risk and Industry Research 2020
- <sup>92</sup> <https://a4ai.org/affordability-report/report/2020/#>
- <sup>93</sup> National Broadband Strategy (2018)
- <sup>94</sup> This section provides a brief summary of a comprehensive pricing and cost study, which can be found in the ICT and telecom diagnostic report prepared in 2019 for the national e-commerce strategy development and provided to the Government of Botswana.
- <sup>95</sup> Ofcom study
- <sup>96</sup> [https://www.sadc.int/files/9413/5293/3532/Regional\\_Infrastructure\\_Development\\_Master\\_Plan\\_ICT\\_Sector\\_Plan.pdf](https://www.sadc.int/files/9413/5293/3532/Regional_Infrastructure_Development_Master_Plan_ICT_Sector_Plan.pdf)
- <sup>97</sup> Consultations with Bocra
- <sup>98</sup> <https://www.travelpulse.com/news/destinations/portugals-madeira-islands-create-worlds-first-digital-nomad-village.html>
- <sup>99</sup> The Committee on Payments and Market Infrastructures (CPMI) defines “clearing” as the process of transmitting, reconciling and, in some cases, confirming transactions prior to settlement, potentially
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including the netting of transactions and the establishment of final positions for settlement. See CPMI 2016 Glossary, available at <https://www.bis.org/dcms/glossary/glossary.pdf?scope=CPMI&base=term>.

- <sup>100</sup> The Global Findex database or “FINDEX” is the world’s most comprehensive data set on how adults save, borrow, make payments, and manage risk. FINDEX has been published every three years since 2011.
- <sup>101</sup> Botswana is classified by the World Bank Group as an upper middle-income country.
- <sup>102</sup> This data was provided to the UNCTAD team by Standard Chartered, Barclays and First Capital Bank during in-country consultations in 1<sup>st</sup> quarter 2019.
- <sup>103</sup> The percentage of adults with a mobile money account is roughly consistent with the number of active (30-day) mobile money accounts that was given by the MNOs interviewed by the mission team: approximately 400,000 active mobile money accounts for an adult population of approximately 1.7 million.
- <sup>104</sup> Currently, prepaid electricity can already be purchased via the app. For additional details see subsection 3.4.
- <sup>105</sup> These programs are often referred to as social assistance programs.
- <sup>106</sup> <https://www.france24.com/en/live-news/20201209-italy-offers-christmas-cashback-in-push-for-digital-payments>
- <sup>107</sup> <https://www.biometricupdate.com/201705/safran-to-deploy-single-multi-biometric-platform-for-government-of-botswana>
- <sup>108</sup> Similar measures were taken back in 2006, but these targeted only specific sectors (e.g. restaurants, tourism).
- <sup>109</sup> MDR reduction and the volume indicator apply only to debit cards and e-money instruments issued in Uruguay.
- <sup>110</sup> <https://www.dlapiperintelligence.com/goingglobal/corporate/index.html?t=01-form-of-entity&c=FR>
- <sup>111</sup> [https://uk.practicallaw.thomsonreuters.com/4-550-7105?transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://uk.practicallaw.thomsonreuters.com/4-550-7105?transitionType=Default&contextData=(sc.Default)&firstPage=true)
- <sup>112</sup> <https://www.french-business-law.com/sas-or-sarl-article27.html>
- <sup>113</sup> [https://www.gide-venture.fr/best\\_practice/tout-savoir-sur-nos-best-practices-en-un-coup-doeil/?lang=en](https://www.gide-venture.fr/best_practice/tout-savoir-sur-nos-best-practices-en-un-coup-doeil/?lang=en)
- <sup>114</sup> <https://incorporate.ee/learning-centre/startup-business-in-estonia>
- <sup>115</sup> <https://e-resident.gov.ee/>
- <sup>116</sup> Azam, R. (2013). E-commerce Taxation in China. *Journal of Chinese Tax and Policy*, 3(1), 10.
- <sup>117</sup> “Special Report no 12/2019: E-commerce: Many of the challenges of collecting VAT and customs duties remain to be resolved”, European Court of Auditors, Published 2019 July 16, Retrieved from <https://www.eca.europa.eu/en/Pages/DocItem.aspx?did=50415>
- <sup>118</sup> “Foreign tax resident reporting”, Australian Taxation Office, Last modified 2018, June 25, Retrieved from <https://www.ato.gov.au/Individuals/International-tax-for-individuals/In-detail/Foreign-residents-reporting/Foreign-tax-resident-reporting/>
- <sup>119</sup> “Import charges”, Tullverket, Last updated 2021 February 3, Retrieved from <https://www.tullverket.se/eng/business/importinggoodstoswedenfromcountriesoutsidetheeu/importcharges.4.7df61c5915510cfe9e75e5d.html>
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- <sup>120</sup> "VAT registrations and simplifications in France", Marosa, Published 2020, July 21. Retrieved from <https://marosavat.com/manual/vat/france/registrations-simplifications/>
- <sup>121</sup> According to the 2016 Census of Enterprises and Establishments, 95 per cent of establishments were classified under the SMME category.
- <sup>122</sup> The comprehensive report on the findings of the focus group discussions conducted as part of the strategy development was provided to the Government of Botswana and is available upon request.
- <sup>123</sup> Other services include enterprises in insurance, education, microfinance, printing, laundry services, photography, estate agents and employment brokerage services.
- <sup>124</sup> BUYBDUB, Imaselife, Afroagilesoft and Keywealth.
- <sup>125</sup> AT Kearney 2012 Global Retail Development Index.
- <sup>126</sup> IFC. International Finance Institutions and Development through the Private Sector.
- <sup>127</sup> OECD. Dryden, John, 2005.
- <sup>128</sup> Published in the UNCTAD Information Economy Report 2015. Developed for the ICTPR National E-commerce Strategy for Egypt and first applied as a diagnostic methodology in Egypt from 2015-2016.
- <sup>129</sup> UNDP. "Botswana Exporter Development Programme launched". October 27, 2020.
- <sup>130</sup> <http://sacu.int/show.php?id=394&type=About>
- <sup>131</sup> <https://www.export.gov/apex/article2?id=Botswana-trade-agreements>
- <sup>132</sup> WTO. SACU Trade Policy Review. WT/TPR/114
- <sup>133</sup> <https://www.tralac.org/blog/article/13806-what-is-a-customs-union-like-sacu-about.html>
- <sup>134</sup> The 16 SADC countries are: Angola, Botswana, Comoros, Democratic Republic of Congo, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, United Republic of Tanzania, Zambia, Zimbabwe.
- <sup>135</sup> *ibid*
- <sup>136</sup> International Merchandise Trade Statistics, February 2018. Statistics Botswana.
- <sup>137</sup> Botswana Automotive Sector Study. Botswana Institute for Development Policy Analysis. 2005.
- <sup>138</sup> [Sundaystandard.info/pasdec-automotive-bags-p1-billion-contract](http://Sundaystandard.info/pasdec-automotive-bags-p1-billion-contract)
- <sup>139</sup> [weekendpost.co.bw/21023/business/bdc-launches-kromberg-and-schubert-factory-shell/](http://weekendpost.co.bw/21023/business/bdc-launches-kromberg-and-schubert-factory-shell/)
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- <sup>141</sup> Czinkota, M. and Ilkka Ronkainen. International Marketing.
- <sup>142</sup> <https://www.investopedia.com/terms/w/white-label-product.asp#:~:text=White%20label%20products%20are%20sold,marketer%2C%20instead%20of%20its%20own.>
- <sup>143</sup> <https://www.ecommerceceo.com/amazon-private-label-fba/>
- <sup>144</sup> AT Kearney 2012
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<sup>145</sup> AT Kearney 2012

<sup>146</sup> Competitive Analysis of the Retail and Wholesale Sector in Botswana (with Specific Focus on Food and Groceries). Mokubung Mokubung. Competition Authority Botswana. 2013.

<sup>147</sup> [sundaystandard.info/kbl-braces-itself-to-reclaim-top-end-of-the-market](http://sundaystandard.info/kbl-braces-itself-to-reclaim-top-end-of-the-market)

<sup>148</sup> Competitive Analysis of the Retail and Wholesale Sector in Botswana (with Specific Focus on Food and Groceries). Competition Authority Botswana. 2013.

<sup>149</sup> See [Agoa.info/Botswana: Textile sector upbeat despite AGOA export collapse](http://Agoa.info/Botswana:Textile-sector-upbeat-despite-AGOA-export-collapse) (march 22, 2019).

<sup>150</sup> [www.chinadailyhk.com](http://www.chinadailyhk.com),:Cabinet Backing for E-commerce Exports". April 14, 2020. Downloaded 23 October 2020

<sup>151</sup> Kinda. IMF, 2019.

<sup>152</sup> <https://www.trade.gov/market-intelligence/vietnam-ecommerce>

<sup>153</sup> [www.globalization101.org](http://www.globalization101.org). Project of Suny Levin Institute.

<sup>154</sup> [www.gkibalization101.org](http://www.gkibalization101.org). Project of Suny Levin Institute

<sup>155</sup> Gereffi, Gary. International trade and industrial upgrading in the apparel commodity chain. *Journal of International Economics*, 1999.

<sup>156</sup> Exim Basic Guide to Exporting, 2019.

<sup>157</sup> Meltzer, Joshua. 2016. Maximizing the Opportunities on the Internet for International Trade. E-15 Expert Group on the Digital Economy – Policy Options Paper. E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum.

<sup>158</sup> [trade.gov/ecommerce](http://trade.gov/ecommerce)

<sup>159</sup> [www.austrade.gov.au/ecommerce-guide](http://www.austrade.gov.au/ecommerce-guide)

<sup>160</sup> [Investopedia.com](http://Investopedia.com)

<sup>161</sup> [www.online.maryville.edu/blog/evolution-social-media](http://www.online.maryville.edu/blog/evolution-social-media)

<sup>162</sup> Statista

<sup>163</sup> Statista

<sup>164</sup> Pew Research Center

<sup>165</sup> Statista

<sup>166</sup> Data from social media platforms reported by Hootsuit.

<sup>167</sup> *ibid*

<sup>168</sup> *ibid*

<sup>169</sup> <http://www.epiqtech.com/e-marketplaces.htm>

<sup>170</sup> UNCTAD ICTPR: National E-commerce Strategy for Egypt

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- <sup>172</sup> [nibusinessinfo.co.uk](http://nibusinessinfo.co.uk)
- <sup>173</sup> oDesk merged with a similar platform, Elance, in December 2013 to form oDesk-Elance. The combined platform is estimated to host 8 million registered individuals.
- <sup>174</sup> [great.gov.uk/selling-online-overseas](http://great.gov.uk/selling-online-overseas)
- <sup>175</sup> [marketingtochina.com](http://marketingtochina.com)
- <sup>176</sup> World Bank
- <sup>177</sup> World Bank
- <sup>178</sup> Statistics Botswana. Quarterly Multi-Topic Survey: Labour Force Module Report. Quarter 1: 2020
- <sup>179</sup> *ibid*
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- <sup>181</sup> Lekgowe, Gosego. The Trajectory of Citizen Economic Empowerment in Botswana after Fifty Years
- <sup>182</sup> Botswana Excellence: A Strategy for Economic Diversification and Sustainable Development
- <sup>183</sup> <https://www.nytimes.com/1994/10/09/arts/made-in-japan-without-the-inferiority-complex.html>
- <sup>184</sup> [Ecommerceguide.com](http://Ecommerceguide.com)
- <sup>185</sup> <https://mixergy.com/interviews/mentor-to-millions-with-kevin-harrington/>
- <sup>186</sup> <http://www.cio.com/article/2449485/e-commerce/6-top-ecommerce-platforms-for-do-it-yourself-small-businesses.html>
- <sup>187</sup> Private discussion with ITIDA
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- <sup>190</sup> *ibid*
- <sup>191</sup> Overseas Development Institute. Analysis of the Economic and Social Effects of Botswana's Loss of Preferential Market Access for Beef Exports to the EU
- <sup>192</sup> World Bank
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- <sup>195</sup> National Broadband Strategy (2018)
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<sup>197</sup> IST Africa (2016)

<sup>198</sup> Prepared in cooperation with ITC.

<sup>199</sup> *ibid*

<sup>200</sup> National Broadband Strategy (2018)

<sup>201</sup> National Broadband Strategy (2018)

<sup>202</sup> BoFiNet (2018)

<sup>203</sup> Discussions with BTCL in the Mission

<sup>204</sup> BoFiNet (2018)

<sup>205</sup> Discussions with BTCL in the Mission

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<sup>208</sup> BoFiNet (2018)

<sup>209</sup> ICTNET Issue Paper 1. The Impact of ICT on Productivity and Growth. December 2018.

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<sup>212</sup> Yellow Pages (2019), The Commonwealth Network (2019), LinkedIn (2019), Local Botswana (2019), Google (2019)

<sup>213</sup> Source of technical staff needs to be checked with the firms listed

<sup>214</sup> Availability of technical staff needs to be checked with the firms listed

<sup>215</sup> Source of technical staff needs to be checked with the firms listed

<sup>216</sup> Discussion with Consult IT, 7th June 2019, during the mission

<sup>217</sup> Discussion with Mascom, 3rd June 2019, during the Mission

<sup>218</sup> Discussion with Consult IT, 7th June 2019, during the Mission

<sup>219</sup> <https://unesco.go.ke/programme/free-and-open-source-software-foss/>, accessed 24th October 2019

<sup>220</sup> Discussions with BoFiNet during the Mission

<sup>221</sup> *ibid*

<sup>222</sup> Discussions with BTCL and BoFiNet during the Mission

<sup>223</sup> Discussions with Dimension Data during the Mission

<sup>224</sup> Discussion with Mascom during the Mission

<sup>225</sup> Discussions with BoFiNet during the Mission

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<sup>226</sup> ibid

<sup>227</sup> ibid

<sup>228</sup> ibid

<sup>229</sup> Raboloko (2019)

<sup>230</sup> Bank of Botswana

<sup>231</sup> GATS/SC/109 (30 August 1995).

<sup>232</sup> Willem te Velde & Cali, 2007

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<sup>234</sup> United Nations Statistics Statistics Division

<sup>235</sup> World Bank (2006), World Development Indicators, CD-Rom. In De Velde & Cali (2007): Assessment of Botswana's Services Sector. Retrieved from <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/4122.pdf>

<sup>236</sup> <http://documents1.worldbank.org/curated/en/544191468052822563/pdf/439650PUB0Box310only109780821369210.pdf>

<sup>237</sup> [https://www.springernature.com/gp/campaign/librarian-tdm-2021?utm\\_source=other\\_website&utm\\_medium=display&utm\\_content=mpu&utm\\_campaign=MKEF\\_2\\_CC\\_TDM%202021](https://www.springernature.com/gp/campaign/librarian-tdm-2021?utm_source=other_website&utm_medium=display&utm_content=mpu&utm_campaign=MKEF_2_CC_TDM%202021)

<sup>238</sup> <https://www.lindanicol.com.au/2021/04/06/better-time-management-with-linda-nicol/>

<sup>239</sup> Boy, Rudolph. "Cattle Traceability – A Threat to Sustainable Supply of Beef to EU: A Botswana Meat Commission". European Journal of Logistics Purchasing and Supply Chain Management. Vol 1, No.1, pp.1-9

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<sup>242</sup> Michiel Jonker. [www.bdo.co.za](http://www.bdo.co.za)

<sup>243</sup> <https://www.bdo.co.za/en-za/insights/2019/advisory/the-futures-triangle-understanding-the-three-time-dimensions-when-planning-for-your-companys-future>



