

# An Established Knowledge-Based Economy: The Key Strategy to Facilitating Economic Recovery and Growth Post Covid-19 in Botswana

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## Abstract

The extent and duration of the covid-19 pandemic's impacts on the economic and social structures of a country are dependent on various factors such as, the economic and social conditions during the pre-crisis period, the severity of the crisis, and countries' financial and technical capacities to implement necessary recovery policies. The severity of the covid-19's economic impacts in Botswana is highlighted by mass erosion of demand and supply capacities across core industrial sectors in the country. In the effort to mitigate the pandemic-induced economic fallout, Botswana has put in place various economic recovery and transformation measures largely focused on promoting diversification, transformation to a knowledge based economy and private sector investment. The recommendations made in this study for enhancing such recovery efforts have been developed firmly based on the guiding principle of "building back better". An analysis of the effects of covid-19 on economic development and elements of an inclusive recovery and resilience are critically examined. The research approach is exploratory utilizing qualitative data collection methods. The results of this study emphasize the importance of public infrastructure investments, high technological use, rapid and intense innovations, high reliance on knowledge as some of the factors that should centre the Botswana government's efforts to stimulate demand, create employment, and kick-start economic recovery post-crisis.

## Keywords

Covid-19, Building Better, Knowledge-Based, Botswana Economy, Recovery Strategies

## 1. Introduction

The COVID-19 pandemic has significantly impacted global socio-economic stability, exacerbating structural weaknesses, especially in developing countries. The extent and duration of these impacts have been linked to several factors, including pre-crisis economic conditions, the severity of the crisis, and the financial and technical capacities of countries to implement recovery policies (Rahim, Allen, Barroy, Gores, & Kutzin, 2020). Major international organizations predict that the socio-economic effects of the pandemic will persist long after the health crisis subsides, with developing nations experiencing disproportionately severe and prolonged consequences.

In this context, this paper explores the role of an established knowledge-based economy as a key determinant in economic recovery from the COVID-19 crisis. Prior research suggests that a well-developed knowledge-based economy can facilitate economic growth and resilience (Dzigbede, Pathak, & Muzata, 2022). The goal of this study is to examine how countries can leverage knowledge-based economies to accelerate recovery, strengthen economic resilience, and enhance global economic stability post-COVID-19. A knowledge-based economy, as defined in this paper, is one that is characterized by high technological utilization, rapid innovation, and intensive reliance on knowledge to drive development.

### General Background

In Botswana, government-imposed lockdowns on businesses and cross-border movements significantly disrupted key industries, leading to a sharp economic downturn. The economy, which had been projected to grow by 4.4% in 2020, instead contracted by nearly 9% due to the pandemic (MFED, 2020b). This represented the most severe economic contraction since the country's independence.

The diamond mining industry, a major contributor to Botswana's exports, experienced a 30% decline in rough diamond sales due to reduced global demand and disrupted supply chains. Similarly, hospitality, travel, and trade industries suffered substantial setbacks, causing widespread job losses, income reductions, and financial distress among businesses and households. For example, the tourism industry experienced a drop of more than 75% in international arrivals in the year 2020, which was a big blow to the businesses that depend on the travel and hospitality business (Statistics Botswana, 2023). On the other hand, the manufacturing sector experienced a production decline because of supply chain disruptions, for instance, some companies felt a 40% drop in the output as compared to the pre-pandemic period (Botswana Manufacturers Association, 2021). Therefore, the severity of these economic impacts was marked by a sharp decline in demand and supply capacities across core industries. In response, Botswana implemented various economic recovery and transformation measures focused on diversification and private sector investment (MFED, 2020a). However, these mitigation strategies placed significant strain on the country's fiscal reserves, resulting in a budget deficit of BWP16 billion (approximately 5.6% of its 2020 GDP). Given these chal-

lenges, there is a pressing need to explore alternative strategies for economic resilience and long-term recovery.

## 2. Literature Review

Even before the onset of the Covid-19 pandemic, Botswana was already grappling with a host of internal serious socioeconomic challenges inhibiting its growth. By the time the pandemic struck, the country's GDP was growing at a sluggish pace of 2.6%, 3-year average since 2015, and this has been cited in the World Bank's Doing Business Report and the Global Competitiveness Index as having been contributed by persistent high rates of poverty and unemployment, declining export performance, low competitiveness, and low productivity levels (MFED, 2020a). This speaks to the fact that although Botswana is struggling to recover from severe and generalized social and economic problems precipitated by the Covid-19 pandemic, its pre-pandemic socio-economic status was not desirable either. Thus, country's residents, government, and business community need to implement an elaborate recovery plan propelling its economy and social structures on to high performance path characterized by high technology use, intense innovation and sustainable development driven growth, profitability, and competitiveness. As such, recovery plans need not be focused on realizing pre-pandemic economic trajectory but rather, a recovery that delivers a more resilient, inclusive, dynamic, and rapidly growing post covid-19 economy. According to Oosthuizen et al. (2020) the set of drivers for the recovery impetus in Botswana are largely concerned with achieving economy-wide efficiency gains through enhanced creativity and innovation in both the private and public sectors.

### 2.1. The Macroeconomic Environment

Since Botswana gained independence over five decades ago, stability has been ubiquitous with the various aspects of its macro-economic environment as highlighted by an enduring price stability, fiscal stability, exchange rate stability, and external stability. In the years leading up to the 2019 pandemic, the country was consistently ranked 1st on the Global Competitiveness Index in terms of macro-economic stability. Prior to the pandemic, Botswana's debt and fiscal positions were desirable and comfortably within the government's policy targets because of a strict abidance to set fiscal rules (Oosthuizen et al., 2020). To better understand Botswana's macroeconomic landscape, **Table A1** presents key socio-economic indicators, including GDP, economic freedom, human development index, and life expectancy, which influence the country's recovery trajectory. These indicators highlight both the strengths and vulnerabilities of Botswana's economy, emphasizing the need for targeted policy interventions to sustain economic growth. For instance, while Botswana has maintained macroeconomic stability, persistent challenges such as income inequality, slow GDP growth, and unemployment suggest that economic diversification and structural reforms are critical for long-term resilience. Addressing these issues requires a strategic shift towards a knowledge-

based economy, increased private sector participation, and investments in human capital development. Here, it is notable that the country's budget deficit in fiscal 2019/2020 was 3.86% of GDP while its total debt to GDP ratio was 18.1%, values which were markedly below the statutory thresholds of 4% and 40% respectively. Also, whilst the country had reported a P3.544 billion trade surplus in 2018, the 16.2% dipping of export performance and 9.3% increment in imports in 2019 led its balance of payments from trading of goods and services to deteriorate by about 25.5% compared with the previous fiscal period (Qobo & Soko, 2022). Such adverse trade balance outcomes in 2019 were chiefly due to a sharp decline both mineral and non-mineral commodity exports since the pandemic was declared, the latter of which vehicles and parts, textiles, and meat sectors were the hardest hit.

On inflation, Dzigbede, Pathak, & Muzata (2022) pinpoint that the country's price levels had continuously been on a favorable trend of relative stability. In fact, Botswana's annual inflation rates had steadily been declining since 2009, where the upper and lower policy threshold of 4% - 6% had already been achieved and surpassed between 2013 and 2018. In 2019, the country beat its lower inflation policy ceiling by realizing 3.1% annual average, and just over 2% in the first quarter of 2020. Botswana's pre-pandemic macro-economic strengths were further enhanced by its superior sovereign credit rating and comfortable foreign reserves position. However, the country's superb macro-economic performance had failed to efficiently translate into similarly desirable socio-economic outcomes, as reflected by its poor performance in aspects such as industry diversification, GDP growth, inequality, and job creation (Dzigbede, Pathak, & Muzata, 2022).

## 2.2. Structure of the Economy

In fiscal year 2019, the largest sectors of Botswana's economy included trade and hospitality, general government, mining, and finance and business services as measured by their share of GDP. At just of over 10% GDP share, the mining industry proved less dominant in the country's economy than it had been a few years earlier, GDP share performance of reflective of a declining trend beginning in 2015 and persisting through 2019 at a 6.1% annualized average rate. Here, Sebolao, Sekwati, & Bakwena (2019) point out that the reducing GDP share of the mining industry ought not be viewed as an indicator of Botswana successful economic diversification since the decline was not accompanied by any emergence of new industries, industries moving up value chains, or more rapid GDP growth in the non-mining sectors. Contributing a paltry 1.7% of GDP, the agricultural sector was at the bottom of the GDP-share scale among the ten major industries in the country. This is particularly disturbing considering that agriculture only falls behind the Government and Wholesale and retail Sectors in terms of number of people employed, a fact that speaks to the low labor productivity in the sector.

Drawing from published data cited by Hillbom & Bolt (2018), the country's 2.6% average real GDP growth in the five years leading up to the pandemic is well

below the 7.0% target set by target 8.1.1 of the Sustainable Development Goal (SDG) 8. Here, 7.0% has since been determined by the SDG drafters as the minimum GDP performance standard capable of meaningfully impacting a country's poverty and unemployment reduction efforts towards achieving generalized human welfare gains. Aside from water and electricity, a relatively small sector whose growth was fueled by substantial public infrastructure development investments over the 5-period under review, hotels and restaurants, and business services were the only sector whose growth exceeded 5%. Exacerbated by the contraction in the mining industry from which the largest share of government and export revenues are derived, these sluggish GDP growth rates are suggestive of an economy diversifying too slowly. Moreover, the apparent stagnation of real per capita GDP since 2014 indicates that Botswana continues to struggle with high poverty levels and limited capacity to create employment (Hillbom & Bolt, 2018).

### 2.3. Business Environment

Based on recent DBI (Doing Business Indicator) scores, the business environment areas in which Botswana performs best relative to other markets include trading across borders and dealing with construction permits. However, the country scores much poorly in performance areas such as enforcing contracts, getting electricity, and starting a business. Botswana's performance across key dimensions of competitiveness is summarized in **Table A2**, highlighting the country's relative strengths and weaknesses in areas such as macroeconomic stability, infrastructure, and innovation capability. These rankings emphasize the need for targeted policy interventions to improve Botswana's business climate and overall economic competitiveness. The Global Competitiveness Index (GCI), on the other hand, ranks Botswana among markets with the most enabling business environments based on most key indicators, except on ICT adoption and infrastructure development where it ranks above 100th. The dismal infrastructure development performance cited by the GCI has also been highlighted by a recent survey where lack of affordable and reliable electricity along with inadequate transport infrastructure have been noted as major impediments to business in the country (Oosthuizen et al., 2020). Further sediments on these GCI rankings observe that Botswana's business environment challenges are highest in two of the most critical competitiveness areas: innovation ecosystems and human capital; as reflected in the market's low innovation capacity, business dynamism, health, and education's rankings.

Another survey cited by Dzigbede, Pathak, & Muzata (2022) observes that skill gap and skill mismatch are among the main constraints to business performance in a given market. For instance, only 40% of interviewed merchants have been able to find workers with the necessary skill sets. While this is mostly the case with the physical product sector, especially in developing markets such as Botswana, the labor situation is less severe in the service sector where 65% of firms have been found as being able to find workers with matching skills for various tasks. Along

with skill deficiency and mismatch, other workforce challenges inhibiting the labor productivity performance of both product and service sectors in developing markets concern with a poor education system, inappropriate work ethic, low investment in skill development, and absence of training schemes and incentives (Dzigbede, Pathak, & Muzata (2022)).

Access to financing has also been identified as a key factor influencing business performance in most developing economies. Although it has previously been reported that most SMEs in Botswana regard financial institutions highly, less than half of interviewed respondents affirmed having received financing from such institutions. Furthermore, only 8% of Botswana's SMEs have been able to secure loan capital from banks, with most of their eligible peers having obtained financing from finance institution and government programs. Meanwhile, (Sebolao, Sekwati, & Bakwena (2019) have since established that quality control and certification programs equally influence business performance. The value of such quality assurance programs in fostering consumer preference for locally produced products is especially significant in Botswana where local products are often disregarded in favor of imports thanks to poor quality perceptions about the former among consumers. This can be argued as having manifested over the years since the majority of enterprises in the country are not certified by any quality, sustainability, or other standardization authority (Dzigbede, Pathak, & Muzata, 2022).

#### **2.4. Research, Development, and Innovation**

OECD (2009) states that fostering a robust innovation ecosystem is pivotal for medium-to-long-term economic recovery. Endogenous growth literature posits that economic growth is dependent on improvements in productivity which involves high levels of innovation and improvements in human capital by governments and the private sector. Furthermore, (Tuna et al., 2015) argue that investments in RD&I can assist in increasing the efficiency of existing production methods using available resources leading to higher growth levels for firms and economies. Lastly, as efficiency innovation increases so does the ability to identify which sectors would be most profitable and strategic for firms and the economy. According to (Celli et al., 2021), while research, development and innovation play a pivotal role in stimulating long-term economic growth, it is imperative that certain conditions are met for there to be a return on the investment. Firstly, the environment that the RD&I investment is made in should have the ability to assimilate R&D into innovation and eventual economic growth. (Rodríguez-Pose, 1999) states whether the society is "innovation prone" or "innovation averse" is dependent on cultural and social factors. Innovation averse societies tend to face more hurdles culturally and socially than their innovation prone counterparts. In Botswana, there is a general lack of manpower within the field of research and development as (UNESCO, 2021) reported there were 185 researchers per million inhabitants from the years 2013 to 2018. This is mainly because of the lack of skilled manpower and the field of R&D has rarely been incentivized for citizens to

consider as a rewarding career path which is reflected in the 272 scientific publications per million inhabitants, with majority focusing on health and medical sectors. The establishment of Botswana International University of Science and Technology in 2012 was meant to supplement not only RD&I efforts within academia thus creating an engaging environment for researchers but also to improve and increase the workforce. The country has however, been having problems absorbing graduates with high unemployment rates amongst the youth, thus halting efforts to increase the number of researchers.

Secondly, the environment should be able to create a competitive market amongst innovative firms as this can yield results in the short-and-long-term. Prior to the 2020 pandemic, Botswana's efforts to foster RD&I were subpar as [Sunday Standard \(2019\)](#) reported that in 2015/16, 2016/17 and 2017/18, the gross domestic expenditure on research and experimental development (GERD) were 0.08%, 0.09% and 0.07% respectively. The results were significantly lower than the set quota of 1% as per Southern Africa Development Community (SADC) and the African Union (AU) standards. Consequently, limiting the desire amongst researchers and the private sector to pursue the costly and time-consuming venture of R&D, as it was reported that the investments were made primarily by the government, with no recorded private sector involvement. Additionally, the number of active innovation hubs available in 2019 according to [UNESCO \(2021\)](#), was six. This placed Botswana in last place amongst its counterparts: South Africa, Zimbabwe, Zambia and Namibia which had ninety three, fifteen, ten and 9 active innovation hubs respectively, further highlighting the lack of regard in the private sector in RD&I. A lack of innovation hubs limits the collaboration amongst innovative firms and researchers in solving existing technical, societal, and economic problems.

Lastly, there should be the ability to identify, assess and deal with any challenges in their innovation value chains. ([Hansen & Birkinshaw, 2007](#)) explains an innovation value chain as a three-step process involving idea generation, development and diffusion of developed ideas. In response to the low performance in RD&I, Botswana government in 2009 formulated the National Development Plan 10, which explained the plans for technological innovation within the country. This led to the inception of Botswana Institute of Technology Research and Innovation in 2012 with the mandate of "identifying, developing and/or adapting appropriate technology solutions that provide sustainable innovation solutions through co-creation and collaboration". Similarly, the Botswana Innovation Hub (BIH) was created in 2017, with the mandate of "coordinate the establishment of a functional and integrated national innovation ecosystem". BIH has since created the Botswana Innovation Fund which supported over 100 start-ups in 2017/18 and the first call for proposals led to an allocation of BWP 5.6 million to fund 7 research projects. These actions have shown an interest by the government to invest and engage in RD&I endeavors, but the government has still failed to incentivize larger private sector firms through means such as tax-breaks ([KPMG, 2021](#)). Private sec-

tors are an engine for growth in RD&I in a way that governments cannot replicate and are unfortunately, generally less like to engage in RD&I activities due to knowledge spillovers and the high expenses of RD&I. Researchers suggest that offering tax incentives can help offset RD&I expenditures by co-financing private firms, increasing their competitiveness, and supporting the realization of the goals outlined in the National Development Plan 10.

## 2.5. Botswana's Citizen Economic Empowerment Program

The Citizen Economic Empowerment policy of 2012 has become one of the most hotly debated topics in Botswana, more so since elaborate post-Covid-19 economic recovery strategies need to be implemented going forward. The CEE policy has generally been defined as “a set of inter-related interventions aimed at strengthening the ability of citizens to own, manage and control resources, and the flexibility to exercise options, which will enable Botswana to generate income and wealth through a sustainable, resilient and diversified economy” (Makgala & Seleke, 2020). The CEE add on to a host of other government sponsored economic intervention programs over the years, including the more recent Covid-19 support programs, which have cumulatively consumed billions of Pula committed to Botswana's economic empowerment. Regardless, there has been much dissatisfaction with these economic development programs among the citizenry, thereby creating increased pressure for the government to do more. Accordingly, two main questions dominate the current debate on the capacity of the CEE and related programs to effectively spur post-pandemic economic recovery going forward (Makgala & Seleke, 2020). The first of these questions concerns with why the CEE has thus far been unable to mobilize the citizenry to adequately participate in the economy, despite its enormous efforts over the years. Secondly, concerned parties are they keen to identify the various factors constraining CEE efforts in Botswana.

Answers to the first debate question can be found by exploring the critical imperatives of the CEE policy 2012. To begin with, the policy attempts to identify and resolve a range of psychological and sociological barriers preventing the locals from a collective taking up decisive actions as was evident in the economic transformation of countries like Singapore and Malaysia. These mindset issues largely have to do with a lacking sense of pride and confidence in one's country and productive abilities, thus breeding a culture of entitlement, dependency syndrome, and inclination to fronting among the locals (Diraditsile, 2021). To mitigate the prevalence of these debilitating vices, policymakers have since proposed a dedicated citizenship education as a critical response measure towards reorienting society and inculcating an entrepreneurship culture. Accordingly, the economy may need to be restructured in a manner that creates an enabling environment for private sector growth, mainly through privatization and enhanced competitiveness.

The other imperative for the CEE policy is centered on realizing global competitiveness and sustainability. Here, Makgala & Malila (2022) put forward that rapid

and sustainable economic growth in Botswana may not be realizable if the country does not cultivate sufficient competitiveness to effectively take part in international trade. One way through which this may be achieved is by the country gaining a leadership position in international markets, especially in the sectors in which it has competitive advantage. These may range from mining, tourism, mineral beneficiation, and financial services, whose performance may be enhanced by strong ICT, R&D, and business service industries. Implicit herein is the need for a movement up the global value chain towards a more dominant competitiveness position, more so in the diamond production industry since the country is already a leading producer globally in terms of value (Makgala & Malila, 2022).

The development of Botswana's human capital resources has also been widely cited as an effort that involves provision of skills and competencies required for one to maximize available economic opportunities. The CEE intends policy to support such an initiative by setting human capital performance targets for domestic firms based on global standards, a measure that is set to ensure that the skills of the local workforce are globally marketable. Additionally, the CEE advocates for an enhanced access to markets, technology, and information to facilitate knowledge transfer, productivity growth, and building of business relations and networks.

## **2.6. Factors Constraining the Effectiveness of Economic Recovery Programs**

Considering the above imperatives, Makgala & Malila (2022) identifies three major constraints to the effectiveness of CEE and related economic stimulus programs, which are also at play during the implementation of post-Covid recovery. The first among these constraint concern with the narrow conception of such programs that empowerment means a transfer of opportunities from foreign investors to local entrepreneurs. Experience from abroad, e.g. countries such as Russia, South Africa, and Zimbabwe has shown that providing local entrepreneurs with increased access to opportunities at the expense of foreign capitalists bring about little public good (Makgala & Seleke, 2020). Such a policy conception may end up creating a small circle of very wealthy local entrepreneurs accompanied by disproportionately high economic costs in terms of employment, innovation, talent, productivity, and growth potential. If the CEE conception were to be adopted in the formulation and implementation of Botswana's post-Covid-19 economic recovery plan, it is highly likely that the country will not be able to effectively compete globally for the skills, technologies, and talent required in building the envisioned knowledge-based economy. According to Makgala & Malila (2022) the most effective economic stimulus/recovery programs look beyond just the entrepreneurs to focus on broader market stakeholders inclusive of workers and consumers. Here, it is notable that while many citizens view empowerment programs as those that provide them with access to secure and well-paying employment opportunities, consumers in any economy will expect such programs to expand their

product/service choices and reduce/stabilize price levels. This shows that the most appropriate post-pandemic economic recovery program for Botswana is one that empowers all markets stakeholders to spur output growth and enhance global competitiveness, a knowledge based one with intense innovation strategies.

Other constraint factors for such recovery programs include the fallacy of attribution, the risk of xenophobia or destructive form of nationalism, and the risk of anti-foreign direct investment (FDI) sentiments among the citizenry (Makgala & Seleke, 2020). Arguing against the prevalent view among locals that their poor economic outcomes are caused by foreigners taking up all opportunities, Makgala & Malila (2022) maintain that economic empowerment is not a zero-sum game where foreign investors must be chased away for the locals to benefit. This derives from the immense value of foreign investments in the growth of any nation as they bring with them critical enterprise skills and assets in the country and their businesses create employment opportunities for the locals. Another constraint flowing from the above has to do with xenophobic or extreme nationalistic sentiments which have previously influenced economic policies in other Southern African countries, including Zimbabwe and South Africa (Makgala & Seleke, 2020). Stemming from this is that the CEE and related post-Covid recovery initiatives need not be centered on beneficiaries' nationality, so long as they have a local residence in Botswana.

Drawing from experiences abroad with the Local Resource-Based Methods (LRBM), it is apparent that infrastructure development projects can be adopted as tools for empowering citizens economically (Kansheba & Marobhe, 2022). This results from the social development, poverty reduction, and job creation benefits of infrastructure development initiatives which characteristically support local industries, save foreign currency reserve, reduce costs, and employ locals while enhancing the capacity of local institutions. The CEE and related recovery initiatives in Botswana need to prioritize social stability and economic inclusion as key imperatives. Effective measures towards achieving sustainable success outcomes may fall under two categories: those aimed at strengthening the critical competencies of locals and locally owned enterprises; and measures relating to the creation of an enabling legal environment based on robust impact assessments and an adequate understanding of the incentive effects and adverse consequences of all regulatory measures adopted.

### 3. Methodology

The methodology section discusses the process through which various study insights were obtained, including details on data collection methods and findings analysis approach adopted. Concerning the research approach, the study can be described as an exploratory research study utilizing both primary and secondary qualitative data collection methods. The suitability of a qualitative data collection approach stems from its capacity to gather relevant insights on a given topic using non numerical data (Carter & Henderson, 2005). Here, the research interprets the

meaning of vast qualitative data on the research variable towards gaining an in-depth understanding of the problem under being investigated. Given the disruptive impacts that the Covid-19 pandemic had on socio-economic structures of countries across the globe, a qualitative in-depth exploratory study approach was herein determined appropriate for understanding short, medium, and long-term impacts on the Botswana economy and the measures that government, industry, and private stakeholders may employ in the effort to spur economic recovery going forward. Accordingly, a semi-structured interview and a rigorous qualitative review of the literature were identified as the ideal primary and secondary qualitative data collection methods for this study (Carter & Henderson, 2005).

The rationale behind choosing semi-structured interviews for the collection of primary respondent data derives from the method's capacity to collect wide ranging insights from participants who are highly knowledgeable in the research subjects in focus. Here, fourteen participants were selected using purposive sampling to interview in this study, through a criterion that narrowed down respondents to individuals with sufficient credentials, knowledge, and expertise in governance, public and private industry sector, and non-governmental institution operations. It was also considered to have representatives from SMEs and local businesses for more comprehensive view of the economic recovery challenges and opportunities. To achieve this, it was important that selected interview respondents held senior managerial and/or policy making positions in their respective organizations and had at least 5 years' experience in serving in such capacities, measure aimed at ensuring the validity and reliability of various insights derived from the semi-structured interviews. Further, these interviews were designed to last for a duration 30 mins<sup>-1</sup> hour each, conducted either through face-to-face meetings or over the phone, although the former was preferable.

A qualitative literature review method was, on the other hand, adopted herein to analyze past publications on the socio-economic impacts of crises over the years and the effectiveness various recovery measures implemented in various countries across the globe. To narrow the list of reviewed literature materials down to the most relevant sources, a purposive sampling approach was adopted where only the most recent peer-reviewed publications were selected. Other relevant documents with insightful data to inform Botswana's post Covid-19 economic recovery recommendations included news articles, international organization reports, and government publications on the underlying topic. These were obtainable from online journal search incredible databases such as Wiley Online Library, JSTOR, Science Direct, Elsevier, and Google Scholar. Potentially useful information was identifiable in each publication through a quick skimming of their abstracts, followed by a more thorough exploration of unclear details through visiting internal references and cross references in the main publications reviewed.

On data analysis, this study adopted a thematic approach through which the researcher categorized and compared and combined interview insights with literature data to come up with more comprehensive recommendations. Further, eth-

ical considerations such as maintaining respondent anonymity, abating informed consent, and confidential resorting were adhered to throughout the research process. However, the researcher was forced to grapple with inherent research time, cost, and scope limitations to ensure quality (Maxwell, 2018).

### 3.1. Results

The information obtained from both the literatures reviewed herein and interview respondents suggest a range of strategy recommendations for facilitating economic recovery and growth post Covid-19 in Botswana. To begin with, both primary sources stress the importance of high technological use, intense and rapid innovations, high reliance on knowledge, public infrastructure investments as some of the factors that should centre government efforts to stimulate demand, create employment, and kick-start economic recovery post-crisis. As one NGO employee offered in his interview response, “by committing increased budgetary allocations for infrastructure investments over (say) the next 18 months, Botswana’s government can significantly revitalise household spending and effectively stimulate demand”. Such sentiments are corroborated by Makgala & Malila’s (2022) observation that infrastructure investments can prove a cornerstone in post-crisis economic recovery efforts, more so since such projects help remove one of the key constraints to doing business in a given market, and that its labour-intensive nature of construction projects allows for the employment of huge number of locals who had been rendered jobless by the underlying economic crisis. Another respondent from the finance sector said, “The pandemic revealed the weakness of our economy which is still dependent on the mining industry. Going forward, Botswana must adopt a more rapid approach to digital transformation and innovation to enhance its capabilities.” While another participant in the agricultural sector commented, “This will also mean that strengthening local value chains through technological enhancement will be crucial to ensure food availability and decrease dependence on importation.” Also, according to (Kansheba & Marobhe, 2022), utilising local resources in infrastructure projects helps build local competitiveness capacities at much reduced cost, thus enhancing internal efficiencies in the sector and economy at large.

Secondly, research evidence has demonstrated that health crises such as Ebola present opportunities to countries to develop diversified local supply chains. For example, Sharma et al. (2020) observe that the supply chain disruptions caused by the Covid pandemic may drive government initiatives to develop the most affected sectors in the effort to enhance resilience. In the case of Botswana, “significant supply chain benefits can potentially be realised in Botswana’s agricultural and construction sectors if the government invests in the manufacturing of materials such as fertiliser, fodder, bricks, or/and cement” suggests another interview participant. One positive step towards this direction concerns with the government announcement that some 30 million have been set aside as funding for an Essential Supplies Loan Facility to support local manufacturing of core health products used in the management of the current crisis. However, increased gov-

ernment investment is required to support the supply of more inputs across Botswana's industrial sectors (Makgala & Malila, 2022). Here, an interview respondent working in the country's financial services sector advice that an increased effort is required in both government private sectors towards offering a broader and more diverse financing mechanisms for small, medium, and micro enterprises.

Another recovery strategy recommendation suggested by both interview and literature sources concerns with implementing comprehensive certification initiatives to cultivate trust for local products. Commenting for the agricultural sector, a respondent has said that local standards should be created in areas where international ones do not exist, thus keeping costs at a minimum. Further implied by Meier & Pinto's (2020) observations is that such local standardisation measures should be accompanied by a legally mandatory checking of imported products to create a level playing field. An interview respondent has also stated that awareness raising campaigns calling for support for local products would help make further these initiatives. However, it is important that in the effort to promote local industries, it is critical that governments do not use market distorting policies against international competition.

Moreover, research results have touched on the need to enhance labour productivity in the agricultural sector. This has largely been influenced by the fact this sector employs a large number of Botswana's working population, making its optimization a key priority in the country's post-pandemic economic recovery plan, according to one of the interview respondents. The first measure towards reviving agriculture would be to identify where the biggest bottle necks are and how the sector's value chains have been affected by the pandemic crisis (Makgala & Malila, 2022). Such information should then help in the formulation of support interventions to remove identified constraints. In the case of Botswana, an interview respondent has highlighted the importance of making the agricultural sector commercially driven, as this would create incentives for enhancing efficiency and labour productivity.

Finally, research findings have also highlighted the importance of skill development initiatives towards enhancing labour productivity. Such efforts should involve measures aimed at bridging skills gaps and mismatch through high technology use and industrial training programs. Referring to Botswana, a respondent has stated that a competency based educational program would be greatly beneficial for meeting skill demand in the labour market. Such a CBC program, however, needs to involved private sector input at every stage of its implementation, from curricular design, selection of occupations, to delivery, testing, and certification. This is supported by Makgala & Malila's (2022) sentiments that private sector umbrella bodies should be called upon to coordinate their members in rolling out these skills development programs. Also suggested herein is that program reviews may be necessary in countries like Botswana where most national human resource councils are overly bureaucratic at the expense of efficiency. Overall, human resource reforms in the post-Covid period will need to be cantered on ensuring future labour market resilience against economic shock, an imperative that

calls for a strategic focus on lifelong learning.

### 3.2. Discussion

Based on a prevalent notion in the development community, countries will need to implement bold recovery plans if they hope to successively emerge from the pandemic induced economic downturn. While 7% GDP growth rate is suggested as the minimum requisite quantum of effort for reverting most economies back to their pre-pandemic levels, those aiming for a more rapid, diversified, inclusive and sustainable need to aim for as high as 10% annual growth. In the case of Botswana, achieving transformative economic recovery will for instance, require bold infrastructure development plans to open new drivers of growth and engineer shifts in productivity in sectors such as commerce, agriculture, tourism, and mining (Kansheba & Marobhe, 2022). If Botswana follows this strategy, it will be one of sectoral diversification, which is the opposite of Rwanda which has Vision 2050, an ICT driven vision and Kenya which has invested in digital infrastructure and innovation. However, for the country to remain competitive, it needs digital economy policies. The private sector can also support the public sector's efforts and policies by enhancing the R&D, expanding the DFS, and supporting entrepreneurship. For example, Botswana Innovation Hub could be more actively involved in the incubation of startups while financial institutions could have come up with specific funding models for SMEs in technology and innovation sectors. However, lack of infrastructure is a barrier to technological development. Therefore, through public private partnerships, expanded broadband access and tax incentives for businesses that have a technological component, Botswana's digital transformation and its economic resilience could be enhanced. The strategy recommendations highlighted in this study affirm that the successful recovery will require combined effort from the public and private sectors, supported by input from development and civil society partners. Even so, only the government is the only entity with the capacity to provide most of the urgent sources of recovery impetus, more so with regards to regulation and infrastructure development. Notable herein is that since Botswana's private sector is unable to marshal enough resources necessary for successful recovery, it follows that any private sector intervention will have to ride on or compliment a core government initiative.

### 4. Conclusion

The recommendations made in this study have been developed firmly based on the guiding principle of "building back better" and moving away from a resource-based economy to a knowledge-based economy. Such can be reflected in the ambitions of umbrella bodies such as Business Botswana that view economic recovery as a turning point towards making the private sector more self-reliant, dynamic, intense and with rapid innovations, high use of technology, inclusive, and resilient going forward. Other than promoting the development of a private sector that is capable of creating a high-performance economy, the principle of "building

back better” also entails other imperatives such as creating a greener, resilient, knowledge-based and more sustainable economy. Also, the government would be wise to identify where Botswana fits into the global economy i.e. the local sectors that will give Botswana a competitive advantage. Government leaders could also dig deeper into innovative thinking and find ways of balancing local economic needs alongside a holistic global perspective. Lastly, the development of human capital and modern and inclusive ICT infrastructure will, in turn, improve the productive capacity of the country. This study had its own limitations such as, firstly, since the COVID-19 pandemic is a recent event, there is a limited amount of data on the long-term effects of the pandemics on the economy, let alone a middle-income economy such as Botswana. Secondly, Botswana does not have a culture of data collection and research therefore, there was a limited amount of literature data used in conducting this study.

### Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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## Appendix 1

**Table A1.** Summary of key indicators of Botswana's socio-economic wellbeing.

Indicator	Value
Gross Domestic Product (BWP Million) (2019)—Nominal	197268.7
Gross Domestic Product (BWP Million) (2019)—Real (2006 Prices)	99396.3
GDP Per Capita (BWP) (2019)—Nominal	84,902
GDP Per Capita (BWP) (2019)—Real	42,779
Social Progress Index (2019)—Value	65.58
Social Progress Index (2019)—Rank	84
Human Development Index (HDI) (2018)—Value	0.728
Human Development Index (HDI) (2018)—Rank	94
GNI Per Capita—Value (SPPP)	15,951
GNI Per Capita—Rank (2018)	73
Economic Freedom Index (2019)—Value	69.5
Economic Freedom Index (2019)—Rank	40
Life Expectancy at Birth (Years)	69.3
Human Capital Index (2018)	0.42
Poverty Headcount Rate (%) (2015)	16.3
Maternal Mortality Ratio	133.7
Rule of Law Index (2019)—Value	0.59
Rule of Law Index (2019)—Rank	44
Corruption Perception Index (CPI) (2019)—Value	61
Corruption Perception Index (CPI) (2019)—Rank	34

## Appendix 2

**Table A2.** Botswana's performance on key dimensions of competitiveness (global competitiveness report 2019).

Category	Indicator	Score	Rank (/141)	Top Performer
<b>Overall Score</b>	Overall	55	91st	Singapore (SGP)
<b>Enabling Environment</b>	Institutions	54	70th	Finland (FIN)
	Infrastructure	54	108th	Singapore (SGP)
	ICT Adoption	46	100th	Korea (KOR)
	Macroeconomic Stability	100	1st	Multiple Countries
<b>Human Capital</b>	Health	59	111th	(No specific country mentioned)
	Skills	57	94th	Switzerland (CHE)
<b>Markets</b>	Product Market	52	95th	Hong Kong SAR (HKG)
	Labour Market	60	66th	Singapore (SGP)
	Financial System	60	72nd	Hong Kong SAR (HKG)
	Market Size	39	112th	China (CHN)
<b>Innovation Ecosystem</b>	Business Dynamism	54	104th	United States (USA)
	Innovation Capability	31	99th	Germany (DEU)

Source: Global Competitiveness Report 2019.