An analysis of the Short Term Effects of Covid 19 on Industries in Uganda

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Abstract

The unprecedented Covid-19 turmoil has forced industries around the world to critically analyse and quickly adopt a more resilient business strategy of operations to ensure the health and safety of their employees and keep their organizations alive in a rapidly evolving environment. Globally, the pandemic has caused great distress on industrialists in the following ways: Supply chain disruptions with limited or lack of access to Materials, Markets and Labour force; Layoff of workers (causing shortages on various production lines); Limited demand, reduced consumer confidence within countries and inaccessibility to international market among others. This paper examines the effects of the pandemic shocks on company production, sales, finances including revenues, cash flows and financial requirements while providing company policy recommendations for government action for post-Covid economic recovery.

Keywords: Covid-19 pandemic, Industrial Production, Sales and Revenue, Business continuity.

Introduction

Industrialization, which is the development of industries in a country or region on a wide scale, is the focus of many governments' transformational policies especially developing countries that have viewed it as the best drive of accelerated growth economically (Opoku & Yan, 2018). According to Mohajan (2019), the first industrial revolution which introduced the first form of industrialization started in 1750 and had several positive impacts that have not left human history globally the same. The key change is that this revolution greatly improved the transportation, communication and financial systems which are crucial for any economy to run smoothly. This not only increased the production and consumption of individuals but also the global economic growth.

Coronavirus officially named "CoronaVirus Disease 2019, Covid-19" by the World Health Organization (WHO) on February 11, 2020, is a novel, zoonotic virus that occurred in the city of Wuhan China in December of 2019. This virus has put the world in a panic especially when it was declared a "global health emergency" in January 2020. As of 3rd July 2020, the globe had recorded 10,874,146 confirmed infections and 521,355 deaths. However, in Africa, the spread has been slow with the highest number of cases within Eastern Africa and the Great Lakes Region as 7,189 in the Democratic Republic of Congo and 6,941 in Kenya by July 2020. (WHO, 2020). Countries and industries across the globe have lost revenue and supply chains have been disrupted as a result of COVID-19 (PWC, 2020). AfDB/OECD/UNDP (2017) and scholars such as Alexiou (2010), Haraguchi et al. (2017) and Lin and Monga (2013) have recognized that for Africa to be able to compete with other continents in terms of productivity, innovation and achieve economic

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transformation, industrialization is vital. In addition to other development strategies like; access to regional and international markets, investment in research and innovation, and use of advanced technology, a country can achieve greater productivity, innovate and create potential to grow (EPRC, 2020). Opoku and Yan (2018) state that without industrialization Africa cannot sustain the growth recently recorded in the period 2006-2010, which showed the region's growth was 5.05%. This growth rate was significantly higher than the world average of 2.27 %. Opoku and Yan (2018) further argue that it is only through industrialization that Africa can catch up with advanced countries to better its current status.

In line with Vision 2040, the Government of Uganda prioritized industrial sector development through building a modern, competitive and dynamic sector that is fully involved in the domestic, regional, and global economy. Shepherd and Twum (2018) and Ggoobi,Wabukala and Ntayi (2017). indicate that industrialization which is critical in the transformation of any nation into a modern industrial economy is being implemented through Uganda's industrial policy. They note that where governments have the political will and the capacity to implement industrial policies, they can be a means through which a country like Uganda can transform its economic structure. In addition, the industrial policy as stipulated is a road map for the country to become more competitive especially in manufacturing through advanced research and innovation at the firm and national level (Ggoobi, Wabukala, & Ntayi, 2017).

In the National Development Plan II (2015), the government of Uganda emphasizes its goal to achieve middle-income status through the pursuit of industrialization and skills development strategies among other means. This plan is in line with the country's aspirations since independence and has made efforts of leveraging industrialization to move the country to middle-income status by 2021. Like many countries across, Covid-19 has led to the closure of many factories in Uganda with its impact being felt through supply chain disruptions for manufacturers and raw material shortages among others (PWC, 2020). The rest of this paper presents the literature review, hypotheses development, results and discussion. The final section concerns the conclusion and implications of the study.

Theoretical foundation and literature review;

This paper adopts the Industrial Organization Theory by Jean Tirole (1988) as a framework to explain the production, performance, revenues and actions that governments take towards the industry sector of a country (Wirth & Bloch, 1995). The theory assumes that industry performance is determined by the conduct of the firms within that industry, which is determined by various industry structure variables that include the number of sellers and buyers, the degree of product differentiation present in a market, industry barriers to entry and exit and conglomerates in this specific industry. The barriers to entry are often determined by the government actions that hinder entry like the imposition of licenses, franchises, and patents, and cost-related barriers such as economies of scale and scope (Scherer & Ross, 1990). In addition, according to Ferguson and Ferguson (1994) , the key performance variables of a market and or industry depend on firms' profitability which should ensure that the firms earn normal returns in the long run and revenues exceed costs, production and allocative efficiency which ensures that there is no wastage of scarce resources and producing the "right" quantity, quality, and mix of goods to maximize consumer welfare, and lastly the extent to which market firms contribute to stable full employment and equitable distribution of income. The theory is an extension of the theory of the firm which is the

microeconomic concept that states that the nature of companies and the purpose for their existence is to maximize profits.

Corona Virus (Covid-19)

According to Jung et al. (2020) Covid-19 which was first reported to the World Health Organization in China on December 31, became a global threat. The origin of this catastrophic epidemic is attributed to a novel 5 virus belonging to the coronavirus (CoV) family. This has caused significant mortality and death in many countries across the globe since this virus is very contagious. Other scholars like Yee et al. (2020) believe that the virus emerged from animal reservoirs and has high mutations that enable it to adapt to varied hosts, increasing its chances of human to human spread once a person is infected having been the seventh human coronavirus identified with notable similarities to two other vastly pathogenic respiratory coronaviruses, the severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East Respiratory Syndrome coronavirus (MERS-CoV), both of which have had big effects in the last decade. From the findings by Poudel et al. (2020), it should be noted that the epidemics appear to present related symptoms of cough, fever and pneumonia, implying that the new virus has surpassed both the 2002 SARS outbreak with 812 deaths and the 2012–2016 MERS outbreak with 866 deaths; however, both SARS and MERS appeared to have had higher case-fatality rates and worse severity of illness with 9.6% and 34.3% respectively compared to Covid-19 with 1.38% to 3.4%.

Ajari (2020) commends Uganda on restricting the spread of the virus despite its relatively weak healthcare system and economy. The first COVID-19 case was confirmed on March 21, 2020, and as of July 14, 2020, there were only 1,029 cases confirmed from 228,105 tests carried out. Also, as of this date June 3, 2020, there have been 507 confirmed cases out of 84,576 samples tested which shows that only 0.599% of the samples tested were infected, with 82 recoveries and no reported death from the disease. To achieve the above results government of Uganda instigated different measures which included the closing of Entebbe International Airport to passenger traffic which prohibited the "entry into Uganda by any person and the introduction into Uganda of any animal, article or thing at or through any of the border posts of Uganda". Cargo transport by train, plane, lorry, pick-up, tuku-tukus, bodaboda and bicycle, within Uganda and between Uganda and the outside, would continue but only with minimum numbers, technically needed as follows: Cargo ─ Air-craft ─ only the crew; Lorry ─ not more than 3 persons i.e. driver, turn-boy plus one, etc., as was directed by the Ministry of Transport, working with the National Task Force on the Coronavirus, all the Educational Institutions which account for 15 million young Ugandans were closed, communal prayers in mosques, churches or in stadia and other open-air venues were suspended, all public political rallies, cultural gatherings or conferences were stopped, returning Ugandans would undergo mandatory quarantine, at their cost, for 14 days at a venue identified by the Ministry of Health (MoH), allowed the non-agricultural gathering points such as; factories, hotels, large plantations, markets, taxi-parks, etc. to continue and follow the Standard Operating Procedures (SOPs) and limited weddings to a maximum of 7 people (MoH, 2020).

Burials could not be postponed, but were to be attended by a maximum of 10 people (close family members), weekly or monthly markets such as cattle auction markets (ebikomera); and obutare (food markets) were suspended. Discos, dances, bars, sports, music shows, cinemas and concerts were ordered to remain closed for the safety of the people. At that time, the government allowed the public transport systems of buses, mini-buses, taxis, boda-bodas, etc., to continue provided

they were given SOPs, however, it banned them later and were to resume on 4th June 2020 while carrying 7(half capacity) passengers instead of 14 except for boda-bodas which only carried cargo but not humans and stopped transporting at 5 pm, private vehicles were allowed to continue operating but with only 3 people maximum per vehicle, ambulances, army vehicles, garbage collection vehicles would continue. In addition, shopping arcades, hardware shops, which gather a lot of people to sell and buy non-food items, were suspended but later shopping malls were allowed to operate with SOPs (MoH, 2020).

All the non-food shops (stores) were closed and home delivery was encouraged, the super-markets were to remain open but with clear SOPs that restricted numbers that enter and leave the site at a given time and the handling of trolleys within the super-markets. Salons, lodges and garages were shut, farms, factories remained open. But the owners were to arrange for the crucial employees to camp around the factory area for the 14 days. If they could not do that, they were to suspend production for 14 days (MoH, 2020). Construction sites were to continue if they could be able to encamp their workers, otherwise, they would suspend construction for 14 days. The essential services i.e., the medical, agriculture and veterinary, telecommunication, door-to-door delivery, financial institutions, all media, private security companies, cleaning services, garbage collection, fire brigade, fuel stations, water departments and some KCCA and URA staff were to continue operating (MoH, 2020).

Curfew was introduced throughout the country from 7:00 pm to 6:30 am. To deal with other health emergencies, permission could be sought from the RDC to use private transport to take a sick person to the hospital. Additionally, government vehicles that did not belong to UPDF, Police, Prisons or UWA, would be pooled and deployed at the District Health Offices, including the divisions of Kampala, with their drivers, staying in rented compounds, ready to help in those health emergencies. Those vehicles would be under the command of the District Medical Officer (MoH, 2020). The public was advised to maintain hygiene measures such as; not coughing or sneezing in public, no spitting, washing with soap and water or using sanitisers, regularly disinfecting surfaces such as tables, door handles, etc. and not touching eyes, noses or mouths with contaminated and unwashed hands, the public was also advised to maintain good nutrition to strengthen the body defence system (MoH, 2020).

Covid-19 on industry

The outbreak of Covid-19 began in Wuhan, China in December 2019. The virus spread globally at an alarming rate, with 1,341,907 confirmed infections and 74,476 deaths as of April 7, 2020. Although Covid-19 had been slow to spread in Africa, cases have now spread rapidly. Since the first case was recorded on the continent on February 14, 2020, Africa had registered 10,018 cases and 484 deaths as of April 7 2020. Within Eastern Africa and the Great Lakes Region, the Democratic Republic of Congo (DRC) and Rwanda had the highest number of confirmed cases, 161 and 105 respectively, followed by Kenya (58), Uganda (52), Ethiopia (44) and Tanzania (24). South Sudan also registered its first case on April 5 (UNDP, 2020). As of May 9, 2020, over 280,000 coronavirus-related deaths had been registered globally, with more than 4 million laboratory-confirmed Covid-19 cases, portraying not only the alarming levels of the spread of the virus but also its severity (WHO, 2020).

The emergency of the Covid-19 struck at a point when the manufacturing sector among other sectors was on a development truck, however, just like other countries, it was not ready to face such a downturn. Over 70% of manufacturing industries were located within the central region yet many of them either import their materials or source them from other parts of the country. The disruption in the supply chains made it impossible for them to access these materials. This caused tensions on the continuity, suspected bankruptcy and immediate need for a bailout from both internal and external funders to the Ugandan manufacturing sector. The reduction in the purchasing power of the consumers reduced the forecast revenues for the companies within the manufacturing sector hence making their retained earnings stressed while increasing their production bills (WEF, 2020). To this end, it has been noted that the previous manufacturer strategies and projected books of account have rendered less favourable future-oriented projections as the companies had earlier anticipated. These effects are far worse on companies in developing countries like Uganda which had no contingency plans or even enough finances to bail out all the organizations to ensure sustained growth.

In 2019, the Uganda Bureau of Statistics (UBOS) released rebased GDP figures, the industrial sector's contribution to GDP was 27.1%; with mining and quarrying contributing 1.4%, manufacturing 15.5%, electricity 1.4%; water 2.3 % and construction 6.5 %. The data presented in the table below further shows how these subsectors have grown over the selected financial years

Table 1: Percentage change for Value added by economic activity at constant prices

Economic Activity/Industry	2015/16	2016/17	2017/18	2018/19	2019/20
Mining & Quarrying	12.4	32.7	30.5	33.4	0.2
Manufacturing	0.6	3.6	4.6	7.8	1.3
Electricity	4	9.2	5.5	2.5	4.7
Water	6.3	5.6	4	4.7	4.1
Construction	7.3	11.7	7.6	14.2	3.8
Industry	4.6	6.8	6.5	10.1	2.2

Source: UBOS Abstract (2020)

The entire industry sector has experienced sluggish growth having registered a sharp drop from 10.1 per cent in FY2018/19 to 2.2 % in FY2019/20 as shown in Table 1. This poor performance is majorly attributed to slow growth in manufacturing activities; mining and quarrying, and construction as shown, which contribute a huge share in the industry. Specifically, poor performance was registered under the manufacturing of processed and preserved meat, grain mill and starch products, fabricated metal, furniture and soft drinks (MoFPED, 2021). According to International Labour Organization (ILO) (2020) in many other countries, the automotive industry was hit by a triple whammy: factory closures, supply chain disruption, which resulted in a collapse in demand. This was also the case in the energy industry of Uganda particularly the fuels given a veto on public and private transportation. Just-in-time manufacturing processes have propagated the impact across the globe causing delayed delivery and production. Small and medium enterprises were among those hit hardest putting millions of jobs at risk. Sustainable industrial policies and targeted support were key to a lasting recovery through building back a better economy with decent work for more women and men (ILO, 2020).

Businesses all over the world including here in Uganda have suffered from lost revenue and disrupted supply chains due to China's factory shutdowns. China's risen importance in the global economy has not only related to its status as the leading global manufacturer and exporter of consumer products but also its role as the main supplier of intermediate inputs for many manufacturers elsewhere in the world. The impact of coronavirus has also been felt in Uganda's manufacturing sector due to, factory closures in China that have resulted in supply chain disruptions. With delays, raw material shortages and increased costs, orders were reduced within the sector which was reflected in the country's Balance of Payments (B.o.P). With the widespread nature of the virus, it became difficult to envisage how supply chains have adjusted rapidly to meet demands (PWC, 2020). There was a worsening revenue collection, which severely impacted fiscal space, including areas of immediate spending to avert the crisis. The slowdown in international trade, which accounted for about 42 per cent of Uganda's tax revenue had a massive negative impact on tax collections in 2020. The above was worsened by the reduced economic activity in the retail and trade, services, hotels, tourism and manufacturing sectors, which translated in both reduced VAT, remittances and corporation tax payments to the Uganda Revenue Authority (URA). Since March 19, 2020, and as the restrictions on movement continued, the impact on the economy particularly on the manufacturing sector became significant and hefty (URA, 2020).

According to a report by the Minister of Finance's statement to Parliament (2020), it indicated that the resultant reduction in international trade taxes as well as consumptive taxes has led to shortfalls in government revenues, that reached anywhere between Shs.82.4 billion and Shs.288.3 billion in FY2019/20, and worsened to between Shs.187.6 billion and Shs.350 billion in FY2020/21. URA projected that about UGX 116.3 billion had been lost in customs revenue by the end of June 2020 due to this crisis alone. This expanded the projected deficit from customs revenue to UGX 513.3 billion by the close of June 2020 (UNDP, 2020). The results from a survey conducted by the Economic Policy Research Institute (EPRC), (2020), suggested that lockdown measures have reduced business activity by more than half. Businesses in the agriculture sector experienced the largest constraints to access to input and output markets due to control measures such as transport restrictions, quarantine, social distancing and ban on weekly markets. On the other hand, micro and small businesses experienced the largest decline in businesses activity due to the inability to cope with measures such as the provision of on-site accommodation to their employees, sanitisers and hand washing equipment. Indeed, preventive measures for Covid-19 such as hand sanitiser, soap, hand washing facilities, and social distancing have resulted in a slight increase in operating expenses for businesses.

With the discussed impacts, United Nations Development Programme (UNDP) (2020) believed that, in addition to the health sector, the most directly affected sectors such as tourism, logistics, and manufacturing were provided priority to receive a fiscal stimulus to protect employment within those sectors. The supply chains were mapped to link with the appropriate government response plan. Without proper planning, the effect of the virus in the country was economically more immense than expected. The impact of the pandemic is huge and can be categorized into periods including, short, medium and long-term impacts. These were measurable directly and through the various suppliers, which clearly stated that the multiplier effect was not be clearly stated or measured.

Conceptual framework

The figure below examines how the existence of Covid 19 directly affects company production, sales and finances including cash flows and financial requirements.

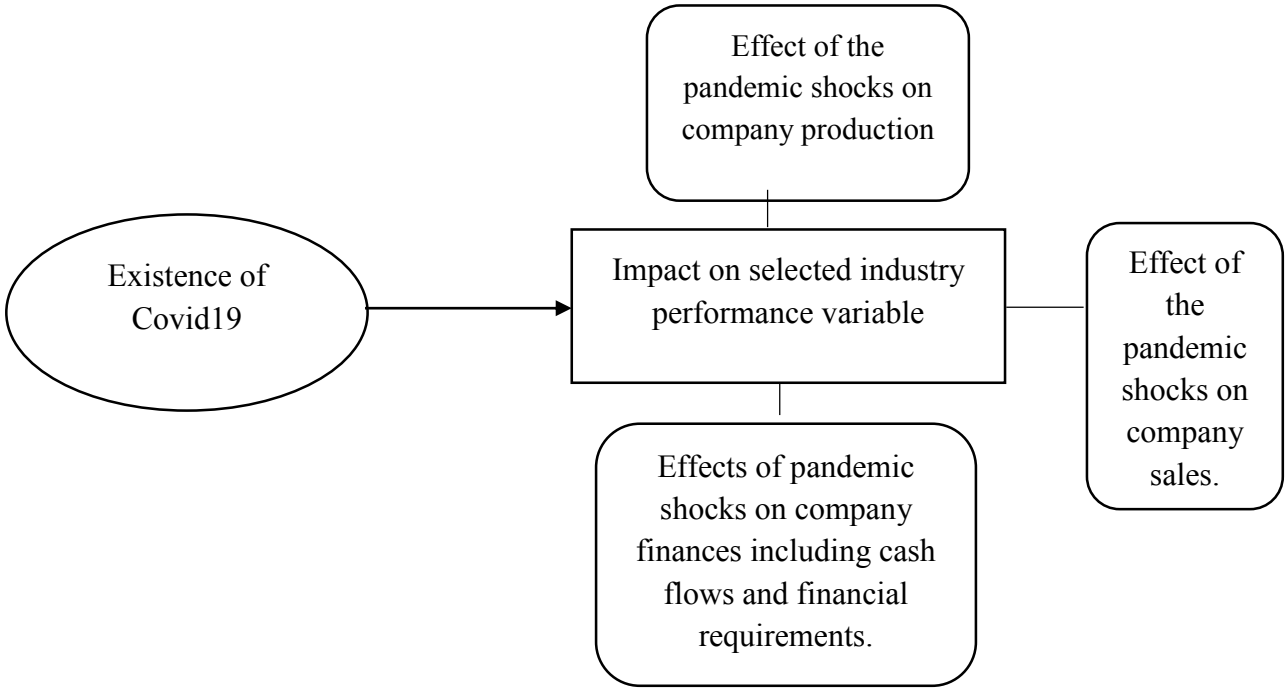

Figure 1: Conceptual framework

Source: Theoretical and Literature review

Methodology

The research employed a cross-sectional research design given the dynamic nature of the concept and holistic approach in data collection, analysis and presentation. A review of the available secondary data was added to the collected primary data to concretize the findings. The team, however, concentrated more on primary data as the research involved interactions with the industries and the identified market leaders in each selected sector within the manufacturing fraternity of the country. Additionally, both formal and informal discussions with some key stakeholders were held to generate operational definitions of some study variables that are to be used in the design of the main research instruments.

Target Population and Sample Size

The target population mainly consisted of the manufacturing companies within the industrial sector of Uganda, as discussed in chapter one, these were within Kampala, Jinja and Mbarara since they have the most manufacturing companies in the country. Major industrial parks were selected as the lead locations for the study. According to Uganda Investment Authority (2020), Uganda has about 5,000 industries distributed across the country with a major concentration in the central region. The main respondents were the industrial owners, CEOs, production and marketing managers within the selected companies. The study also targeted stakeholders that were directly

linked to the development of the manufacturing sector, these included manufacturing associations like Uganda Manufacturers Association, Private Sector Foundation Uganda (PSFU) and Uganda Small Scale Enterprises Association (USSEA).

The research team employed Cochran Formula to identify the sample of companies to be considered for the survey. The team used a population of 1,000 companies that are associated with the Uganda Manufacturers Association. The association was selected as it is the largest convenor of manufacturers in the country and its databases were better organized and easily accessible to the researchers. The Cochran formula allowed us to calculate an ideal sample size given a desired level of precision, desired confidence level, and the estimated proportion of the attributes present in the population. Cochran's formula is considered especially appropriate in situations with large populations as for the case of the research at hand. Considering a confidence level of 90%, margin acceptable error of 10% and a response distribution of 50%, the total sample size was established to be 96 companies. Snowballing sampling method was used to take on the most suited companies for the survey. Hence, the team distributed the companies across the regions depending on the concentration of companies within the region.

Development of Data Collection tools

A questionnaire for data collection regarding the study variables was developed accordingly. This considered the major industrial growth variables that directly or indirectly measured the variables of concern that is; production, sales and revenue within the industries considering the study time and geography. The development process involved reviewing the previous studies related to the same variables and modification using the expertise of the researchers on the team and technical officers who supervised the process. Due to the advent of the Corona Virus in the country, the team resorted to the use of online data collection methods. The questionnaire was coded online using google forms and identified industrialists were sent the form accordingly.

Statistical Hypothesis

The study was set to test the following hypotheses

i. The changes in revenue between December 2019 and July 2020 is independent of the existence of Covid-19.
ii. The changes in production between December 2019 and July 2020 are independent of the existence of Covid-19.

Based on the hypotheses set under the study, using the world development indicators as outlined by the World Bank data (2020), it was observed that findings under the research is aligned with the outlined data as observed below.

From Figure 2, it is observed that between 2017 and 2019, the annual growth rates for both industry and manufacturing were positive. It should be noted that between this period, Covid-19 was not in existence. However, between 2019 and 2020, it can be observed that the annual growth of both industry and manufacturing slowed down projecting a negative trend. This period is when Covid-19 was declared a global pandemic and hence the first wave of the pandemic.

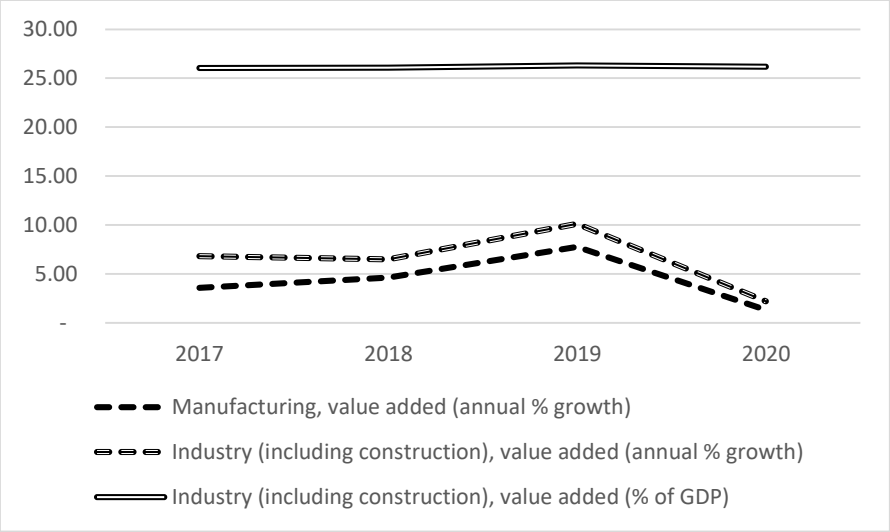

Figure 2: Trend of World Development indicators

Discussion of Findings

The general impact of Covid-19 on a manufacturing company

As a result of the Standard Operating Procedures (SOPs) as discussed, companies were directly affected by the lockdown measures taken by the Government of Uganda (GOU) through MoH. To this, companies had to endure direct impacts such as; limitation of general access to markets, transportation, movement across borders and even access by their employees to the workplace. Companies indicated the general impact of Covid-19 as follows;

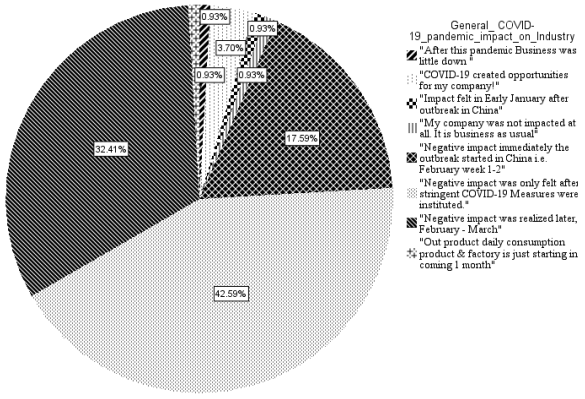

Figure 3: General impact of Covid-19 on the industrial sector in Uganda

As part of the lockdown measures including curfew hours (starting at 5:00 pm EAT), restrictions on the movement of trucks, private cars and boda-bodas, 43% of the respondents stated that they experienced negative impacts of Covid-19 after the stringent measures to curb its spread were instituted by the government. However, 31% stated that the effect of the pandemic was felt much later especially between February and March 2020. The 5% caters for other impacts of Covid-19 on companies.

The effect of the pandemic shocks on company production in Uganda

Given that most companies in Uganda import their raw materials in form of semi-finished goods, production stage inputs or even capital goods that aid production, it is paramount to understand how production was affected as a result of the lockdown and hence border delays in access to these materials.

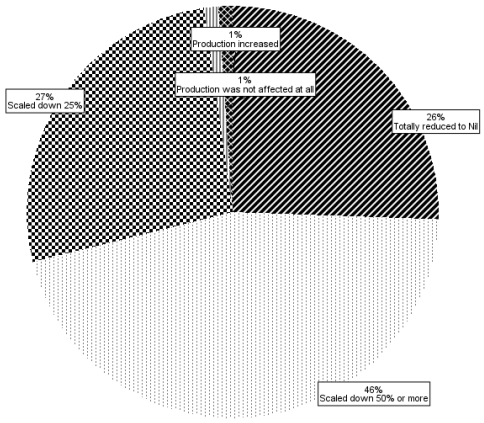

Figure 4: Effect of Covid-19 on company production 2020

In addition to the lockdown, the government shut down shopping arcades, supermarkets, saloons, lodges, hardware shops and any other businesses that gather a lot of people and sell non-food items. This tremendously reduced income but also made people mainly buy necessities (MoH, 2020). As a result, 46% of the respondents stated that production in their businesses scaled down to more than 50%, 27% stated that the production scaled down to 25% and 25% stated it scaled down to zero.

The effect of the pandemic shocks on company sales in Uganda

Apart from production, many companies saw an effect on the sales of their commodities. Different manufacturers claimed that their sales were also affected by the pandemic in various ways. Below is the indication of the effect on sales; the researchers used a Likert scale where 1 represents Zero Sales (sales affected 100%), 2 represents an effect of 75%, 3 represents 50%, 4 represents 25% and 5 represents 0% (sales were not affected at All) effect on sales.

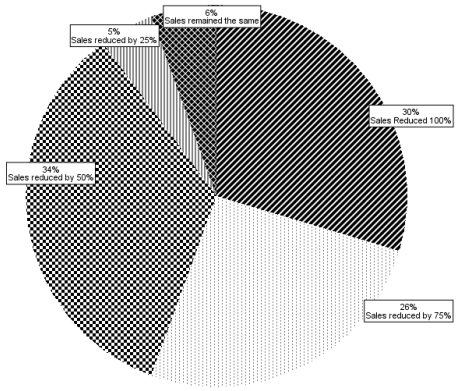

Figure *5*: The effect of the pandemic shocks on company sales

Sales are the major source of company revenue in addition to other activities. For some companies, sales are the only source of revenue. This, therefore, means that any effect on the ability to move sales to the market causes a pause in the company's activity. The majority of the respondents, 33%, indicated that their sales were not affected at all, the markets they served still requested for the same quantities and they were able to deliver these quantities, 27%, 20%, 13% and 7% indicated that their sales reduced by 25%, 50%, 75% and 100% respectively.

The effects of pandemic shocks on Company cash flows in Uganda

Most of the manufacturers have various lines of production some of which depend on internal sources of material and market access. This, therefore, means that there is a possibility of uninterrupted production and market access translating into a steady cash flow for these local market selling companies. The researchers were seeking to understand that with this possibility, are the cash flows of such companies still affected by the pandemic or steadily flowing without interruption.

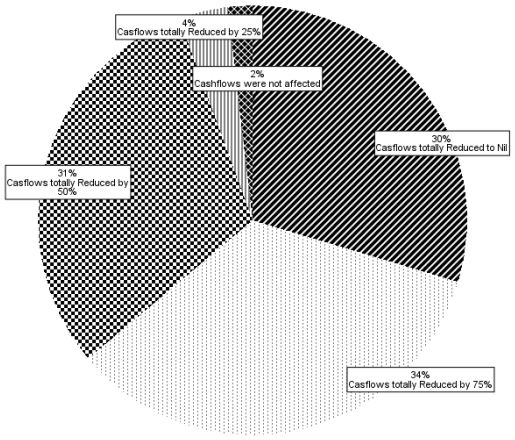

Figure 2: The effects of pandemic shocks on company cash flows

The majority of the companies (33%) that sell their commodities locally (Ugandan market) indicated that their cash flows were not affected by the pandemic. These can easily get their products to the customers through their established distribution lines. However, 27% of the respondent companies indicated that their cash flows were still affected given their inability to access the customers. Most cited an inability to transport their products due to the reduced number of staff, a total ban on both private and public transportation for 21 days. It was due to these measures that such companies could not meet the demand of their customers as many did not possess fleets of vehicles to do so. Other companies (20%) indicated that due to the pandemic and various lockdown measures undertaken by the government, their cash flows were reduced by 50% while 13% and 7% indicated that their cash flows were reduced by 75% and 100% respectively. Many of the companies are closing off the production lines and laying off workers due to the inability to sustain them. With net losses being made by the companies resulting from the inability to access markets and raw materials, the logical move inevitable is to stop production.

The effects of pandemic shocks on Company financial requirements in Uganda

Apart from the total projected capital requirement, the researchers wanted to determine the main agreeable sources or refinancing by the organizations. Below are the major findings;

Financial requirement for sustained cash flows post Covid-19

It has not yet been communicated when this situation will halt and we revert to the normal where access to the markets (both regional and international) is easy and free, easy access to transportation, normal working hours hence proper production to mention but a few. This puts many companies in suspense about their going concern hence limiting particular investment decisions. Many companies are however stout about the future and are projecting the investment capital they will require once the pandemic is no longer a threat globally. Many organizations stated the capital they will require as follows;

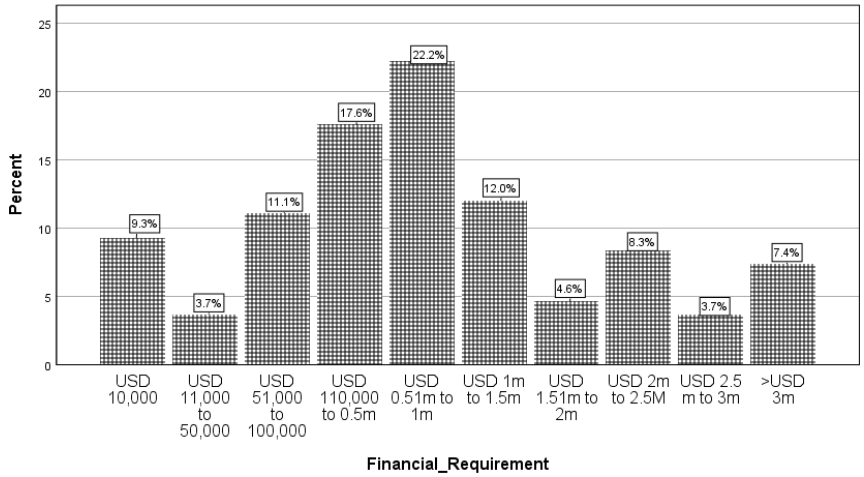

Figure 3: Financial requirement for sustained cash flows post Covid-19

The lowest capital requirement was set at USD 11,000 to also consider the response of the small companies category. The majority of the companies (22%) stated that they will require a financial boost between USD 510,000 and USD 1 Million, this was followed by 18% of the respondents that will require between USD 110,000 and USD 500,000. For companies that require between USD 11,000 to 50,000 and USD 2Million to 2.5 Million were 4% and 4% respectively. Other companies (7%) will require a financial boost of more than USD 3Million to operate at the same capacity as before the pandemic.

Obligatory Payments (e.g. PAYE, NSSF etc.) Deferral

As one of the ways to recapitalize their businesses due to shortage of revenue, some respondents were asked if they thought obligatory payment deferral is a good measure to source income to meet the gap caused by the Covid-19 pandemic. Their response was as follows;

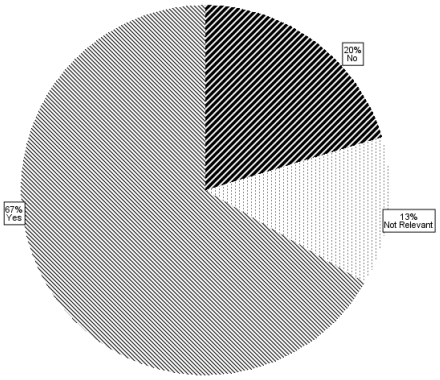

Figure 7: Obligatory Payments Deferral

From the findings, the researchers realized that 67% agreed that deferral of obligatory payments like NSSF would be a good measure to source income to meet the gap caused by the Covid-19 pandemic. However, 20% disagreed with this measure, 13% find the measure not relevant.

Conclusions and implications

Theoretical implications

The study was based on the theory of Industrial Organization Theory by Jean Tirole which emphasizes the variables that support industrial development. These among others include profitability, revenues, production and allocative efficiency. Therefore, using the findings from the study, the perseverance of Covid-19 creates a challenge to company growth in the following ways

i. The decline in the company cash flows in terms of reduced revenues created deterrence in organizational continuity hence limiting the process of industrial development. The deterioration created by the pandemic is hence likely to limit the exponential flow of company growth
ii. The disruption of supply chains limiting the access to resources used in production also limits the application of the theory hence not only limiting production as indicated in the findings but also, limiting the transitive growth and utilization of resources at the company level.
iii. As part of indicative development, it is part and parcel that the recommendation of technological use, especially at sales, production and delivery level to ensure that there is deterrence on the rate of pandemic spread but also create business continuity process and ease access to markets.

Study Implications

From the practical point of view, the study will help policymakers and players in the relevant sectoral ministries to come up with holistic policy interventions aimed at curbing both short and long term effects of Covid-19 on the industry sector in Uganda while providing references to other researchers and academicians on how the Covid-19 pandemic has affected production, revenues, sales and the financial requirements of the industry sector in Uganda. On the selected company variables, the study shows a slowdown in sales, production, cash flows and presents a need for the companies affected by Covid-19 to access particular funding to ensure business continuity. Relatedly, the findings can help guide the formulation of policies related to economic recovery, industrial mapping and stimulus packages from the government. Policies can include a review of the NSSF and PAYE payments by the companies, access to low credit loans, review of loan restructuring objectives in the face of the pandemic. However, it is pertinent that a study on the

long-term impacts of the pandemic is undertaken. The study can create a deeper understanding of the individual economic and social variables related to firm development. This will provide a more profound policy basis for the particular study variables.

Conclusions

From the findings and discussion, it can be concluded that Covid-19 has had a significant effect on company (industry) production and sales. This showed that for a company and therefore the whole industry to maintain and increase its production and sales, the country should be free of any pandemic for operations to run smoothly due to limited or no access to regional, international and local markets. It was therefore concluded that pandemics such as Covid-19 have a negative relationship with industry and company production and sales. Implying that, as the rate of spread of Covid-19 increased, the company (industry) production and sales decreased. In addition, Covid-19 had a significant effect on company (industry) finances by reducing cash flows, increasing debt burden and the general cost of operation. It was further noted that once countries face a pandemic like Covid-19, to control its spread they go into lockdowns which deterred border entry of materials, labour, access to regional and international markets which automatically reduces finances. It was therefore concluded that Covid-19 had a negative relationship with company finances. This is, as the rate of spread of Covid-19 increased or as pandemic persisted, the companies were not in a position to sustain their cash flows which caused a collapse in related company activities that required financing like investment expansion, sustaining the labour force, and dividend payment. This in turn was transferred to the entire industry. Lastly, companies suggested several recommendations which the government was to implement for post-Covid economic recovery. These and more are highlighted in the sub-section below.

Recommendations

The government should give tax exemptions or reduce tax rates on the manufacturing sector, increase taxes on imported goods to encourage the BUBU policy and promote locally manufactured goods through URA exempting companies that were mostly affected by Covid-19 from payment of particular taxes like a corporate tax for two years. In addition, the government should repurpose its policies and defer the payment of PAYE and NSSF for 2 years to help companies be in a position to sustain salary payment to their staff, in addition to re-investment in core company activities. Regional industry development through the development of infrastructure to increase market and raw material access through increasing energy supply, construction of better roads and enabling easy access to funds by establishment and support of micro finances and SACCOS would also help companies recover from the Covid-19 pandemic.

From the study, there is also a need for companies to innovate and invent ways of improving production and sales in these Covid times especially through the maximum use of technology to advertise and also avail their products online, specifically service companies. Businesses should also invest in or contract service providers like DHL, Safe Boda, Bolt or a quick taxi to deliver their products to the customer's doorstep to improve convenience and minimize body contact. To minimize the spread of Covid-19, organizations and other stakeholders should continuously sensitize and emphasize the need for their staff and community to follow the SOPs through washing hands, sanitizing, wearing masks and social distancing, invest in the necessary equipment such as; sanitiser, water, soap and handwashing cans and where necessary replace physical meeting

with online methods of organizing meetings through platforms like; Microsoft Teams, Google Meets, Zoom, Facebook, WhatsApp among others.

Corporations can embark on re-training their employees through Instructor-led training, E-learning simulation, employee training, hands-on training, mentoring lectures, group discussion and activities, role-playing, and coaching while maintaining social distancing. Management-specific activities like case studies and other required reading materials on zoom or any other online platforms should be conducted to obtain, improve and retain the skills and knowledge. Employees should be equipped with tools and equipment that help them do their jobs competently. There is also a need to move from labour-intensive techniques to capital intensive techniques through artificial intelligence specifically by replacing human labour with robots in technical production units. Lastly, there is a need to consider packaging materials that don't harbour the SARS-COV-2 virus for more than a few minutes.

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