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The Effect of Covid19 on the Ugandan Macroeconomy

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Abstract

The purpose of this research study was to analyze the effects of Covid 19 on the Ugandan macro economy. The dependent variable was Uganda's macroeconomy while the independent variable was Covid19 pandemic. Uganda's macroeconomy was measured using macroeconomic indicators and these included; the country's interest rates, exchange rates, business tendency indicator and price levels. The study used secondary data from Uganda Bureau of Statistics and Bank of Uganda from January 2020 to April 2020. A retrospective – prospective research design was used to basically analyze trends of these variables. The results indicated increase in the general price levels. The end period exchange rate of the Uganda shilling against the dollar increased in March 2020, the Central Bank rate reduced in April 2020 while the rediscount rate reduced. For the real sector, the business tendency indicator reduced in April 2020. The study recommended that the government of Uganda considers the health sector priority, embarks on import substitution industrialization since the economy's export base is low at the moment, encourage and support innovations for ideas and machinery that can be manufactured in Uganda rather than importing them, boosts the private sector by contracting when she makes her government procurements, uses Uganda Development Bank to issue low interest loans with a substantial grace period but with collateral security from borrowers.

Key words: *Economic effects, Covid 19, Uganda, macro economy*

Introduction

The Coronaviri belong to the Ribonucleic Acid (RNA) acid virus family known as Coronviridae (Kelvin, 2013) which cause disease these cause to both animals and human beings. Epidemiological research shows that initial patients diagnosed with Severe Acute Respiratory Syndrome have contracted it from animals and that animal traders are more susceptible to the disease. It was observed the existence of SARS infection and symptoms of the disease in aged animals (Graham, 2013) which included; mice, cats, civets, hamsters and primates and yet there hasn't been any vaccine discovered for the disease. Covid 19 also known as the Corona Virus Disease 2019 first emerged in Wuhan, China on 31st December 2019 and by 11th May 2020, it had been declared by the World Health Organization a global pandemic. (Uganda AIDS Commission,2020).

Uganda registered her first case of Corona virus confirmed case on the 21st of March 2020 and this was a 36 year old male Ugandan from Dubai aboard Ethiopian airlines at 2:00 am detected by a high temperature of 38.7^0 C (Ministry of Health, 2020) and since then the statistics of confirmed cases have been rising and by 27th May 2020, the number of confirmed cases was 253 and out of these, Uganda had 69 recoveries.

Uganda is the third largest economy in East Africa after Kenya and Tanzania and has had considerable economic growth over the past decades. However, the International monetary Fund has predicted a decline in the country's economic growth to 3.5% due to the Covid19 pandemic (Nordea, 2020). There has been a pre-pandemic projection of Uganda's economic growth declining to 6% for financial year 2019/2020 as a result of reduction in Uganda's inflows of foreign direct Investments, remittances, tourism and exports (Muhakanizi, 2020). Uganda's Gross Domestic Product has been predicted to be between 0.4% and 1.7% in 2020 compared to 5.6% in 2019 mainly due to international trade disruptions caused by the Covid19 pandemic (WorldBank, 2020) and since China is Uganda's main trade partner, there has been cancellation of orders from Uganda by importers from China (Kamulegeya, 2020).

It is upon this background that the study is geared relevant to analyze trends of the country's macroeconomic indicators of price levels, interest rates, exchange rates and business tendency indicator one month after the the country has been hit by the Covid19 pandemic to establish the effect of Covid19 on the Ugandan macroeconomy.

1.2 Statement of the Problem

Before the Covid 19 epidemic became global, (Erin, 2020),economists had come to a general consensus that the pandemic would lead to the 2020 global Gross Domestic Product which is estimated at 86.6 trillion US dollars to reduce by 2.4%. Covid 19 pandemic has led to shut down of all sectors of global economies Uganda inclusive (Azevendo, 2020) including tourism, restaurants, hotels, retail shops, manufacturing among others due to lockdowns that involve social distancing and restrictions of movements and air travels that have been implemented by world governments in a bid to reduce the spread of the global pandemic. The effect of the Covid 19 pandemic on the global economy has attracted both pessimistic and optimistic projections although accurate forecasts will require use of actual data estimates.

It is important to note that unless the situation is effectively managed, the Ugandan economy is likely to experience macroeconomic problems like inflation, unemployment, worse balance of payment deficits and a recession at worst. It is important that this study is conducted in order to ascertain the likely economic effect of the Covid 19 global pandemic on the Ugandan macroeconomy and recommend policy options to curb the pandemic and protect her economy.

1.3 Objective

The study aims at establishing the effect of Covid19 on the Ugandan macro economy whereby the macro economy is the dependent variable and it is measured by interest rates, exchange rates, business tendency indicator and price levels and Covi19 is the independent variable. The specific objectives are to establish the effect of Covid19 on Uganda's interest rates which include; the central bank rate and interest rates on securities like treasury bills and bonds, to identify the effect of Covid19 on; Uganda's exchange rates, business tendency indicator and on Uganda's price levels which are measured by the inflation rate.

1.3 Research questions

The study entails asking questions like; what is the effect of Covid 19 on the interest rates in Uganda? The study will examine trends of interest rates on the central bank rate and treasury bills and bonds, one month after the outbreak of the Covid19 pandemic in Uganda.

The study also aims at answering what the influence of the Covid 19 on exchange rates in Uganda is. Exchange rate will be in terms of the Ugandan shilling against the United States dollar. Additionally, the study seeks to answer the question of the effect of Covid 19 on Uganda's Business tendency indicator which is measured by levels of economic activity in Uganda. The question of what is the influence of Covid 19 on the price levels in Uganda will be answered by analyzing trends of inflation levels in the country.

1.3 Significance of the study

This study comes at a time when global economies, in a period of less than a year have all been negatively affected by the Corona virus pandemic and need systematic processes to jump start their economies. The study will provide a clear picture of the country's macroeconomic position especially one month after the confirmation of the Covid 19 pandemic in Uganda and will therefore be useful in provision of economic policy advice to the Ugandan government especially policy makers.

1.4 Global Influenza pandemics

In the 20th century, the world experienced influenza global pandemics among which include; Spanish, Asian and Hong Kong influenza in 1918, 1957 and 1968 respectively. (Edwin,2006). The 1918 Spanish flu (Centre for Disease Control and Prevention, 2018) that is said to have led to deaths of about five hundred million people, estimated to be a third of the world population was phased out by Isolations, quarantine, good personal hygiene habits like washing of hands and avoiding of mass gatherings.

According to (Kairvy,2020) the Asian flu pandemic in 1957 that led to the death of about one million people that is believed to have been caused by strains of human and Avian influenza viri that is believed to have spread from birds especially in South East Asia. It was however the least fatal compared to the Spanish flu of 1918 to 1919 and the Hong Kong flu of 1968.

In 1968, another influenza virus strain emerged (Kumar, Madhu & Ronsard, 2018) and this was the Hong Kong influenza by virtue of its country of origin that spread mainly through air travels but it was less severe than the Asian influenza of 1957.

In February 2009 Influenza pandemic known as Swine flu (Wiley, 2020) that is estimated to have caused 575,400 deaths originated from a six months old girl in Mexico and World Health Organization officially declared the pandemic on 11th of June 2009 as it had spread around the world.

In September 2012, there emerged a form of Corona virus known as the Middle East Respiratory Syndrome (Dallas, 2014) that has symptoms of fever, chills, pneumonia and kidney failure and it resulted to death of 68 people and it did not become a global pandemic.

The SARS Avian influenza pandemic that is believed to have emerged from poultry in China that started in 2002 (Qiu, Chu & Mao, 2018) and continued with different phases of infection right through up to 2018 where in 2003 in China and Hong Kong, 648 people died

out of 8,082 laboratory confirmed positive cases and over 700 people lost their lives on a global perspective out of 8000 laboratory confirmed positive cases, in 2013, there were 681 confirmed positive cases and 275 deaths in China as per the World Health Organization, while in 2017, there were 1,223 positive laboratory cases. In 2018, in China, there were 589 laboratory confirmed positive cases with 259 deaths.

1.5 Effect of Covi19 on global economies

By 27th April 2020, (Jones, Palumbo & Brown, 2020) the price of Brent crude oil in Europe had fallen below $20 the lowest since the last eighteen years and that of the United States of America was -37.63. This was basically due to the reduced demand for oil as movements were halted due to lockdowns in a bid to reduce the spread of the Corona virus pandemic In Europe, the European Central Bank (Nichola, Alsafi & Sohrabi, 2020) launched the 750 billion pounds asset purchase programme to stabilize its currency simply because corona virus pandemic has led to low economic activity among nations as a result of closure of different sectors of the economies and this has prompted economies to increase their expenditures. By May 19th 2020, Uganda had 260 Covid 19 cases and 63 recoveries (Lakuma & Sunday, 2020) and according to a survey made by Economic Policy Research Centre Uganda, it was observed that three quarters of businesses in Uganda had downsized their workers in order to maintain business survival. This was mainly due to limited access to inputs as a result of restrictions on movements and social distancing as well as quarantines. The Havard Business School (Vinelli, Weller & Vijay, 2020) predicted that the epitome of the Corona Virus global pandemic would be felt in mid-March 2020 as companies and manufacturing plants would close in Europe and United States of America affecting world supply chains and demand for goods and services. According to Fernandes, in a study of a sample of 30 countries

globally (Fernandes, 2020), it was revealed that the negative effect of the outbreak of the Coronavirus on the world economy would be felt more by countries Spain, Greece, Portugal and others that greatly depend on services like tourism and that for each extra month of continued existence of the pandemic would lead to an estimated of 2.5% to 3% loss of Gross Domestic Product on global economies. It was predicted (Fornaro & Wolf, 2020) that the Corona virus global pandemic would lead to a demand-supply slump that would lead to stagnation traps which could be reverted by strong investment policies to revitalize world economies. A study on the impact of Corona virus on Uganda (Bell, Kristian & Hansen, 2020) revealed that the pandemic would have a relatively low mortality burden of 12% on Uganda, but would increase the mortality burden of other diseases like HIV/AIDS and Malaria. Most studies, have focused on general effects of Covid 19 pandemic for example; social, economic, psychological, political effects. Those that have focused on the economic effect of the pandemic on global economies have put in emphasis on factors like the effect of Covid 19 on employment, and Gross Domestic Product and on different sectors of the economy like tourism, industry, health, education and agriculture. These studies have been done at country level and at general, continent level yet it is unrealistic to use a sample of a few countries around continents and using data from Asia, Europe, America and Australia to predict the impact of the pandemic on Africa specifically Uganda in particular.

However, the effect of the Covid 19 pandemic depends on the country's efficiency of response measures against the pandemic, the number of Covid 19 deaths and recoveries, availability of well equipped medical facilities and attitude of the nationals and relationships with the country's trade partners especially countries in the same regional blocs. While most studies have been only retrospective in predicting the effect of Covid 19 on global economies by using incidences of previous catastrophes like global pandemics of Spanish influenza of 1918 and 1919, SARS,MERS, bird flu, Ebola in Africa and the global financial crisis of 2008, this study uniquely uses both retrospective – prospective research approach with Uganda's data on disseminated economic growth indicators shown by trends of Uganda's interest rates, exchange rates, price levels, business tendency indicator and external sector to analyse effect of Covid 19 on the Ugandan macro economy.

2. Method

This section explains the research design adopted by the study, approach and data and sample used and why these are specifically selected.

2.1 Research design

The study used a retrospective - prospective research design to assess the economic effect of the Covid 19 global pandemic on Uganda's macro economy. Retrospective studies look backwards by using past data trends to predict the outcome while prospective studies look ahead by considering the present time for the future (Song & Chung, 2010)

Given the fact that retrospective studies, analysis is made based on past existing data that is used to judge the sequence of outcome, they are cheap and very effective and prospective studies have an

advantage of accurate determination of the sample size under study and ensure collection of quality data (Lazcano, Papuzinski & Madrid, 2019)

2.2 Approach

A qualitative approach was used and this involved document review of Uganda's macroeconomy. Since the Covid 19 pandemic emerged from Wuhan China on 31st December 2020 and China being Uganda's major trading partner(Kamulegeya 2020), and given the fact that the pandemic hit Uganda on 21st March 2020(Ministry of Health,2020) the period January 2020 to April 2020 was selected to analyze trends of Uganda's interest rates, exchange rates, price levels, business tendency indicator and external sector to analyse the economic effect of Covid 19 on the Ugandan macro economy.

Document sources included; books, journal articles, monetary policy statements from Bank of Uganda and electronic databases like PubMed and International Centres for disease Control on Covid 19 literature. The words used in the search engines were; economic, affect, Covid 19, Uganda, macro economy.

2.3 Data and Sample

The study used secondary data and this involved reviewing literature related to economic effects of Covid 19 and monthly data from Bank of Uganda and Uganda National Bureau of Statistics. Given the fact that Covid19 pandemic started in Wuhan, China on 31st December 2020 and China being Uganda's major trade partner, the economic effect of the pandemic begun to be felt on Uganda in this period (Kamulegeya, 2020), statistics from January 2020 to April 2020 were used to study trends for interest rates, exchange rates, price level, and business tendency indicator one month after the country was hit by the Covid19 pandemic.

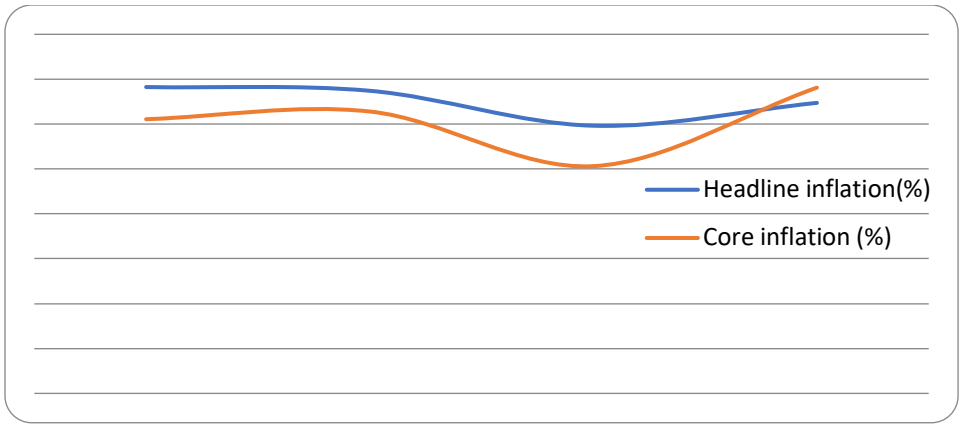
3. Results

This section indicates the findings of the study which include; the effect of Covid19 on Uganda's exchange rates,interest rates,price levels and business tendency indicator.

3.1 Effect of Covid19 on Uganda's price levels

The headline inflation was at 3.0% in March 2020. However, by April 2020, the headline inflation had risen to 3.2% core inflation rose from 2.5% to 3.4% in a space of only one month. This was due to factors the supply side of the economy given the fact that producers cannot access inputs in the production process and the level of imported inputs is low due to restricted movement as a result of quarantines and social distancing.

3.2 Graph 1: Effect of Covid19 on Uganda's inflation rate

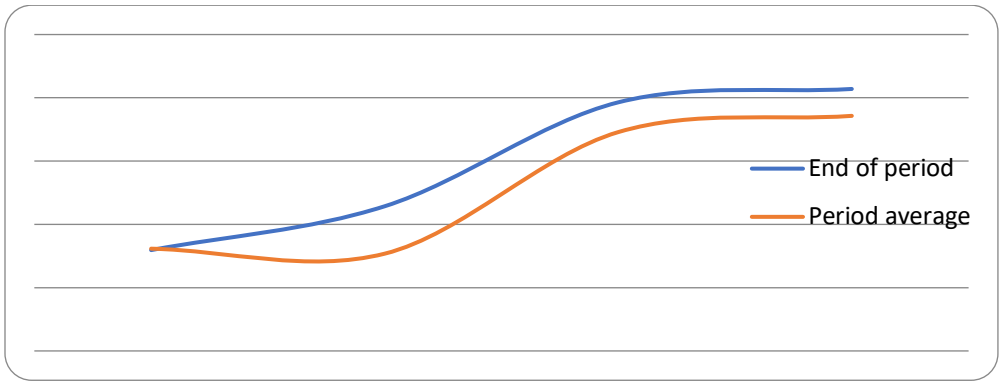


Bank of Uganda, 2020. Macroeconomic indicators.Retrieved from: https://www.bou.or.ug/bou/bouwebsite/Statistics/Statistics.html

3.3 Effect of Covid19 on exchange rate in Uganda

The end period exchange rate of the Uganda shilling against the dollar rose from 3,796.4/= in March 2020 to 3,807/= while the average period exchange rate rose from 3,772.9/= to 3,785.7/= This was mainly attributed to reduction in the export base and reduced productivity by business and hence low economic activity which led to demand and supply slump.

Graph 2: Exchange rate (Ugandan shilling against the US dollar)



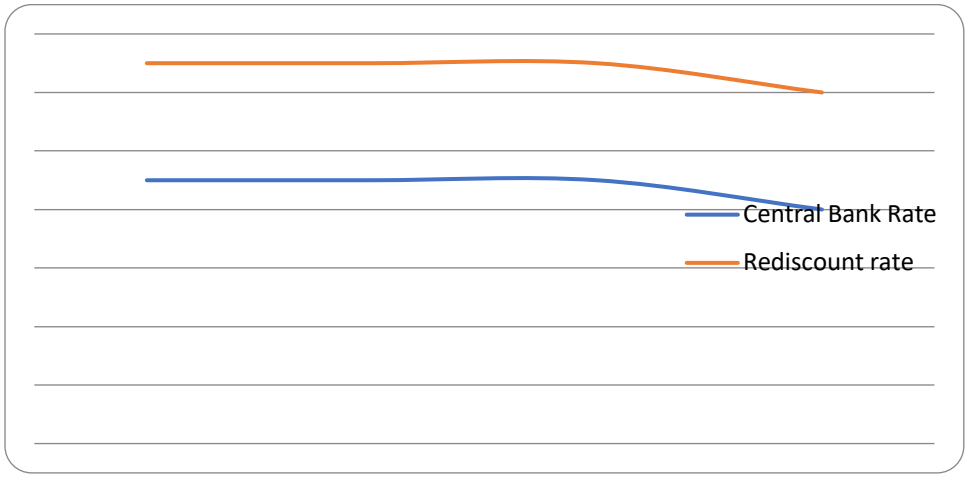
Bank of Uganda, 2020. Macroeconomic indicators.Retrieved from: https://www.bou.or.ug/bou/bouwebsite/Statistics/Statistics.html

3.4 Effect of Covid19 on Central Bank Rate and rediscount rate

The Central Bank rate reduced from 9% in March 2020, to 8% in April 2020 while the rediscount rate reduced from 13% to 12%.This was attributed to the low demand by commercial banks for

loans from the central bank due to low demand for credit from commercial banks by borrowers. The central Bank lowered the Central Bank Rate, one of its monetary policy instruments to encourage commercial banks borrow money from the central bank.

Graph 3: Trends for Central Bank rate and Rediscount rate

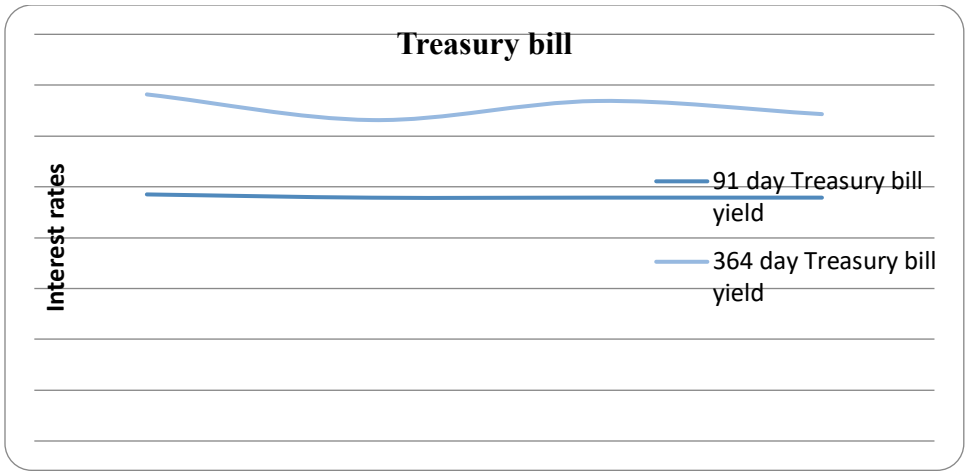


Bank of Uganda, 2020. Macroeconomic indicators.Retrieved from: https://www.bou.or.ug/bou/bouwebsite/Statistics/Statistics.html

3.5 Interest rates on Treasury bills

The interest rate on 91 day Treasury bill yield remained at 9.6% in April 2020, as in March 2020 when the epidemic was confirmed in Uganda. The interest rate on 364 day Treasury bill yield dropped from 13.4% in March 2020 to 12.9% in April 2020.

Graph 4: Effect of Covid19 on interest rates on treasury bills

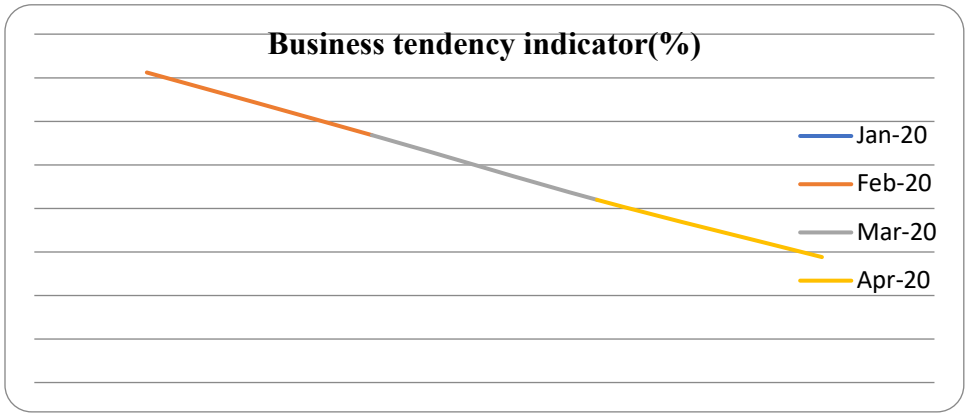


Bank of Uganda, 2020. Macroeconomic indicators.Retrieved from: https://www.bou.or.ug/bou/bouwebsite/Statistics/Statistics.html

3.6 Business tendency indicator

For the real sector, the business tendency indicator reduced from 51.2% in March 2020 to 49.9% in April 2020, meaning that Covid 19 pandemic led to low levels of economic activity in Uganda

Graph 5: Effect of Covid19 on Uganda's business tendency indicator



Bank of Uganda,2020. Macroeconomic indicators.Retrieved from: https://www.bou.or.ug/bou/bouwebsite/Statistics/Statistics.html

4. Discussion

4.1 The effect of covid 19 on Uganda's price levels

Although, literature reveals that the Covid19 pandemic will lead to supply slumps, it does not specify by how much these will be. The study therefore indicates an increase in headline inflation from 3.0% in March 2020 to 3.2% in April 2020 and core inflation from 2.5% in March 2020 to 3.4% implies shortage in supply of basic goods and services in the country as a result of a lockdown, restrictions in movements and travel as well as social distancing. The increased demand for goods and services especially food commodities as a result of panic shopping in preparation for the

lockdown has led to increased prices and therefore increase in the inflation rate in the country. This increase in prices is likely to increase the cost of living, reduce the citizen's standard of living as well as loss of the value of the Uganda shilling if the situation is not managed by the Ugandan government.

4.2 The effect of covid 19 on Uganda's interest rates

The demand slump predicted in the reviewed literature is indicated by a reduction of the Central Bank Rate from 9% in March 2020 to 8% in April 2020 implies Central Bank's effort to increase money supply as a result of low demand for loans from commercial banks due to low economic activity as a result of restricted movements and a lockdown in the country. The low money supply in the country is likely to lead to reduced aggregate demand for goods and services, low economic activity and thereby a deflation.

Covid19 has had a negative effect on interest rates as indicated by a reduction of interest rate on 364 day Treasury bill yield from 13.4% in March 2020 to 12.9% in April 2020 implies increased aggregate demand for goods and services and reduced demand for domestic assets and therefore low domestic investment in the country.

4.3 The effect of covid 19 on Uganda's exchange rates

Although, literature is pessimistic on Uganda's Gross Domestic Product due to effects of the Covid19 pandemic, there'sn't any accurate prediction that has been made on the country's exchange rate fluctuations. The increase of the end period exchange rate of the Uganda shilling against the dollar from 3,796.4/= in March 2020 to 3,807/= in April 2020 and the average period exchange rate from 3,772.9/= to 3,785.7/= in March 2020 and April 2020 respectively was mainly attributed to reduction in the export base and reduced productivity by businesses and hence low economic activity which led to demand and supply slumps. Low demand for goods and services will lead to reduction in prices of goods and services which will eventually lead to a recession if the situation is not managed by the Ugandan government.

4.4 The effect of covid 19 on Uganda's business tendency indicator

Literature generally predictions reduction of business activities globally and this has been a prophecy fulfilled to Uganda with a reduction in the business tendency indicator from 51.2% in March 2020 to 49.9% in April 2020 implies reduction in the level of economic activity due to restrictions in movements and travels as well as social distancing and quarantines which were measures to reduce the spread of the Covid19 pandemic in the country. The low level of economic activity is bound to lead to low tax revenue and hence low economic growth.

5. Conclusion and Recommendation

5.1 *Conclusion*

The study's main objective was to establish the effect of Covid19 on Uganda's macroeconomy. The dependent variable was Uganda's macroeconomy and the independent variable was Covid19 pandemic and results revealed that Covid19 pandemic had significant negative effects on the country's macroecomy as follows:

5.1.1 The effect of covid 19 on Uganda's price levels

There was increase in headline inflation from 3.0% in March 2020 to 3.2% in April 2020, which is a 0.2% increase and core inflation from 2.5% in March 2020 to 3.4% which was a 0.9% increase implying increase in the general price levels that was basically as a result of supply slumps due to restrictions on movement, social distancing and quarantines which were measures to reduce the spread of Covid19.

5.1.2 The effect of covid 19 on Uganda's interest rates

There was reduction in the Central Bank Rate from 9% in March 2020 to 8% in April 2020 which was a 1% reduction implying reduction in demand for loanable funds due to low economic activity as a result of restrictions on movement, social distancing and quarantines in a bid to reduce the spread of Covid19. With reduction in demand for loanable funds implied and reduction in money supply and hence the central bank's effort to increase money supply by reducing the central bank rate.

5.1.3 The effect of covid 19 on Uganda's exchange rate

There was increase of the end period exchange rate of the Uganda shilling against the dollar from 3,796.4/= in March 2020 to 3,807/=, an increase of 0.28% in April 2020 and the average period exchange rate from 3,772.9/= to 3,785.7/= in March 2020 and April 2020 which was a 0.34% increase. This was basically due to reduction in productivity especially domestically manufactured products and due to reduction in the country's export base due to travel restrictions in a bid to reduce the spread of the Covid19 pandemic.

5.1.4 The effect of covid 19 on Uganda's business tendency indicator

There was reduction in the business tendency indicator from 51.2% in March 2020 to 49.9% in April 2020 which was a 1.3% reduction due to the low levels of economic activity caused a lockdown in the country which involved restrictions of movements and social distancing measures in a bid to reduce the spread of Covid19 in the country.

5.2 *Recommendations to the Ministry of Finance Planning and Economic Development (Uganda)*

It is therefore recommended that the Ugandan government adopts the following policies;

1. The government of Uganda should consider the health sector priority and it should be noted that without managing the Covid 19 pandemic, it will be very challenging for the economy to attain substantial economic recovery. At the time of writing this paper, the president of Uganda had made partial lifting of the lockdown, but since there is un certainty on who has the Covid 19 disease on

who does not have it considering the fact that some Covid 19 cases are asymptomatic showing no symptoms and yet very infectious, this could bring community infections which could be a worse scenario than ever before. The Ugandan government should therefore increase its budget towards;

I. Expenditures regarding purchase of medical equipment required for testing and treating of Covid 19 pandemic like; Personal Protection Equipment, testing kits, face masks, and ensuring timely and attractive salaries and risk packages and facilitations in terms of food and accommodation for the medical workers that are at the forefront of fighting the epidemic.

II. The government of Uganda should increase the level of number of people tested for Covid 19 by increasing the number of testing centres around the country so that the country gets a more clear picture of the health status of citizens and be able to treat and track contacts for the disease so that they can be quarantined and tested for Covid 19 and treated if found positive with the disease.

The government should impose strict measures on border security to prevent foreigners from entering the country as this may mean importing the disease thus this will reduce on the sporadic infections.

III. The government of Uganda should increase remuneration for the security personnel like the policemen, army and prison officers and facilitation in terms of providing them with face masks, feeding and accommodation.

IV. The government of Uganda should invest in research conducted by Ugandan medical workers to establish a vaccine for the Covid 19 pandemic.

2. The government of Uganda should embark on import substitution industrialization since the economy's export base is low at the moment. This will; i. Generate revenue to the government in form of taxes, generate employment to several sectors of the economy especially agriculture for the agro based industries.

3. The government of Uganda should encourage and support innovations for ideas and machinery that can be manufactured in Uganda rather than importing them.

i. The government should disseminate information on these innovation sponsorships through various media like newspapers, television stations, radios.

ii. Patents should also be provided by governments to original innovations.

4. The government of Uganda should boost the private sector by contracting when she makes her government procurements. For example, regarding the provision of face masks for Ugandans, the government should contract the private companies as well to increase business activity in the country.

5. The government of Uganda should use Uganda Development Bank to issue low interest loans with a substantial grace period but with collateral security from borrowers to ensure Credit worthiness of borrowers. This is because reducing the bank rate is not a guarantee for commercial banks to increase the amount of loans given to borrowers and the central bank is limited in terms of preventing commercial banks from levying high interest rates on loans issued to borrowers The government of Uganda should embrace the use of internet in both public and private sector. `

6. The Ugandan government should subsidize the internet services around the country to ensure that citizens can access cheap and affordable internet for the business sector, health, education agriculture, industry and other sectors of the economy.

7. By the time of writing this paper, the National Social Security had supported the idea of providing its members with 20% of their money and this was to be tabled in the nation's parliament to enable them go through the Covid 19 challenging time since most of them were not working by then due to government adoption of quarantines and social distancing measures. This should be supported by the judiciary and the executive as well.

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