COVID-19 in Colombia: repercussions on the economy

COVID-19 en Colombia: repercusiones en la economía

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ABSTRACT. This research shows the effects of COVID-19 on various economic sectors globally and on the Colombian market. The negative effects on the economy due to the mandatory restrictions imposed by the governments of each country are reflected in the high rate of unemployment, low demand for informal employment and closures of businesses and/or enterprises. Therefore, the largest drop in GDP on the European continent occurred in France and the United Kingdom with 11.4% and 11.5%, respectively. In Latin America the greatest economic impact received was the reduction in investment, obtaining a value of approximately 85%, and in Colombia the GDP fell considerably by -15.7% due to many factors caused by the measures imposed to prevent the spread of the virus. In addition, economic activities such as industrial production had a fall of -35.6% in March, the manufacturing sector decreased by -25.4% and the construction sector by approximately -31% in the month of June.
Keywords: COVID-19, economy, informal employment**.**

RESUMEN. Esta investigación muestra los efectos del COVID-19 en varios sectores económicos a nivel mundial y en el mercado colombiano. Los efectos negativos en la economía por las restricciones obligatorias impuestas por los gobiernos de cada país se reflejan en la alta tasa de desempleo, baja demanda de empleo informal y cierre de negocios y/o empresas. Por tanto, la mayor caída del PIB en el continente europeo se produjo en Francia y Reino Unido con un 11,4% y un 11,5%, respectivamente. En América Latina el mayor impacto económico recibido fue la reducción de la inversión, obteniendo un valor aproximado del 85%, y en Colombia el PIB cayó considerablemente en un -15,7% por múltiples factores provocados por las medidas impuestas para evitar la propagación del virus. Además, actividades económicas como la producción industrial tuvo una caída de -35.6% en marzo, el sector manufacturero disminuyó -25.4% y el sector construcción aproximadamente -31% en el mes de junio.
Palabras clave: COVID-19, economía, empleo informal.

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1. Introduction.

Since thousands of years ago humanity has found itself exposed to microorganisms that lead to diseases that put our health at risk or even end our lives, the possibilities are frequent given the innumerable activities that we must do to ensure our survival, the increases in pollution levels and among other factors. Humanity has seen great diseases such as the Antonine Plague (now known as smallpox) in the Roman Empire in 165 A.D., which spread through Rome and killed about 2 million people (Littman and Littman, 1973). Similarly, in approximately 524 A.D., the Justinian plague left a mortality rate of almost 100 million people (Wagner et al., 2014).

Centuries later, the onset of the terrifying Black Death in 1347 killed approximately 30-60% of the inhabitants of Europe, the Mediterranean and parts of Asia in a short period of time (1347-1351) (Benedictow and Benedictow, 2004; Green, 2014). This had negative implications for social as well as cultural and economic factors (Alfani and Murphy, 2017), Research has been conducted to seek the cause of the rapid spread of the Black Death, from which emerged the theory that the famines of that period were the main cause of the appearance of the Black Death (Slavin and DeWitte, 2013)

In 1918, the influenza pandemic appeared, killing approximately 48 to 50 million people worldwide, including half a million Americans (Crosby, 2003). Questions about the origin and epidemiology of the 1918 virus are inconclusive because no genomes of mutations have been found inthis virus that correlate with the high pathogenicity in other human or animal influenza viruses (Taubenberger and Morens, 2006), however, it is suspected that the first transmission was avian, Another event that has not been answered is the high mortality rate in individuals aged 20 to 40, whose births of that generation were between 1878 and 1898 and evidence suggests that within that time frame a pandemic-like virus emerged in 1889 for H3 (Morens and Fauci, 2007).

Approximately a century after the Spanish flu, in China, exactly in the city of Wuhan, the first outbreaks of Coronavirus disease (COVID-19) caused by the severe acute respiratory syndrome (SARS-CoV-2) began, which managed to spread rapidly throughout all continents and its most frequent symptoms are pneumonia, fever, cough, dyspnea (Deng, et al., 2020). In March 2020, certain restrictions were applied in Italy to deal with the health emergency of (COVID-19), such as: isolation in their homes of people with a fever higher than 37.5° C, distance of at least one meter in public places, suspension of activities that lead to crowding and other restrictions (Ulteriori disposizioni attuative del decreto-legge, 2020).

Therefore, such restrictions were applied by many governments of different countries, in which the economic consequences were notorious (Li, et al., 2020). The US is the center of the global financial system, and therefore all economic risks are defined in relation to it (McKibbin and Fernando, 2020). So that the restrictions at the global level have led to the decline of the workforce in all economic sectors including job losses, the need for commodities and manufactured products has decreased but the need for medical supplies has increased considerably (Nicola et al., 2020). Low demand for restaurants and hotels has led to a 20% decline in the prices of several agricultural products (Badu, 2020). However, large panic purchases in supermarkets complicate the situation and increase shortages (American Veterinary Medical Association, 2020).

2. Materials and methods.

This study is developed from a documentary review where various documents of a scientific nature, institutional reports and reports issued by non-governmental entities directed towards the study

of the effects of the COVID 19 pandemic on the international economy were taken into consideration; with a greater emphasis on the repercussions within the Colombian state. The review is carried out towards documentation published between the years 2020 and 2021.

3. Results.

A study conducted in June 2020 by Mena (2020), in which the fall of the GDP of severalcountries was evidenced as a consequence of the restrictions presented due to the COVID-19.

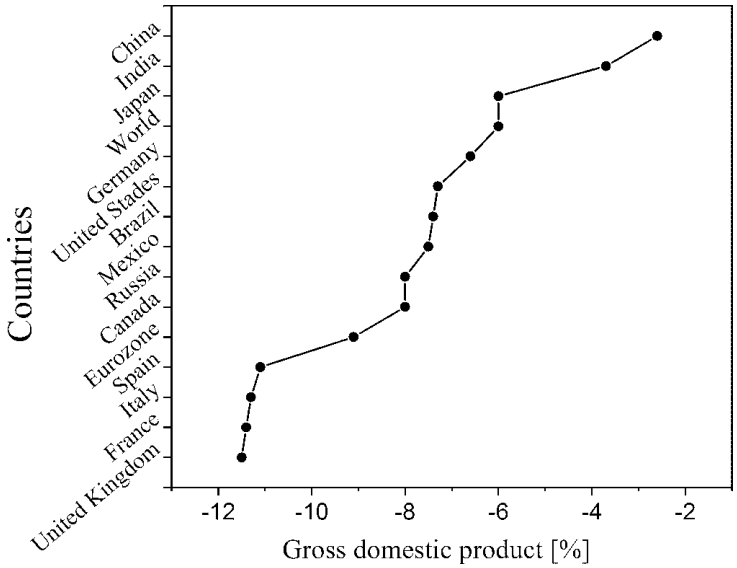

Figure 1. Decline in the GDP of several countries.
Data produced by Statista.

We note that this fall has more influence in one country than in another due to different factors triggered by the COVID-19, of which Spain had a decrease of 11.1% and Brazil a fall of 7.4% with an approximate value that that of Mexico with a collapse of 7.5%. The greatest decline in GDPwas seen in the United Kingdom with -11.5% and the least vulnerable country in terms of economic performance was China with a 2.6% drop. These figures show the percentage of the economic recession in 2020 of the countries selected in Figure 1.

The economic recession has been inevitable, so governments like the United Kingdom, the United States and India incorporated unusual measures to preserve their distribution links, entering the market for the design and production of N95 fans and masks, of which the US was accused of pirating medical supplies from Asian countries sent to the European Union (bn-Mohammed et al., 2020).

3.1. Economic impact of COVID-19 in Latin America.

The rapid spread of the coronavirus from China to the United States meant that the first infections occurred in Latin American countries such as Brazil, Ecuador and Mexico, where the levelsof infection were higher and most of the inhabitants of these countries work in the informal sector (Proaño, 2020). The rate of informality in Latin America is approximately 53% of workers and affects more than 140 million people, the reasons for informality are due to the need because it is the only

source of livelihood and opportunity for entrepreneurs to start their own business (Smeets and Zeisberger, 2020). It is estimated that the sectors of the economy most affected by the loss of jobs willbe the hotel and food industry, transportation, real estate, factories, business areas, artistic sector and recreation.

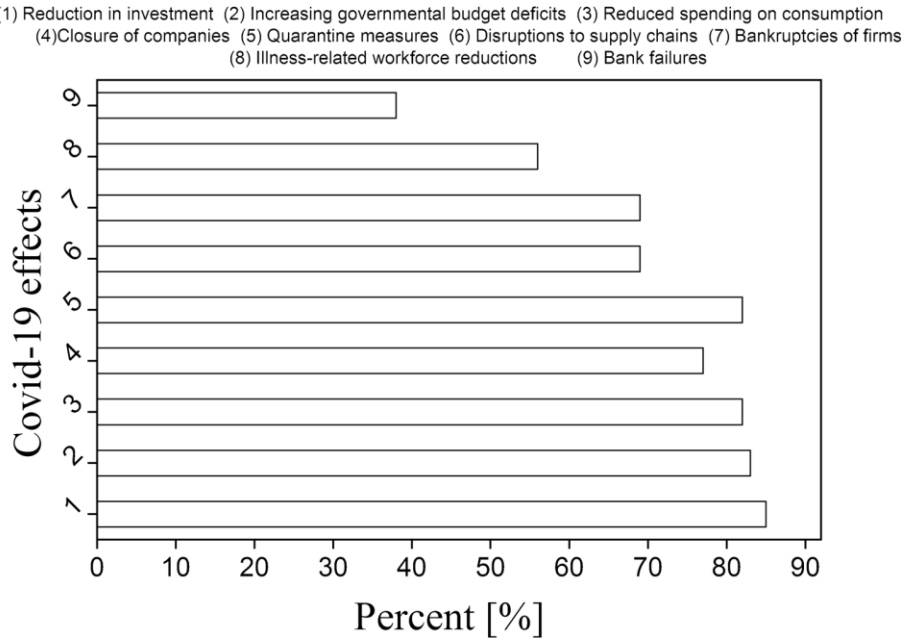

Figure 2. Effect of COVID-19 on Latin America.

Data produced by CEPAL (2020) calculations.

On the other hand, the prohibition of domestic and international travel will represent a drop with unfavorable effects for countries like those of the Caribbean region that have in this sector their main source of income, influencing tourism by 25%. In Latin America the economic crisis due to the COVID-19 had the effects presented in Figure 2, where globally in this territory the reduction of investment, the decrease in consumer spending, the quarantine measures and the increase in government budget deficits obtained an impact by the COVID-19 of more than 80%, likewise, the effect of lesser incidence is the bankruptcy of the banks with 38% (CEPAL, 2020).

3.2. Economic impact of COVID-19 in Colombia.

Colombia was one of the first countries to follow the recommendations imposed by the WHO. Therefore, on March 25, 2020, it decreed mandatory preventive isolation, implementing economic, health, social and political measures with the objective of reducing the rate of infection and adequately conditioning the health system that provides intrahospital care and intensive care units, avoiding the collapse of the system, maintaining today the timely provision of medical services and keeping mortality rates for COVID-19 within expectations. However, health personnel; doctors, nurses and medical assistants are seen as a vector of contagion, are stigmatized and rejected by society. In addition, they are poorly paid, with low salaries, lack of biosecurity elements and contracts without job stability, amongother benefits not granted. This has led to approximately 1472 infections and 15 deaths among healthpersonnel.

Economically, Colombia is experiencing a setback in terms of economic growth due to the fallin international oil prices, where for the year 2020 the price of oil was predicted to be USD 50 per barrel, but today, the barrel does not exceed USD 25, so the country's economy is impacted because oilis the main export product and the gross domestic product was projected to reach values ofapproximately 4%. However, it is expected to fall to values close to -5% and -8.3% in the worst-case scenario. The strong impact that the COVID-19 has generated on the economy has led to a reductionin the world demand for hydrocarbons and has led the Organization of Petroleum Exporting Countries(OPEC) to try to stabilize prices with supply, but has not been successful (Cardona & Serna, 2020). The economic impact was evident, so much so that, in the case of natural gas production, there was a 2.22% drop between mid-2018 and 2019.

However, the considerable decline reflected in June 2020 with a difference from the previous year of 16.7% could be due to the low circulation rates of vehicles in the country, the cessation of activities in several commercial establishments and coal extraction companies. In the electricity generation sector, there was a small increase of 0.98% between 2018 and 2019. Due to the pandemic, in mid-2020 it fell by 11.74% compared to the percentage obtained in 2019. The distribution of water during 2018 and 2019 varied by 0.18%, but in mid-2020 its decrease was 9.5% compared to the previous year, this is due to the halt of trade and industry, although it is known that most people werein their homes, but the effect was not significant in the sector.

Table 1. Annual growth by sector.

Sectors	June 2018	June 2019	June 2020
Gas production	4.37%	2.15%	-14.55%
Electric power generation	2.33%	3.31%	-8.43%
Water distribution	2.6%	2.42%	-7.08%

Data produced by DANE calculations UMAC (2020).

At the end of March 2020, when Colombia began mandatory preventive confinement measuresin order to avoid an increase in the rate of contagion, there was a significant decrease of -15.7% in theGDP according to the values reported by the National Administrative Department of Statistics-DANE(2020). The closure of commercial establishments, unemployment and other events that affected the different economic sectors triggered a considerable collapse of the economy due to the strict nationalquarantine.

This led to relate this economic impact with the results of the GDP in previous years and it canbe said that it is the biggest decrease registered in the last decades. In the first five years of the decade, between 2010 and 2020, GDP performance varied between 2.15% and 7.5% (see Figure 3), as shown in December 2015 and mid-2011, respectively. This suggests that GDP performance was better in this period of time than in the second half of the decade, i.e., the period between 2016 and 2020, where GDP performance varied between 0.5 and 0.9% each year until the end of 2019. From 2020 onwards, a decrease in negative values began to be observed, such as -0.43% in the month of January to

approximately -15% as previously mentioned. The government's debt is expected to increase to 61% ofGDP in 2020, an increase of 10.7 points compared to 2019 (Cuidarte, 2020).

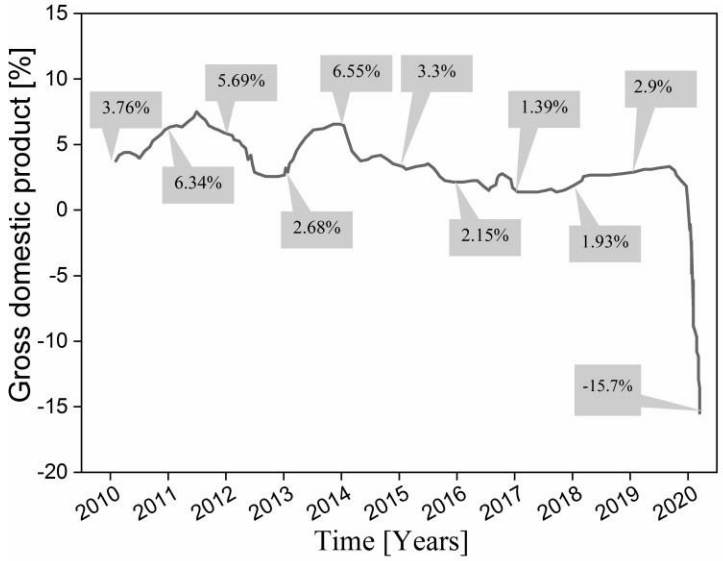

Figure 3. Behavior in Colombia's GDP in the last 10 years.
Data produced by DANE calculations UMAC (2020).

Figure 4 shows the annual growth behavior in various sectors that drive the Colombian economy, such as agriculture, manufacturing, industrial production, construction, transportation, and commerce. It can be inferred that the agricultural sector in the last months of 2018 remained almost constant at approximately 1.7%. Subsequently, at the beginning of 2019 the trend decreased to values close to 0.2%. However, at the end of that same year it began to increase considerably, reaching valuesof 4% and 7.62% in the first quarter of 2020, where in the following months it decreased to 2.3% in July 2020.

The transportation and trade sector showed significant variations in 2018 and 2019, which remained in a range of 1.5% to 6.2%, but since the beginning of the restrictions imposed by the government to counteract the spread of COVID-19, the decrease was significant, so that in July 2020the value was approximately -20.4%. In the construction sector, during the last months of 2018, the economy remained at a level close to 2.27%, then it decreased until the end of the first quarter of 2019, when it reached -5.84%, and then increased and remained between 0.6% and -3.4%.

The manufacturing sector remained between 2 and 2.7% during the last months of 2018 and the first months of 2019, then it slowly decreased until it remained between 1.03% and 1.57% until December 2019. The economy in the industrial production sector in 2019 fluctuated from -1% in March and approximately 4% in December of the same year. In January 2020, this figure dropped to -35.66% at the end of the first quarter, and then reestablished itself until it reached -3% in June.

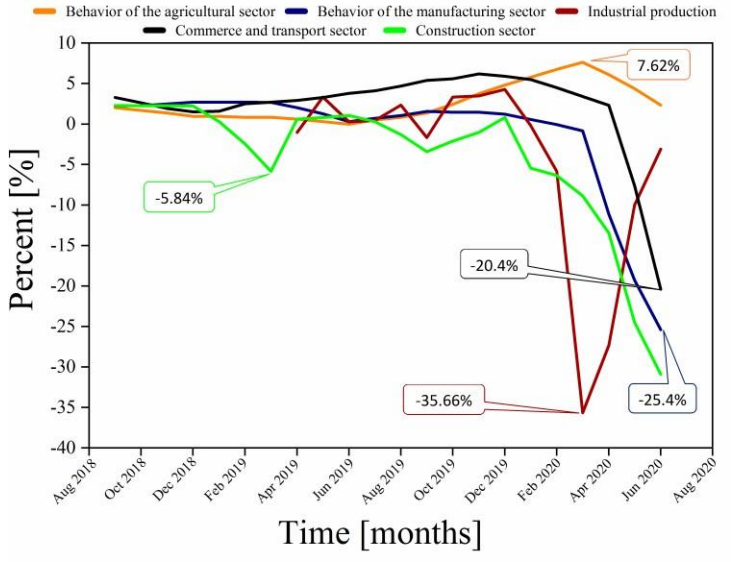

Figure 4. Behavior of the activities in different economic sectors.
Data produced by DANE calculations UMAC (2020).

4. Conclusion.

In this study, the economic variation in the last years of Colombia was evidenced through data provided by DANE, where a decline due to COVID-19 of approximately 50% in oil prices, 14.55% in natural gas production, 8.43% in power generation and 7% in water distribution was observed. The GDP in Colombia fell to -15.7% and this value is consolidated as the lowest in history, which, it is assumed, will take years to recover. The agricultural sector had a stable behavior and can be said to have reached its highest point in March 2020 with 7.6%, so it can be inferred that this sector was the least affected by the effects of COVID-19.

Certainly, the COVID 19 pandemic has had important effects on the dynamics of the Societyat all levels, from educational to organizational (Garcés, Omaña y Borja, 2021). In this way, although the economies through organizations and academic institutions have been working for several years towards the incorporation of virtuality (Díaz y Serra, 2020; Garcés y Mora, 2020; Parra et al., 2020); the vast majority were not prepared for the abrupt changes that the current contingency has brought.

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