

Forecasting in a disruptive environment by SARS-COV-2 in individual economic operators.

Previsiones en un entorno disruptivo por el SARS-COV-2 en los agentes económicos individuales

(April 2020)

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Summary, A virus of the SARS family was incubated in late 2019 in Wuhan City, Hubei Province, China (Munster et al., 2020, p. 1); in early 2020 the virus spread beyond Asia (Ahani & Nilashi, 2020), its epicenter of origin, and is now found in 173 countries (Dong et al., 2020) (*Coronavirus Update (Live)*, 2020); declared a pandemic by the WHO in March 2020 (Adhanom, 2020), the virus has a mortality rate of 3% (Biscayart et al., 2020), mainly affecting older adults and children with a predisposition to acute respiratory diseases, diabetes and hypertension. (Yang et al., 2020, p. 6) The response of governments to this crisis was mostly to temporarily close their air and sea ports and borders (Yang et al., 2020, p. 10), to declare quarantine and in some cases to enact a state of emergency (Sohrabi et al., 2020) in order to mitigate the infection, which has affected the economy of developed countries and emerging economies (Arshad Ali et al., 2020) (McCloskey & Heymann, 2020) (Rosas Gonzalez, 2020) (Ahani & Nilashi, 2020) (Ayittey et al., 2020) (Economics, 2020), specifically to economic agents, such as companies, consumers, producers, exporters, investors, government entities, and their behavior developed in the face of this disruptive environment resulting from the Asian virus is the subject of this

article. The methodology used is one of documentary review and compiles selected research literature and current financial and economic reports on the impact of the virus in a macro context and explores the different forecasts of specialized institutions in the world economy regarding the actions taken by governments. The document shows interest in the economic consequences of the impact of the pandemic and serves as a support to promote future actions to mitigate the effects of the post-crisis.

Keywords: Coronavirus, Global Economy, Leadership, Economic Forecasts, Resilience.

Resumen, A finales del año 2019 se incubó un virus de la familia SARS en la ciudad de Wuhan, provincia de Hubei, China (Munster et al., 2020, p. 1); a principios del 2020 el virus se extendió más allá de Asia (Ahani & Nilashi, 2020), su epicentro de origen y actualmente se encuentra en 173 países (Dong et al., 2020)

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(Coronavirus Update (Live), 2020); declarada como pandemia por la OMS en marzo de 2020 (Adhanom, 2020), el virus tiene una tasa de mortalidad del 3% (Biscayart et al., 2020), afectando principalmente a población adulta mayor y menores de edad con predisposición a enfermedades respiratorias agudas, diabetes e hipertensión. (Yang et al., 2020, p. 6) La respuesta de los gobiernos ante esta crisis en su mayoría, fue cerrar provisionalmente sus puertos aéreos, marítimos y fronteras. (Yang et al., 2020, p. 10) declarar cuarentena y en algunos casos promulgar estado de emergencia, (Sohrabi et al., 2020) con el fin de mitigar la infección, ello ha afectado la economía de los países desarrollados y las economías emergentes (Arshad Ali et al., 2020) (McCloskey & Heymann, 2020) (Rosas González, 2020) (Ahani & Nilashi, 2020) (Ayittey et al., 2020) (Economics, 2020), específicamente a los agentes económicos, como empresas, consumidores, productores, exportadores, inversionistas, entes gubernamentales y su comportamiento

desarrollado frente a este entorno disruptivo producto del virus asiático es el objeto de estudio del presente artículo. La metodología empleada es de revisión documental y recopila bibliografía selecta de investigaciones e informes financieros y económicos actuales del impacto del virus en un contexto macro y se explora las diferentes previsiones de instituciones especializadas en la economía mundial frente a las acciones tomadas por los gobiernos; El documento evidencia el interés en cuanto a las consecuencias económicas del impacto de la pandemia y sirve de apoyo para promover acciones futuras para mitigar los efectos de la post-crisis.

Key words: Coronavirus, Economía Global, Liderazgo, Previsiones Económicas, Resiliencia.

I. INTRODUCTION

The pandemic of the year 2020 will be a landmark in modern human history, due to the general lack of preparedness of the affected countries, however, where many remain in crisis and chaos, others see opportunities for society and the way to change the way things are done.

The international context, from the economic, political and social point of view, was not the most optimal for the development of Covid-19, a virus that originated in China, a situation that is evident in the first chapter of this article.

The impact of the virus on individual economic agents originated from the actions executed by governments and institutions to mitigate the spread of the virus and the uncertainty in the stock markets; with this, the scenarios and forecasts of economic growth were affected, as there was a pause in the industrial productive processes and in international

commercial operations. Information highlighted in the second chapter.

In the third chapter is the current economic situation of developed countries, emerging markets and economic sectors, and presents the forecasts issued by economic and financial institutions which declared a global recession for the year 2020, however, their forecasts are positive regarding the recovery for the following year.

Finally, the macro and micro actions are presented as a forecast so that they can be executed by governments, institutions, entrepreneurs and society in the post-crisis period and how, from a scenario of resilient leadership, the chaos can be confronted and thus support the business and social opportunities that set the trend.

Consequently, this article aims to highlight the forecasts in a disruptive environment generated by the Covid-19 and its impact on individual economic agents through a bibliographic review in the framework of a documentary research, starting from

the chaos and the crisis generated; culminating in forecasts of actions and opportunities.

II. METHOD

In view of the recent occurrence of the subject, the methodology used is located in the framework of documentary research with a design of bibliographic review and from this propose actions and ideas that serve as a guide for readers or strengthening future research.

To this end, the first step was to select the academic information sources to be consulted, which were Scopus, Science Direct, Emerald Insight, Microsoft Academy, Google Scholar, as well as institutional repositories of Harvard, MIT, Oxford; and of economic, financial and journalistic reports, WHO, UN, Financial Times, IMF, Capital Economics, WEF, ECLAC, OECD, IIF, Reuters, Market Watch, Bloomberg, AP News, CNBC, The Economist, WSJ, The New York Times, among others.

Based on the above, 134 titles were compiled, including scientific articles, economic and financial reports, books, articles from economic magazines, podcasts, entries from institutional blogs, informative websites, radio stations and newspaper articles.

Then, the titles were read to interpret their approach and the writing of an abstract with the extraction of data and information, for the construction of the article.

Later, the titles compiled were classified, taking into account their focus and the design of the article, so that it could serve as a support for the construction of the parts of the article, which are: the context in which the pandemic broke out and the economic status of those affected; government actions and the economic impact of the pandemic in its beginnings and development; the economic forecasts prior to the pandemic and the current ones in relation to Covid-19; and finally ideas and actions

that can be applied by governments, businesses, institutions and society for the post-crisis period.

Finally, 98 of the 134 titles collected were used in the writing of the article, most of which were indexed and in English.

III. RESULTS

CONTEXT

World Economy before SARS-COVID-2

Global economic growth in 2019 was only 2.3% (ONU, 2020) below the forecast of 3% (IMF, 2020b)), the lowest growth in the last decade. (WORLD BANK GROUP, 2020).

The tariff policy of the president of the United States to the Chinese economy has decreased the flows of international trade between these countries and at a global level, the same policies that have been imposed on the European Union. In the latter, the Brexit issue is shaking the markets of the countries of this continent, and their entrepreneurs have lost investment confidence due to the instability of the growing policy. (Bloomberg, 2020)

On the Asian continent, China has also maintained a slowdown in its growth, the demand for its products has been reduced due to the tariff amounts that the United States has promoted, (Steinberg, 2019) on the other hand, China continues to borrow in order to maintain the growth characteristic of this nation and not depend on foreign political trends. Japan has not been able to recover its economy after the typhoon it faced and the changes made to VAT in its business sector. (WORLD BANK GROUP, 2020)

In Latin America, countries have seen their export earnings decline, due to the declining value of raw materials and commodities, which are the specialty of these nations. This is compounded by the political and social crises they have faced, such as massive mobilizations that have challenged their

governments (WORLD BANK GROUP, 2020) and the rising currency inflation that threatens their economies. (Capital Economics, 2020)

The global economic slowdown is the most accurate definition of the year 2019, there were several factors that together led to this negative result, in all continents there were economic and political challenges and each country took the measures they considered necessary to mitigate them, quoting Salvador Allende is relevant to communicate to all nations that the new year will be easy, unfortunately it will not be so. ("Salvador Allende-Wikiquote", 1973)

SARS-COV-2 - Beginnings

In late 2019 in mainland China, an outbreak of influenza unknown to doctors occurred. It was in the city of Wuhan, capital of Hubei Province, where it began, initially called 2019-Ncov, now officially known as SARS-COV-2 virus, causing a disease called COVID-19 (Munster et al., 2020), which belongs to the group of viruses that induce severe acute respiratory syndrome and belongs to the family of coronaviruses found in exotic animals such as the horseshoe bat, an animal native to Hubei, which is believed to have given rise to the virus when it crossed the human barrier (Menachery et al., 2015) (Cheng et al., 2007) (Andersen et al., 2020), its dangerousness is based on its strong capacity to spread between humans, this allowed the outbreak to become virilized very easily in the Chinese province and spread rapidly in the Asian continent and later outside it (Munster et al., 2020).

This virus is the third of the coronavirus family that sets off health alarms, the first was the SARS-CoV acute respiratory syndrome which had a mortality rate of 10% in the 2002 outbreak, the second was the Middle East coronavirus respiratory syndrome (MERS-CoV) in 2012 had an estimated mortality rate of 35%, and the current SARS-CoV-2 which has an early estimate of 2-3% (Poland, 2020), which in March 2020 was declared a pandemic by the WHO, due to the rapid spread among humans, the deficiency in hospital infection

control, the global spread of the agent and the exponential number of deaths (Sohrabi et al., 2020).

The zoonotic virus (Andersen et al., 2020), which causes everything from flu-like symptoms to a life-threatening form of pneumonia, mostly affects older adults, people with sensitive medical histories and children with impaired immune systems (Poland, 2020).

Speculation and misinformation affect the work of governments and health authorities, such as the growing xenophobia towards the country of China, for them this pandemic represents a challenge with several aspects such as controlling the spread of the virus abroad, avoiding the greatest number of deaths, investigating the production of the cure, protecting society and the national economy (Ahani & Nilashi, 2020) .

Scientific research, medical investment and public health actions to mitigate the spread, are the main axes in the management of the pandemic, as far as scientific research is concerned, it already undertook studies in the field of coronavirus, this being studied for years as a result of previous epidemics, there are currently several studies that predicted a strain of this family of viruses, which had its origin in bats and with high probability of transmission to humans. However, the complexity of the virus did not allow winning this race in the creation of the vaccine (Andersen et al., 2020) (Cheng et al., 2007) (Menachery et al., 2015).

The People's Republic of China has experience in handling epidemics and health crises, which is why it is predicted that the pandemic will be managed optimally; however, for this emerging economy, its economic stability plays a vitally important role in the Beijing agenda (Yang et al., 2020).

This virus represents a challenge for all countries, and international organizations, will test the policies and risk management plans decided by governments, the latter will be mostly questioned (Riley, 2020), and misinformation will abound through the abuse of social networks (Ahani & Nilashi, 2020), for the WHO is concerned that the virus will get out of control in developing countries

because they do not have the infrastructure to deal with the pandemic and do not have strong public health policies (Sohrabi et al, 2020) (Cameron et al., 2019).

Currently, the actions taken by the country of China to contain the virus, were not fully effective, the outbreaks occurred outside of it in a very short time, South Korea, Japan, Spain, Italy, Germany and the United States began to have cases of coronavirus in early 2020 (Munster et al, 2020), this expansion accelerated towards the other countries due to the advanced globalization, this added to the ignorance and lack of precaution of the political leaders of other countries, at the moment, the infection spreads in a fast way, having infected more than 181 countries, and at the beginning of April 2020 surpassing the million of infected (Dong et al., 2020).

IMPACT

Government actions

The first government actions taken in response to the crisis, were given by China, this declared the quarantine in the city of Wuhan and later in the province of Hubei, decided to close the air and sea ports in the country, however, the virus had already begun to emerge in other countries such as South Korea and Italy, then in Spain, France, Germany, the United Kingdom and the United States containment of the virus, became a government action of each country. (Munster et al., 2020)

Several countries have demonstrated that the virus can be mitigated and controlled, now it is the duty of others to imitate them, some face the pandemic without the capacity to do so, others with a lack of resources, however, in all, the economic and social effects are visible (Adhanom, 2020).

The world organizations and institutions, since the growing outbreak of the coronavirus, have pronounced and activated the protocols for this scenario, the main two global fronts, the mitigation and prevention in health by the WHO and the economic and financial action represented by the IMF and the World Bank, have the focus of attention of governments, entrepreneurs and society

in general, on the one hand, one provides the recommendations in health and the state of management of the pandemic, the other presents the global economic forecasts and prepares contingency plans.

The WHO, is the United Nations agency that has been responsible for managing policies to prevent and mitigate SARS-COVI-2, its first action of global incidence was to declare the disease of COVID-19 as a pandemic in March 2020, this statement, alert governments to prepare where the virus had not reached and where the outbreak was increasing to take stronger decisions. (Adhanom, 2020)

On the economic and financial front, since the beginning of the crisis in China, the IMF has expressed its willingness to collaborate and help member countries, through a fund of \$1 billion available (Kristalina, 2020), and the IMF has been receiving requests for loans from countries dealing with the pandemic and others activate previously agreed plans for situations like this in the World Bank which also has a fund of \$ 14,000 million (Mejlak, 2020).

At the same time, other institutions have made recommendations to governments. The UNWTO, which is responsible for promoting tourism worldwide and is aware of the main economic effects that the sector will suffer, was one of the first institutions to declare its cooperation in order to prevent the spread of the virus. Knowing the economic impact that this represents. (UNWTO, 2020a)

An effective and global cooperation will allow to overcome the economic and social crisis caused by the Covid-19, this was the call of the Secretary General of the International Chamber of Commerce (Denton AO, 2020), for its part the ICC together with the WHO promote at global level from the business network, the prevention and mitigation of the pandemic and the creation of plans to give business continuity in the current crisis ("ICC and WHO join forces to mobilise business action to curb Coronavirus spread", 2020).

Actions such as quarantine or social isolation, similar in the world, share a similar threatening effect on companies, especially SMEs, which are present in all sectors of the economy, are the basis of productivity of nations, and therefore it is vital to protect them. Due to their size, they do not have the financial support to face the economic slowdown that is developing. (Caixin, 2020)

The small and medium entrepreneurs affected by the quarantine, claim not to endure more than one month without working, since the expenses on salaries, health insurance for employees, rent and interest on bank loans, do not allow them to yield their budgets. In view of this, the countries affected by the pandemic have decreed different instruments and contingency plans to solve the blow to this sector. (Berger et al., 2020)

The decisions shared by several governments were to promote financial relief to these SMEs and other companies, lower the interest rate of central banks, and these in turn, extended the payment schedules of bank loans, through financial and business regulators are accompanying these companies with loans that serve to solve the crisis and others have paused the collection of taxes. These actions have been cautiously executed to avoid driving economies into inflation, high debt or rising default rates. (Caixin, 2020)

Thus most governments have decided to sacrifice economic performance to mitigate the spread of the pandemic, the decreed measures of social isolation and quarantine, forced trade has paused its activities, affecting employers and employees, to this, several countries have decided to grant financial assistance to citizens, who, for the most part, have been dismissed, sent on vacation or unpaid leave.

An Economic ... Pandemic

Declared a pandemic by the WHO in March (Sohrabi et al., 2020), it not only tests countries' containment of the virus and health spending, but also puts their economies at risk (Steinberg, 2020). In China, epicenter of the outbreak, it declared quarantine at first the city of Wuhan, later to the province of Hubei, in which live more than 50

million people and in this province is located the industrial area of the Asian country, with the mobility restrictions decreed came the decrease in production of companies, an effect that spread throughout the Chinese country (Berger et al., 2020) (Ayittey et al., 2020) (Phillips, 2020).

China is currently the maquila of the modern world, the main industries of the world have their manufacturing base in this country, for this reason, the actions taken by the government to interrupt industrial activities, became a trauma that affected the national supply and demand, this caused an economic slowdown, which ended up spreading worldwide (Global X ETFs, 2020) (Shih, 2020).

The Asian country, purely industrial, is the largest consumer of raw materials in the world (Steinberg, 2020), due to decisions made by its government, the countries producing raw materials have had to stop the flow of exports to this country (Gopinath, 2020), affecting their economies, this causes a series of chain effects, which also involves the commodity markets and the disruption of global supply networks, which are the pillar that supports the world economy (Shih, 2020) (Gopinath, 2020).

This pause in export processes forces countries to stop their production processes to avoid saturation of inventories (Phillips, 2020), which generates a decrease in the percentages of domestic production in their countries and is replicated on a global scale (OECD, 2020) (ECLAC, 2020).

The pandemic is a generator of uncertainty on a large scale and this tends to make investors and companies act with much prevention and make difficult decisions with limited information (Lopez, 2020), this causes asset prices to devalue and speculation to overflow (IMFBlog, 2020b), these triggers coupled with breaks in global supply networks and chains, promoted the fall of stock markets on a scale that predicts recession and demands action to avoid a depression (Probst, 2020) (Riley, 2020) (CNN - Edition, 2020).

U.S. stock market indicators reflect the global market situation, the S&P500 and the Dow Jones in the fourth week of February began to fall uncontrollably, and so they remain, this caused

investors to seek protection in low risk assets such as gold or government bonds, however these also suffer devaluation, now the goal of investors is to have the most cash, selling without prudence all types of shares which promotes the devaluation of companies listed on the stock market (Tamargo, 2020) (Tan, 2020).

With unstable stock markets and global production chains halted, mainly due to government decisions on quarantine and social isolation, large corporations and industries, from multiple sectors, excluding those needed to deal with the pandemic, decided to pause their production or service provision. This has generated a labour stagnation of unprecedented proportions, and several companies decided to opt for the mechanism of teleworking in those jobs that allowed it (Tarki et al, 2020) and where this was not possible, workers were sent on holiday or their employment contract was suspended (Bartash, n.d.) (TIME, 2020).

A global public health crisis such as the pandemic, is an economic crisis of the same nature, the latter is characterized by ending the employment stability of countries, only in the United States in early April, the employment office received more than 6 million applications for unemployment benefits, an unprecedented record for this economic power (Tranding Economics, 2020) ("Instant View", 2020).

While the pandemic is developing, economists are analysing the impacts on the different sectors of production and services, in general it is affecting the whole economy because it affects supply and demand from a micro scale replicating the macro (Gopinath, 2020).

According to the IMF, the supply is affected by the reduction of the workforce, as these people are sick or caring for their families because schools and colleges are closed and therefore cannot provide their work in the companies, which can be more affected if the supplies they receive for production (Gopinath, 2020), The main supplier of commodities and electronics (Shih, 2020), in addition to government decisions to impose

quarantine to prevent the spread, directly affects the productivity of the company.

On the demand side, the loss of purchasing power, fear of coronavirus infection, and uncertainty forces people to cut back on their spending, and companies may have to cut back on jobs or send their workers on vacation (Gopinath, 2020).

Regarding the sectors, one of the first affected at the beginning of the pandemic, were the commercial flight companies, the measures implemented at first in China to contain the virus, forced to stop all commercial air operations, this action was followed by other countries where the virus outbreak, a difficult but necessary decision, since international flights were one of the main sources of spread of the virus (Ruescas, 2020) (TIME, 2020) (Palmer, 2020).

Currently, this service sector is the most affected by the pandemic at a global level and in turn affects tourism, on which many companies and countries depend; Measures to contain the virus, such as social isolation, avoiding crowding, and the prohibition of international and national travel in some cases, affect this sector which continues to register losses. The sub-sectors that benefit from tourism, such as hotels, museums, cultural and recreational centers, transportation, restaurants, and cafeterias have also been affected (UNWTO, 2020b) (UNWTO, 2020a) (Ruescas, 2020).

Another sector that has suffered is the energy sector (Riley, 2020), due to the pause in the large Chinese industries and the halt in international aviation, the index of global oil consumption is falling, affecting this strong industry and the countries that depend on the export of this product are seeing their income decrease (Steinberg, 2020), which is not a comforting effect for an industry that was in the midst of a price war crisis between Russia and Saudi Arabia, has led to a discouraging economic growth forecast for Latin America's emerging markets, which are dependent on exports of this product (Brooks & Fortun, 2020).

The large-scale financial and social disruption, promoted by uncertainty and ignorance, has caused

the global financial sector to lose trillions of dollars since the beginning of the pandemic (Dodd, 2020), although some economists bet that few countries would go into recession, this has already been officially announced by the IMF on a global scale (Franck, 2020). The constant losses in the different stock markets of the world and their main economic indicators falling without control are one of the results of not being able to anticipate a black swan (Gormsen & Koijen, 2020) (Winston, 2020).

The SMEs are the business base that makes a country economically strong, its strength and development depend on the stability of the market, national and international, this sector has been the most affected by the pandemic, most do not have the liquidity to pay wages and it is estimated that they survive a short time, the actions of different governments in this situation has been to protect them financially, however, the forecasts for this sector are not very encouraging (Tamargo, 2020).

The effects of the pandemic are comparable to those of a world war, both share the same scale of action and their impact is profound, widespread and sudden (Jonas, 2014) (Home and Security Council, 2006).

The economic impacts perceived by the countries, the various sectors, industries, SMEs, and society in general, are not yet appeased, the experts propose that this crisis in April would be resolved (Gil, 2020), now study the possibility of not extending the quarantine or social isolation until half of the year, as this would cause a deeper impact on all actors involved in the pandemic; this event will take place in the history of humanity, in the sense that the world economy can be put in check by an exotic diet and bad health practices (Cheng et al., 2007), coupled with the lack of concise plans to deal with an emergency of such dimensions (Jonas, 2014).

INDIVIDUAL ECONOMIC AGENTS

Comprehensive review

The economic recession was already announced by the IMF (Franck, 2020), the forecasts of economic growth have been adjusted, according to

the behavior of the pandemic and its impact on each region of the globe, this behavior is variable, with a disposition to a deceleration, because the pandemic is not yet controlled, and its peak of possible infections has not been presented (Brooks & Fortun, 2020) (Moody's Analytics, 2020). Added to this are the actions taken by governments to address both sides of the crisis, health and economic (Berger et al., 2020).

On the side of the Asian region, China, suffered in its beginnings the greatest negative economic impact of the pandemic (Phillips, 2020), the uncertainty generated by the outbreak, promoted an unprecedented outflow of capital (Lanau & Fortun, 2020); China and the other emerging economies, were harmed by this movement of investors, who sought shelter in more solid assets and with less risk in more stable economies (Mühleisen, 2020) (Rojas, 2020).

China's secrecy does not allow us to assess with certainty the impact of the pandemic on its economy, the information available is the official one transmitted by Beijing, and despite the fact that government actions taken to contain the virus in this country paralyzed the economy (Ayitney et al., 2020), its macroeconomic indicators are positive, it is estimated that domestic production will decrease by 0.6% in the first quarter of 2020, with a recovery starting in the second quarter and stability in the fourth quarter (OECD, 2020).

World economic growth in the first quarter was the lowest since the global financial crisis, mainly because of covid-19, the financial shocks already felt before the outbreak, such as falling commodity prices and inflation in some countries, and the price war in the oil sector that affected exporters (WORLD BANK GROUP, 2020).

In Europe; Italy and Spain, are the great centers of expansion of the virus, surpassing the victims of infection and deaths in China (Dong et al., 2020), this has demonstrated the need to expedite the creation of the cure (Regalado, 2020a), while in the United Kingdom that promoted group immunization to address the Covid-19 this shot the figures of infected (Regalado, 2020b), reaching the

highest levels of political power. These countries, together with Germany, represent a large part of Europe's gross domestic product.

In Europe, unemployment is rampant, production factories are still held up by the decreed quarantine, entrepreneurs are demanding financial relief and the government is taking action to inject large sums of assets to ease investment uncertainty (Steinberg, 2020).

In America, the United States at the beginning of the outbreak, its leaders did not dimension the effects of this (Steinberg, 2020), now they are the largest focus of the pandemic worldwide (Dong et al., 2020), have issued all kinds of financial and fiscal relief, to appease the negative impact of the pandemic, however their indicators do not stop falling (Merrefield et al., 2020).

In Latin America, the economies of these countries were already going through financial instabilities, such as rising inflation, and stagnation in their GDPs, low costs of raw materials and the oil price war, were reinforced by the actions of social isolation and pause in productivity (WORLD BANK GROUP, 2020). In these countries the outbreak of COVID-19, has affected all the individual economic agents from the consumers in the decrease of the purchasing power and the restrictions of social contact; on the other hand, the companies are also affected by the absence of personnel, the lack of supplies and materials for the production; in the private financial sector, the growing uncertainty and volatility of the stock markets; as far as governments are concerned, the social questioning of the shares issued, the lack of preparation, the absence of plans and resources to face the crisis are the most significant problems they face (Gopinath, 2020).

The domestic economy, is predicted to be another affected and its impact will vary according to the country being studied; in developed economies, they have the financial muscle to support the fiscal and financial actions they issue and a solid industrial and business sector. On the other hand, in the emerging economies apart from China, the economies of their inhabitants will be

seriously affected, for them the pause in production of the companies of any size and sector due to the decreed quarantine will result in great economic losses from which a slow recovery is estimated; Apart from that, the national economy of those governments, are indebted in several cases and do not have the financial support to appease the economic and social impact of the pandemic as the emerging ones and therefore seek refuge in international loans, to this is added the flight of capital and investors that will increase the economic slowdown; the current and future outlook for these economies is not the most positive in this new decade.

Economic forecasts and previous studies

In 2019, economists did not visualize the chaos that a pandemic virus could generate. The forecasts did foresee a slowdown in the economy in 2020 but far from a recession, due to a series of factors that were the focus of attention of governments, internationalists, investors and others in 2019 and continued to be so in early 2020, before the virus became a pandemic (WORLD BANK GROUP, 2020).

The main factors and events of 2019 that attracted attention because of their impact on governments and economies, were the basis of economic forecasts for 2020, some of them are, the trade war between China and the United States, the political instability of the United States with Iran, the Brexit in Europe, the social movements in Latin America that shake their governments and recently the oil price war between Russia and Saudi Arabia (Steinberg, 2019).

If the *capital economics* estimates for economic growth in 2020 before COVID-19, was 2.8%, one percentage point less, similar to the results of 2019, where world growth was 2.9% (the *Nuestros pronósticos clave—Economía de capital*, 2020) result of a constant slowdown due to trade disputes between developed economies, low demand for commodities and therefore their devaluation since 2011 (IMF, 2020a), now with the coronavirus pandemic outbreak, the world GDP for 2020 was

2.4%. The forecast is correct with the feared recession already announced by the IMF (Franck, 2020).

The developed economies, in Europe and the United States, showed a slight growth, having in 2019 a joint growth of 1.7% and forecasts of decrease for 2020 with 1.5%, with the pandemic crisis, this forecast falls to 1.3% (OECD, 2020).

In China, the epicenter of the pandemic, the halt of its industry and international trade, due to government actions to control the virus, significantly affected the prospects for economic growth, during 2019 China obtained a growth of 6.1%, with the economic crisis resulting from the pandemic is predicted to grow below 4.9% on the assumption of achieving control of the virus in the first quarter of 2020. This forecast is the lowest that this power has had since the nineties (*World Economic Outlook (October 2019)—Real GDP growth*, s. f.), The economic impact on China affects the whole world, as China is the main importer of oil and the largest producer of commodities in the world. (Sohrabi et al., 2020)

In the emerging economies, they were registering high growth, due to investments in industry, commerce and the wide market of raw materials and crude oil exports that they cover, but even so this has begun to decline due to the devaluation of the value of these. In 2019, growth was 4.2% and was predicted to rise to 4.6% in 2020, updated with the effects of the pandemic, which is projected to be 3.8% (OECD, 2020).

In the case of Latin America, it grew economically in 2019 0.1% and was predicted to rise to 1.3%, these forecasts will be justified by the current crisis, which points to an economic contraction of -1.8%, this being caused by the decline in trade of its main international partners in the case of Mexico, Chile and Brazil, the decline in income received by the tourism sector in the countries of the Caribbean, the break in the supply chains and the fall in commodity prices, especially in the countries of South America that export raw materials (ECLAC, 2020). ECLAC predicts that poverty in this region will increase from the current

620 million to between 185 and 220 million more people, with an additional 67 to 90 million people living in extreme poverty (ECLAC, 2020).

The forecasts of the financial institutions at world-wide level adjust their economic forecasts, according to the handling that is given to the virus at global level, most are based on the scenario that the virus will be controlled in the first trimester of the 2020, if not, the forecasts will continue to fall; at the moment China gives part of control on the virus like other Asian nations nevertheless the interconnectivity in the economies allows that the impact generated by the COVID-19 is replicated in countries even when in these it is controlled therefore the "economic" infection is transmitted between these. From there arises the need for effective international cooperation, governments that manage to control the virus, offer their strategies and provide technical and if economic support to the most vulnerable countries (Farlow, 2016; IMFBlog, 2020a).

Previous studies in the field of medical science, virology, risk management and specific studies on pandemics provided data and conclusions that could have predicted this pandemic and supported its prevention, control and mitigation (Cheng et al., 2007).

In the report *Global Risks 2020*, describes the global health system with high risk of not being able to cope with changes in social, environmental, demographic and technological patterns because it exceeds its capacity, the report also refers to the progress of pandemics by indecision in vaccination and drug resistance by agents and concludes that the risks overcome in the past in the area of health, does not guarantee the results of the future (WEF, 2019).

During the year 2014 a report was presented that examined the risk of a pandemic and how to improve its management, this study was financed by the World Bank, its author Alba Jonas, concludes, the probability of unleashing a pandemic is between 1% and 3%; The virus can spread globally in less than 36 hours; for its sudden, accelerated and widespread impact is comparable to a world war, its cost to the world economy can amount to 3 trillion

dollars annually and for its prevention is estimated the annual financial investment of 3.4 billion dollars in strengthening the surveillance and control of pandemic diseases (Jonas, 2014).

The Johns Hopkins Institute through the Center for Health Security and the Nuclear Threat Initiative, with the support of The Economist Magazine, developed the Global Health Security Index 2019, which highlights the report on the overall risk environment and vulnerability of countries to biological hazards, with data showing that less than 7 per cent of countries scored high on their ability to prevent the emergence or release of pathogens. Only 19 per cent of countries were ranked at the highest level for their ability to rapidly detect and report on epidemics of potential international concern, and less than 5 per cent of countries were ranked at the highest level for their ability to rapidly respond to an epidemic and mitigate its spread. This concludes that no country is currently fully prepared for epidemics or pandemics, and all have significant gaps to address. For China, the Index ranks it 51st out of 195, in the risk environment category it is 10 points above the global average with 64 points (Cameron et al., 2019).

In the journal of Clinical Microbiology, published in 2007 a research called, The Coronavirus of Severe Acute Respiratory Syndrome as an agent of emerging and re-emerging infection, the research was raised to need by the previous epidemic that had emerged, the SARS, researchers argue that the presence of a large reservoir of SARS-CoV-like viruses in horseshoe bats, coupled with the culture of eating exotic mammals in southern China, is a time bomb and suggest that the possibility of SARS and other new viruses re-emerging in animals or laboratories should not be ignored, so the need to be prepared is paramount. (Cheng et al., 2007)

Late in 2015, research was published in the scientific journal Nature that warned of a group of circulating bat coronaviruses similar to SARS that show potential for a future human emergency. Using the reverse genetic system of SARS-CoV, they generated a chimeric virus that expressed the

same present in Chinese horseshoe bats, and was implanted in a mouse and in cells extracted from the human respiratory tract, the virus was effectively coupled to these without the need for adaptation, in the mouse lung a remarkable pathogenesis was observed, in the experiment they tried to address the infection with current SARS treatments giving poor results. This study concludes with the need to prepare for an imminent health emergency (Menachery et al., 2015).

The world's leading biomedical research centers are in a scientific race to create the cure, which they claim will be at least one year away, due to the process of creation, efficiency testing and side effect studies. (Gifted, 2020a)

IV. CONCLUSION

RESILIENCE IN DISRUPTIVE TIMES

Macro Actions

Governments, supranational entities, multinational companies and industries, and institutions with international impact bear the greatest responsibility for managing the pandemic from the socio-economic and health fronts (World Bank, 2013).

In the previous chapters of this paper, the pressing government actions in the face of COVID's expansion were described¹⁹; in An "Economic" Pandemic, the actions of companies and industries in the face of the impact of the growing crisis were described. This fragment will show the possible actions that can be promoted in the short and long term, depending on the actor, to mitigate, prevent and control future outbreaks in addition to minimizing the economic impact that it generates.

On the part of the international community and its regulatory bodies such as supranational entities, the UN should develop an international standard-setting body dedicated to promoting early identification and reduction of biological risks, as well as developing capacities to address rapidly

moving pandemic threats. To this end, financial investment in programmes that strengthen nations in this regard should be agreed upon, with an emphasis on emerging countries where this is not their strength (Cameron et al., 2019).

In the area of Multinationals, Industries and public organizations, they should tend to invest their sustainable development and health security portfolios in the area of biosafety. Leaders of global relevance, as well as institutions, should promote the communication of information to the general community about health risks and prevention measures (Cameron et al., 2019).

Governments are aware of the existence of pandemics, but not of their sudden outbreak, which encourages them not to invest enough in the areas of research and prevention. Therefore, governments must promote policies that transcend political cycles in order to maintain a long-term perspective that favors scientific research on biosafety, studying the prevention of epidemic-pandemic risks (Jonas, 2014); For this purpose, they can be based on reports such as the Globals or advance their evaluative studies, in addition to strengthening the academia and linking them so that in the future they become scientific research centers.

On the economic front, Multinational Industries must look to other horizons when selecting the base of their industrial production; the halt in the supply chain that affected automobile or technology manufacturing companies such as Apple, these suffered quickly when the Chinese industries where they manufacture their products or parts of them stopped and this anticipated the industrial pause in these sectors which would extend later (Shih, 2020). It is suggested that companies return their production plants to their countries, if the biological risk controls are stronger there, or divide the production in more than one foreign location, in the first case to return the production processes to the country of origin, bringing the management, operation and research processes closer, as well as bringing the company closer to the customers. This is a superior advantage that transcends geopolitical problems or foreign health crises (Global X ETFs, 2020).

The adoption of technology, robotics and automation, is an option already on the agenda of industry and various service sectors and government, however, with crises emerging in this decade, reinforces and accelerates the adoption of these tools and technological advances. This generates two scenarios, the first is the economic savings for companies that implement it and the other is the displacement and destruction of jobs. The comparisons are suggestive, in the last 30 years, the average price of the robot has fallen by more than 50% in real terms, while labor costs have increased by more than 100%, to which is added the comparative efficiency in terms of production (Global X ETFs, 2020).

Although the adoption of technologies in the production process cannot be delayed, since this is a common process in the history of humanity, technology must tend to improve the quality of life of people, an example of this was the mechanism of adoption of teleworking, which served not to stop in part the management processes in sectors of the economy, especially in education and government; the crisis of the coronavirus and the use of technologies promotes the creation of new business models and services, reinvention is typical of human beings (Neeley, 2020).

Micro Actions

In today's economy, where the only certainty is uncertainty, SMEs and companies must focus on their main competitive advantage, which is knowledge; the company as a creator of knowledge is the one that adopts and disseminates it in its structure, and applies these technological advances in its products and services, so the meaning of its business is continuous innovation. (Nonaka, 2007)

Thus the crisis unleashed by a virus in southern China, encourages the adoption of technological advances more quickly (Global X ETFs, 2020); managers of private companies and directors of public entities, must be assessed the different impacts on their organizations, so that they establish a navigation chart of the areas where changes should be made, adoption of new processes or methods and

restructuring of business and administrative strategies.

To do this, the company, SME or entity, must pay attention to its human resources, any idea that arises in them, product of the impact of the crisis, must be taken into account, from the researcher who proposes a new patent, the manager with his intuitive sense of market trends, or the worker of the production line that creates or improves a production process. (Nonaka, 2007)

The vision of managers and directors should include different strategies to continue their operations or part of them (Britto, 2020), and to reduce costs to reduce the financial impact of the company, the common action of most companies to face the pandemic crisis and subsequent economic, was to make cuts in its employees, although this is an encouraging action for the company in economic terms, in social terms it seriously damages the population that is left without income and protection and the image of the company is affected, so it is recommended that the last option the company should take is this one (Tarki et al., 2020); in some governments, they issued tax breaks and lowered credit rates to counteract the crisis (Caixin, 2020).

One of the strategies in which several companies and entities carried out was that of teleworking, which reduces the option of cutting staff or advancing the holidays of their employees, remote work provides through technology the fulfillment of the work in a company, although several of them had not ventured into this mode, the adoption of this was forced by the crisis (Neeley, 2020). For business managers and entities, it is estimated that the use of this mode will be extended after the crisis, for this should be improved taking into account the development of this during the pandemic.

Saving, and safeguarding capital was for companies a relief for their short term expenses, when the economy was stopped by the pandemic, for those who did not have it, they were forced to look for help in financial instruments. Therefore, it is suggested that in future economic fluctuations resulting from a pandemic or other, businesses

should have a three-month cash buffer (Hudecheck et al., 2020).

Taking into account the business risk plan, some companies were prepared for similar events, either because they were affected by previous epidemics or economic crises, a solid risk plan becomes a guarantee for the manager in the decision making, if you do not have this, it is suggested to build and taking into account the areas where the impact had greater incidence. In this way, managers can proceed to take the most appropriate strategy (Rivera, 2020).

Companies, entities, institutions and the community must cultivate a culture of preparation in the face of risks. This prior preparation allows them to be one step ahead and overcome the crisis in a more enjoyable way, reducing the impact that it may generate. The management of expenses, savings, the safeguarding of an inventory, information on suppliers, effective communication, the generation of knowledge, research and information, as well as the appropriation of health prevention and the application of technology, are tools that will make it possible to overcome any future epidemic and pandemic crisis that puts the local, national and international economy at risk (Britto, 2020; Hudecheck et al., 2020; Rivera, 2020).

Opportunities and Leadership

The disruptive environment generated by the current pandemic crisis predicts a different future in several respects, outside the notorious and already predicted global economic decline, people often adapt and undertake before these, to continue with that historical growth characteristic of humanity, this will be encouraged by resilience, solidarity and innovation (Lichfield, 2020; Lopez, 2020).

Leaders must instill these skills in their workers, since, in order to reduce the crisis, people must act with perseverance; resilience will also be that essential skill in those who take up their activities of any kind to face the post-crisis, not everyone will have suffered an impact in the same way, there will be some more affected than others, there solidarity will make the difference. The latter has been notable

during the pandemic, from companies and institutions that have made donations and supported mitigation (Droog, 2020; Renjen, 2020) (PricewaterhouseCoopers, 2020).

In addition to this, leaders must promote in their human capital the continuous education and updating of knowledge, this investment is of vital importance for both the company and the employees (Droog, 2020), as well as making the adoption of the digital transformation which has been very reluctant in Western countries compared to Asian countries (Lin, 2020).

Although this black swan brings great changes, the latter will be complex and to transcend them, trust and creativity will be the tools used to do so (Nonaka, 2007). Apart from the difficulties that are already observed and those that are predicted, these scenarios should be used to see and also create the opportunities in the promotion of new, better businesses and strengthening of the current ones (Renjen, 2020).

The adoption of the digitalization of processes is an opportunity that cannot be ignored by entrepreneurs (Boer & Iwamoto, 2020), the use, application of technologies, development of apps and websites, are a market not so affected by the crisis unleashed, increased consumption of these services and products, predicts an economic boom for this sector (Palandrani & Little, 2020).

The startups and their business models saw an upturn in the willingness of consumers to access their services, an example of which are the applications and portals for online shopping, those for homes, streaming applications and virtual communication (Lin, 2020). This represents a large market segment in which other complementary activities are emerging and can be undertaken.

The fintech and virtual currencies, are another sector that takes and will continue with relevance in the needs of consumers in the XXI century, its ease of use and practical control, relieves the old institutions (Orcutt, 2020) (Mills, 2020); other technological sectors that predict growth in the post-crisis, are technological advances in lithium batteries, genomics, artificial intelligence,

biotechnology, longevity studies and cyber security, opportunities with which you can undertake. (Palandrani & Little, 2020)

Another sector that will be promoted is that of telemedicine, in view of the need to avoid physical displacement and reduce risks. This, with the support of technology, is a field that will be strengthened, as will mental health and well-being as a result of the isolation and fear suffered by millions of people during the pandemic (Basu, 2020).

To quote the French saying "*Rome was not made in a day*", the overcoming and re-establishment of the economies will be a process that takes time and for that it needs the will and participation of all.

This event will undoubtedly mark a milestone in the history of the modern world, as it reveals how fragile institutions, governments, businesses and a globalized society can be, but it will also encourage us to raise our levels of preparation and lay the foundations for the necessary changes in the goals set by humanity for the future.

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