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A Discussion About Strategies for Economic Recovery Post-COVID-19 Pandemic

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***Abstract*— In December 2019, the covid-19 pandemic had a significant impact on the global economy. The objective of this study is to identify the strategies used for economic recovery after the crisis, differentiating the implemented actions and analyzing how GDP, unemployment, and inflation reacted to the events. Using a qualitative approach, countries that were positively and negatively affected were selected, observing their different political approaches, and determining the most efficient ones. Additionally, the fiscal and monetary policies implemented in these countries were compared. The main economic indicators analyzed were GDP, unemployment, and inflation. Considering that the study is a comparison between the same countries before and after the pandemic and does not focus on absolute numbers of the mentioned indicators, the results suggest that even geographically close countries achieved different outcomes. Countries with more liberal labor markets and those that invested in professional qualification and internal infrastructure showed more positive results in the proposed indicators. Furthermore, since the covid-19 pandemic had a significant impact on the global economy, the study discusses the adopted strategies of fiscal and economic policies and their importance in differentiating the economic recovery among countries, as well as the relationship between inflation and recovery policies.*

I. INTRODUCTION

Throughout the 20th century, moments of economic rise were witnessed, such as the post-World War II Capitalist Golden Age, marked by the vigorous growth of the United States and other industrial powers [7]. However, economic disasters were also faced, such as the Great Depression of 1929 and the more recent financial crisis of 2008, triggered by the housing bubble in the United States [14].

In the 21st century, health crises have taken on a new relevance, not seen on a large scale since the Spanish flu at the beginning of the 20th century, highlighted by the speed with which they spread globally. The COVID-19 pandemic is the most recent and striking example and object of study, causing not only a public health crisis, but also triggering significant economic consequences on a local and global scale [15]. Countries around the world have faced unprecedented challenges, with varying impacts on key economic indicators such as Gross Domestic Product (GDP) [21] and unemployment and inflation rates [8].

In the face of these crises, fundamental questions arise about how the role of the State impacts the economy and what strategies are to face adversities, seeking a quick recovery. This research aimed to identify which public and monetary policies were adopted by different countries and economic blocs to mitigate the impacts of crises and promote economic recovery. Through the analysis of significant economic indicators, recently mentioned, and implemented policies, we sought to understand how these actions affected the flexibility and adaptation of the market to the adverse conditions imposed by the health crisis established in the world in 2020 with the COVID-19 pandemic.

The research methodology adopted to compose the research included a qualitative approach [5], of a descriptive nature [9], based on the analysis of existing data and the bibliographic review of sources. The aim was to provide an in-depth understanding of political and economic responses to crises, using reliable and reliable sources, such as reports from international multilateral organizations and official government data.

This is expected to enable the discussion of valuable results to guide future political decisions and economic strategies in the face of similar crises. With an analysis based on data and based on economic theories, the study seeks to contribute to the development of effective policies for economic recovery and preparation for possible future crises.

II. DISCUSSIONS

A comparative analysis of recessions throughout the 20th and 21st centuries reveals a series of patterns and nuances that highlight the complexity of economic crises. By examining historical events such as the Spanish flu [3], the crises of 1929 [13] and [14], and the recent recession caused by the COVID-19 pandemic, it is possible to identify points of convergence and distinction that shed light on the underlying mechanisms and policy responses adopted in the face of such challenges.

Recessions resulting from biological agents, such as the Spanish flu and COVID-19, stand out for their unpredictability of a biological agent and global scope with rapid spread. The sudden emergence of these pandemics generated immediate impacts on economic indicators, reflected in falls in the Gross Domestic Product (GDP), increased unemployment [19] and inflationary pressures. Although historical data estimates are scarce, it is possible to draw parallels between the economic effects of these crises, as done by [2], showing a significant reduction in GDP per capita and disturbances in the production and distribution chains.

Comparatively, recessions originating from financial crises, such as those of 1929 and 2008, have similarities in economic impacts, but differ in terms of predictability. While the speculative bubbles that led to the crises [20] were largely identified by economists and market observers, the magnitude and exact timing of the collapse were difficult to predict. These crises triggered sharp declines in GDP, rising unemployment and global financial instability.

A quantitative analysis of the economic impacts of these recessions reveals a variety of scenarios. The 1929 crisis was characterized by an abrupt drop in GDP and a significant rise in unemployment, the effects of which lasted for years. The 2008 crisis, centered on the collapse of the real estate and financial markets, generated a prolonged recession, with repercussions on several sectors of the economy. In contrast, the 2020 recession, triggered by the pandemic, demonstrated a more immediate economic response, with significant drops in GDP and an increase in unemployment, followed by stimulus and recovery measures.

The implementation of economic policies to address these crises reflects both similarities and contextual adaptations. Government responses to the 1929 and 2008 crises included budget balancing measures, spending restraint and fiscal stimulus to rescue affected sectors. In the case of the 2020 recession, fiscal stimulus, interest rate reduction and liquidity injection policies were adopted on a global scale, aiming to mitigate the immediate impacts of the pandemic and promote economic recovery.

Although economic policies share common elements, such as stimulating aggregate demand and supporting the financial system, their applications vary according to the specificities of each crisis. The response to the COVID-19 pandemic highlighted the importance of agile and adaptable measures, such as lines of credit for companies and direct financial support to the population, especially the most exposed portion, reflecting the disruptive and unpredictable nature of the crisis.

Furthermore, in terms of the economic indicators listed and the data from [2], [11], [13], [14], [17] and [18], Table 1 was constructed, summarizing how the last three major crises unfolded.

Finally, regarding comparative analyzes of recessions throughout the 20th and early 21st centuries, recurring patterns and contextual adaptations in the economic response to crises are revealed. Understanding these historical events and their implications offers valuable insights to guide future policies and economic recovery strategies in the face of similar challenges.

During the pandemic seen in 2020, there was a significant change in consumption patterns and the supply of products and services, resulting in inflationary pressures. Public policies implemented to deal with the crisis, such as movement restrictions and economic stimuli, directly affected inflationary dynamics. For example, supply chain disruption has led to increases in the prices of essential products, while monetary stimulus measures such as currency printing have contributed [22] to greater liquidity and, consequently, inflation. Furthermore, external events, such as the political crisis in Europe, also influenced inflation rates. Thus, inflation in 2021 and 2022 reflects not only the effects of the pandemic, but also strongly the government policies adopted to face the crisis and other external factors that affected the global economy. Fig. 1 shows the effects of inflation in the United States, the world's largest economy, by segment during the pandemic period.

Table. 1: Comparison of Recession in Countries

Crisis	Root Cause	GDP Impact	Unemployment Impact	Inflation (CPI) Impact
1929	American stock market crash	GDP fell by around 10% in 1930 and 31 and 15% in 1932. Values only returned to normal 13 years later, in 1942	The total number of unemployed people in the United States in 1929 was 1.5 million. The number grew in the following 2 years: 4.3 and 8 million. The level of 2 million or less was only reached again in 1942.	Measurement began at the time, data is scarce. In the United States, from 1913 to 1929, the annual average was 3.5%. In the first 3 years of the 1930s, an average of 10.8%
2008	Subprime Mortgages	1.3% drop in world GDP in 2009, 4.49% increase in 2010. GDP in 2010 was higher than in 2008 in absolute values	It went from 5.4% in 2008 to 6% in 2009, only in 2018 did the indicator perform similarly to pre-crisis (5.4%)	The peak of global inflation was in 2008, at 8.95%. Among the most prominent countries, 2009 was a year of low and growing inflation until 2011, where it presented similar numbers to 2007 (4.8%)
2020 (COVID)	Coronavirus	3.1% drop in world GDP in 2020. Estimated at the beginning of 2022 that GDP 21 would increase by 5.9% and would continue to grow in 22 and 23	5.4% of unemployed in 2019 and 6.6% in 2020, a greater increase than in 2008. The forecast is that in 2023 we will still have 5.7%.	Inflation was low in 2020 (1.89%) and much higher in 2021 and 2022. Projections for 2023 are also higher than those seen in 2019 and 2020

Throughout 2021, the general inflation index showed constant evolution, and the energy index showed a strong increase, driven by events around the world. According to data from the European Central Bank (2021) [4], the lack of wind in the United Kingdom that caused windmills to stop, droughts in Brazil that led to less energy from dams and the cold winter of 2022 left the Europe with smaller oil and gas reserves, along with growing demand across the globe. This increase in energy ends up creating a cascade effect on other items that depend on production and transport, that is, it further amplifies inflationary rates. And, added to the greater volume of currencies [6], the devaluation of paper, caused general and collective inflation in the world, starting in 2021 and amplified in 2022, not least due to the political crises in Europe, involving the war between Russia and Ukraine.

Given the immediate impact on GDP in 2020 [17] and the subsequent impact on inflation as exemplified in Fig. 1, it is understood that in fact COVID-19, despite starting as a health crisis, also presented itself as a crisis economic. A strong drop in economic activity was seen on all continents, an increase in unemployment, a decrease in family income, strong financial instability of people and companies, in addition to an initial deflation, as a result of the policies applied, with the subsequent and already mentioned inflation. Furthermore, the pandemic brought with it social impacts such as increased social inequality, the bankruptcy of small businesses, overload on the healthcare system and housing crises. As a result, countries around the world were forced to resort to economic and fiscal policies to control the impacts of crises, thus justifying an analysis of economic recovery; after all, there must be a recession for there to be a recovery.

Therefore, after a prior analysis to select significant countries, based on the size of their economy and the expressiveness of the recovery of the indicators in question, GDP, unemployment and inflation, Table 2 was created, presenting a comparison of the COVID-19 crisis, with what actions were taken for an eventual post-crisis economic recovery. Produced from data from [11], [12], [16]. [17] and [18] to facilitate relevant discussions

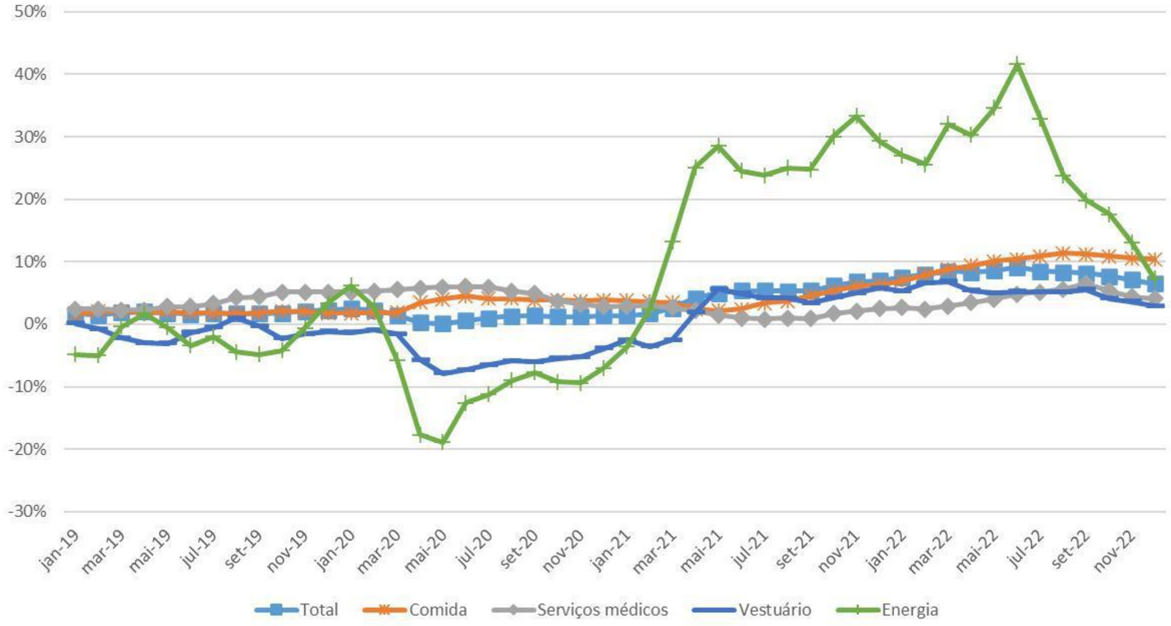

Fig. 1: Accumulated inflation – United States

Table. 2: Comparison of Recession in Countries

Crisis	Actions to mitigate impacts	GDP Impact	Unemployment Impact	Inflation Impact
Germany	Fiscal stimulus for companies; Loan guarantees; Emergency purchase program; Loans to banks for liquidity; Asset purchase program; Tax cuts.	-1.81% variation between 2019 and 2021	Unemployment peak was 6.40% (Aug/2020), 1.5% higher than in December 2019	Highest value in (Sep/22) with 10.4%, 8.6% in Dec/2022 and 1.7% in Dec/2019.
Australia	Wage subsidy for employers; Cash flow assistance; Early access to pension fund; Interest rate cut; Purchase of government bonds.	1.47% variation between 2019 and 2021	Unemployment peak was 7.50% (Jul/2020), 2.4% higher than in December 2019	Highest value in (Oct/2022) with 7.8%, 7.8% in Dec/2022 and 1.8% in Dec/2019

Brazil	Economic aid for companies and families; Credit expansion and tax postponement; Spread reduction and increased liquidity; Historic reduction in the basic interest rate; Liquidity measures for loans and banks.	0.56% variation between 2019 and 2021	Unemployment peak was 14.90% (Sep/2020), 3.8% higher than in December 2019	Highest value in (Apr/2022) with 12.13%, 5.79% in Dec/2022 and 4.3% in Dec/2019
China	Tax Relief; Subsidies; Credit support; Stimulating investment; Interest rate cuts; Quantitative Ease; Currency intervention.	10.53% of variation between 2019 and 2021	Unemployment peak was 6.20% (Feb/2020), 1.7% higher that in December 2019	Highest value in (Jul/21) with 5.4%, 1.8% in Dec/2022 and 0.8% in Dec/2019.
United States	Direct payments, loans and financing; Paid leave and benefits unemployment; Emergency Loan; Interest cut; Quantitative Ease.	2.07% of variation between 2019 and 2021	Unemployment peak was 14.70% (Apr/2020), 11.1% greater than in December 2019	Highest value in (Jun/2022) with 9.1%, 6.5% in Dec/2022 and 2.3% in Dec/2019.
Ireland	Tax relief package for businesses; More money for health and support for unemployed and low income; Fiscal measures to alleviate the burden; Interest rate reduction; Asset purchase program; Credit guarantee scheme for companies.	20.14% of variation between 2019 and 2021	Unemployment peak was 7.70% (Mar/2021), 2.9% greater than in December 2019	Highest value in (Oct/2022) with 9.2%, 8.2% in Dec/2022 and 1.3% in Dec/2019.
United Kingdom	Wage subsidy for employers and independent workers; Cash flow loans; Reduction of VTA to 5%; Cut in bank rates; Asset purchase program increased	-2.52% from variation between 2019 and 2021	Unemployment peak was 5.20% (Dec/2020), 1.4% greater than in December 2019	Highest value in (Oct/2022) with 11.1%, 10.5% in Dec/2022 and 1.3% in Dec/2019.

It is natural that, in the face of the crisis, many countries have resorted to similar economic policies, such as quantitative easing, interest rate reductions and fiscal stimulus packages. These measures were designed to stimulate aggregate demand, to provide financial support to affected businesses and households, and to prevent the recession from prolonging. However, the effectiveness of these policies varied considerably according to the implementation and economic context of each country, even if, as seen in Table 2, the policies applied were of similar ideas, the effects were seen differently in terms of GDP, inflation and unemployment, for example, nearby countries such as Ireland and the United Kingdom presented diametrically opposite GDP, respectively, 20.14% against -2.52%.

Therefore, countries like Australia and Ireland, more economically liberal countries [10], have emerged as examples of a relatively robust recovery in terms of GDP and unemployment. These nations have managed to keep unemployment under control and minimize economic contraction, in part due to targeted investments in infrastructure and support for businesses and workers affected by the crisis. The rapid mobilization of resources and the effective implementation of stimulus policies played a crucial role in protecting the economies of these countries against the worst effects of the pandemic.

However, other countries have faced significant challenges in economic recovery. Germany and the United Kingdom, for example, recorded falls in GDP and high relative unemployment rates, reflecting the specific difficulties faced by their economies during the pandemic. Factors such as dependence on heavily impacted sectors, such as tourism and the third sector [1], contributed to the difficulties faced by these nations in the search for a sustainable economic recovery.

An interesting aspect to observe is the allocation of resources during the crisis. Brazil, for example, chose to invest much less relatively (as a percentage of the country's GDP) compared to the others, but the majority of this investment was directed directly to the needy population, with an approach of financial assistance to the population. This approach may have contributed to mitigating the negative effects of the crisis on the most vulnerable and helped to maintain social cohesion amid economic adversity, however, the lack of investment in infrastructure and programs with long-term thinking has a greater chance of, in the medium and long term, demonstrate negative impacts on the speed of economic recovery and the country's subsequent economic growth.

Table. 3: Investments made by countries

Country	Total Injected (% GDP)	Direct aid (% GDP)	Direct aid (% of total injected)
Australia	20.00%	2.50%	12.50%
Ireland	14.00%	2.00%	14.29%
United Kingdom	20.00%	3.50%	17.50%
USA	25.00%	6.00%	24.00%
Germany	16.60%	4.20%	25.30%
Brazil	9.20%	5.00%	54.35%

* China did not have its data released in a satisfactory manner to carry out the analysis.

With this less immediate thinking, countries like Ireland and Australia adopted a different strategy, investing more in infrastructure and supporting companies, aiming for a more sustainable economic recovery in the long term. This approach appears to have been effective, considering the relatively quick recovery of these countries compared to others. Table 3 presents a relationship, based on data from the IMF [12], between the percentage of investment and the percentage of direct aid to the population's pockets.

Therefore, the importance of these economic policies during periods of crisis is highlighted and how these policies can shape the recovery trajectory of each country and, although there is no single approach to dealing with an economic crisis, after all, each particularity of the population and its government, as a percentage of the nationalized economy, levels of corruption and even people's educational levels, can have a negative or positive impact, however the results suggest that investments aimed at infrastructure and support for companies can significantly contribute to a sustainable economic recovery in In the long term, that is, less populist policies in countries with more liberal economies, such as Ireland and Australia [10], present more economically optimized results.

Furthermore, it is crucial to recognize that the economic challenges posed by the pandemic do not end when the public health crisis abates. Many nations will face long-term economic consequences such as rising debt, exacerbated inequality, and structural changes in labor and consumer markets. Therefore, it is essential that governments continue to closely monitor the economic situation and implement appropriate policies to promote an inclusive and sustainable recovery.

As we move into a post-pandemic future, it is critical to learn from the experiences and lessons learned from this challenging period. This includes not only identifying the most effective policies to respond to economic crises, but also addressing underlying structural issues that can make economies more resilient to future shocks. Only through a collaborative, long-term oriented approach can we build a more stable and prosperous economic future for all.

III. CONCLUSION

Based on the post-crisis economic recovery, focusing on the COVID-19 pandemic and considering key indicators such as GDP, unemployment and inflation, implemented actions and their consequences were observed in selected countries, highlighting the effectiveness of investments in fiscal policies and flexibility in public management.

Australia and Ireland showed positive results due to investments in professional qualifications and state infrastructure. Geographically close countries, such as the

United Kingdom and Ireland, demonstrated contrasting results, with Ireland showing the highest GDP growth.

Global inflation was impacted by governments' fiscal and monetary policies, reflecting the devaluation of currencies. Countries with rapid economic recovery are at an advantage to attract investments and strengthen their infrastructure instead of resorting only to direct financial support to the population. It is worth highlighting, however, that comparisons must be based on a country's pre-pandemic and current economic potential. Brazil, for example, cannot be considered low-income just because it had high unemployment and inflation figures in the period; after all, these are indices that, in several passages in recent history, demonstrated double-digit values, that is, above 10%

Furthermore, as future work, this can serve as a bibliographical basis for future analyzes and studies, in addition to promoting political-economic discussions, highlighting, above all, the importance of a detailed analysis of Ireland and the policies applied in the country.

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