

# ***Analysis of Italian Economic Fluctuations Based on Keynesian Framework***

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**Abstract:** After the coronavirus-caused global recession, governments implemented various contingency measures to revive their economies worldwide. Despite improving digital marketing and international business relations, adverse effects still need to be addressed, and the issue takes time and money to resolve. Italy is one of the EU's most economically powerful countries, but COVID-19 has hit it hardest. This article will analyze relevant data and examine the causes of statistical fluctuations to explain Italy's economy. There are various reasons why Italy was so heavily infected. This study uses the concept of aggregate demand in Keynesian economics to analyze Italy's economic model and gross domestic product (GDP) composition. In addition, by looking at the policies and other influential factors, the paper explores the current economic situation the Italian government is in. By providing some overview and further explanation of the data, the paper underscores that Italy has made a remarkable recovery after COVID-19 using investment support. However, the government is now too dependent on it, and its GDP structure has to change to improve its performance in solving the surging public debt and deficit issues.

**Keywords:** Economic growth, Keynesian, Gross Domestic Product, COVID-19

## **1. Introduction**

Italy's economy had a resurgence after being impacted by COVID-19 and the global oil crisis created by the Russian-Ukraine Crisis. Italy is working toward its objective of repairing the enormous economic issues it faces, including significant deficits and a considerable weight of public debt. Despite this, the country's GDP in 2022 ultimately rebounded to virtually the same level as its GDP in 2019. Despite the fact that its circumstances do not appear to be ideal, it had one of the finest performances anywhere in Europe. After a meteoric rise in 2021, the economic growth rate decelerated in 2022. Following a time of expansion during the first quarter of 2023, the Gross Domestic Product (GDP) saw a period of contraction during the second quarter, which resulted in a decrease of 0.4% quarter-on-quarter. This dip was mainly attributable to a decrease in domestic demand and, more notably, a drop in investment within the building industry [1].

Thus, the research aims to integrate the information regarding Italy's current economic condition in the complex global economy. The Italian economy had experienced a drastic plummet during the recession caused by the coronavirus. Although it seems to be recovering, the recession is further and more profound, influencing its economy and exacerbating the nation's inherent issues. During the virus, the Italian government changed their GDP structure to combat the indirect negative impact in

the short term, which resulted in other adverse factors. This paper seeks to overview those factors, their cause and consequences using the Keynesian economic theory to analyze the data.

This inquiry will primarily concentrate on the ramifications of the coronavirus, which will be examined in more depth. The paper will explore economic development theories from various schools of thought during the upcoming sessions. It will engage in a discussion about the economy's current status, adopting a macroeconomic perspective. Additionally, It will go into an in-depth analysis of the crucial factors associated with the aggregate demand theory proposed by Keynesian economists. Furthermore, this study will examine the implemented policies in reaction to the virus and elucidate the external and internal factors that influence the fluctuations in the nation's economy.

The following section will overview several schools of thought on economic growth and the methodology. The third section of this paper will include a macroeconomic analysis of the Italian economy and a deeper explanation using the aggregate demand theory in Keynesian economics. In the fourth section, there will be an overview of some important policies and decisions made by the Italian government after COVID-19. The fifth section will summarize the internal and external factors contributing to the changes in Italy's economy. In the last section, a conclusion will be made to conclude the findings and further predictions for future developments.

## **2. Theory about economic growth**

Despite the 2.5 million years of human history, economic progress is just 250 years old. Economic non-growth was typical before the Industrial Revolution, and growth was unusual. People seldom ever discuss economic growth, much less express concern about it.

In the current society, the research on economic growth is usually divided into five categories: classical economic growth theory, neoclassical economic growth theory, endogenous economic growth theory, development economics growth theory and institutional economics growth theory. Amidst these, the classical economic growth theory, the neoclassical economic growth theory, and the Keynesian economic approach will be the major topics of this part of the paper.

### **2.1. Classical Economics**

Following the Industrial Revolution in the 18th and 19th centuries, the classical economic growth theory developed primarily the methods and elements that influence economic growth. The paper will introduce the theories of Adam Smith and David Ricardo as two representatives of this school of thought to illustrate the notion of economic growth in classical economics. In Adam Smith's book *The Wealth of Nations*, he illustrated the factors that contributed to the development of society's productivity with a representative example of the pin factory. The kernel of this sample was the division of labour, in which he narrowed the approaches to achieve economic growth in two primary ways: increase the amount of productive labour and improve labour efficiency. "The greatest improvements in the productive powers of labour, and most of the skill, dexterity, and judgment with which it is directed or applied, seem to be results of the division of labour.[2]" He illustrated how the division of labour increases labour productivity and is essential for economic progress using the example in the book. Beyond that, another crucial factor in sustaining economic growth is the ability of capital accumulation and investment to keep the manufacturing process going. Based on land rent, wages, profits, and other aspects of Smith's theory, Ricardo made a more systematic elaboration. In contrast to Smith, he emphasized the importance of distribution in capital accumulation and reproduction and held that profit was the primary driver of economic expansion. He demonstrated through the analysis of diminishing marginal returns that the fall in profit rate is unavoidable with continuous production, making it harder to continue capital accumulation and causing economic growth to continue to slow or even cease.

Economists first started to take note of the variations and changes caused by various national systems in the 1950s. Before this, while attempting to explain economic growth (as previously said), economists concentrated mainly on technical factors (capital, labor force, technology, investment, consumption, and exports). In the following two portions of this part of the paper, the author will introduce the two major economic growth theories widely used by the population nowadays.

## 2.2. Neoclassical Economics

Neoclassical growth theory was created in 1956 by Robert Solow, an economist at the Massachusetts Institute of Technology. The following year, in 1957, he researched and analyzed the factors that led to the early to mid-20th century economic expansion in the United States. This idea subsequently evolved into the widely accepted theory of economic growth with the addition and advancement of some other economists. Neoclassical economics substituted the marginal utility value theory for the labour value theory and the supply-centric analysis for the demand-centric analysis of the classical economy. The entire economy is viewed as a "production function" in neoclassical growth theory, where factor inputs serve as the independent variable and output—often measured by GDP—as the dependent variable. The technology stock determines the production function's shape. The greater the output for a given factor input, the more sophisticated the technology, and the most straightforward production function only uses labour and capital as inputs. Following the neoclassical paradigm, Solow makes the following assumptions: the economy exhibits consistent returns to scale; the proportions of labour and capital add up to one; and the cause of real growth above one is technical advancement, or "Total Factor Productivity" (TFP). In other words, the total factor productivity is the excess, or residual, in a regression analysis that labour and capital cannot explain. Neoclassical growth models dominated the explanation of growth, with which researchers and economists measure economic growth in almost every country.

## 2.3. Keynesianism & New Keynesianism

Keynesian economics is another popular hypothesis of economic expansion. It was initially used to explain short-term economic volatility rather than economic development. However, the Keynesian theory has developed into the most popular economic model to explain economic growth. Today, Keynesian economics is used by academics, government officials, corporate executives, members of the media, and even the general public when debating and predicting economic growth rates. The British economist John Maynard Keynes, whose *The General Theory of Employment, Interest and Money* was published in 1936, rejected the conventional wisdom that wages and prices could adjust quickly to bring all markets into equilibrium. He claimed that because wage and price adjustment was slow, the market would instead be disequilibrium, a persistent imbalance between supply and demand. According to Keynes' theory, unemployment remained because the wage-price adjustment was too gradual to match the number of employees required by businesses with the number of open positions in the market. Keynesian economics focuses on aggregate demand theory. Keynesian theory examines economic growth from the demand side, as opposed to the neoclassical growth model, which investigates it from the aggregate supply (output) side. This theory contends that investment, consumption, and net exports are the three variables that determine economic growth, just as the neoclassical model determines economic growth by capital, labour, and total factor productivity.

## 2.4. Methodology

The "invisible hand" was believed to operate effectively under the classical premise, and classical economists contended that the government could only have a little impact on the economy. Classical economists also stressed government measures' ineffectiveness or unfavourable effects on desired

goals as prescriptive counsel. As a result, many classical academics think that the government should refrain from taking any direct action to address economic cycle issues. In contrast, Keynes advocated expanding government spending power and product demand to remedy the high unemployment because firms would need to increase labour force levels to accommodate the rising market demands for their goods. As the newly recruited employees make more money, they will spend more simultaneously. The demand for goods coming from the opposite side will rise as a result, generating employment. Keynes was inclined to question the “invisible hand” of the free market economy, in contrast to the classical school, and he prompted the role of the government in fostering the macroeconomy. However, the influence of the government and the results of its policies and other important economic decisions are inevitable in a contemporary and complex economic world, especially in light of the COVID-19 global virus.

Keynesian economics provides a complete theoretical framework for studying the contemporary world economy as it puts forward the concept of insufficient effective demand. Deriving from this, the method of using discretionary monetary policy to stimulate the economy appeared. Expansionary fiscal and monetary policies are adopted when the economy is declining, and tight monetary and fiscal policies should be adopted when the economy is overheating. Due to the current COVID-19 pandemic and the rise of the anti-globalization trend, the world economy is entering a recession trend. Therefore, in coping with economic recession, various countries have adopted some active policies to combat the economic recession, and Italy is the same. Through the analysis of Keynesian theory, this paper will conduct a detailed analysis of the Italian economy in aggregate and structure and try to find deeper reasons for the current situation.

### 3. Macroeconomic view of Italy's economic situation

To determine and understand the current economic status of Italy, the GDP has a significant role as representative data of the entire economy in a collective data published this year in May by researchers who are a member of Statista. Italy had the fourth highest GDP in Europe, behind Germany, the United Kingdom and France. The paper will then explain the fluctuation it experienced in the past five years.

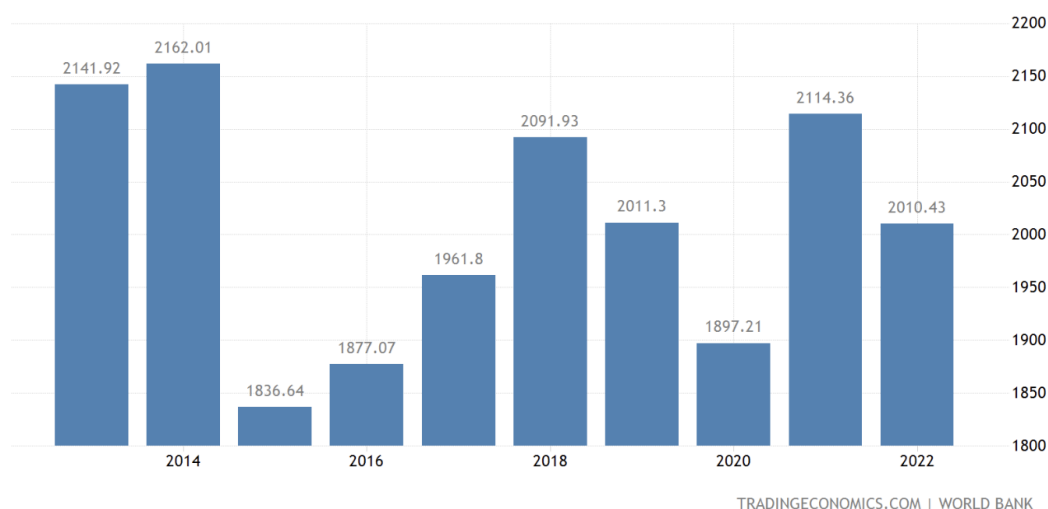


Figure 1: Italy's Gross Domestic Product in the Nearest Ten Years in USD Billion

The data from the World Bank shows the two key slump points from 2014 to 2015 and 2019 to 2020. After the plummet in 2014, Italy's GDP never returned to 2150 USD billion (Figure 1). The

Italian economy is believed to never recover from the global financial crisis of 2008, resulting in a sustained decline in production, which is a critical factor in the decline in GDP. During the onset of the global financial crisis, Italy was compelled to implement borrowing reductions due to its membership in the eurozone [3]. In addition, other factors that impacted the stagnated GDP may be the decreasing proportion of investment and a sudden increase in debt ratio, which will be explained later in the paper.

Italy's GDP at current prices was 2,011.3 billion U.S. dollars in 2019. However, COVID-19 caused a global outbreak in 2020, resulting in a decline in all nations and dwindled Italy's GDP to 1897.21B. Italy is a country highly dependent on its services. Thus, the plummet seems not inscrutable because the government had to introduce quarantine and contact measures to prevent the virus in that condition. Therefore, consumption expenditure stagnated after the drop, in addition to a growing unemployment rate [4].

Although the state of the world economy is always complicated and competitive, the data listed proves that Italy has favourable growth trends in most parts of the economy with improved performance in these few decades. Unprecedented GDP growth was found in 2021 and was the highest in four decades. Though the trend has decelerated, sustained growth is still happening, symbolizing its healthy status. However, inevitable and apparent long-term problems such as ageing populations, regional differences in development, low rates of female labour force participation, slow productivity growth, stagnant wages, tax avoidance, and new climate-related concerns are still to be solved. Luckily, a solid and influential fund, NRRP, is currently running, so hope Italy can overcome some resistance.

### 3.1. Overview of the four categories in Keynesianism's analysis of aggregate demand or GDP

The aggregate demand formula in Keynesian is the same for calculating nominal GDP. In the formula, Y or AD on the left side is the aggregate demand; on the right side, C stands for the consumption spending, I stands for the investment spending, G stands for the government spending, and net exports are the total exports minus total imports, representing the amount the nation earned from trade.

$$Y = C + I + G + NX \quad (1)$$

This section will analyze the consumption spending, percentage of investment in GDP and net exports.

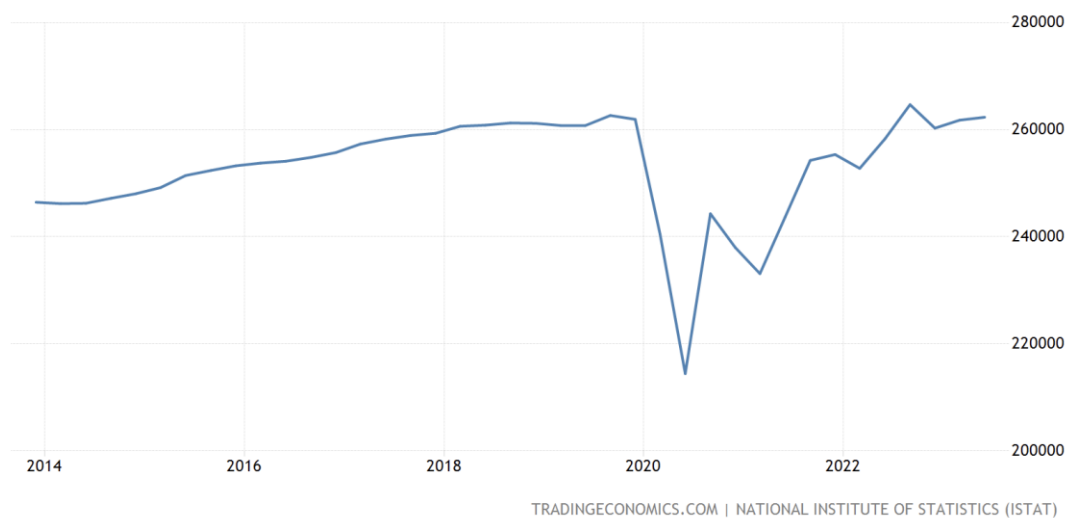


Figure 2: Italy's Consumer Spending in the Nearest Ten Years in EUR Million

Consumer spending is believed to be the most significant portion of the GDP and the focus of Keynesian fiscal policy. According to The Italian National Institute of Statistics (ISTAT) data, consumer spending sharply descended in 2020, which matches the information in Figure 1 and Figure 2. After that, this value fluctuated in an upward trend. This increase means a rise in individual savings, expenditures on investments, and output, as it is the spending of all use of an individual or household. It is attributed to the government's policy and investment plans to support the economy. In the two big waves of the pandemic that happened in 2020, the Italian government responded differently to minimize the restrictions and their impact. Additionally, if a market or industry has a decline in consumer spending, businesses must respond by cutting expenses, decreasing labour costs, or coming up with new, improved products and services. Thus, when discovering rising consumer spending after COVID-19, it is apparent that Italy rebounded and brought this expenditure back to a healthy level (compared to pre-COVID).



Figure 3: Italy's Percentage of Investment in its Nominal GDP in the Nearest Ten Years

Figure 3 of the Percentage of investment in Italy's nominal GDP from CEIC Data. Although no specific data was found, it is known that investment expenditure usually takes up a smaller proportion of the GDP compared to other categories, such as consumption expenditure, and is around 20~25% for most countries [5]. Generally, less developed nations receive more investment than industrialized ones. Given that those nations are industrializing, this is expected, which calls for more significant investment. Thus, seeing a growing proportion of investment in Italy's GDP is not a good sign. This means Italy is now more dependent on investment than before, and it testifies that some of the infrastructure or industries may be underdeveloped, resulting in a soaring increase in investment as investors know they can benefit from investing in those developments. In addition, according to the data from Trading Economics, Foreign Direct Investment did not make any significant growth but stayed at a constant level of fluctuation [6].



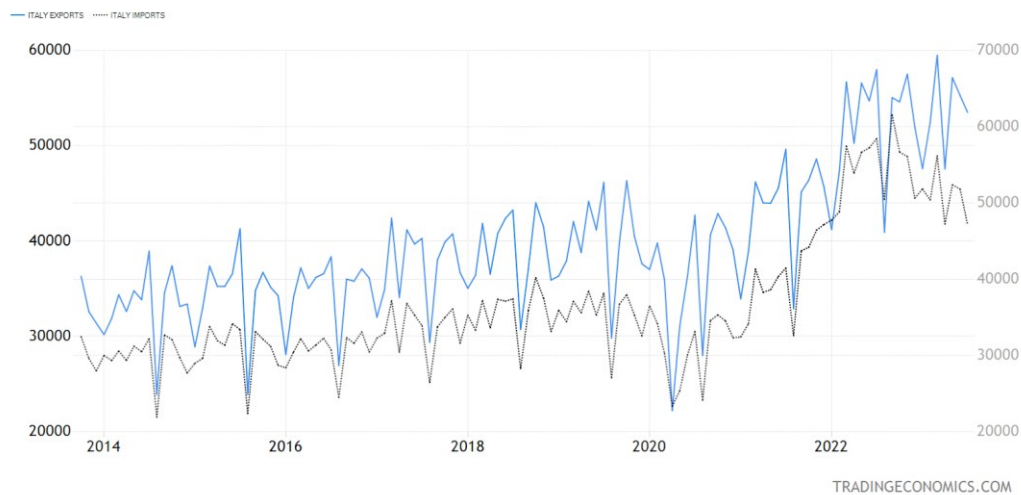


Figure 3: Comparison of Italy's Exports and Imports in the Nearest Ten Years

The net export measures the nation's total trade. A country with buoyant net exports has a trade surplus, whereas a country with negative net exports suffers a trade deficit. In the figure above illustrating a comparison between the lines, each representing export and import in Italy from the data of ISTAT (Figure 4). It is clear that the whole graph is climbing upward, which means Italy was expanding their trading market through its development after the Great Recession in a healthy trend. The total of export and import are also growing, except in 2020 where there was a tumble in both of them. The net export had fluctuated during the year, some of the greater area may be in 2019 and in 2021. This means before the coronavirus had started, the Italian economy was in a healthy development trend. In addition to after COVID, while the globe is in need of resources, Italy rebound enormously with its resources and products such as machinery, pharmaceuticals and vehicles [7].

#### 4. Overview of policies and decisions after COVID-19

Despite the financial initiatives stated above, the Italian government has implemented other steps such as fiscal and monetary policies to boost and assist the economy under the tremendous pressure directly and indirectly brought on by the coronavirus.

##### 4.1. Fiscal Policy

As the first major and most hit Western country to experience the outbreak of COVID-19 in 2020, Italy launched a significant bailout programme. It successfully obtained the greatest proportion of EU recovery money, known as 'Next Generation EU'. [8]. After the amendment in September 2023, the plan was valued at €191.5 billion and is specified to be used in "helping it become more sustainable, resilient and better prepared for the challenges and opportunities offered by the green and digital transitions.[9]" Other than that, industrial policies such as investment incentives were provided and allocated to stimulate the firms. Including the "New Sabatini Law," the "Transition 4.0" plan and the Green Bonus program, more than €20 billion was invested to support SMEs and other areas such as the bank and construction [10].

The European Central Bank considers fiscal discipline "a pivotal element of macroeconomic stability." Thus, Europe's fiscal goal in the Maastricht Treaty involved bringing national debt and deficits down to 60% and 3% of GDP, respectively [11].

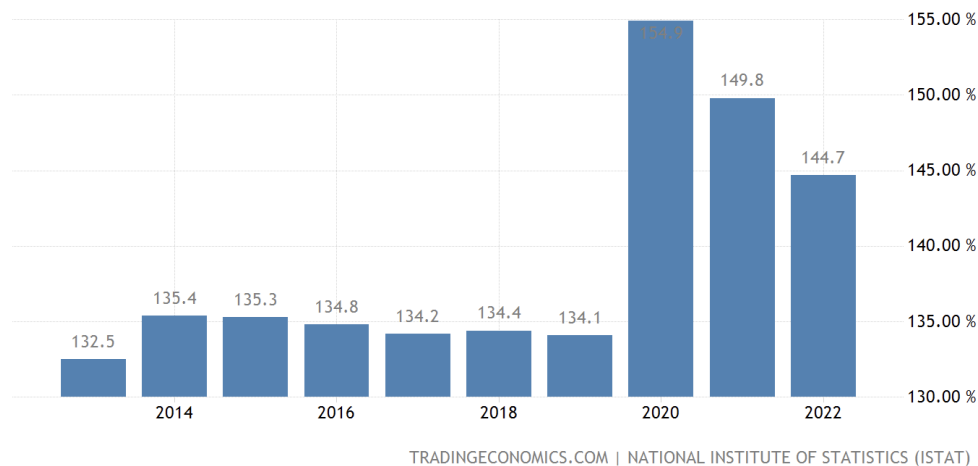


Figure 4: Italy's National Debt Ratio in the Nearest Ten Years

The national debt ratio was almost double the EU's exemption pre-COVID-19, although it was under control (Figure 4). The European Central Bank has raised interest rates multiple times in the past year, raising debt costs and risking default. Thus, limiting government spending threatens borrowers' national credit and solvency. Global financial markets would suffer if the country and eurozone default [12]. Thus, while the debt ratio is decreasing, the economy must be boosted quickly and effectively to prepare for future issues that may again damage it.

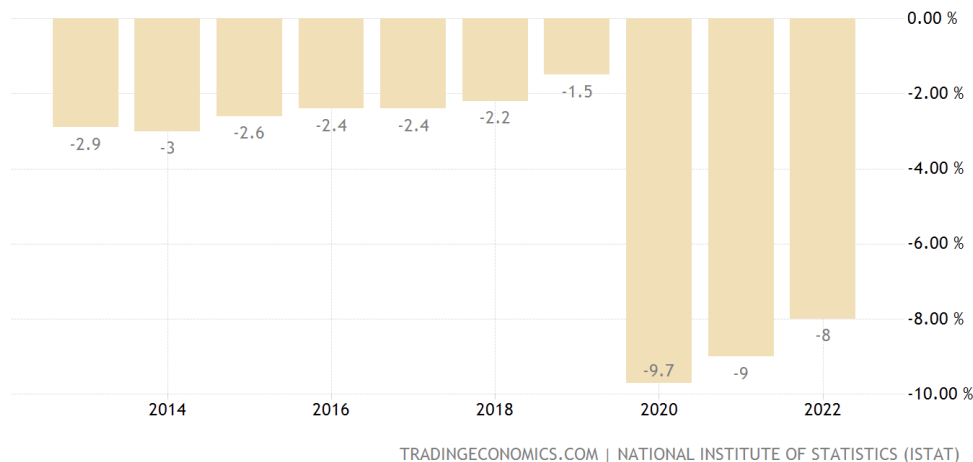


Figure 5: Italy's Government Budget (Deficit) in the Nearest Ten Years

Compared to the national debt, which never achieved the EU's plan. The government budget (deficit) always followed the requirements before COVID-19 happened in the past ten years (Figure 5). However, the drastic plunge in 2020 was apparent, even though the GDP also tumbled. This outcome highlighted Italy's feeble budgetary health because extreme tax break schemes and widespread stimulus were anticipated in fresh revisions [13].

## 4.2. Monetary Policy

According to the Banca D'Italia, all major economies' monetary authorities have taken unprecedented expansionary steps to ensure market liquidity, support consumer and company credit, and promote demand for products, services, and investment [14]. In addition, the European Central Bank (ECB) decreased the overnight deposit rate by 0.1 percentage points to -0.5% [15], due to the negative



interest rate environment, ECB's limited monetary policy operating space [16] and the minimal effect of continuing interest rate decreases. If interest rates continue to be cut, it could lead to a sharp decline in bank revenues, which would weaken banks' ability to lend.

## **5. Factors contributing to economic growth and slowdown**

External and internal factors influenced Italy's overall economy negatively and positively. This session will examine the impact of the global environment and Italy's domestic environment on its economic standing. Some foreign forces discussed will be the coronavirus and the Russia-Ukraine crisis. At the same time, domestic factors, such as the direct and indirect influence of the virus on Italy and some of its inherent problems, will be analyzed.

### **5.1. External Factors**

Since people found the way coronavirus spread, governments implemented non-pharmaceutical treatments to mitigate the transmission and consequences of the COVID-19 worldwide pandemic. Lockdown regulations and universal movement restrictions have been implemented to combat the epidemic's initial surge. Lockdown measures have demonstrated notable efficacy due to their comprehensive integration of many targeted interventions, two of which merit specific attention in this context: restrictions on large-scale gatherings and limitations on long-distance travel [17]. Indeed, apart from its primary role in mitigating the spread of COVID-19, the restrictions imposed have resulted in a significant economic downturn worldwide, thus becoming a major consequence of the containment measures. As e-commerce experienced significant growth, conventional physical firms faced substantial negative consequences.

The escalation of the conflict in Ukraine and the consequential disruptions to global supply networks caused by the COVID-19 pandemic has resulted in a notable surge in energy prices and a heightened prevalence of scarcities in essential commodities [18]. After Russia cut its gas supply, Italy had to manage its short-term poverty and find new suppliers as it had a high dependence on Russia's natural gas sources [19]. Statista's data displayed that in 2021, Russia was still the leading supplier of Italy's natural gas, with the provision of natural gas amounting to around 14 billion cubic meters per semester. Following the Russian-Ukraine crisis, the volume of Russian imports experienced a decline to 2.2 billion cubic meters to Italy in the year 2023[20]. Consequently, the Italian government was compelled to adopt a proactive approach by significantly augmenting expenditures on stimulus packages and providing help to both people and companies, exacerbating Italy's precarious budgetary condition. Resources like investments in liquefied natural gas infrastructure and making the most of all fossil fuel sources should be used to make up for a drop in the Russian gas supply. Although the debt-to-GDP ratio of the nation had a decline of 5.2 percentage points compared to the previous year, reaching a level of 144.7 percent, it is still above the average debt-to-GDP ratio observed in the Eurozone.

### **5.2. Internal Factors**

Italy has seen significant repercussions as one of the nations most impacted by COVID-19. Compounded by pre-existing economic fragility and reductions in public health services resulting from budgetary constraints over the last decade, the situation has been further exacerbated, intensifying its gravity. The increasing cost of food and energy gradually diminishes households' earnings, negatively influencing spending patterns. This is occurring despite the provision of partial fiscal compensation to offset the increased expenses associated with energy bills and the accumulation of substantial surplus savings during the epidemic [7]. In addition, it is believed that the composition of the Italian GDP reveals that contact-intensive services constitute a comparatively

significant share of the economy compared to other major European nations [21]. The service sector has always been valued more than 60% of the GDP, and the number from 2022 was almost 65% [22-23]. In this particular environment, elucidating the reasons behind the repeated escalation of Italy's pre-existing high unemployment rate and the substantial impact on the Italian economy due to the pandemic is challenging.

## 6. Conclusion

Overall, Italy seems to be back on track with its economy after COVID-19 in most of its data performance after the rebound in 2021 after being affected by it, while the Italian government had introduced an abundance of policies to support the recovery. However, no strong growth or long-term recovery can be found, and neither reached the European Union's fiscal restraint requirement, while its debt ratio remains high. As economic growth started to slow in 2022, the momentum to end economic stagnation seems to have slowed due to rising energy costs, weak global demand and other factors that will be introduced in the next session.

Keynesian economic theory was employed in this study to examine Italy's economic situation. The selective use of financial aid from the European Union and the efficient use of resources are primarily responsible for Italy's successful recovery from the COVID-19 pandemic. Despite the persistent obstacles associated with implementing the EU budgetary plan, the advent of the virus has presented a chance to facilitate the digital restructuring and transformation of the sector. In order to progress, Italy should enhance its efficiency in solving its inherent issues, especially the massive deficit. Furthermore, boosting the foundational infrastructure might yield advantageous outcomes over time.

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