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EFFECTOS DEL COVID-19 EN EL PIB DE ESPAÑA EN 2020

EFFECTS OF COVID-19 ON SPAIN'S GDP IN 2020

AUTHOR: MARCOS ELISEO GÓMEZ MATÉ

DIRECTOR: MARÍA HIERRO FRANCO

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RESUMEN

En este trabajo se estudia la evolución del PIB durante el año 2020, año del inicio de la crisis del coronavirus. Para analizar las causas de las fluctuaciones del PIB se utilizará el enfoque del gasto y se analizará el comportamiento de cada uno de sus componentes. Con el fin de establecer un marco comparativo se utilizan datos de la media europea para analizar el desempeño del PIB en relación con otros países. El análisis se apoya en gráficos y tablas con datos representativos del desempleo y la deuda pública cuyo comportamiento influye en el PIB, lo cual mostrará problemas estructurales de la economía española. El trabajo analiza la crisis financiera de 2008, que otorga un marco histórico-comparativo del que sacar conclusiones del comportamiento de los indicadores macroeconómicos previamente mencionados, así como las principales diferencias y similitudes entre ambos periodos de crisis.

ABSTRACT

This paper studies the evolution of GDP during the year 2020, the year of the beginning of the coronavirus crisis. To analyse the causes of GDP fluctuations, the expenditure approach will be used and the behaviour of each of its components will be analysed. In order to establish a comparative framework, European average data are used to analyse GDP performance in relation to other countries. The analysis is supported by graphs and tables with representative data on unemployment and public debt whose behaviour influences GDP, which will show structural problems of the Spanish economy. The paper analyses the 2008 financial crisis, which provides a historical-comparative framework from which to draw conclusions on the behaviour of the macroeconomic indicators mentioned above, as well as the main differences and similarities between the two periods of crisis.

1. INTRODUCTION

The Spanish economy had accumulated steady growth from the first quarter of 2014 to the fourth quarter of 2019. The global financial crisis of 2008 dealt a severe blow to the country's economy, which suffers more acutely from economic downturns than other neighbouring countries. The reasons for this sensitivity are due to a rigid labour market coupled with a heavy dependence on the tourism sector, which underpins the good performance of the Gross Domestic Product (hereafter GDP) in summer periods.

The risk premium soared to 636 basis points on 23 July 2012. The national government led by Mariano Rajoy implemented cuts to reduce public spending, as well as a tax increase (VAT from 18% to 21%). A labour reform was implemented with the aim of making the labour market more flexible.

All these measures and the increase in economic dynamism at the global level, as well as the recovery of confidence on the part of the markets, resulted in sustainable GDP growth since 2014, although the unemployment rate remained very high. High structural unemployment is historically endemic to Spain.

Six years after the start of the economic recovery, a global event would hit the economy of Spain and the rest of the world's countries more intensely in the short term than the crisis previously described. A global health emergency, a pandemic, that emerged in China in December 2019 would be transmitted to the rest of the planet just two months later. The so-called SARS-CoV-2 crisis brought the way of life and the economic system of the modern world to a halt, paralysing the global economy.

In this paper we will analyse how this health crisis has affected the variation of GDP during the year 2020, as well as the behaviour of its main components. The year 2020 has been marked by restrictions on movement during different periods of the year and measures

limiting the use of leisure and hospitality establishments, jeopardising the survival of very important sectors, which will be reflected in the evolution of GDP.

Finally, it is interesting to analyse certain important differences between the 2008 financial crisis and the current one caused by SARS-CoV-2. The difference in the origin of both is the subject of analysis, as well as the possible evolution of the latter as opposed to the former. Broadly speaking, this paper shows the behaviour of GDP during the turbulent year 2020 and why we must differentiate this crisis from the previous one mentioned above.

Data we use in this paper are collected from the Spanish Statistics Institute (INE) and Eurostat.

2. THE IMPACT OF THE COVID-19 PANDEMIC ON SPAIN'S GDP IN 2020

The coronavirus altered the productive structure of our country, limiting the supply of goods and services to basic necessities on a temporary basis. The collective hysteria that arises because of the uncertainty during house confinement led to a considerable increase in the consumption of basic necessities.

The slowdown in the transmission of the virus, as well as the arrival of summer and the reactivation of sectors of the economy (hotels and tourism), seemed to alleviate slightly the sharp fall in GDP accumulated in the first two quarters of the year.

GDP performance in the fourth quarter of the year was close to 0%. The final balance of the year 2020 was negative and historical, with GDP falling by 10.8%, the second worst record since 1936, when it fell by 26%.

In our opinion, it would be interesting to analyse the behaviour of the GDP components in isolation. This is because, although the bad performance of GDP in Spain during the COVID crisis is apparent, a more in-depth analysis of GDP by components may allow us to gain more insights into factors behind GDP evolution.

To this end, we proceed to define GDP as an indicator and the approach we will use for its analysis. As it is well-known, the GDP is an economic indicator that sheds light on the economic health of a country. It can be defined as the "monetary (nominal) value of all final goods and services generated in an economy in a given period of time." (López del Paso, 2011).

According to the economic literature, there are different approaches to measure GDP. The first one, commonly known as the Expenditure Approach, suggests estimating GDP as the sum of expenditure on final goods and services by households, firms, the public sector and the external sector. The second one, the so-called Production approach, defines GDP as the sum of gross value added (GVA) generated at the various stages of production and in all sectors of the economy. Finally, the Income Approach considers the income obtained by the owners of the factors (land, labour and capital) for their participation in the different stages of the production process.

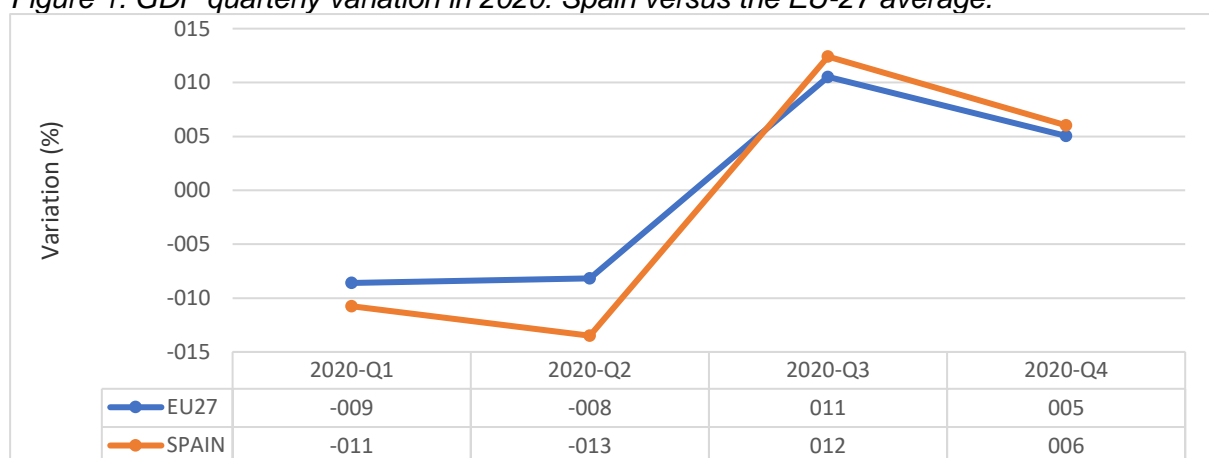
In this paper, we will resort to the first approach to carry out our analysis. Using this approach, we analyse domestic demand (private consumption, gross investment and government expenditure) and external demand (exports of goods and services minus imports of goods and services). According to it, the GDP can be expressed as follows:

$$(1) Y=C+I+G+XN$$

Where (C) represents consumption, that is, household expenditure on goods and services (excluding new housing), I denote investment, that is, expenditure on capital, structures and stocks (we include expenditure on new housing by households); G is Government expenditure, that is, central, regional and local government expenditure on goods and services; and, finally, XN represents Net exports, that is, exports (X) minus imports (M).

Before proceeding with the analysis of the evolution of the Spanish GDP and its components, it seems pertinent to first compare the Spanish GDP fall with the EU-27 average as a benchmark, as it may provide a realistic framework of the Covid-19 impact in Spain comparing to other countries. As we will see, Spain had a strong impact comparing to the EU-27 average. It has decided to use quarterly variations in the graphical analysis. Quarterly variations are used to analyse short-term changes in the economy (acceleration, deceleration and trend changes).

Figure 1. GDP quarterly variation in 2020: Spain versus the EU-27 average.



Source: Data from Eurostat. Own elaboration.

Figure 1 shows that Spain suffered a more intensive hit than EU-27 in the first and second quarter of 2020. What were the reasons? Unfortunately, Spain was the second country where Sars-Cov2 started its spread inside Europe. The situation in Italy was a warning to the rest of Europe but Spanish government failed to declare the lockdown in time. A high percentage of the companies stopped their activity because only main necessities business could work. Teleworking hadn't been enough developed so we weren't prepared for the emergency. Regarding to the data, Spain got a more intensive recovery in the third quarter of the year. The country stopped the coronavirus spread just before the summer. The government's actions allowed it to open the country trying to save the most touristic period of the year. Spain recovery was stronger than EU27 average in the third quarter 2020. Totally expected when the fall was higher and Spain is the most touristic country in the union. However, as we see in the figure 1, the net result was better for EU27 because the fall was 5% lower and the recovery only 2% under Spanish. The last quarter was similar for both, so we can establish that Spain in 2020 result was clearly worse than EU27. So, it was Spain the worst country managing the pandemic? The next table compares Spain with other countries in EU.

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Table 1. EU27 GDP quarter variation (%)

Period	2020-Q1	2020-Q2	2020-Q3	2020-Q4
Austria	-9,24	-7,01	10,51	2,38
Belgium	-9,86	-9,13	8,06	8,92
Bulgaria	-21,89	6,85	14,05	4,69
Croatia	-8,97	-6,42	18,39	-8,62
Cyprus	-5,00	-8,93	12,15	-3,93
Czechia	-10,36	-6,38	10,57	3,17
Denmark	-4,05	-2,91	3,90	3,54
Estonia	-12,68	-1,03	7,36	5,48
Finland	-6,83	0,04	1,23	5,78
France	-7,16	-9,89	11,35	5,62
Germany	-3,96	-9,66	9,75	3,38
Greece	-11,32	-6,00	16,95	-4,59
Hungary	-18,04	-5,33	12,48	8,76
Ireland	-1,92	-9,31	18,72	-3,78
Italy	-15,32	-7,42	13,84	6,81
Latvia	-16,16	2,50	13,17	1,60
Lithuania	-12,55	3,22	14,49	-2,90
Luxembourg	-8,10	-3,94	5,99	12,20
Malta	-6,10	-10,27	10,63	0,20
Netherlands	-3,23	-5,00	3,64	4,61
Poland	-13,57	-8,66	11,29	10,23
Portugal	-7,57	-8,56	12,27	1,31
Romania	-32,07	2,55	25,93	14,43
Slovakia	-11,14	-0,24	13,84	-0,82
Slovenia	-9,46	-3,26	11,44	-1,89
Spain	-10,75	-13,49	12,41	6,02
Sweden	-6,48	-1,73	1,25	11,62

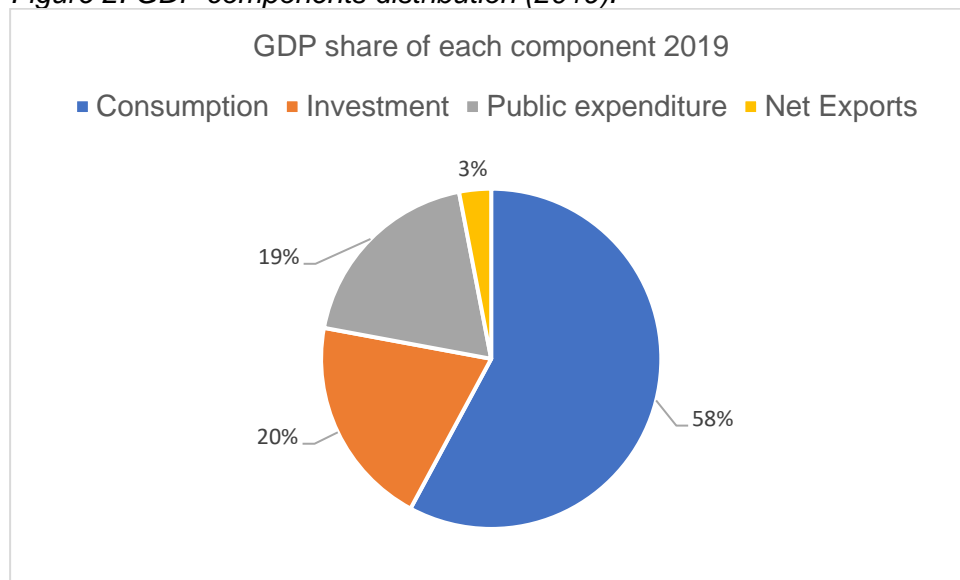
Source: Data from Eurostat. Own elaboration.

Table 1 shows that Spain performance in 2020 was the worst comparing to its neighbours. Top countries in Europe like Germany or France compensated the first half of the year. Their economies are, apparently, more dynamic like ours. Looking at the Italian data, we observe that in the first quarter the percentage drop is higher than in the Spanish case. Not surprisingly, it was the first European country to import the coronavirus, detected in Bergamo. The second quarter was dramatic for Spain. There isn't another country which (Malta economy can't be compared to ours) suffered the pandemic emergency like Spain. The summer period seemed boost the economy but not better than touristic countries like

Greece or Italy. In net terms, comparing to the best or similar economies, Spain performances is the worst. Why these differences? Spanish labour market has a high temporality rate and we export low added value goods. Touristic sector is the main sector representing 12,4% of GDP in 2019, obviously the most affected by the coronavirus. Terrifying mix for the economy. Nordic countries had a good performance last year. We can see that Finland first quarter was the only negative. Bulgaria and Romania are “outsiders”. These countries had the worst fall in the first quarter, but they got an amazing recovery in the next quarters. Denmark and Netherland were very stable, low variations between periods. The reason of this differences is, for sure, the size of the economies and their development level but we can't ignore that government actions were very important. Expansive or contractive policies? Social restrictions? These questions answers are very relevant to understand the different GDP reactions that we can see in Table 1. I believe that This Covid-19 crisis reveal the instability of Spanish productive structure. We traditionally feel the shocks more than other countries but, despite of this condition of our economic structure, it's clear that we could have managed the situation better. We also must consider the necessity of a big change in our labour market. The health emergency has allowed us to see how fragile the stability of Spanish jobs is. ERTE is a big shield for the employment, avoiding the mass destruction of thousands of jobs during the pandemic. As we will see in the next pages, the application of this kind of protection actions boosted the public expenditure while others GDP components fell. We begin with the analyse of the components that make up GDP as we specified in Equation 1. We will see the relevance of every component in GDP % and the quarter variations relative to GDP.

The starting point is the distribution of GDP by components in 2019 (pre-pandemic period), to compare the situation the year before the outbreak of the pandemic with the current situation. After the component's analysis, we will try to address whether the Covid-19 crisis significantly altered this distribution.

Figure 2. GDP components distribution (2019).



Source: Data from INE. Own elaboration.

Consumption has the main importance among the components, almost 60% of GDP in 2019. As we can see, invest and public expenditure were balanced in their contribution. If we refer to the trade balance, it's contribution was barely a 3%.

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Now we are going to look inside the components and their characteristics. In order to get more precise insights into the evolution of such components, we will show its quarterly variation relative to GDP.

Consumption (C):

According to Caballero Jiménez (2016), consumption has a procyclical response, being more volatile than output (Y).

Figure 3. Consumption quarter variation with respect to GDP.



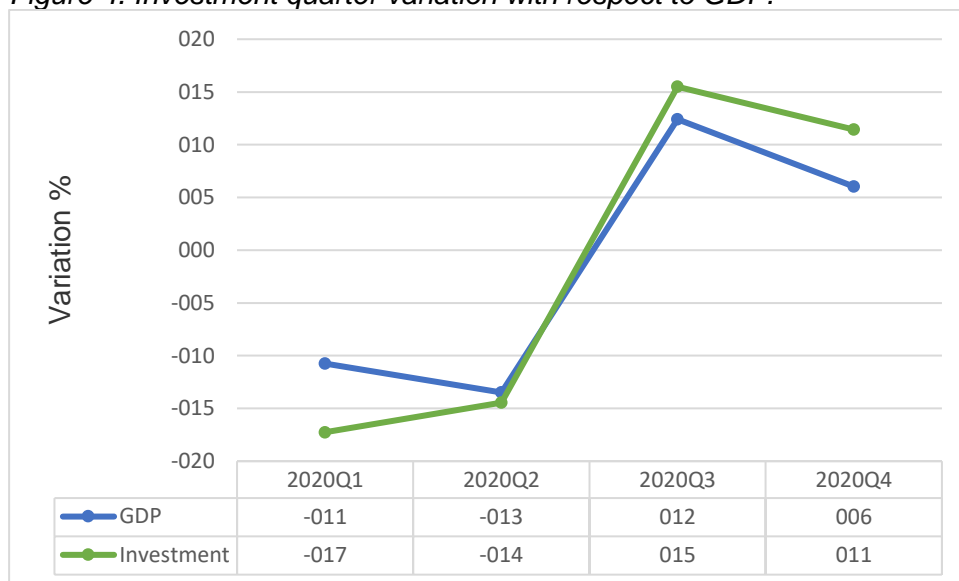
Source: extracted data from INE. Own elaboration.

As expected, consumption declined in the first quarter of 2020 because of the household containment that started in March. The sharpest fall would come in the following quarter, during which the house confinement was maintained. Households used their income almost entirely to consume necessities. There was a supply shock, the supply of goods and services was limited to only those of necessities as we were immersed in a state of alarm declared by the national government. The total halt of productive activity in many sectors triggered the request for ERTes by employers, an instrument made available by the government to protect employment. A lot of workers who entered ERTes did not receive their economic benefits on time, which produced a demand shock. Many families did not have the financial resources to afford the consumption of basic goods and services as their income was suddenly reduced. In the following two quarters of the year there is a strong recovery as the anti-COVID19 measures were relaxed and tourism opened in the summer. This, however, does not compensate the sharp fall in the first two quarters of the year. As we see in Figure 3, changes in GDP were higher than in consumption in the first quarter. We check that consumption was a little more volatile than GDP, particularly in the first quarter of the year. Notwithstanding that, the evolution was quite similar during the next quarters.

Investment (I):

According to Caballero Jiménez (2016), investment is four times more volatile than output and is highly correlated with it.

Figure 4. Investment quarter variation with respect to GDP.



Source: Data from INE. Own elaboration.

As expected, investment also suffered a significant fall in the first and second quarters of 2020. The logic behind this fall lies in the fact that households do not invest in new housing, but rather most of their income is earmarked for savings or the consumption of necessities. On the business side, it seems clear that the total slowdown in activity in most sectors is leading to a sharp fall in the capacity to purchase new capital goods and machinery. As in the case of consumption, the fall is strong and the recovery is also intense in the following two quarters, without compensating for the previous fall. The characteristic invest volatility respect GDP is clear in figure 4. The characteristic volatility of the invest respect GDP is clear in figure 4. The two first quarters fall was more intensive than GDP and the following recovery was far higher too. As compared with consumption, the first quarter was so much worse. The role of investment in the first quarter GDP fall was, in percentage, very important.

It's interesting the last quarter variation, which shows a far better performance of the invest respect GDP. The huge volatility of the invest could means a future better recovery than other components in short term.

Exports (X):

Net exports have similar volatility to GDP and are weakly countercyclical (Caballero Jiménez, 2016). In this case, we will check that this behaviour is true in the first and last quarters, but a high volatility is observed in the second and third quarters.

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Figure 5. Exports quarter variation with respect to GDP.



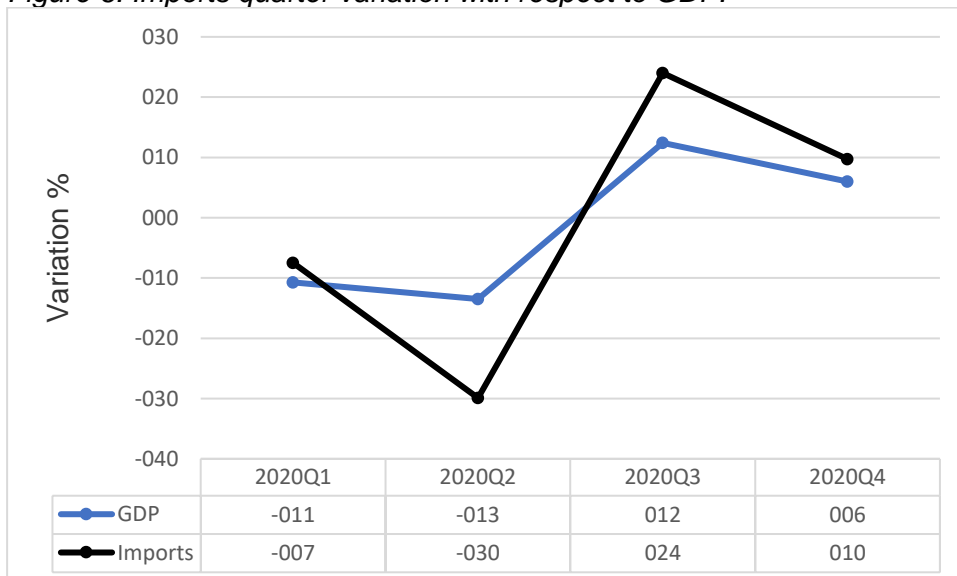
Source: Data from INE. Own elaboration.

The fall in exports is not surprising. We must appreciate that it was not only Spain that found itself in a situation of confinement, but practically the whole planet, or at least its main trading partners. The paralysis in part of production or the reduction in the volume of sales and purchases of goods is reflected in this fall. Sales of automotive and capital goods fell sharply, their relevance in the economy putting very negative pressure on the export figure. The destination of exports fell more to areas such as Asia and Oceania than to the European Union, our favourite trading partners (EFE, 2020).

Imports (M):

Imports are much more procyclical than exports (Caballero Jiménez, 2016).

Figure 6. Imports quarter variation with respect to GDP.



Source: extracted data from INE. Own elaboration.

As we have defined in the GDP equation (Y), imports are shown in negative, they are subtracted from exports to obtain net exports. If the value of this difference is positive, the contribution to the total GDP computation will be positive, and the opposite is negative.

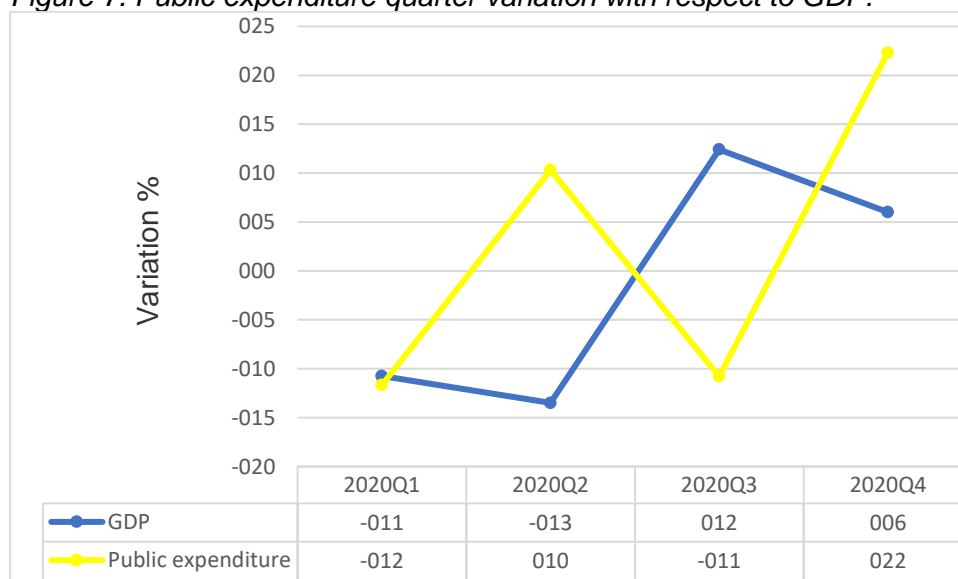
As with the rest of the variables that make up our definition of GDP (except public expenditure, we will see in the next figure) it shows a sharp fall in the first two quarters of the year with a subsequent recovery that does not offset the first two quarters.

As with exports, the slowdown or stoppage of the productive apparatus is the main cause of the fall in imports. The figure 6 shows that, at this time in our analysis, imports are a little more volatile than exports and suffered a more variation than GDP. We checked in figure 3 the apparently low variation of consumption respect GDP. Contrary other components, specially imports and exports which reaction was intensive. The contrast is clear but in general terms all the components analysed fell following GDP trend.

Public expenditure (G):

According to the theory of the business cycle, public expenditure is uncorrelated with output, less volatile than output, and slightly pro-cyclical (Caballero Jiménez, 2016). We leave public spending for the end of the analysis because unlike the rest of components, public expenditure presents an increasing trend due to the expansive policies launched by the Spanish government to stimulate the economy; mainly, spending on unemployment benefits policy and ERTES, spending on remuneration of non-civil servant (health) staff and social and health spending.

Figure 7. Public expenditure quarter variation with respect to GDP.



Source: Data from INE. Own elaboration.

In contrast with the rest of GDP components, public expenditure grew in net terms last year. We can see in figure 7 that quarter variation in second quarter was positive. The reason is government took social protection measures, boosted public expenditure. After summer period the GDP slowed the recovery and second Covid-19 wave hit the country. In that context the government keep employment shield (ERTES) and increased the public expenditure. The last quarter GDP variation was 16 percentage points under the public expenditure.

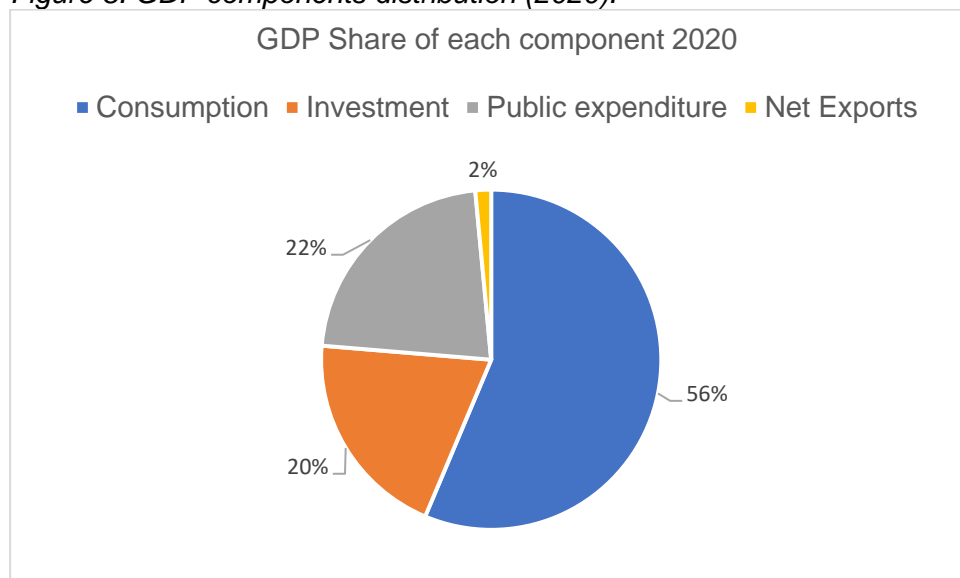
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As mentioned above, the government had to go to great lengths to prepare a package of measures to protect the economy. Naturally, public spending grew to finance these protective measures. Is increased public spending in exceptional situations the right thing to do? Necessary, in the general opinion of economists. Saving during periods of growth to provide a buffer against extreme and unlikely shocks seems the "healthiest" way forward, but it is realistic to expose the need for external financing or increased tax revenues.

“Ante perturbaciones adversas, los Gobiernos deben endeudarse, de manera que los niveles de gasto público se puedan sostener en estas situaciones, o incluso incrementarse, sin necesidad de recurrir a aumentos impositivos. Para ello, las finanzas públicas deberían acumular márgenes de maniobra (espacio fiscal) en los momentos de expansión económica que pudieran utilizarse en los momentos de dificultad. Así, desde un punto de vista Intertemporal, bajo esta condición, y siempre que los Estados tengan un acceso adecuado y continuo a los mercados financieros, el recurso al endeudamiento permite suavizar las fluctuaciones cíclicas o los costes de eventos extremos (poco probables).”
(Brunet, et al., 2021).

The most relevant expenditure within the package of measures approved by the government is that related to the ERTes, 14,738 million euros belong to the contributory unemployment benefit (1.3% of GDP) and 6018 million euros in contribution exemptions (0.5% of GDP). This amounts only in 2020, the measure is active in 2021. The measures include an increase in the volume of social and health care expenditure. Regarding to health expenditure, 1,317 million euros (0.1% of GDP) and in terms of social spending measures 147 million euros. Expenditure associated with helping the self-employed is quantified at 4,726 million euros for cessation of activity (0.4% of GDP) and 2388 million euros in contribution exemptions (0.2% of GDP). Of the 36,396 million euros spent on unemployment in 2020, 40.5% went to finance ERTes. In short, 47,304 million euros are COVID19 expenditure, a heavy bill mainly destined to health expenditure and to protect employment in Spain. In fact, if we compare the distribution of GDP components at the end of 2020 in Figure 8, we can observe that, as expected, the weight of government expenditure on GDP grew significantly... (AIREF, 2021).

Figure 8. GDP components distribution (2020).



Source: Data from INE. Own elaboration.

In short, our analysis reveals that all components of the Spanish GDP fell in 2020, with the only exception of government expenditure. Consumption performance was very similar to GDP. As concerned investment, while it experienced a severe drop in the first quarter of the year, it reacted adequately to the situation in the last quarter. Exports and imports experienced great volatility, with a large fall in the first half of the year and a strong recovery in the second half. As regards public expenditure, it ended the year with net growth supported in the second and fourth quarter of the year due to government measures to counteract the economic effects of COVID-19 on employment and to provide more resources to the health care system.

3. Differences between the 2008 financial crisis and the covid-19 crisis

The attacks of 1 September 2001 in the United States created a climate of uncertainty around the world. This climate encouraged households to prioritise savings over consumption. To revive consumption, the Federal Reserve reduced interest rates. Many families took out mortgage loans from commercial banks. Investment banks created CDOs (Collateralised Debt Obligations). They bundled mortgage securities of varying risk into a single security and sold it on the stock exchange. They sold it as a high-yield security to investors, foreign governments, pension funds... Why were they high-yield securities? The lending banks stopped checking the credit history or payment capacity of families. People with little or no ability to pay acquired mortgages, which became known as subprime mortgages (high possibility of default). In addition, they were granted with a variable rate, so if the interest rate rises, the instalment increases. In this context, investment banks introduced subprime mortgages in CDOs. The credit rating agencies analysed the CDOs, omitted the mortgages with poor payment projections and looked at the ones they did have. They gave AAA or AA ratings. Investors around the world bought these securities but, as a protective measure, purchased credit default swaps with insurers. The high demand for real estate drove up its price. The US government and the Federal Reserve denied the existence of a housing bubble. Speculators bet against CDOs; insurers gave speculators credit default swaps believing there would be no defaults. Consumption outstripped supply, causing inflation to rise. The Federal Reserve raised interest rates, which increased mortgage payments that many families could not afford. Banks began repossessing homes and the demand for homes fell, reducing their price. Liquidity became scarce and the price of CDOs fell. Despite capital injections and attempts to save the banking sector, on 15 September 2008 Lehman Brothers declared bankruptcy. Many people were left homeless and broke, mortgage banks and investment banks failed, investors ruined, insurers bankrupted and governments in trouble all over the world. The default moved to other types of consumer credit and mortgages that are less risky than subprime. Banks found it necessary to seek capital injections, more costly and difficult to access since the Lehman Brothers bankruptcy, to improve their cash position and adapt to the Basel Accords (Farhi & Cintra, 2009).

The Basel Accord contained a series of rules to control banks from incurring high credit risks by setting a minimum level of capital in relation to the risk assumed to be able to absorb possible losses in the event of default of their debtors (Rodríguez & Marín, 2005).

This was the sequence of events that triggered a systemic financial crisis in the US, mainly related to the mortgage market. This crisis quickly spread to the rest of the world and was complex, partly because of the number of actors involved:

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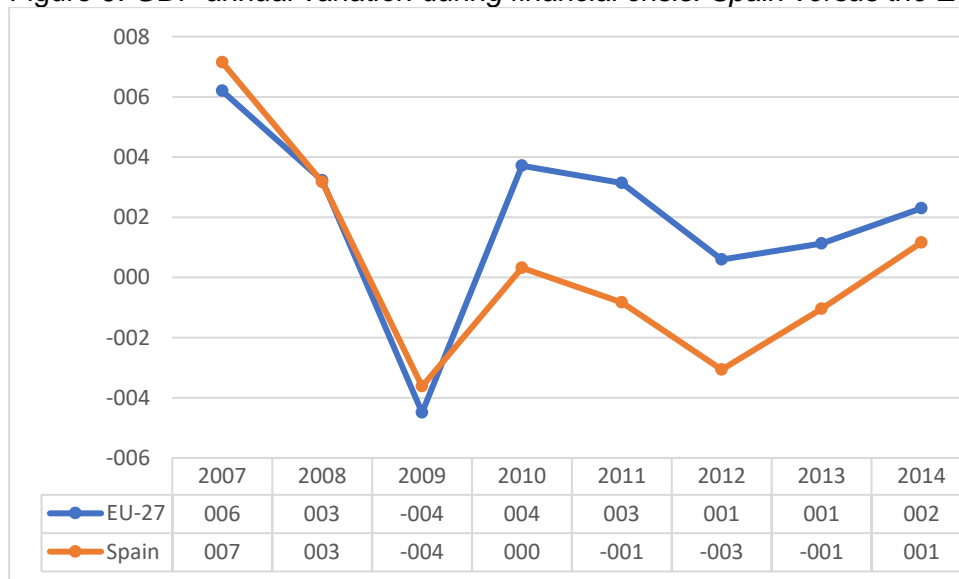
1. Families, households.
2. Commercial banks.
3. Investment banks.
4. Investors.
5. Insurance companies.
6. Rating agencies.
7. Federal Reserve.

The 2008 financial crisis was a demand shock. The loss of purchasing power of many lower-middle class families, the unemployment generated by the crisis and the bursting of the real estate bubble are some of the reasons that led to a fall in domestic demand.

In Spain, the international financial crisis burst the real estate bubble that had been building for more than a decade. Analysing the national case, the malpractice and lack of control of the savings banks and the real estate bubble meant a serious problem of solvency and international credibility. Who felt the weight of the crisis? The middle and lower social classes who bore the brunt of economic policies (Fernández Navarrete, 2016).

As in the previous section, it is interesting to observe graphically the evolution of GDP in relation to the EU-27 average.

Figure 9. *GDP annual variation during financial crisis: Spain versus the EU-27 average.*



Source: Data from Eurostat. Own elaboration.

Figure 9 clearly shows that the impact of the crisis was, at the beginning (2008-2009), almost one percentage point lower than the European average. Even so, the fall in GDP of more than 3.5% is remarkable. As we can see, the average European country returned to growth as early as 2010 (driven mainly by the strength of Germany), while Spain remained close to zero growth in 2010 and declined until 2014.

The collapse of the real estate sector hit savings banks and commercial banks very hard. Mortgage defaults and the large number of unsold properties due to their high price at the time of the crisis were a lethal combination. Construction companies went bankrupt and banks restricted credit as they had no liquidity on their balance sheets. In the case of Spain, the government tried to sustain this situation by issuing public debt into the market and in some

cases nationalising banks to avoid an even worse situation. The issuance of debt by the state increased to meet these expenses.

Table 2. General government gross debt of EU-27 countries. Percentage of GDP.

Period	2007	2008	2009	2010	2011	2012	2013	2014
Austria	65	68,7	79,9	82,7	82,4	81,9	81,3	84
Belgium	87,3	93,2	100,2	100,3	103,5	104,8	105,5	107
Bulgaria	16,3	13	13,7	15,4	15,2	16,7	17,1	27,1
Croatia	37,5	39,3	48,7	57,7	64,3	70,1	81,2	84,8
Cyprus	54	45,5	54,3	56,4	65,9	80,3	104	109,1
Czechia	27,3	28,1	33,4	37,1	39,7	44,2	44,4	41,9
Denmark	27,3	33,3	40,2	42,6	46,1	44,9	44	44,3
Estonia	3,8	4,5	7,2	6,6	6,1	9,8	10,2	10,6
Finland	33,9	32,6	41,5	46,9	48,3	53,6	56,2	59,8
France	64,5	68,8	83	85,3	87,8	90,6	93,4	94,9
Germany	64,2	65,7	73,2	82,5	79,9	81,2	78,8	75,7
Greece	103,1	109,4	126,7	147,5	175,2	161,9	178,4	180,2
Hungary	65,7	71,8	78,2	80,2	80,4	78,4	77,4	76,7
Ireland	23,9	42,4	61,7	86	111	119,9	119,9	104,2
Italy	103,9	106,2	116,6	119,2	119,7	126,5	132,5	135,4
Latvia	8,5	18,6	36,8	47,9	43,7	42,2	40	41,6
Lithuania	15,9	14,6	28	36,2	37,1	39,7	38,7	40,5
Luxembourg	8,2	15,4	16,1	20,2	19	22	23,7	22,7
Malta	61,9	61,8	66,3	65,3	69,3	65,9	65,8	61,6
Netherlands	43	54,7	56,8	59,3	61,7	66,3	67,7	67,9
Poland	44,5	46,7	49,8	53,5	54,7	54,4	56,5	51,1
Portugal	72,7	75,6	87,8	100,2	114,4	129	131,4	132,9
Romania	11,9	12,3	21,8	29,6	34	37,1	37,6	39,2
Slovakia	30,3	28,6	36,4	41	43,4	51,8	54,7	53,6
Slovenia	22,8	21,8	34,5	38,3	46,5	53,6	70	80,3
Spain	35,8	39,7	53,3	60,5	69,9	86,3	95,8	100,7
Sweden	38,9	37,5	40,7	38,1	37,2	37,5	40,2	45

Source: Data from Eurostat. Own elaboration.

As we can see in Table 2, all countries increased their public debt in the wake of the financial crisis. This crisis was compounded in 2011 by a sovereign debt crisis that particularly affected the so-called PIGS (Portugal, Italy, Ireland, Greece and Spain). These countries were characterised by large deficits and balance of payments problems. In the case of these countries, public debt reached or exceeded 100% of GDP. In the case of Italy and Greece, they already had a debt level above 100% of GDP before the financial shock. The risk premium of these countries soared, creating misgivings among debt buyers and in making it difficult for governments to refinance debt.

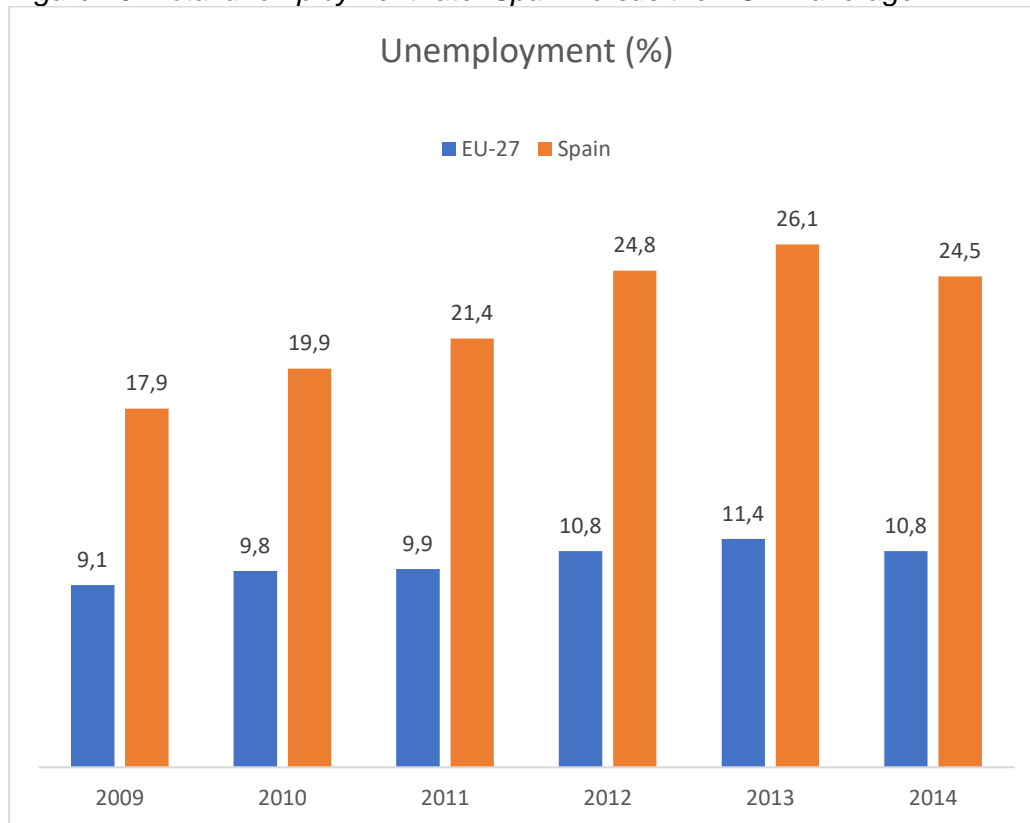
A definition of risk premium would be as follows:

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Debt rating agencies did not help to facilitate the placement of debt by these countries. In this context, the spectre of an economic bailout was already a reality. The European Union approved the bailout of the governments of Greece (several), Ireland and Portugal, as well as the financial rescue of Spain. Portugal did not receive it in the end. Europe's financial support included structural changes that the governments of these countries committed themselves to undertake, taking very unpopular measures. Key was the intervention of the president of the European Central Bank, Mario Draghi, who assured that he would do everything possible to sustain the euro. Following this announcement, the PIGS improved their ability to place debt and the situation in the markets gradually calmed down.

Another pro-cyclical macroeconomic indicator that was strongly affected was unemployment. In the case of Spain, the construction sector provided a large volume of employment to the economy. Once the financial crisis hit and the real estate bubble burst, Spanish labour market data were very negative in those years. It is true that Spain suffers more acutely from economic cycles than other countries historically, but it is still worth analysing the data in relation to EU countries.

Figure 10. Total unemployment rate: Spain versus the EU-27 average.



Source: Data from Eurostat. Own elaboration.

As can be seen in Figure 11, the unemployment rate in Spain followed a trend similar to that of the EU-27, increasing from 2009 to 2013 and starting a small decrease in 2014. However, the variation in the unemployment rate during these years was very strong in Spain. From 17.9% in 2009 to 24.5% in 2014, with a peak of 26.1% in 2013. It contrasts with the slight variation in the EU-27, with an unemployment rate of 9.1% in 2009 which stood at 10.8% in 2014 with a peak of 11.4% in 2013.

Table 3. Total unemployment rate EU-27 countries.

Period	2009	2010	2011	2012	2013	2014
Austria	5,3	4,8	4,6	4,9	5,4	5,6
Belgium	7,9	8,3	7,2	7,6	8,4	8,5
Bulgaria	6,8	10,3	11,3	12,3	13	11,4
Croatia	9,2	11,7	13,7	16	17,3	17,3
Cyprus	5,4	6,3	7,9	11,9	15,9	16,1
Czechia	6,7	7,3	6,7	7	7	6,1
Denmark	6,4	7,7	7,8	7,8	7,4	6,9
Estonia	13,5	16,7	12,3	10	8,6	7,4
Finland	8,2	8,4	7,8	7,7	8,2	8,7
France	9,1	9,3	9,2	9,8	10,3	10,3
Germany	7,8	7	5,8	5,4	5,2	5
Greece	9,6	12,7	17,9	24,5	27,5	26,5
Hungary	10	11,2	11	11	10,2	7,7
Ireland	12,6	14,6	15,4	15,5	13,8	11,9
Italy	7,8	8,4	8,4	10,7	12,2	12,7
Latvia	17,5	19,5	16,2	15	11,9	10,8
Lithuania	13,8	17,8	15,4	13,4	11,8	10,7
Luxembourg	5,1	4,4	4,9	5,1	5,9	5,9
Malta	6,9	6,9	6,4	6,2	6,1	5,7
Netherlands	4,4	5	5	5,8	7,3	7,4
Poland	8,2	9,7	9,7	10,1	10,3	9
Portugal	9,6	11	12,9	15,8	16,4	14,1
Romania	6,9	7	7,2	6,8	7,1	6,8
Slovakia	12	14,4	13,6	14	14,2	13,2
Slovenia	5,9	7,3	8,2	8,9	10,1	9,7
Spain	17,9	19,9	21,4	24,8	26,1	24,5
Sweden	8,4	8,6	7,8	8	8,1	8

Source: Data from Eurostat. Own elaboration.

As can be seen in Table 3, Spain leads the increase in unemployment in Europe except for Greece, which, as previously indicated, had to be bailed out on several occasions. They were the only two countries in the EU-27 that exceeded the 20% unemployment barrier. In relation to the other members of the PIGS (Portugal, Italy and Ireland), their unemployment rates were between 10-15 per cent in 2014. Negative figures, but far from those of Spain and Greece. In the case of France, the unemployment rate reached 10.3% in 2014, an increase of just over 1% since 2009. It is worth highlighting the case of Germany, which reduced its unemployment rate from 7.8% to 5% from 2009 to 2014. Germany's strength as the engine of Europe is evident, further distancing it from the other major European economies.

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For Spain, the 2008 crisis marked the end of a period of economic prosperity based on the real estate sector since the late 1990s. The bursting of the real estate bubble triggered unemployment and led to the bankruptcy of many construction companies as well as the restructuring of the banking system. A demand shock in which consumption fell causing a contraction of the economy. Rising unemployment and the credit crunch exacerbated the crisis and the government had to intervene to save banks strangled by defaults. Spain's credibility in the markets worsened, making it difficult to place public debt in the market. Investors were wary and debt rating agencies contributed negatively to this. Faced with this scenario, we received European aid to rescue the financial system. The aid package was linked to the obligation to implement a series of changes in the economy. The government implemented measures that included spending cuts and tax increases, as well as a labour reform to make the labour market more flexible.

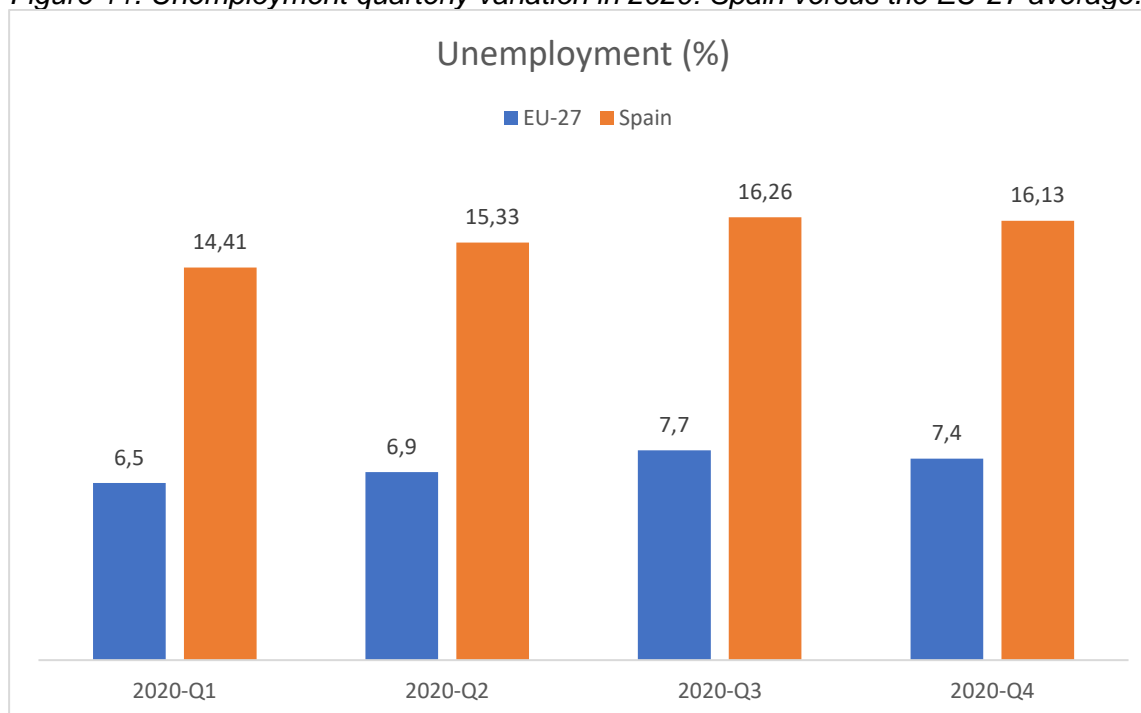
From 2014 onwards, Spain recovered the path of economic growth and this was reflected in the data on the evolution of GDP and its aggregates, until we reached the year 2020 and the economy suffered an unpredictable economic shock of a completely different origin to the previous crisis.

Just as the 2008 crisis had a financial origin explained at the beginning of the chapter, in 2020 the world faced (and still faces) a different threat that puts governments in check by forcing them to take decisions to protect their populations that irremediably hit the economy.

In late 2019, a new coronavirus was identified in Wuhan, China. This virus causes severe respiratory problems in elderly patients or those suffering from other pathologies. The so-called SARS-CoV-2 has a very large capacity to spread and rapidly did so around the world (Alanagreh, et al., 2021). In Europe, Italy was the first country to diagnose cases of the new coronavirus imported from China, the second was Spain. The virus was spreading at cruising speed around the world, triggering a global economic crisis. The only defence against this threat is the health systems, which were overwhelmed during the first wave of the coronavirus. Governments enacted home confinement to flatten the curve so that health systems could cope with the volume of COVID-19 patients.

In the case of the coronavirus crisis, the economic shock was supply-side, at least initially. Confining people to their homes and keeping only basic sectors of the economy functioning limited the supply of goods and services. In this case, it was not a problem of purchasing and investment capacity on the part of individuals and companies, but rather that the productive system was operating at a minimum to supply the population with its basic needs. This situation generated unemployment and greatly reduced household income, which reduced consumption, generating a demand shock in the economy. Section 2 shows how GDP reacted to these events, with a much more severe fall in the short term compared to the financial crisis. In Spain, the demand for ERTes soared as an employment protection measure. How did the unemployment rate react during 2020?

Figure 11. Unemployment quarterly variation in 2020: Spain versus the EU-27 average.



Source: Data from Eurostat and INE. Own elaboration.

As during the 2008 crisis, the unemployment rate in Spain is much higher than in the EU-27. In this case, the nuance is that the workers in ERTE remain in the employed group and therefore unemployment explains less of the fall in GDP. The sector that has been hardest hit during this crisis has been the tourism sector due to the limitations of movement and social distancing, unlike the real estate sector in the 2008 crisis.

Following the analysis carried out in this paper, the variations in the indicators and components analysed are much more pronounced in the coronavirus crisis. Given that we are still living this latest crisis, the question is: What are the government's prospects for economic recovery?

“La recuperación en forma de 'K' de la que tanto se habla ahora es compatible con la 'V asimétrica' de la que delinea el Gobierno de España. La recuperación no solo va a ser larga, sino que además va a ser muy desigual, que es lo que da forma a la 'K': la pata alta de esta letra representa a los sectores, personas o, incluso países, que pueden salir ganando en la era post-covid (o que ya están beneficiándose), mientras que la pata baja representa a los perdedores. En resumen, la recuperación en 'K' venderá acompañada de mayor grado de desigualdad económica, que los gobiernos intentarán reducir con sus políticas.” (Nieves, 2020).

With the arrival of mass vaccination, 2021 seems to be the last year of the pandemic's major influence on the economy. As determined in chapter 2 of this paper, the government received financial assistance from Europe and increased public expenditure to combat the crisis. How did public debt evolve?

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Table 4. Quarterly government debt of EU-27 countries. Percentage of GDP.

Period	2020-Q1	2020-Q2	2020-Q3	2020-Q4
Austria	73,2	82,4	78,9	83,9
Belgium	103,4	114	113,1	114,1
Bulgaria	20,1	21,3	25,3	25
Croatia	73,7	84,5	86,1	88,7
Cyprus	96,2	113	119,2	118,2
Czechia	32,7	39,9	38,4	38,1
Denmark	32,9	41	41,9	42,2
Estonia	8,9	18,5	18,5	18,2
Finland	64,4	68,7	67	69,2
France	101,3	113,9	116,4	116,3
Germany	60,9	67,3	70	69,8
Greece	180,7	191,3	199,8	205,6
Hungary	65,8	70,3	73,9	80,4
Ireland	59	62,8	62,3	59,5
Italy	137,8	149,5	154,5	155,8
Latvia	37,1	43	44,7	43,5
Lithuania	33	41,4	45,9	47,3
Luxembourg	22,2	23,9	26	24,9
Malta	43,3	50,1	52,6	54,3
Netherlands	49,5	55,2	55,2	54,5
Poland	47,6	54,8	56,6	57,6
Portugal	119,2	125,7	130,5	133,6
Romania	37,4	40,7	43,1	47,3
Slovakia	49,5	60,1	60,5	60,6
Slovenia	68,9	78,2	78,4	80,8
Spain	99,1	110,2	114	120
Sweden	35,9	37,2	38,5	39,9

Source: Data from Eurostat. Own elaboration.

As can be seen in Table 4, all EU-27 countries have increased their public debt as a percentage of GDP. Undertaking the necessary policies to contain the coronavirus crisis has meant a logical increase in indebtedness.

As in the 2008 crisis, the so-called PIGS, except for Ireland, are well above 100% debt as a percentage of GDP. In the case of Greece, it even reaches 200% of GDP, making it once again the worst in Europe in these terms. France and Belgium also reach very high debt levels at the end of 2020. The public debt problem existed pre-pandemic for many of these countries and long-term solutions are needed. Again, the example of orthodox and effective management is Germany, whose public debt has increased by 10 percentage points in 2020 and stands near 70% of GDP.

In the post-crisis period, inequality is expected to rise. Some industrial sectors and households will recover and become part of aggregate GDP growth, while others will not be part of the recovery and remain unemployed or vulnerable. To contain the rise in inequality, the government will have to get its policies right.

The study reveals differences and similarities between the two crises:

- The 2008 crisis had a financial origin in the US related to the real estate market and the global spread of toxic assets, in the case of the 2020 crisis the origin is the spread of a virus that forced to stop the global economy in its tracks to avoid excess mortality.
- The 2008 financial crisis was a demand shock, while the coronavirus crisis was an initial supply shock that also led to a demand shock.
- In both cases GDP contracted, most sharply in 2020, although it is expected to recover faster than during the financial crisis.
- The unemployment grew more during the financial crisis than de coronavirus crisis.
- The 2008 crisis sent public debt soaring, the coronavirus crisis also aggravated this indicator, but it was already at pre-crisis near of 100% GDP.
- In both cases, the Spanish economy reacted worse to these shocks than the European average.
- Inequality is expected to increase after overcoming the coronavirus crisis, as in the financial crisis.
- To be able to undertake and finance the necessary measures that each crisis demanded, Spain needed European funding.

4. Conclusion

As the study shows, GDP has suffered a severe setback during 2020. This downturn is based on a paralysis of the economy (caused by house confinement) that affected all components of GDP and forced the government to increase public spending to face this economic shock. Spain's problem is that it was already highly indebted and needed a European financial aid package to meet the costs of the measures adopted. The ERTes and health expenditure represent most of the expenditure within the package of measures approved by the government in 2020. Employment protection has been a priority during the pandemic. In relative terms, Spain has performed worse during the crisis than the European average. Applying a comparative analysis to the coronavirus crisis with the 2008 financial crisis shows that, although the origin is of a completely different nature, the effects on the economy are similar in some parts. While the 2008 crisis was a severe blow to the real estate sector, the Covid-19 crisis is a severe blow to the tourism sector. Spain has a structural debt problem that was originated with the financial crisis and has become even worse in 2020. Unemployment remains high and is very sensitive to changes in GDP. Consideration should be given to the need to assume structural changes in the Spanish labour market since, as this paper has shown, it undergoes very intense fluctuations during periods of economic downturn. After the 2008 crisis there was an increase in inequality and expectations are the same for the post-covid period. It took years for gross domestic product to return to the growth path during the financial crisis, although the decline was more gradual and controlled.

The pandemic caused an economic shock that affected more the GDP in the shorter term, but the perspective of recovery to pre-crisis levels are more immediate. The GDP behaviour means changes in other indicators or components of the economy. As the study shows, consumption has a big role inside de economy and it's strong related with employment. If the level of unemployment stays low, it means that households have the resources to keep their consumption levels, invest in new housing. I believe that if the countries can regulate and control the labour market, in the way to improve the employment perspective, others macroeconomics measures as public debt or GDP grow will react in a good path. It is not easy to predict when recovery will come. Overcoming the viral threat is essential but, once this objective has been achieved, the appropriate use of European funds to implement structural reforms to solve the problems of youth unemployment and public debt will be essential.

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