



Facultat de Ciències Jurídiques
i Econòmiques · **FCJE**

THE MACROECONOMIC EFFECTS OF COVID-19 IN SPAIN: A COMPARATIVE ANALYSIS

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Abstract:

The coronavirus pandemic has left our economy in an unprecedented situation. The impact has been massive and global, and although it is expected to be temporary, it could cause structural damage. Some characteristics of our economy, such as the sectoral specialisation of our productive system, the small average size of firms and the high degree of seasonality, make it more vulnerable than other countries.

Such a situation initially requires immediate and decisive economic policies. These policies must be limited in time, until employment and economic activity regain momentum after the imposed closure, and coordinated at the international level. The aim is to mitigate the loss of income of households and firms affected by the crisis and to prevent the temporary shock from having lasting effects over time. Fiscal policy is the most appropriate tool for this purpose. Monetary policy must also be active to ensure adequate financing and liquidity conditions for economic agents. Policies should encourage financial institutions to continue to ensure that credit reaches households and firms, thereby maintaining the financial stability of the system. Social policies must also be implemented to help the sectors most affected by the crisis.

As the crisis is global, a coordinated response is also needed at the international level. At the European level, a common response is needed, supported by a risk and financial resource sharing mechanism and a global banking union.

Once the tipping point of this crisis is passed, economic policies should reduce structural deficits and public debt and promote long-term growth.

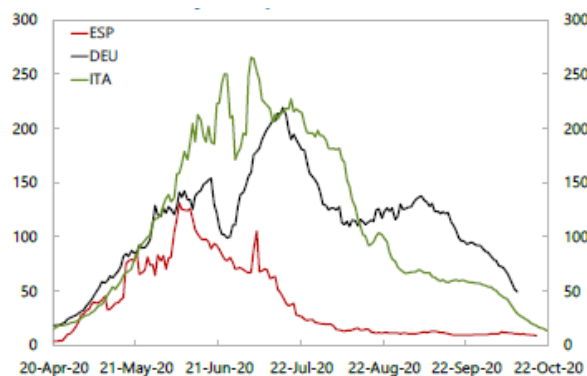
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1. Introduction

To contain the spread of the disease, the authorities ordered the confinement of the population to their homes and the closure of entire sectors of economic activity. These include, in particular, some of the most labour-intensive service industries, such as accommodation and catering activities and a significant part of the retail trade. The rapid increase in the number of cases prompted the government to declare a state of alert on 14 March for a two-week period, which has since been extended for two 15-day periods until 26 April. Mobility restrictions were tightened between 30 March and 9 April, with the suspension of all non-essential economic activity.

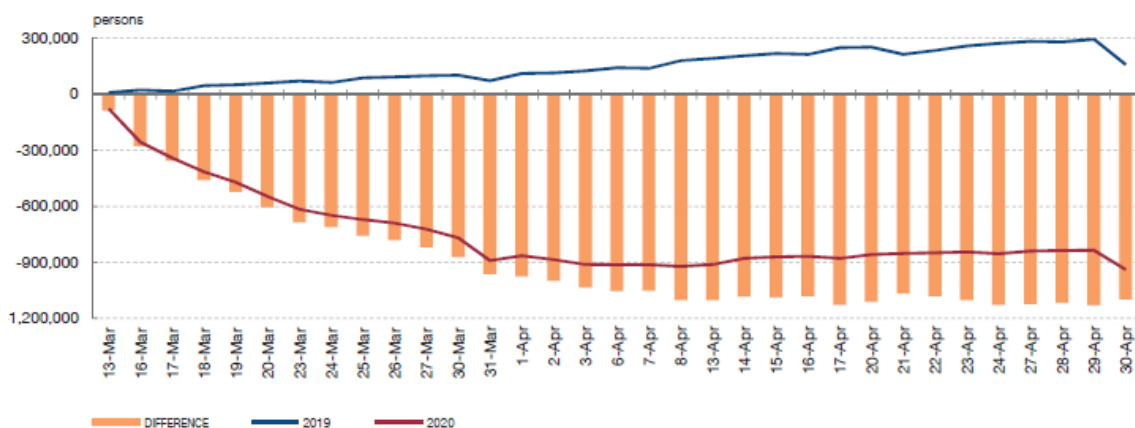
Chart 1 Daily positive tests from Spain, Germany and Italy



Source: Fondo Monetario Internacional

The impact of the fall in productive activity has been particularly evident in the labour market. In the days prior to the declaration of the state of emergency on 31 March, social security registrations fell by almost 900,000 (Chart 2). In addition, a very large number of workers have been affected by temporary lay-offs (ERTE).

Chart 2 Developments in social security registrations between 13 March and 30 April

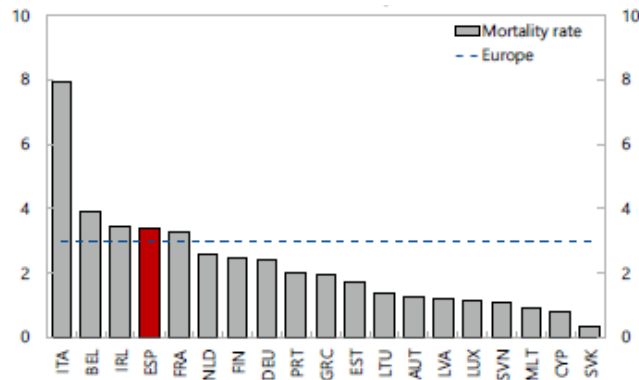


Source: Banco de España

After the first wave of infections in March and April that caused nearly 28,000 deaths and severely strained the health care system, there was a second, larger wave of infections since mid-July. While mortality rates remained much lower, hospitalisation rates rose sharply in some regions as each community had its own measures. Since October, the government launched criteria and a new state of emergency in an attempt to legally cover tighter restrictions and better coordinate the responses of communities that have responsibility for

public health policy. During the first wave, the government centralised health care measures by declaring a state of emergency from March to June.

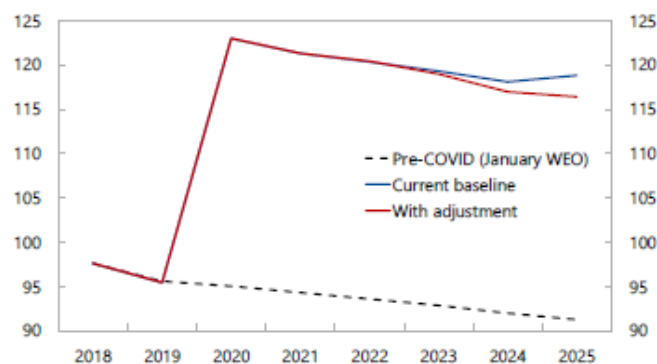
Chart 3 Share mortality



Source: Fondo Monetario Internacional

According to the Bank of Spain's report, Spain entered the COVID-19 pandemic with an estimated structural deficit of around 3% of GDP and a public debt ratio of around 96% of GDP at the end of 2019 (Chart 4).

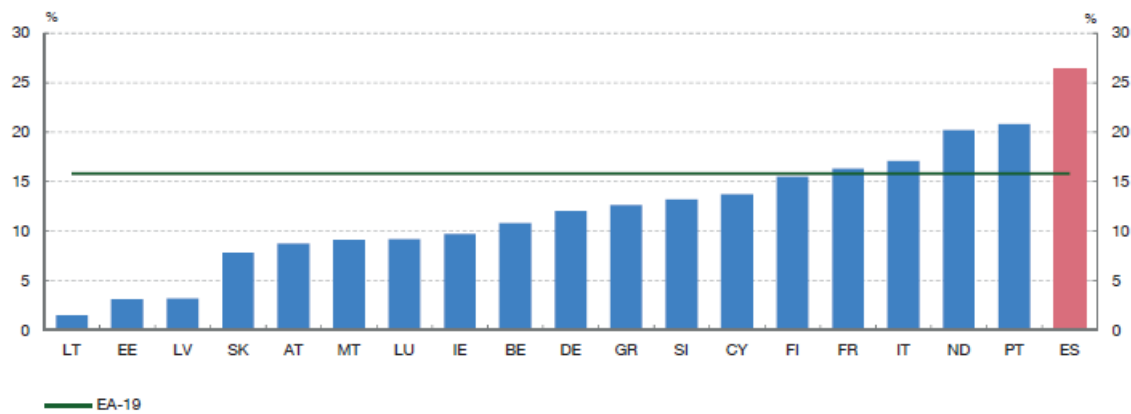
Chart 4 Evolution of public debt



Source: Fondo Monetario Internacional

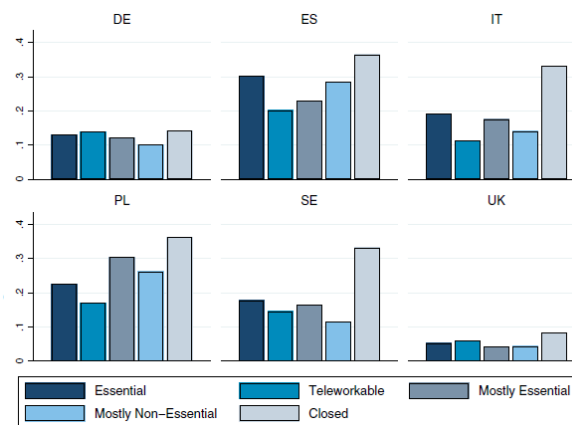
The large economic contraction accentuated high income inequality and put further pressure on public finances. Spain has one of the highest shares of temporary employment in Europe (Chart 5, 6). Employees on fixed-term contracts, many of whom work in the hardest hit sectors of tourism and hospitality, bore a disproportionately high burden of the crisis. As already high public debt increased further, a key medium-term challenge was to maintain sustainable public finances and to share the burden of adjustment and financing equitably.

Chart 5 Percentage of temporary work



Source: Banco de España

Chart 6 Share of temporary work by category



Source: Journal of Industrial and Business Economics

In terms of economic impact, there were three determinants of policy outcomes according to the IMF report.

First, the magnitude of the impact was immense. Unfortunately, we saw how, in a short period of time, the pandemic pushed our health system to its limits, cutting short thousands of human lives and leaving a deep scar on their families and on Spanish society as a whole. The situation led our authorities to adopt social distancing measures that limited people's movements and a complete shutdown of activity in some non-essential production processes. The pandemic increased uncertainty, causing a sharp drop in agents' confidence and a sharp fall in the price of many financial assets.

Second, the crisis was triggered by a temporary factor, although it was more lasting than initially expected, and is not related to the functioning of the economy. The duration of the crisis is uncertain. However, it should be limited and give way to recovery once the disease has been brought under control. However, it cannot be ruled out that, despite its temporariness, the crisis will have a structural impact.

The third and final feature is the global character of this crisis, which is dealing a severe blow to the world economy. This means that the depth of the recession in the Spanish economy and the subsequent recovery will also depend on how other countries fare.

These three characteristics determined the particularities of the economic policy response. The severity, timing and global impact of the shock initially required that economic policy actions be forceful, time-limited and internationally coordinated. (Fondo Monetario Internacional, 2020)

The aim was to bring the economy out of this shutdown with as little damage as possible and thus prevent a temporary shock causing persistent effects over time. This required decisive action during the initial phase of the activity restriction to reduce the loss of income of households and firms affected by the crisis and to prevent the temporary closure of business activity from becoming permanent. This action should be tailored to the duration of the activity restrictions, taking into account that they are expected to affect different productive sectors and firms unevenly.

In the phase of containing the economic impact of the crisis, fiscal policy is the most appropriate tool as a first line of defence. Preventing the temporary paralysis of activity from leading to a permanent destruction of the productive system requires mitigating the loss of income of the households and companies affected. Moreover, from the point of view of equity, it seemed reasonable that society as a whole should share the burden of the costs that some citizens were already bearing more directly. In this respect, only fiscal policy has the right instruments to achieve these objectives with immediate, targeted measures adapted to an uncertain and uneven duration. (Caracciolo, G., Cingano, F., Ecolani, V., Ferrero, G., Hassan, F., Papetti, A., & Tommasino, P. et al., 2020; Fondo Monetario Internacional, 2020; Hernández de Cos, 2020)

Monetary policy also had to operate swiftly to ensure adequate financing and liquidity conditions for the various economic agents. In the specific case of the euro area, the Eurosystem approved large-scale purchases of financial assets, to allow euro area private agents and fiscal authorities to benefit from low funding costs, and took various measures to boost banking. This is particularly important in an environment in which the financing needs of economies increased more significantly as a result of the crisis. (Caracciolo, G., Cingano, F., Ecolani, V., Ferrero, G., Hassan, F., Papetti, A., & Tommasino, P. et al., 2020; Hernández de Cos, 2020)

Macroeconomic policies in the financial system must operate to ensure an adequate flow of credit to the economy while preserving financial stability. The aim is for financial institutions to continue to ensure the flow of credit to households and firms affected by the crisis. For example, using the capital buffers accumulated in recent years precisely for this purpose. A parallel objective is to prevent the increase in credit, market and operational risk resulting from the sharp fall in activity from generating financial instability. (Hernández de Cos, 2020)

Moreover, the global nature of the crisis required a coordinated response from countries. The temptation to resort to protectionist policies had to be avoided. That would only paralyse the fight against the pandemic and delay and weaken the expected economic recovery for all. Instead, we should strengthen the multilateral economic policy coordination mechanisms that already existed at the international level.

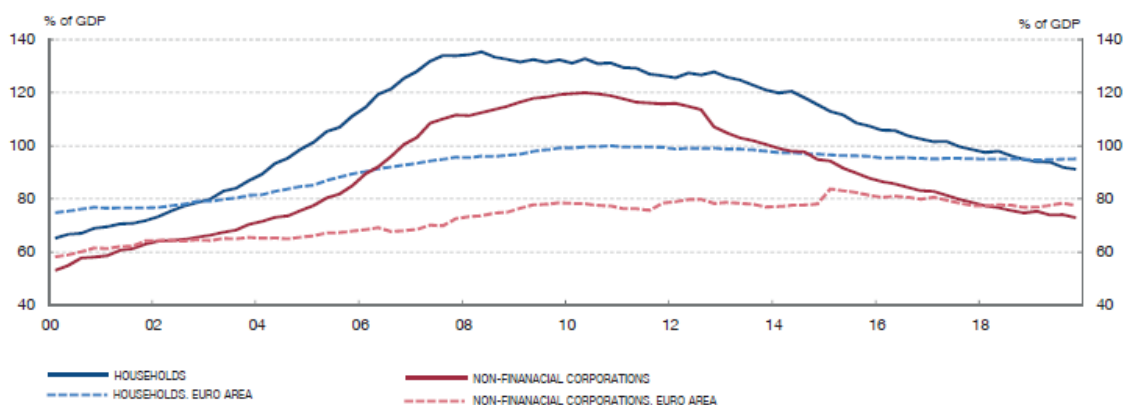
This need was particularly evident for the members of the euro area, as we share the same currency. For each and every member, joint action was the most effective means of ensuring that the economic effects of the pandemic would be overcome in a shorter time and at lower cost. While the impact has been common, the effect between countries has not been the same and the initial position was also different.

That said, the way this crisis will unfold is shrouded in high uncertainty. In the initial situation, from a public health point of view, there were many unknowns about how the disease would evolve in the coming months, whether there would be new waves of infection. This determined the pace at which normality would return to our daily lives and thus to economic activity. In this sense, the longer the duration of the economic shutdown, the greater the damage to activity.

Moreover, it cannot be ruled out that, beyond its short- and medium-term effects, the pandemic may also trigger certain structural changes in the supply and demand side of our economies. Identifying these structural changes is important, as the economic policy response should not only aim at temporarily sustaining the income of affected firms and employees, but also at assisting reconstruction and inter-sectoral and cross-sectoral reallocation of firms.

There are also adverse side effects. These are particularly visible in the sharp increase in public debt. Consequently, just as a decisive fiscal response in the short term will help reduce future damage to our economy, we must accept that a stronger budgetary impulse now must be part of a clear strategy to repair public finances. This is especially necessary here, as we face this crisis from a vulnerable starting position of public finances, due to high levels of public debt and structural deficits (Chart 7).

Chart 7 Evolution of debt as a percentage of GDP



Source: Banco de España

On the other hand, the ERTes have been instrumental in limiting the impact on unemployment. The banking sector, supported by policy measures such as government loan guarantees and the ECB's accommodative monetary policy, has continued to support the real economy with credit intermediation. Mitigating the impact on the economy affected government finances, and the public debt ratio was expected to rise to around 120% of GDP by 2020. (Hernández de Cos, 2020)

However, the economic outlook was surrounded by a high degree of uncertainty. The first major source of uncertainty related to the length of the period of confinement, as I discussed earlier.

There was also uncertainty about the extent of the measures that may be necessary, once the state of alert has been lifted, to prevent new cases and contain emerging ones. Moreover, the absence of a similar historical precedent with which to compare the current global crisis made the analysis of the impact on the economy and the financial sector of the measures adopted by the various authorities particularly complicated. (Caracciolo, G., Cingano, F., Ercolani, V.,

Ferrero, G., Hassan, F., Papetti, A., & Tommasino, P. et al., 2020; Fondo Monetario Internacional, 2020)

There is no doubt that the rapid spread of COVID-19 around the world and the policy measures taken to curb it have caused major negative economic shocks, never before experienced. The adverse economic effects of the pandemic at the level of individual countries have also been accentuated by the trade and financial linkages that have been growing since World War II. Unlike a typical macroeconomic shock, the COVID-19 shock and the policies implemented to contain it have led to simultaneous supply and demand shocks in an entirely new economic environment, where consumers and businesses face additional uncertainties about the disease itself.

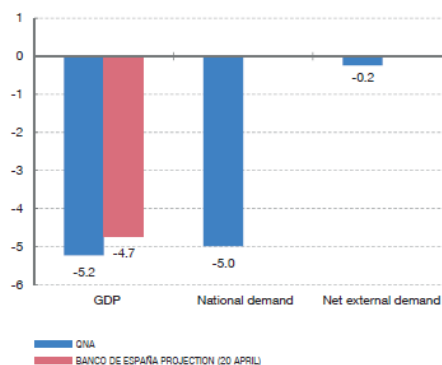
On the supply side, contagions reduce labour supply and productivity, and business closures and social distancing lead to supply disruptions. On the demand side, layoffs and loss of income and worsening economic prospects reduce household consumption and business investment. Extreme uncertainty about the path, duration, magnitude and impact of the COVID-19 pandemic could pose a vicious circle that weakens business and consumer confidence and tightens financial conditions, which could lead to job losses and investment cuts in the expectation of a lower future aggregate.

2. Macroeconomic Analysis

Globally, the spread of the pandemic and the necessary containment measures drastically disrupted the global economy. Evidence that has come to light in recent months reveals a marked fall in activity and employment, most notably in the service sectors and in those countries that, affected by a more severe outbreak of the epidemic, applied stricter containment measures.

Spain was one of the countries most affected by the health crisis and, subsequently, by the impact of containment measures on economic activity. A preliminary estimate by the INE (National Statistics Institute) indicates that GDP fell by 5.2% in the first quarter of 2020, despite the fact that the state of alert only affected the last fortnight of this period. (Hernández de Cos, 2020, *INE. Instituto Nacional de Estadística*)

Chart 8 Deviation of GDP, domestic demand and net external demand



Source: Banco de España

In the labour market, the pandemic and the measures taken to contain it also left a deep mark. Social Security registration figures reveal a reduction of almost 900,000 employed persons

between mid-March and 30 April (Chart 9). Job losses were mainly concentrated in the second half of March. This figure contrasts with the increase of almost 160,000 in Social Security registrations in the same period of 2019.

Chart 9 Social security contributions



Source: Banco de España

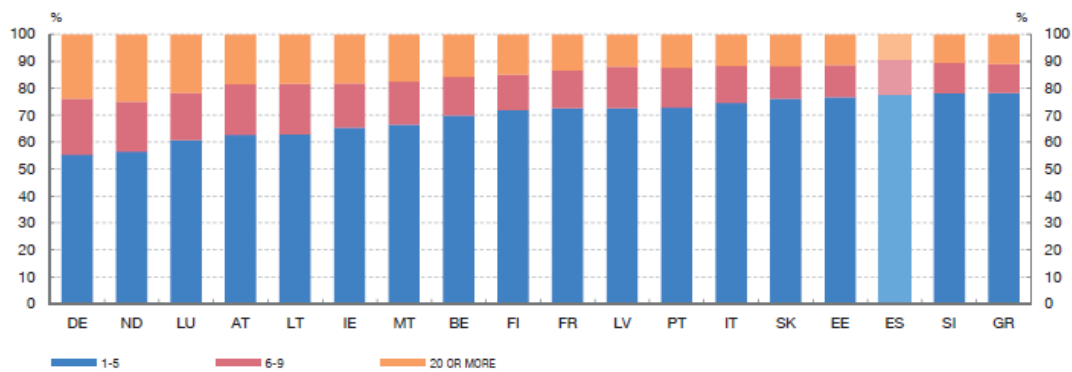
In any case, the Social Security figures give a partial picture of the consequences of the current crisis on the labour market. An even larger contingent of employees, some 3.4 million, have taken ERTes. ERTes involve the formal maintenance of the contractual relationship, pending the resumption of activity, although there is no actual employment benefit. In addition, 1.3 million self-employed workers have applied for unemployment benefits.

Beyond the short term, estimates of the duration and depth of the effects of the shock on the economy are still subject to much uncertainty. But these effects depended to a large extent on two types of factors. The first relates to the future course of the disease. In particular, new waves of the epidemic occurred, forcing constraints on various types of productive activity to be tightened.

The second factor relates to the effectiveness of the measures, both in Spain and in the rest of the world, that the economic authorities have implemented in an attempt to prevent the shutdown of activity at the height of the pandemic from leading to permanent job losses and company closures. Clearly, these two factors are related.

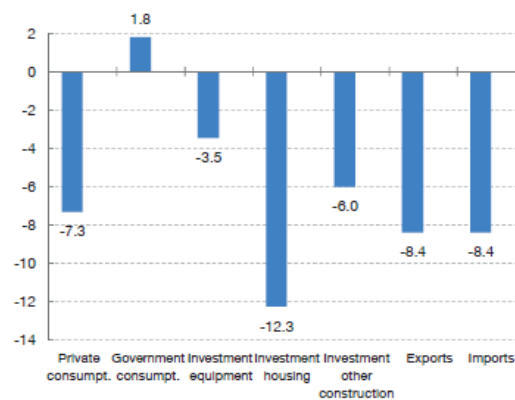
In any case, it should be stressed that certain characteristics of our economy make it more vulnerable than others to the shock we face. These include the sectoral specialisation of our productive system, the small and medium size of firms and the high rate of temporary employment.

Chart 10 Percentage size of enterprises



Source: Banco de España

Chart 11 Components of GDP in 2020

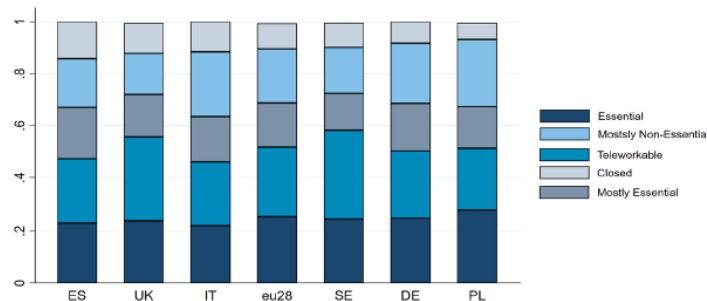


Source: Banco de España

2.1. Spanish starting point

Firstly, in Spain, tourism-related activities have a very high weight in terms of both added value and employment. And, as we know, the social distancing measures have most acutely affected the hotel, restaurant and leisure sectors. It is not known how long it will take for these sectors to return to normality.

Chart 12 Distribution of employment by category and country



Source: Journal of Industrial and Business Economics

Overall, the sectors most affected by the pandemic represent in the case of Spain around 25% of GDP. These include hotels and restaurants, transport and retail, due to restrictions on the movement of people and the suspension of their activity, and others such as the automotive

industry, due to the paralysis of demand and the interruption of global supply chains. (Banco de España, 2020)

Second, in terms of business structure, Spain has a comparatively higher weight of SMEs than most euro area economies. The small average size of non-financial corporations places the Spanish productive system in a position of greater vulnerability to loss of income as a consequence of the COVID-19 crisis, as SMEs in general have less access to external financing and higher overheads relative to turnover.

Finally, this crisis has again strongly highlighted the fact that, as in previous recessions, when there is a negative shock, job destruction falls disproportionately on temporary workers. Specifically, the weight of these employees in the decline in Social Security registrations between March and April is estimated to have been around three quarters of the total, a proportion similar to that during the financial crisis.

Higher labour turnover and the high rate of part-time employment mainly affect young people. This group is particularly vulnerable in these circumstances, as they have fewer cushions to withstand unexpected drops in income, and the public insurance mechanisms available to them are limited compared to other groups. Moreover, young people had not yet recovered their income and wealth levels prior to the financial crisis. (Banco de España, 2020)

2.2. Joint European action

Purely individual measures by several euro area countries will not provide the most effective response to the crisis. We have forged ever closer ties as European citizens over the past decades, and this process has intensified over the past 20 years following the creation of the single currency. Europe has been one of the regions hardest hit by the current crisis, so all Europeans have been affected, to a greater or lesser extent, by the same problem.

Some of the reasons for the joint action of European countries in response to this emergency go beyond economics. Europe has the ideas of freedom and progress. And in a crisis of this severity, it is essential that European citizens perceive that their governments are capable of acting together if we are to consolidate and strengthen public support for the European project. (Hernández de Cos, 2020)

Over time, our economies have become closely intertwined from a trade and financial point of view. In situations of shared shocks such as this crisis, there are even stronger reasons to act in unison. In any case, it should be borne in mind that, while the pandemic has spread to all eurozone countries, its intensity across the board is uneven. The degree of economic exposure to the effects of containment measures also varies, for example as a result of different production structures. Nor should it be forgotten that the starting position of each country to face this crisis, in terms of public debt, budget deficit and, therefore, fiscal space and vulnerability of public finances, is also different. The result is that the economic impact of the pandemic, both in the short and medium term, will be mixed in all countries. Joint action to ensure that all European countries can deal with the crisis on comparable terms would shorten its duration, protect the productive system and underpin the reality of our shared European destiny.

In the first months of the quarantine, several European initiatives were taken in response to the crisis. However, in general terms, the volume of these measures was too modest and they

were not the most appropriate for organising a common fiscal response. The measures adopted included using the remaining funds in the EU budget and new financial assistance to cover the costs of the short-term rise in unemployment. Financial support was also provided in the form of credit lines to companies from the European Investment Bank and to general government through the European Stability Mechanism.

One example of such measures is the NextGenerationEU, which is a temporary, €750 billion recovery instrument between 2021 and 2027 that will help repair the immediate economic and social damage caused by the coronavirus pandemic. Europe is seeking to become greener, more digital, more resilient and better adapted to current and future challenges through such instruments. Spain is expected to receive 140 million, of which 70 million will be in the form of direct transfers and the other 70 million in the form of loans. (European Commission, 2020)

True, these are valid measures to alleviate the crisis in the short term. But they cannot avoid the main shortcoming: the absence of a framework for sharing fiscal efforts, in addition to the indirect role that the ECB's asset purchase programmes can play in this regard. Such a framework would allow all actors, both public and private, in the euro area to finance themselves on comparable terms across jurisdictions and at low interest rates. (Banco de España, 2020)

This need could be covered by a recovery fund that takes advantage of the common capacity to mobilise future resources in the present, which would far exceed each country's individual capacity. In the short term, this instrument should be geared towards financing public expenditure directly triggered by the pandemic, while in the medium term it should focus on covering possible restructuring needs of the productive system.

The crisis has shown that, in the longer term, a larger EU budget will be key to completing monetary union and would allow the bloc to deploy sufficient firepower to react to future crises. Debt financing through the common budget would naturally lead to the creation of active mutualised insurance, which would help reduce the funding costs currently faced by individual member states and break the fatal circle of sovereign banks in each country. This, in turn, would improve the effectiveness of monetary policy by facilitating the implementation of the Eurosystem's asset purchase programmes.

2.3. Problems after COVID-19

The legacy of the current crisis will be a very high level of public debt, both at home and abroad. Managing such high levels of public debt will be a major challenge once the pandemic is over. In the short term, there is no rational alternative to fiscal expansion. However, once the pandemic and its economic effects are under control, the need to repair general government finances must take centre stage to avoid episodes of public debt crisis such as those experienced in several euro area countries in the aftermath of the last financial crisis.

Reducing public debt is also necessary if we are to restore the room for manoeuvre of fiscal policy in the medium term as a stabilisation mechanism for future crises. This is particularly important in the euro area, where monetary policy is decided by the ECB on the basis of the general economic situation. Indeed, the current crisis shows the importance of sound public finances that allow strong fiscal actions to be taken without raising doubts about future sustainability.

The time horizon for public debt reduction at the end of this crisis will be determined by changes in the interest rate at which debt is financed, the growth of GDP in real terms, the rate of inflation and the pace at which the deficit is reduced. The scale of the challenge is such that economic policies will have to operate all these levers at the same time, albeit to varying degrees.

As for borrowing costs, the pre-crisis outlook was that interest rates would remain at very low levels for a very long period of time, in a context in which several central banks had taken strong measures to reduce inflation closer to their monetary policy targets. In the aftermath of the current crisis, all indications are that monetary policies will remain very expansionary for a prolonged period of time.

Some rebound in inflation rates towards the medium-term objective of monetary policy is expected to help reduce the burden of public debt by stimulating the nominal rate of economic growth. However, we cannot rule out that deflationary forces stemming from weakening demand may prevail for some time over other countervailing forces stemming from recent increases in the prices of certain goods. As such, inflation is not expected to contribute much to debt relief at present. In any case, should supply-side factors prevail, any increase in inflation would come at the cost of lower real GDP. (Hernández de Cos, 2020)

As for the contribution of GDP growth to the reduction of the debt burden, the economic policies pursued in Spain must play a very active role. Unlike other historical episodes of rapidly rising public debt, no immediate gains are expected in the demographic context, which would require many young people to enter the labour market or a general improvement in educational levels. In fact, the opposite is true. Today, there is little doubt that population ageing will put downward pressure on potential growth in developed countries.

Fiscal policy has a key role to play in reducing public debt. In the short term, emergency fiscal measures should not be withdrawn, as this would increase the risk of more lasting damage to economic growth.

The scale of the challenge to reduce the budget deficit is significant. Available estimates show that, at the onset of the crisis, Spain had a high structural deficit of around 3% of GDP. The expected increase in public debt resulting from the current crisis will also lead to an increase in the interest burden. The pandemic is also likely to lead to higher structural demand for basic welfare expenditure, such as on health care. In addition, pension expenditure will increase in the coming years as a result of the combined effect of population ageing and the suspension of the application of the revaluation index and the sustainability factor. Some measures have also been announced that permanently raise the level of expenditure, such as the introduction of a minimum living income, which has not yet been defined. . (Fondo Monetario Internacional, 2020)

Future welfare gains from reducing public debt will have to come not only from reducing the structural deficit, but also from achieving higher economic growth. This makes it advisable to maintain resources for sectors such as education and R&D and innovation. (Fondo Monetario Internacional, 2020)

On the fiscal side, improving the revenue-raising capacity and efficiency of the tax system should also be a priority, for which comparisons with other European countries can serve as a guide. It also seems reasonable to further explore, in an internationally co-ordinated manner, some possible tax reforms that have been the subject of recent discussions. This includes a

review of the fiscal side of the taxation of certain multinationals, with a view to avoiding the use of aggressive tax planning strategies to shift tax bases to lower tax jurisdictions.

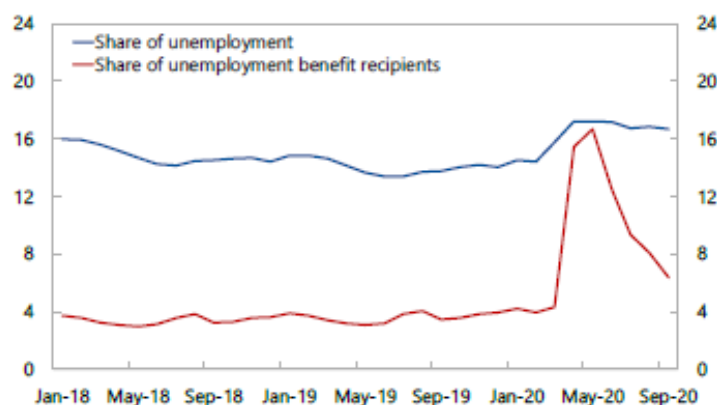
In any event, irrespective of the revenue and expenditure structure, the anchoring of the gradual process of fiscal consolidation will be determined in the medium term by the requirements of the Stability and Growth Pact (SGP). In this respect, it is estimated that government debt will tend to decline gradually as a percentage of GDP in all the Bank of Spain scenarios described above. This is assuming that, once the effects of the crisis have abated, the structural deficit continues to fall in terms similar to those required by the SGP, i.e., 0.5% of GDP per year, to achieve a structural government balance in equilibrium.

2.4. COVID's economic development

After a massive fall in GDP, the gradual relaxation of the containment measures gave some life to activity, but the second wave of infections put the brakes on the recovery. The lockdown measures, combined with supply disruptions and confidence effects, pushed the economy into a deep recession. Real GDP declined by 12.8% in the first six months. This is the steepest fall among the major advanced economies. Domestic demand was the main culprit for the slump in activity. Net exports also declined, shaving about 1.6 percentage points off annual growth in the first half of 2020. Since mid-May, several high-frequency indicators had been trending upwards from very depressed levels. However, with the second wave of infections, many improvements in activity have stalled or reversed in August and September. Core inflation, after remaining broadly stable at around 1% (year-on-year) until June, slowed to 0.3% during July-August. And the sharp fall in oil prices pushed headline inflation into negative territory. (Fondo Monetario Internacional, 2020)

After significant job losses in March-April, the labour market partially recovered. Social security employment recovered in June-September. Temporary employment accounted for most of the job losses. Across all industries, the construction and services sectors were the most affected, together accounting for about 90 per cent of the job losses in March-September. At the height of the crisis, almost 17% of the labour force benefited from unemployment benefits (Chart 13). The increase in claims for social protection reflects both the rise in unemployment and the expansion of ERTes.

Chart 13 Share unemployment and benefit recipients

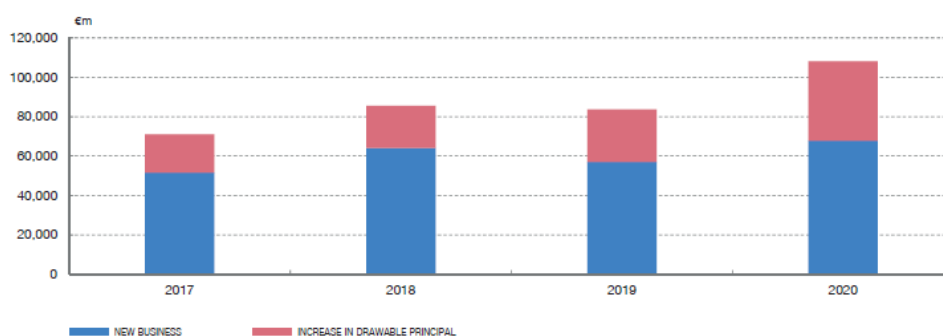


Source: Fondo Monetario Internacional

The COVID-19 crisis quickly affected trade flows. During March-June 2020, total exports and imports fell 34% and 29%, respectively. The effect on tourism, a key export-oriented sector accounting for more than 12% of Spain's GDP, was particularly harsh as tourism receipts plummeted by more than 90% between March and June. Foreign tourism activity recovered slightly in July, when the number of tourist arrivals was around 75% lower compared to a year earlier.

The private sector, including banks, entered the crisis. Households and especially firms deleveraged significantly in recent years. However, some groups of agents remained over-indebted, including segments of SMEs and low-income households. The banking system also created important buffers stronger than those of the last crises. Faced with higher credit risk, in 2020: the first half of the six largest Spanish banks disclosed EUR 14 billion in loan loss provisions, more than twice as much as in 2019. Anticipated provisions, along with some goodwill impairments, contributed to the erosion of profits. A recently announced merger of two large banks will create Spain's largest national bank. Backed by public loan guarantees, new lending to businesses increased strongly in the wake of the impact of the coronavirus and bank lending to the private sector recorded positive annual growth rates for the first time in many years (Chart 14).

Chart 14 Volume of lending to non-financial corporations



Source: Banco de España

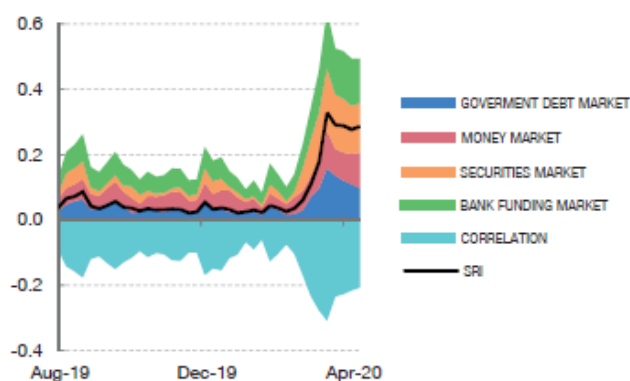
After an initial sharp correction, financial conditions in the corporate sector remain slightly tighter than before the crisis, and prices in some real estate segments have declined. The onset of the crisis triggered major corrections in European and Spanish equity markets. Bank equity prices corrected even more sharply, but have since broadly stabilised, while the increase in bank bond funding costs has been reversed. Corporate credit risk premia in Spain and the euro area remain elevated.

3. Fiscal policy and financial risks

The major impact of the pandemic on economic activity has important consequences on many fronts. One such front is financial stability.

In this respect, the economic impact of the crisis has substantially increased the risks to financial stability. That said, the national, European and international policy measures adopted should help to mitigate these risks. In the specific case of banks, the business disruption is increasing credit, market and operational risks.

Chart 15 Indicators of financial system risk



Source: Banco de España

Indeed, the pandemic has meant that credit risk has increased substantially. This is particularly the case of credit exposures to non-financial corporations, which have seen their income fall, initially as a result of the closure of productive activities and, subsequently, due to lower demand for their products. In this respect, it should be borne in mind that, although this crisis affects all sectors of activity, it does so asymmetrically. This is why the effects on each bank's loan portfolio depend on its sectoral composition and, therefore, also on its presence in the different regions. (Hernández de Cos, 2020)

The pandemic also entails an increase in household credit risk, mainly as a result of job destruction. Past experience shows that, in the face of declining household incomes, consumer loan delinquency tends to increase. The lending rate has been rising at very high rates in recent years. From the point of view of overall household credit, there is a risk from mortgages, suggesting defaults if this risk is sustained over time. Consequently, if the crisis is of a temporary nature, default rates are likely to be lower.

But the risks to financial stability stemming from the current crisis do not end with credit risks. First, COVID-19 has increased market risk, as a result of the fall in the price of financial assets that banks hold on their balance sheets. In addition, operational risks have also increased as adaptation to restricted movements and remote working has had to take place in a very short space of time, which may in some cases lead to vulnerabilities in technological infrastructures. So far, banks have been able to adapt effectively to the situation and financial markets have continued to function well. But more contingency planning is needed ahead of any potentially extreme operational events that could cause this crisis.

In any case, it is worth noting that the Spanish non-financial private sector is facing this situation in a more favourable financial position than before the global financial crisis. The financial situation of the household sector as a whole has improved significantly in the wake of the global financial crisis.

In the case of non-financial corporations, the sector's level of net indebtedness has been reduced, in fact, it is below the euro area average. Moreover, the sector now has a larger stock of liquid assets.

At the same time, the Spanish banking sector has also significantly improved the quality of its balance sheet over the last decade, leaving it in a better position to absorb this crisis and continue to provide the financing the economy needs. During this same period, moreover, the

weight of refinanced exposures on the asset side has been reduced. Finally, the weight of credit to construction and real estate development activities represents 10% of total credit to the non-financial private sector. (Banco de España, 2020)

In terms of solvency levels, Spanish banks increased their common equity by just over 35%. In terms of total assets, the increase was 5.8% at this time. The capital increase has meant a notable increase in the capacity to absorb the losses that will arise as a result of the growth in non-performing loans caused by the crisis. (Banco de España, 2020)

Almost half of this total amount of capital is in the form of reserves above the regulatory minimum level. These can be used as part of the prudential response to the crisis if necessary. The amount involved could cover a volume of losses equivalent to almost twice the current volume of non-performing loans in the system, i.e., about 8.2% of total credit to the resident private sector. (Banco de España, 2020)

The risks to financial stability have been mitigated by the various policy measures taken. In particular, these measures should allow for a better evolution of non-performing loans by directly supporting the financial position of households and firms and through macroeconomic stimulus. Moreover, the above-mentioned loss absorption capacity stemming from non-performing loans is reinforced when taking into account the positive effect of the credit moratorium and the government-approved corporate guarantee programme. In the case of the temporary moratoriums put in place by both the authorities and the banks themselves, these should help the households most affected by the crisis to face this critical period with greater peace of mind.

3.1. Implications of the crisis for fiscal policy

Firstly, the figures for the fall in GDP in 2020 reflected in the macroeconomic scenarios discussed above would represent the largest economic contraction in Spain in a single year in recent history. This will lead to an increase in the NPL ratio, albeit on an as yet uncertain scale. That said, the magnitude of the decline in output projected at present is very high, which could lead to a proportionately larger effect.

In any case, uncertainty about the duration of the pandemic and its effects is very high. In this sense, the consequences of adverse economic scenarios that are prolonged over time may significantly worsen aggregate solvency. But even in these scenarios, loss absorption elements will mean that the erosion of capital is not immediate. This leaves some room for manoeuvre which, where appropriate, should be used to put in place all the elements for a forceful policy response to ensure financial stability.

Second, the above considerations on the aggregate situation of the system mask a high degree of heterogeneity. This is mainly due to the fact that the initial positions, in terms of funds and credit quality, are themselves divergent. In the same vein, in the case of households and non-financial corporations there are still some segments in a position of high financial fragility. For example, in the case of firms, smaller firms are more vulnerable to a scenario of declining revenues. But, in addition, in a crisis such as the current one, in which the pandemic is affecting different regions and sectors in different ways, the fall in the solvency of institutions will foreseeably depend on their degree of exposure to these firms.

Third, the materialisation of losses in the credit portfolio as a result of the pandemic will directly affect bank profitability. Profitability was already low before the outbreak of the crisis: as in most European economies, the profitability of Spanish financial institutions was, on average, below the cost of capital last year. The crisis has meant that this spread has tended to widen.

The COVID-19 crisis will negatively affect banks' earning power. As in the case of solvency, it will affect different institutions differently depending on their business model and the distribution of their exposures to the sectors and regions most affected by the pandemic. Moreover, the crisis has reinforced the prospect of continued low interest rates. This will tend to affect Spanish banks' net interest income in the future, which, given the type of activity of banks, is the main component of their profit and loss account. (Fondo Monetario Internacional, 2020)

In summary, the financial situation of both the non-financial private sector and the financial sector is undoubtedly significantly healthier than in the previous crisis, but the degree of deterioration in the outlook for the Spanish economy, combined with uncertainty about the duration of the recession, obliges us to closely monitor the risks to financial stability.

3.2. The impact of the crisis on the financial sector

In general, the various economic authorities, both supranational and national, have appreciated the enormous scale of the challenge we face. Hence, in practice, they have chosen to act forcefully, deploying a very broad package of measures in the fiscal, monetary and prudential spheres with the dual objective of alleviating the effects of the crisis in the short term and preventing its prolongation over time.

In this context, fiscal policy has naturally established itself as the first line of defence. The COVID-19 shock calls for income and liquidity support for the most affected agents, through the rapid and temporary injection of funds focused on those agents for whom this type of support is a priority. And fiscal policy is the most appropriate tool for this purpose.

In Spain, in the case of households, this has mainly led to a situation where the temporary employment adjustment measures enacted by many firms have not translated into a total loss of income. At the same time, measures have been deployed to alleviate the situation of the most vulnerable households through various instruments. These have included the aforementioned moratoriums on bank loans, those relating to the protection of households renting their homes, guarantees for the maintenance of certain basic supplies and the activation of specific direct aid for the most disadvantaged.

On the business side, in addition to significantly easing the burden of wage costs and social security contributions during the entire state of alert, liquidity has been injected through the deferral of certain tax payments, while measures have been enacted to defer payments on rent for business premises. And, at the same time, the launch of the programme of public guarantees for loans granted by financial institutions for a very significant amount is a powerful lever allowing companies to finance their liquidity needs. This programme limits the risk of companies disappearing and thus preserves the productive system for the moment when the restrictions on activity imposed by the pandemic are lifted.

It is very likely that the interruption of activity, either totally or partially through the establishment of maximum permitted numbers, will most drastically affect the tourism and leisure related sectors. In this sense, a temporary extension of the mechanisms implemented so far would be desirable to provide liquidity to businesses in those sectors that will be affected by the crisis for a longer period. (Caracciolo, G., Cingano, F., Ercolani, V., Ferrero, G., Hassan, F., Papetti, A., & Tommasino, P. et al., 2020; Fondo Monetario Internacional, 2020)

In general, the pace of the return to normality will obviously differ across different productive sectors and firms. Consequently, the fiscal policy response must also be adapted to these circumstances, with the dual objective of preserving the part of the productive system most affected by the crisis and containing the impact of these measures on public finances.

3.3. Contributions of the financial sector to overcoming the crisis

In parallel to the multi-faceted economic policy strategy to cope with the crisis, financial institutions must also contribute to mitigating the adverse effects on the various actors in the economy. The objective here is that banks should be in a position to provide funding to agents that were solvent before the pandemic but face liquidity needs after it. Banks now have higher solvency levels than in the previous crisis, which should help them to play a leading and active role in this environment.

In order for the financial system to contribute to overcoming the crisis, national and international authorities, including the Bank of Spain, the ECB, the European Banking Authority and the Basel Committee on Banking Supervision, have taken certain decisions aimed at preventing an interpretation of the existing rules that banks lend less just when this is all the more necessary. (Caracciolo, G., Cingano, F., Ercolani, V., Ferrero, G., Hassan, F., Papetti, A., & Tommasino, P. et al., 2020; Hernández de Cos, 2020)

These decisions affect two distinct areas. On the one hand, certain aspects of the application of existing accounting rules for the calculation of credit risk are clarified. On the other hand, the authorities have ruled that banks can effectively use available capital buffers to absorb unexpected losses.

In particular, the objective of the clarification of the accounting rules is to avoid that possible temporary delays by borrowers in repaying their loans are treated in the same way as a lasting deterioration in the quality of loans, which would lead to a downgrading of the credit granted by banks. In return, it is necessary to prevent the misuse of this flexibility from leading to inappropriate accounting practices.

In the second of the two aforementioned areas, the Banco de España has informed all the banks it supervises of the various resolution measures to mitigate capital and liquidity requirements.

In addition, the Banco de España has recommended that the banks under its supervision temporarily eliminate the distribution of dividends and apply prudent criteria in the variable remuneration of their staff, so that they can channel the funds they generate towards strengthening their capital position.

Efforts have also been directed at mitigating non-banking financial risks. The Comisión Nacional del Mercado de Valores (CNMV) is closely monitoring the liquidity conditions of investment funds, with a particular focus on funds with high exposure to liquid assets and

high-yield corporate debt. A ban on short selling in the stock market was imposed between March and May. (Caracciolo, G., Cingano, F., Ercolani, V., Ferrero, G., Hassan, F., Papetti, A., & Tommasino, P. et al., 2020; Banco de España, 2020)

All these measures, together with the ECB's liquidity provision, are intended to help banks to better withstand this crisis and to act as an active lever to overcome it quickly. There are already signs that this is proving to be the case. The containment measures taken to curb COVID-19 contagion are leading to a very sharp fall in the revenues of many non-financial corporations. This has significantly increased their liquidity needs, which they are meeting to a large extent through bank financing.

These measures have helped to boost credit flows, prevent an increase in non-performing loans, keep capital ratios broadly stable and strengthen liquidity buffers. The authorities are analysing the effects that may arise as some of the policy measures expire, including a potential increase in loan defaults, and are assessing further actions to mitigate such effects. Banks also built-up provisions in adequate amounts. Non-bank financial institutions have generally been resilient to the impact of COVID-19 and coordination among financial supervisors has increased.

This demand for funding could have been met on better terms thanks, on the one hand, to the ECB's support measures for bank funding, which have helped banks to obtain funds on favourable terms, and, on the other hand, to the government-approved programme of public guarantees on corporate loans, which has mitigated banks' possible reluctance to incur higher risks in an environment of high uncertainty and growing concerns about credit risks.

4. Monetary policy

The European Central Bank (ECB) also acted forcefully in response to this crisis to mitigate its effects on the eurozone economy. It deployed a wide range of measures, which can be grouped into two main blocks.

The first block refers to the strengthening of asset purchase programmes, the aim of which was to improve the financing conditions for companies and public administrations in the securities markets. The second concerns long-term refinancing operations aimed at making the ECB's liquidity provision facilities more accessible to banks, both in terms of cost and volume. The aim is to provide credit institutions with funds with which to lend at reduced interest rates to the agents most affected by the crisis, which include, in particular, SMEs and the self-employed. These programmes play a role in improving credit financing conditions for households and firms, similar to that of the asset purchase programme in terms of financing non-financial corporations and public administrations through the issuance of securities. The two sets of measures complement each other. (Fondo Monetario Internacional, 2020)

In the first set of measures, the Governing Council of the ECB announced in March the launch of a new asset purchase programme, the Pandemic Emergency Purchase Programme (PEPP), which will run until the end of 2020 and could be extended or increased in volume if necessary. The programme provides for the purchase of all eligible asset classes under the existing asset purchase programme. A characteristic feature of the new programme is that it provides for large measures of flexibility in terms of its distribution over time and, in the specific case of government asset purchases, also of the issuing country, should market

conditions make this necessary, especially if any signs of financial fragmentation within the euro area were to emerge. This implied an increase in the volume of net purchases. Finally, the Council decided to increase the asset classes of private issuers that can be purchased, with commercial paper of sufficient credit quality being considered eligible.

As regards liquidity programmes, the ECB announced more favourable conditions for its existing so-called "longer-term refinancing operations". These operations provide funding at a favourable cost to banks. This may become even more attractive if banks comply with a number of requirements regarding the use of such funds. The requirements involve maintaining or increasing the volume of their lending to households and businesses during the period from 1 March 2020 to 31 March 2021. The current conditions, offering funds to banks at a lower cost than the ECB's deposit facility rate. In addition, the ECB approved the launch of a series of longer-term refinancing operations, which will run until June as a form of "bridge" financing, until the first of the new longer-term operations is executed. Also in this regard, the Governing Council of the ECB announced a new series of pandemic emergency longer-term refinancing operations, as a continuation of these latest forms of bridge financing. (Banco de España, 2020)

In the same vein, the ECB announced a package of temporary measures relaxing the criteria for banks' eligibility of assets offered as collateral in Eurosystem refinancing operations. The aim of this package is to allow banks to increase their ability to raise funds in these operations. Among other measures, the ECB decided to include, among the assets accepted, government-backed loans to enterprises, the self-employed and households in order to encourage banks to grant loans that can benefit from the collateral, granted by euro area countries in the context of this crisis. In addition, the ECB decided to continue to accept as collateral, until September 2021, marketable assets whose credit rating is several notches below the current minimum required level. The aim of this measure is to mitigate the effect of possible credit downgrades on the availability of assets that banks use as collateral in their refinancing operations with the ECB.

It is clear that the new PEPP programme has made a significant contribution to alleviating some of the financial distress caused by the health crisis in the first half of March. This distress had translated into a sharp rise in sovereign and corporate bond yields, which was subsequently largely reversed following the announcement of the programme.

The positive effect of the new package has been visible not only in the prices of debt instruments through interest rate differentials, but also in the amounts issued. Thus, new issuance of investment grade corporate debt by the most creditworthy companies, which had slowed down significantly since early March, picked up following the announcement of the PEPP. As a result, the improvement in financing conditions has helped companies to continue to finance themselves in the capital markets.

Chart 16 Evolution of corporate and household debts



Source: Fondo Monetario Internacional

As regards longer-term refinancing operations, preliminary information based on euro area bank lending surveys suggests that banks are using this liquidity mainly to lend to households and firms, and that they plan to do so to a greater extent in the coming months, especially to firms.

In any case, the magnitude of the economic slowdown triggered by the pandemic, its effects in terms of the large increase in countries' financing needs and the uncertainty about the duration of these effects make it necessary for monetary policy to stand ready to act further if conditions so require.

The Governing Council of the ECB therefore stood ready to do everything in its power to help the euro area economy to overcome the current deep-seated difficulties. This commitment includes, in particular, the possibility of increasing the volume or duration of asset purchases and adjusting their composition. The overriding objective was to remove any obstacles that might hinder the effective transmission of monetary policy and to prevent risks of fragmentation of the euro area.

4.1. Proposals to the crisis according to the vision

In March an intense debate took place on what monetary policy can do in the face of a shock such as COVID-19, which is affecting the global economy in an environment already characterised by historically low interest rates. Two responses emerged from the debate: we will call them the orthodox and the heterodox view. (Caracciolo, G., Cingano, F., Ercolani, V., Ferrero, G., Hassan, F., Papetti, A., & Tommasino, P. et al., 2020)

The first, according to the orthodox view, which is a view that treats economics as an exact science, central banks should intervene immediately using liquidity provision measures targeted at specific markets in order to preserve the proper functioning of the monetary policy transmission mechanism and measures aimed at providing the expansionary impulse of monetary policy.

The other, heterodox, view treats economics as a social science. These proposals differ in important institutional respects, but they start from the same premises and reach similar general conclusions. The two premises are as follows: first, in response to the COVID-19 shock, the effectiveness of monetary policy measures that rely on the interest rate channel and intertemporal substitution are less effective than in the presence of a "conventional" aggregate demand shock. Uncertainty determined by the COVID-19 shock, business closures

and limits to mobility determined by containment measures aimed at reducing the contagion rate, cause economic activity to contract regardless of the level of the interest rate. Second, deficit-financed expansionary fiscal policies through the issuance and sale of government bonds to the private sector may be ineffective in increasing aggregate demand. In other words, since bonds mature, the money that the government receives when it issues and sells bonds must be returned to the private sector when they mature, in addition to the interest rates that must be paid as long as the security remains in place. This induces households and businesses to save rather than consume and invest.

5. Social Policy

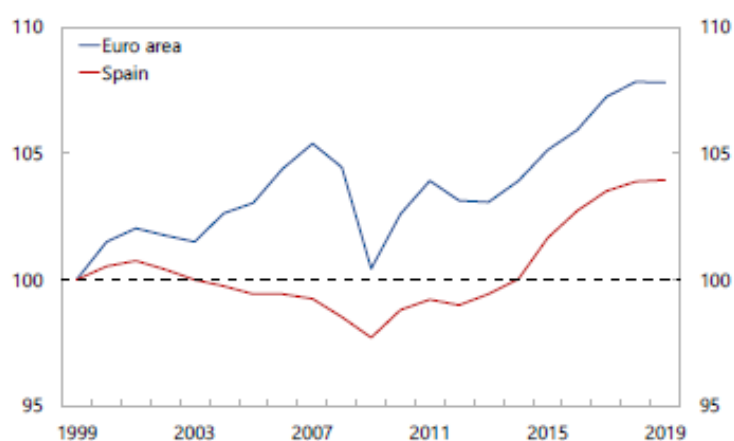
In strategies to reduce public debt over the medium and long term, the role of policies to promote sustained growth in activity and employment should be very important.

Initially, the key objective of economic policy should be to ensure the most favourable conditions possible when the economy emerges from the impasse. However, more persistent adverse effects in certain sectors cannot be ruled out after the pandemic has been brought under control.

Moreover, there are some indications that, in the longer term, demand could fall in some sectors, such as retail trade, and rise in others, such as logistics, technology and IT systems.

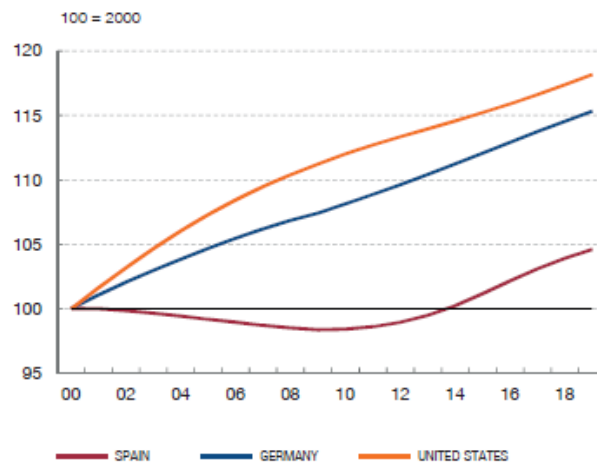
Apart from these effects, estimates show that the potential growth of the Spanish economy is low compared to other developed countries. The potential growth of an economy, on which the long-term level of welfare depends, is the result of the accumulation of the factors of production of capital and labour, and the degree of efficiency with which they are combined. The low levels of potential growth in our economy are attributable to both low total factor productivity (TFP) and a higher level of structural unemployment (Chart 17, 18). (Fondo Monetario Internacional, 2020)

Chart 17 Comparison of total factor productivity between Spain and Europe



Source: Fondo Monetario Internacional

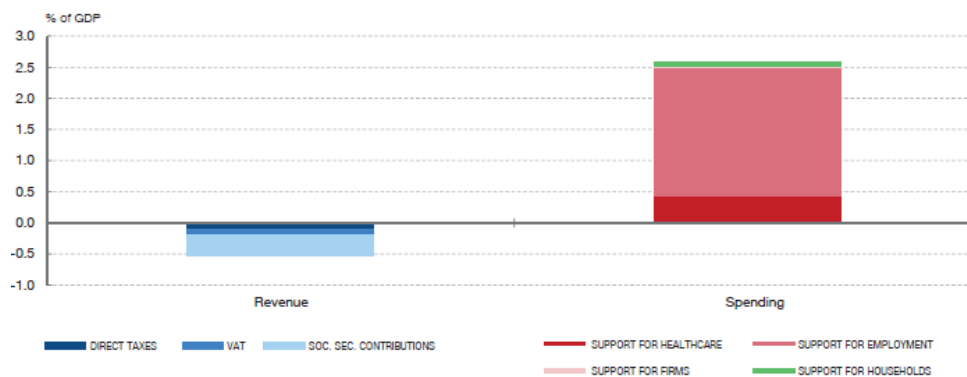
Chart 18 Spain's total factor productivity compared to the US and Germany



Source: Banco de España

In its latest annual reports, the Bank of Spain has highlighted some policy avenues that, if followed, could improve the dynamics of these variables in Spain. These initiatives relate to the level of sectoral competition and the productive structure, tax and regulatory incentives, human capital, R&D and technology, and labour market regulation, among others (Chart 19). (Banco de España, 2020)

Chart 19 Revenue and expenditure as a percentage of GDP

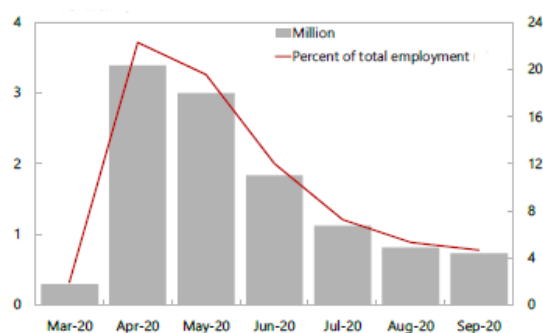


Source: Banco de España

5.1. Employment

Rapid fiscal measures have helped to preserve employment and provide income support. To mitigate the loss of household income, the government rationalised and expanded short-time work schemes, introduced a special allowance for the self-employed whose business activities were severely disrupted by the pandemic, and increased sick pay for workers infected with COVID-19 or quarantined. Most of the measures were extended several times, with some modifications made over time. The government also provided special benefits for affected temporary workers, domestic workers and workers on discontinuous indefinite contracts. The income support package was estimated to have benefited almost 7 million workers or 30% of the labour force, at a fiscal cost of about 2% of GDP (Chart 29). (MacDonald, M., Piazza, R., & Sher, G. et al., 2020)

Chart 20 Number of workers in ERTE



Source: Fondo Monetario Internacional

In terms of human capital, the confinement imposed by the crisis has caused students at different levels of education to stop attending classes in person. This could have significant effects on their academic performance, particularly in low-income households, where there is less possibility of replacing physical access to education due to the lack of technology or internet. Therefore, in order to strengthen long-term economic growth, one of the objectives of economic policies in the immediate future must be to equip the education system with mechanisms that enable affected students to obtain the necessary qualifications, despite the lack of face-to-face education.

For those in employment who have lost their jobs, it is essential that income support measures are complemented by active policies that prevent the loss of labour skills and encourage the acquisition of new ones. In this respect, it is important to note that the effectiveness of active labour market policies has traditionally been a pending issue in Spain.

For those who remain in employment after the crisis, a number of initiatives can also be devised to improve their productivity. Firstly, it is desirable to implement formulas to counteract possible cuts in training expenditure that firms may make in the short term to meet their liquidity needs, given the adverse impact that such cuts would have on aggregate productivity later on. Secondly, the possible changes in the sectoral structure of employment, discussed above, make it advisable to encourage lifelong learning, which in itself is desirable in the current environment of a rapidly ageing population. Finally, the current scope for teleworking for some occupations as an emergency solution during the pandemic may not be merely temporary.

The aforementioned duality of the labour market has important implications for the productivity of the economy in aggregate terms, as it hinders the accumulation of human capital by workers, who move from one temporary contract to another. All this makes it advisable to carry out an in-depth review of the range of contract modalities in Spain in order to align the level of protection of different groups of workers. (MacDonal, M., Piazza, R., & Sher, G. et al., 2020)

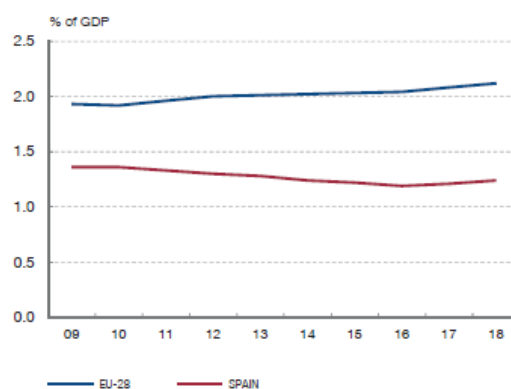
The high weight of temporary contracts in the Spanish economy is not due to sectoral specialisation. In fact, certain service sectors with a relatively limited level of professional skills represent a high proportion of the Spanish productive structure. In these cases, flexibility in the use of the labour input factor prevails over the desire to retain workers, as the human capital acquired in their work is relatively low. However, even once these differences in the production structure are taken into account, the share of temporary contracts is higher in each sector taken individually.

The authorities underlined the important impacts of the government's support measures in mitigating the economic and social consequences of the pandemic. In particular, the successful design of the short-time work scheme (ERTE) has allowed the programme to achieve unprecedented coverage of firms and workers and has facilitated the recent job recovery. The introduction of the windfall benefits for the self-employed and various vulnerable groups, together with the Minimum Income Scheme, has provided critical income support to households. In addition, the authorities highlighted the key role of loan guarantee schemes in alleviating liquidity pressures on enterprises, in particular for SMEs and the self-employed.

5.2. Education, Research and Development

As for R&D, experience from previous crises shows that, as with productive public investment, firms' investment in innovation tends to be cut back in times of uncertainty and financial difficulties, with a consequent adverse impact on long-term growth (Chart 21). One of the factors behind this is that innovative firms find it comparatively more difficult to access bank financing, as they tend to have a smaller volume of tangible assets to secure their loans. As in the case of education, future public spending should pay particular attention to this area because, far from aggravating public debt, it contributes to improving it in the long run by raising potential growth, and the current crisis is also likely to boost the ongoing digitisation of the economy. (Fondo Monetario Internacional, 2020)

Chart 21 Research and development expenditure

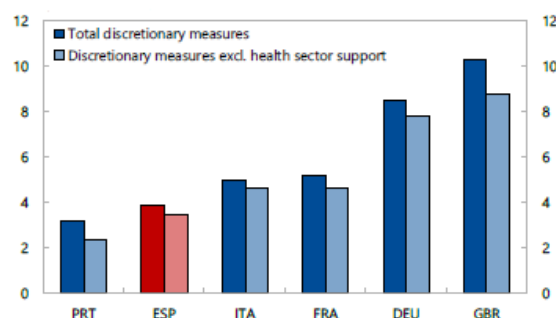


Source: Banco de España

5.3. Health

Combating the health crisis and mitigating the economic impact were short-term priorities. The government acted swiftly and forcefully by deploying a multi-faceted rescue package to mitigate the economic consequences of the pandemic. But the second wave of infections again put people's health and the economy at risk. The short-term priority was therefore to control the second wave of infections and ensure the preparedness of the health system to deal with future outbreaks, as well as to purchase and widely distribute vaccines and treatments when they become available. At the same time, fiscal support had to be maintained until the recovery was firmly underway to prevent the recession from turning into financial sector stress with even higher real and social costs.

Chart 22 Comparison of fiscal aid as a percentage of GDP



Source: Fondo Monetario Internacional

The government strengthened the health system by allocating additional resources to the sector, but responses to contain the second wave have been uneven. Spain rapidly expanded health care capacity at the height of the first outbreak and substantially improved its virus testing capacity. Maintaining the preparedness of the health system remained crucial. As responsibilities for containment measures have shifted to the regions during the second wave, responses have been uneven. Going forward, re-establishing targeted restrictions in a timely manner remains critical to control new outbreaks. Improvements in contact tracing as an effective means of containing infections and limiting harmful effects on economic activity. (Banco de España, 2020; Hernández de Cos, 2020)

The authorities stressed their readiness to manage further outbreaks. They noted that the second wave was different, with fewer deaths and lower hospital admission rates. The health system is now better equipped with testing and protection capabilities. Efforts are underway to improve mechanisms for contact tracing, including the wider deployment of a contact tracing application. Newly agreed criteria triggering regional containment measures are expected to ensure greater consistency and faster control of new infections.

5.4. Support

Efforts were also made to expand social protection for the most vulnerable. To ensure a basic standard of living, the government established a new rental assistance programme for vulnerable tenants and provided subsidies for basic access to water and energy. Additional resources were allocated to sub-national governments to meet the growing demand for social services. In addition, several time-bound measures were adopted to ease the financial burden on vulnerable people. These include moratoriums on mortgage payments and other non-mortgage loans, including consumer credit, as well as moratorium and deferment of rent payments.

The government has also provided extensive policy support to businesses. To help meet firms' liquidity needs and strengthen risk sharing, the government has provided public loan guarantees worth more than 13% of GDP with a focus on SMEs and the self-employed. Other official sector lending programmes include special credit lines from the Instituto de Crédito Oficial (ICO), such as for the automotive sector and industry. The government also extended tax deferrals for SMEs and the self-employed, deferrals of social security and tax debts, and flexibility in tax filing. A €4.2 billion support package for the tourism sector was announced, including €2.5 billion in loans. The government also granted exemptions from social security

contributions to companies that maintain employment under the ERTE programme. (Banco de España, 2020; Fondo Monetario Internacional, 2020)

6. Most affected sectors

The travel restrictions and social distancing measures required to reduce the spread of COVID-19 have taken a dramatic toll on economic activities that depend on physically close human interactions. In May 2020, flight departures were down 80% from the previous year, restaurant bookings by more than 90% and hotel reservations by more than 70%. Searches for driving directions were down by more than 50% from their January 2020 levels. As some countries managed to reduce new infections, blockages were removed and mobility increased.

Restaurant bookings recovered in advanced countries. Flight departures increased between May and the end of June, especially in the United States and China. (MacDonald, M., Piazza, R., & Sher, G. et al., 2020)

This part presents a simple framework for estimating the impact on 2020 GDP of disruptions in tourism and accommodation, food and transport services. The decline in annual GDP growth for 2020 is associated with the disruption of activity in each sector multiplied by the share of GDP occupied by that sector.

The block also identifies the sectors of the economy that, due to input-output linkages, are most affected by a fall in demand for intermediate goods by the travel and hospitality sectors.

The results say that a shutdown in the hospitality and personal travel sectors reduces average GDP growth by between 2.5 and 3.5 percentage points, depending on how large the sector is and how long it is shut down. The lower average represents a shutdown affecting only household consumption in the accommodation, food and transport sectors. The higher average represents impacts on the travel and hospitality sectors in countries that have a high demand for tourism. These shocks to final demand for travel and hospitality services lead to a significant reduction in GDP in several other sectors of the economy. Italy and Spain are two of the countries most affected by the disruption of activity due to COVID.

Chart 23 Weight of sectors affected by containment

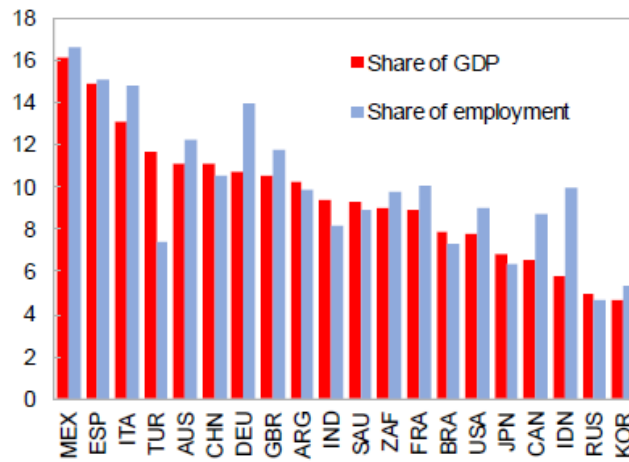


Source: Banco de España

6.1. Tourism

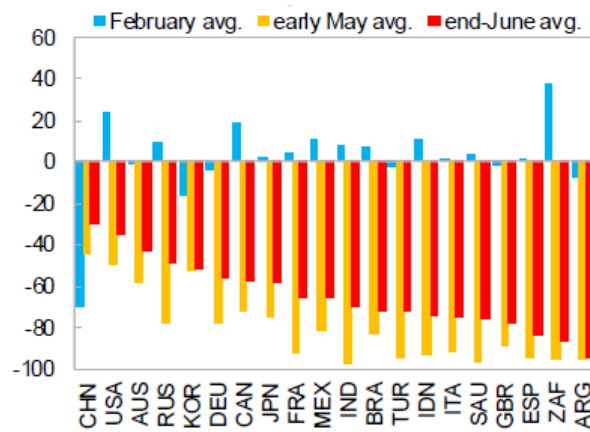
Tourism, defined as all economic activities related to domestic or international travel, for business or personal reasons and without change of residence of the traveller, is an important part of employment and GDP in many countries. It is not only an important component of GDP but also the main source of foreign exchange inflows for their balance of payments.

Chart 24 Share tourism percentage



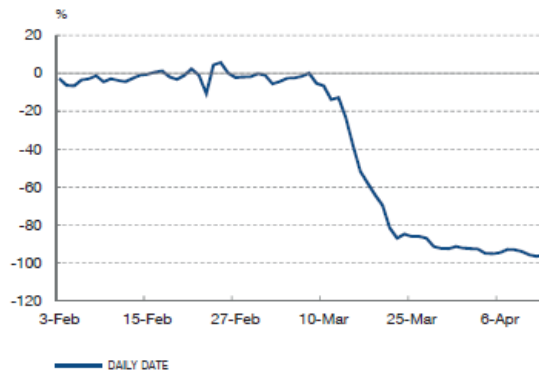
Source: Fondo Monetario Internacional

Chart 25 Changes to daily flights



Source: Fondo Monetario Internacional

Chart 26 Evolution of air traffic in Spain

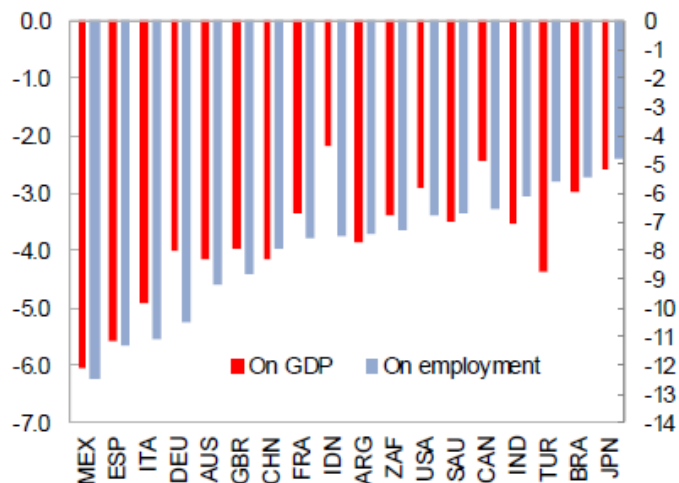


Source: Banco de España

Tourism, directly and indirectly, employs around 15% of workers in Spain. Travel and tourism services also represent a relatively important fraction of GDP, accounting for around 14% or more of GDP in Italy and Spain (Chart 24).

The impact of COVID represented a 75% cessation in travel and tourism activity for six months. Although they may be even more affected, because the current pandemic occurs during the spring and summer months, which for these countries represent the peak of the tourist season.

Chart 27 Impact of the 6-month closure on tourism

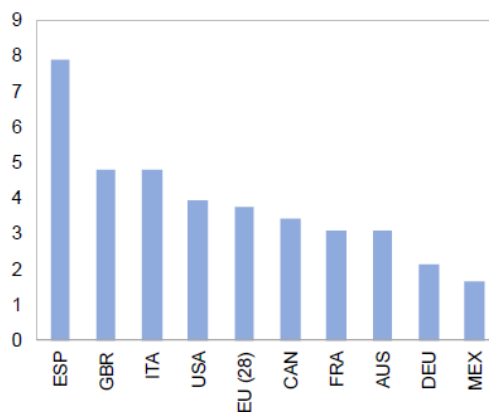


Source: Fondo Monetario Internacional

6.2. Restaurants

Household consumption of restaurant services represents on average almost 4% of GDP in the economies. This means that a sharp fall in activity in this sector would have significant negative repercussions in all countries. The sector is also important for employment. Accommodation and food services together employ around 8% of workers in Spain, where restaurant services account for 8% of GDP (Chart 28).

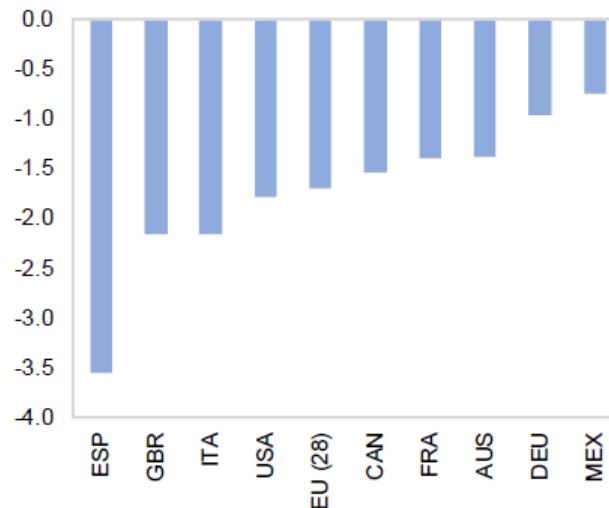
Chart 28 Household consumption in restaurants by country



Source: Fondo Monetario Internacional

Data show a sharp and widespread decline in restaurant visits between March and May 2020. Restaurant bookings fell by around 99% worldwide during the time when confinements were at their highest. However, it must be acknowledged that the shutdown of restaurant activity was never total, as even when strict social distancing policies were in place, restaurants were often allowed to open for takeaway and home delivery services.

Chart 29 Impact of restaurant closures 6 months



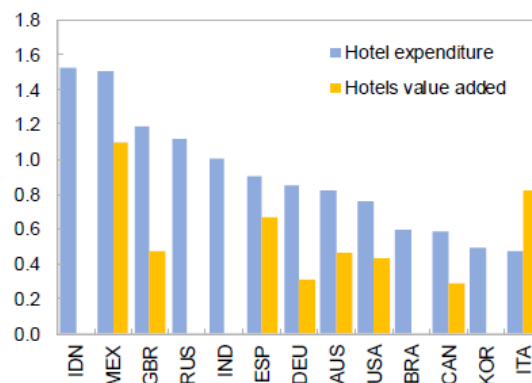
Source: Fondo Monetario Internacional

Based on the observed declines in daily restaurant visits, we analyse the effects on GDP growth in 2020 of 90% closures in restaurant activity. This would reduce annual GDP growth by more than 3 percentage points in Spain, where restaurants account for a larger share of GDP (Chart 29).

6.3. Accommodation

Household consumption of accommodation services, although lower than that of the restaurant sector, represents an important share of GDP, even reaching 1.5% of GDP. The accommodation sector represents a slightly smaller but still important share of total activity.

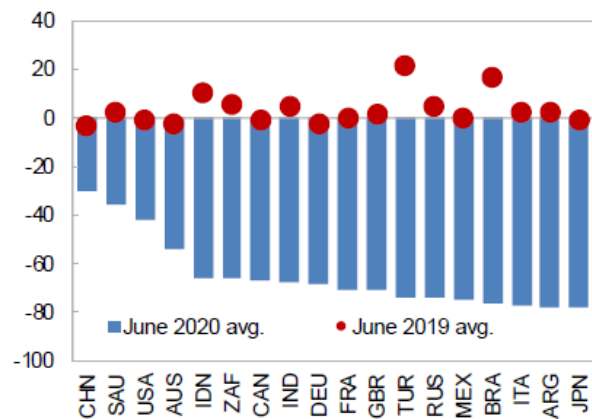
Chart 30 Expenditure on accommodation as a percentage of GDP



Source: Fondo Monetario Internacional

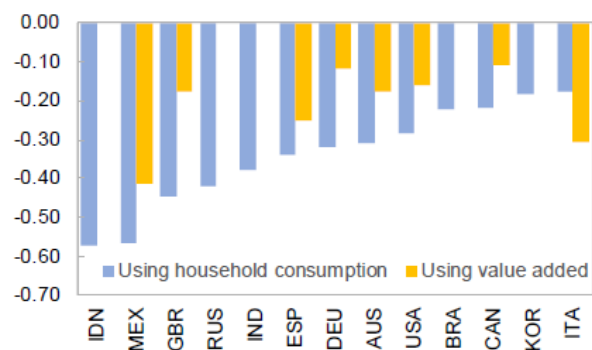
Throughout the pandemic, the accommodation sector has been severely affected by a reduction in personal, business, foreign and domestic travel, as well as in the organisation of events. Spain experienced falls of more than 75% in hotel occupancy in May compared to previous years.

Chart 31 Hotel occupancy comparison



Source: Fondo Monetario Internacional

Chart 32 Impact of the 6-month closure on accommodation



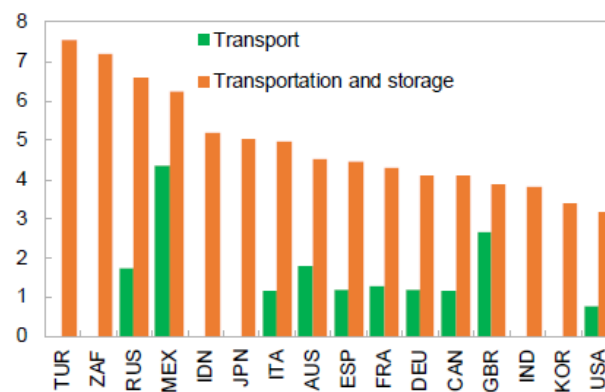
Source: Fondo Monetario Internacional

Based on its contribution to consumption, a 75% decrease in expenditure on accommodation led to a reduction of about 0.35% in GDP for the country.

6.4. Transport

In Spain, value added in the transport and storage sector amounts to around 4.5% of GDP, and household consumption of transport services is equivalent to 1.2% of GDP (Chart 33).

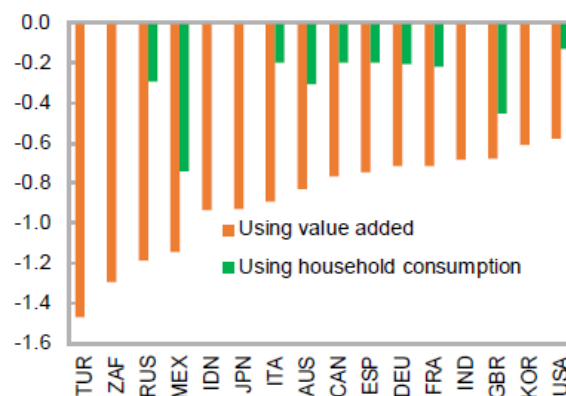
Chart 33 Households' transport expenditure



Source: Fondo Monetario Internacional

Transport by road, rail, air and sea has been disrupted by social distancing measures, border restrictions and strained global value chains. Although personal transport has been more affected by social disengagement than freight transport, the latter is also disrupted. Strained global value chains and falling demand for commodities have reduced the volumes and frequency of shipments. Road traffic, as represented by driving direction searches on Apple Maps, fell in March to less than 20% of its January values in Spain. Beyond driving, public transport has also been severely disrupted, and more so in the cities most affected by COVID-19. Shipping has also been affected by reduced factory production and reduced demand for commodities.

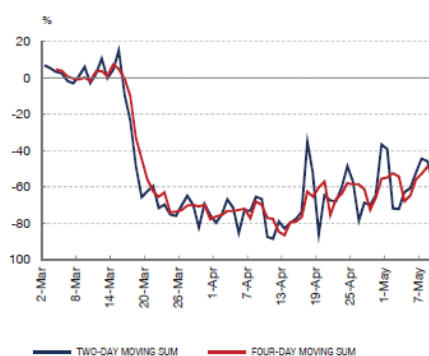
Chart 34 Impact of the 6-month closure on transport



Source: Fondo Monetario Internacional

However, the transport sector has also experienced better business conditions in two respects. First, companies in the sector benefited from lower fuel prices (Chart 35), which tend to be a major cost. Secondly, as the number of people teleworking increased, orders in courier companies also increased.

Chart 35 Oil and gas sales



Source: Banco de España

According to the information available for household consumption, the 40 % disruption in the transport sector reduced GDP growth by 0.2 % (Chart 34). However, household consumption of transport services is only a small fraction of the overall value added of the sector. A larger share of transport sector value added would further reduce GDP growth.

6.5. Other sectors

Non-financial firms face significant risks. Spain, before the pandemic, had a relatively strong position, with less than 30% of firms vulnerable. The proportion of vulnerable firms could increase to 57% due to the health crisis, close to the average degree of corporate vulnerability among advanced European economies. However, taking into account policy measures, the share of vulnerable firms is estimated to increase more moderately to around 37%. It is expected that insolvency cases could increase significantly. Weaknesses in insolvency frameworks will weaken the ability to cope with a potential wave of insolvencies, repair balance sheets and address over-indebtedness. In the medium term, a slow restructuring of the economy could dampen corporate profitability, as well as investment and lower potential growth, with adverse implications for corporate solvency. (MacDonald, M., Piazza, R., & Sher, G. et al., 2020)

Increased risks will test the resilience of the banking system. Banks' profitability and creditworthiness may deteriorate as loan defaults materialise. Non-performing loans are likely to increase disproportionately in the non-financial corporate segment as some borrower support measures expire. The impact of the crisis on Spanish banks could be amplified by the severity of the economic downturn, a possible widespread increase in insolvencies and moderately higher exposure to borrowers in vulnerable sectors such as housing and food. In this context, banks are expected to draw on capital and liquidity buffers to absorb potential losses and continue to support lending. Regulatory flexibility and broader policy support in Europe and Spain should also help banks to withstand the impact, albeit temporarily. But the impact on capital positions may still be significant.

Banks face additional risks, in particular reduced earnings from geographic diversification. Spanish banks maintain significant subsidiary operations abroad, with exposures to emerging markets and some advanced economies such as the UK. They operate largely on a subsidiary model under which there is virtually no intra-group financing. While geographic diversification generally helped profitability in recent years, including during crises, this time may be different. Other risks arise from new legal claims against banks, especially in relation to

mortgage contracts. With still significant holdings of national government bonds (about 7% of bank assets), Spanish banks may also be subject to feedback effects related to a possible resurrection of the state-bank nexus.

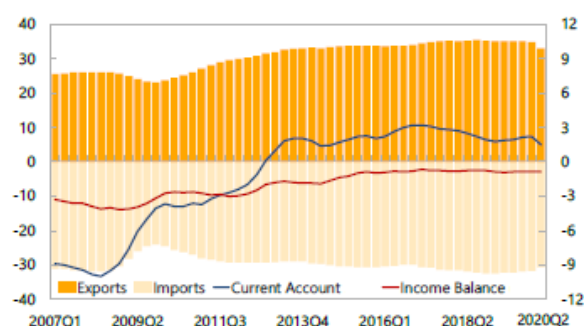
6.6. Recovery and prospects

With the reopening of the economy, only a gradual recovery it is expected in the second half of 2020 in light of the second wave of infections. The unemployment rate could rise to around 17% on average in 2020 despite the strong employment support programme. The impact would be even more negative if the spread of the virus and containment measures were greater. (MacDonald, M., Piazza, R., & Sher, G. et al., 2020)

It is likely to take several years to reach the pre-pandemic level of output, and risks are on the downside. In the short term, a further upturn in activity will be closely linked to the ability to limit new infections. By 2021, real GDP is expected to grow by 7.2%, helped by the use of the EU Resilience and Recovery Fund (RRF) and its effects on confidence. The recovery in 2021 is expected to come from a strong rebound in private consumption and a substantial increase in public investment financed mainly by EU grants. In the medium term, external demand is expected to increasingly support growth as exports recover and foreign tourists return in greater numbers to Spain. The outlook for 2021 and the medium term also hinges on the success of policy measures to mitigate the scars in the economy. (Hernández de Cos, 2020; MacDonald, M., Piazza, R., & Sher, G. et al., 2020)

The emergence of new flare-ups would delay the recovery. Despite weaker tourism receipts, the current account is projected to remain in surplus, but this forecast faces considerable uncertainty, especially in the short term. Tourism receipts are weak even after 2020, contributing significantly to the expected decline in the current account surplus. But two main factors help offset the impact of tourism losses on the current account: subdued imports, reflecting domestic demand and low oil prices, and relatively resilient exports of goods as world trade gradually recovers.

Chart 36 Evolution of the components of the current account as a percentage of GDP



Source: Fondo Monetario Internacional

The devastating effects of the pandemic will put severe pressure on Spain's public finances, underlining the need for a post-COVID-19 fiscal adjustment and ECB policy support. The general government deficit reached 6.7% of GDP in the first months of the year, almost 5% higher than in the same period of the previous year. The fiscal deficit is expected to widen to around 14% of GDP. The deterioration is largely due to automatic stabilisers and temporary discretionary measures taken in response to the crisis. Public debt is expected to increase by

about 25 per cent of GDP over the next two years and, in the absence of fiscal adjustment beyond 2021, would remain broadly unchanged over the medium term. However, if the crisis in Europe were prolonged and additional fiscal support were needed, the increase in Spain's public debt over the next five years could reach more than 40 per cent of GDP. In such an adverse scenario with continued downward pressure on inflation, continued pressure from high global savings, low investment and accommodative monetary policy would be key to keeping borrowing costs low. (Banco de España, 2020)

The authorities broadly shared staff views on the economic outlook and balance of risks. Amid high uncertainty, the government has somewhat higher growth projections for 2021 compared to staff, while the Bank of Spain projects a slightly weaker recovery due to more scarring. The authorities stressed that the recession would have been significantly sharper without the policy support package. The government expects the implementation of the EU Recovery and Resilience Fund to raise real GDP by 2-3% in 2021 and raise potential growth by about 0.5% per year over the medium term. While still confident about the competitiveness of Spanish tourism, the authorities acknowledged that policy support remains crucial for this sector during the pandemic. They agreed that the current account is likely to remain in surplus. (Banco de España, 2020)

The authorities also stressed that profitability problems are a key risk for banks, as in most advanced economies, reinforcing the need to ensure the viability of their businesses and address overcapacity in the system. They anticipated that loan delinquencies will start to rise in the first half of 2021, the end date of the grace period for loans made under the public loan guarantee scheme. While the increase in corporate bank deposits will play a mitigating role, the authorities saw cliff effects as a material risk that will mainly affect SMEs. While NPL ratios are expected to rise, policymakers stressed that banks' solvency positions should be largely resilient in the baseline scenario, helped by supportive measures in Spain and Europe. They agreed that international banks in Spain may not benefit from geographic diversification during this crisis as much as they did in the past. They also emphasised that, while a large fraction of sovereign holdings are held to maturity, the risks related to the bank-sovereign nexus warrant close monitoring.

7. Comparison with other countries

As we have seen throughout the paper, COVID-19, despite being a disease, has affected both the health system and the economy. Moreover, the disease affected globally, so the rest of the world's economies were also affected. In this last section we will see a comparison between Spain and Europe, Germany, leader and example within the countries of the European Community, and Italy, due to its proximity both geographically and in terms of the effects of the pandemic. In this way we will be able to see the differences between the consequences of the pandemic.

We will compare data, taken from Eurostat, on developments from 2019 to 2020 in the areas that I believe have been most affected by the global pandemic. These are GDP, exports, imports, inflation, employment, benefit spending and unemployment. (*Database - Eurostat*)

Starting with the macroeconomic aggregates, we have the comparison of the Gross Domestic Product percentage with base year 2010 for Europe, Germany, Spain and Italy. We will continue with exports, and finish with imports.

Table 1 GDP comparison between 2019 and 2020

	2019		2020	
	Index	Million €	Index	Million €
Europe	114.18	13.965.441,3	107.18	13.305.813,8
Germany	116.14	3.449.050,0	110.60	3.336.180,0
Spain	110.65	1.244.772,0	98.66	1.121.698,0
Italy	100.76	1.790.941,5	91.82	1.651.594,9

Source: Eurostat

As we can see, GDP has decreased between 2010 and 2020 by 7 percentage points in Europe. Germany is below Europe with a decrease of almost 6 percentage points. As for Spain and Italy, the decline has been greater, in Spain, the fall has been almost 12 percentage points. Italy, although starting from a lower rate in 2019, fell by 9 percentage points.

As for exports, we can observe the following table. The base year is 2010. (INE. Instituto Nacional de Estadística, n.d.)

Table 2 Comparison of exports between 2019 and 2020

	2019		2020	
	Index	Million €	Index	Million €
Europe	145.37	6.907.536,0	132.72	6.222.934,7
Germany	137.92	1.617.360,0	125.00	1.460.094,0
Spain	144.50	434.336,0	115.32	343.594,0
Italy	128.80	567.653,2	111.07	487050,6

Source: INE

As we can see, exports have decreased between 2010 and 2020 by almost 13 percentage points in Europe. The decline of German exports is slightly below average with 12 percentage points. As for Spain, the drop has been almost 30 percentage points. Italian exports fell by 17 percentage points.

As for imports, we can observe the following table. The base year is 2010.

Table 3 Comparison of imports between 2019 and 2020

	2019		2020	
	Index	Million €	Index	Million €
Europe	142.15	6.381.905,6	130.30	5.690.610,4
Germany	141.87	1.417.429,0	129.87	1.266.140,0
Spain	120.62	396.875,0	101.59	326.871,0
Italy	112.79	508.847,5	98.06	426.579,1

Source: INE

As we can see, imports have decreased between 2010 and 2020, by almost 12 percentage points on average. The decrease in German imports is similar to that of Europe. As for Spain, the drop in imports has been smaller, 19 percentage points. Italian imports fell by 14 percentage points.

Regarding labour, we will see the comparison of the percentage of unemployment in relation to the active population in Europe, Germany, Spain and Italy. We will also look at the percentage of temporary workers and finish with a comparison of spending on benefits.

Regarding unemployment. We compare the percentage of the population between 15 and 74 years of age of both sexes.

Table 4 Unemployment comparison between 2019 and 2020

	2019	2020
Europe	6,7	7,1
Germany	3,1	3,8
Spain	14,1	15,5
Italy	10,0	9,2

Source: INE

In this comparison, it is curious how unemployment increases in all economies, between 0.4 percentage points in Europe and 1.4 in Spain, except in Italy, where unemployment decreases by 0.8 percentage points.

Regarding the temporary employment rate. We compare the percentages of the population between 15 and 64 years of age.

Table 5 Temporariness comparison between 2019 and 2020

	2019	2020
Europe	12,8	11,5
Germany	11,0	9,8
Spain	22,3	20,4
Italy	13,4	11,9

Source: INE

As expected, all economies have lowered the percentage of temporary workers. This is due to the fact that, in times of crisis, temporary workers are laid off. Spain has the highest temporary employment rate of all, although in percentage terms it has destroyed the least amount of jobs.

Spending on subsidies also differs between the 3 nations. Data are in millions of euros.

Table 6 Comparison of subsidy spending between 2019 and 2020

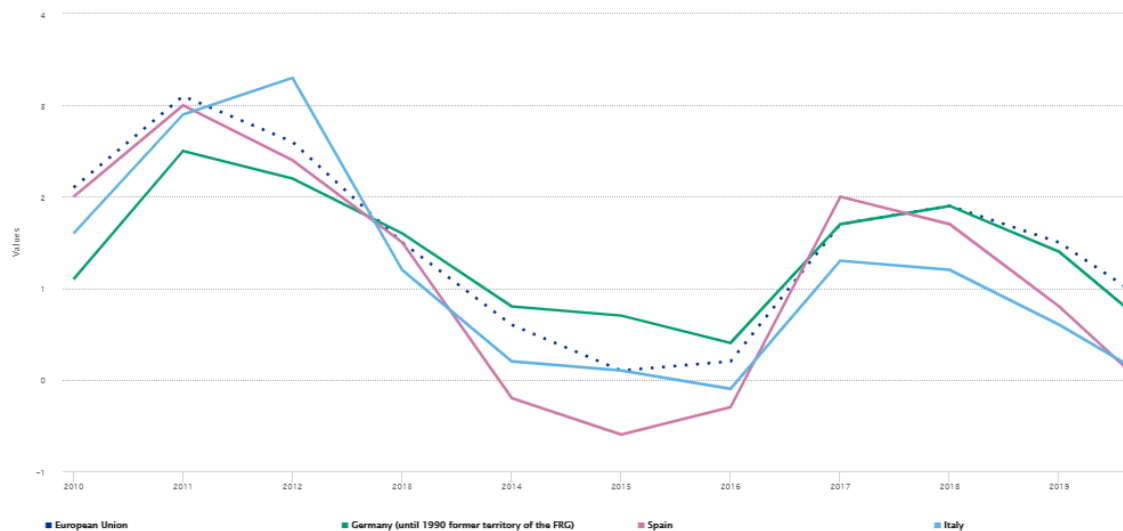
	2019	2020
Germany	36.404,0	74.825,0
Spain	18.200,0	27.268,0
Italy	33.260,0	36.381,7

Source: INE

In 2019, the country with the lowest subsidy expenditure was Spain by far, with Germany and Italy almost doubling it. In terms of increase, Italy had the smallest increase, Germany and Spain doubled their subsidy spending in that year.

Finally, we will look at the evolution of inflation in these three economies and the European average. (*Statistics | Eurostat*)

Chart 37 Inflation developments



Source: Eurostat

As we can see in the image above, we can see that the evolution of inflation between 2010 and 2020 is M-shaped. We start in 2010 at 2% for practically all except Germany, which starts from a point close to 1%. In the first period between 2010 and 2012, inflation experiences growth, reaching the maximum of all economies, followed by a period of decline in which, in 2015, Spain reaches negative inflation, close to 0.5%. Subsequently, it recovers with another period of growth of around 1% and 2% until 2018, when it starts to decrease.

This table shows inflation at the end of 2020. (Database - Eurostat)

Table 7 Current inflation

	Europe	Germany	Spain	Italy
Inflation	0.3	-0.7	-0.6	-0.3

Source: Eurostat

8. Conclusions

This paper takes you back to the starting point of COVID-19 in Spain, with its initial data on macroeconomic aspects and the sectors most affected. Once that starting point has been analysed, we continue with how these aspects have evolved due to fiscal policies, monetary policies and social policies. In addition, we look at the effect of the crisis on the most affected sectors.

We started from the macroeconomic analysis in which the GDP fell by 5.2% in the first quarter of 2020, social security registrations fell by 900,000 employed people, 3.4 million people in ERTE and almost 1.3 million self-employed people applied for unemployment benefits. These data are overwhelming. Finally, the data for both the fourth quarter and the general computation of 2020 have thrown up several surprises. Quarterly growth in the summer months was 17.1%, seven tenths of a percentage point higher than estimated (INE). Finally, GDP fell by 10.8%. (INE. Instituto Nacional de Estadística)

The Spanish government, together with the European Union, is rapidly promoting a series of measures and policies to halt the advance of this crisis in different economic and political areas.

They used fiscal policy to seek economic stability. The closure of productive activities caused credit risk to increase. The financial crisis was averted because financial institutions had a better balance sheet than in the previous economic crisis, they had more money at their disposal, they had a higher percentage of reserves and their accounts were healthy. They had a higher percentage of reserves and their accounts were healthy. Thanks to this, banks were able to make up for customer defaults with the use of these reserves and also lowered interest rates to meet households' need for financing.

In terms of monetary policy, the ECB acted swiftly to mitigate the effects of the crisis on the economy. It did this in two blocks with different objectives. The first block was intended to improve financing conditions for companies, for which it launched programmes such as the PEPP. The second block aimed to make liquidity more accessible to banks in the long term, in order to lower interest rates for financing SMEs and the self-employed, for which the ECB announced the application of more favourable conditions for longer-term financing operations.

The social policies used by the government during this first year of the crisis were to reduce public debt in the long term and to promote the growth of activity once we were out of the deadlock. These social policies focused on four different points:

- Employment. To mitigate the loss of household income, the government rationalised and expanded short-time working schemes, introduced a special allowance for the self-employed and increased sick pay for infected workers.

- Education, research and development. This is the factor that drives long-term business growth, but in times of crisis it tends to be cut back. Public spending should contribute to improving this area in the long term.

- Health. The short-term priority was to control the second wave of infections and ensure the preparedness of the health system to deal with future outbreaks, as well as to purchase and widely distribute vaccines and treatments when they become available. The government strengthened the health system by allocating additional resources to the sector.

- Aid. The main support measure for households has been the use of ERTE, although the government also made a rental assistance programme for tenants, subsidies for access to water and energy. Moratoriums on loan repayments are also included.

The travel restrictions and social distancing measures necessary to reduce the spread of COVID-19 have taken a dramatic toll on economic activities that depend on physically close human interactions. These include:

- Tourism. Activities encompassing tourism employ around 15% of the workforce, accounting for 14% of Spanish GDP. The pandemic represented the closure of 75% of travel and tourism activities.

- Restaurants. The restaurant industry accounts for 8% of Spanish GDP. During the pandemic, restaurant bookings fell by over 99%. In this sector, 8% of the workforce is employed.

-Accommodation. Hotel occupancy experienced falls of more than 75%. This in a sector that accounts for 1.5% of Spanish GDP.

-Transport. The aggregate value of this sector represents 4.5% of GDP. This sector was disrupted by 40% during confinement.

-Other sectors. The share of vulnerable non-financial firms could increase from 30% before the crisis to 57%. However, thanks to the measures proposed by the government, it is expected to increase to only 37%.

9. Personal reflection and limitations

This work has helped me in terms of understanding how everything is related to the economy and what mechanisms the government has to try to minimise the impact and to be able to continue the upward trend.

We started from a health crisis that quickly turned into an economic crisis. This meant that all the information quoted in the media was not only health-related, but also economic. In my case, I was quite well informed at the beginning about the policies that were going to be imposed by the state and the policies that were imposed on us by the European Union. All this has made it easier to carry out this work.

But I don't think we have as much information as we would like. The crisis is very recent, so much so that we are still in the middle of it, so we cannot analyse the consequences properly. The reports on the consequences of COVID-19 are still being prepared at the moment, so we will not be aware of everything that has happened in this crisis, both health and economic, and we do not yet know the side effects and after-effects it will have on the population and our way of life.

I would also have liked to relate the policies chosen by the Spanish government and the ECB to models used during my career, but the models used during these years are simple or have nothing to do with what is described in this paper. The use of more recent models in this area is still too theoretical and at an early stage where not all the relevant issues are very clear to me.

In my humble opinion, I believe that the government has been concerned from the outset with the health and safety of citizens, to the detriment of the Spanish economy. It has preferred to have the confinements and the economy closed, with only basic services, rather than keep the economy open and increase the number of contagions. All the policies carried out by the government are expansionary policies, focused in the short term on minimising the impact of the crisis, and in the medium and long term on promoting growth. All this at the cost of increasing the public deficit due to the increase in public spending on aid and subsidies such as the ERTes. I therefore believe that we are in for a few years of tax rises to try to reduce the high budget deficit due to the pandemic, all of which will be gladly accepted if the revenue is used for social and employment-boosting measures.

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