

CHALLENGES AND POLICIES FOR SUSTAINABLE
AND BALANCED GROWTH OF THE SPANISH ECONOMY



## CHALLENGES AND POLICIES FOR SUSTAINABLE AND BALANCED GROWTH OF THE SPANISH ECONOMY

## Introduction

This chapter presents the main structural challenges facing the Spanish economy over the years ahead and some of the economic policy levers available for tackling them. In this extraordinarily uncertain time, the performance of activity in Spain over the coming quarters will be chiefly determined by how the COVID-19 health crisis is overcome, how the war in Ukraine unfolds and the degree of persistence of the current inflationary episode (see Chapters 1 and 3 of this report). However, over a longer time horizon, the outlook for the Spanish economy will be shaped by a set of huge structural challenges. Notable among these challenges, in particular, are boosting job creation and reinforcing employment stability (see Section 2.1), improving training and increasing human capital (see Section 2.2), addressing inequality (see Section 2.3), increasing firm size and facilitating cross-sectoral reallocation of resources and innovation (see Section 2.4), taking full advantage of the execution of the Next Generation EU (NGEU) programme (see Section 2.5) and bolstering the sustainability of public finances (see Section 3). Nor must other further challenges be neglected, such as those stemming from the fight against global warming and from the green transition (see Chapter 4 of this report). For an in-depth analysis of the Spanish banking sector's situation and the challenges it faces, the reader is referred to the Financial Stability Report<sup>1</sup> published by the Banco de España in May 2022.

The Spanish economy's ability to follow a robust, sustainable and inclusive growth path in the medium and long term will hinge on the economic policy response to this set of challenges. In this respect, the scale of the challenges and their close interrelatedness call for a comprehensive strategy of lasting and ambitious structural reforms. At the same time, in a setting in which European policies play an increasingly significant role in the economic activity of individual Member States, it is also essential that the European institutional framework is decisively further reinforced (see Section 4).

## A broad range of structural challenges and policies to address them

In recent years, the Banco de España has detailed, in various reports,<sup>2</sup> the main challenges that will influence the future course of the Spanish economy. Most of the challenges facing the Spanish economy pre-date the pandemic.

<sup>1</sup> See Banco de España (2022a).

<sup>2</sup> See, for example, Banco de España (2020 and 2021a).

Examples here include the need to boost productivity growth, to correct dysfunctions in several goods and factor markets (in the labour market in particular), to make public finances more sustainable and to address the challenges posed by population ageing, inequality and climate change. However, others are relatively new, such as the need to adapt to an accelerated digitalisation of economic activity and to the recent changes in globalisation dynamics.

Within the framework of a comprehensive strategy of structural reforms, the Banco de España has also tabled a broad range of economic policy measures that could help turn the challenges facing Spain into opportunities (see, for example, Figure 2.1). These challenges are explored in detail below, together with the recommendations made in the light of the latest data available, the most recent analytical work and the public policy developments of recent months.

## 2.1 The challenge of boosting job creation and strengthening employment stability

One of the greatest challenges for the Spanish economy is stimulating job creation and reducing employment instability. In recent decades, Spain's unemployment rate and temporary employment ratio have, on a persistent basis, been significantly higher than the average of the euro area economies, particularly for young people (see Charts 2.1.1 and 2.1.2). Furthermore, young people have been appreciably affected by the incidence of part-time employment, which has increased considerably since the global financial crisis, surpassing that observed in the euro area (see Chart 2.1.3).

## High employment instability has adverse economic effects in many spheres.

For example, employment instability affects the accumulation of workers' human capital and can thus have very persistent effects on their working lives. In particular, Garcia-Louzao, Hospido and Ruggieri (2022) find that the employment stability afforded by a permanent contract in Spain can lead to cumulative wage differences of up to 16 percentage points (pp) between a worker on this type of contract and another on a temporary contract, over 15 working years (see Chart 2.2.1). The harmful effects of job instability are felt not only in the accumulation of human capital of the workers affected, but also in that of their families. Specifically, Ruiz-Valenzuela (2020) suggests that Spanish pupils whose parents have more job instability as a result of being on a temporary contract are 7.8 pp less likely than others to complete their compulsory education at the age of 16. These channels aside, insofar as employment instability has a particularly strong impact on young people, it has a bearing on pivotal decisions, such as decisions to leave home, to form new households and to have children, and is a key factor when explaining the high per capita income inequality in Spain.3

<sup>3</sup> See Anghel et al. (2018).

Figure 2.1 COMPREHENSIVE STRUCTURAL REFORM STRATEGY



SOURCE: Banco de España.

Employment instability affects not only households' income, but also the degree of uncertainty about their future income. Arellano et al. (2021) suggest that employment instability and uncertainty are positively related. This relationship was clear during the initial stages of the pandemic. Analysis of the latest wave of the Spanish Survey of Household Finances (EFF, by the Spanish abbreviation) shows that 25% of Spaniards aged 18-64 experienced job losses, reductions in the numbers of hours worked or business closures between November 2020 and June 2021 (see Chart 2.2.2). Within this group, over 50% received public support, either in the form of unemployment

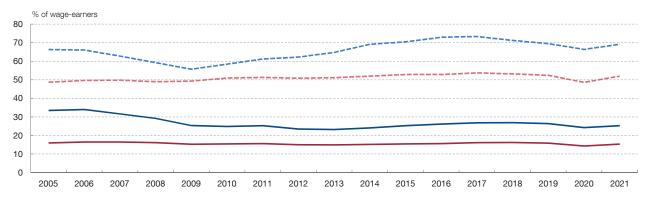
## UNEMPLOYMENT, TEMPORARY EMPLOYMENT AND PART-TIME EMPLOYMENT

Traditionally, Spain's unemployment rate and temporary employment ratio have been significantly higher than the average of the euro area economies. For instance, in 2021, the unemployment rate for the population aged 15-64 was 14.9% in Spain, 7 pp higher than that of the euro area, while the temporary employment ratio was 25.2%, 10 pp higher than in the euro area. These differences are greater in the case of young people. Furthermore, young people have also been appreciably affected by the incidence of part-time employment, which has increased considerably since the global financial crisis, surpassing that observed in the euro area as a whole. Specifically, in 2021 the rate of part-time employment for young people stood at 38.7% in Spain, 4.5 pp more than in the euro area.

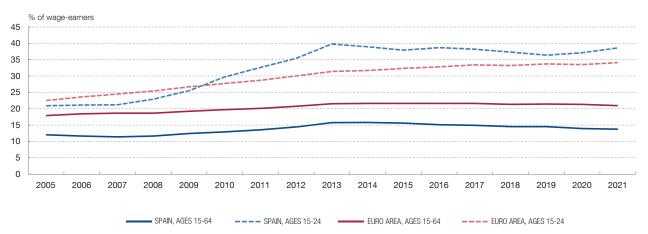
#### 1 UNEMPLOYMENT RATE



## 2 TEMPORARY EMPLOYMENT RATIO



## 3 RATE OF PART-TIME EMPLOYMENT

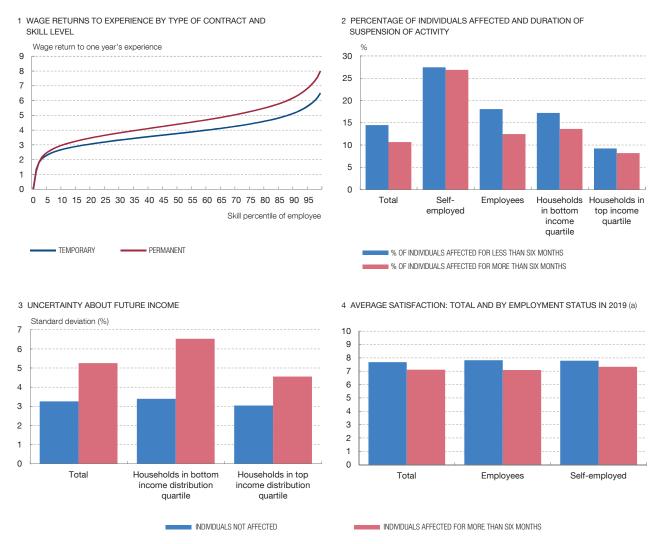


SOURCE: Eurostat (Labour Force Survey).



#### SOME ADVERSE ECONOMIC EFFECTS OF EMPLOYMENT INSTABILITY

According to Continuous Sample of Working Histories data for the period 2005-2018, the employment stability afforded by a permanent contract in Spain leads to significant wage differences after a number of years. Moreover, on Spanish Survey of Household Finances data for 2020, a large number of Spaniards experienced job losses, reductions in the number of hours worked or business closures between November 2020 and June 2021. The survey suggests that those whose employment activity was suspended for a prolonged period reported being more uncertain about their future income and having lower emotional well-being.



SOURCES: INE (Continuous Sample of Working Histories) and Banco de España (Encuesta Financiera de las Familias 2020).

a Average satisfaction is measured drawing on a question in the Spanish Survey of Household Finances on "the level of life satisfaction of the respondent, considering all aspects jointly". A value of 10 would indicate "fully satisfied" and a value of 0 would indicate "not satisfied at all". The chart depicts the average value for each group.



assistance benefits or through the mechanisms specifically deployed for workers on furlough (ERTE, by the Spanish abbreviation) and the self-employed whose activity was suspended. Despite the buffering effect of this public support, the future income expectations of those who were affected by this type of reduction in their employment activity for more than six months showed a higher degree of uncertainty (see Chart 2.2.3).

This greater uncertainty has direct consequences on spending decisions, but also on emotional well-being. Again, taking the recent health crisis as reference, the latest EFF shows that those whose employment activity was suspended for a prolonged period during the initial stage of the pandemic – and who were more uncertain about their future income – reported having, months later, lower life satisfaction levels than other respondents (see Chart 2.2.4).<sup>4</sup>

In a setting like the present one, in which new forms of employment are emerging, it is even more important to address the challenges posed by employment instability. In recent years, the growing digitalisation of economic activity has given rise to new forms of interaction between the supply and demand for labour. Some of these developments have enabled firms to resort less to establishing stable relationships with certain employees, which appears to have contributed to shortening contract terms and to increasing part-time employment. However, this increase in part-time employment may also be associated with some workers potentially preferring to have a contract of this type to supplement their income from other part-time jobs.

# Although these new forms of employment have developed relatively quickly, very little is as yet known about their relative importance or their implications.

In practice, obtaining precise measures of the quantitative relevance of these new ways of working is difficult as official statistics are not yet properly designed to capture them. However, drawing on current sources (specifically the European Commission's COLLaborative Economy and EMployment research project), Gómez and Hospido (2022) find that, in 2018, 18.5% of Spanish workers worked at least sporadically for digital ecommerce platforms in Spain, the highest share of the 16 European countries included in the research and far surpassing those observed in Germany (12.1%) and France (8.4%), for example. Moreover, this study suggests that digital platform workers comprise a very specific group that is not directly comparable either with employees or with the self-employed.

In this setting, one of the main objectives of the labour market reform enacted in 2022 is to combat the high proportion of temporary employment in the Spanish labour market.<sup>7</sup> To this end, a set of measures have been agreed to basically introduce stricter limits on the use of temporary contracts, restrict the

<sup>4</sup> In the same vein, drawing on two surveys conducted in Spain in May and November 2020, Martínez-Bravo and Sanz (2021) suggest that one of the main reasons why Spaniards on lower incomes reported their emotional well-being as having worsened during this period was a loss of income and/or employment.

<sup>5</sup> See, for example, Acemoglu and Autor (2011), Feenstra and Hanson (1999) and Comin, Danieli and Mestieri (2020).

<sup>6</sup> See, for example, Hall and Krueger (2018).

<sup>7</sup> The labour market reform came into force on 28 December 2021, with the publication of Royal Decree-Law 32/2021 on urgent measures for labour reform, for guaranteeing job stability and for transforming the labour market. It was subsequently passed with no amendments by Parliament on 3 February 2022. There is a three-month moratorium for applying some elements of this reform.

duration of training contracts and eliminate contracts for specific tasks and services. which were widely used by firms before the legislation came into force. In addition, the reform allows subcontractors and temporary employment agencies to use permanent discontinuous contracts. However, measures making permanent contracts more attractive have not been envisaged under this reform.8

In recent months, permanent hiring has quickened significantly, and temporary hires have decreased. Since the summer of 2021, the year-on-year growth rate of permanent hires has increased, while growth in temporary hires has decreased (see Chart 2.3.1). These dynamics have intensified since the start of 2022, prompting a marked reduction in the temporary employment ratio (see Chart 2.3.2).

It is, however, early to assess the impact of the labour market reform, and any such evaluation will have to consider numerous issues. Notable among them is the impact on employment because, in principle, the reduction in temporary contracts might stem from both temporary employment being replaced by permanent employment and from the destruction of temporary jobs. Answering this question will require an extensive period over which to analyse job creation and destruction dynamics. In any event, some studies for other countries that have previously enacted similar reforms suggest that they have had a certain cost in terms of lower net job creation.9 Also, insofar as the labour market reform has been conducive to contractual stability in temporary employment agencies, the type of professional development of those workers who start their career at such agencies will need to be analysed. Another issue that will need to be determined is whether the reform prompts an increase or decrease in labour turnover and, therefore, its impact on the accumulation of workers' human capital and their working lives.<sup>10</sup> Furthermore, labour market regulation can also affect the type of jobs available and, in sum, the type and productivity of the firms that are created.11 In particular, some of the literature suggests that greater constraints on temporary contracts increase business productivity, but at the cost of higher unemployment.<sup>12</sup> All of these overwhelmingly relevant questions should be subject to rigorous analysis in the years ahead.

Having a diagnosis on these issues is essential to recalibrating the characteristics of contracts, should it be necessary. In this respect, various

<sup>8</sup> The only exception is the construction sector. Here, the new labour market reform introduces additional grounds for terminating the permanent contracts of workers assigned to construction work in certain circumstances where no vacancies exist for the worker in other work at the same firm. Such dismissals have a severance cost of 7%, which is equivalent to around 25 days per year worked and, therefore, at a midpoint between the protection afforded for temporary employment (12 days per year) and that for permanent employment (33 days in the case of unfair dismissals).

<sup>9</sup> See, for example, Palladino and Sartori (2022), for Italy, and Cahuc et al. (2022), for Portugal.

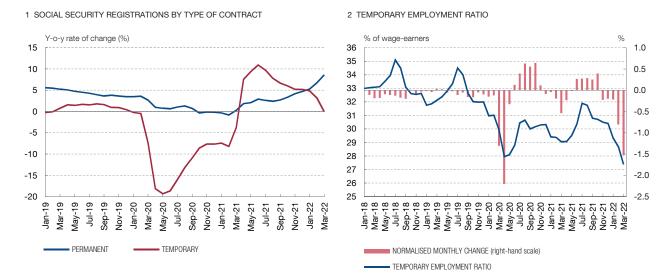
<sup>10</sup> See, for example, García-Pérez, Marinescu and Vall Castello (2018) and Garcia-Louzao, Hospido and Ruggieri (2022).

<sup>11</sup> See Blanchard and Tirole (2022).

<sup>12</sup> See Pijoan-Mas and Roldan-Blanco (2022), forthcoming, for Spain; Hirsch and Mueller (2012) for Germany; and Cappellari, Dell'Aringa and Leonardi (2012) for Italy.

#### CHANGES IN TEMPORARY CONTRACTS FOLLOWING THE LABOUR MARKET REFORM

On social security registration data to March, year-on-year growth in social security registrations with permanent contracts quickened to 8.6%, up from 4.7% in December, while those with temporary contracts decreased 0.1%, compared with a year-on-year increase of 5.2% in December. The temporary employment ratio declined by 3 pp with respect to December.



SOURCES: Banco de España and Ministerio de Inclusión, Seguridad Social y Migraciones.



Banco de España reports<sup>13, 14</sup> consider different contractual alternatives that would allow for a more equitable distribution of job protection for workers, based on their work experience, while retaining some flexibility in firms' hiring.

The labour market reform has also brought about changes in collective bargaining. The new legislation retains some of the internal flexibility mechanisms (such as opt-outs and unilateral changes by the employer to working conditions) that were conceived for ailing firms and were widely used during the last recession in the Spanish economy and, to a lesser extent, in the recent health crisis. However, the reform automatically extends the term of agreements following their end until a new agreement is signed and prevents firm-level agreements from setting lower salaries than those established in the corresponding sectoral agreement. While these changes appear to be of less importance than the rest of the reform,<sup>15</sup> the extent to which they may affect the collective bargaining process, negotiated wage increases and employment in the medium term, especially in those firms with productivity levels below the sector average, will need to be analysed.

<sup>13</sup> See, for example, Banco de España (2021b).

<sup>14</sup> See Banco de España (2021c), "Labour market duality and severance costs: a model based on the Austrian fund", Box 2.4, Annual Report 2020.

<sup>15</sup> The practical implications of eliminating such extensions in the 2012 labour market reform were limited, as the agreements were allowed to specify that the previous terms be maintained until a new agreement was signed. Furthermore, after that reform was enacted, the proportion of firm-level agreements did not increase, and in fact declined.

Moreover, the reform has made furlough schemes easier and created a new mechanism for sectoral restructuring processes. Following the intensive and effective use made of furlough schemes during the COVID-19 pandemic, the reform has introduced some changes to the definition and procedures associated with these schemes to streamline their use in the future. The so-called RED mechanism has also been established, consisting of two forms: a cyclical form, which is designed for macroeconomic downturns, and a sectoral form, which envisages circumstances where permanent changes arise that create a need for vocational reskilling in an industry. Exemptions from social security contributions for the workers affected have been approved, depending on the form and duration of the procedure, and workers subject to the sectoral mechanism will be required to follow a reskilling plan that includes training. Such arrangements have proven effective during eminently temporary shocks, such as the health crisis, suggesting that they could be equally valuable in temporary macroeconomic situations. However, they would not necessarily be as appropriate in other types of more structural processes, such as those that will foreseeably have to be addressed by the Spanish economy in the years ahead (see Section 2.4); in such instances, the sectoral form of the RED mechanism would be activated. Consequently, looking forward, it would be advisable to assess how effective this form of the RED mechanism is, compared with other mechanisms currently conceived for permanent restructurings (e.g. redundancy programmes), in terms of boosting the employability of the workers affected and maintaining their human capital, but also in smoothing the necessary cross-firm and cross-sectoral reallocation of resources.

## 2.2 The challenge of training and increasing human capital

Increasing the educational attainment level of workers and employers is crucial to reducing structural unemployment, boosting productivity and fostering the creation of higher quality jobs. In recent decades, the Spanish population's level of educational attainment has improved considerably. However, Spain is still behind its European peers in this respect. By way of illustration, in 2020 Spain had the highest early school leavers' rate in the EU (see Chart 2.4.1).

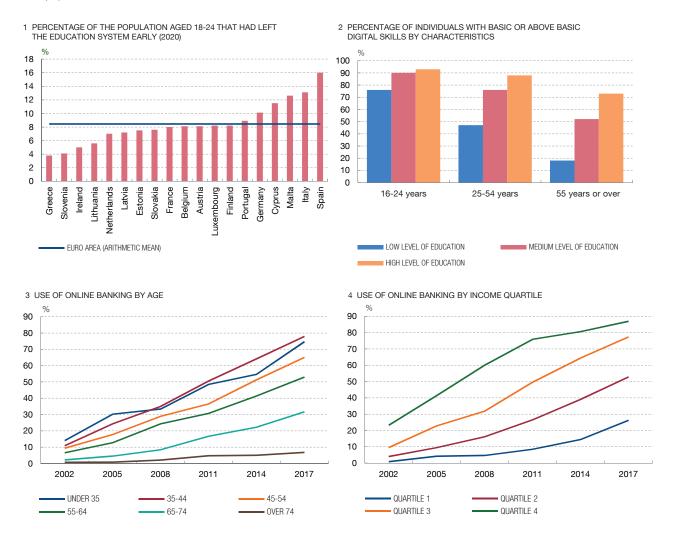
Tackling this challenge is especially important at the current juncture, given the confluence of an intense digitalisation of economic activity, marked population ageing and various factors that may require a profound cross-sectoral reallocation of activity. As analysed in Section 2.4, there are notable differences as regards the relative positioning of the various sectors of activity in Spain vis-à-vis the main challenges facing the economy and society in the medium and long term.<sup>17</sup> This suggests that

<sup>16</sup> On Eurostat data for 2021, 36% of the self-employed, 32.7% of employers and 26.5% of employees in Spain had a low educational level. These percentages are much higher than those observed in the euro area as a whole (21.3%, 19.1% and 17.9%, respectively). For further details on these differences, see Hernández de Cos (2020).

<sup>17</sup> See Fernández-Cerezo and Montero (2021).

## SPAIN STILL FACES A SIGNIFICANT CHALLENGE RELATING TO SCHOOL LEAVERS BEFORE THE AGE OF 25 AND THE LOW **DIGITAL SKILLS AMONG SOME GROUPS**

Although the Spanish population's level of educational achievement has improved considerably in recent decades, in 2021 the percentage of the population aged 18-24 that had left the education system early was 13.7%, and Spain had the worst ranking in the euro area in 2020. Moreover, in a setting of population ageing and of digital transformation of many production processes, it is important that the digital skills of over-55s with a low level of education be improved. According to the Spanish Survey of Household Finances, households' use of online banking has increased significantly since 2002, driven by digitalisation. However, it has barely improved and remains at very low levels among certain groups, such as the older generation and those on lower incomes, prompting substantial, and widening, differences vis-à-vis the rest of the population.



SOURCES: Eurostat (Labour Force Survey and EU survey on the use of ICT in households and by individuals) and Banco de España (Encuesta Financiera de las Familias).



significant sectoral reallocation processes may lie ahead in the coming years. In this setting, a comprehensive training policy that not only increases the population's human capital, but that also adapts it to the demand for skills required in the labour market, with the aim of smoothing both intra and inter-sectoral mobility, is essential.<sup>18</sup>

<sup>18</sup> See Anghel and Lacuesta (2020) and Anghel, Lacuesta and Regil (2020).

Given the current changes in the demand for training, which are likely to intensify in the years ahead, the education system should be adapted to provide a decisive response. In the coming decades, over one million workers each year could see their skills become obsolete.19 In this respect, it is vital that compulsory secondary education - especially at the higher, far more specialised, levels – be adapted swiftly and flexibly to the changes that will occur in the economy, In this respect, to absorb the rise in demand for vocational training, the Spanish Recovery, Transformation and Resilience Plan (RTRP) aims to provide 200,000 more vocational training places in the coming years, entailing an investment of around €254 million. Furthermore, the Organic Vocational Training Bill fosters the accreditation of skills - not only for students, but also for adults - and promotes tools to increase collaboration between training centres, universities and firms. Looking forward, it would be desirable to improve the granular information on access conditions and on the professional opportunities offered by different vocational training courses. This would enable students to take better informed decisions and the authorities to identify possible entry problems.

Harnessing the opportunities of digitalisation calls for increasing the population's digital skills, especially in the case of the older generation, those with lower education attainment levels and those on lower incomes. According to Eurostat data, the digital skills of these cohorts are appreciably lower than those of the rest of the population (see Chart 2.4.2).<sup>20</sup> As highlighted by the EFF data, the use of online banking among these cohorts is also very low (see Charts 2.4.3 and 2.4.4).<sup>21</sup> At a time of ongoing advances in the digitalisation of financial services, this evidence would point to the possibility of these population groups being at greater risk of financial exclusion.

A comprehensive skill recycling strategy throughout the life cycle is key in a setting in which society finds itself faced with marked population ageing and, at the same time, the need to extend people's working life. There is evidence that, as people grow older, they gradually lose some of the skills that are needed in the labour market (see Chart 2.5.1 for the case of Spain).<sup>22</sup> Given that the retirement age has been raised in Spain and other European countries in recent years to ease the pressure of population ageing on public pension system expenditure, ensuring that these workers can extend their working life makes it essential to press forward with training policies that curb this skills erosion (see Section 3.1.1). Set against this need, however, the percentage of economically active persons studying non-formal training courses in Spain falls very markedly - and more sharply than in other euro

<sup>19</sup> See Spain 2050 Strategy (only available in Spanish).

<sup>20</sup> The digital skills of women over the age of 55 are particularly low compared to those of men. For instance, 36% of women aged 55-74 have basic or above basic digital skills, far below the 46% of men with such skills. Conversely, in all other age groups, women have the same or higher digital skills than men.

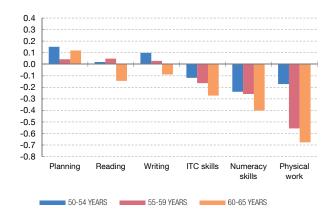
<sup>21</sup> See Crespo et al. (2022), forthcoming.

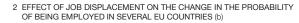
<sup>22</sup> See Anghel and Lacuesta (2020).

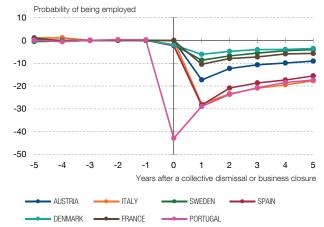
#### JOB DISPLACEMENT AND POPULATION AGEING GENERATE LOSSES OF HUMAN CAPITAL IN THE POPULATION

As people grow older, they lose certain skills. This erosion is significant, given the swift technological transformation being observed in many sectors of activity and the need to press forward with measures that can extend people's working life. Further, workers whose job is displaced in a collective dismissal in Spain have a 16 pp lower probability of being employed five years later; this is a greater erosion than that observed in other European countries, in part attributable to lower spending on active policies in Spain.









SOURCES: OECD (PIAAC) (2013), AMDB administrative social security data in Austria (1984-2019), IDA database in Denmark (1980-2018), DADS database in France (1991-2018), INPS social security records in Italy (1998-2005), QP database in Portugal (1987-2018), Continuous Sample of Working Histories in Spain (2005-2019), RAMS tax authorities database in Sweden and LOUISE database in Sweden (1994-2016).

- a The bars denote the estimated coefficients for indicators for each age group (50-54, 55-59 and 60-65) in a regression that includes sex, education level and dummy variables for the sector of activity, for occupation and for each age group. The dependent variable is the skill use at work indicator.
- b Change in the probability of being employed relative to the average probability of being employed in the five years prior to the collective dismissal.



area countries - after the age of 45. Nonetheless, if any potential strategy to increase the training of older workers is to be successful, it should be accompanied by occupational mobility arrangements and by other contractual changes at firm level that enable the experience-based and educational skills acquired by workers to be harnessed appropriately.

Active labour market policies are also vital for limiting the loss of human capital stemming from job losses. One recent paper<sup>23</sup> shows that job displacements in a collective dismissal lead to a sharp reduction (of 16 pp) in Spanish workers' employability five years later (see Chart 2.5.2). This erosion of employability is greater than that experienced, for example, by workers in Austria, Denmark, France and Sweden, a circumstance not attributable to cross-country differences in the composition of workers or jobs. The paper also finds that the variable that most increases employability in these situations is spending on active policies.

<sup>23</sup> See Bertheau et al. (2022).

It is important to design an active labour market policy system that is efficient and effective. The Spanish Government has undertaken to enact an employment law before end-2022 to make the State employment system more effective. Among other aspects, the law aims to improve the internal management of the data underpinning unemployment benefits and active policies - for the purpose of their assessment -, digitalise information for the public and combat fraud. International experience shows that statistical profiling techniques can help to identify the most vulnerable unemployed people and thus reduce the resources used in actions geared towards those who would have found work without the need for any type of government benefit.<sup>24</sup> In this respect, there is mounting research that uses randomised control trials to assess the effectiveness of different active policies in various contexts and across groups. 25 Thus, it would be desirable to boost collaboration between the research community and government to attempt to understand, by drawing on these techniques, the best design of employment subsidy programmes and of the guidance and training provided to the unemployed.<sup>26</sup>

## The challenge of addressing inequality

Levels of inequality in the Spanish economy were already high before the outbreak of the pandemic. Taking as reference the ratio between the 90th and 10th percentiles (P90/P10) of the distribution of household net income per capita,<sup>27</sup> Chart 2.6.1 shows that, while inequality in Spain declined significantly over the economy's most recent expansionary phase, in 2019 it remained well above 2007 levels.

Despite the key mitigating role played by public policy, these levels of inequality are likely to have increased as a result of the health crisis. Although official statistics enabling post-2019 inequality indicators to be constructed for the Spanish population as a whole are not yet available, <sup>28</sup> various alternative sources of information suggest that the pandemic is likely to have led to a resurgence in inequality. For instance, drawing on anonymised data on over three million bank account holders for the period running from February 2020 to July 2021, Aspachs et al. (2022) find that the initial months of the pandemic saw a sharp rise in inequality that was never fully reversed, as the health crisis continued to hit some of the more vulnerable

<sup>24</sup> See Felgueroso, García-Pérez and Jiménez-Martín (2018).

<sup>25</sup> See, for example, Card, Kluve and Weber (2018).

<sup>26</sup> For example, Levy-Yeyati, Montané and Sartorio (2019) find that training programmes yield better results, on average, if they are vocational and include monetary incentives.

<sup>27</sup> An economy's inequality can be estimated using a variety of methods, which need not necessarily yield similar results. For example, in certain cases, an estimate of the dispersion of workers' hourly earnings may be the most relevant measure of inequality. Elsewhere, however, it may prove more worthwhile to consider measures of inequality relating to total (individual or household) income, wealth or consumption, among other alternatives. For further details on these measures of inequality in the Spanish economy, see Anghel et al. (2018).

<sup>28</sup> In the coming months, micro data from the EFF 2020 and the ECV 2021 will allow for an in-depth analysis of changes in inequality for a representative sample of Spanish households.

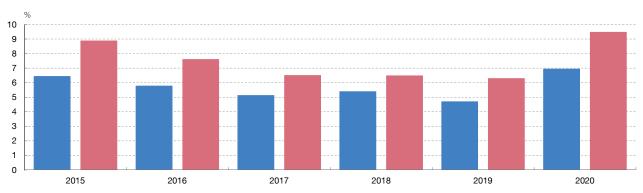
## **INEQUALITY INDICATORS**

Although inequality in terms of household net income per capita in Spain declined significantly over the Spanish economy's most recent expansionary phase, in 2019 it remained well above the figures posted in 2007. Moreover, 7% of the population were in a situation of severe material deprivation in 2020, compared with 4.7% in 2019. Among young people, this figure rose from 6.3% to 9.5%. The data on the average monthly wage distribution of workers whose main employment is salaried work show that the P90/P10 ratio, which stood at 4.3 in 2019, increased to 4.5 in 2020 for the total sample and to 4.6 for young people.

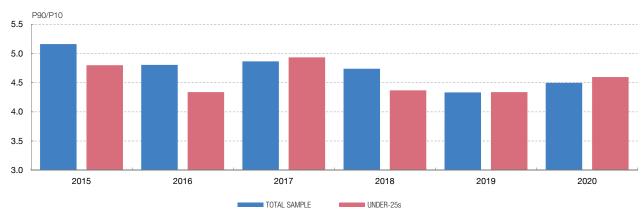
## 1 CHANGES IN THE P90/P10 RATIO OF HOUSEHOLD NET INCOME PER CAPITA (a)



## 2 PERCENTAGE OF THE POPULATION IN A SITUATION OF SEVERE MATERIAL DEPRIVATION



## 3 MONTHLY WAGE INEQUALITY



SOURCES: INE (ECV and EPA).

a Household net income per capita is household net income adjusted using the OECD equivalence scale.



groups particularly hard (for example, lower-paid workers, the young, immigrants and women). In the same vein, the Spanish Living Conditions Survey (ECV, by the Spanish abbreviation) shows a striking increase in the percentage of the population in a situation of severe material deprivation in 2020 (see Chart 2.6.2), while the Spanish Labour Force Survey (EPA, by the Spanish abbreviation) reveals that 2020 saw a rise in the P90/P10 ratio of the average monthly wage distribution of workers whose main employment is salaried work (see Chart 2.6.3).

To mitigate the adverse (economic and social) effects of high levels of inequality, public policy measures must be rolled out and continuously assessed across a wide range of areas. Examples here include labour market regulation (see Section 2.1) and education policy (see Section 2.2), and also income and housing policies.

Improving the educational attainment levels of the most disadvantaged groups is a highly effective means of boosting their income, levelling up job opportunities ex ante and enhancing the prospects of future generations. The returns to individuals (in terms of employment and income) have been extensively addressed in the literature, which finds that such returns are comparatively high with respect to those on other alternative investments.<sup>29</sup> It has also been shown that the educational attainment of parents has a decisive role to play in the transfer of knowledge to their offspring. Thus, improving human capital in one generation can yield benefits not only in the short term, but also in the long run.<sup>30</sup>

As far as incomes policies are concerned, further adjustments must be made to the conditions governing eligibility for Spain's minimum income scheme (MIS) to ensure that this instrument can effectively fulfil its mission: to eradicate extreme poverty. Almost two years down the line, 362,000 benefits have been granted to some 824,000 beneficiaries, still far short of the potential target (some 2.3 million beneficiaries from around 850,000 households). Since the scheme was first created, some of its eligibility requirements, such as the time since a cohabitation unit was initially established, the independent living requirement for the under-30s and the income limits, have been relaxed with a view to reaching more households. Looking ahead, the conclusions drawn from any periodic assessments of this instrument, as required under the law creating the MIS, such as the one the Independent Authority for Fiscal Responsibility (AIReF) is to publish in 2022 Q2, should be used to fine-tune such requirements.

Above and beyond the financial support provided by the MIS, the social and labour market inclusion of the most vulnerable calls for a set of policies aimed at ensuring this group is fully served. The sheer range of circumstances behind the socio-economic situations of such persons further underscores the value of an

<sup>29</sup> See, for example, Harmon, Oosterbeek and Walker (2003).

<sup>30</sup> See Björklung and Salvanes (2011).

ongoing assessment of the various public policy measures that target this group, so as to ensure their efficacy. 31 With this approach in mind, the social security authorities have recently signed agreements with several renowned independent research institutions to evaluate social inclusion itineraries linked to the MIS.32

Steps should also be taken to reduce the adverse effects of inequality in the area of housing affordability, which has tightened in recent years, for both home ownership and rentals. Steep rents (when compared with employment income) increase the proportion of the population at risk of social exclusion and of households whose ability to spend on other goods and services is constrained.<sup>33</sup> According to Eurostat data, 48.7% of Spaniards living in market-price rented accommodation in 2020 were at risk of poverty or social exclusion, the highest rate in the European Union (where the average stands at 32.3%), while 35.9% devoted more than 40% of their disposable income to housing, versus the EU average of 25.8% (see Chart 2.7).

The Draft Law on the right to housing seeks to ease such difficulties in accessing housing, which hit the young and lower-income households particularly hard. The key measures under this legislation notably include those applicable in areas that regional governments (which have competence over housing matters) consider to be under pressure; in particular, rent controls and three-year lease renewals where the tenant so desires. In addition, the tax credit for rental income is modified under personal income tax (and reduced under corporate income tax), a potential property tax surcharge on vacant dwellings is envisaged, 30% of land in new developments is set aside for government-subsidised housing (with half of such land earmarked for properties with capped rent), the privatisation of public buildings for rental purposes is banned and the time frames for eviction of vulnerable households from their primary residence are extended.

Some of the measures envisaged in the draft Law, such as rent control,<sup>34</sup> may not have the desired effect. Recent findings show that, in general, while rent control policies may be effective in curbing rents in regulated segments in the short term, they can at the same time have the opposite effect in unregulated market segments.<sup>35</sup> Other potentially significant adverse effects may also emerge in the medium term, such as a contraction in supply or a failure to ensure properties are maintained, particularly where such measures remain in place for long periods

<sup>31</sup> See Duflo, Glennerster and Kremer (2007).

<sup>32</sup> See "The Ministry of Inclusion and CEMFI sign an agreement for the evaluation of social inclusion projects in Spain", Banco de España press release, 18 January 2022 (only available in Spanish).

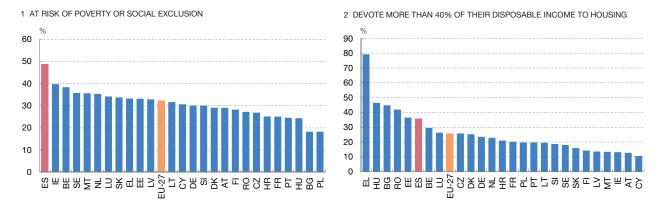
<sup>33</sup> See Directorate General Economics, Statistics and Research (2020).

<sup>34</sup> In areas under housing pressure, large corporate landlords are limited to the maximum rent set under the preceding lease agreement or by the benchmark price index, while small and other large landlords are subject to rent freezes, though they may raise their rents by up to 10% if they sign a 10-year lease or perform certain refurbishment works.

<sup>35</sup> See López-Rodríguez and Matea (2020).

## POPULATION IN RENTED HOUSING IN SPAIN IN COMPARISON WITH THE EUROPEAN UNION (2020)

Almost half of Spaniards living in market-price rented accommodation are at risk of poverty or social exclusion, the highest rate in the European Union, while just over one-third devote more than 40% of their disposable income to housing, also above the EU average.



#### SOURCE: Eurostat.

a AT: Austria, BE: Belgium, BG: Bulgaria, CY: Cyprus, CZ: Czech Republic, DE: Germany, DK: Denmark, EE: Estonia, EL: Greece, ES: Spain, FI: Finland, FR: France, HR: Croatia, HU: Hungary, IE: Ireland, LT: Lithuania, LU: Luxembourg, LV: Latvia, MT: Malta, NL: the Netherlands, PL: Poland, PT: Portugal, RO: Romania, SE: Sweden, SI: Slovenia, SK: Slovakia, EU-27: European Union. Figures not available for Italy.



of time. Either way, it is essential to ensure that statistics that correctly identify the areas under housing pressure are available if these types of measures are to be effectively applied.

The effectiveness of other measures included in the draft Law, such as the subsidies for young people and the changes to tax relief, is also in doubt. As far as subsidies for the young are concerned,<sup>36</sup> the empirical evidence suggests that, in a market with relatively inelastic supply, there is a risk that income may be transferred from the public sector to landlords, with price hikes also suffered by tenants who receive no subsidy.<sup>37</sup> Furthermore, while landlords renting to the under-35s have seen additional tax benefits (provided the rent falls below a certain threshold), the general tax credit has also been cut from 60% to 50%.

The draft Law overlooks certain measures that could give a significant structural boost to the supply of rented accommodation. In particular, it does not envisage any measures that might offer greater effective legal certainty to landlords. Nor does it alter certain regulations that prevent, hinder or delay new housebuilding or restrict the use of properties for residential purposes. These could

<sup>36</sup> Since 1 January 2022, persons aged 18-35 living in rented accommodation with a maximum monthly rent of €600 and whose annual earned income is less than three times the Multipurpose Public Indicator of Income (IPREM, by the Spanish abbreviation) are eligible for a young persons' rental subsidy of €250 a month over two years. The thresholds in terms of rent and earned income may be higher (up to €900 a month and up to four times the IPREM, respectively) where the rented accommodation on offer so justifies. See Royal Decree 42/2022 for further details (only available in Spanish).

<sup>37</sup> See López-Rodríguez and Matea (2020).

be modified to ease the pressures on property prices in local markets that experience occasional housing shortages.

# 2.4 The challenge of increasing firm size, facilitating cross-sector reallocation and fostering innovation

Spanish firms are very small by international standards, a state of affairs that cannot be explained by the sectoral structure of the country's economy. According to Eurostat business demography data, in 2019 (the latest available year) Spain was the EU country with the highest percentage of firms with fewer than five employees (see Chart 2.8.1). The small size of Spanish firms – a persistent hallmark of the country's productive system over the past decades – cannot be put down to the specific sectoral make-up of the Spanish economy, since the same phenomenon is apparent when firm size is compared internationally within specific industries, such as services (see Chart 2.8.2), manufacturing or construction.

The small size of Spain's businesses is one reason behind the country's low aggregate productivity. This is not only because productivity tends to increase with firm size, but also because it is precisely the smaller Spanish firms that have a wider negative productivity gap with their European counterparts, even allowing for the different sectoral composition of these economies. Moreover, given that smaller businesses find it harder or are less likely to invest in innovation, the small size of Spanish firms would also partly explain why innovative activities are less prevalent in Spain than elsewhere in Europe, which in turn results in more lacklustre productivity. Indeed, it has consistently been observed that the drive for innovation in Spain is weaker than in the EU-27 overall. For instance, between 2015 and 2020, average business investment in R&D&I in Spain stood at 0.7% of GDP, as compared with 1.4% in the European Union. This gap is largely due to the lower proportion of innovative enterprises in the Spanish economy (31% in Spain versus 50% in the EU).<sup>38</sup> Meanwhile, the considerable relative weight of smaller firms in the productive system also leaves the overall economy more vulnerable to adverse macro-financial shocks or structural transformation processes, since such firms are generally less able to adapt and find it harder to access external financing.<sup>39</sup>

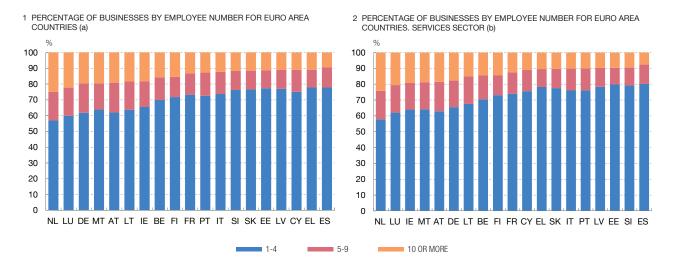
For instance, small Spanish firms are not generally benefiting from the changes in marketing processes brought about by digitalisation. Indeed, data from the Banco de España's 2021 Survey of Small Enterprises' Financial

<sup>38</sup> See Community Innovation Survey, Eurostat.

<sup>39</sup> The latest negative shocks suffered by the Spanish economy have clearly demonstrated this greater vulnerability associated with smaller firm size. See, for example, Blanco et al. (2020). Moreover, Chapter 4 of this report notes that Spain's smaller firms also appear ill prepared, in relative terms, for the sizeable climate-related challenges that will have to be faced in the coming years.

# SPANISH BUSINESS DEMOGRAPHICS ARE NOTABLE FOR THE HIGH RELATIVE WEIGHT OF SMALL FIRMS, REGARDLESS

According to Eurostat business demography data, in 2019 Spain still had the highest percentage of firms with fewer than five employees, regardless of the sector analysed. This poses a challenge for productivity growth and the resilience of Spain's business sector.



SOURCE: Eurostat (Structural Business Statistics).

NOTE: AT: Austria, BE: Belgium, CY: Cyprus, DE: Germany, EE: Estonia, EL: Greece, ES: Spain, FI: Finland, FR: France, IE: Ireland, LT: Lithuania, LU: Luxembourg, LV: Latvia, MT: Malta, NL: Netherlands, PT: Portugal, SE: Sweden, SI: Slovenia, SK: Slovakia.

a Latest data available (2019). The figures for Ireland are from 2018 and those for Belgium are from 2017.

b Latest data available (2019). The figures for Ireland are from 2018.



Literacy indicate that only 51% of businesses with fewer than ten workers have a bespoke website on which to showcase their products or services (see Chart 2.9.1). Moreover, less than 30% of small firms report significant sales of their products or services on their websites, a percentage that falls yet further in the case of online sales via digital platforms (see Chart 2.9.2). In a setting in which online shopping by households is clearly on the rise.<sup>40</sup> this points to some of the negative implications of small firm size for the resilience and dynamism of business activity in Spain.

It is essential to explore the various reasons why the Spanish business sector is so skewed towards small, low-productivity firms and to mitigate the effects. 41 As discussed below, such reasons have to do with a very broad range of aspects, including most notably the volume and quality of regulations, and the mechanisms that influence the creation, growth and winding-up of businesses. Furthermore, as part of a strategy to stimulate business growth, smaller firms should be helped to access a wider range of external sources of funding on more advantageous conditions, while the policies in support of

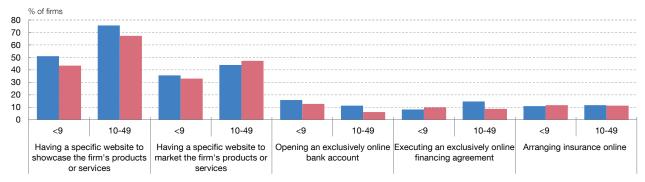
<sup>40</sup> According to the National Statistics Institute (INE) survey on household equipment and the use of information and communication technologies, 55.2% of the Spanish population aged 16-74 made an online purchase in 2021, up 8.3 pp on 2019.

<sup>41</sup> See Banco de España (2016) for a detailed analysis of the different factors that affect business demographics.

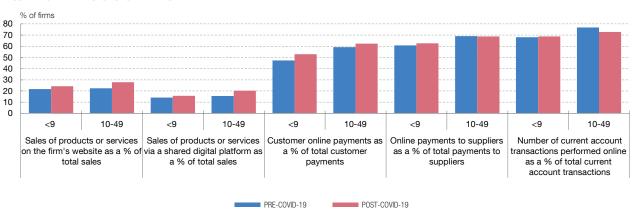
#### SMALL SPANISH BUSINESSES MAKE LITTLE USE OF DIGITAL RESOURCES TO MAKE SALES

Digitalisation is an important resource for small Spanish firms, above all with a view to showcasing their products. In general, while small firms use digital resources to receive and make payments, only a very small fraction make a significant part of their sales online.

#### 1 SOME USES OF DIGITAL RESOURCES FOR BUSINESS OPERATIONS BY FIRM SIZE



#### 2 SOME DIGITAL TRANSACTIONS BY FIRM SIZE



SOURCE: Banco de España (Encuesta de Competencias Financieras en las pequeñas empresas 2021).



business innovation should be strengthened. To this end, the synergies between the different public and private institutions that pursue innovation would have to be enhanced, and the tax incentives and direct subsidies for R&D&I projects in Spain reviewed and rigorously designed. 42, 43 In fact, there is a degree of crossover between these two aims, particularly in terms of helping small businesses to access venture capital firms, which tend to specialise in funding newly created businesses and innovative activities.

<sup>42</sup> The RTRP makes support for investment in R&D&I a major priority, devoting 18% of the total potential NGEU funds to be received by Spain to such activities.

<sup>43</sup> In its assessment of the R&D&I tax incentives in Spain, AIReF (2020b) (only available in Spanish) points to the difficulties experienced by smaller innovative firms in securing support in the form of public funding, owing to both the administrative requirements for accessing such funds and the regulations restricting the use or monetisation of tax credits for corporate income tax purposes.

Many of the initiatives that could be rolled out to foster business growth would also facilitate the processes to reallocate activity across sectors and firms that the Spanish economy will in all likelihood have to face in the coming years. It is worth noting here that a recent Banco de España research paper<sup>44</sup> finds considerable disparity in terms of the position of Spain's different economic sectors in an increasingly digital environment, in which other far-reaching structural changes are also taking place, such as those brought about by the green transition and an ageing population. The paper notes that professional, scientific and technical activities, information and communication services, financial and insurance activities and the manufacture of machinery, computer, electronic and optical products and pharmaceutical products are the Spanish economic sectors best placed to meet the challenges that will be posed by the digital, green and demographic transition in the coming years. Conversely, accommodation and food service activities, the primary sector and transport services are in a more vulnerable position when it comes to facing such challenges. These widely differing positions of Spain's firms and industries in the face of the structural changes that will shape the course of the economy in the most immediate future suggest that a far-reaching process of reallocating activity across sectors and firms will be required if the opportunities deriving from such challenges are to be harnessed. Indeed, the paper notes that the Spanish sectors best placed to address the challenges the digital, green and demographic transition will entail actually account for a small share of the country's economy, whether compared with other domestic sectors that are less well prepared or with the equivalent industries in Spain's neighbouring economies (see Chart 2.10).

One aspect requiring action is the regulation of economic activity, an area that has increased in complexity in recent decades, with a potentially adverse impact on business dynamics and aggregate productivity. These developments in Spanish regulation (i.e. in the set of rules and regulations approved by the different tiers of government) have their origin in both the increasing volume of regulations approved and the fact that such regulations are increasingly poorly drafted and ever more complex in the way they overlap. Specifically, the Spanish authorities published more than 12,700 new regulations in 2021, a four-fold increase on the volume seen in the early years of Spain's democracy. Recent empirical evidence indicates that this increase in the volume and complexity of regulations could have a negative impact both on business dynamics and on the productivity of the Spanish economy.<sup>45</sup> For instance, it has been estimated that a 1% improvement in the drafting of legislation could boost productivity per hour worked by 0.07%.

The Draft Law on business start-ups and growth and the Draft Law on developing the ecosystem of emerging businesses represent a step forward in boosting business start-ups and fostering their expansion by improving

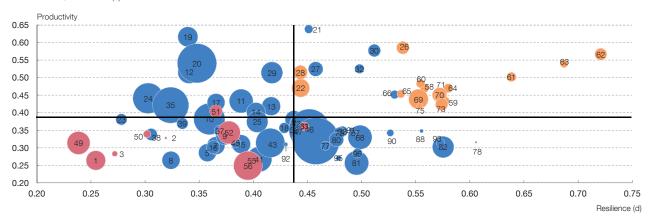
<sup>44</sup> See Fernández-Cerezo and Montero (2021).

<sup>45</sup> See, for example, Mora-Sanguinetti and Soler (2022) (only available in Spanish), Mora-Sanguinetti and Pérez-Valls (2021) and De Lucio and Mora-Sanguinetti (2022).

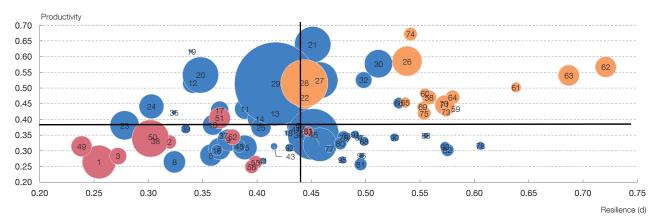
## POSITIONING OF SPANISH SECTORS VIS-À-VIS THE MAIN ECONOMIC CHALLENGES (a)

Services relating to professional, scientific and technical activities (69-75), information and communication (58-63) and financial and insurance activities (64-65), as well as the manufacture of machinery (28), of computer, electronic and optical products (26) and of pharmaceutical products (22), are well positioned both in terms of productivity and resilience, but these are sectors, in general, with little weight in the Spanish economy (orange bubbles). By contrast, accommodation and food service activities (55-56), the primary sector (1-3) and transport services (49-53) have the most vulnerabilities in the dimensions analysed (red bubbles).

## 1 INTERNAL CENTRALITY (b)



## 2 EXTERNAL CENTRALITY (c)



## SOURCE: Banco de España.

- a The size of the bubbles indicates the degree of centrality.
- b Internal centrality reflects the importance of each sector as a customer and supplier in the production chain, as well as its relative weight in the overall economy in terms of employment, number of companies and exports, inter alia.
- c External centrality measures the share of a sector's exports in a country's total exports and the difference between the share of output exported and the share of materials imported to manufacture one unit of output in each sector.
- d Resilience groups a number of sectoral indicators for withstanding technological and digital transformation, the energy transition and population ageing (see Fernández-Cerezo and Montero (2021)).



regulations, removing barriers to economic activity, combating business defaults and providing financial support for business growth. Among other measures, these draft Laws cut business start-up and procedural costs<sup>46</sup> and

<sup>46</sup> For instance, the minimum share capital for setting up a private limited company is reduced from €3,000 to €1, and electronic start-up procedures are encouraged, thereby expediting procedures and cutting notary and registry costs.

strengthen the bodies that seek to ensure market unity in regulatory terms. Looking ahead, other issues should also be addressed, such as a review of the employment and tax-related regulatory thresholds (linked to arbitrary categories of firm size), which deter business growth, 47 and the need to reduce late payment by the public authorities, which makes it harder to finance businesses, particularly in the case of small firms.

Meanwhile, the reform of the Insolvency Law brings in significant changes to insolvency and pre-insolvency procedures. 48 Notable new developments include the introduction of business debt restructuring at an early stage, in the form of a new pre-insolvency mechanism known as the "restructuring plan". Improvements have also been made to the fresh-start mechanism (for both consumers and business owners), introducing the possibility of debt waiver without first liquidating a debtors' assets and based on a payment plan, extending the waiver of unpaid claims to include debts to the public authorities (albeit still in a relatively small amount). Lastly, a bespoke procedure for microfirms<sup>49</sup> is set in place, characterised by maximum procedural simplicity and the use of new technologies, to make it less costly and swifter than standard insolvency proceedings. Under this procedure, the insolvency judge only intervenes to adopt the most important decisions or where the parties refer a dispute to the court.

While this insolvency reform may help partially remedy the shortcomings of the current insolvency mechanisms, the extent to which some of the new procedures will be effective is unclear. 50 In principle, early business restructuring ought to help reduce the high winding-up rates among insolvent firms in Spain. Moreover, the changes introduced could help shorten insolvency proceedings, thereby freeing up the courts, and cut the cost of such proceedings, particularly in the case of microfirms. In general terms, this reform could also have a positive impact on entrepreneurship, by offering coverage to business owners in the event of supervening insolvency. However, there is some uncertainty over the efficacy of the special procedure for microfirms. In particular, by doing away with the insolvency administrator in the majority of such proceedings, leaving matters in the hands of the debtor, the risk of opportunistic conduct and issues of moral hazard could arise due to the lack of oversight from an independent professional. In this regard, the extent and degree to which these potential effects of the new legislation materialise will have to be assessed in the coming months.

<sup>47</sup> See Almunia and López-Rodríguez (2018).

<sup>48</sup> This draft legislation includes the transposition of the European Directive on restructuring and insolvency and introduces other reforms in the field of insolvency and pre-insolvency. See García-Posada (2020) for a description and evaluation of the previous Insolvency Law.

<sup>49</sup> Microfirms are firms with fewer than ten workers and annual turnover of less than €2 million.

<sup>50</sup> According to García-Posada and Vegas (2018), the average duration of insolvency proceedings in Spain is around 40 months, far in excess of those in neighbouring countries such as France (12 months) and the United Kingdom (14 months).

## 2.5 The challenge of fully capitalising on the roll-out of the Next Generation EU programme

The rigorous selection of the investment projects to be funded under the NGEU programme is one of the factors that may most influence its success in Spain. NGEU projects should be chosen in light of best international practice and the available analytical evidence. For instance, such evidence suggests that the most successful public investment policies are generally those that supplement private investment (in the form of employee training or capital modernisation), while the impact on aggregate productivity of policies targeting regional or sector-specific development appears to be unclear.<sup>51</sup> Moreover, the literature suggests that initiatives geared towards increasing the stock of public capital are associated with a larger multiplier effect, particularly in the medium and long term, than those that seek to boost other expenditure items such as government consumption.<sup>52</sup>

Some possible improvements to the design of public tenders in a bid to fully harness the transformational impact of the NGEU programme are proposed in Banco de España (2021b). In particular, as part of the criteria for assessing the merits of bids, preference could be given, among solvent, equally productive projects, to those of businesses that find it hardest to access external finance, since some recent studies suggest that this would generate a larger multiplier effect.<sup>53</sup> In this respect, public procurement could represent a powerful economic policy tool for helping small firms to overcome existing financial friction. In fact, this is standard practice in the United States, where the Small Business Act seeks to ensure that a certain percentage of federal contracts are awarded to small companies.<sup>54</sup>

There is a very high degree of complementarity between the financing of investment projects, such as those envisaged in the NGEU programme, and the implementation of structural reforms. Recent research conducted by the Banco de España notes that the transformational potential of the NGEU programme would be fully harnessed if it were accompanied by a range of structural measures to facilitate the reallocation of resources across firms and sectors<sup>55</sup> and if steps were taken to enhance the synergies between public and private investment.<sup>56</sup> In this regard, the Spanish RTRP (linked to the implementation of the NGEU programme) envisages a total of 102 possible reforms (see Figure 2.2), which should be carefully designed and swiftly rolled out in the coming months.

A recent paper by the Banco de España illustrates how the impact of different combinations of reforms and investment projects associated with

<sup>51</sup> See Howell (2017) and Woodward, Figueiredo and Guimarães (2006).

<sup>52</sup> See Deleidi (2022).

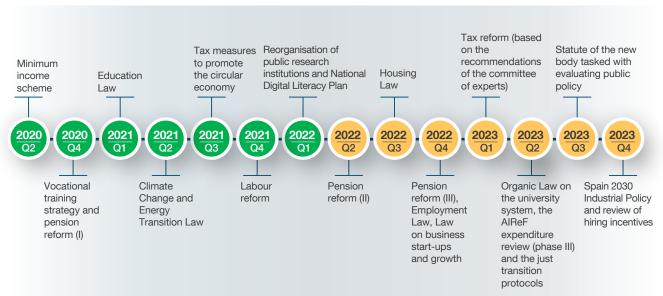
<sup>53</sup> See Di Giovanni et al. (2022).

<sup>54</sup> See Congressional Research Service (2022).

<sup>55</sup> See Albrizio and Geli (2021).

<sup>56</sup> See Alloza, Leiva-León and Urtasun (2022), forthcoming.

Figure 2.2 MAIN ACTIONS PROPOSED IN THE SPANISH RECOVERY, TRANSFORMATION AND RESILIENCE PLAN (a)



SOURCE: Banco de España, drawing on the Recovery and Resilience Facility Operational arrangements between the European Commission and Spain.

a Reforms already completed are in green, while pending reforms are in yellow.

the NGEU programme on the Spanish economy's growth capacity in the medium term could vary considerably. Specifically, Cuadrado et al. (2022)<sup>57</sup> note that if projects with a high degree of complementarity between public and private investment are chosen within the framework of the NGEU programme, thereby generating positive externalities in terms of private productivity (i.e. spillover effects), the annual potential growth rate of the Spanish economy in 2030 could reach around 1.3%, some 0.2 pp above the growth rate in an alternative scenario without such spillover effects (see Chart 2.11). If this careful selection of projects is also accompanied by various structural reforms to ease the existing rigidities in the product and labour markets, thereby helping to reduce the structural unemployment rate and boost productivity, the potential growth rate of the Spanish economy could reach around 2% by the end of that decade.

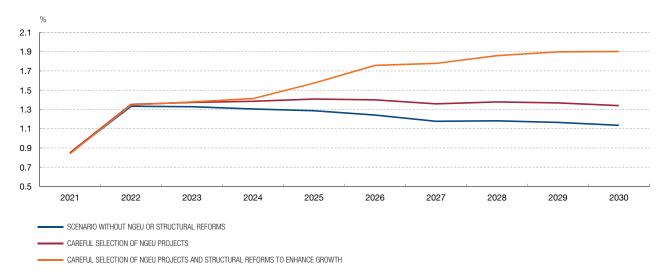
## The fiscal consolidation challenge

The necessary and resolute response of fiscal policy to the COVID-19 crisis gave rise to a substantial deterioration in public finances in 2020. The package of measures approved to combat the health crisis, together with the ensuing economic deterioration, drove up the general government deficit considerably, from 3.1% of GDP in 2019 to 10.3% of GDP in 2020. The structural

<sup>57</sup> Only available in Spanish.

#### **ESTIMATED SPANISH ECONOMIC GROWTH POTENTIAL**

The post-pandemic growth potential of the Spanish economy is likely to be very similar to that estimated before the health crisis. Nonetheless, it could rise to around 2% if carefully selected investment projects financed with European funds are combined with a set of structural reforms to enhance economic growth.



SOURCE: Banco de España.



primary deficit, which factors in the economic cycle effect, also rose, to stand at nearly 1.8% of potential output. For its part, public debt increased from 98.3% of GDP at end-2019 to 120% at end-2020.

The general government budget balance improved in 2021, albeit largely owing to the cyclical performance of activity. Accordingly, from a structural standpoint, public finances remain highly vulnerable. In effect, in 2021 the public deficit fell to 6.9% of GDP while the government debt ratio dropped slightly to 118.4% of GDP. Nevertheless, the general government's structural primary balance continued to post a deficit and, despite falling, the general government debt ratio remained very high, both on an historical and an international comparison. This - relatively persistent - public finances situation is a considerable source of vulnerability for the Spanish economy and leaves less fiscal space in the event of possible future macro-financial shocks. In the current setting, such shocks could come, for example, from a deterioration in the economic growth outlook as a result of a possible escalation of the war in Ukraine, or from the possible emergence of tension on the financial markets in a setting in which monetary policy has begun to tighten financial conditions.

In the coming years, public indebtedness will remain very close to or even exceed current levels, unless an ambitious fiscal adjustment plan is implemented. The

Banco de España's simulation exercises<sup>58</sup> show that if no fiscal adjustment is made in Spain in the coming years (scenario 1), the pressure exerted by population ageing on public expenditure - if the current pension system parameters are maintained (see Section 3.1.1) - will drive up the government debt-to-GDP ratio (see Chart 2.12.1). Conversely, under an alternative scenario in which a consolidation effort consistent with maintaining the structural primary balance envisaged in the Banco de España's latest macroeconomic projections for 2024 is made (scenario 2), the government debt ratio will stand at levels close to 120% of GDP in the coming decades. Should there be a greater fiscal adjustment, for example, if the structural primary balance improves by 0.5 pp of potential output each year, to reach total structural balance equilibrium (scenario 3), a path more consistent with the Stability and Growth Pact (SGP) rules, public debt could fall to 82% of GDP by 2040. Moreover, if the scenario 3 adjustment is accompanied by an ambitious package of structural reforms that enhance the Spanish economy's growth capacity (scenario 4), the government debt ratio could be around 79% of GDP by 2040.

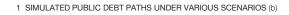
This fiscal adjustment would have to be more intense if future interest rates rise more than expected. The simulations described above include, among other hypotheses, a future interest rate path consistent with analysts' current monetary policy consensus forecasts. Yet these forecasts are subject to considerable uncertainty, so the results need to be interpreted with caution. In particular, as Chart 2.12.2 shows, if future interest rates rise more than expected - for example, if risk-free rates go up by almost 1 pp in the long term (to 2% at the end of the horizon considered) - greater structural primary adjustment would also be needed to maintain the public debt paths described above.

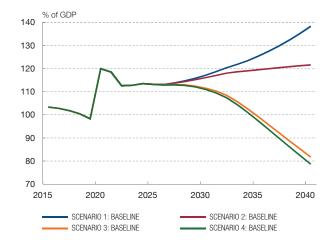
Accordingly, to bolster the sustainability of Spanish public finances, a multiannual fiscal consolidation plan will have to be rigorously implemented, once the pandemic is over and the adverse economic effects of the war in Ukraine have diminished. To cushion the negative economic impact of the war in Ukraine, fresh fiscal policy countercyclical measures could be needed in the coming months; these should be temporary and concentrated on the groups most affected by this shock. However, even if such measures are adopted in the short term, this is not incompatible with the definition and early communication of a comprehensive plan for the restructuring of public finances - in which all tiers of general government should participate - to be implemented gradually, once the ongoing recovery trajectory of the Spanish economy is firmly established. The design and announcement of such a plan, focused on ensuring the sustainability of public finances, including measures on both the revenue and the expenditure side, will also boost confidence and certainty about Spanish economic policies. There follow several considerations on public expenditure and revenue that could serve as a guide for the design of this consolidation strategy.

<sup>58</sup> The Banco de España has developed a model - based on debt sustainability analysis (DSA) - that determines the future path of the government debt ratio under different fiscal policy and macro-financial development hypotheses. For more details, see Alloza et al. (2022), forthcoming.

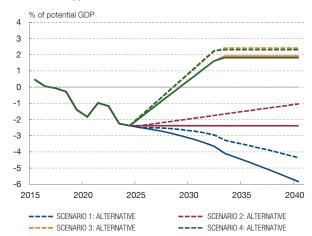
## SIMULATED PUBLIC DEBT PATHS UNDER ALTERNATIVE SCENARIOS (a)

Long-term public debt stability requires a fiscal effort that at least offsets the expenses associated with demographic trends under the current pension system parameters. In addition, a deterioration in financial markets resulting, for example, from an increase in the risk-free interest rate to close to 2% in the long term, would elevate the fiscal effort needed to maintain a certain debt path.





2 SIMULATED STRUCTURAL PRIMARY BALANCE PATHS UNDER VARIOUS SCENARIOS (c)



SOURCE: Banco de España, on INE and IGAE data.

- a Drawing on "Macroeconomic projections for the Spanish economy (2022-2024)", Box 1 of the "Quarterly report on the Spanish economy", Economic Bulletin 1/2022, Banco de España.
- b All the scenarios include a deterioration in the structural primary balance up to 2040 owing to ageing costs (pensions, health care and long-term care). Scenario 1 assumes a fiscal policy that does not correct that deterioration. Scenario 2 envisages a fiscal policy that makes a consolidation effort consistent with maintaining the structural primary balance envisaged in the Banco de España's latest projections for 2024. Alternatively, scenario 3 assumes a fiscal policy that makes a further adjustment to the structural primary balance of 0.3 pp of potential GDP each year, until structural balance equilibrium is reached. Lastly, scenario 4 modifies scenario 3 with long-term potential GDP growth of 1.9% (instead of 1.3% as assumed in all the other scenarios).
- c For each simulation, the unbroken lines denote the structural primary balance associated with the public debt paths in Chart 2.12.1, under a baseline scenario determined by a future interest rate trajectory consistent with monetary policy analysts' consensus estimates (SMA). The broken lines denote the structural primary effort needed to achieve the same public debt paths under an alternative scenario where interest rates rise by almost 1 pp in the long term (to 2% at the end of the horizon considered).



## 3.1 Main aspects on the public expenditure side

General government expenditure policies must be subject to an exhaustive review, with two essential aims: to increase the efficiency of each budget item and to optimise the distribution of public expenditure between items in order to promote more robust and equitable economic growth. First, given the relatively limited fiscal space available, it is imperative to identify the budget items where expenditure efficiency can be enhanced. In this respect, it would be appropriate to explicitly include in budgetary policy some of the recommendations made in AIReF studies in recent years. In particular, these studies suggest that efficiency improvements could be obtained in some key expenditure chapters, such as active labour market policies, subsidies, tax relief, expenditure on hospitals and hiring incentives. 59 Second, it would be desirable to consider how public expenditure could

<sup>59</sup> See AIReF (2020a).

be best distributed to drive Spanish economic growth in the medium term, without overlooking various highly important equity considerations. In this respect, in the coming years the Spanish economy should undertake large-scale investment to adapt to the green and digital transition, among other structural challenges, in a setting in which population ageing will also exert significant upward pressure on public expenditure.

Education and public investment expenditure, two budget items that are essential to drive economic growth and reduce inequality, account for a lower share of Spain's general government accounts than they do in the European Union overall. 60 On average, in the period 2015 to 2019, public expenditure on education and public investment expenditure in Spain accounted for 4% and 2.9% of GDP, respectively, 0.9 pp and 1.5 pp below the EU figures<sup>61</sup> (see Chart 2.13). In the academic literature there is broad consensus regarding the importance of these items to drive economic growth and mitigate inequality. First, abundant empirical evidence demonstrates the positive impact that expenditure on education and public investment has on the accumulation both of physical and human capital and, by extension, on economic growth. 62 Second, the available evidence also suggests that the explanation for the lower degree of inequality in Europe compared with the United States lies, above all, in the role played by pre-distribution policies such as public education. 63 Thus, the fact that public policies facilitate widespread access to quality education encourages a more equal distribution of income before taxes and transfers. This evidence suggests that pre-distribution policies – such as education - could be as or more effective in reducing inequality than other post-market redistribution policies, such as welfare benefits designed to prevent social exclusion (for more details in this respect, see Section 2.3 above).

## 3.1.1 The pension system

Given that the demographic trends expected in the coming years will exert huge pressure on pension-related public expenditure, a specific analysis of the main features and reform of the pension system is essential. <sup>64</sup> As a starting point for this analysis, the reform of the pension system approved in 2013 sought to address this expenditure growth by way of the pension revaluation index, which linked increases in pensions to the pension system's revenue and expenditure, via

<sup>60</sup> The EU figures used in this section are the arithmetical mean of the current 27 EU countries plus the United Kingdom, using pre-crisis (2019) figures.

<sup>61</sup> See Alloza et al. (2022), forthcoming.

<sup>62</sup> See, for instance, Ramey (2020), Deleidi (2022) and Barro (2001).

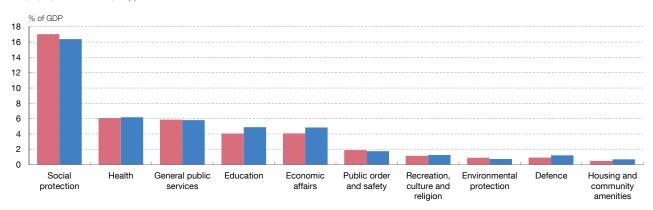
<sup>63</sup> See Blanchet, Chancel and Gethin (2021).

<sup>64</sup> Addressing the numerous challenges posed by demographic change requires not only adjustments to the pension system but also resolute action in many spheres. In particular, analysis of the reasons for Spain's low birth rate, more support for families and labour market opportunities for young mothers and tailoring of migratory policies in Spain to the changing needs of the labour market.

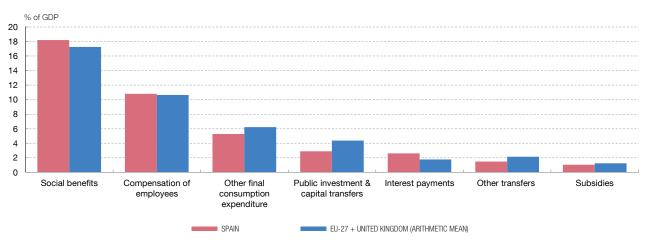
## **GENERAL GOVERNMENT EXPENDITURE BY FUNCTION (AVERAGE 2015-2019)**

Spain spends less (as a % of GDP) than the EU-27 plus the United Kingdom on education and public investment, both of which are linked to long-term productivity growth. Conversely, Spain spends more on items related to interest payments and social protection (which includes pension costs).

#### 1 FUNCTIONAL EXPENDITURE (a)



## 2 EXPENDITURE BY ECONOMIC CATEGORIES (b)



## SOURCE: Eurostat.

- a The functional classification catalogues public expenditure by the purpose for which it is to be used.
- The classification by economic category catalogues public expenditure by the way in which it is used, according to European System of Accounts (ESA) definitions.



the sustainability factor which reduced the initial pension as life expectancy increased. These reforms significantly eased the financial situation of the pension system, albeit at the expense of a considerable reduction in the amount of benefit received compared with the average wage.<sup>65</sup>

The two key elements for containing pension expenditure included in the 2013 reform were recently removed. The first part of a new pension system reform was

<sup>65</sup> See Hernández de Cos (2021).

approved in late 2021.66 Among other measures, this reform indexed pensions to inflation and removed the sustainability factor. According to AIReF projections and the European Commission's Ageing Report, the two measures combined mean that pension expenditure will grow by between 4.1 pp and 4.3 pp of GDP in the period 2019 to 2050. Of that increase, the return to CPI indexation accounts for 55% to 65%,67 and the removal of the sustainability factor for 20%. The remaining 15% to 25% is explained by the fact that, even with the 2013 reform, under the demographic and macroeconomic scenarios considered pension expenditure will grow by between 0.7 pp and 1 pp of GDP between 2019 and 2050 (see Chart 2.14.1).68

The sustainability factor will be replaced by a new intergenerational equity mechanism. This consists of two parts. First, an increase of 0.6 pp in social contributions (0.5 pp to be paid by employers and 0.1 pp by employees), to be implemented over ten years from 2023. With this increase, the Social Security Reserve Fund could accumulate capital of around 2.5% of GDP by 2032.<sup>69</sup> Second, the adoption of fresh measures from 2032, depending on how pension expenditure has evolved. Unlike the sustainability factor adjustments, which were automatic, these possible additional measures will have to be negotiated and approved in due course.

At the same time, various measures were approved to bring actual retirement age closer to statutory retirement age. These measures include, in particular, an increase in the reduction coefficients, especially for persons taking early retirement whose regulatory base is above the maximum pension, although a transition period has been established that partly dilutes this increase. Also, new incentives were introduced to encourage people to retire after the statutory retirement age. According to official estimates, these new incentives could entail savings for the pension system of 1.1 pp to 1.6 pp of GDP by 2050. In any event, these measures should be reviewed ex post to assess their efficiency. Lastly, a substantial increase in transfers from the State to Social Security was also approved. This considerably enhances Social Security's budget balance, albeit with zero impact in terms of the aggregated general government budget balance (see Chart 2.14.2).

The second part of the pension system reform envisages a series of further steps to be spelt out over the course of 2022. They most notably include measures such as the development of occupational pension schemes, a review of maximum social security contribution bases and maximum pensions, a new contribution system for self-employed workers, and a review of the period considered for calculation of the regulatory base.

<sup>66</sup> See Law 21/2021 of 28 December 2021 guaranteeing the purchasing power of pensions and establishing other measures to strengthen the financial and social sustainability of the public pension system (Spanish version only).

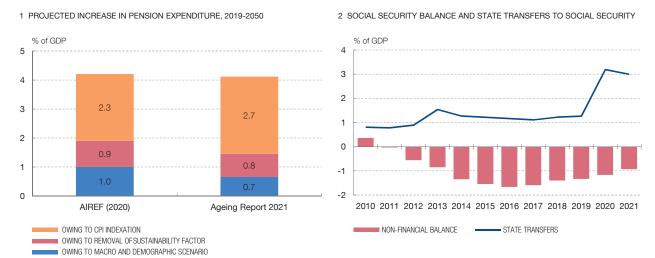
<sup>67</sup> The contribution of this factor is calculated compared with the revaluation index in place prior to the entry of Law 21/2021 which, under certain conditions, set pension increases at 0.25%.

<sup>68</sup> See AIReF (2020c) and Ageing Report 2021. Country fiche Spain (2021).

<sup>69</sup> According to the latest Report to Parliament (Spanish version only), at 31 December 2020 the Reserve Fund amounted to €2,138 million, equivalent to 0.2% of GDP. The estimated total for 2032 includes the effect of the increase in social contributions and also capitalisation of the total as at end-2020.

#### IMPACT ON THE PENSION SYSTEM OF THE REMOVAL OF THE SUSTAINABILITY FACTOR AND THE RETURN TO CPI INDEXATION

According to AIReF and the European Commission's Ageing Report, with the return to CPI indexation and the removal of the sustainability factor, pension expenditure will grow by between 4.1 pp and 4.3 pp of GDP between 2019 and 2050 (not taking into account the new intergenerational equity mechanism). The increase in State transfers to Social Security approved recently considerably enhances the latter's budget balance, albeit with zero impact in terms of the aggregated general government budget balance.



SOURCE: Banco de España.



Private saving can play an important role as a supplement to the benefits offered by the pay-as-you-go (PAYG) public pension system. In this respect, the recent legislative proposal to encourage collective pension schemes - which in general are less well developed in Spain than in other EU countries - essentially aims to increase the share of the population covered by these schemes. <sup>70</sup> For this purpose, the reform establishes the creation of public occupational pension funds and facilitates the creation of occupational schemes in the collective bargaining framework. Tax relief is also envisaged to encourage occupational schemes, in keeping with the pattern observed in recent years where tax incentives have been focused on occupational schemes to the detriment of individual pension schemes.<sup>71</sup>

A recent Banco de España publication suggests that making contributions to occupational pension schemes may be a useful channel through which to generate new retirement saving. Specifically, based on EFF 2017 data, it is estimated that the total saving could increase by 31 euro cents per euro contributed to such schemes, after subtracting the related tax credit.72

<sup>70</sup> See Draft legislation regulating incentives for occupational pension schemes (Spanish version only).

<sup>71</sup> See, for example, State Budget Law 22/2021 for 2022 (Spanish version only).

<sup>72</sup> See Gómez and Villanueva (2022) (English version forthcoming). Also, Ayuso, Jimeno and Villanueva (2019) find that tax incentives for private pension schemes in Spain will generate an increase in saving of 19 euro cents per euro of contribution. In turn, Carrasco and Villanueva (2022), forthcoming, show that tax incentives for private pension schemes help households moderate their consumption throughout their lifetime.

In any event, total contributions to (individual, occupational and collective) pension schemes fell by more than 30% in Spain in 2021. Above all this reflects the sharp decline (of almost 40%) in contributions to individual pension schemes. mainly as a result of the decline in the related tax incentives, in a setting in which contributions to occupational schemes were virtually unchanged. In this respect, looking forward, it will be essential to assess the extent to which the new regulations are able to encourage the more widespread use of occupational schemes, to offset the lower contributions to individual schemes.

In general, on the estimates available, which include the latest measures adopted, fresh future actions will be needed on either the revenue or the expenditure side, or on both sides, to cater for the growth in pension expenditure stemming from population ageing. In this respect, in recent years the Banco de España has been pointing to the need to strengthen the link between contributions made and benefits received - while ensuring a sufficient level for the most vulnerable households - and to launch a rigorous debate to address the level of benefits the system should provide and the question of how the revenue required to fund those benefits can be raised. Moreover, the consequences of the reforms envisaged in terms of redistribution and intergenerational equity must be analysed, to ensure that any adjustments to the system do not fall disproportionately on specific population groups, such as the retired population or future cohorts of workers. The system should also be made more transparent and easier to plan for, to offer greater certainty to the population and facilitate decision-making as regards saving, work and retirement. In this respect, automatic adjustment mechanisms could possibly be introduced, to adapt certain system parameters to changes in demographic and economic dynamics.

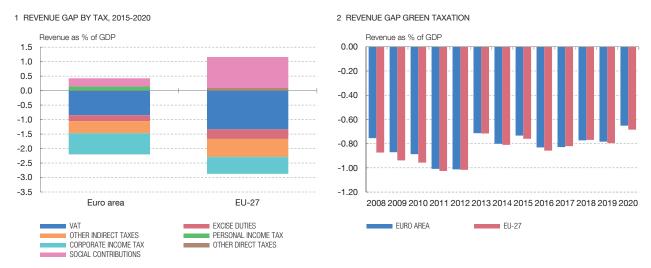
## Main aspects on the public revenue side

A comprehensive review of the Spanish tax system is needed to assess whether, overall, the different taxes meet their goals in the most efficient and most effective manner possible. A useful starting point for this analysis is to compare Spain's tax structure with that of our European neighbours. In this respect, the comparison with the EU-27 average over the average of the period 2015-2020 shows that revenue from indirect taxes and effective tax on consumption is lower in Spain (see Chart 2.15.1). In the case of direct taxation, corporate income tax revenue is also lower in Spain, while personal income tax revenue is in line with the EU-27 average. Moreover, the Spanish tax system obtains a larger proportion of revenue from tax on non-corporate capital, and higher public revenue from social contributions.<sup>73</sup> If the Spanish tax structure is compared, not with the European Union but with the average

<sup>73</sup> See López-Rodríguez and García Ciria (2018) for a more detailed descriptive analysis of Spain's tax structure compared with the other EU-27 economies.

#### SPAIN'S TAX STRUCTURE COMPARED WITH THE EU-27 AVERAGE

A comparison of the Spanish tax structure with the European average over the average of the period 2015-2020 shows that revenue from indirect taxes is lower, with lower effective tax on consumption and a significant revenue gap in terms of green taxation. As a percentage of GDP, VAT and corporate income tax revenue in Spain is lower than the EU-27 average, while its revenue from social contributions and taxation of non-corporate capital is higher. Green taxation in Spain is lower than the EU-27 average.



SOURCE: Eurostat (2022).



of the euro area economies, in the period 2015-2020 Spain also has a negative revenue gap in terms of indirect and corporate taxation, while it obtains a higher proportion of revenue from the other direct taxes and social contributions.

The academic literature suggests that shifting the burden of taxation from income to consumption yields potential efficiency and equity gains.74 The efficiency gains associated with this shift in the tax burden stem from the reduction in the distortions associated with both corporate and personal income tax in the relative prices of the factors of production and the returns on assets. As regards the distributive effects, the additional revenue associated with the efficiency gains obtained from the shift in the tax burden could be used to neutralise its regressive effects, especially as a consequence of the higher tax on consumption. These compensatory measures could be introduced through adjustments in personal income tax or transfers to lower income households;75 the amount and scope of these measures should be established according to society's distributive preferences.

<sup>74</sup> The role played by consumption taxes in terms of redistribution and social insurance, and their positive effects on welfare, are examined in Correia (2010) and Macnamara, Pidkuyko and Rossi (2022), forthcoming. The possible expansionary impact that shifting the burden of taxation from income to consumption could have on economic activity is examined, for example, in Nguyen, Onnis and Rossi (2021).

<sup>75</sup> Both the AIRef's Spending Review and the White Paper for the Reform of the Tax System (text available only in Spanish) point to the inefficiency and high cost of a redistributive policy based on the widespread use of reduced and super-reduced rates of VAT. In this respect, a flat rate of VAT, combined with transfers or negative personal income taxes for lower income households, would enable the same distributive goals to be achieved more efficiently.

Any reorganisation of the Spanish tax structure should include a review of the tax cost associated with the consumption tax relief measures. On the information available, 76 this cost is the main component of tax relief in Spain. In this respect, all tax benefits currently available must continue to be rigorously and independently reviewed, to determine whether they effectively and efficiently meet their initial goals, and otherwise to eliminate them.

Green taxation, coordinated at the international level, is an efficient instrument to reduce the negative effects associated with climate change and to incentivise the green transition (for more details, see Chapter 4 of this report). Despite the ambitious environmental commitments assumed by Spain in recent years, green taxation remains underdeveloped in Spain. In particular, the consistently negative revenue gap between Spain and the average of the EU-27 economies in this field illustrates the ample margin available for action and improvement in this area (see Chart 2.15.2).

The ambitious environmental goals assumed by Spain point to the need to introduce new tax measures in energy, hydrocarbons and transport. Ambitious and coordinated reforms in all these areas, without considering additional measures, would have an important distributive effect on households and would adversely affect activity in those industries with a higher environmental impact. However, these effects could be mitigated by various compensatory packages seeking to neutralise the regressive impact of the measures on the most vulnerable households. They could also be moderated by introducing various initiatives to encourage businesses and professionals to adopt new equipment and green technology. On aggregate terms, an increase in the share of green taxation could also permit an adjustment of the tax structure, reducing direct taxes and, therefore, the distortion these create in agents' decisions.<sup>77</sup>

The growing digitalisation and globalisation of economic activity require greater international coordination and harmonisation of the tax system. Digitalisation and globalisation provide an opportunity to boost Spanish economic growth. However, they also pose a challenge as to the design and sufficiency of the tax system. This challenge stems from the growing difficulty to accurately identify the jurisdiction in which a taxable object is created or transferred, an economic activity is pursued or taxable income is generated. At the same time, the effective taxation of tax bases may be eroded in view of the emergence of economic activities based on new business models that are difficult to assess, and in some cases even to locate. Likewise, the growing international mobility of tax bases associated with non-corporate capital, corporate profits and highly skilled labour income limits countries' revenue-raising capacity. In this setting, the recent international taxation agreements reached under the aegis of the OECD-G20 are to be welcomed, as are the various European Union initiatives

<sup>76</sup> See, for example, the Memoria de Beneficios Fiscales (Spanish version only) accompanying the State Budget for 2022.

<sup>77</sup> See Estrada and Santabárbara (2021).

to advance in the coordination and integration of corporate taxation and taxation of digital activities. The Spanish tax system needs to adapt to this new reality, since furthering the processes of international coordination and tax harmonisation driven by the EU-27 is the surest means of preventing any erosion of tax bases and Spain's economic competitiveness.

The White Paper for the Reform of the Tax System, published in March, presents a diagnosis of the Spanish tax system and proposes a raft of measures for a future reform of the system. In April 2021 the Government created a committee of experts entrusted with drafting a White Paper that would serve as a base for a future tax reform. Drawing on the diagnosis contained in the White Paper, which was published in March 2022, the bases and goals of a possible tax reform are presented. The White Paper points to the desirability of undertaking a complete overhaul of the system, to guarantee the sustainability of public finances, in accordance with the principles of efficiency and equity, and of announcing in advance the various tax measures to be included in the necessary fiscal consolidation programme.

As the preferred option in this possible tax reform, the White Paper calls for both direct and indirect tax bases to be broadened. It also highlights the desirability of strengthening continuous assessment of the measures introduced and of tax incentives, in order to achieve ongoing improvements in the process of drafting public policies. In addition, the White Paper signals the need to design the tax reform in conjunction with decisions as to the level and future course of public expenditure. However, the proposals do not include a quantitative assessment of the different tax measures considered under alternative macroeconomic scenarios and projected public expenditure paths, which is vital in the design of a credible fiscal consolidation strategy.

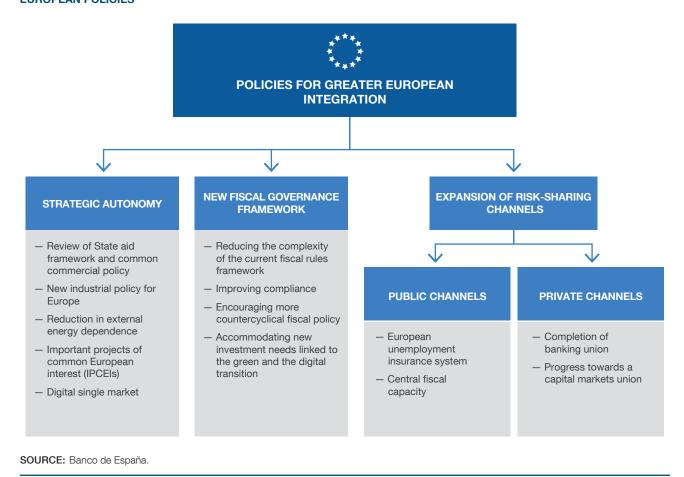
# The role of European policies

European policies are playing an increasingly important role in addressing shocks that affect the EU economies overall. This came to the fore with the outbreak of the COVID-19 pandemic when, among other measures deployed at the European level, the NGEU programme was launched, making a huge volume of funds available to Member States.<sup>78</sup> More recently, the importance of European policies has also been apparent following the Russian invasion of Ukraine. In this case, for instance, the European Union has responded as one, imposing broad economic sanctions on Russia.

The growing importance of European policies - as an essential factor in Member States' economic activity - means that it is now more important than ever to continue

<sup>78</sup> For more details, see Banco de España (2021d), "The EU response to the COVID-19 economic crisis and its new governance challenges", Box 1.2, Annual Report 2020.

Figure 2.3 **EUROPEAN POLICIES** 



making firm progress to strengthen the European institutional framework (see Figure 2.3). Some of the main initiatives that have attracted growing interest in the European institutional debate in recent months are set out below. In particular, the proposal to increase the European Union's autonomy of decision and action in areas such as energy, technology and digitalisation (see Section 4.1), and reform of the Union's fiscal rules framework (see Section 4.2). Also discussed in detail is the need to expand its public and private risk-sharing channels, which will require, inter alia, making continued progress towards the banking union and the capital market union (see Section 4.3).

# Strategic autonomy

In recent decades, the integration of the European economies (including the Spanish economy) into global production chains has improved the allocation of resources and economic efficiency but, at the same time, increased the EU's exposure to supply chain strains. The globalisation of international trade and financial flows in recent decades has generally taken place in a geopolitical context conducive to the growth of multilateralism.<sup>79</sup> More recently, however, various geopolitical events - such as the Russian invasion of Ukraine, Brexit and the trade war between China and the United States - have fundamentally questioned multilateralism and highlighted the significant risks to which the European economy is exposed in the global environment.

The high degree of trade openness of the European economy exposes it, through various channels, to disruptions in international trade and financial flows. In particular, the heavy dependence of the EU on imports of energy and other commodities make it especially vulnerable to shocks affecting the main countries supplying these products. It should be noted here that Russia is the main supplier of natural gas and oil to the EU (see Chart 2.16.1), although there are notable disparities in the degree of dependence of the different Member States.80 The EU also depends critically on imports of other commodities essential for various industrial processes. For example, China produces around 90% of rare earths and magnesium, essential inputs for the electronics and automotive industries. 81 Russia, meanwhile, besides being one of the main global suppliers of certain critical commodities (such as palladium and scandium), is practically the only supplier to the EU of other very important products, such as nickel and anthracite (see Chart 2.16.2). Aside from these exposures, the EU economy is also very vulnerable to other disruptions in global value chains, such as those observed in medical products in the first phase of the pandemic<sup>82</sup> and those that still exist in international trade in semiconductors and in maritime transport.83

Recent trade and geopolitical developments have increased the relevance of the EU's open strategic autonomy (OSA) agenda presented at the end of September **2020.** The aim of this initiative is to increase the EU's autonomy of decision and action, while strengthening the resilience of its economy, without undermining its open and multilateral stance, within the framework of a world order based on rules and cooperation.<sup>84</sup> Since 2020, the EU has launched an ambitious agenda of actions in the financial, technological and digital areas, among others, to accelerate European integration. These include, notably, those seeking to ensure a level playing field for EU businesses (such as the mechanism to control foreign investment in the EU and the review of State aid frameworks), measures to boost the resilience of the financial and payment system, the review of European trade policy and the proposal for a new European industrial policy.85

One example of the initiatives proposed within the scope of the OSA is the use of national and supra-national funds for Important Projects of Common

<sup>79</sup> See Kataryniuk, Pérez and Viani (2021).

<sup>80</sup> For example, gas supply in Spain is much less exposed to Russia than in most EU countries as a result of Spain's notable LNG regasification capacity (the largest of any EU country) and the gas pipelines connecting Spain to North Africa.

<sup>81</sup> See European Commission (2020a).

<sup>82</sup> See García, Martín-Machuca and Viani (2020).

<sup>83</sup> See Kataryniuk, Río Lopezosa and Sánchez Carretero (2021) and Chapter 3 of this report.

<sup>84</sup> See L'Hotellerie, Manrique and Millaruelo (2021).

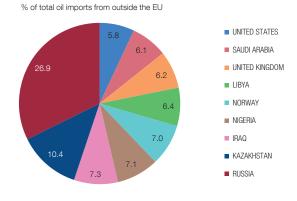
<sup>85</sup> See European Commission (2021a).

#### Chart 2.16

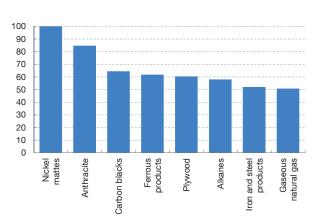
# EUROPE'S HIGH DEPENDENCE ON TRADE WITH RUSSIA FOR CERTAIN COMMODITIES

Russia is the main supplier of oil to the EU. Also, the EU's imports of some specific products, such as nickel and anthracite, are highly concentrated in Russia and would in principle be difficult to substitute, owing to scant European exports and Russia's importance as a global producer.

1 IMPORTS OF OIL FROM COUNTRIES OUTSIDE THE EU IN 2019







SOURCES: Suomen Pankki - Finlands Bank and CEPII.

a The identification of goods with low substitutability is based on the ratio of imports from Russia to European exports and on Russia's share of global production.



European Interest (IPCEI) relating to microelectronics and batteries. The purpose of these actions is to guarantee Europe's supplies, resilience and leadership in these technologies, including achieving a 20% share of global chip production by 2030.86 Also, in order to create a safer digital space and to establish a level playing field to foster digital innovation, growth and competitiveness, both in the European Single Market and globally, a proposal has been presented for a regulation on a single market for digital services (Digital Services Act)87 and another on contestable and fair markets (Digital Markets Act).88

OSA policies need to be designed and implemented so as to minimise the risk of fragmentation within the EU and undesired distortions. For example, a more ambitious EU industrial policy could promote network effects and economies of scale, boosting efficiency and the development of specific industries geared to greater resilience. However, this policy may also intensify productive specialisation in the EU, generating major asymmetries across countries. Accordingly, these policies would need to be complemented by other initiatives to improve economic integration in the region and ensure profits and costs are more evenly distributed (see Section 4.3).

<sup>86</sup> See European Commission (2022).

See European Commission (2020b).

See European Commission (2020c).

# 4.2 Reform of the fiscal rules framework

At the beginning of the COVID-19 pandemic, the Council of the European Union activated the Stability and Growth Pact's (SGP) escape clause. As a result, the deficit and debt requirements of the European fiscal rules were temporarily suspended, enabling a decisive national fiscal policy response to the health crisis and significantly mitigating the adverse effects of the pandemic on the EU economies.

In principle, when this clause is deactivated, the SGP will once again be applied. Against a background of higher government debt levels, this could require a significant fiscal consolidation drive in some Member States. Before the start of the war in Ukraine the European Commission indicated that the escape clause would be deactivated in 2023, as it considered that the economic recovery in the EU would be sufficiently advanced by then for fiscal policy normalisation to begin. However, taking into account the setback to EU growth already caused by the war, it is likely that the deactivation of this clause will be postponed by a year.

In any event, the European Commission is currently reviewing the European fiscal rule framework. In view of its significant shortcomings in recent decades, the European Commission began to review this framework in October 2021. The objectives of this review include reducing its complexity, improving compliance, boosting the countercyclical behaviour of fiscal policy and accommodating the new investment needs of the digital and green transitions.89

This reform of the fiscal rules should take into account, inter alia, the magnitude and disparity of the Member States' current budgetary imbalances (see Chart 2.17.1), which could require a more individualised approach and a reconsideration of the government debt levels that serve to anchor the SGP in the medium term. In this respect, it should be pointed out that the economic conditions under which the deficit and debt reference levels were originally set have changed. In particular, one of the main determinants of debt sustainability, the differential between the real interest rate and the economy's potential growth rate (known as the "r-g gap"), which was clearly positive when the euro area was established, has been negative over the last five years, although with high heterogeneity across countries. This means that, if the low interest rate environment of recent years continues to prevail, the primary balance necessary to stabilise the government debt-to-GDP ratio at a particular level would now be lower than required by the SGP, for any given inflation rate. 90 Conversely, however, it is important to bear in mind that the current negative differential between the real interest rate and potential growth may be reversed in the medium term, in which case stabilising the current high levels of government debt would require a considerable fiscal adjustment (see Chart 2.17.2).

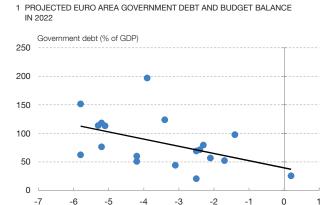
<sup>89</sup> See European Commission (2021b).

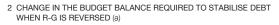
<sup>90</sup> See Alloza et al. (2021).

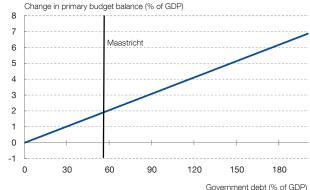
#### Chart 2.17

### THE FISCAL POSITION OF THE MEMBER STATES AND THE ARITHMETIC OF EURO AREA DEBT SUSTAINABILITY

The narrowing of the differential between interest rates and growth allows debt to be stabilised at a higher level for a given primary deficit. However, a higher level of government debt entails greater exposure to reversals of this differential, which increases fiscal risk in a high government debt scenario.







# SOURCE: European Commission.

a Depicted here is the change in the primary budget balance that would be needed to stabilise debt again at the level marked by the horizontal axis, when the differential between the real interest rate and potential GDP growth increases by 4 pp (approximately, the reverse of the change between 1995-1999 and 2015-2019).

Budget balance (% of GDP)



Moreover, there is a consensus among experts as to the need to review the fiscal rules framework to make it more transparent and predictable, and to improve countries' compliance. The fiscal rules framework has numerous objectives and a complex system of governance, which has made it difficult to apply in practice. One possibility that has been proposed in the specialised literature is to organise the framework around a single medium-term target for the level of government debt (which could be different in each country) and a single fiscal policy instrument, setting public expenditure from a medium-term perspective (i.e. linking its growth to the potential increase in economic activity). This approach would make the path of budgetary policy more predictable by introducing elements that go beyond the normal budgetary cycle, making it more automatic, and would therefore help to mitigate fiscal policy's procyclical pressures<sup>91</sup> and facilitate the evaluation task of the independent monitoring authorities (such as the AIReF in Spain). The hitherto scant ability to ensure that countries build up fiscal buffers in good times for use in crises should also be improved. This would require improving the design of the system of incentives for complying with the rules and, probably, strengthening the role played by independent fiscal institutions.

The new European fiscal governance framework should be completed with a number of elements to expand the risk-sharing channels in the EU. This would entail, for instance, establishing a European unemployment insurance system and a

<sup>91</sup> See Benalal et al. (2022).

central fiscal capacity need to be established. It should be noted that, under the current fiscal rules framework, it is not possible to ensure, at any given moment, that the aggregate stance of the national fiscal policies is appropriate for the EU as a whole, which makes it hard to achieve a balanced fiscal and monetary policy mix.

New tools must also be developed to enable the risk of financial fragmentation to be reduced and new common investment needs to be financed. In this respect, some of the initiatives approved during the pandemic should be expanded, such as the temporary Support to mitigate Unemployment Risks in an Emergency (SURE), launched in April 2020, which has demonstrated how access to EU loans generates significant interest savings for most Member States and also protects them from situations of financial market stress. 92 It would also be desirable to review the timeframe for the NGEU programme to reduce the risk that some of the investment necessary to boost digitalisation, the fight against climate change and EU strategic autonomy may not be completed. For example, the length of the application period for loans under this programme, which expires in mid-2023, could be reconsidered.

# **Expanding risk-sharing channels**

In addition to expanding public risk-sharing channels (see Section 4.2), risk pooling among private agents needs to be fostered. Various analytical studies have already shown that the private risk-sharing mechanisms currently operating among the European economies are much less powerful than those in the United States, for example.93

For progress to be made with private risk sharing, the financial architecture of the EU needs to be completed. In particular, progress is needed on the capital markets union agenda, to achieve greater financial market integration in the EU and to increase flows of financing between Member States. The European Commission's 2020 Action Plan contains a wide range of proposals to move in this direction, which have been well received by the Member States. For example, in November 2021, the Commission proposed a package of measures to improve the dissemination of equity market information and to improve investor access to company data (especially SME data). In 2022, it is expected to continue proposing initiatives to facilitate SME access to listed markets and the exchange of information. The Commission will also address the harmonisation of certain aspects of national corporate insolvency frameworks, a decisive factor to reduce fragmentation in European financial markets and encourage cross-border investment. The fiscal treatment of such investment - in particular, the deductibility of withholding taxes at source - and supervisory convergence are other aspects due to be addressed within the context of the 2020 Action Plan.

<sup>92</sup> See Burriel, Kataryniuk and Pérez (2022), forthcoming.

<sup>93</sup> See, for example, Burriel et al. (2020).

Completing the banking union is also essential. This requires setting in place a European Deposit Insurance Scheme (EDIS) with a risk-pooling component that is as extensive as possible. A credible political commitment here would represent a decisive contribution to ensuring financial stability in the euro area in the short and medium term.

## **REFERENCES**

- Acemoglu, D., and D. Autor (2011). "Skills, tasks and technologies: Implications for employment and earnings", *Handbook of Labor Economics*, Vol. 4, pp. 1043-1171.
- AIReF (2020a). Spending review, Phase II.
- AIReF (2020b). "Beneficio fiscal: Deducción por por I+D+i en el impuesto sobre sociedades", Spending review phase II, Study 1 tax benefits.
- AIReF (2020c). "Update of demographic and pension expenditure forecasts", Technical Document 1/20.
- Albrizio, S. and J. F. Geli (2021). "An empirical analysis of the determinants that can boost Next Generation EU's effectiveness", Analytical Articles, *Economic Bulletin* 4/2021, Banco de España,
- Alloza, M., J. Andrés, P. Burriel, I. Kataryniuk, J. J. Pérez, and J. L. Vega (2021). "The reform of the European Union's fiscal governance framework in a new macroeconomic environment", *Occasional Paper* No 2121, Banco de España.
- Alloza, M., J. Brunet, V. Forte-Campos, E. Moral-Benito, and J. Pérez (2022). *El gasto público en España desde una perspectiva europea*, Documentos Ocasionales, Banco de España, (forthcoming).
- Alloza, M., V. Forte-Campos, J. Martínez-Pagés, E. Moral-Benito and J. A. Rojas (2022). *La sostenibilidad de la deuda pública en España en el largo plazo*, Documentos Ocasionales, Banco de España (forthcoming).
- Alloza, M., D. Leiva-León and A. Urtasun (2022). La respuesta de la inversión privada a un incremento de la inversión pública, (forthcoming).
- Almunia, M. and D. López-Rodríguez (2018). "Under the Radar: The Effects of Monitoring Firms on Tax Compliance". American *Economic Journal: Economic Policy*, Vol. 10, No 1, pp. 1-38.
- Anghel, B., H. Basso, O. Bover, J. M. Casado, L. Hospido, M. Izquierdo, I. A. Kataryniuk, A. Lacuesta, J. M. Montero and E. Vozmediano (2018). "Income, consumption and wealth inequality in Spain", SERIEs, 9(4), pp. 351–387.
- Anghel, B. and A. Lacuesta (2020). "Ageing, productivity and employment status", Analytical Articles, *Economic Bulletin*, 1/2020, Banco de España.
- Anghel, B., A. Lacuesta and A. Regil (2020). "Transferability of workers' skills in sectors potentially affected by COVID-19," Analytical Articles, *Economic Bulletin*, 2/2020, Banco de España.
- Arellano, M., S. Bonhomme, M. de Vera, L. Hospido and S. Wei (2021). "Income risk inequality: Evidence from Spanish administrative records", *Working Paper* No 2136, Banco de España.
- Aspachs, O., R. Durante, A. Graziano, J. Mestres, J. G. Montalvo and M. Reynal-Querol (2022). "Seguimiento de la desigualdad en tiempo real en España durante la crisis de la Covid-19", ICE, *Revista de Economía*, No 923, pp. 163-179.
- Ayuso, J., J. F. Jimeno and E. Villanueva (2019). "The effects of the introduction of tax incentives on retirement saving", *SERIEs*, 10, pp. 211-249.
- Banco de España (2016). "Business dynamics in Spain: characteristics, determinants and implications", Chapter 4, Annual Report 2015.
- Banco de España (2020), Annual Report 2019.
- Banco de España (2021a), Annual Report 2020.
- Banco de España (2021b). "The Spanish economy post-COVID-19: structural challenges and policies to address them", Chapter 2, *Annual Report 2020.*
- Banco de España (2021c), "Labour market duality and severance costs: a model based on the Austrian funds", Box 2.4, *Annual Report 2020.*
- Banco de España (2021d). "The EU response to the COVID-19 economic crisis and its new governance challenges", Box 1.2, *Annual Report 2020.*
- Banco de España (2022a). Financial Stability Report, spring.
- Banco de España (2022b). "El Ministerio de Inclusión y el CEMFI firman un convenio para la evaluación de los proyectos de itinerarios de inclusión social", press release, 18 January 2022, Communication Department.

- Barro, R. J. (2001). "Human Capital and Growth", American Economic Review, Vol. 91, No 2, pp. 12-17.
- Benalal, N, M. Freier, W. Melyn, S. van Parys and L. Reiss (2022). "Towards a single performance indicator in the EU's fiscal governance framework: An assessment of the expenditure and structural balance rules in the European fiscal governance framework", *Working Paper Series*, No 288, ECB.
- Bertheau A., E. M. Accabi, C. Barceló, A. Gulyas, S. Lombardi and R. Saggio (2022). *The unequal cost of job loss across countries*, Working paper, No 29727, NBER.
- Blanchard, O. and J. Tirole (2022). "Major future economic challenges", VoxEU, CEPR Policy Portal, 21 March.
- Björklund, A. and K. G. Salvanes (2011). "Education and family background: Mechanisms and policies", in S. Machin, E. A. Hanushek, and L. Woessmann (eds.), *Handbook of the Economics of Education*, Vol. 3, pp. 201-247.
- Blanchet, T., L. Chancel and A. Gethin (2021). "Why is Europe more equal than the United States?", *American Economic Journal: Applied Economics* (forthcoming).
- Blanco, R., S. Mayordomo, Á. Menéndez and M. Mulino (2020). "Spanish non-financial corporations' liquidity needs and solvency after the COVID-19 shock", *Occasional Paper* No 2020, Banco de España.
- Burriel, P., P. Chronis, M. Freier, S. Hauptmeier, L. Reiss and D. Stegarescu (2020). "A fiscal capacity for the euro area: lessons from existing fiscal-federal systems", *Occasional Paper*, No 2009, Banco de España.
- Burriel, P., I. Kataryniuk and J. J. Pérez (2022). "Computing EU's SURE interest saving with an extended debt sustainability assessment tool", *Occasional Paper*, Banco de España, forthcoming.
- Cahuc, P., P. Carry, F. Malherbet and P. Martins (2022). "Employment effects of restricting fixed-term contracts: theory and evidence", CEPR Discussion Paper, DP16875, Centre for Economic Policy Research.
- Cappellari, L., C. Dell'Aringa and M. Leonardi (2012). "Temporary Employment, Job Flows and Productivity: A Tale of Two Reforms", *The Economic Journal*, Vol. 122, No 562, pp. F188-F215.
- Card, D., J. Kluve and A. Weber (2018). "What works? A Meta Analysis of Recent Active Labor Market Program Evaluations", *Journal of the European Economic Association*, Vol. 16, pp. 894-931.
- Carrasco, R. and E. Villanueva (2022). "Tax incentives to retirement saving and intertemporal income smoothing", mimeo.
- Comin, D. A., A. Danieli and M. Mestieri (2020). "Income-driven labor-market polarization". Working Paper, No 27455, NBER.
- Comité de Personas Expertas (2022). Libro Blanco sobre la Reforma Tributaria, Ministerio de Hacienda.
- Community Access to Cash Pilots.
- Congressional Research Service (2022). An overview of small business contracting.
- Correia, I. (2010). "Consumption taxes and redistribution". American Economic Review, Vol. 100, No 4, pp. 1673-1694.
- Crespo, L., C. Gento, N. El Amrani and E. Villanueva (2022). "El uso de los hogares españoles de los medios de pago entre 2002 y 2020: un análisis a partir de la Encuesta Financiera de las Familias", *Occasional Papers*, Banco de España (forthcoming).
- Cuadrado, P., M. Izquierdo, J. M. Montero, E. Moral-Benito, J. Quintana (2022). El crecimiento potencial de la economía española tras la pandemia, *Occasional Papers*, No 2208, Banco de España.
- Deleidi, M. (2022). "Quantifying multipliers in Italy: does fiscal policy composition matter?", Oxford Economic Papers, Vol. 74, No 2, pp. 359–381.
- Di Giovanni, J., M. García-Santana, P. Jeenas, E. Moral-Benito and J. Pijoan-Mas (2022). "Government procurement and access to credit: firm dynamics and aggregate implications", *CEPR Discussion Paper*, 17023, Centre for Economic Policy Research.
- Directorate General Economics, Statistics and Research (2020). "The housing market in Spain: 2014-2019", Occasional Paper, No 2013, Banco de España.
- Duflo, E., R. Glennerster and M. Kremer (2007). "Using randomization in development economics research: a toolkit", in T. Paul Schultz and John A. Strauss, *Handbook of Development Economics*, Elsevier, Vol. 4, pp 3895-3962.
- Estrada, Á. and D. Santabárbara (2021). "Recycling carbon tax revenues in Spain. Environmental and economic assessment of selected Green reforms", Working Paper, No 2119, Banco de España.

- European Commission (2020a). Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions: Critical Raw Materials Resilience: Charting a Path towards greater Security and Sustainability, Brussels, 3.9.2020 COM(2020) 474 final.
- European Commission (2020b). Proposal for a Regulation of the European Parliament and of the Council on a Single Market for Digital Services (Digital Services Act) and amending Directive 2000/31/EC, Brussels, 15.12.2020 COM(2020) 825 final.
- European Commission (2020c). Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (Digital Markets Act), Brussels, 15.12.2020 COM(2020) 842 final.
- European Commission (2021a). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Updating the 2020 New Industrial Strategy: Building a stronger Single Market for Europe's recovery, Brussels, 5.5.2021 COM(2021) 350 final.
- European Commission (2020b). Communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank: Economic policy coordination in 2021: overcoming COVID-19, supporting the recovery and moderniing our economy, Brussels, 2.6.2021 COM(2021) 500 final.
- European Commission (2022). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions A Chips Act for Europe. Brussels, 8.2.2022 COM(2022) 45 final.
- Feenstra, R. C., and G. H. Hanson (1999). "The Impact of Outsourcing and High-Technology Capital on Wages: Estimates for the United States, 1979-1990", *The Quarterly Journal of Economics*, Vol. 114, No 3, pp. 907-940.
- Felgueroso, F., J. I. García-Pérez and S. Jiménez-Martín (2018). Perfilado estadístico: un método para diseñar políticas activas de empleo, Ed. Ramón Areces.
- Fernández-Cerezo, A. and J. M. Montero (2021). *Un análisis sectorial de los retos futuros de la economía española,* Documentos Ocasionales, No 2133, Banco de España.
- García, C., C. Martín-Machuca and F. Viani (2020). "International trade in medical products during the COVID-19 pandemic", Box 4, *Economic Bulletin*, 4/2020, Banco de España.
- Garcia-Louzao, J., L. Hospido and A. Ruggieri (2022). Dual returns to experience, Working Paper No 2211, Banco de España.
- García-Pérez, J. I., I. Marinescu and J. Vall Castello (2018). "Can fixed-term contracts put low skilled youth on a better career path? Evidence from Spain", *The Economic Journal*, Vol. 129, pp. 1693-1730.
- García-Posada, M. (2020). Analysis of insolvency procedings in Spain against the backdrop of the COVID-19 crisis: insolvency proceedings, pre-insolvency arrangements and insolvency moratorium, *Occasional Paper* No 2029, Banco de España.
- García-Posada, M. and R. Vegas (2018). "Bankruptcy reforms in the midst of the Great Recession: The Spanish experience", *International Review of Law and Economics*, Vol. 55, pp. 71-95.
- Gómez, M. and L. Hospido (2022). "The challenge of measuring digital platform work", Analytical Articles, *Economic Bulletin*, 1/2022, Banco de España.
- Gómez, M. and E. Villanueva (2022). "El efecto de los planes de pensiones de empresa sobre el ahorro privado de los hogares", Artículos Analíticos, *Boletín Económico*, Banco de España.
- Hall, J. V. and A. B. Krueger (2018). "An analysis of the labor market for Uber's Driver-Partners in the United States", *ILR Review*, Vol. 71, No 3.
- Harmon, C., H. Oosterbeek and I. Walker (2003). "The returns to education: microeconomics", *Journal of Economic Surveys*, Vol. 17, No 2, pp. 115–156.
- Hernández de Cos, P. (2020). "The main post-pandemic challenges for the Spanish economy. Appearance before the Parliamentary Committee for the Economic and Social Reconstruction of Spain after COVID-19. Congress of Deputies 23 June 2020", Occasional Paper No 2024, Banco de España.
- Hirsch, B. and S. Mueller (2012). "The Productivity Effect of Temporary Agency Work: Evidence from German Panel Data", *The Economic Journal*, Vol. 122, No 562, pp. F216-F235.
- Howell, S. T. (2017). "Financing innovation: evidence from R&D grants", American Economic Review, Vol. 107, No 4, pp. 1136-1164.

- Kataryniuk, I., J. J Pérez and F. Viani (2021). "(De-)Globalisation of trade and regionalisation: a survey of the facts and arguments", Occasional Paper No 2124, Banco de España.
- Kataryniuk, I., A. del Río and C. Sánchez Carretero (2021). "Euro area manufacturing bottlenecks", Box 3, Quarterly report on the Spanish economy, Economic Bulletin 3/2021, Banco de España.
- L'Hotellerie-Fallois Armas, P., M. Manrique and A. Millaruelo (2021). "Open strategic autonomy in the EU", Box 5, Quarterly report on the Spanish economy", Economic Bulletin 1/2021, Banco de España.
- Levy-Yeyati, E., M. Montané and L. Sartorio (2019). "What works for active labor market policies?", Harvard University Center for International Development, Faculty working paper, No 358.
- López-Rodríguez, D. and C. García Ciria (2018). "Spain's tax structure in the context of the European Union", Occasional Paper No 1810, Banco de España.
- López-Rodríguez, D. and M. L. Matea (2020), "Public intervention in the rental housing market: a review of international experience", Occasional Paper, No. 2002, Banco de España.
- Lucio, J. de, and J. S. Mora-Sanguinetti (2022). "Drafting "better regulation": the economic cost of regulatory complexity", Journal of Policy Modeling.
- Macnamara, P., M. Pidkuyko and R. Rossi (2022). "Taxing Consumption in Unequal Economies", Working Paper, Banco de España (forthcoming).
- Martínez-Bravo, M. and C. Sanz (2021). "Inequality and psychological well-being in times of COVID-19: evidence from Spain", SERIEs 12, pp. 489-548.
- Ministerio de Asuntos Económicos y Transformación Digital (2021), Ageing report 2021. Country fiche Spain.
- Mora-Sanguinetti, J. S. and R. Pérez-Valls (2021). "How does regulatory complexity affect business demography? Evidence from Spain", European Journal of Law and Economics, Vol. 51, No 2, pp. 203-242.
- Mora-Sanguinetti, J. S. and I. Soler (2022). La regulación sectorial en España. Resultados cuantitativos. Working Paper No 2202, Banco de España.
- Nguyen, A., L. Onnis, and R. Rossi (2021). "The macroeconomic effects of income and consumption tax changes", American Economic Journal: Economic Policy, Vol.13, No 2, pp. 439-466.
- Oficina Nacional de Prospectiva y Estrategia del Gobierno de España (coord.) (2021). España 2050: Fundamentos y Propuestas para una Estrategia Nacional de Largo Plazo.
- Palladino, M.G. and M. Sartori (2022). "Dignity by decree? The occupational effects of temporary jobs regulation in Italy", mimeo, CEMFI.
- Pijoan-Mas, J. and P. Roldan-Blanco (2022). "Dual labor markets and the equilibrium distribution of firms", mimeo.
- Ramey, V. A. (2020). "The macroeconomic consequences of infrastructure investment", Working Paper, No 27625, NBER.
- Ruiz-Valenzuela, J. (2020). "Intergenerational effects of employment protection reforms", Labour Economics, Vol. 62.
- Woodward, D., O. Figueiredo and P. Guimarães (2006). "Beyond the Silicon Valley: University R&D and high-technology location", Journal of Urban Economics, Vol. 60, No 1, pp. 15-32.
- Worthington, H., P. Simmonds, K. Farla, and P. Varnai (2018). The silver economy: final report, European Commission, Publications Office.

