

GOVERNMENT SPENDING IN SPAIN  
FROM A EUROPEAN PERSPECTIVE

2022

BANCO DE **ESPAÑA**  
Eurosistema

Documentos Ocasionales  
N.º 2217

Mario Alloza, Júlia Brunet, Victor Forte-Campos,  
Enrique Moral-Benito and Javier J. Pérez

## GOVERNMENT SPENDING IN SPAIN FROM A EUROPEAN PERSPECTIVE

# GOVERNMENT SPENDING IN SPAIN FROM A EUROPEAN PERSPECTIVE

**Mario Alloza**

BANCO DE ESPAÑA

**Júlia Brunet (\*)**

ECONOMIST

**Victor Forte-Campos**

BANCO DE ESPAÑA

**Enrique Moral-Benito**

BANCO DE ESPAÑA

**Javier J. Pérez**

BANCO DE ESPAÑA

(\*) Júlia Brunet's contributions to the paper were made while she worked at the Banco de España.

Documentos Ocasionales. N.º 2217

Agosto 2022

The Occasional Paper Series seeks to disseminate work conducted at the Banco de España, in the performance of its functions, that may be of general interest.

The opinions and analyses in the Occasional Paper Series are the responsibility of the authors and, therefore, do not necessarily coincide with those of the Banco de España or the Eurosystem.

The Banco de España disseminates its main reports and most of its publications via the Internet on its website at: <http://www.bde.es>.

Reproduction for educational and non-commercial purposes is permitted provided that the source is acknowledged.

© BANCO DE ESPAÑA, Madrid, 2022

ISSN: 1696-2230 (on-line edition)

## Abstract

This document presents a detailed analysis of the structure of general government spending in Spain and its recent evolution in comparison to the rest of the European countries. The weight of Spanish public spending is similar to that of neighbouring countries, although below the average for a reference group of European countries (EU-15). Thus, in 2019 the level of public spending stood at 42% of GDP compared to 46% in the EU-15, with a corresponding lower weight of public revenue (39.2% compared to 46% in the EU-15). In terms of the composition by expenditure items, Spain has a relatively high weight compared to other European countries in items such as social benefits (pensions and unemployment) and debt interest payments, but a relatively lower weight in items such as education and public investment. According to the available evidence, a composition of public spending with a lower weight in investment and education is usually associated, in the medium term, with lower rates of potential growth of the economy, and a lower capacity of public redistributive policies to reduce inequality (due to the lesser role of pre-market redistributive policies, which affect the level of skills of economic agents).

**Keywords:** General government, public spending, public finances, economic growth, role of the public sector.

**JEL classification:** H11, H51, H52, H54, H55, H61.

## Resumen

Este documento presenta un análisis pormenorizado de la estructura del gasto público en España y de su evolución reciente, en comparación con el resto de los países europeos. España presenta un peso del sector Administraciones Públicas (AAPP) asimilable al de los países de su entorno, aunque se encuentra, en relación con un grupo de referencia de países europeos (UE-15), con niveles por debajo del promedio. Así, en 2019 el nivel de gasto de las AAPP se situó en el 42% del PIB, frente al 46% de la UE-15, con un correspondiente menor peso de los ingresos públicos (el 39,2%, frente al 46% de la UE-15). En términos de la composición por partidas de gasto, España muestra un peso relativamente elevado, desde una perspectiva europea, en partidas como las prestaciones sociales (pensiones y desempleo) y los pagos por intereses de la deuda, pero un peso relativamente menor en partidas como la educación y la inversión pública. De acuerdo con la evidencia disponible, una composición del gasto público con un menor peso en inversión y educación suele estar asociada, a medio plazo, con tasas inferiores de crecimiento potencial de la economía y con una menor capacidad para reducir la desigualdad —por el menor papel de las políticas redistributivas premercado, que afectan al nivel de competencias de los agentes económicos—.

**Palabras clave:** Administraciones Públicas, gasto público, finanzas públicas, crecimiento económico, papel del sector público.

**Códigos JEL:** H11, H51, H52, H54, H55, H61.

## Índice

<b>Abstract</b>	<b>5</b>
<b>Resumen</b>	<b>6</b>
<b>1 Introduction</b>	<b>8</b>
<b>2 Definition of “public spending” and time references for the comparison</b>	<b>11</b>
<b>3 Developments in public spending from an international perspective</b>	<b>12</b>
<b>4 The structure of public spending by economic classification</b>	<b>16</b>
4.1 Expenditure on social benefits	18
4.2 Expenditure on investment	20
4.3 Expenditure on interest	22
4.4 Expenditure on final consumption	24
<b>5 The structure of public spending by functional classification</b>	<b>26</b>
5.1 Expenditure on healthcare	28
5.2 Expenditure on education	30
5.3 Expenditure on economic affairs	32
5.4 Expenditure on general public services	34
5.5 Expenditure on social protection	36
5.6 Expenditure on other items	38
<b>6 Conclusions and future work streams</b>	<b>41</b>
<b>Box 1 Cyclicity of public spending</b>	<b>43</b>
<b>Box 2 The decentralisation of public spending</b>	<b>46</b>
<b>References</b>	<b>48</b>
<b>Annex 1 Definitions</b>	<b>51</b>
<b>Annex 2 Additional charts</b>	<b>53</b>

## 1 Introduction

The public policy response to the health and economic crisis prompted by COVID-19 has driven a worldwide increase in sovereign debt levels, from what in many economies, including Spain, were already historically high levels. This adds further pressure on government budgets, which have already been affected by a series of global phenomena, such as population ageing, rising inequality, digitalisation, international migration, the response to geopolitical risks (health and even military) and the green transition. Moreover, the government spending needs generated by some of these phenomena can be expected to rise significantly over the coming years. In Europe, the scale of these challenges, which are common to many economies, calls for a joint response.<sup>1</sup> However, from a domestic standpoint, thought should be given to how public sector expenditure can be most effectively structured and sized over the medium term to address those challenges.

In democratic societies, decisions about the proportion of the different expenditure items in public finances, and the corresponding revenue streams that finance them, are guided by social preferences. It is essential that these decisions be based on a prior and thorough analysis of the extent to which each item can efficiently fulfil its purposes.<sup>2</sup> Gauging how efficiently public spending is designed and implemented is a priority not to be taken lightly, particularly when the evidence available for Spain points to considerable room for improvement in some very important expenditure items.<sup>3</sup>

However, the levels of government expenditure and its distribution across different items must also be assessed.<sup>4</sup> To that end, comparing the structure of Spain's public expenditure with that of its European peers can also be informative, which is precisely the aim of this paper. In particular, this paper sets out a detailed analysis of the structure of, and recent developments in, government expenditure in Spain and compares them with other European countries.<sup>5</sup> We use two aggregates as references throughout this paper: the EU-15 (the European Union (EU) prior to the accession of ten new countries on 1 May 2004) and the EU-28 (the EU immediately prior to the withdrawal of the United Kingdom).<sup>6</sup> Both definitions are artificial, given that the United Kingdom ceased to be an EU member on 31 January 2020, but we consider them a useful representation of Spain's European peer

---

1 See [Arce et al. \(2020\)](#) or [Hernández de Cos \(2021a\)](#).

2 For an overview of this topic, see, among others, [Schuknecht \(2020\)](#).

3 For further details, see the [Spending Review](#) conducted by the Independent Authority for Fiscal Responsibility (AIReF).

4 This paper does not cover the above-mentioned and highly significant topic of the efficiency of government expenditure. For a recent review of some of the papers that address this topic from an international comparative standpoint, see [Afonso, Jalles and Venâncio \(2021a\)](#) and [Afonso, Jalles and Venâncio \(2021b\)](#). However, the measurement and cross-country comparison of aggregate public sector efficiency are based on methodologies, such as the estimation of production possibility frontiers, whose results are overly dependent on the assumptions used. In the absence of a precise methodology for conducting international comparisons of public sector efficiency, the study and cross-country comparison of expenditure levels are a first step towards a more comprehensive assessment of the optimal functioning of the public sector.

5 For related papers, see the contributions in [Lago and Martínez-Vázquez \(2016\)](#).

6 The EU-15 comprises Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom. The EU-28 comprises these same countries plus Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia.



group before and after the 2004 enlargement. While we use both references in this paper, in some comparisons we give greater priority to the EU-15 aggregate, given the more readily available time series for the 1980s and 1990s for this group and that it includes a set of countries with a history of EU membership more in line with that of Spain.

According to the analysis, in 2019<sup>7</sup> general government expenditure in Spain stood below the average for the EU-15 both as a percentage of GDP and in real terms (i.e. adjusted for inflation) per capita, and in both metrics was among the lowest four EU-15 countries in terms of government expenditure. As compared with levels in the 1980s, government expenditure has increased by 15 percentage points (pp) of GDP and has nearly tripled per capita in real terms. This is testimony to Spain having established a modern welfare state over the last four decades,<sup>8</sup> with a fiscal system<sup>9</sup> that is capable of providing it with stable funding over the medium term and is comparable to those of its European partners. However, although government expenditure in Spain reached 42% of GDP in 2019, compared with 46% for the EU-15, the government revenue ratio was 39.2% compared with 46% for the EU-15. This lower level of government revenue than the government spending it is required to finance has been a constant since the onset of the 2008 financial crisis, driving up the public debt-to-GDP ratio from 35.8% in 2007 to 118.4% in 2021. It also underscores the importance of striking a better balance between expenditure and revenue for the levels expected by society for each of these.

In terms of the share of each expenditure item, in Spain items such as social benefits (pensions and unemployment benefits) and debt interest payments account for a relatively high proportion, in relation to its European peers, whereas items such as education and public investment make up a relatively low share. In other words, the structure of public spending in Spain appears more skewed towards items linked to social protection as compared with the EU-15 average. In particular, the proportion of expenditure earmarked for social protection-related items is 41.3% for Spain and 40.7% for the EU-15, while public investment and capital transfers represent 6.7% of expenditure for Spain and 8.5% for the EU-15. Expenditure on education accounts for 9.5% of total spending in Spain, compared with 10.8% for the EU-15, which translates into per capita spending of €1,163 in Spain, compared with €1,915 for the EU-15 (taking into account the cross-country differences in per capita income).

Spending on public investment and on education both have a critical impact on the accumulation of physical and human capital in the economy. Indeed, there is extensive empirical evidence suggesting that the accumulation of productive public capital acts as a significant catalyst for private investment, which fosters productivity gains for the

---

<sup>7</sup> This paper uses 2019 as a time reference to facilitate the comparisons across time references and geographical areas, since in 2020 (the last year for which data are available according to the classification of the functions of government (COFOG)) those comparisons could be distorted by the uneven effects of the pandemic.

<sup>8</sup> For an analysis of government expenditure developments from a historical perspective, see [Comín \(1988\)](#).

<sup>9</sup> For a detailed analysis of the structure of government revenue in Spain, see [López-Rodríguez and García Ciria \(2018\)](#).

economy overall.<sup>10</sup> Similarly, higher spending on education would boost the accumulation of human capital by workers and business owners, which would help increase both their level of individual productivity and aggregate efficiency.<sup>11</sup> Thus, these spending items have a positive effect on the economy's potential growth and, therefore, on the sustainability of public debt and on the economy's net financing capacity. The declining share in budgets of public spending on capital has been identified at the global scale as a factor that has dampened potential growth in a broad set of both developed and developing economies.<sup>12</sup>

Furthermore, it is important to highlight that these government expenditure items also help reduce inequality and strengthen intergenerational equity. According to the taxonomy proposed by [Rodrik and Stantcheva \(2021\)](#), a distinction can be drawn between pre-market redistributive policies (e.g. public education) and post-market redistributive policies (e.g. social benefits), with the former being just as effective, if not more so, than the latter.<sup>13</sup> Indeed, the evidence available suggests that inequality is lower in European countries than in the United States due, above all, to the role of “pre-distribution” policies.<sup>14</sup> These considerations are particularly important against a backdrop in which factors such as demographic trends and changes in the productive system relating to the digitalisation process and the green transition will require significant investment in training to ensure that workers can participate in the labour markets of the future.

Lastly, this paper also explores two important differential aspects for Spain as compared with the average for the European reference countries: greater volatility in public spending throughout the economic cycle and highly decentralised spending. First, Box 1 analyses how the cyclical components affect the performance of fiscal variables in Spain, finding that Spain has a higher degree of fiscal volatility than the EU, which may be linked to the response to larger fluctuations in macroeconomic variables. Second, Box 2 explores and sets in context the highly decentralised nature of public spending in Spain, more than in the European countries of reference, which reflects the asymmetry between the sub-central expenditure powers and the tax autonomy of these tiers of government.

The rest of this paper is organised as follows. Section 2 discusses certain methodological aspects regarding the scope of this study. Section 3 analyses the recent dynamics and levels of public spending in Spain compared with other European countries. Section 4 examines the structure of public expenditure by economic classification, while Section 5 does likewise by functional classification. Lastly, Section 6 offers some final considerations.

---

<sup>10</sup> See [Deleidi \(2022\)](#).

<sup>11</sup> See [Barro \(2001\)](#).

<sup>12</sup> See [Ardanaz et al. \(2021\)](#) and [Delgado-Téllez et al. \(2022\)](#).

<sup>13</sup> According to the authors, pre-market or pre-distribution policies are those that affect the endowments that agents bring to the production process (e.g. skills or education), while post-market policies are those geared towards reducing the inequality that emerges after determining the income levels in the economy (e.g. public transfers or other aspects of social protection).

<sup>14</sup> See [Blanchet, Chancel and Gethin \(2022\)](#).

## 2 Definition of “public spending” and time references for the comparison

Comparing the levels of provision of public goods and services across countries is a complex task that demands a precise definition of what is being studied. To determine the calculation scope of the relevant public spending, the European system of national accounts (ESA) distinguishes between an entity’s market activity and non-market activity. An entity controlled by general government which is shown to be a market corporation is classified in the corporation sector, outside the “general government sector”, and, therefore, so are its spending, deficit and debt levels. General government control is defined as the ability to determine the general policy or programme of an institutional unit.<sup>15</sup> Thus, the ESA refers to the “public sector” as the sum of the “general government sector”<sup>16</sup> and those public institutional units that are under general government control, despite engaging in a market activity and being classified outside the “general government sector”. However, broadly speaking, the limitations of the data available preclude international comparisons of the “public sector”, given the significant cross-country differences in the institutional form in which many public services – such as healthcare, education, utilities and motorways – are delivered, with varying proportions of public or private participation and differences in the market or non-market approach. Therefore, in this paper we use the narrower definition of “public sector” spending that is typically employed in the reference literature, referring to this interchangeably as “public spending” or “general government spending”.

Regarding the time references used for the comparison, in this paper we focus on a detailed review of public spending dynamics in recent decades, with a particular focus on 2019. This is the last year for which full information is available on the main relevant classifications (economic and functional). It should be noted that the findings set out here accurately reflect the fundamentals of the Spanish public sector as compared with other European countries, and that the more recent developments associated with the COVID-19 health crisis and their subsequent (and ongoing) normalisation do not alter the findings of this paper (see Chart A2.1 in Annex 2).

---

<sup>15</sup> For specifics, see paragraphs 2.35 to 2.38 of [Regulation \(EU\) No 549/2013 of the European Parliament and of the Council of 21 May 2013 on the European system of national and regional accounts](#).

<sup>16</sup> Sector S.13 in ESA 2010 includes all institutional units which are non-market producers whose output is intended for individual and collective consumption, and are financed by compulsory payments made by units belonging to other sectors, and institutional units principally engaged in the redistribution of national income and wealth.

### 3 Developments in public spending from an international perspective

Since the 1960s, public spending has increased as a percentage of GDP in a very wide range of countries. Indeed, this ratio has doubled for the EU-15 group of countries over the last six decades, rising from 23% in 1960 to nearly 46% in 2019, although it has held virtually flat in the last 20 years (see Chart 1.1). Spain has been no exception, with the public spending-to-GDP ratio climbing from 22% in 1960 to 42% in 2019 (see Chart 1.2). This trend is even more pronounced when government expenditure is measured in terms of the per capita spending ratio in purchasing power parities (PPPs),<sup>17</sup> a metric that has more than doubled in both Spain and the EU-15 in the last 20 years (see Chart 1.3). The literature has documented a positive association between increases in GDP per capita and rising public spending as a percentage of GDP.<sup>18</sup>

Growth in public spending was a common trend among European countries in the second half of the last century. However, that growth was more pronounced in the case of Spain, which had comparatively lower levels in the 1970s, leading the country's public spending-to-GDP ratio to converge with that of the EU-15. As a percentage of GDP, the public spending gap between Spain and the EU has narrowed in the last 40 years, especially since the start of the 2008 financial crisis (see Chart 2.1). Thus, the gap between Spain and the arithmetic mean of the EU-15 decreased by 12 pp in that period. It should be noted that this reduction owed to the increase in spending as a percentage of GDP in Spain (15 pp), which more than offset the rise in the same ratio in the EU-15 (less than 3 pp) (see Chart 2.2.). Conversely, in recent years there has not been a similar narrowing of the gap between per capita spending in Spain and in the EU. In terms of euro per capita, both nominal and adjusted for PPP, the gap between spending in Spain and in the EU-15 and the EU-28 has widened slightly since 1999 (see Chart A2.2 in Annex 2),<sup>19</sup> reflecting the differences in population and income dynamics during this period.

All told, in 2019 the level of government spending as a percentage of GDP (or per inhabitant) in Spain stood slightly above the European average, although there is marked

<sup>17</sup> PPPs are a statistical adjustment that allow prices to be measured for a comparable basket of goods and services across different countries. By taking into account the differences in purchasing power and reflecting the prices in a common currency (for instance, euro purchasing power standard (PPS) according to the Eurostat methodology or international dollars under the methodology used by the Organisation for Economic Co-operation and Development (OECD)), this adjustment allows nominal economic variables to be compared across different countries (isolating those variables from differences in price levels or exchange rates).

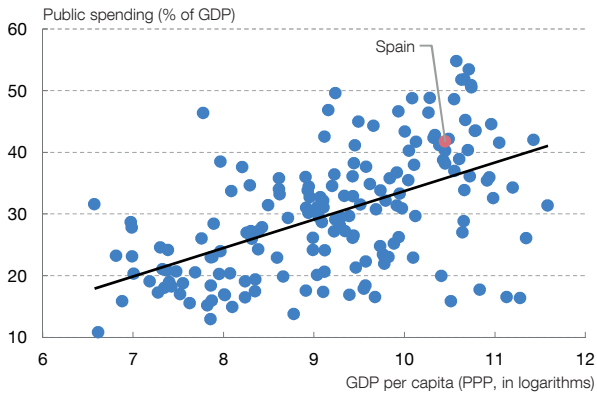
<sup>18</sup> The relationship between economic development and public sector size has received a great deal of attention in the literature. Although there is consensus over the positive association between the two variables, there is still debate over the direction of causality (see [Afonso and Furceri \(2010\)](#) and [Durevall and Henrekson \(2011\)](#)). In a seminal paper, Wagner proposed the theory that economic development runs in step with a secular increase in government activities and functions (Wagner (1890)). This finding has given rise to subsequent reinterpretations and refinements ([Peacock and Wiseman \(1961\)](#) and [Musgrave \(1969\)](#)). The economic literature has proposed various theoretical frameworks to understand and rationalise the relationship between government size and economic development (see, for example, [Barro \(1990\)](#)), and a variety of empirical assessments have been formulated ([Ram \(1986\)](#)).

<sup>19</sup> In terms of PPP-adjusted euro, the per capital spending ratio between Spain and the EU aggregates has held relatively stable in the last two OECD decades (at around 90% and close to 70% in relation to the EU-28 and the EU-15, respectively). Given the secular increase in per capita spending, the gap has increased during this period by some €1,100 PPS compared with the EU-28 average and by around €1,700 PPS compared with the EU-15 average (see Chart A2.2 in Annex 2).

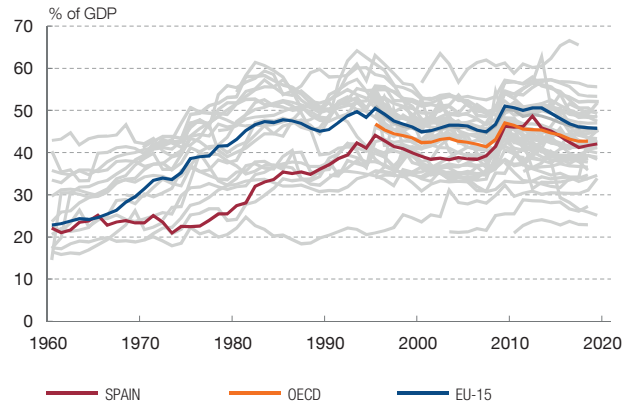
Chart 1

**PUBLIC SPENDING AND ECONOMIC GROWTH**

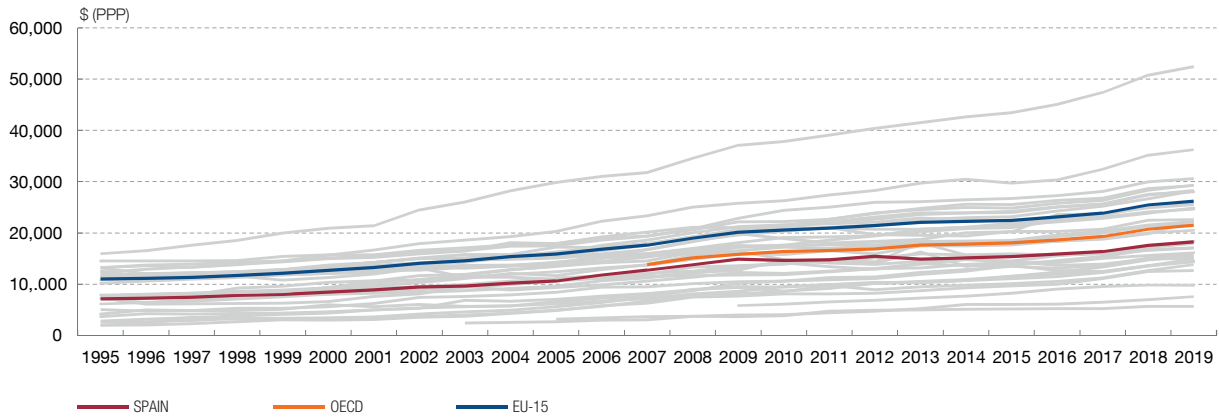
1 RELATIONSHIP BETWEEN SPENDING AND ECONOMIC DEVELOPMENT (AVERAGE 1999-2019)



2 PUBLIC SPENDING



3 PUBLIC SPENDING PER CAPITA

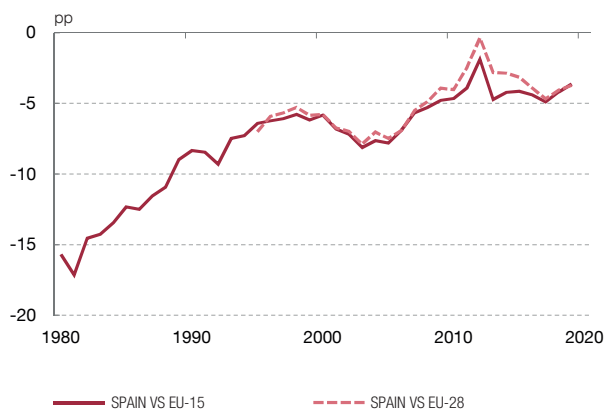


SOURCES: Eurostat, OECD, Penn World Table and IMF.

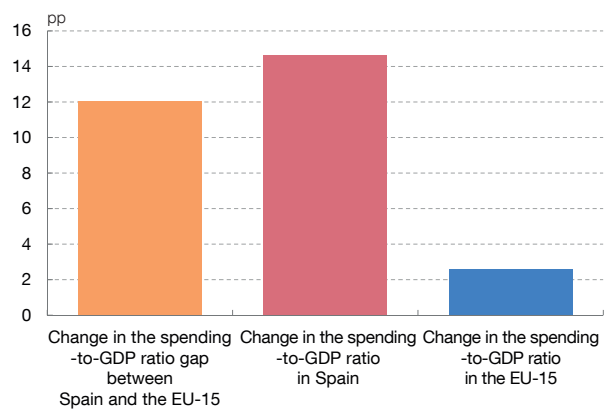
Chart 2

**COMPARISON OF PUBLIC SPENDING**

1 COMPARISON VS THE EU



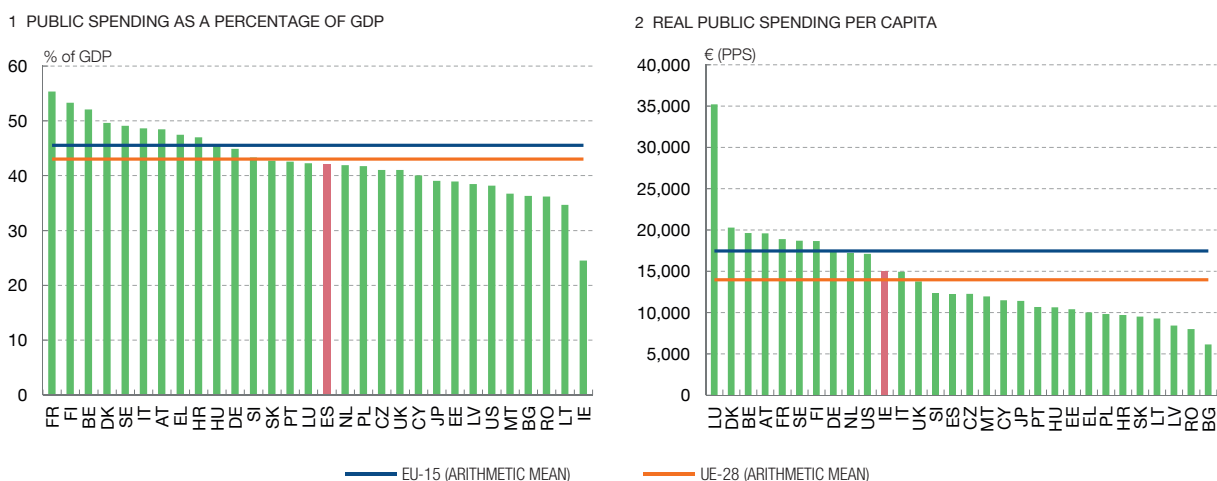
2 BREAKDOWN OF THE CHANGE BETWEEN 1980 AND 2019 IN THE PUBLIC SPENDING-TO-GDP RATIO GAP BETWEEN SPAIN AND THE EU-15



SOURCES: Eurostat and OECD.

Chart 3

**PUBLIC SPENDING IN EU COUNTRIES, THE UNITED STATES AND JAPAN IN 2019**



SOURCES: Eurostat and OECD.

cross-country heterogeneity. The distribution of the public spending-to-GDP ratio showed a high level of dispersion in 2019, with public spending amounting to more than 50% of GDP in some countries (such as France, Finland and Belgium) and less than 30% of GDP in others (such as Ireland). In the case of Spain, public spending as a proportion of GDP stood at 42%, slightly below the average for the EU-28 (43%) and for the EU-15 (46%) (see Chart 3.1). However, from a broader comparative perspective, these values are higher than those recorded in other reference advanced countries, such as the United States (38%) and Japan (39%). In per capita and PPS terms, government spending in Spain stood at €12,232 in 2019, compared with the EU-28 average of €13,987 and the EU-15 average of €17,464 (see Chart 3.2). That figure is also lower than for Spain's closest neighbours, such as France (€18.866 PPS) and Italy (€14,912 PPS), but also for the United States (€17,085 PPS).<sup>20</sup>

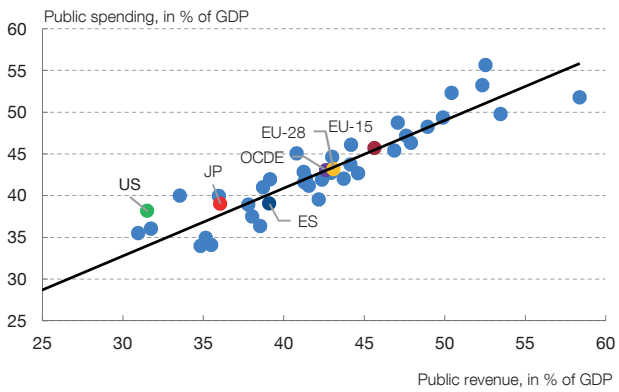
However, it is worth noting that the level of public spending in Spain is high compared with other European countries when expressed as a ratio of public revenue. General government budgetary constraints explain the close relationship between the levels of expenditure and revenue in the different countries (see Charts 4.1 and 4.2). In 2019 Spain had a higher level of expenditure than revenue (with a spending-to-GDP ratio of 42% and a revenue-to-GDP ratio of 39.2%). Spain's spending-to-revenue ratio in that year stood at 107%, above the average for the EU-15 and for the EU-28 (both around 100%), which, in broad terms, would be consistent with a balanced budget (see Chart 4.3). Per capita public spending in Spain amounted to €12,223, well above the per capita public revenue of €11,399. These figures compare with per capita spending of €17,464 on average for the EU-

<sup>20</sup> Public spending as a percentage of GDP and in per capita terms is also lower for Spain than for the European aggregates when considering a broader time horizon that includes the average for the last two decades (see Chart A2.3 in Annex 2).

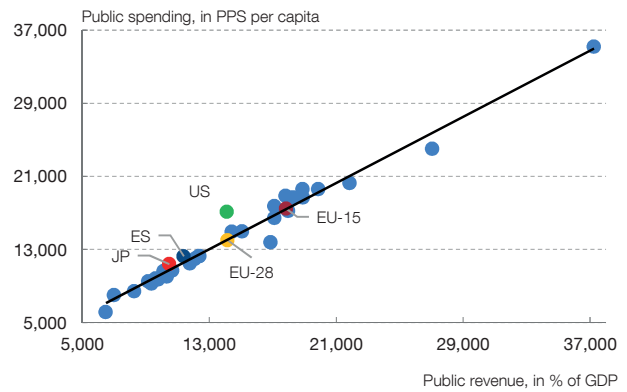
Chart 4

**RELATIONSHIP BETWEEN PUBLIC SPENDING AND REVENUE IN 2019**

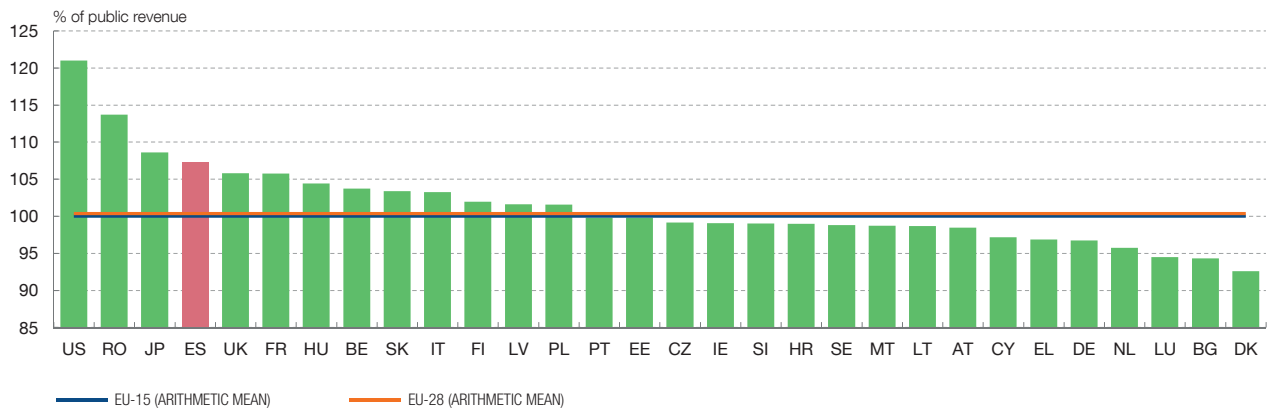
1 PUBLIC SPENDING AND REVENUE AS A PERCENTAGE OF GDP



2 PUBLIC SPENDING AND REVENUE IN EURO PER CAPITA



3 PUBLIC SPENDING/REVENUE IN EU COUNTRIES



SOURCES: Eurostat and OECD.

15, less than the public revenue figure of €17,849 (€13,987 and €14,169, respectively, for the EU-28). In other words, in 2019, in average terms, Spanish general government spent €833 per capita that was not offset on the revenue side, while in the average EU-15 country per capita spending was €385 lower than per capita revenue.

#### 4 The structure of public spending by economic classification

Under the “economic classification” approach, public spending is grouped into five main categories: final consumption, social benefits, investment, interest and other current transfers. Final consumption expenditure includes three main categories: compensation of employees, intermediate consumption (e.g. purchase of medical equipment) and the payment of other taxes on production (e.g. immovable property tax paid by general government). Spending on social benefits in cash (e.g. contributory and non-contributory pensions and unemployment benefits), as well as social transfers in kind (e.g. spending on medication dispensed by pharmacies or government-subsidised privately-run education, healthcare and social services). Investment expenditure mainly refers to gross fixed capital formation (i.e. spending on assets used in the production of public goods and services for a period of more than a year, such as the construction of a technology park or the purchase of software) and capital transfers (the transfer of public funds for capital expenditure by other economic agents). Interest expenditure represents the category of spending derived from property income, which almost exclusively comprises interest payments for servicing public debt. The final category, other current transfers, includes the provision of VAT- and gross national income-based EU own resources, along with the other current transfers (e.g. current spending on international cooperation, payments of compensation and payments linked to lotteries and gambling). Annex 1 includes a detailed description of all five categories.

Two categories, social benefits and compensation of employees, make up the bulk of public expenditure in both Spain and the EU as a whole. Specifically, social benefits<sup>21</sup> accounted for 43.9% of total spending in 2019 in Spain and 42.8% for the EU-15 (39.2% in the EU-28), while compensation of employees represented 25.7% in Spain and 23.4% for the EU-15 (see Chart 5.2).<sup>22</sup> In other words, around seven out of ten euro in public spending are earmarked for social benefits or compensation of employees. As a percentage of GDP, the sum of both spending categories amounts to 29.3% in Spain, compared with the average of 30.2% for the EU-15 and 27.7% for the EU-28 (see Chart 5.1).

Spending as a percentage of GDP is lower in Spain than in the EU-15 in all categories except for interest expenses and, marginally, compensation of employees. In 2019, most of the economic classification categories contributed to the difference in total spending as a percentage of GDP between Spain and the EU aggregates (-1 pp compared with the EU-28 and -3.5 pp compared with the EU-15) (see Chart 5.1). Compared with the EU-28 average, social benefits and interest expenses are the only two expenditure items where Spain has a notable positive gap (1.4 pp and close to 1 pp of GDP, respectively). Interest expenditure made up 5.4% of the total for Spain, compared with 2% for the EU aggregates. In terms of per capita expenditure, interest

<sup>21</sup> The higher relative spending on social benefits does not owe to the inclusion in this category of social transfers in kind. Excluding this component, spending on social benefits in Spain in 2019 amounts to 37.6%, 4 pp higher than the EU-15 average and 5.6 pp more than the EU-28 average.

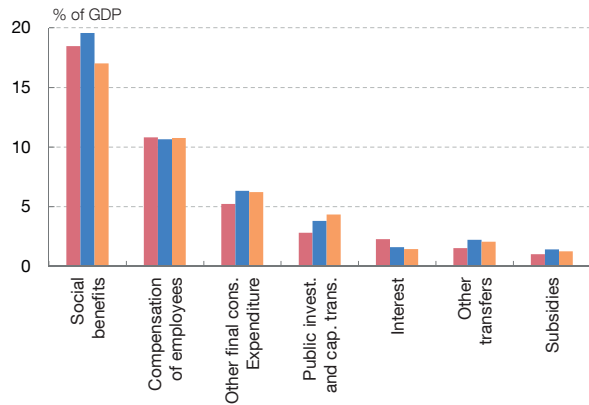
<sup>22</sup> This spending distribution is similar to the average distribution in the last two decades (see Chart A2.4 in Annex 2).



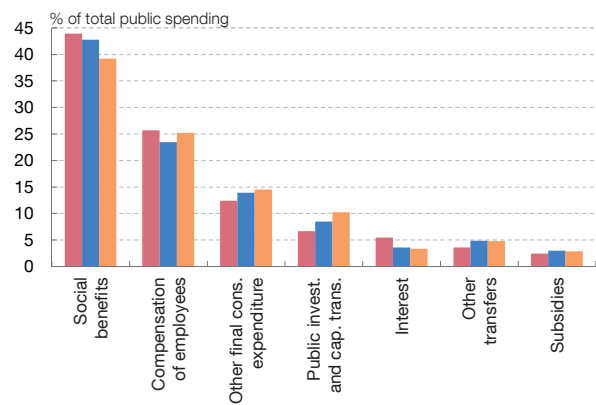
Chart 5

**PUBLIC SPENDING BY ECONOMIC CLASSIFICATION**

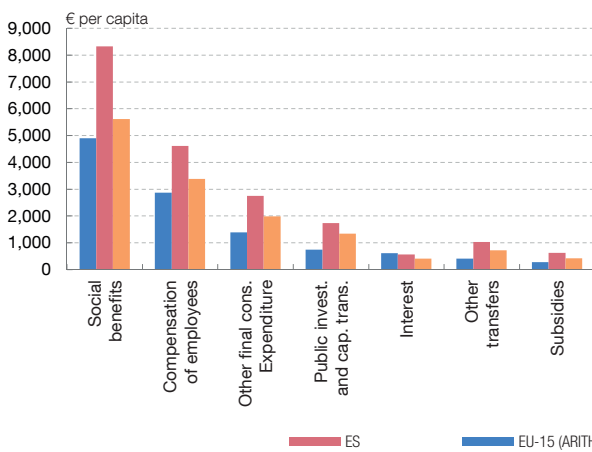
1 SPENDING BY ECONOMIC CATEGORY IN 2019. PERCENTAGE OF GDP



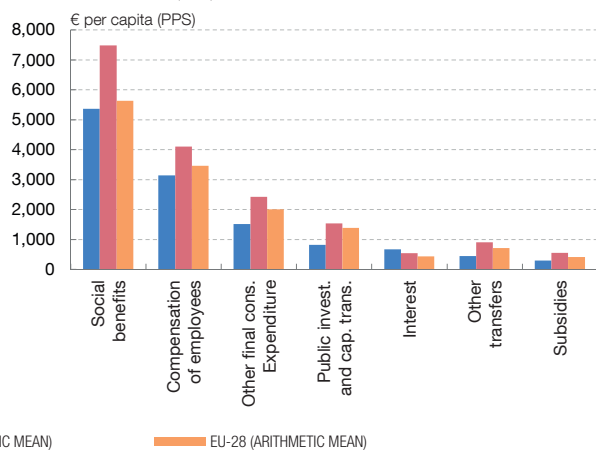
2 SPENDING BY ECONOMIC CATEGORY IN 2019. PERCENTAGE OF TOTAL SPENDING



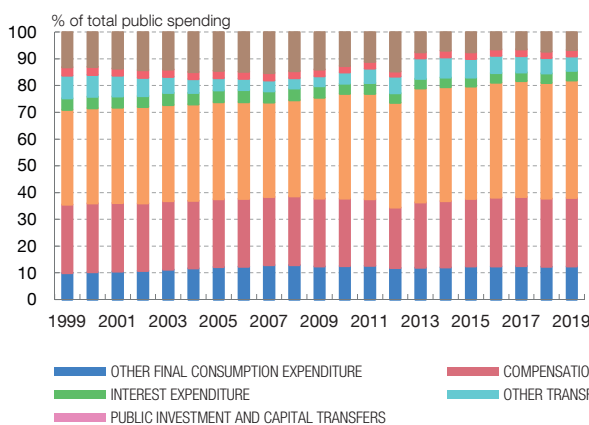
3 SPENDING BY ECONOMIC CATEGORY IN 2019. EURO PER CAPITA



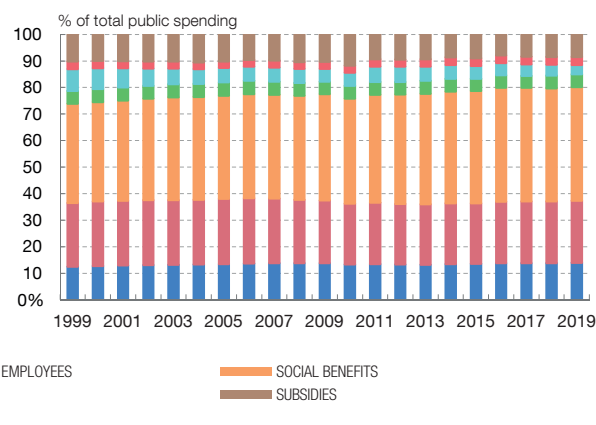
4 SPENDING BY ECONOMIC CATEGORY IN 2019. EURO PER CAPITA (PPS)



5 PUBLIC SPENDING BY ECONOMIC CATEGORY. SPAIN



6 PUBLIC SPENDING BY ECONOMIC CATEGORY. EU-15 AVERAGE



SOURCE: Eurostat.

payments is the only category where spending is higher in Spain than in the EU-15 and the EU-28. Adjusting for the cross-country differences in purchasing power, in 2019 Spain spent €125 more per person on interest payments than the EU-15 average and €227 more than the EU-28 average (see Charts 5.3 and 5.4).

The relative proportions of the different categories have changed over the last two decades, with social benefits gradually gaining in prominence. Average EU-15 spending on this category grew as a share of total expenditure by 0.3 pp in 1999-2019, reaching 43% of total spending. This change was more pronounced in the case of Spain, with an increase of 0.5 pp, from 39% to 44% of the total (see Charts 5.5 and 5.6). These changes in the relative proportions took place as interest expenses lost prominence and to the detriment of other items such as public investment expenditure. In the EU-15, the share of this latter category has declined in the last 20 years from 10% to 8.5%, while in Spain its relative importance nearly halved (from 13.2% to 6.7%). These trends are reflected in the literature, which points to the growing importance of welfare expenditure at the expense of other items such as investment expenditure.<sup>23</sup> This phenomenon, which owes in part to demographic reasons and social preferences, is highly significant in that spending on social benefits (which is subject to tighter economic policy restrictions) generates greater rigidity in the structure of public spending.

The main spending categories by economic classification are analysed below.

#### 4.1 Expenditure on social benefits

In 2019, spending on social benefits amounted to 18.4% of GDP in Spain, compared to 17% for the EU-28 and 19.5% for the EU-15. The 2008 crisis significantly drove up spending on this item, both for the European aggregates and in Spain. However, the increase in spending on social benefits as a percentage of GDP was more pronounced and longer lasting in Spain than in the EU-15 or the EU-28, with growth of more than 4 pp that, in contrast with other countries, is yet to show signs of correction (see Chart 6.1). Thus, in terms of this spending, Spain currently stands midway between the averages for the EU-15 and the EU-28. In per capita terms, in 2019 spending on social benefits amounted to €5,363 in Spain (adjusted for cross-country price differences), compared with €7,482 for the EU-15 and €5,627 for the EU-28 (see Chart 5.4).

Spending on social benefits is largely determined by expenditure on pensions,<sup>24</sup> which in Spain accounted for more than two-thirds of spending on social benefits and close to 30% of total general government spending in 2019, equivalent to 12.6% of GDP (see Chart 6.1).<sup>25</sup> In addition to pension expenditure, spending on social transfers in kind purchased on the market is also notable (14.3% of total spending), and includes acquisitions

<sup>23</sup> See [Delgado-Téllez et al. \(2022\)](#). This is known as “social dominance”: the relative growth of social expenditure items as a result of the demographic trends and preferences in developed countries.

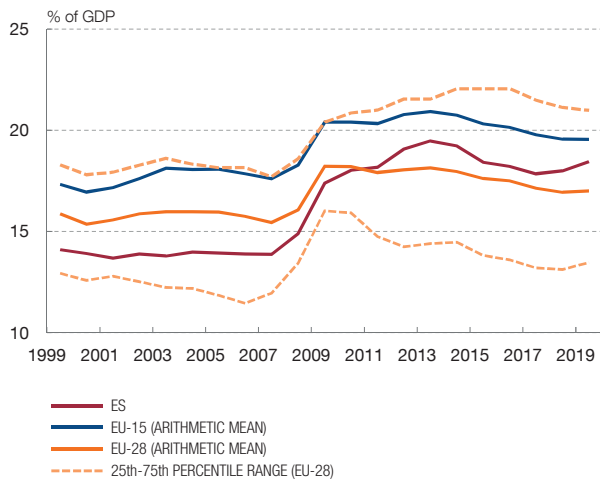
<sup>24</sup> Expenditure on pensions comprises the categories of contributory pensions (those recognised by social security systems for individuals who meet certain requirements and have made earnings-related contributions; they include retirement pensions, permanent disability pensions or survivor’s pensions), direct social benefits (mainly under pension schemes for public sector employees and paid to, among other groups, public sector employees or their beneficiaries upon old age or death) and non-contributory pensions (which cover retirement or disability benefits for individuals who have made no earnings-related contributions or not enough to qualify for a contributory pension).

<sup>25</sup> According to the European Commission’s [Ageing Report](#) (European Commission (2021)), pension expenditure in Spain amounted to 12.3% of GDP, slightly above the arithmetic mean of the EU-15 (11.2%) and of the EU-27 (9.9%) (both aggregates excluding the United Kingdom). However, as pointed out in [de la Fuente, García Díaz and Sánchez Martín \(2020\)](#), these comparisons must factor in the degree of population ageing in each economy.

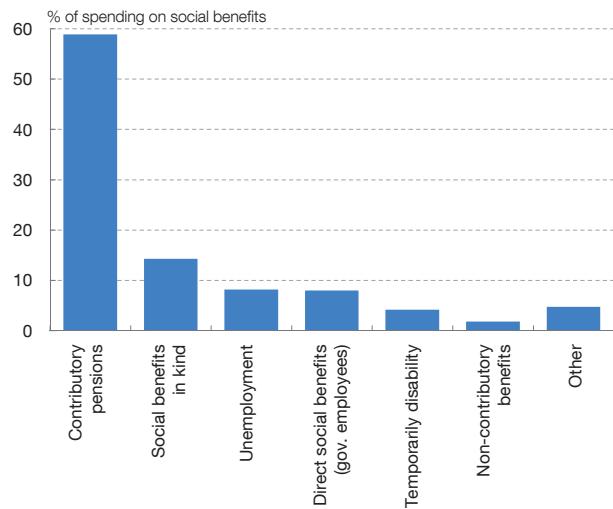
Chart 6

**PUBLIC SPENDING ON SOCIAL BENEFITS**

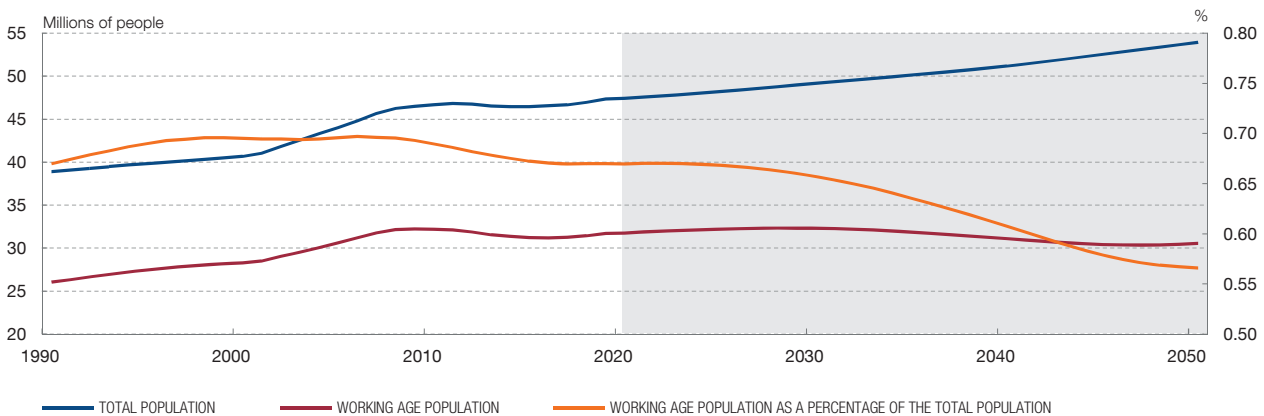
1 PUBLIC SPENDING ON SOCIAL BENEFITS



2 STRUCTURE OF PUBLIC SPENDING ON SOCIAL BENEFITS IN SPAIN, 2019



3 DEMOGRAPHIC PROJECTIONS FOR SPAIN



SOURCES: AIReF and Eurostat.

by general government of goods and services produced by market producers that are supplied to households without any transformation (e.g. medicines or recreational or cultural services) (see Chart 6.2). Meanwhile, expenditure on unemployment benefits represents 8% of total spending on social transfers, although this percentage is far higher during downturns (17% in 2009), which contributes to greater cyclicity in government expenditure.<sup>26</sup>

The recent and future dynamics of pension expenditure are conditioned by demographic trends and legislative changes. In the last two decades, spending on social protection has grown in a number of metrics: as a percentage of GDP, in euro per capita

<sup>26</sup> Box 1 assesses the cyclicity of public spending in Spain compared with the EU.

terms and as a proportion of total government expenditure. This has come in parallel with progressive population ageing, a phenomenon that will intensify in the coming decades: according to the latest estimates by AIReF, the working age population as a percentage of the total population could decline by around 10 pp by 2050, to 57% (see Chart 6.3). On the most recent estimates, this demographic deterioration, together with recent legislative changes,<sup>27</sup> would increase pension expenditure by more than 4 pp of GDP in the period 2019-2050 to nearly 17% of GDP.<sup>28</sup> Cost developments associated with population ageing in general, and with pensions in particular, underline the importance of pursuing budgetary reforms to reconcile the level of social protection demanded by society with long-term fiscal sustainability.<sup>29</sup>

## 4.2 Expenditure on investment

At present, in terms of expenditure on investment and capital transfers, Spain stands at the lower end of the distribution of European countries. In 2019 this ratio was 2.8% in Spain, well below the average for the EU-15 (3.8%) and for the EU-28 (4.3%). Excluding capital transfers,<sup>30</sup> government investment stood at 2.1% in Spain, 0.9 pp below the EU-15 average and 1.4 pp below the EU-28 average (see Chart 7.1). Of the EU-28 countries, only Portugal recorded a lower level of investment (1.8% of GDP). In PPP-adjusted euro per capita, Spanish government expenditure on public investment and capital transfers in 2019 (€824) represented just 53% and 58% of the average spending per capita in the EU-15 and the EU-28, respectively.

In Spain, in contrast with other European countries, the financial crisis prompted a very significant change in public investment dynamics. Although investment expenditure was very high as a percentage of GDP in 2009, having risen steadily since the start of the 21st century, this trend came to an end after 2009, with such expenditure falling far more sharply in Spain than in the EU-15 or the EU-28 (see Chart 7.1). Specifically, as a percentage of GDP, investment expenditure in Spain rose from above the 75th percentile of European countries in 2009 to below the 25th percentile in 2019.<sup>31</sup>

<sup>27</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.

<sup>28</sup> See AIReF (2020). According to European Commission (2021) projections, pension expenditure could rise to 16.6% by 2050 (up by 4.2 pp on the ratio recorded in 2019). Nearly two-thirds of this increase would owe to legislative changes that link pension expenditure to changes in inflation. The rest of the increase would stem in part from the reversal of other legislative amendments (such as the repeal of the sustainability factor) and from changes in demographic structure and the macroeconomic environment.

<sup>29</sup> See Hernández de Cos (2021b).

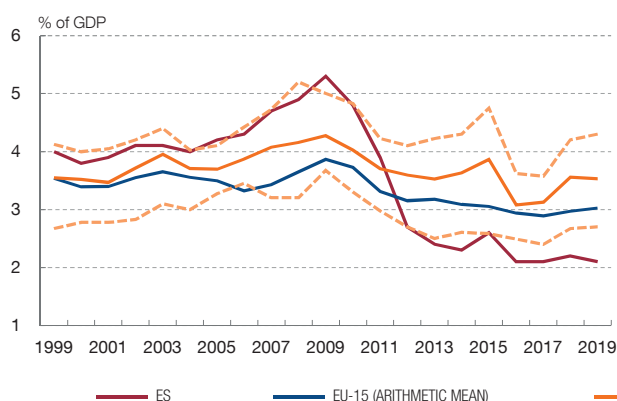
<sup>30</sup> Total capital expenditure comprises public investment (known as “gross fixed capital formation” in National Accounts) and spending on capital transfers (i.e. general government transfers to other sectors for investment spending). This latter item also includes reclassifications of firms as general government entities, such as the recent classification of the Spanish Asset Management Company (Sareb) and the toll motorways managed by ACESA reverting to State control.

<sup>31</sup> Public investment expenditure stood at very high levels in 2009 and 2010, mainly due to the fiscal stimulus implemented in response to the 2008 global financial crisis. In Spain, much of this fiscal action (the “Spanish Plan for Stimulating the Economy and Employment”, commonly known as “Plan E”) was implemented through local governments, with total stimulus of around 1.2 pp of GDP. In terms of structure, the low level of Spanish general government investment compared with the average for the EU-15 and for the EU-28 is evident across all public spending functions. Thus, in Spain and both the EU-15 and the EU-28, investment expenditure is concentrated in spending on economic affairs and general services (including basic research) (see Chart A2.5 in Annex 2).

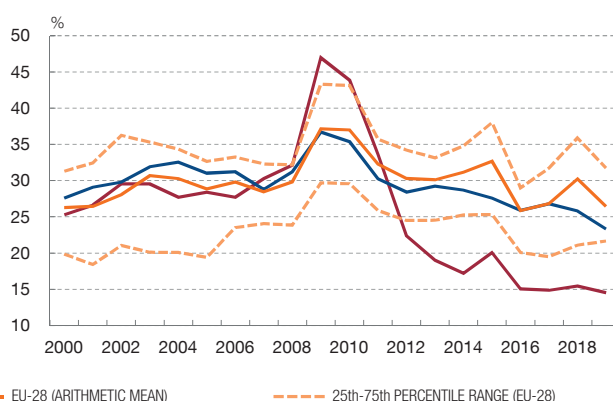
Chart 7

**PUBLIC SPENDING ON INVESTMENT**

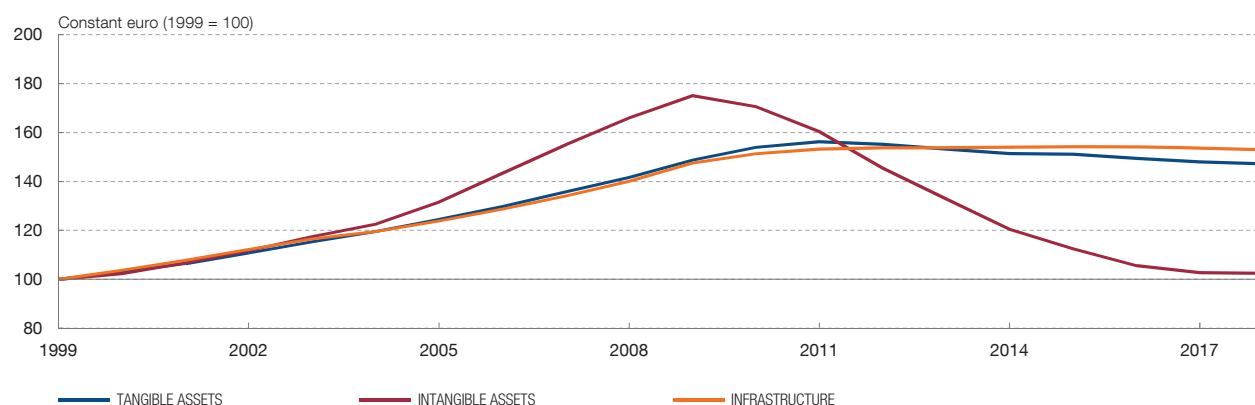
1 PUBLIC SPENDING ON INVESTMENT



2 PUBLIC INVESTMENT/BUSINESS INVESTMENT RATIO



3 PUBLIC CAPITAL STOCK, BY SECTOR



**SOURCES:** Eurostat and Instituto Valenciano de Investigaciones Económicas.

The public investment/business investment ratio is also low compared with European peers. Despite a similar performance to the European average in the period 1999-2007, there was an a very marked decoupling thereafter (see Chart 7.2). Specifically, the ratio rose more sharply in Spain in 2008-2010, but fell far more heavily in 2010-2019. Thus, in 2019 general government investment represented 15.4% of business investment in Spain, which was the second lowest level among EU-28 countries, higher only than Ireland. Based on the assumption that public capital increases the marginal productivity of private factors, this disconnect between public and private investment could lead to efficiency losses, in that higher productive public capital could drive up private investment.<sup>32</sup>

These developments have reduced general government investment to below asset depreciation rates, leading to a reduction in the public capital stock which was

<sup>32</sup> For a seminal paper on the relationship between public investment and long-term activity, see [Baxter and King \(1993\)](#).

particularly acute in terms of the stock of intangible assets.<sup>33</sup> In real terms, in 2019 the intangible capital stock (mainly including net cumulative investment in software and R&D) stood at levels similar to those at the end of the 20th century (see Chart 7.3), due to the fact that, since 2010, gross investment has not managed to cover capital depreciation (see Chart A2.8 in Annex 2). In the case of tangible assets and public infrastructure, the stock of public capital has also declined, albeit at a significantly lower rate than for intangible assets.

Investment expenditure, particularly on certain asset types, can help bolster the economy's potential growth and, thus, fiscal sustainability. In the medium and long term, the fiscal multipliers associated with increases in public investment are substantially higher than those linked to increases in public consumption.<sup>34</sup> This owes to the effects generated through productivity gains, which, along with other transmission mechanisms, increase the economy's productive capacity and foster synergies between public and private investment.<sup>35</sup> The final impact of higher public investment on activity in the medium and long term crucially hinges on the sensitivity of output to installed public capital. Thus, investment in items more closely linked to productivity (e.g. intangible assets, such as R&D) would be associated with greater economic buoyancy in the medium and long term.<sup>36</sup>

### 4.3 Expenditure on interest

Interest expenditure is high in Spain compared with other European countries. Spending on this category represented 2.3% of GDP in 2019, well above average for the EU-15 (1.6%) and the EU-28 (1.4%) (see Chart 8.1).<sup>37</sup> In per capita terms interest spending amounts to just over €600, which, adjusted for PPP, is 23% and 28% higher than the average for the EU-15 and the EU-28, respectively.

In the case of Spain, interest expenditure has increased significantly in recent years, clearly overtaking the average for the EU-15 and the EU-28. In 2008, interest expenses

<sup>33</sup> Public assets are classified into basic tangible assets (including investment in housing and other construction, transport equipment, machinery and equipment, etc.), basic intangible assets (mainly software and R&D) and public infrastructure (including publicly-owned water infrastructure and road, rail, airport and port infrastructure, along with local government urban infrastructure). See [Ivars and Pérez García \(2021\)](#). In terms of real gross investment, on average in 1999-2019, tangible assets, infrastructure and intangible assets represented 53%, 41% and 6%, respectively, of total investment. In the case of public infrastructure, these largely, but not exclusively, materialised through general government investment. This investment is supplemented by that of other corporate public sector entities, which account for most investment in rail, port and airport infrastructure (see [Pérez and Solera \(2017\)](#) and Chart A2.6 of Annex 2). Further, some infrastructure and public services are provided through public-private partnerships, which are particularly widespread in Spain (along with other countries such as Portugal, United Kingdom, Greece and Ireland). According to International Monetary Fund (IMF) data, on average in 1999-2017, investment through such partnerships represented 0.2% of GDP (PPP-adjusted). Like that of general government, this investment is currently low (0.04% of GDP), although it reached 0.4% of GDP in 2006 (see Chart A2.7 of Annex 2).

<sup>34</sup> See [Ramey \(2021\)](#) for a discussion on the determinants of the multipliers of public investment. [Alloza, Burriel and Pérez \(2019\)](#) provide empirical estimates of those multipliers in Spain and other European economies.

<sup>35</sup> See [Alloza, Leiva-León and Urtasun \(2022\)](#) for an analysis of the relationship between public and private investment.

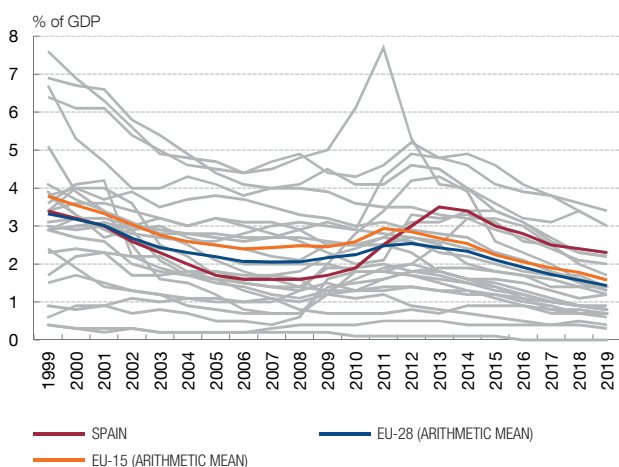
<sup>36</sup> [IMF \(2021\)](#) sets out evidence that investment in research (e.g. basic research) has a positive impact on long-term growth, and even on the development of new greener technologies. According to the authors, by expanding the tax base, such investments could pay for themselves in a decade.

<sup>37</sup> The interest expenditure category is actually called "property income expenditure" and includes, in addition to interest spending, items such as rent on land. However, these non-interest items represent a negligible share, with interest expenditure accounting for around 99.97% of total property income expenditure in Spain in 2019.

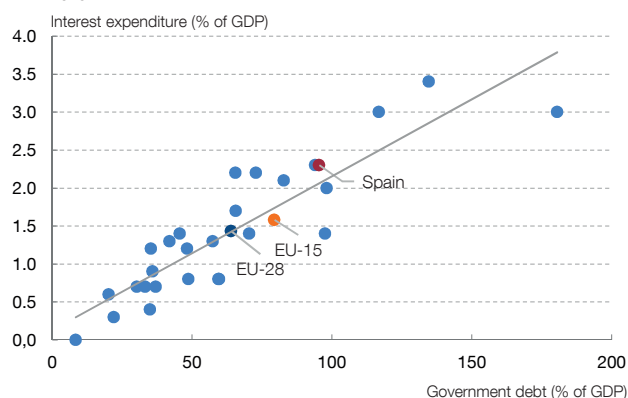
Chart 8

**PUBLIC SPENDING ON INTEREST**

1 PUBLIC INTEREST EXPENDITURE



2 RELATIONSHIP BETWEEN GOVERNMENT DEBT AND INTEREST EXPENDITURE IN 2019



SOURCE: Eurostat.

as a percentage of GDP stood at 1.4% in Spain, compared with 2.5% on average for the EU-15. These developments are in keeping with the rise in government debt, which was more pronounced in Spain.<sup>38</sup> Indeed, the countries with higher debt-to-GDP ratios also have higher interest expenditure (see Chart 8.2).

Thus, interest expenditure moves in close step with public debt levels, although this relationship is conditioned by the government debt maturity structure. Given that interest expenditure depends on the implicit interest rate on government debt, rather than on the cost of new issuances (the marginal rate), an increase in the average maturity of government debt means that higher financing costs have a less noticeable effect on interest expenditure, which may even continue to decline for a time.<sup>39</sup> In any event, the highly accommodative monetary policy stance – which has helped to reduce public debt financing costs by keeping key policy rates low and through asset purchase programmes – has resulted in a gradual decline in interest expenditure over the last few years.

Although the monetary policy stance has helped to curb public expenditure in recent years, thanks to its impact on the interest burden, the attendant risks should not be underestimated. Amid high government indebtedness, any persistent increases in interest rates (for a given output growth rate) would exert upward pressure on interest expenditure, which

<sup>38</sup> The interest expenditure-to-GDP ratio can be broken down into the product of the public debt-to-GDP ratio and the ratio of interest expenditure to the stock of public debt (i.e. the implicit average interest rate on outstanding public debt). The interest expenditure differential between Spain and the EU-15 has changed sign during the last two decades as a result of changes in both factors. Between 2008 and 2019 the public debt-to-GDP ratio increased by around 60 pp in Spain, nearly triple the average increase for the EU-15. In the same period, the implicit average interest rate fell more sharply in the EU-15 (-2.2 pp) than in Spain (-1.7 pp).

<sup>39</sup> Between 2002 and 2019 the average maturity of government debt increased by one year to 7.55 (8 years in September 2021).

would be a cause for concern when it comes to fiscal sustainability. Further, in such a scenario the scope for either fiscal or stabilisation policy action in response to possible adverse shocks would be limited. Thus, it would be a good idea to set aside at least part of the fiscal headroom generated by monetary policy so as to restore scope for fiscal policy action in the future.

#### 4.4 Expenditure on final consumption

The general government final consumption expenditure category encompasses various items, focused on the provision of goods and services to households and the community. Notable among these expenditure items are compensation of employees and intermediate consumption. Overall, government consumption expenditure in Spain currently stands at close to 16% of GDP (1 pp less than that of the EU-15 and the EU-28).

Compensation of employees is the main general government consumption item. In Spain, this category represents 57% of overall public consumption and around 10.8% of GDP (see Chart 9.1), which is close to the average for the EU-15 (10.6% of GDP) and the EU-28 (10.7%). At present, €2,865 per capita is earmarked for compensation of employees, which, adjusted for cross-country purchasing power differences, is 23% lower than the EU-15 average and 9% lower than the EU-28 average.

This item accounts for varying shares of spending in different countries, which reflects the heterogeneity in how the provision of public goods and services is structured at the institutional level. Thus, a government might opt to provide services such as education or healthcare directly, with employees in these sectors included in the general government workforce. Alternatively, it might acquire part of these services from private entities (through spending on social transfers in kind via market producers). The different shares of spending on compensation of employees and on transfers in kind reveal various institutional idiosyncrasies in the provision of public goods and services (see Chart 9.2). The balance reached by Spain is similar to the EU-28 average. However, some countries (e.g. Denmark and Romania) have opted to give greater prominence to the direct production of goods and services through general government, while others (Germany and the Netherlands) opt for a model in which a higher share of such goods and services are purchased on the market. In any event, these institutional dissimilarities underline the importance of a cautious approach to interpreting the cross-country expenditure differences in some categories.

The ratio of compensation of employees can be broken down into average salary per employee and ratio of general government employees to GDP. For instance, compared with the EU-15 average, Spain has a slightly lower cost per employee (some €10,000)<sup>40</sup> (see Chart 9.3), but a higher concentration of general government employees per unit of GDP (2.5 workers per million euro of GDP vs 2.2 for the EU-15) (see Chart 9.4). Conversely, as compared with the EU-28 average, Spain has a higher cost per employee, although this

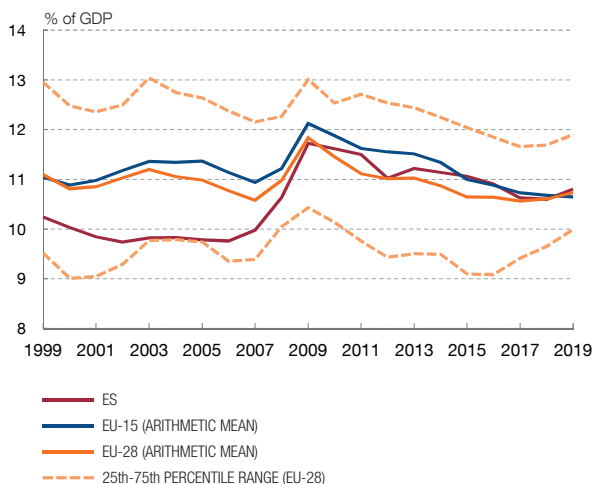
<sup>40</sup> Note that much of these differences owe to the cross-country heterogeneity in purchasing power and in other non-salary compensation items, such as actual and imputed social contributions.



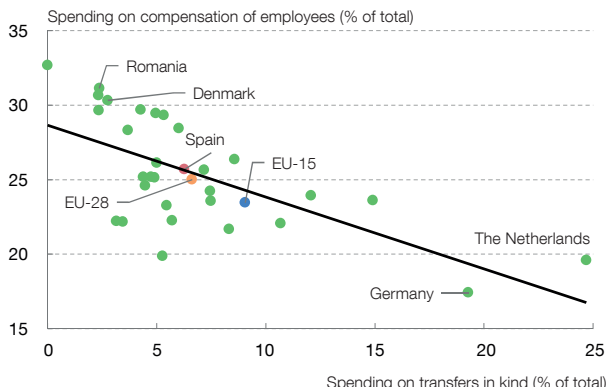
Chart 9

**PUBLIC SPENDING ON COMPENSATION OF EMPLOYEES**

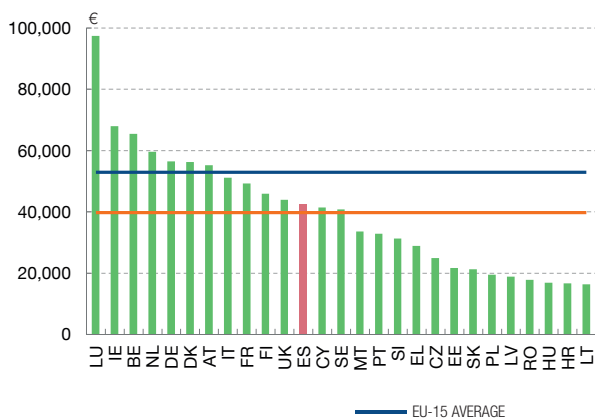
1 PUBLIC SPENDING ON COMPENSATION OF EMPLOYEES



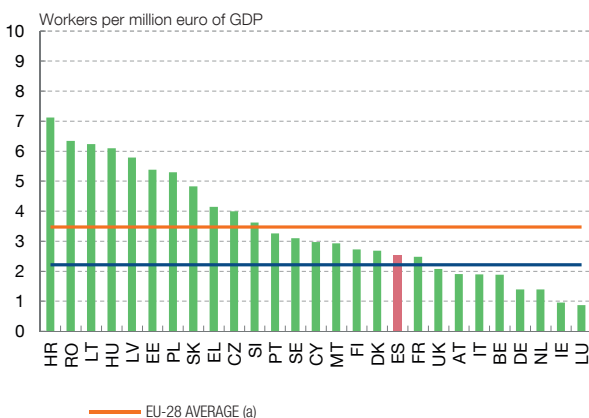
2 RELATIONSHIP BETWEEN SPENDING ON COMPENSATION OF EMPLOYEES AND SPENDING ON TRANSFERS IN KIND IN 2019



3 AVERAGE COST PER PUBLIC SECTOR EMPLOYEE IN 2019



4 GENERAL GOVERNMENT EMPLOYMENT AS A PERCENTAGE OF GDP IN 2019



SOURCE: Eurostat.

a Excluding Bulgaria due to lack of data availability.

is offset by its lower ratio of employees per unit of GDP. This difference owes, in part, to a number of factors related with the structure and organisation of the public sector. Thus, for instance, a sizeable volume of spending on education and healthcare being implemented within the scope of general government (rather than in the private sector) results in a higher percentage of public employees compared with other EU countries that have different institutional arrangements.<sup>41</sup>

41 See Hernández de Cos, Moral-Benito and Pérez (2016) and Pérez et al. (2016) for a broader discussion of these aspects and the difficulties associated with comparing the levels of public employee compensation across different countries.

## 5 The structure of public spending by functional classification

According to the “functional classification”, public spending breaks down into ten divisions based on the purpose of the expenditure:<sup>42</sup> general public services (including interest accrued on government debt, contributions to the EU budget, general government operating expenses and basic research), defence (including military spending and foreign military aid), public order and safety (including police and justice services, along with fire-protection services), economic affairs (subsidies for different economic sectors, hiring incentives and support for worker training, or the reclassification as public of expenditure via public-private partnerships), environmental protection (mainly waste management), housing and community amenities (urban development, water supply and street lighting), health, a group called “recreation, culture and religion” (which includes the provision of recreational, cultural and sporting services), education and social protection (including pensions and other social transfers).

The composition of spending by functions should be analysed with caution. Specifically, cross-country comparisons of the expenditure by purpose are subject to some uncertainty, especially in some functional groups, such as spending on health or social protection, owing to the institutional differences between countries. For instance, in the case of health, some countries (such as Norway and Denmark) have a system that is entirely public, while others (such as Germany) operate a combined public and private system.<sup>43</sup> See, for example, [ECB \(2009\)](#) for a more detailed description.

The five largest functions account for around 90% of total spending. Social protection, health, economic affairs and education are the categories that make up the bulk of public expenditure, both in Spain and in the average for the EU-15 and the EU-28. However, there are certain cross-country differences in the spending functions.

Relative to the size of its economy, public spending in Spain is lower than the average for the EU-15 in the largest spending functions. However, in some comparatively smaller spending categories (such as public order and safety, environmental protection and recreation, culture and religion), public expenditure in Spain is slightly higher than the EU-15 average (see Chart 10.1). As compared with the EU-28, spending in Spain is higher in social protection (1.3 pp higher) and, to a far lesser extent, in environmental protection, public order and safety, and general public services. In all of the functions, per capita spending is lower in Spain than in the EU-15 average. This difference is only positive (albeit marginally) when compared with the EU-28 average in the environmental protection category (see Charts 10.3 and 10.4).

---

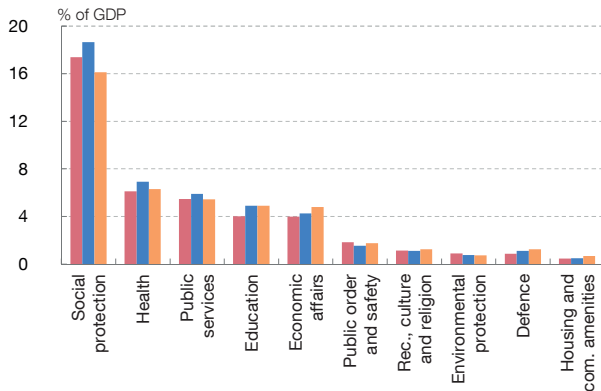
42 This spending breakdown, known as the classification of the functions of government (COFOG), is based on a methodology published by the United Nations and is consistent with National Accounts. The ten functional divisions in turn break down into a maximum of nine groups or sub-items. The COFOG classification has a third level of detail, known as “classes”, although this breakdown is not implemented in some countries, including Spain.

43 In the case of social protection, it is especially important to take into account the relationship between the social security and tax systems in each country. For instance, in some countries social transfers are taxed similarly to labour income (e.g. Italy). In others, however, social transfers are entirely or partially tax free (e.g. unemployment benefits in Germany). This distinction means that, in principle, two countries with the same net spending on social protection (i.e. once taxes are taken into account) may reflect different levels of spending on this item if one of them implements said spending in gross terms (i.e. providing transfers subject to tax).

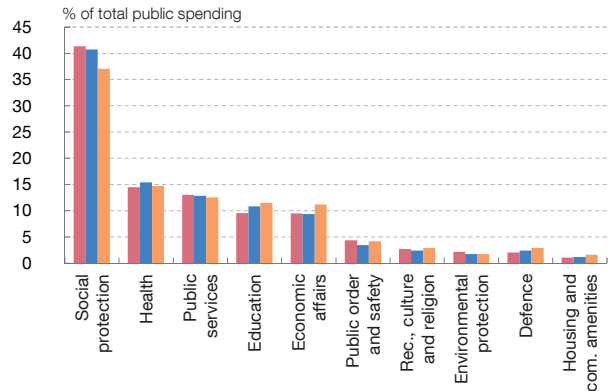
Chart 10

**PUBLIC SPENDING BY FUNCTIONAL CLASSIFICATION**

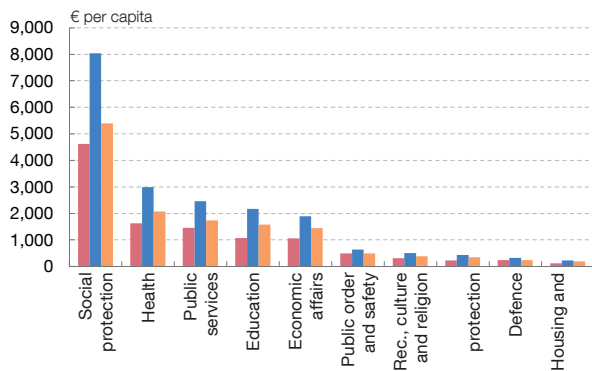
1 SPENDING BY FUNCTION IN 2019. AS A PERCENTAGE OF GDP



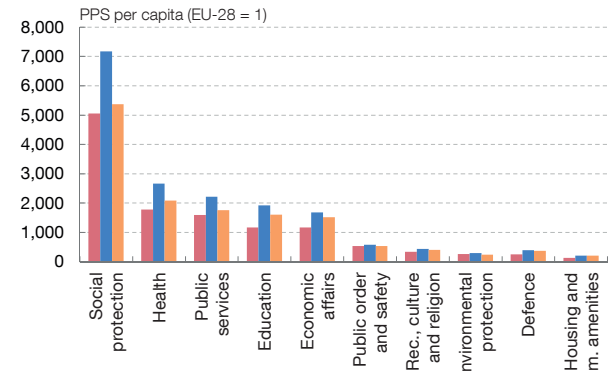
2 SPENDING BY FUNCTION IN 2019. AS A PERCENTAGE OF TOTAL SPENDING



3 SPENDING BY FUNCTION IN 2019. IN EURO PER CAPITA

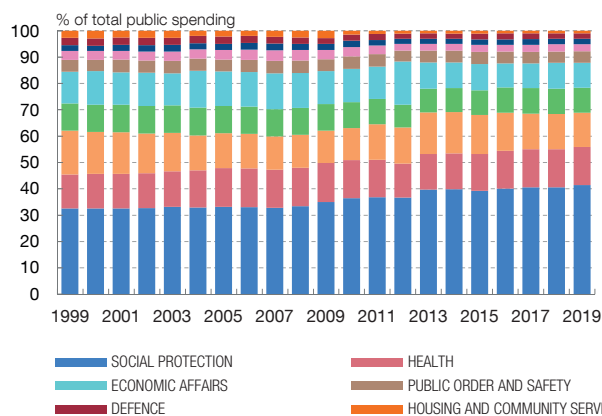


4 SPENDING BY FUNCTION IN 2019. IN EURO PER CAPITA (PPS)

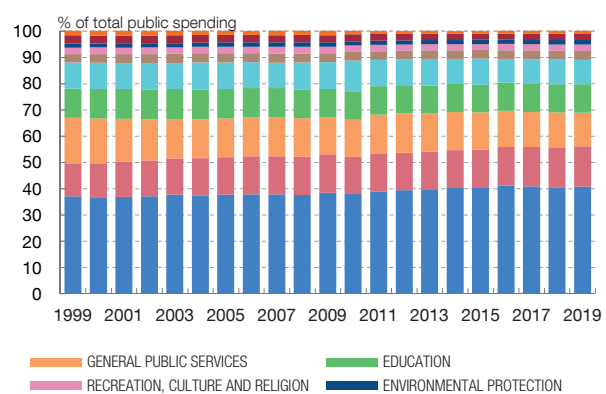


ES EU-15 (ARITHMETIC MEAN) EU-28 (ARITHMETIC MEAN)

5 PUBLIC SPENDING BY FUNCTION. SPAIN



6 PUBLIC SPENDING BY FUNCTION. EU-15 AVERAGE



SOURCE: Eurostat.

Turning to composition by item, Spain gives greater prominence to spending on social protection and on public order and safety. In 2019, spending in Spain on social protection amounted to 41.3% of the total (4.3 pp and 0.6 pp higher than the average for the EU-28 and the EU-15, respectively) (see Chart 10.2). Spending on public order and safety

was slightly higher in Spain than the average for the EU-15 and for the EU-28 (by 1 pp and 0.2 pp, respectively). Less significantly, government expenditure was also higher in Spain than for either EU aggregate in the categories of general public services and environmental protection. In addition, Spain spent more than the EU-15 average on economic affairs and recreation, culture and religion.

General government spending on education is significantly lower in Spain than in the EU based on the different metrics considered.<sup>44</sup> Thus, as a percentage of GDP, spending on this function was 4% in Spain and 4.9% on average for the EU-15 and the EU-28. This meant that per capita spending (adjusted for purchasing power differences) in 2019 was around €1,160 in Spain, which represented just 61% of per capita spending for the EU-15 (€1,915) and 73% of that for the EU-28 (around €1,600). Thus, as a share of total expenditure, spending on education accounted for 9.5% of total public spending in Spain, compared with 10.8% and 11.5% on average for the EU-15 and the EU-28, respectively.

The relative importance of the different spending items, according to the functional classification, has varied over time, with a progressive increase in “social spending”. In particular, social spending (which includes health, education and social protection) has gained relative importance both in Spain in the other European countries during this period (see Charts 10.5 and 10.6).<sup>45</sup> In the case of the EU-15, the share of social spending increased by 6 pp in 1999-2019, compared with a more pronounced rise of 10 pp in Spain (from 55% to 65%).

## 5.1 Expenditure on healthcare

Healthcare spending concentrates a large amount of funds both in Spain and in the EU. In both cases spending for this purpose increased by around 1 pp of GDP between 1999 and 2019. However, it should be highlighted that this increase comprises two sub-periods with relatively different performances: a significant increase between 1999 and 2008 and a slightly downward trend thereafter (see Chart 11.1). Thus, in 2019 healthcare expenditure in Spain accounted for 6% of GDP (0.8 pp less than the EU-15 average and 0.2 pp less than the EU-28 average). This amounts to €1,615 per person or, in PPP terms, €1,770 PPS, compared with the EU-15 average of €2,658 and the EU-28 average of €2,075.<sup>46</sup>

In Spain, spending on healthcare is more intensive in remunerations rather than in social benefits, as the main provider of this service is general government.<sup>47</sup> Spending on

<sup>44</sup> This was also true in the average for the last two decades. See Chart A2.9 of Annex 2.

<sup>45</sup> See Delgado-Téllez et al. (2022).

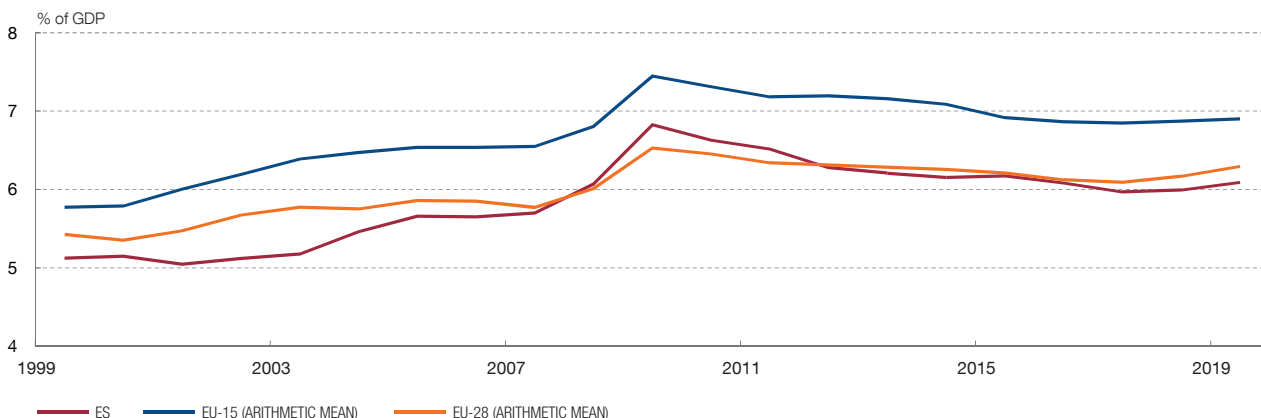
<sup>46</sup> These figures were likely affected by higher growth in healthcare expenditure in 2020, due to the effects of the COVID-19 pandemic. Based on the provisional data available for Spain, healthcare expenditure increased at a year-on-year rate of 12% in 2020, three times the average growth of the previous three years.

<sup>47</sup> Like education expenditure, healthcare expenditure is highly decentralised in Spain (in both cases, more than 90% of spending is implemented at regional level). Box 2 provides a more detailed analysis of the decentralisation of public expenditure in Spain.

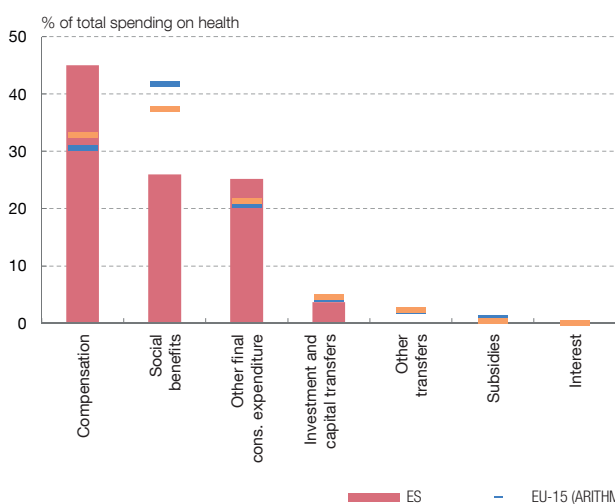
Chart 11

**PUBLIC SPENDING ON HEALTH**

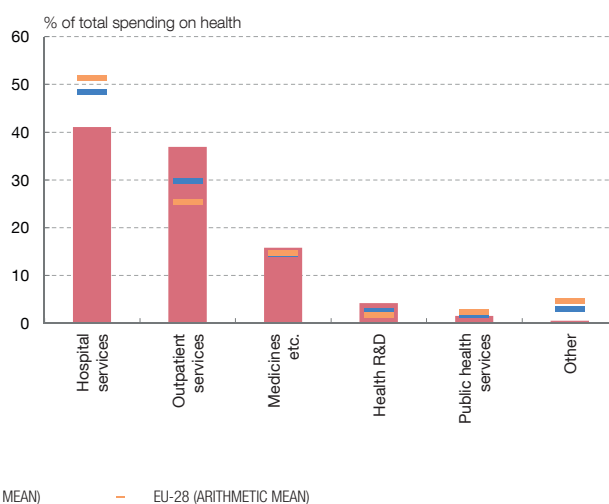
1 PUBLIC SPENDING ON HEALTH



2 SPENDING ON HEALTH BY ECONOMIC CATEGORY IN 2019



3 SPENDING ON HEALTH BY SUB-FUNCTION IN 2019



SOURCE: Eurostat.

healthcare in 2019 related mainly to compensation of employees (45%), spending on social benefits and transfers in kind purchased on the market<sup>48</sup> (26%) and intermediate consumption and other final consumption expenditure (around 25%) (see Chart 11.2). Jointly, these three components account for roughly 95% of total spending on healthcare. These components have a similar joint importance in the EU-15 average (93%), although the percentage spent on compensation of employees is 10 pp lower than in Spain. This difference owes to the different model of healthcare provision: while in Spain many of these services are provided by general government, other countries provide these services via purchases on the market (for example, through healthcare contracts).

<sup>48</sup> The social transfers category in Chart 11.2 is divided into two components: total social benefits and social transfers in kind (STiKs) purchased on the market. In the case of spending on healthcare, STiKs are, by far, the largest component (in 2019 they accounted for close to 92% of total healthcare social transfers, or €18,120 million). STiKs include items such as pharmaceutical spending or spending on healthcare contracts.

By sub-function, spending on hospital and outpatient services accounts for the bulk of healthcare expenditure. Both in Spain and in the EU-15, these two items represented 78% of healthcare expenditure in 2019, although there are differences in their relative distribution: the share of spending on hospital services is lower in Spain and is offset by the larger share of spending on outpatient services (see Chart 11.3). In terms of its composition, in the case of Spain spending on outpatient and hospital services relates largely to compensation of employees, which represents 65% and 45% of total spending on these sub-functions, respectively. The importance of intermediate consumption should also be highlighted in both cases, owing, inter alia, to pharmaceutical expenditure in hospitals. Spending on STiKs is also significant in the outpatient and hospital services category, as it includes spending on healthcare contracts (which amounted to €6,117 million in 2019).<sup>49</sup> Lastly, almost all spending on social transfers is concentrated in the medical products, appliances and equipment category (99.9%), which includes, among other items, pharmaceutical spending totalling €11,111 million in 2019.<sup>50</sup> Of note in this respect is the introduction in 2012 of the pharmaceutical copayment, which helped reduce spending in this category.<sup>51</sup>

## 5.2 Expenditure on education

Although expenditure on education as a percentage of GDP in Spain has followed a similar pattern, it has remained below the EU averages for the past two decades. With the exception of the 2008-2009 crisis period (which saw a significant decline in GDP), spending on education relative to GDP in Spain has remained relatively stable at around 4%, 1 pp below the EU-15 and EU-28 averages (see Chart 12.1). This gap in education expenditure is also observed in the lower relative importance of this heading in total expenditure (9.5% in Spain, compared with 10.8% in the EU-15 and 11.5% in the EU-28) and in the per capita figures (adjusted for purchasing power differences, per capita expenditure in Spain was almost 40% lower than in the EU-15 and 27% lower than in the EU-28).

Spending on education relates mainly to compensation of employees, although in Spain the higher relative share of spending on social transfers stands out. Both in the EU countries and in Spain, compensation of employees is the largest expenditure category (representing around 65% for the European aggregates and almost 70% in Spain)<sup>52</sup> (see Chart 12.2). In Spain the social transfers category accounts for a higher percentage than at European level (16% in 2019

<sup>49</sup> See *Intervención General de la Administración del Estado (2021)*. This figure means social transfers accounted for almost 80% of spending on outpatient and hospital services in 2019.

<sup>50</sup> In addition to pharmaceutical spending, this category also includes spending on prosthetics and vehicles for people with disabilities, which amounted to €178 million in 2019.

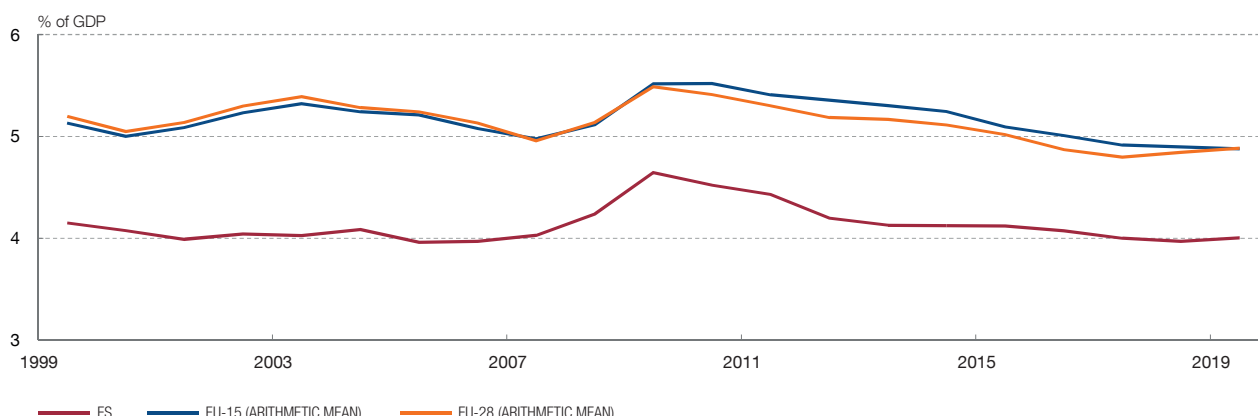
<sup>51</sup> More broadly, Royal Decree-Law 16/2012 of 20 April 2012 on extraordinary measures to ensure the sustainability of the National Health Service and improve the quality and safety of its services, significantly reduced healthcare expenditure. According to the *Stability Programme Update 2013-2016*, this reduction amounted to €3,053 million in 2012, of which €1,047 million owed to reductions in STiKs from market producers (which mainly affect spending on pharmaceuticals and healthcare contracts).

<sup>52</sup> Spending on compensation of employees in Spain has been influenced in recent years by two opposing factors. On the one hand, this expenditure item was curbed by the wage freeze in 2014 and 2015 and the temporary elimination in 2012 of the December extra payroll for general government employees as a consequence of the raft of fiscal measures adopted to meet the stability targets. On the other, the gradual payment from 2015 onwards of the withheld extra payroll and wage increases (1% in 2016 and 2017, 1.75% in 2018 and 2% in 2019) put upward pressure on expenditure on compensation of employees during those years.

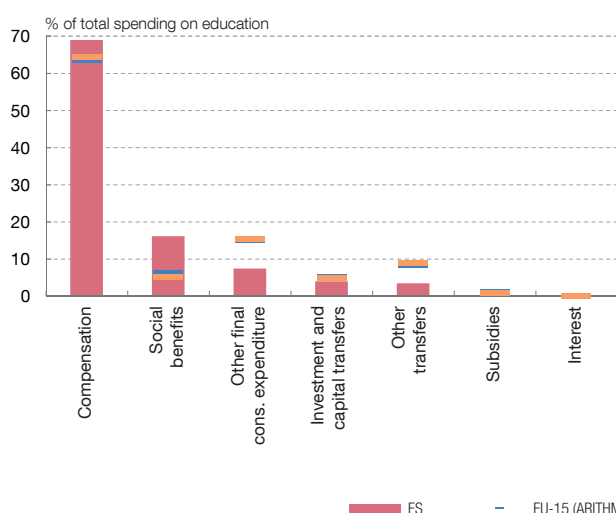
Chart 12

**PUBLIC SPENDING ON EDUCATION**

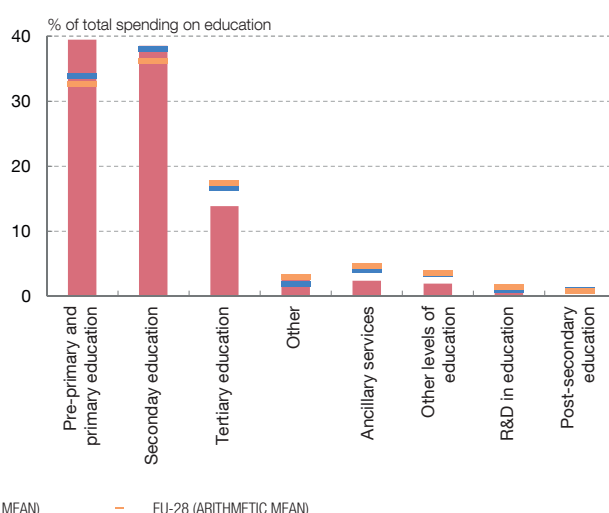
1 SPENDING ON EDUCATION



2 SPENDING ON EDUCATION BY ECONOMIC CATEGORY IN 2019



3 SPENDING ON EDUCATION BY SUB-FUNCTION IN 2019



SOURCE: Eurostat.

compared with 6.3% and 5.3% in the EU-15 and EU-28, respectively). This reflects the different institutional arrangements for the provision of education services. Thus, in Spain this category almost exclusively comprises STiKs and mainly includes spending on state-subsidised privately-run schools.<sup>53</sup> In 2019, regional governments, responsible for more than 90% of spending on education, spent approximately €6.6 billion on state-subsidised privately-run schools, representing close to 83% of total expenditure on education-related social transfers.<sup>54</sup> The “other

<sup>53</sup> And on other smaller items, such as school transport, canteens and textbooks.

<sup>54</sup> This expenditure reflects the importance of state-subsidised privately-run schools in Spain compared to other countries. Thus, according to the report on the state of the education system prepared by the State School Council on the basis of the Eurostat database (see *Consejo Escolar del Estado (2021)*, pp. 379-380), the share of primary and secondary students enrolled in publicly-owned schools is lower in Spain (68.5% in 2019, compared with 84.4% for the EU aggregate). The remaining students are largely enrolled in private institutions dependent on public financing (27.7%), with a small percentage enrolled in independent private institutions (3.8%).

current transfers” category includes spending on scholarships,<sup>55</sup> which accounts for a slightly smaller share than in the European aggregates. However, this difference is significantly higher in the investment and capital transfers category, which in 2019 represented 3.5% of total spending on education in Spain, far below the figure for this category in the EU-15 (8.3%) and the EU-28 (9%).

By sub-function, approximately three out of every four euro spent on education are spent on pre-primary, primary and secondary education. However, in Spain spending on pre-primary and primary education accounts for a higher percentage than in the EU (5-6 pp higher) to the detriment of other categories, especially expenditure on university education, which stood at 14% of total education expenditure in Spain, compared with 17% for the European aggregates in 2019 (see Chart 12.3).

### 5.3 Expenditure on economic affairs

Spending on economic affairs is more procyclical than other spending, with greater volatility in Spain. Thus, during the first decade of the period 1999-2019, this component, as a percentage of GDP, followed an upward trend, particularly in Spain (see Chart 13.1). In fact, in the years leading up to the 2008 crisis, spending on economic affairs in Spain exceeded that of the European aggregates. However, in the second decade of this period expenditure in this category declined continuously, and more so in the case of Spain.<sup>56</sup> Given this volatility, Spain’s higher average spending on economic affairs for this two-decade period (both relative to GDP and relative to total spending)<sup>57</sup> is not representative of the current situation. Thus, in 2019 spending on economic affairs in Spain stood at 4% of GDP, 0.3 pp and 0.8 pp below the EU-15 and EU-28 aggregates, respectively. In relative terms, the percentage of general government spending on this category in Spain in 2019 (9.5%) was, however, similar to that in the EU-15 (9.3%), but slightly lower than in the EU-28 (11.2%). In per capita terms, the differences are more marked at present: per capita spending on economic affairs reached €1,158 in Spain in 2019, 70% and 77% of the amounts for the EU-15 and the EU-28, respectively.

In terms of its composition, spending on economic affairs is largely determined by investment expenditure. Although the relative share of investment and other capital expenditure in spending on economic affairs has declined over time, it is still the main determinant both in Spain (34% of total expenditure) and in the EU (34% and 37% of total expenditure in the EU-15 and the EU-28, respectively) (see Chart 13.2). Indeed, economic affairs accounted for almost half of total investment expenditure by Spanish general government in 2019 (1.4 pp of total investment

<sup>55</sup> As part of its evaluation of public spending, the AIReF carried out a study, finding that although university scholarships help to achieve equality in access to higher education, there is room for improvement in areas such as the grants for students who change residence, the economic eligibility criteria and the information on access to these scholarships and the application procedure. See AIReF (2019) for more details.

<sup>56</sup> Except for the spending peak recorded in 2012, when aid was channelled to the financial sector through the FROB pursuant to Royal Decree-Law 24/2012.

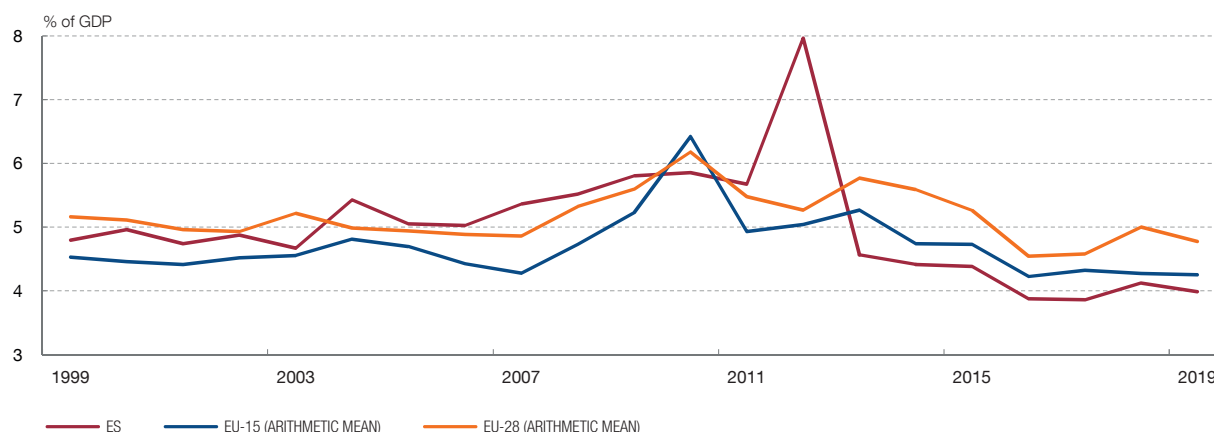
<sup>57</sup> See Chart A2.9 in Annex 2.



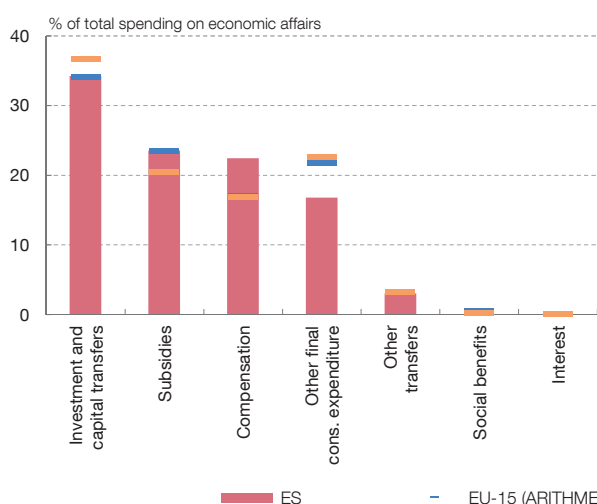
Chart 13

**PUBLIC SPENDING ON ECONOMIC AFFAIRS**

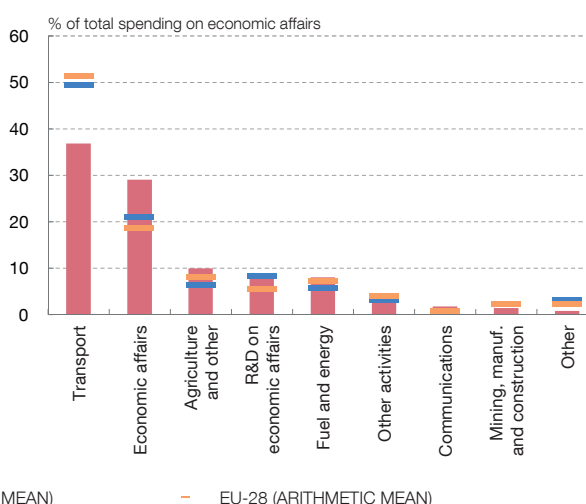
**1 SPENDING ON ECONOMIC AFFAIRS**



**2 SPENDING ON ECONOMIC AFFAIRS BY ECONOMIC CATEGORY IN 2019**



**3 SPENDING ON ECONOMIC AFFAIRS BY SUB-FUNCTION IN 2019**



SOURCE: Eurostat.

expenditure and capital transfers, which amounts to 2.8% of GDP).<sup>58</sup> Subsidies are the second most important instrument for implementing spending on economic affairs, representing a similar share of total spending on economic affairs in Spain and the EU-15 (slightly above 23%). In the case of Spain, this category includes, among other concepts, the amounts earmarked to cover the tariff deficit of the electricity sector, which in 2019 represented almost 30% of total subsidies.<sup>59</sup>

<sup>58</sup> Total expenditure on investment and capital transfers includes numerous non-recurring events that affect public spending. For instance, in 2015 expenditure of around €1.3 billion implemented via public-private partnerships in previous years was reclassified as public investment. In 2018 control over certain toll roads reverted back to the State, which led to an increase of €1.8 billion. In 2019 the Insurance Communications Consortium was reclassified within the general government sector, increasing public spending for that year by €1,109 million.

<sup>59</sup> The tariff deficit of the electricity sector arises from the shortfall between revenues generated through regulated tariffs and operating costs. Although the debt stemming from the accumulation of these deficits has been decreasing since 2014 (following the implementation of Law 15/2012 of 27 December 2012 and Royal Decree-Law 9/2013 of 12 July 2013 adopting urgent measures to ensure the financial stability of the electricity system), subsidies aimed at correcting this deficit amounted to €3,365 million in 2019. Part of this amount is also used to cover the extra cost of electricity generation in non-mainland territories (50% of which is financed out of the State Budget).

Two-thirds of total expenditure on economic affairs are accounted for by two sub-functions: (i) transport, and (ii) economic, commercial and labour affairs. The joint importance of these two sub-functions is similar in Spain and in the EU-15, although their relative size differs: in Spain, the former represented 37% of total spending on economic affairs in 2019 compared to 29% for the latter (49% and 21%, respectively, for the EU-15 aggregate) (see Chart 13.3). In the case of Spain, spending on the transport sub-function mainly includes capital expenditure (both gross fixed capital formation in new infrastructures and reclassifications, such as certain toll roads reverting to central government control) and expenditure through subsidies.<sup>60</sup> Within the economic, commercial and labour affairs sub-function, subsidies granted to social security funds (around €2.6 billion in 2019) were particularly noteworthy. These subsidies were mainly earmarked for hiring incentives to promote employment and for training for workers in employment through the National Public Employment Service. This sub-function also includes a large amount of capital transfers (almost €3 billion in 2019), which reflect both accounting reclassifications and expenditure relating to asset protection schemes (APSs).<sup>61</sup>

#### 5.4 Expenditure on general public services

The level of general government expenditure on general public services is similar in Spain and in the EU. In 2019 the gap in spending on this item between Spain and the EU-15 had narrowed by more than 1 pp compared with 2010 (see Chart 14.1), with this expenditure standing at similar levels in Spain and in the EU-28 (5.5% of GDP). As a percentage of total spending, Spain allocates slightly more to this item than the EU aggregates: 13% in Spain vs 12.8% and 12.5% in the EU-15 and the EU-28, respectively.<sup>62</sup>

The composition and dynamics of spending on general public services are determined by the importance of interest expenditure. In 2019, the share of interest expenditure in total spending on general public services stood at 42% (or somewhat more than €28 billion), 14 pp and 16 pp above the EU-15 and EU-28 averages, respectively (see Chart 14.2). The significance of interest expenditure also explains the above-mentioned dynamics,<sup>63</sup> especially the peak in expenditure on general public services in 2013 amid tensions in the sovereign bond market and its subsequent deceleration after the unconventional monetary policy measures adopted by the European Central Bank (ECB), which led to a reduction in the financing costs of the euro area economies.<sup>64</sup>

By sub-function, besides the significance of public debt-related transactions there are other notable differences between Spain and the EU in important items, for example in

<sup>60</sup> A significant part of the subsidies in the transport category was granted at the regional level. Of particular note in 2019 were the allocations to the Madrid Regional Transport Consortium and the Consortium of the Metropolitan Transport Authority of Catalonia.

<sup>61</sup> Expenditure on APSs refers to the guarantees provided to financial institutions by the FROB or the Deposit Guarantee Scheme to cover potential credit portfolio losses after a bank restructuring process. In 2019, APSs amounted to €1,819 million.

<sup>62</sup> Despite having grown over the last decade, in 2019 per capita spending in Spain on general public services stood at €1,590 PPS, less than in the EU-15 (€2,206 PPS) and the EU-28 (€1,756 PPS).

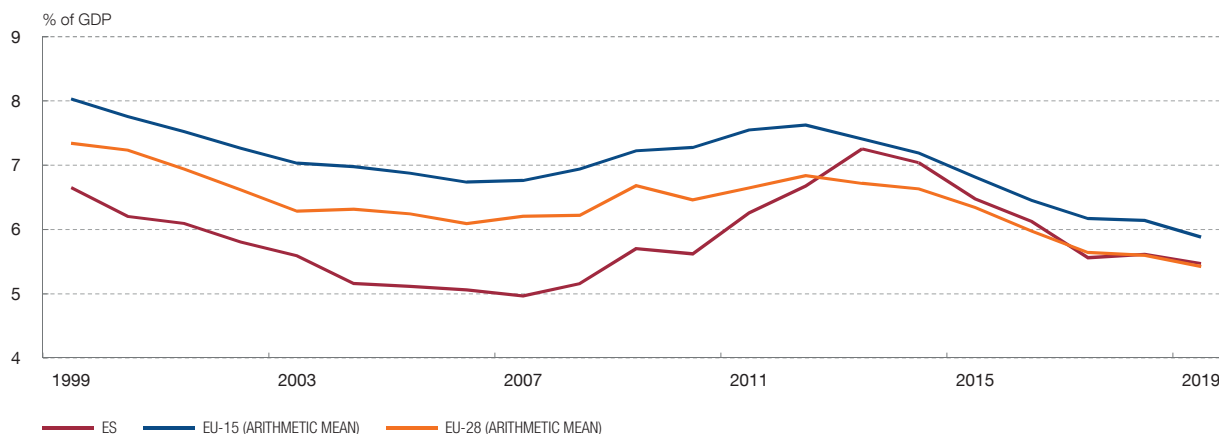
<sup>63</sup> Note the similarities in the dynamics of total interest expenditure (see Chart 8.1) and spending on general public services (see Chart 14.1).

<sup>64</sup> See [Burriel, Martí and Pérez \(2017\)](#).

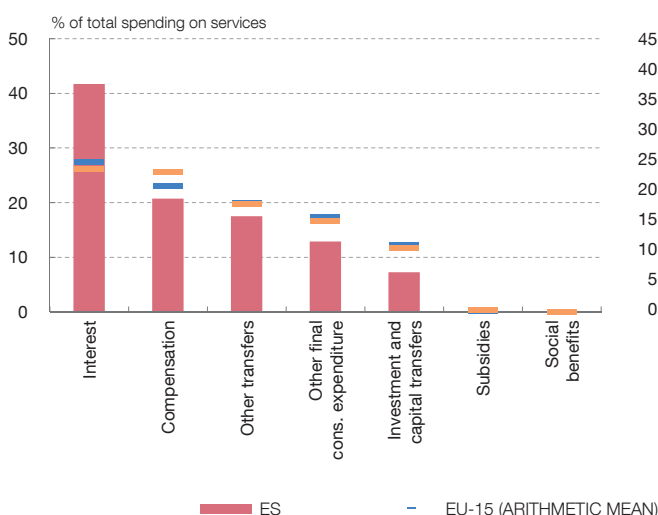
Chart 14

**PUBLIC SPENDING ON GENERAL PUBLIC SERVICES**

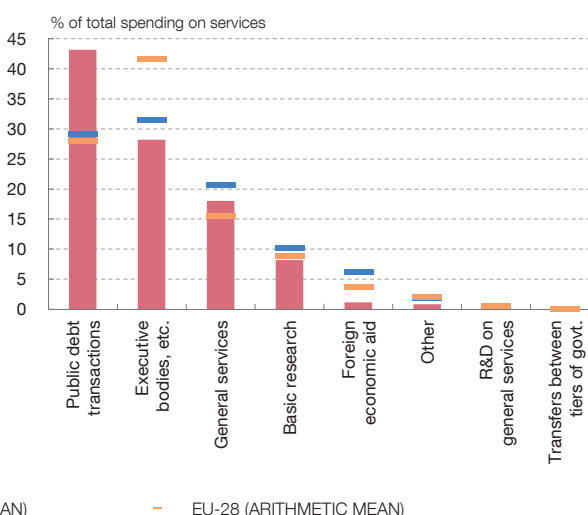
**1 SPENDING ON GENERAL PUBLIC SERVICES**



**2 SPENDING ON GENERAL PUBLIC SERVICES BY ECONOMIC CATEGORY IN 2019**



**3 SPENDING ON GENERAL PUBLIC SERVICES BY SUB-FUNCTION IN 2019**



SOURCE: Eurostat.

spending on basic research. Debt transaction expenditure is the greatest determinant of spending on general public services (see Chart 14.3), accounting for up to 43% in Spain (far above the EU-15 and EU-28 figures of 29% and 28%, respectively). This item includes not only interest payments, but also other expenditure, for example on financial intermediation services indirectly measured (FISIM), which reflects the indirect remuneration obtained by financial institutions in public debt-related transactions.<sup>65</sup> The next largest sub-functions by size are: (i) spending on executive and legislative bodies, financial and fiscal affairs and foreign affairs (which includes, for example, spending on diplomatic delegations and, especially, contributions

<sup>65</sup> FISIM is calculated indirectly based on the difference between the interest rate effectively paid (or received) and the reference rate. Such expenses are classified as intermediate consumption and totalled just over €1 billion in 2019 (although they reached €2.5 billion-€3 billion during the period 2013-2015, close to 30% of total intermediate consumption within the general public services category during this period).

to the EU budget)<sup>66</sup> and (ii) spending on general services (which includes general government spending that cannot be assigned to a specific function).<sup>67</sup> These two items jointly account for most of the spending on compensation of employees in total general public services expenditure (around 85%). The next sub-function by relevance is spending on basic research,<sup>68</sup> which is primarily implemented through gross fixed capital formation (and, to a lesser extent, compensation of employees and intermediate consumption) and accounts for almost two out of every three euro of total investment expenditure in the general public services category (see Chart 14.2). In Spain, spending on basic research represented 8.2% of total spending on general public services in 2019, 2 pp below the EU-15 average. However, this difference is more marked in per capita terms: the spending in Spain amounted to €150 PPS, which is only 53% of the EU-15 average. It should be noted that the amount of spending on basic research is closely related with productivity growth and innovation, and is therefore relevant in designing public finances whose composition is conducive to economic growth.<sup>69</sup>

## 5.5 Expenditure on social protection

Spending on social protection increased substantially after the 2008 crisis in the EU as a whole, although its subsequent buoyancy relative to GDP was stronger in the case of Spain. As a result, this expenditure now has a higher relative share in Spain than in the EU. Social protection is the largest expenditure item by size both in Spain and in the EU, although with some cross-country differences. Relative to GDP, the gap in social protection expenditure between Spain and the EU has narrowed markedly in recent decades and has changed sign in the case of the EU-28 (see Chart 15.1). This owed, first, to the effects stemming from the 2008 crisis (which particularly influenced spending on social protection in Spain, increasing it by 3.3 pp between 2007 and 2009) and, second, to the greater buoyancy of this item in Spain over the last decade,<sup>70</sup> in contrast to the trend observed in the EU. Thus, in 2019 spending on social protection in Spain stood at

<sup>66</sup> Contributions to the EU budget are established based on VAT (a 0.3% rate is applied to each EU country's harmonised VAT base, which is capped at 50% of its gross national income) and a percentage determined by each country's gross national income. The EU also raises own resources from customs duties on imports to the EU and, from 1 January 2021, from a contribution from EU countries based on the quantity of non-recycled plastic packaging waste. Overall, contributions to the EU budget represent an important item which exceeded €10 billion in 2019 (more than half of the expenditure on this sub-function and around 15% of total spending on general public services). From the economic transaction standpoint, this expenditure is classified as "other current transfers" (see Chart 14.2).

<sup>67</sup> Including, for example, expenditure relating to resource planning, compilation of statistics, etc. Much of this expenditure is implemented at sub-national level, especially through local government (which represents 73% of spending on this sub-function of general services). Developments in this expenditure item have been affected by the measures aimed at streamlining general government, in the framework of the Commission for Government Reform. In the case of local government, these reforms were enshrined in Law 27/2013 on the streamlining and sustainability of local government.

<sup>68</sup> Unlike applied research, basic research seeks to increase scientific knowledge in a general, theoretical way, without necessarily having immediate practical applications.

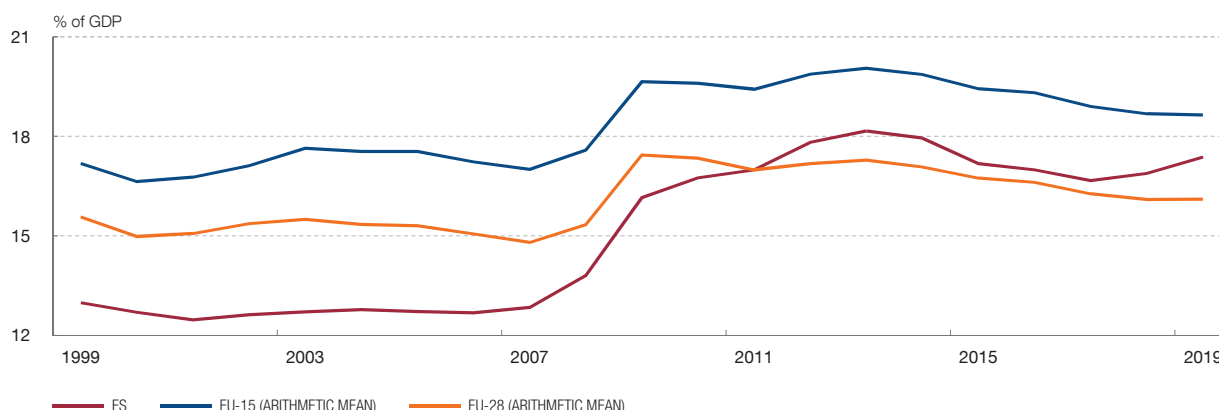
<sup>69</sup> The link between investment in basic research and total factor productivity growth has been reported in the economic literature for decades, with documented evidence of a causal empirical relationship between both variables (see [Nelson \(1959\)](#) and [Mansfield \(1980\)](#)). In fact, some recent studies show that basic research could have a higher economic impact than other types of R&D. For instance, [Akcigit, Hanley and Serrano-Velarde \(2021\)](#) construct and estimate a microfounded model which distinguishes between basic and applied research. Their conclusions show that, given its complementarity with applied research, subsidies specifically designed to encourage basic research would be the most effective policies to support R&D, as they have a positive effect on productivity, innovation and social well-being. [Gruber and Johnson \(2019\)](#) reached similar conclusions about the positive effect associated with public investment in basic research, especially when it is concentrated around populated areas with good physical infrastructure and highly educated workforces.

<sup>70</sup> Of all general government expenditure functions in Spain, the social protection item is the only one that has grown faster than GDP in the latter years of the sample considered, with such spending up by 16.9% between 2015 and 2019 compared with GDP growth of 15.5%.

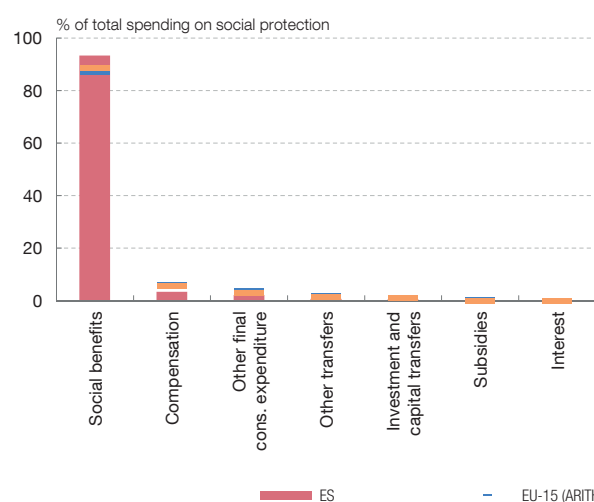
Chart 15

**PUBLIC SPENDING ON SOCIAL PROTECTION**

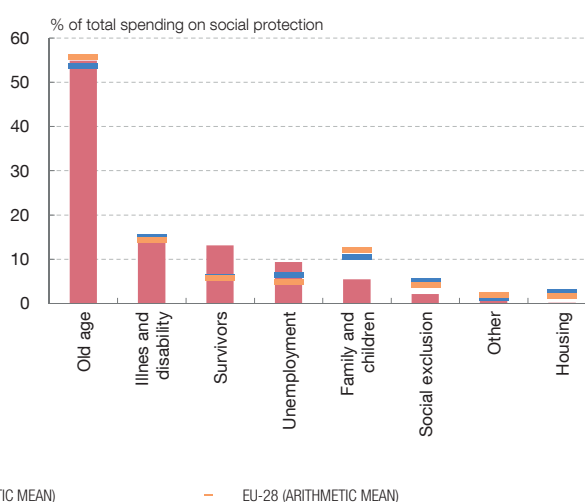
**1 SPENDING ON SOCIAL PROTECTION**



**2 SPENDING ON SOCIAL PROTECTION BY ECONOMIC CATEGORY IN 2019**



**3 SPENDING ON SOCIAL PROTECTION BY SUB-FUNCTION IN 2019**



SOURCE: Eurostat.

17.4% of GDP, 1.2 pp below the EU-15 and 1.2 pp above the EU-28.<sup>71</sup> However, in relative terms, Spain devotes a larger share of spending to social protection than the European aggregates: 41.3% vs 40.8% in the EU-15 and 37% in the EU-28. In per capita terms, and bearing in mind the cross-country differences in purchasing power, spending on social protection in Spain (€5,362 PPS) was similar to that of the EU-15 (€5,052 PPS) but lower than in the EU-28 (€7,171 PPS).

International comparisons of spending on social protection must take into account institutional differences between countries. For example, such comparisons may be distorted if social transfers are not taxed homogeneously across countries (these transfers may be tax exempt in some countries) or when there are other factors of the fiscal framework that affect

<sup>71</sup> Relative to total government receipts, Spain was the EU country with the fourth highest social protection expenditure in 2019 (44.3%, above the EU-15 average of 40.7% and the EU-28 average of 37.2%).

the “net” proportion of social protection spending at the disposal of beneficiaries. To make these comparisons possible, the OECD proposes a definition of net social expenditure that includes, in addition to social protection, other expenses relating to healthcare and active labour market policies.<sup>72</sup> Importantly, the definition of net social spending also takes into account the different tax arrangements that may distort comparisons between countries. This correction allows for a more accurate comparison of the budgetary effort in the area of social policy.<sup>73</sup> The latest OECD calculations (for 2017) suggest that social spending in Spain stood at 21.3% of GDP, slightly above the EU-15 average (20.7%). When analysing social spending as a proportion of total public spending, it is worth highlighting that the social spending effort in Spain is 51.6%, which far exceeds the EU-15 average (45.4%). In fact, according to this metric, Spain would be the second EU-15 country in terms of its ratio of net social spending to total public spending, behind only Germany.

By its very nature, spending on social protection materialises mainly through social benefits. Indeed, in Spain social benefits accounted for 93% of spending on this item, the vast majority of which were social benefits other than STiKs (see Chart 15.2). In Spain, this spending is primarily implemented through social security funds and represents somewhat more than 80% of social protection expenditure.<sup>74</sup> This is similar to the EU-15 and the EU-28, where social transfers account for slightly less than 90% of total expenditure on social protection.

The structure of spending on social protection by sub-function is similar in Spain and the EU. Of note in both cases is the significance of spending on transfers associated with old age (i.e. pensions),<sup>75</sup> which accounted for between 54% and 56% of total spending on this item in Spain, the EU-15 and the EU-28 in 2019 (see Chart 15.3). This similarity can also be seen in the second largest category: spending on social protection related to illness and disability (around 15% of spending in this category in both Spain and the EU). Conversely, there are some differences in items such as spending on unemployment,<sup>76</sup> which concentrates 9.3% of spending on social protection in Spain, compared with 5% and 6% in the EU-28 and EU-15, respectively.

## 5.6 Expenditure on other items

The remaining spending categories represent a lower percentage of total public spending (12% in Spain, 1 pp more than in the EU-15 and 1 pp less than in the EU-28). Given its smaller size, this spending depends on GDP to a greater extent. This set of expenditure items currently represent between 5% and 5.5% of GDP in Spain and in the EU (see

---

<sup>72</sup> The social protection expenditure mentioned in this section represents somewhat more than 70% of the OECD's definition of “gross” social spending (i.e. before taking into account institutional differences).

<sup>73</sup> See page 37 of the OECD's report on social spending: [OECD \(2019\)](#).

<sup>74</sup> Another 10% of expenditure on social protection is assigned to central government, mainly to cover pension schemes for public sector employees.

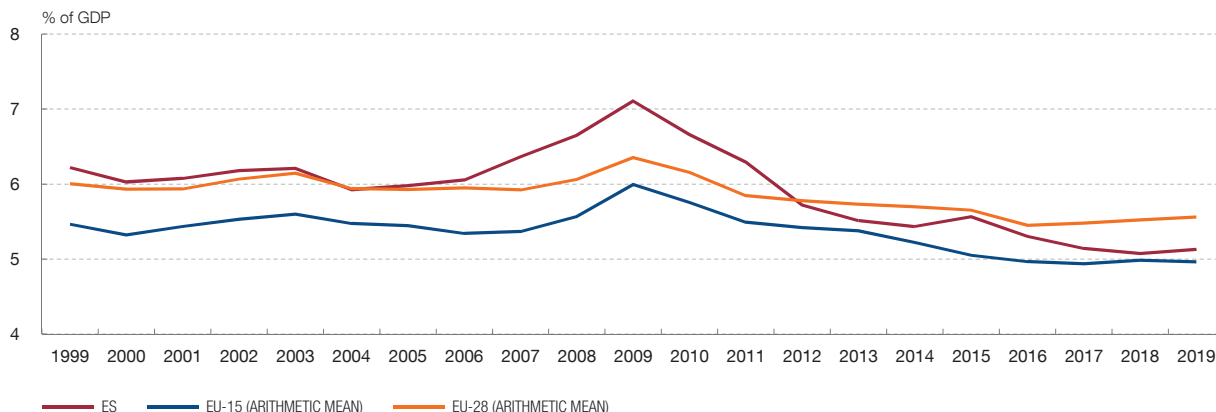
<sup>75</sup> For more details about the institutional framework of the pension system in Spain and its medium-term challenges, see the Banco de España's contribution to the work of the Committee for the Monitoring and Assessment of the Toledo Pact Agreements in [Hernández de Cos \(2021b\)](#).

<sup>76</sup> The differences in spending on survivors' pensions (which comprises widows' and orphans' pensions) and on family and children reflect differences in the institutional design of these benefits and are also noteworthy.

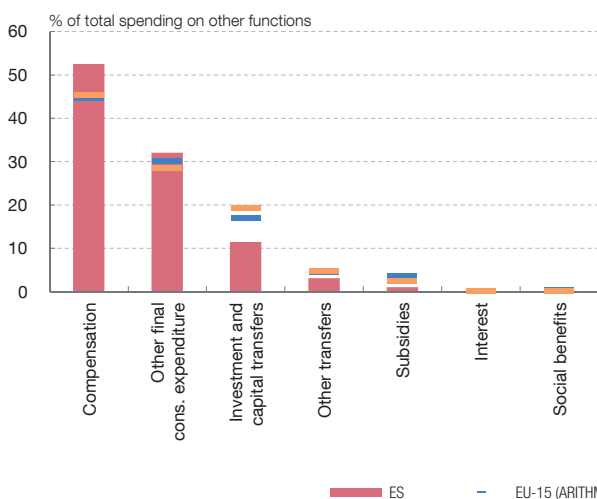
Chart 16

**PUBLIC SPENDING ON OTHER FUNCTIONS**

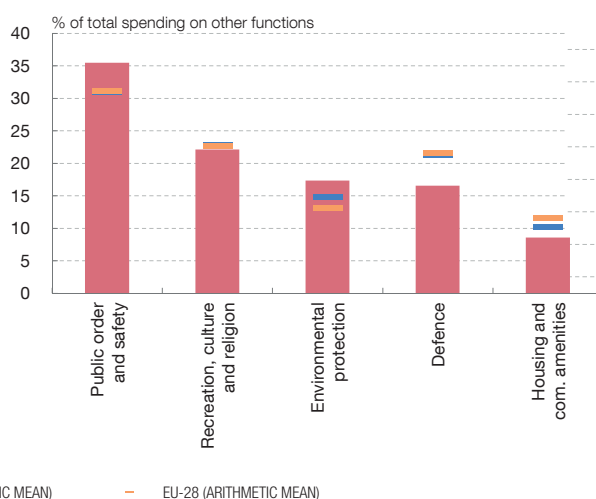
**1 SPENDING ON OTHER FUNCTIONS**



**2 SPENDING ON OTHER FUNCTIONS BY ECONOMIC CATEGORY IN 2019**



**3 SPENDING ON OTHER FUNCTIONS BY SUB-FUNCTION IN 2019**



SOURCE: Eurostat.

Chart 16.1) and are mainly implemented through general government consumption expenditure<sup>77</sup> (see Chart 16.2).

This expenditure category comprises five items, with some differences between Spain and the EU. Ranked by size, the largest item in Spain is spending on public order and safety (see Chart 16.3), which includes resources allocated to police services, fire-protection services, law courts and prisons. In Spain this type of spending represented 4.3% of total public spending in 2019 (see Chart 10.2), approximately the same as in the EU-28 (4.1%) and slightly more than in the EU-15 (3.4%). In GDP terms, spending on public order and safety accounted for a similar but marginally larger share than in the EU-15 and the EU-

<sup>77</sup> General government final consumption expenditure represents 80% of total spending on these categories in Spain (75% in the EU), owing mainly to spending on compensation of employees.

28 (1.8% compared with 1.5% and 1.7%, respectively). In second place is expenditure on recreation, culture and religion, which includes recreational and sporting services, cultural services, broadcasting and publishing services and religious and other community services. This spending represented 2.7% of total expenditure in Spain in 2019 (2.5% and 2.9% in the EU-15 and EU-28, respectively) and 1.1% of GDP. Expenditure on environmental protection comes third, and includes waste and wastewater management, pollution abatement and protection of biodiversity and landscape.<sup>78</sup> Its share in total spending rose to 2.1% in Spain in 2019, slightly above the EU-15 and EU-28 figure of 1.7%. As a share of GDP, this expenditure reached 0.9% in Spain, 0.1 pp and 0.2 pp above the EU-15 and EU-28 expenditure, respectively. Fourth is defence spending, which includes spending on military defence, civil defence, foreign military aid and defence-related R&D. In Spain, this expenditure was lower than in the EU and amounted to 2% of total spending (0.8 pp of GDP), compared with 2.4% in the EU-15 (1.1 pp of GDP) and 2.9% in the EU-28 (1.2 pp of GDP). The last item is spending on housing and community amenities, which comprises categories relating to urban planning, community development, water supply and street lighting.<sup>79</sup> In Spain, this item accounted for 1% of total spending in 2019 (0.4 pp of GDP), a similar but marginally lower figure than in the EU-15 (1.1% of total spending, 0.5 pp of GDP) and the EU-28 (1.6% of total spending, 0.7 pp of GDP).

---

<sup>78</sup> This type of expenditure is highly decentralised in Spain: over 70% is executed by local government.

<sup>79</sup> Spending on housing and community amenities is implemented mostly at sub-national level: in 2019, local government was responsible for 63% of this spending, while regional governments were responsible for 36%.



## 6 Conclusions and future work streams

This document analyses the level, dynamics and composition of public spending in Spain and compares it with other European countries. The analysis yields two main conclusions. First, the weight of the government sector in Spain is comparable to that of its European peers, although it lies in the lower range of a reference group of European countries (EU-15), with below-average levels and requiring a level of public revenue to finance expenditure well below the average of the reference countries. Second, the composition of public spending in Spain is skewed towards items such as pensions and unemployment benefits, to the detriment of other items like education and investment.

These study's findings bring into view two elements that should be borne in mind when designing medium and long-term public spending policies. First, although the current level of public spending in Spain lies in the lower range of its European peers, it is high in relation to its level of government receipts. Thus, any increase in the level of public spending in Spain would only be fiscally sustainable if it is accompanied by measures on the public revenue side. This is particularly important considering how certain global trends may put additional upward pressure on public spending levels. These include demographic dynamics<sup>80</sup> (which, under the system's current parameters, will significantly drive up pension expenditure linked to population ageing) and trends associated with the energy transition to a more sustainable model.<sup>81</sup>

Second, it is important to consider the composition of government expenditure and how it may affect economic growth.<sup>82</sup> In particular, any process of fiscal normalisation and consolidation after the pandemic should be designed to keep the adjustment from falling on those public expenditure items that are most conducive to long-term growth, such as investment and education, which are underfunded in Spain compared with the EU as a whole. Moreover, it should be noted that these items contribute decisively to reducing inequality and strengthening intergenerational equity in their role as pre-production redistributive policies.<sup>83</sup> In fact, according to the available evidence, differences in items such as public spending on education explain the lower levels of inequality in European countries relative to the United States to a greater extent than tax-based redistributive policies.<sup>84</sup>

Regardless of its level and composition, analysing and evaluating the effectiveness and efficiency of public spending is vital. All general government spending should be subject to evaluation to help identify sources of inefficiency and promote the most effective policies to achieve the objectives being pursued. This factor is especially relevant in the current

---

80 For a discussion of this issue from a medium-term perspective, see, inter alia, [Hernández de Cos, Jimeno and Ramos \(2017\)](#) and [Hernández de Cos \(2021b\)](#).

81 See, inter alia, [Banco de España \(2020\)](#), [Islam \(2022\)](#) and [Darvas and Wolff \(2022\)](#).

82 See [Cepparulo and Mourre \(2020\)](#) for an analysis of the compatibility of the composition of spending in Europe with economic growth.

83 See [Rodrik and Stantcheva \(2021\)](#).

84 See [Blanchet, Chancel and Gethin \(2022\)](#).

context, in which the arrival of European funds linked to the Next Generation EU programme is giving public spending a significant boost.<sup>85</sup>

Lastly, it is particularly important to analyse how social preferences about public spending policies may have changed in the wake of recent events such as the pandemic, the crisis triggered by the invasion of Ukraine by Russia or the global pick-up in inflation. In particular, these episodes may end up affecting the future composition, level and dynamics of public spending and the sustainability of public finances. While it is far too early to assess the magnitude and persistence of such changes, it is only natural that analysing them should be the next step after this paper.

---

<sup>85</sup> See, inter alia, the discussion in [Banco de España \(2021\)](#) and [Alonso et al. \(2022\)](#).

Box 1

**CYCLICALITY OF PUBLIC SPENDING**

The cyclicality of fiscal policy is the degree to which budgetary developments reflect economic fluctuations. From a conceptual standpoint, fiscal policy in general, and public spending in particular, should be countercyclical in nature, with expenditure increasing during recessions to stabilise the economic cycle and decreasing during upswings to create fiscal space for future action.<sup>1</sup> However, the available evidence shows that various factors, such as, inter alia, economic policy constraints or non-compliance with the existing framework of fiscal rules, give rise to procyclical fiscal policies.<sup>2</sup>

Public spending in Spain has a more procyclical and volatile behaviour than in the euro area, particularly in the case of consumption expenditure and government investment. Transfers to households, which include unemployment expenditure, have a countercyclical behaviour, in that they are negatively correlated to economic activity (see Chart 1). This is true both in Spain and in the euro area,<sup>3</sup> although it is more evident in the latter case. However, government consumption (which includes compensation expenses) and government investment act procyclically in Spain, in contrast to the euro area. Moreover, fiscal

Table 1  
SENSITIVITY OF PUBLIC SPENDING TO GDP

	t-4	t-3	t-2	t-1	t	t+1	t+2	t+3	t+4	Volatility relative to GDP	Volatility relative to the euro area
<b>Spain</b>											
Total expenditure	-0.02	0.00	0.05	0.05	0.10	0.14	0.18	0.25	0.32	1.59	1.61
Transfers to households	-0.42	-0.41	-0.37	-0.33	-0.23	-0.12	0.03	0.21	0.35	1.56	1.97
Government consumption	-0.01	0.07	0.21	0.29	0.35	0.41	0.44	0.44	0.47	1.77	2.42
Government investment	0.27	0.32	0.35	0.35	0.32	0.30	0.28	0.26	0.29	7.41	2.44
<b>Euro area</b>											
Total expenditure	-0.23	-0.24	-0.22	-0.20	-0.17	-0.07	0.02	0.14	0.25	1.15	1.00
Transfers to households	-0.17	-0.27	-0.37	-0.45	-0.50	-0.47	-0.34	-0.16	0.03	0.92	1.00
Government consumption	-0.16	-0.16	-0.13	-0.10	-0.06	0.01	0.11	0.23	0.34	0.86	1.00
Government investment	0.02	0.09	0.16	0.19	0.22	0.24	0.27	0.31	0.37	3.55	1.00

SOURCE: Alloza, Burriel and Pérez (2019).

NOTE: Rows 2-9 show the correlation between the cyclical component of the fiscal variable in the period t+h and the cyclical component of GDP in the period t. The cyclical component is extracted with a Hodrick-Prescott filter on the natural logarithm of the variables, using a smoothing factor of 1,600. All variables are expressed in real terms using the GDP deflator.

Chart 1  
RELATIVE VOLATILITY OF SPENDING ON TRANSFERS TO HOUSEHOLDS

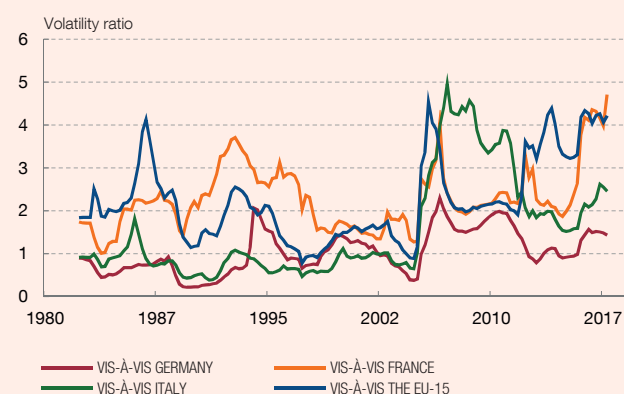


Chart 2  
RELATIONSHIP BETWEEN VOLATILITY OF UNEMPLOYMENT AND SOCIAL TRANSFERS IN SPAIN



SOURCES: Eurostat and Alloza, Burriel and Pérez (2019).

1 See, for example, Lane (2003).

2 See Hauptmeier, Sánchez Fuentes and Schuknecht (2015) or Eyraud, Gaspar and Poghosyan (2017).

**CYCLICALITY OF PUBLIC SPENDING (cont'd)**

variables in Spain are more volatile than in the euro area. For example, government investment (a variable that tends to fluctuate more than proportionally to the economic cycle) is 2.4 times more volatile in Spain than in the euro area.

Part of the higher volatility observed in the fiscal variables in Spain may owe to a greater fluctuation of the macroeconomic variables, but the unexpected excess volatility may be harmful for economic activity. A comparison with individual European countries also reveals Spain's more volatile fiscal variables. For instance, spending on transfers to households shows a higher relative volatility in Spain than in Germany, France and Italy, and more so in the period following the 2008 crisis (see Chart 1). Part of this volatility may be due to the fluctuations observed in the underlying macroeconomic variables, which would be passed through to the

spending needed to cover the risks associated with such variability. In this regard, volatilities in transfers to households in Spain have a positive correlation with the fluctuations observed in the labour market (see Chart 2). Several recent papers find that any volatility in the fiscal variables not aimed at reducing the economic effects of the cycle (unexpected volatility) could have adverse effects on future economic growth.<sup>4</sup>

Adjusting for the economic cycle, both government receipts and expenditure in Spain are comparatively lower than in the European Union (EU). The cyclical adjustment of the fiscal variables is a commonly used procedure for monitoring public finances, net of temporary factors that can be expected to even out over time.<sup>5</sup> Once this cyclical adjustment has been made, public (or structural) spending is lower than in the EU-15, especially when interest

Chart 3  
PUBLIC SPENDING ADJUSTED FOR CYCLICAL EFFECTS

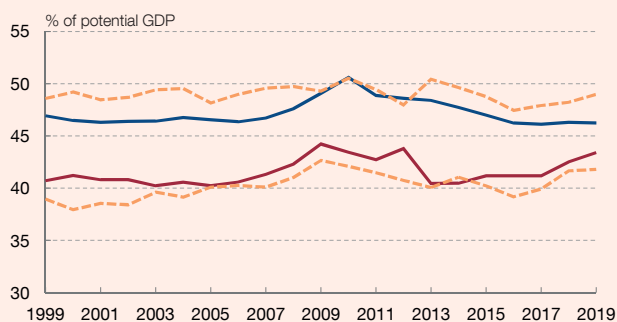


Chart 4  
PRIMARY PUBLIC SPENDING ADJUSTED FOR CYCLICAL EFFECTS

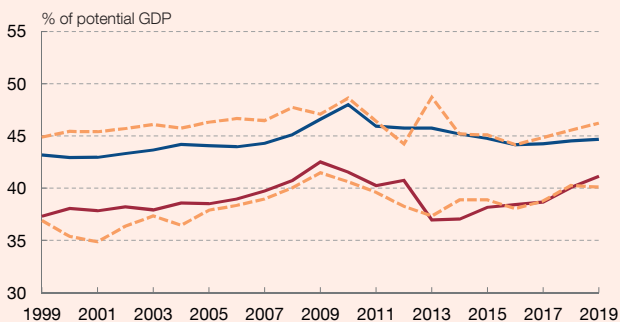


Chart 5  
PUBLIC REVENUE ADJUSTED FOR CYCLICAL EFFECTS

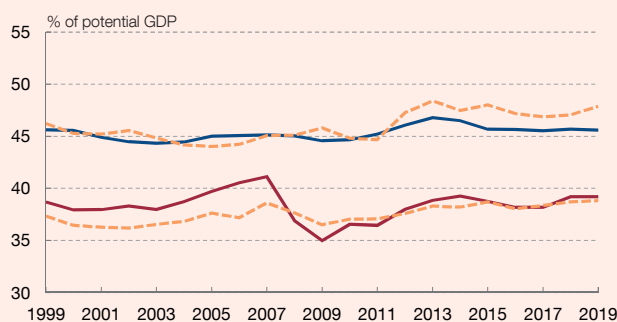
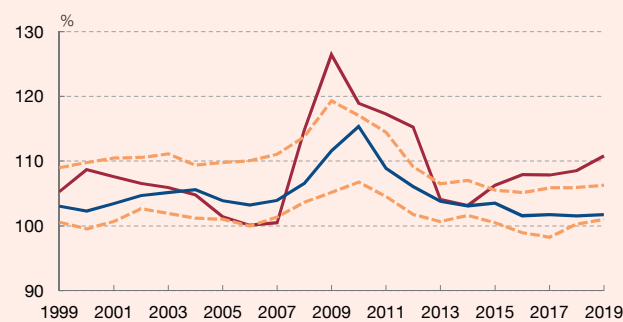


Chart 6  
PUBLIC EXPENDITURE-TO-REVENUE RATIO ADJUSTED FOR CYCLICAL EFFECTS



— ES — EU-15 (ARITHMETIC MEAN) — 25th-75th PERCENTILE RANGE (EU-28)

SOURCE: AMECO.

3 This first analysis takes as reference the euro area aggregate, due to its better coverage of the required historical quarterly data.  
 4 See Afonso and Furceri (2010), Fatás and Mihov (2013) and Fernández-Villaverde et al. (2015). Under certain conditions, higher volatility in public spending may be reflected in an increase in the volatility of the future tax burden, discouraging investment and business entry. Fernández-Villaverde et al. (2015) estimate a general equilibrium model to reveal how this increase in volatility, coupled with existing nominal price rigidities, could lead to a greater decline in economic activity stemming from higher profit margins.  
 5 This procedure is based on an estimation of the output gap (the difference between current GDP and its potential level) and of the elasticity of the fiscal variable under analysis with respect to the output gap. Cyclically-adjusted variables tend to be referred to as “structural” and are expressed as a percentage of potential GDP. See Larch and Turrini (2010) for a description and critical overview of this methodology.

### CYCLICALITY OF PUBLIC SPENDING (cont'd)

payments are removed from this definition (see Chart 3 and 4). Moreover, the public revenue estimate once the cyclical effect is stripped out also yields similar conclusions: the revenue-to-potential GDP ratio in Spain is well below the EU-15 average and lies in the lower range of the EU-28 figure (see Chart 5). When these

two estimates are analysed jointly, it can be seen that the ratio of public expenditure to public revenue adjusted for the cyclical effects has remained above the EU-15 average in Spain for most of the past two decades, with the gap widening from 2014 onwards (see Chart 6).

## THE DECENTRALISATION OF PUBLIC SPENDING

Fiscal decentralisation refers to the proportion of the general government budget that is implemented at the sub-national administrative level. This is a key element in several fiscal policy areas, as aggregate spending and revenue in the various tiers of general government determine a country's aggregate fiscal policy stance, fiscal imbalances and other relevant aggregates. The economic literature has identified a number of advantages and disadvantages of institutional frameworks that favour greater fiscal decentralisation, on both the expenditure and the revenue side. For instance, on the one hand, decentralisation of fiscal responsibilities may give rise to coordination failures between the different tiers of general government, generating negative externalities and preventing economies of scale.<sup>1</sup> On the other, fiscal decentralisation may make it possible for decisions on spending or the revenue needed to finance it to better represent local preferences.<sup>2</sup>

On the public expenditure side, Spain is a highly decentralised country. According to estimates by the Organisation for Economic Co-operation and Development (OECD), Spain is one of the countries with the highest percentage of public

spending implemented at the sub-national level. Thus, regional governments and local government jointly managed close to 44% of public spending in 2019, above the EU-15 and OECD average of 31% and 4 pp lower than the figure for state-level government spending as a percentage of total spending in the United States (see Table 1). This high degree of decentralisation is also reflected in the distribution of public sector employees, as Spain is one of the countries with the lowest concentration of employees in central government.<sup>3</sup>

However, on the public revenue side, the degree of fiscal decentralisation is substantially lower. This trend can be seen across many countries, where co-responsibility for income and expenditure is not symmetrical (see Chart 1). In the case of Spain, although 44% of expenditure was implemented at the regional or local level, these tiers of general government had decision-making power over only 22.6% of total public revenue in 2018. Greater fiscal co-responsibility between income and expenditure would foster transparency in the implementation of public spending and accountability.<sup>4</sup>

Table 1  
EXPENDITURE BY GOVERNMENT TIER (AS A PERCENTAGE OF TOTAL EXPENDITURE)

	2007			2019		
	Central government and social security	Regional government	Local government	Central government and social security	Regional government	Local government
Spain	50	36	14	56	32	12
Austria	70	16	14	68	17	16
Belgium	62	24	14	54	33	13
France	80	0	20	80	0	20
Germany	61	23	16	60	22	18
Italy	69	0	31	72	0	28
Switzerland	44	35	20	43	37	20
United States	49	51	0	52	48	0
Japan (a)	64	0	36	66	0	34
EU-15 average	69	7	25	69	7	24
OECD average	68	9	23	69	9	22

SOURCE: OECD.

a Values for 2007 and 2018 owing to the lack of data.

1 See Oates (1999).

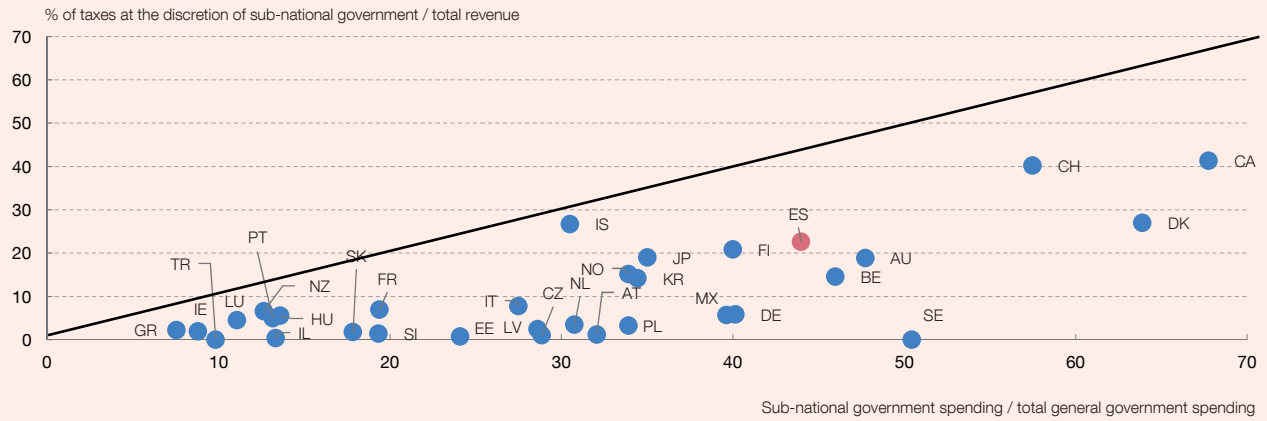
2 See, for example, Forman, Dougherty and Blöchliger (2020) and the references therein.

3 In particular, 81.6% of public sector employment is in regional and local government. See the latest edition of the *Government at a Glance* report, in OECD (2021), p. 103. Much of this owes to the decentralisation of healthcare and education expenditure, more than 90% of which is implemented at the sub-national level. See also Hernández de Cos, Moral-Benito and Pérez (2016).

4 See Martínez-Vázquez and Lago Peñas (2020).

**THE DECENTRALISATION OF PUBLIC SPENDING (cont'd)**

Chart 1  
FISCAL CO-RESPONSIBILITY IN 2018



SOURCE: OECD.

## References

- Afonso, A., and D. Furceri (2010). "Government size, composition, volatility and economic growth", *European Journal of Political Economy*, Vol. 26, pp. 517-532.
- Afonso, A., J. T. Jalles and A. Venâncio (2021a). "Taxation and Public Spending Efficiency: An International Comparison", *Comparative Economic Studies*, Vol. 63, pp. 356-383.
- Afonso, A., J. T. Jalles and A. Venâncio (2021b). "Structural Tax Reforms and Public Spending Efficiency", *Open Economies Review*, Vol. 32, pp. 1017-1061.
- Akcigit, U., D. Hanley and N. Serrano-Velarde (2021). "Back to basics: Basic research spillovers, innovation policy, and growth", *Review of Economic Studies*, Vol. 88, pp. 1-43.
- Alloza, M., P. Burriel and J. J. Pérez (2019). "Fiscal policies in the euro area: Revisiting the size of spillovers", *Journal of Macroeconomics*, Vol. 61, 103132.
- Alloza, M., D. Leiva-León and A. Urtasun (2022). "The response of private investment to an increase in public investment", Analytical Articles, *Economic Bulletin 2/2022*, Banco de España.
- Alonso, D., I. Kataryniuk, C. Moreno and J. J. Pérez (2022). "El programa *Next Generation EU*: características y claves para su éxito", *Información Comercial Española*, Vol. 924, pp. 77-97.
- Arce, Ó., I. Kataryniuk, P. Marín and J. J. Pérez (2020). "Thoughts on the design of a European Recovery Fund", *Occasional Paper No 2014*, Banco de España.
- Ardanaz, M., E. Cavallo, A. Izquierdo and J. Puig (2021). "Growth-friendly fiscal rules? Safeguarding public investment from budget cuts through fiscal rule design", *Journal of International Money and Finance*, Vol. 111, 102319.
- AlReF (2019). "Estudio sobre las becas de educación universitaria en España", Proyecto 4, *Evaluación del gasto público 2018*.
- AlReF (2020). *Actualización de previsiones demográficas y gasto en pensiones*, Documento Técnico 1/20.
- Banco de España (2020). "The role of public investment on a European scale in the economic recovery", Box 5.2, *Annual Report 2019*.
- Banco de España (2021). "The Spanish economy post-COVID-19: structural challenges and policies to address them", Chapter 2, *Annual Report 2020*.
- Barro, R. J. (1990). "Government spending in a simple model of endogenous growth", *Journal of Political Economy*, Vol. 98, S103-S125.
- Barro, R. J. (2001). "Human Capital and Growth", *American Economic Review*, Vol. 91, pp. 12-17.
- Baxter, M., and R. G. King (1993). "Fiscal policy in general equilibrium", *American Economic Review*, Vol. 83, pp. 315-334.
- Blanchet, T., L. Chancel and A. Gethin (2022). "Why Is Europe More Equal than the United States?", *American Economic Journal: Applied Economics*, forthcoming.
- Burriel, P., F. Martí and J. J. Pérez (2017). "The impact of unconventional monetary policy on euro area public finances", Analytical Articles, *Economic Bulletin 3/2017*, Banco de España.
- Cepparulo A., and G. Mourre (2020). *How & How Much? The Growth-Friendliness of Public Spending Through the Lens*, Discussion Paper No 132, European Commission.
- Comín, F. (1988). "Evolución histórica del gasto público", *Papeles de Economía Española*, Vol. 37, pp. 78-99.
- Consejo Escolar del Estado (2021). *Informe 2021 sobre el estado del sistema educativo, curso 2019-2020*, Ministerio de Educación y Formación Profesional.
- Darvas, Z., and G. Wolff (2022). "How to reconcile increased green public investment needs with fiscal consolidation", VoxEU.org, 7 March 2022.
- de la Fuente, A., M. A. García Díaz and A. R. Sánchez Martín (2020). *Algunas reflexiones sobre el informe del Pacto de Toledo y los planes del Gobierno en materia de pensiones*, FEDEA Policy Papers 2020/23.
- Deleidi, M. (2022). "Quantifying multipliers in Italy: does fiscal policy composition matter?", *Oxford Economic Papers*, Vol. 74, pp. 359-381.
- Delgado-Téllez, M., E. Gordo, I. Kataryniuk and J. J. Pérez (2022). "The decline in public investment: "social dominance" or too-rigid fiscal rules?", *Applied Economics*, Vol. 54, pp. 1123-1136.
- Durevall, D., and M. Henrekson (2011). "The futile quest for a grand explanation of long-run government expenditure", *Journal of Public Economics*, Vol. 95, pp. 708-722.
- ECB (2009). "The functional composition of government spending in the European Union", *Monthly Bulletin*, April.
- European Commission (2021). *The 2021 Ageing Report. Economic & Budgetary Projections for the EU Member States (2019-2070)*, Institutional Paper 148.
- Eyraud, L., V. Gaspar and M. T. Poghosyan (2017). *Fiscal politics in the euro area*, Working Paper No 2017/018, International Monetary Fund.
- Fatás, A., and I. Mihov (2013). "Policy volatility, institutions, and economic growth", *Review of Economics and Statistics*, Vol. 95, pp. 362-376.



- Fernández-Villaverde, J., P. Guerrón-Quintana, K. Kuester and J. Rubio-Ramírez (2015). "Fiscal volatility shocks and economic activity", *American Economic Review*, Vol. 105, pp. 3352-3384.
- Forman, K., S. Dougherty and H. Blöchliger (2020). *Synthesising good practices in fiscal federalism: Key recommendations from 15 years of country surveys*, OECD Economic Policy Paper No 28, April.
- Gruber, J., and S. Johnson (2019). *Jump-starting America: How breakthrough science can revive economic growth and the American dream*, Hachette UK.
- Hauptmeier, S., A. J. Sánchez Fuentes and L. Schuknecht (2015). "Spending dynamics in euro area countries: composition and determinants", *Hacienda Pública Española / Review of Public Economics*, Vol. 215, pp. 119-138.
- Hernández de Cos, P. (2021a). "A complete institutional architecture for a stronger policy mix", *A stronger policy mix for the euro area?*, European Commission webinar.
- Hernández de Cos, P. (2021b). "*The Spanish pension system: an update in the wake of the pandemic: Banco de España contribution to the Committee on the Monitoring and Assessment of the Toledo Pact Agreements, 2 September 2020*", Occasional Paper No 2106, Banco de España.
- Hernández de Cos, P., J. F. Jimeno and R. Ramos (2017). "*The Spanish public pension system : current situation, challenges and reform alternatives*", Occasional Paper No 1701, Banco de España.
- Hernández de Cos, P., E. Moral-Benito and J. J. Pérez (2016). "El empleo y los salarios públicos durante la crisis: análisis desde una perspectiva internacional y regional", *Papeles de Economía Española*, Vol. 147, pp. 68-89.
- International Monetary Fund (2021). "Research and Innovation: Fighting the Pandemic and Boosting Long-Term Growth", Chapter 3, *World Economic Outlook*, October.
- Intervención General de la Administración del Estado (2021). *Informe sobre la Clasificación de las funciones de las Administraciones Públicas (COFOG)*, Ministerio de Hacienda.
- Islam, R. (2022). "Meeting the climate agenda's infrastructure investment needs when public finances constrain: Getting more for less", *World Bank Blogs*, 26 January.
- Ivars, M. M., and F. Pérez García (2021). *El stock de capital en España y sus comunidades autónomas. Revisión metodológica y evolución reciente de la inversión y el capital 1995-2020*, Documentos de Trabajo 1/2021, Fundación BBVA.
- Lago, S., and J. Martínez-Vázquez (coords.) (2016). "Gasto público en España: presente y futuro", *Papeles de Economía Española*, Vol. 147.
- Lane, P. R. (2003). "The cyclical behaviour of fiscal policy: evidence from the OECD", *Journal of Public economics*, Vol. 87(12), pp. 2661-2675.
- Larch, M., and A. Turrini (2010). "The cyclically adjusted budget balance in EU fiscal policymaking", *Intereconomics*, Vol. 45(1), pp. 48-60.
- 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.
- Mansfield, E. (1980). "Basic research and productivity increase in manufacturing", *American Economic Review*, Vol. 70(5), pp. 863-873.
- Martínez-Matute, M., and J. J. Pérez (2017). "*General government employment over the past decade*", Economic Notes, *Economic Bulletin* 4/2017, Banco de España.
- Martínez-Vázquez, J., and S. Lago Peñas (dirs.) (2020). *Desafíos pendientes de la descentralización en España: Suficiencia y autonomía tributaria*, Instituto de Estudios Fiscales, Madrid.
- Musgrave, R. A. (1969). *Fiscal systems*, Studies in Comparative Economies No 10, Yale University Press, p. 397.
- Nelson, R. R. (1959). "The simple economics of basic scientific research", *Journal of Political Economy*, Vol. 67, pp. 297-306.
- Oates, W. E. (1999). "An essay on fiscal federalism", *Journal of Economic Literature*, Vol. 37, pp. 1120-1149.
- OECD (2019). *The OECD SOCX Manual 2019 Edition. A guide to the OECD Social Expenditure Database*, OECD Publishing, Paris.
- OECD (2021). *Government at a Glance 2021*, OECD Publishing, Paris.
- Peacock, A. T., and J. Wiseman (1961). *The growth of public expenditure in the United Kingdom*, Princeton University Press, 1961.
- Pérez, J. J., M. Aouriri, M. Campos, D. Celov, D. Depalo, E. Papapetrou, J. Pesliakaitè, R. Ramos and M. Rodríguez (2016). *The fiscal and macroeconomic effects of government wages and employment reform*, Occasional Paper Series No 176, ECB.
- Pérez, J. J., and I. Solera (2017). "*Developments in public investment during the crisis and the recovery*", Economic Notes, *Economic Bulletin* 4/2017, Banco de España.
- Ram, R. (1986). "*Government size and economic growth: A new framework and some evidence from cross-section and time-series data*", *American Economic Review*, Vol. 76.1, pp. 191-203.
- Ramey, V. A. (2021). "The macroeconomic consequences of infrastructure investment", E. L. Glaeser and J. M. Poterba (eds.), *Economic Analysis and Infrastructure Investment*, University of Chicago Press, pp. 219-276.

- Rodrik, D., and S. Stantcheva (2021). "Fixing capitalism's good jobs problem", *Oxford Review of Economic Policy*, Vol. 37, pp. 824-837.
- Schuknecht, L. (2020). *Public Spending and the Role of the State*, Cambridge University Press.
- Wagner, A. (1890). *Finanzwissenschaft*, CF Winter, Leipzig.

## Annex 1 Definitions

This annex lists the different categories that make up public spending. Under the economic classification criterion (included in the System of National Accounts), public spending is broken down as follows:

- **Compensation of employees:** total remuneration, in cash or in kind, payable by an employer to an employee in return for work done by the latter during an accounting period.
  
- **Public investment and capital transfers:** is divided into three categories:
  - Capital transfers.
  
  - Gross fixed capital formation: gross fixed capital formation, changes in inventories and acquisitions less disposals of valuables.
  
  - Non-produced assets: assets that have not been produced within the production boundary and which may be used in the production of goods and services.
  
- **Social benefits:** goods and services provided by social security.
  
- **Interest:** property income. It is classified as follows: interest, distributed income of corporations, reinvested earnings on foreign direct investment and other investment income.
  
- **Subsidies:** current unrequited payments which general government or the institutions of the European Union make to resident producers.
  
- **Other final consumption expenditure:** it comprises four categories:
  - Intermediate consumption: goods and services consumed as inputs by a process of production, excluding fixed assets.
  
  - Taxes on income: taxes on incomes, profits and capital gains.
  
  - Other taxes on production: all taxes payable by firms as a result of production.
  
  - Adjustment for the change in pension entitlements: adjustment needed to make appear in the saving of households the change in the pension entitlements.

Furthermore, under the functional classification criterion (used in Section 4 of the main text), public spending can be broken down into:

- **General public services:** executive and legislative bodies, financial and fiscal affairs, foreign affairs; foreign economic aid; general services; basic research; R&D; general public services n.e.c.; public debt transactions, transfers of a general character between different tiers of government.
- **Defence:** military defence; civil defence; foreign military aid, R&D related to defence; defence n.e.c.
- **Public order and safety:** police services; fire-protection services; law courts; prisons; R&D; public order and safety n.e.c.
- **Economic affairs:** general economic, commercial and labour affairs; agriculture, forestry, fishing and hunting; fuel and energy; mining, manufacturing and construction; transport; communication; other industries, R&D; economic affairs n.e.c.
- **Environmental protection:** waste management; wastewater management; pollution abatement; protection of biodiversity and landscape; R&D related to environmental protection.
- **Housing and community amenities:** housing development; community development; water supply; street lighting; R&D; housing and community amenities n.e.c.
- **Health:** medical and pharmaceutical products, appliances and equipment; public health, outpatient and hospital services; R&D related to health; health n.e.c.
- **Recreation, culture and religion:** recreational, sporting and cultural services; broadcasting and publishing services; religious and other community services, R&D related to recreation, culture and religion; recreation; culture and religion n.e.c.
- **Education:** pre-primary, primary, secondary and tertiary education, post-secondary non-tertiary education, education non definable by level, subsidiary services to education, R&D; n.e.c.
- **Social protection:** sickness and disability; old age; survivors; family and children; unemployment; housing; R&D; social protection and social exclusion n.e.c.

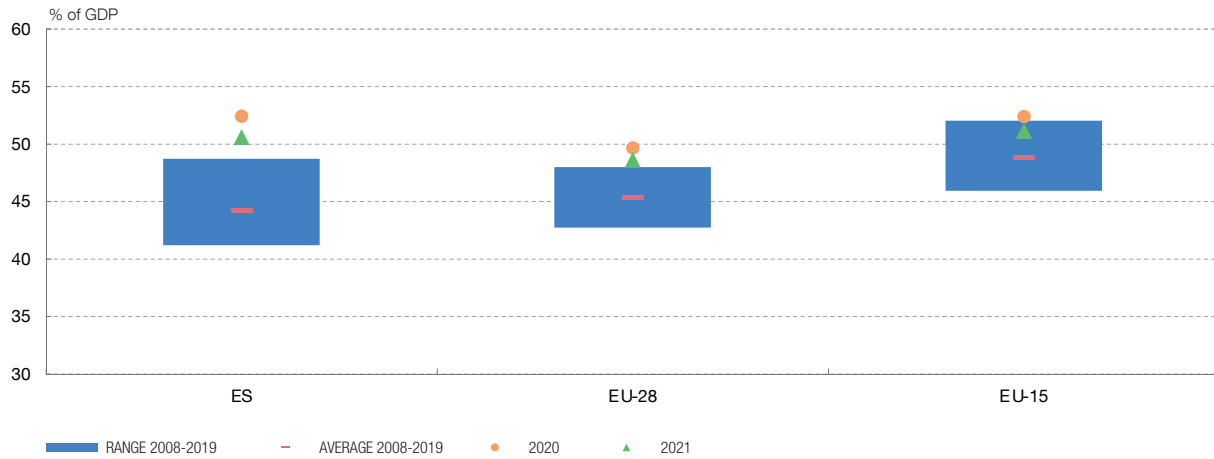
**This paper focuses on the five main categories (general public services, economic affairs, health, education and social protection), which account for around 90% of total public expenditure.**

## Annex 2 Additional charts

Chart A2.1

### RECENT DEVELOPMENTS IN PUBLIC SPENDING

1 PUBLIC SPENDING AS A PERCENTAGE OF GDP

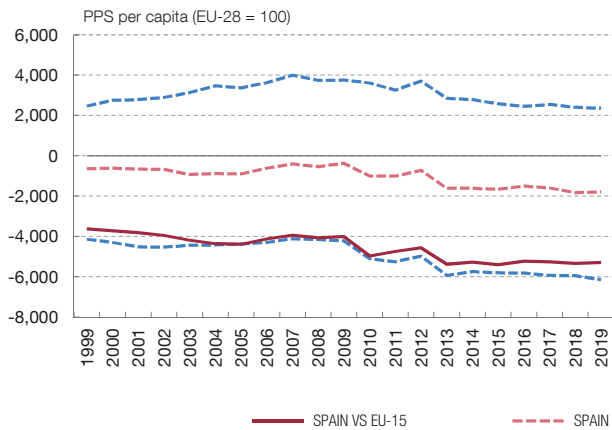


SOURCES: AMECO and Eurostat.

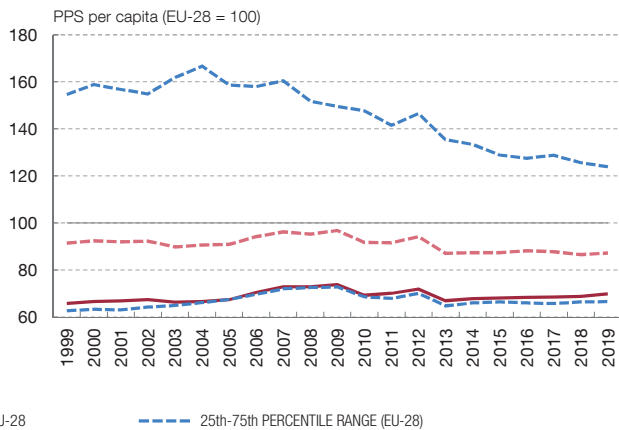
Chart A2.2

### PUBLIC SPENDING COMPARISON BETWEEN SPAIN AND THE EU

1 PUBLIC SPENDING GAP BETWEEN SPAIN AND THE EU



2 PUBLIC SPENDING RATIO COMPARISON. SPAIN VS EU

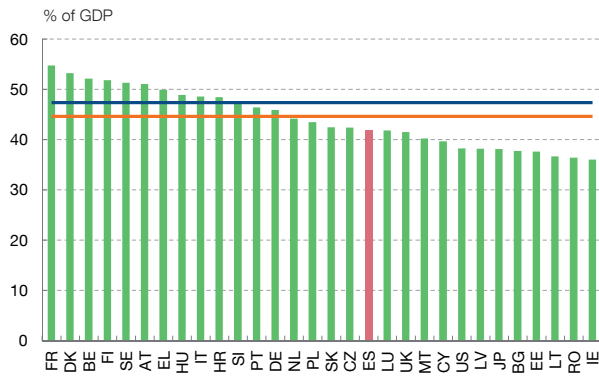


SOURCE: Eurostat.

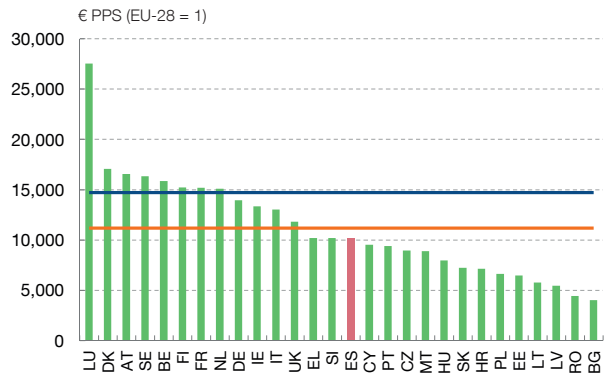
Chart A2.3

**PUBLIC SPENDING IN THE EU IN 2019**

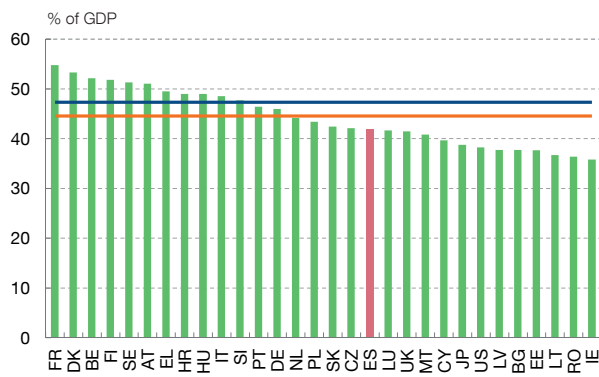
1 PUBLIC SPENDING AS A PERCENTAGE OF GDP (AVERAGE 1999-2019)



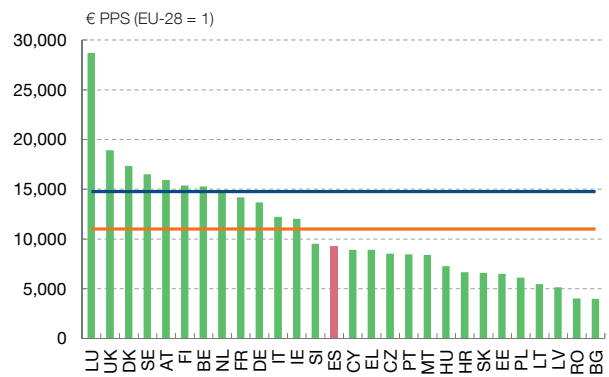
2 REAL PUBLIC SPENDING PER CAPITA IN PPS (AVERAGE 1999-2019)



3 PUBLIC REVENUE AS A PERCENTAGE OF GDP (AVERAGE 1999-2019)



4 REAL PUBLIC REVENUE PER CAPITA IN PPS (AVERAGE 1999-2019)



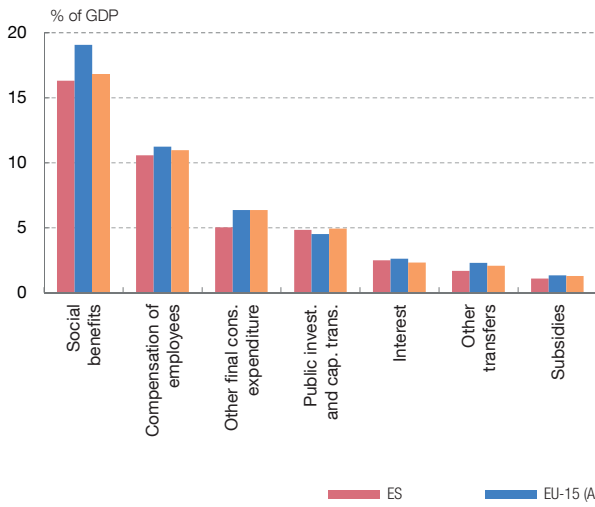
— EU-15 (ARITHMETIC MEAN) — EU-28 (ARITHMETIC MEAN)

SOURCE: Eurostat.

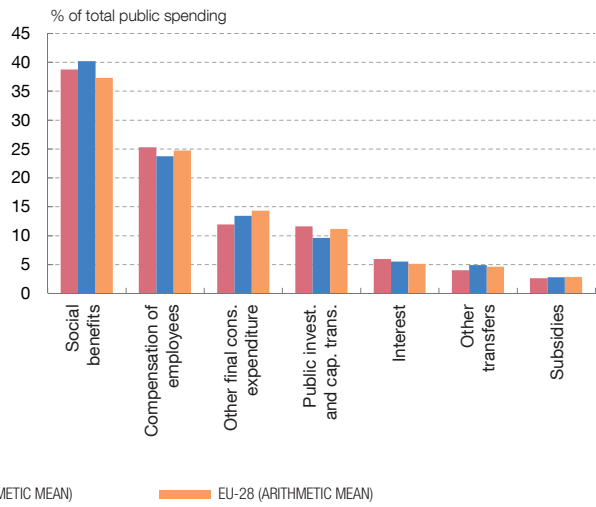
Chart A2.4

**PUBLIC SPENDING BY ECONOMIC CATEGORY. AVERAGE 1999-2019**

1 SPENDING BY ECONOMIC CATEGORY AS A PERCENTAGE OF GDP



2 SPENDING BY ECONOMIC CATEGORY AS A PERCENTAGE OF TOTAL PUBLIC SPENDING

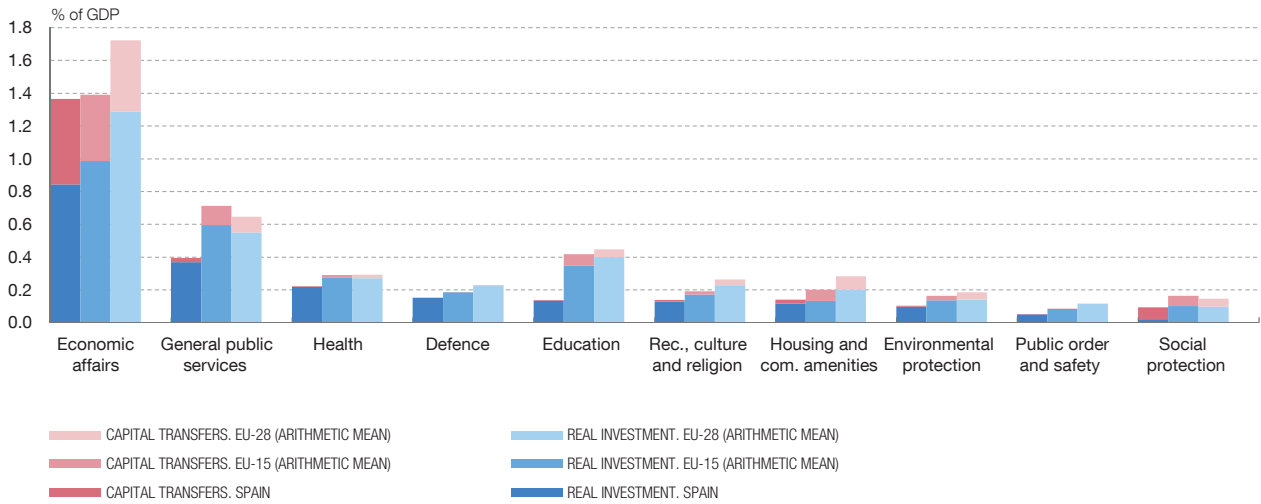


SOURCE: Eurostat.

Chart A2.5

**PUBLIC INVESTMENT BY FUNCTIONS IN 2019**

PUBLIC INVESTMENT INFRASTRUCTURE BY COFOG FUNCTION

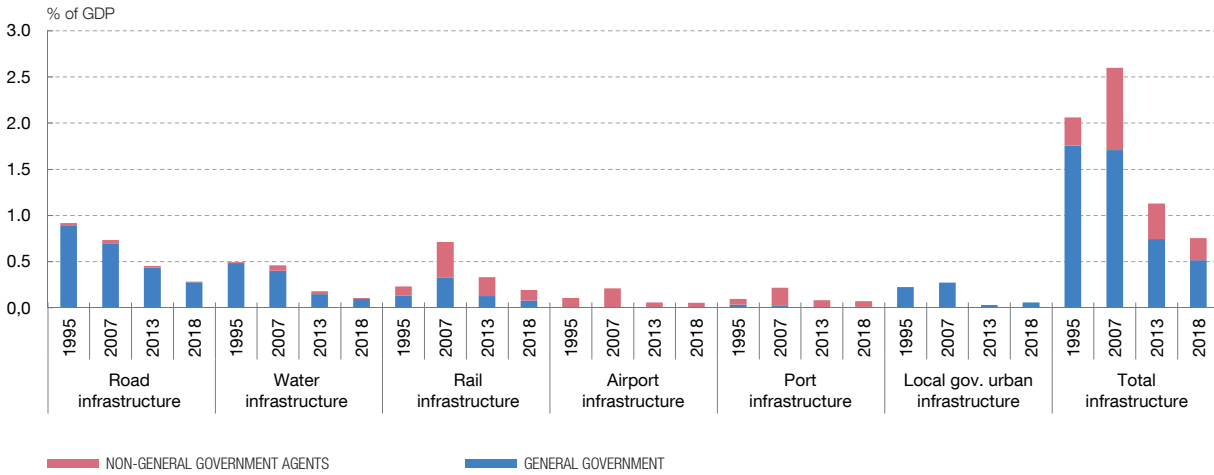


SOURCE: Eurostat.

Chart A2.6

**INVESTMENT IN PUBLIC INFRASTRUCTURE**

GROSS INVESTMENT IN INFRASTRUCTURE BY GENERAL GOVERNMENT AND NON-GENERAL GOVERNMENT AGENTS

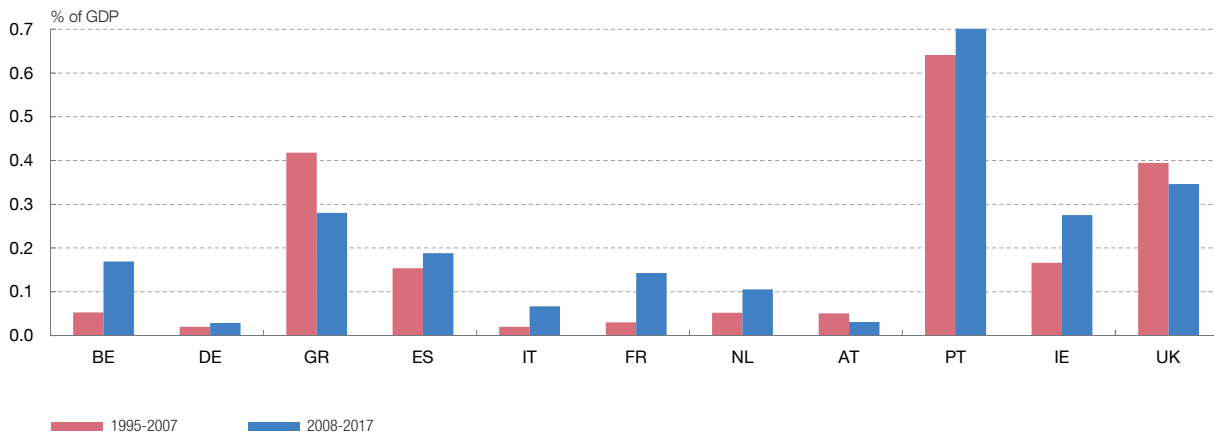


SOURCE: Instituto Valenciano de Investigaciones Económicas.

Chart A2.7

**INVESTMENT IN PUBLIC-PRIVATE PARTNERSHIPS**

INVESTMENT IN PUBLIC-PRIVATE PARTNERSHIPS (a)



SOURCE: IMF.

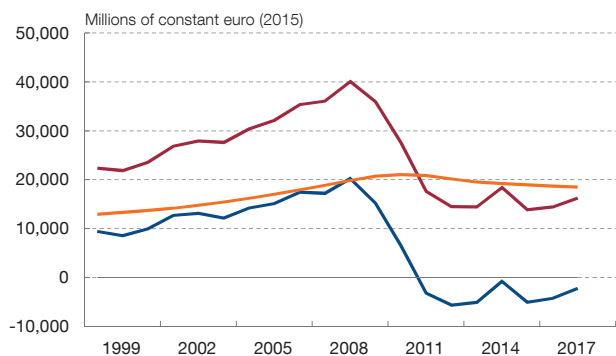
a Data not available for Greece in 1995 and 2004-2005, for Italy in 1995, for Austria and Ireland from 2002 and for Portugal after 2014.



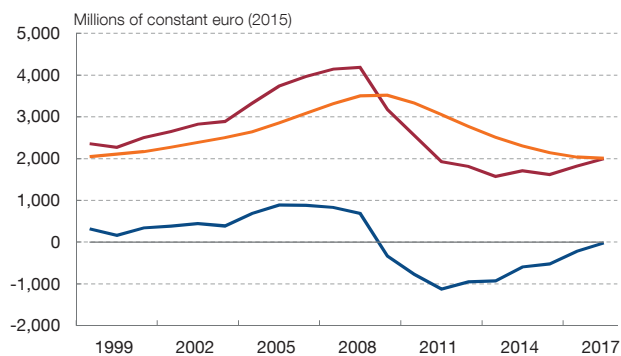
Chart A2.8

**PUBLIC INVESTMENT BY SECTOR**

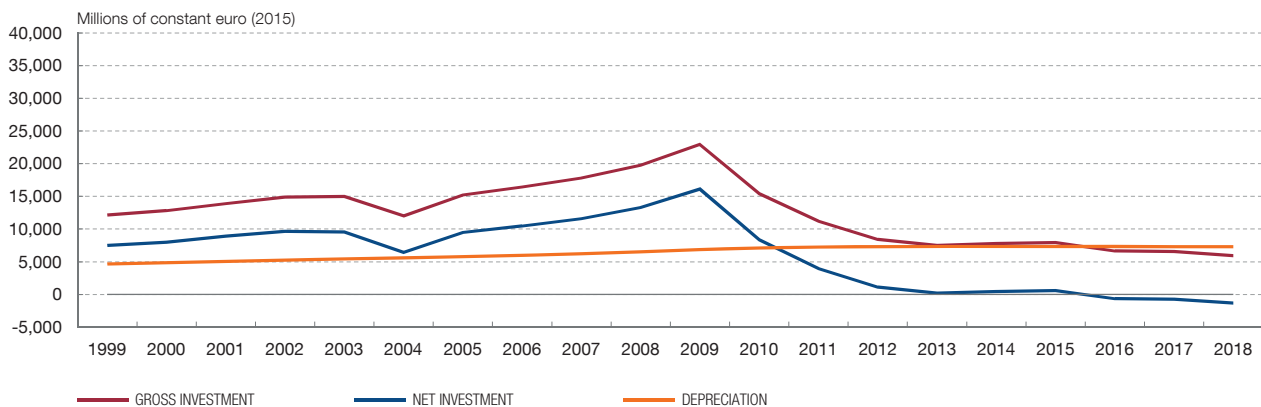
1 GROSS PUBLIC INVESTMENT IN TANGIBLE ASSETS



2 GROSS PUBLIC INVESTMENT IN INTANGIBLE ASSETS



3 GROSS PUBLIC INVESTMENT IN PUBLIC INFRASTRUCTURE

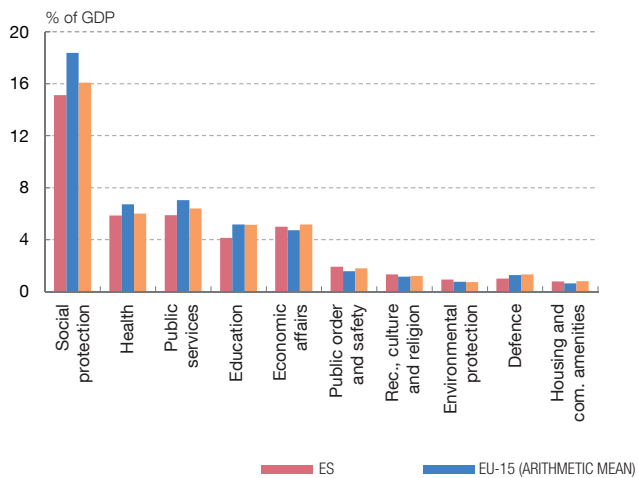


SOURCE: Instituto Valenciano de Investigaciones Económicas.

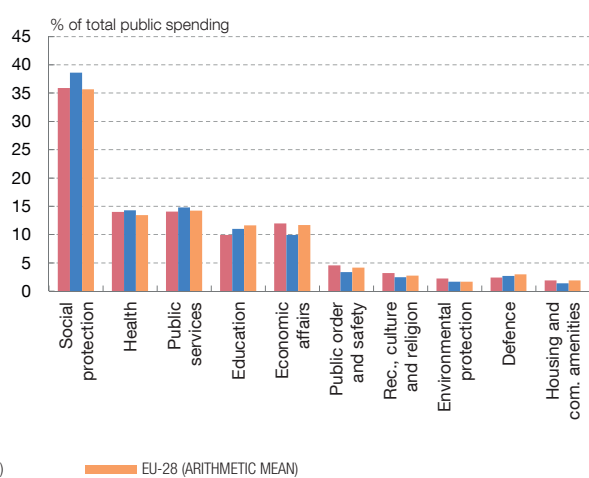
Chart A2.9

**PUBLIC SPENDING BY FUNCTION. AVERAGE 1999-2019**

1 FUNCTIONAL SPENDING AS A PERCENTAGE OF GDP



2 FUNCTIONAL SPENDING AS A PERCENTAGE OF TOTAL SPENDING



SOURCE: Eurostat.

## BANCO DE ESPAÑA PUBLICATIONS

### OCCASIONAL PAPERS

- 2110 DMITRY KHAMETSHIN: High-yield bond markets during the COVID-19 crisis: the role of monetary policy.
- 2111 IRMA ALONSO and LUIS MOLINA: A GPS navigator to monitor risks in emerging economies: the vulnerability dashboard.
- 2112 JOSÉ MANUEL CARBÓ and ESTHER DIEZ GARCÍA: El interés por la innovación financiera en España. Un análisis con Google Trends.
- 2113 CRISTINA BARCELÓ, MARIO IZQUIERDO, AITOR LACUESTA, SERGIO PUENTE, ANA REGIL and ERNESTO VILLANUEVA: Los efectos del salario mínimo interprofesional en el empleo: nueva evidencia para España.
- 2114 ERIK ANDRES-ESCAIOLA, JUAN CARLOS BERGANZA, RODOLFO CAMPOS and LUIS MOLINA: A BVAR toolkit to assess macrofinancial risks in Brazil and Mexico.
- 2115 ÁNGEL LUIS GÓMEZ and ANA DEL RÍO: The uneven impact of the health crisis on the euro area economies in 2020. (There is a Spanish version of this edition with the same number).
- 2116 FRUCTUOSO BORRALLO EGEA and PEDRO DEL RÍO LÓPEZ: Monetary policy strategy and inflation in Japan. (There is a Spanish version of this edition with the same number).
- 2117 MARÍA J. NIETO and DALVINDER SINGH: Incentive compatible relationship between the ERM II and close cooperation in the Banking Union: the cases of Bulgaria and Croatia.
- 2118 DANIEL ALONSO, ALEJANDRO BUESA, CARLOS MORENO, SUSANA PÁRRAGA and FRANCESCA VIANI: Fiscal policy measures adopted since the second wave of the health crisis: the euro area, the United States and the United Kingdom. (There is a Spanish version of this edition with the same number).
- 2119 ROBERTO BLANCO, SERGIO MAYORDOMO, ÁLVARO MENÉNDEZ and MARISTELA MULINO: Impact of the COVID-19 crisis on Spanish firms' financial vulnerability. (There is a Spanish version of this edition with the same number).
- 2120 MATÍAS PACCE, ISABEL SÁNCHEZ and MARTA SUÁREZ-VARELA: Recent developments in Spanish retail electricity prices: the role played by the cost of CO<sub>2</sub> emission allowances and higher gas prices. (There is a Spanish version of this edition with the same number).
- 2121 MARIO ALLOZA, JAVIER ANDRÉS, PABLO BURRIEL, IVÁN KATARYNIUK, JAVIER J. PÉREZ and JUAN LUIS VEGA: The reform of the European Union's fiscal governance framework in a new macroeconomic environment. (There is a Spanish version of this edition with the same number).
- 2122 MARIO ALLOZA, VÍCTOR GONZÁLEZ-DÍEZ, ENRIQUE MORAL-BENITO and PATROCINIO TELLO-CASAS: Access to services in rural Spain. (There is a Spanish version of this edition with the same number).
- 2123 CARLOS GONZÁLEZ PEDRAZ and ADRIAN VAN RIXTEL: The role of derivatives in market strains during the COVID-19 crisis. (There is a Spanish version of this edition with the same number).
- 2124 IVÁN KATARYNIUK, JAVIER PÉREZ and FRANCESCA VIANI: (De-)Globalisation of trade and regionalisation: a survey of the facts and arguments.
- 2125 BANCO DE ESPAÑA STRATEGIC PLAN 2024: RISK IDENTIFICATION FOR THE FINANCIAL AND MACROECONOMIC STABILITY: How do central banks identify risks? A survey of indicators.
- 2126 CLARA I. GONZÁLEZ and SOLEDAD NÚÑEZ: Markets, financial institutions and central banks in the face of climate change: challenges and opportunities.
- 2127 ISABEL GARRIDO: The International Monetary Fund's view of social equity throughout its 75 years of existence. (There is a Spanish version of this edition with the same number).
- 2128 JORGE ESCOLAR and JOSÉ RAMÓN YRIBARREN: European Central Bank and Banco de España measures against the effects of COVID-19 on the monetary policy collateral framework, and their impact on Spanish counterparties. (There is a Spanish version of this edition with the same number).
- 2129 BRINDUSA ANGHEL, AITOR LACUESTA and FEDERICO TAGLIATI: 2021 Survey of Small Enterprises' Financial Literacy: Main Results. (There is a Spanish version of this edition with the same number).
- 2130 PABLO HERNÁNDEZ DE COS: Testimony before the Congress of Deputies Budget Committee on 25 October 2021 and before the Senate Budget Committee on 30 November 2021 in relation to the Draft State Budget for 2022. (There is a Spanish version of this edition with the same number).
- 2131 LAURA AURIA, MARKUS BINGMER, CARLOS MATEO CAICEDO GRACIANO, CLÉMENCE CHARAVEL, SERGIO GAVILÁ, ALESSANDRA IANNAMORELLI, AVIRAM LEVY, ALFREDO MALDONADO, FLORIAN RESCH, ANNA MARIA ROSSI and STEPHAN SAUER: Overview of central banks' in-house credit assessment systems in the euro area.
- 2132 JORGE E. GALÁN: CREWS: a CAMELS-based early warning system of systemic risk in the banking sector.

- 2133 ALEJANDRO FERNÁNDEZ CERREZO and JOSÉ MANUEL MONTERO: A sectoral analysis of the future challenges facing the Spanish economy. (There is a Spanish version of this edition with the same number).
- 2201 MANUEL A. PÉREZ ÁLVAREZ: New allocation of special drawing rights. (There is a Spanish version of this edition with the same number).
- 2202 PILUCA ALVARGONZÁLEZ, MARINA GÓMEZ, CARMEN MARTÍNEZ-CARRASCAL, MYROSLAV PIDKUYKO and ERNESTO VILLANUEVA: Analysis of labor flows and consumption in Spain during COVID-19.
- 2203 MATÍAS LAMAS and SARA ROMANIEGA: Designing a price index for the Spanish commercial real estate market. (There is a Spanish version of this edition with the same number).
- 2204 ÁNGEL IVÁN MORENO BERNAL and TERESA CAMINERO GARCÍA: Analysis of ESG disclosures in Pillar 3 reports. A text mining approach.
- 2205 OLYMPIA BOVER, LAURA CRESPO and SANDRA GARCÍA-URIBE: Household indebtedness according to the Spanish Survey of Household Finances and the Central Credit Register: a comparative analysis. (There is a Spanish version of this edition with the same number).
- 2206 EDUARDO GUTIÉRREZ, ENRIQUE MORAL-BENITO and ROBERTO RAMOS: Population dynamics during the COVID-19 pandemic. (There is a Spanish version of this edition with the same number).
- 2207 JULIO GÁLVEZ: Measuring the equity risk premium with dividend discount models.
- 2208 PILAR CUADRADO, MARIO IZQUIERDO, JOSÉ MANUEL MONTERO, ENRIQUE MORAL-BENITO and JAVIER QUINTANA: El crecimiento potencial de la economía española tras la pandemia. (There is a Spanish version of this edition with the same number).
- 2209 PANA ALVES, SERGIO MAYORDOMO and MANUEL RUIZ-GARCÍA: Corporate financing in fixed-income markets: the contribution of monetary policy to lowering the size barrier. (There is a Spanish version of this edition with the same number).
- 2210 PABLO BURRIEL, IVÁN KATARYNIUK and JAVIER J. PÉREZ: Computing the EU's SURE interest savings using an extended debt sustainability assessment tool.
- 2211 LAURA ÁLVAREZ, ALBERTO FUERTES, LUIS MOLINA and EMILIO MUÑOZ DE LA PEÑA: Fund raising in the international capital markets in 2021. (There is a Spanish version of this edition with the same number).
- 2212 CARLOS SANZ: El peso del sector público en la economía: resumen de la literatura y aplicación al caso español.
- 2213 LEONOR DORMIDO, ISABEL GARRIDO, PILAR L'HOTELLERIE-FALLOIS and JAVIER SANTILLÁN: El cambio climático y la sostenibilidad del crecimiento: iniciativas internacionales y políticas europeas.
- 2214 CARMEN SÁNCHEZ and JARA QUINTANERO: Las empresas *fintech*: panorama, retos e iniciativas.
- 2215 MARÍA ALONSO, EDUARDO GUTIÉRREZ, ENRIQUE MORAL-BENITO, DIANA POSADA, PATROCINIO TELLO-CASAS and CARLOS TRUCHARTE: In-person access to banking services in Spain: a comparison with other countries and other types of services. (There is a Spanish version of this edition with the same number).
- 2216 BEATRIZ GONZÁLEZ, ENRIQUE MORAL-BENITO and ISABEL SOLER: Schumpeter Meets Goldilocks: the Scarring Effects of Firm Destruction.
- 2217 MARIO ALLOZA, JÚLIA BRUNET, VÍCTOR FORTE-CAMPOS, ENRIQUE MORAL-BENITO and JAVIER J. PÉREZ: Government spending in Spain from a European perspective.