

---

**13.06.2023**

**Productivity, sustainable growth and prosperity**

45<sup>th</sup> anniversary of *Cinco Días*

Madrid

Pablo Hernández de Cos

Governor

\* English translation from the original in Spanish

---

Ladies and gentlemen,

I would like to begin by thanking Amanda Mars, the Managing Editor of *Cinco Días*, for inviting me to take part in this event to mark the newspaper's 45<sup>th</sup> anniversary. Since 1978, a year that also saw the approval of the Spanish constitution, this newspaper has daily reported on and appraised the most important issues for our economy.

It has thus been able to testify to the changes that have swept through the country, which have yielded very marked improvements in its citizens' well-being. Over the past 45 years Spain has witnessed cumulative growth in gross domestic product (GDP) and in consumption, both expressed per capita and in real terms, of 83% and 60%, respectively.

This should not come as a surprise. The economic literature highlights the positive impact democratic institutions can have on economic growth, thanks, among other factors, to improvements in the business climate, private investment and the opening up of trade, as well as to greater fiscal capacity and spending on essential public goods, such as education and health. In the case of Spain, these changes have been further enhanced by the European integration process.

For instance, the economy's degree of external openness, measured in terms of the weight of exports and imports in GDP, has increased by almost 50 percentage points (pp). The stock of private productive capital (relative to employment) has increased by 40%, and much the same can be said of the stock of residential capital (relative to the population). The stock of public capital, essentially comprising transport, health, educational and other infrastructure, has almost tripled in real per capita terms over this period. Government spending on education and health has risen twofold. The percentage of the adult population with intermediate and higher studies has increased by 28 pp and 20 pp, respectively. Moreover, since 1978, the Spanish population has grown by over 10 million, and the number of people in work has risen by more than 8 million, including over 6 million women. This has raised the female participation rate from a mere 28% to 54%.

Overall, economic success in the democratic era can probably be put down to a combination of our economic integration into Europe, the consolidation of stability-oriented economic policies, the development of our welfare state and the modernisation of our tax system.

Against this backdrop, I would like to focus my address on the outstanding structural challenges and the economic policies best equipped to address them, as further explored in the Banco de España's latest Annual Report, published in May.

These challenges can be illustrated, first of all, by acknowledging the Spanish economy's failure in recent decades to converge consistently towards the per capita income levels of the euro area. Spain's per capita income today stands 17% below that of the euro area, a gap that is 4 pp narrower than was the case in 1978, but 8 pp wider than in 2005.

Behind this persistent negative gap lie two well-known shortcomings in the Spanish economy: low productivity and a low rate of employment, which have moreover historically been negatively correlated.

Today, if I may, I will focus on the first of these factors, since productivity is the only fail-safe means of improving living standards.<sup>1</sup> What's more, our low productivity issues are very closely related to some of the weaknesses of our labour market, which, in turn, condition our ability to converge in terms of the employment rate.

Second, it is well worth stressing that the convergence of the Spanish economy should be sustainable over time. With this in mind, it must be acknowledged that some of our economic problems these past few decades have stemmed from a failure to understand the obligations and restrictions that come with forming part of the European integration process and, in particular, of the euro area. This led, for instance, to the build-up of serious financial imbalances after joining the euro, which meant that our economy was particularly hard hit during the global financial crisis.

Since the outbreak of that crisis, the Spanish economy has displayed a healthier pattern of growth that has, in fact, partly corrected the imbalances built up over the previous upswing. In particular, there has been extensive deleveraging by Spanish households and firms; an increase in the solvency and liquidity of the balance sheets of credit institutions; an improvement in competitiveness (which has enabled a current-account surplus to be maintained since 2012, even after the outbreak of the pandemic and the energy crisis); and a reduction in the share of construction investment in activity to levels similar to those seen in the euro area as a whole.

However, certain structural vulnerabilities remain, which shape the outlook and sustainability of economic growth going forward. Notable among them is that arising from the high level of public debt (up by more than 80 pp of GDP since the start of the financial crisis), which is also accompanied by a considerable structural budget deficit.

In addition, the Banco de España, along with other institutions and analysts, has in recent years highlighted the vulnerabilities stemming from the increase in certain aspects of inequality in Spain, in particular in the area of opportunities.

With this backdrop in mind, **what lies behind this failure to converge and what role does productivity have to play in this process?**

First, it should be pointed out that the comparatively low productivity of Spain's firms is a widespread problem, unrelated to the sectoral specialisation of the economy or the size of such firms.

The sectoral structure of the Spanish economy, skewed more towards services such as wholesale and retail trade and the hospitality sector, only partially explains our country's poor level of productivity, as measured in terms of output per hour worked. This output stands 14% below that of the euro area. If Spain had the sectoral structure of the euro area, this negative gap would still be 10%.<sup>2</sup>

---

<sup>1</sup> Endogenous growth models show that knowledge is the only factor of production that generates positive externalities and economies of scale. Romer (1986), Lucas (1988) and Aghion and Howitt (1992).

<sup>2</sup> This figure is a 2020 update on the figures set out in Cuadrado, Moral-Benito and Solera (2020).

Nor can lower productivity be attributed simply to the smaller size of Spain's business sector. When the registry data on firms from Spain, Germany, France and Italy are grouped together by size, Spanish firms are between 10% and 20% less productive than their European peers, regardless of size.<sup>3</sup>

In reality, this lacklustre productivity is symptomatic of an array of interconnected shortcomings. Today I will focus on five factors behind these shortcomings. The first factor concerns **the very minor role played by innovation in our economy**. To give one example: between 2020 and 2021 the ratio of research and development and innovation (R&D&I) expenditure to GDP stood on average at 1.2% in Spain, 0.8 pp below the euro area average.<sup>4</sup>

The private sector's failings in this area are particularly striking. Spain has a lower percentage of innovative firms<sup>5</sup> and its industrial sector (traditionally the most innovative) makes less of a contribution to value added, while spending on R&D&I is lower across the different sectors of activity. But public investment is also slightly below the euro area average.

Public policies should help to spur corporate innovation. In Spain, the most significant incentives for innovation take the form of corporate income tax credits. Although the subsidy implicit in these incentives is, in theory, among the highest in the [Organisation for Economic Co-operation and Development \(OECD, 2021\)](#), they are actually deployed notably less in practice ([Independent Authority for Fiscal Responsibility \(AIReF\), 2020](#)). Thus, the various analyses performed agree on the need for reform.<sup>6</sup> In particular, evidence from around the globe shows that designing tax incentives that yield higher subsidies for start-ups leads to particularly effective policies.<sup>7</sup> It may also be worth giving thought to measures that would allow innovative firms that do not make enough taxable profits to claim direct reimbursement for investments.

As far as public support for R&D&I is concerned, as important as additional funding is, it must be properly directed towards projects that yield synergies with private initiatives. Part of this activity could, for instance, be channelled through venture capital firms, which have greater expertise in funding businesses at the start-up phase and innovative activities.

---

<sup>3</sup> According to Eurostat business statistics data, (SBS\_SC\_OVW) in 2021 Spanish firms' productivity (measured as sales over employment) in industry, construction and services, as compared with the average for French, German and Italian firms in the same size group, was 62% for firms with between zero and nine workers, 77% for those with between 10 and 19 workers, 75% for those with between 20 and 49 workers, 87% for those with between 50 and 249 workers, and 79% for those with more than 250 workers.

<sup>4</sup> A persistent negative gap can also be seen when looking at investment in intangibles ([Banco de España, 2018](#)). A similar diagnosis can be drawn from certain international innovation indicators, such as the European Commission's [European Innovation Scoreboard](#) (2022) or the [Global Innovation Index \(WIPO, 2022\)](#).

<sup>5</sup> [Community Innovation Survey, 2018](#)

<sup>6</sup> See the [White Paper on Tax Reform](#) (Committee of Experts, 2022) and Almunia and López-Rodríguez (2023), forthcoming.

<sup>7</sup> See, for example the assessments of the effectiveness of R&D tax incentives in: the United Kingdom, [Guceri and Liu](#) (2019) and [Dechezleprêtre, Einiö, Martin, Nguyen and Van Reenen](#) (in press); Canada, [Agrawal, Rosell and Simcoe](#) (2020); and the United States, [Rao](#) (2016).

The Law on Developing the Ecosystem of Emerging Businesses, better known as the Start-Ups Law, was enacted with the aim of spurring entrepreneurship and R&D&I activity, to this end setting in place a range of tax and employment incentives for R&D&I, while also streamlining the administrative formalities for setting up new innovative firms. Meanwhile, the new Science Law has set a target for government funding of R&D&I at 1.25% of GDP in 2030.

The second factor is the **low level of Spain's human capital**, particularly in terms of its population's technological expertise and digital skills, which has much to do with its limited capacity to innovate and absorb knowledge.<sup>8</sup>

Despite a notable improvement in recent decades, the educational attainment level of employers, the self-employed and employees in Spain is lower than the euro area average.<sup>9</sup> Moreover, the high early school leavers rate, while clearly tending downwards, continues to point to weaknesses in the education system.<sup>10</sup>

In addition to boosting the level of human capital, it is essential in the current technological and demographic environment to ensure that the education system and vocational training cater to the far-reaching structural changes under way. On this subject, allow me to make four observations:

**1** Encouraging the young to take more of an interest in vocational training would help cut the numbers leaving school early and ease the shortage of specialist technical workers. Recent years have seen growing interest in vocational training among students in compulsory and higher secondary education.<sup>11</sup> The new [Vocational Training Law](#) seeks precisely to ensure that the training on offer better caters to this increased demand and to ease the transition into the world of work, to this end focusing on practical training (over and above academic learning) and promoting lifelong learning.

**2** Spain is notable for having a low proportion of STEM (science, technology, engineering and maths) graduates,<sup>12</sup> probably due to the poor mathematical skills of our secondary

---

<sup>8</sup> Schivardi and Schmitz (2020).

<sup>9</sup> On Eurostat data, 35.2% of the self-employed, 32.9% of employers and 28.5% of employees had a low educational attainment level in Spain in 2022. These figures are well above those observed in the euro area (20.7%, 18.9% and 18.2%, respectively).

<sup>10</sup> The percentage of the population aged 18-24 that had not completed upper secondary education and were no longer in education or training stood at 13.9% in Spain in 2022 (up 0.6 pp on a year earlier), as compared with the euro area average of 9.7% (in 2021, the latest available year).

<sup>11</sup> In particular, the number of students aged 17 in intermediate vocational training (as a percentage of the total students who have chosen either vocational training or higher secondary education) has risen from 10% to over 15% in the last five years. Similarly, the number of those aged 19 in higher vocational training (as a percentage of the total of those either enrolled in these programmes or at university) increased from 20% to 25% over the same period.

<sup>12</sup> On Eurostat data for 2020, 24% of students in tertiary education in Spain are enrolled in a field related to the natural sciences, mathematics, statistics, information and communication technologies, engineering, manufacturing and construction, compared with 28% in the euro area. In the *Global Innovation Index* (WIPO, 2022), Spain is ranked 61 out of 109 countries by number of science and engineering graduates.

school students, according to the OECD's PISA database. Improving in this area calls for better trained, more professional teachers able to teach based on best practices.

**3** Longer working lives, which will be unavoidable given current demographic trends, increase the need for sufficiently skilled, versatile workers able to switch jobs and lines of work over their working lives, especially in a context in which certain professional skills are rapidly becoming obsolete and the cognitive skills of the older population are increasingly deteriorating.<sup>13</sup> Having workers take part in lifelong learning will require combating job instability, lowering the institutional barriers to business growth and helping to ensure that the training on offer at universities and vocational training centres caters to the changing demands of the job market.

**4** Education spending in Spain is slightly below that seen in the euro area (on average, 4.2% and 4.7% of GDP, respectively, between 2010 and 2021). Alongside expenditure, it is important to identify and resolve any inefficiencies in the use of the public funds earmarked for education. The AIREF is already doing this in various autonomous regions. Recent reforms in this area (laws governing education, vocational training and the university system) should also be assessed.

The third factor limiting productivity is the **regulatory environment, which affects activity and the efficient allocation of resources among firms**. The evidence points to a significant accumulation of capital in low-productivity firms between 1995 and 2007 in Spain.<sup>14</sup> This allocation has barely become any more efficient in the most recent period.<sup>15</sup>

To a certain extent, this situation has come about because firms' access to financing seemingly depends less on their productivity and more on the collateral available to them.<sup>16</sup>

In this respect, in spite of significant improvements in financing in recent years, Spanish firms – in comparison with firms in the euro area – continue to be heavily reliant on bank loans and have relatively limited access to venture capital. This funding structure, which is closely linked to the collateral available, restricts not only firms' growth possibilities and their capacity to respond to potential shocks, but also negatively affects their ability to carry out innovation projects, which, by their very nature, have a relatively high risk profile. Improvements in this area will also require initiatives at European level, such as completion of the capital markets union, for example.

Notable among other factors that distort the efficient allocation of resources are regulation and the public procurement system.<sup>17</sup>

---

<sup>13</sup> Anghel and Lacuesta (2020).

<sup>14</sup> If this misallocation of resources had been avoided, this period would have seen total factor productivity grow by 10% overall, instead of fall by 8%. Gopinath, Kalemli-Özcan, Karabarbounis and Villegas-Sanchez (2017) and García-Santana, Moral-Benito, Pijoan-Mas and Ramos (2020).

<sup>15</sup> Albrizio, González and Khametshin (2023).

<sup>16</sup> Gopinath, Kalemli-Özcan, Karabarbounis and Villegas-Sanchez (2017).

<sup>17</sup> García-Santana, Moral-Benito, Pijoan-Mas and Ramos (2020).

As regards the quantity and quality of regulation, an abundance of increasingly complex rules and regulations that vary from one region or municipality to the next can have a negative impact on both economic agents' decisions and the ability of governments to guarantee market unity, both domestically and at European level. This limits firms' ability to grow and expand geographically, while stifling their incentive to innovate and specialise. As an example, I need only mention that, in 2022 alone, central and regional governments approved almost 11,000 new pieces of legislation.<sup>18</sup> Some of these regulations may in fact directly influence the size of firms, given that firms are subject to stricter regulation above certain headcount thresholds.

Regulatory improvement should be implemented by strengthening two important mechanisms already existing in our legal system.

First, the [Law on Market Unity](#) establishes mechanisms to protect economic operators that allow them to file complaints.<sup>19</sup> After ten years in force, 575 decisions have been issued. These are concentrated in certain professional, educational and commercial activities and they have generally found in favour of the complainant. In a decentralised country such as Spain, which needs different government units to cooperate with one another, these decisions must be taken into consideration by the so-called "sector committees", which have the power to identify good practices and reach consensus that can be embodied in legislation through, for example, harmonisation laws.

Second, the [Public Policy Assessment Law](#), approved at the end of last year, is intended to incorporate ex ante and ex post assessments into central government legislative processes. This will require the creation of a new appropriately funded State Assessment Agency.

Third, with regard to access to public procurement, it is estimated that 12% of tenders in Spain in 2021 were not competitive (as against an EU average of 6%). The literature has highlighted various channels through which public tender awards may be conducive to business growth, investment, innovation and productivity when they are focused on small firms with high growth potential,<sup>20,21</sup> since they may serve as collateral and thus improve firms' access to bank finance.<sup>22</sup> In this respect, one of the aims of the [Law on Business Start-ups and Growth](#) is to increase the participation of small and medium-sized firms in public tenders.

---

<sup>18</sup> Bardhan (2020), Mora-Sanguinetti and Pérez-Valls (2020), Lucio and Mora-Sanguinetti (2021), Lucio and Mora-Sanguinetti (2022), Mora-Sanguinetti (2022) and Mora-Sanguinetti, Quintana, Soler and Spruk (2023).

<sup>19</sup> Article 26 of the Law on Market Unity provides a specific administrative appeal proceeding for defence of the rights and interests of economic operators by competent authorities. It also provides a procedure for agents to request the National Commission on Markets and Competition to file an appeal for judicial review before the National High Court by means of a streamlined process. Finally, Article 28 allows consumers to inform the Market Unity Secretariat about obstacles and barriers and request a report.

<sup>20</sup> Ferraz, Finan and Szerman (2021) and Hebous and Zimmermann (2021).

<sup>21</sup> Ilzetki (2023).

<sup>22</sup> García et al. (2022).

Against this background, the long-term macroeconomic impact of the Next Generation EU (NGEU) programme will largely depend on how tenders are allocated among different firms. Moreover, this will provide an opportunity to assess the extent to which Spain has improved the level of competition in this area.

The fourth factor relates to **labour market regulations**. The Spanish labour market has traditionally had a high incidence of temporary contracts (a cause of low labour productivity in themselves),<sup>23</sup> a wage determination process that takes little account of each firms' productivity and ineffective passive and active employment policies.

Since the pandemic, regulatory changes such as the 2021 labour market reform have been introduced which have reduced the temporary employment ratio. However, a full assessment of these changes will need to consider many different aspects and a broader time frame. Likewise, the Employment Law and the changes in unemployment benefits seek to ensure compatibility between protecting the most vulnerable and providing appropriate incentives for job seekers.

Looking ahead, public employment services need to play a more prominent role in job mediation (currently very minor) and their training and vocational integration activities need to be more effective. This requires appropriate professional profiling of the unemployed, rigorous assessment of training and vocational integration programmes and, on the basis of this assessment, sufficient funding for these programmes.

Squaring protection for the more vulnerable groups with appropriate incentives on the labour supply-side calls for greater coordination between active and passive policies. The capacity of migration policies to effectively smooth any mismatches arising in the Spanish labour market also needs to be continuously monitored.

The fifth factor I wish to refer to is **confidence in institutions and their management capacity**. Both these types of confidence are currently low in comparison with other European countries.<sup>24</sup>

The efficiency of public administration may have a key role to play in overturning this perception. For example, efficiency indices for the Spanish judicial system stand below those in comparable countries. In this respect, one of the priorities of the Spanish [Recovery, Transformation and Resilience Plan](#) (RTRP) is public administration modernisation. Specifically, the aim is to improve the efficiency of public administration through, among other measures, a digitalisation drive, strengthening the public policy assessment framework and reducing the proportion of public employment that is temporary. Incorporating incentives into personnel management may also improve the efficiency of public spending.

---

<sup>23</sup> García-Louzao, Hospido and Ruggieri (2022) find that the employment stability afforded by a permanent contract in Spain can lead to cumulative wage differences of up to 16% between a worker on this type of contract and another on a temporary contract, over 15 working years. Bertheau et al. (2022) show that job displacements in a collective dismissal lead to a significant reduction (of 16 pp) in Spanish workers' employability five years later. Part of this reduction can be attributed to the lower investment in active employment policies in Spain.

<sup>24</sup> According to Eurobarometer (2023), only 7% of Spaniards say they trust political parties (as against 27% in the EU) and only 47% local and regional public authorities (56% in the EU). Furthermore, trust in the three branches of the state is also low. In 2023, 24% of those surveyed trusted the Government (as against 32% in the EU), 16% Parliament (33% in the EU) and 46% the judiciary (54% in the EU).



## The correction of imbalances

According to the available estimates, the structural budget deficit stood at around 4% of GDP, above the estimate in 2019 (3% of GDP), and the public debt-to-GDP ratio stood in 2022 at 113.2%, almost 22 pp above the euro area average. This situation amounts to a significant source of vulnerability for the Spanish economy, especially in a context of monetary policy tightening, while also reducing the fiscal space available to address possible future negative shocks.

According to the simulation exercises performed by the Banco de España, in order for the public debt ratio to follow a downward path in the coming decades a fiscal consolidation plan will need to be implemented that progressively reduces the primary structural deficit until the total structural balance is equal to zero. Also, the reduction in public debt would be facilitated if the fiscal adjustment were accompanied by ambitious structural reforms, in line with those mentioned in the first part of my address.

Indeed, given the extent of the fiscal imbalances, the inflationary environment and the resilience displayed by the Spanish economy, this consolidation plan should be launched in 2023, so that some reduction in the structural deficit is achieved this year. Another reason for this recommendation is that inflation helped to reduce the fiscal imbalance in 2022, but its long-term impact on public finances will be less favourable or even negative. Also, there are some doubts over the extent to which the strong tax revenue growth of recent years will prove temporary.

Moreover, we should not waste the opportunity provided by the deployment of European NGEU funds and RTRP structural reforms, which may, in the short term, counterbalance or even outweigh the possible economic slowdown arising from this fiscal consolidation process.

This process must be grounded on prudent macroeconomic projections, involve all tiers of general government and translate into a medium-term plan detailing the government receipt and expenditure measures aimed at ensuring a gradual reduction in the imbalances. This would shore up the sustainability of public finances and bolster the credibility of, and confidence in, economic policies.

The fiscal consolidation should also go hand-in-hand with an improvement in the quality of public finances, boosting their contribution to the economy's potential growth. And it must take into account the impact of structural aspects such as population ageing, which will exert upward pressure on public spending on pensions and other expenditure items.

At the same time, addressing social imbalances is also essential as increasing inequality could undermine social cohesion and foment social conflict, with adverse repercussions for the security of investments, the incentive to work and opportunities for future generations.<sup>25</sup>

---

<sup>25</sup> Grossman (1991), Dijkstra, Poelman and Rodríguez-Pose (2020), Persson and Tabellini (1994), Alesina and Rodrik (1994) and Corak (2013).

In recent years, the Banco de España has actively contributed to identifying sources of inequality. One factor that crucially affects productivity is educational inequality. A recent study of ours suggests that differences in educational attainment level are relatively persistent, which may be understood as a system failure insofar as ensuring equality of opportunity is concerned.<sup>26</sup>

Thus, the average educational attainment level in 2001 among the residents of a specific locality born in 1974 predicts, with a correlation of more than 90%, the level achieved at the same age (27 years) by the residents of the same locality born 10 years later.<sup>27</sup> This persistence is also seen across generations, with the correlation between the educational attainment levels of parents and their offspring standing close to 35%, similar to that observed in other countries.<sup>28</sup>

Thus, an increase in the population's human capital is fundamental not only to increase productivity and convergence with the euro area, but also to ensure that opportunities are more equally distributed across the population.

Mitigating the adverse effects of the various social vulnerabilities identified requires public action across a very broad range of areas, such as regulation (inter alia, of the labour and housing markets), taxation, public services (e.g. education and health care) and income and transfer policies. In fact, raising productivity and the employment rate are key elements of any strategy aiming to achieve a sustainable reduction in inequality. And these actions must be rigorously evaluated in terms of both equity and efficiency.

## **Conclusion**

In short, ambitious, lasting economic policies will be needed if the challenges facing the Spanish economy in the years to come are to be addressed decisively. Within a few weeks, Spain will be holding general elections, which should be cause for a far-reaching debate on these challenges. A minimum consensus should ultimately emerge on the policies best suited to tackling them, thus ensuring that such policies are durable (a key factor if they are to be successful). Our ability to secure lasting improvements to the well-being of the general public and real convergence with our European partners will largely depend on this.

---

<sup>26</sup> Stuhler, Grébol and Machelet are the joint authors of the forthcoming paper *Educational Mobility in Spain*.

<sup>27</sup> Grébol, Machelett, Stuhler and Villanueva (2023).

<sup>28</sup> This statistical relationship has been called "The Great Gatsby Curve". Corak (2013).