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**Business conference: “Strategic sectors for the Spanish economy”**

El Economista  
Margarita Delgado  
Deputy Governor

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Good morning everyone.

We are present here today, at this event organised by elEconomista, to discuss an important topical issue: Spain's economic future from a sectoral standpoint.

Before I start, I should like to thank elEconomista, in particular its editor, Amador G. Ayora, and chair, Gregorio Peña, for inviting me to participate in this event. The topic of discussion could hardly be better chosen.

Perhaps the first order of business, to guide the debate, should be to establish what we at the Banco de España understand by strategic sector.

Regrettably, there is no single approach to this highly complex and controversial matter. I think it worthwhile, then, to begin this address by demarcating what we might understand by strategic sector.

The criteria for deciding a sector's degree of importance may be manifold and interconnected. These criteria may relate to economics, geopolitics, social cohesion (who could deny the strategic nature of education or health?), territorial cohesion or other aspects.

In this address I will focus on the purely economic factors, although I will also briefly comment on geopolitical criteria insofar as they might interact with those economic factors. As we are all aware, substantial geopolitical shifts in recent years are changing the rules of the game in the global economy.

So, **what defines a sector as strategic from the economic standpoint?** In my view, a series of criteria must be satisfied for a sector to be considered strategic.



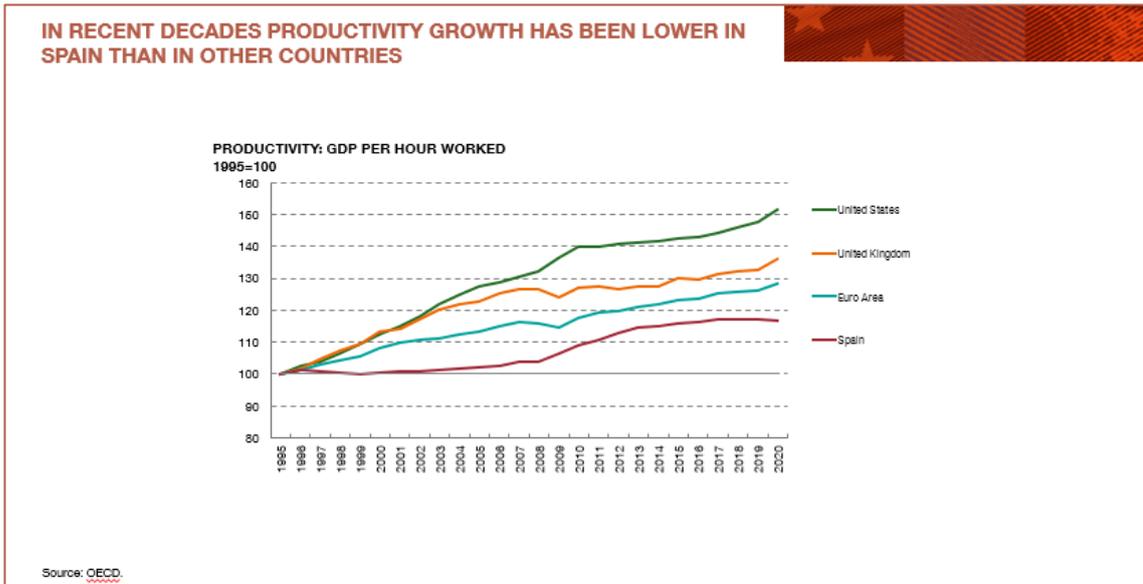
As this slide shows, the economic elements that we use to define a sector as strategic are productivity, resilience and centrality.

Productivity is a multi-dimensional concept in which we include a sector's innovative capacity, human capital as an essential input in production and in the assimilation of new ideas, and, lastly, the potential for reallocation of resources.

Resilience is likewise multi-dimensional. It relates to the sector's capacity to withstand the impact of shocks and recover rapidly thereafter. In this case, I believe the three main changes to which the Spanish economy is exposed are digitalisation, climate change and population ageing.

Lastly, centrality refers to a sector's importance based on interactions with other sectors and contribution to the value chain, in addition to size in the overall economy in terms of the number of firms and share in employment and exports.

Let us briefly elaborate on each of these elements.



**First, for a sector to be considered strategic it must have robust potential to contribute to aggregate productivity growth.**

This is crucial, since we know that productivity is the variable that determines sustained long-term growth and the level of social well-being. I would emphasise that in a low-growth economy there are more obstacles to economic policy implementing the structural reforms that would result in a better redistribution of wealth. In such a scenario, it is harder to muster the resources required to bolster social safety nets and to cushion the impact of those reforms on the affected groups.

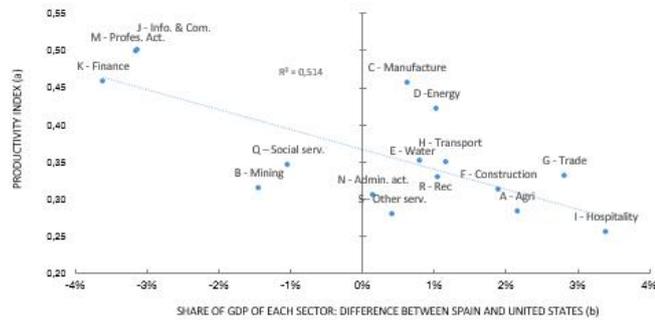
I think we can agree that without reforms, per capita income growth would be lower in the future. Therefore, a vicious circle may arise that would be difficult to break: lacklustre productivity growth reduces the likelihood of reforms, and the absence of reforms, in turn, leads to more lacklustre productivity growth.

It seems reasonable, therefore, to assert that **achieving a more buoyant productivity performance is one of the most important challenges facing the Spanish economy**, particularly since productivity growth has been very modest in the last three decades, as can be seen in the chart.

From a sectoral standpoint, this lacklustre performance is explained both by low productivity growth sectors accounting for a larger share of the economy and by Spain's lower productivity compared with other countries practically across all sectors. Therein lies one of the main problems for the Spanish economy.

**THE PRODUCTIVITY CHALLENGE: THE LESS PRODUCTIVE SECTORS ACCOUNT FOR A LARGER SHARE OF THE SPANISH ECONOMY**

NACE Rev. 2 ONE-DIGIT SECTORS: PRODUCTIVITY AND SHARE OF GDP



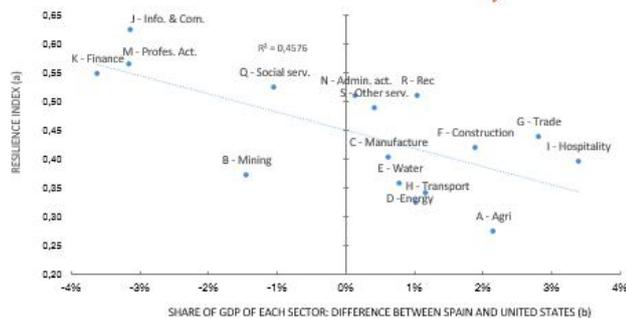
SOURCES:  
 (a) Fernández and Montero (2021): "A sectoral analysis of the future challenges facing the Spanish economy", Occasional Paper no 2133, Banco de España.  
 (b) OECD.

As the chart shows, the most productive sectors (on the vertical axis: professional activities, information and communication, finance) account for a lower share of the economy in Spain than in the United States. This conclusion can be extrapolated to a comparison with other major European economies.

**Second, as I have mentioned, a sector's strategic nature should be determined by its contribution to the economy's resilience<sup>1</sup> to different kinds of shocks.** This applies in particular to its contribution with respect to the main ongoing structural challenges, such as the process of technological change (particularly that related to digitalisation), population ageing and climate change.

**RESILIENCE TO TECHNOLOGICAL, CLIMATE AND DEMOGRAPHIC CHANGE: THE LESS RESILIENT SECTORS ACCOUNT FOR A LARGER SHARE OF THE SPANISH ECONOMY**

NACE Rev. 2 ONE-DIGIT SECTORS: RESILIENCE AND SHARE OF GDP



Sources:  
 (a) Resilience to the challenges of technological change, climate change and population ageing, based on Fernández and Montero (2021).  
 (b) OECD.

For a number of reasons, we can expect the impact of these challenges to be highly uneven across the different productive sectors. For example, the degree of exposure to potentially disruptive technologies, such as artificial intelligence, is not the same in agriculture, say, as

<sup>1</sup> The concept of resilience may be understood as the capacity of the economic system to, first, withstand the impact of shocks (static resilience) and, second, to recover rapidly thereafter (dynamic resilience).

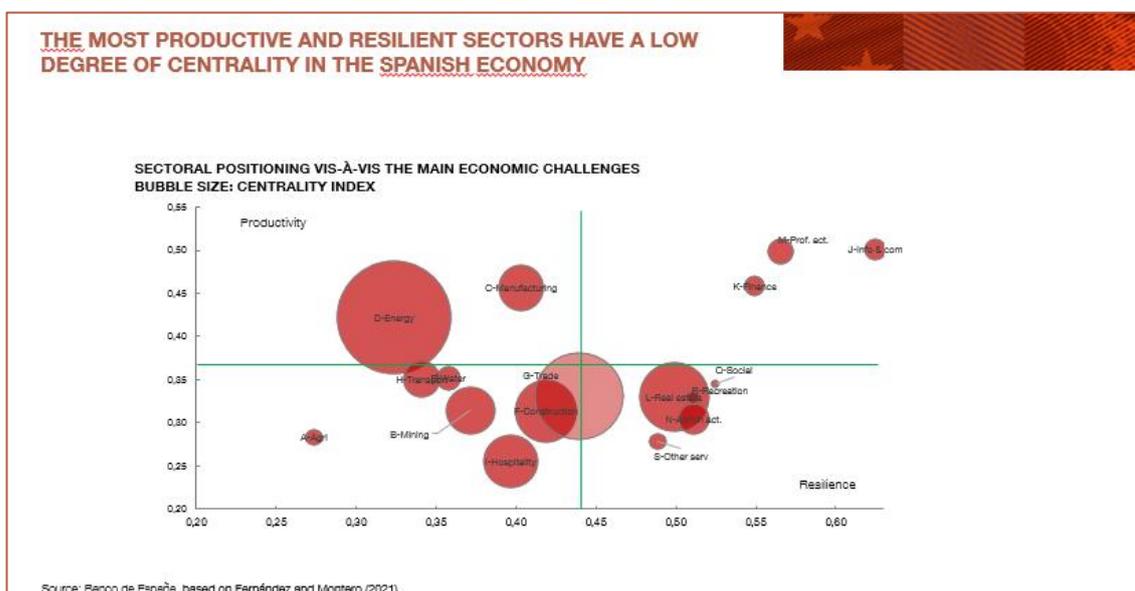
it is in the financial sector. However, I would like to emphasise that both can and must benefit from such knowledge. Illustrative examples in agriculture include the development of smart irrigation or fertilisation systems and the use of robotics for faster and more precise large-scale harvesting.<sup>2</sup>

And nothing could better exemplify the transformative power of digitalisation than the information services sector itself. It is fair to say that the business model for written media changed little during the 19th and 20th centuries.<sup>3</sup> By contrast, in the last 20 years it has had to adapt at breakneck speed to changes driven by the digitalisation of society. A case in point is our host today; eIEconomista launched 16 years ago simultaneously in print and online as a means of contending with the transformations that were already under way.

The physical risks posed by climate change would likewise have differing impacts across the sectors. For instance, the impact would be far greater on tourism and infrastructure construction than on the chemicals industry. Meanwhile, a shift in consumer preferences in response to both climate change and the process of population ageing might lead us to expect sharper demand-side disruptions in sectors such as residential construction and vehicle manufacturing than in industries such as water collection, treatment and supply.

In this chart we again see that the most resilient sectors (on the horizontal axis: finance, information and communication, professional activities and social services) account for a smaller share of the Spanish economy than of the US economy.

### Third, a sector's strategic nature depends on its economic centrality.



Some sectors occupy a privileged position in the productive system for a wide range of reasons. These might include the country's comparative advantages (understood in the broad sense: not just in terms of the labour or capital inputs, but also natural resources, geographical positioning, etc.). A prime example would be the tourism sector.

<sup>2</sup> As illustrated, for example, at <https://www.fao.org/e-agriculture/artificial-intelligence-digital-blue-planet>.

<sup>3</sup> As illustrated by the history of The Times newspaper since its foundation in 1785. See "The Times". Encyclopaedia Britannica, 16 Sep. 2021, <https://www.britannica.com/topic/The-Times>.

However, a sector may also be strategic on account of its activity generating relevant spillovers for the rest of the economy or its capacity to provide essential infrastructure or inputs for firms in other sectors. Two such examples are electricity supply and financial services, both of which have a high degree of economic centrality.

Allow me to underline two important aspects relating to centrality.

First, factors unconnected with those that I have just mentioned, such as mere historical inertia or having capitalised on different disruptions, should not qualify a sector as central based on its large share in the economy in terms of employment, number of firms or production.

Second, the centrality of a sector is not static, given that comparative advantages and essential inputs and infrastructure will evolve over time.

Just a few decades ago mobile phone or 5G networks did not even exist. Today it would be unthinkable to consider them anything other than essential infrastructure. Good climate and sunshine have been, and still are, a comparative advantage, but in a few decades' time climate change might erode that source of competitiveness. This is obviously subject to enormous uncertainty, but we cannot at present rule out an adverse future scenario of severe droughts, desertification and rising sea levels.

We at the Banco de España have recently classified the different sectors of activity by their relative position based on the three dimensions that I have just described: productivity, resilience and centrality.<sup>4</sup> We have constructed a taxonomy of the sectors, combining a broad series of indicators that capture different elements of those dimensions.

I would like to emphasise two key messages stemming from that work. First, **the sectors best positioned to contribute to productivity growth and resilience are those that, at present, have a low degree of centrality and low relative weight in the Spanish economy.**

As the slide shows, the professional activities and information and communication sectors have a low degree of centrality. On top of this, low productivity sectors, such as hospitality, trade, construction, mining and quarrying and the real estate sector, have a high degree of centrality in the Spanish economy.

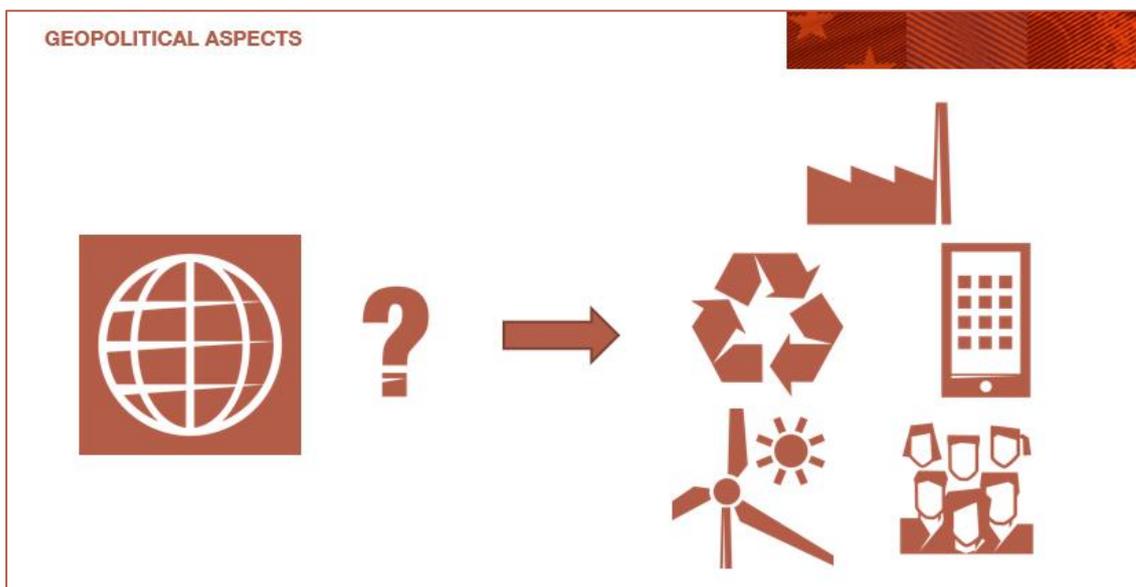
Second, **many of the sectors with a better relative position in terms of productivity and resilience have a lower weight in the Spanish economy than in some of the most advanced countries.** I refer to the aforementioned professional, scientific and technical activities, information and communication, and the manufacture of computer and electronic products.

These findings are undoubtedly thought-provoking.

**So far we have omitted geopolitical factors. But would their inclusion change this outlook in any way?**

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<sup>4</sup>See Fernández and Montero (2021), "[A sectoral analysis of the future challenges facing the Spanish economy](#)", *Occasional Paper* no 2133, Banco de España.



The debate over the geopolitically strategic nature of certain sectors has heightened in recent times. Some countries have mooted measures that could result in a tightening of restrictions on the free movement of goods, capital and ideas, with a potentially adverse impact on global well-being.

Perhaps one of the most relevant geopolitical risks stems from the growing US-China rivalry, given its potential as a global game changer. Both of these powers have developed plans to identify priority sectors for their economies. These exactly match the sectors identified in our analysis as the best positioned in the categories of productivity and resilience.

Unfortunately, in Spain these are generally not the sectors with the largest relative weight in the economy and account for lower shares than in the most advanced countries.

**And what do we make of the geopolitical risks at the European level?** The EU's response to these challenges has been to introduce the **Open Strategic Autonomy**.<sup>5</sup> This is a coordinating framework for a broad set of policies to boost the EU's external projection and reinforce its economic and financial resilience.

One focal point of these actions is the **industrial policy strategy**, which was revised in May 2021 to incorporate the lessons learned during the COVID-19 crisis. The overall objective is to enable EU industry to lead the way in the transition towards a green, digital and resilient economy.

The COVID-19 crisis, the global supply chain bottlenecks and the tensions between China and the United States have all highlighted the importance of addressing the EU's strategic dependencies in areas such as critical raw materials (rare earth elements and silicon), batteries, some active pharmaceutical ingredients, hydrogen, semiconductors and cloud computing technologies (which are key to the 5G roll-out, artificial intelligence and the Internet of Things).<sup>6</sup>

I think I hardly need to repeat that our relative position (and that of most of our European partners) in the majority of these areas could be improved. Hence, it is essential that we

<sup>5</sup> See L'Hotellerie-Fallois, Manrique and Millaruelo (2021), [Open Strategic Autonomy in the EU](#), Box 5. *Economic Bulletin* 1/2021. Banco de España.

<sup>6</sup> See [https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-industrial-strategy/depth-reviews-strategic-areas-europes-interests\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-industrial-strategy/depth-reviews-strategic-areas-europes-interests_en).

take full advantage of the opportunity presented by the **Next Generation EU** programme. This economic policy lever, with great transformative potential, was designed with all of these considerations in mind. Indeed, more than half of the funds (57%) must be allocated to the digital transformation and the green transition, which, as I have mentioned, are the two key elements behind the design of the EU industrial policy strategy.

**Allow me to begin wrapping up this speech by recalling that all of these sectoral policies should be accompanied by more horizontal measures so as to strengthen their economic and social impact.** By this, I mean measures that improve the overall economic environment for all sectors and firms simultaneously.

The raft of reforms that the Banco de España has been advocating is well known,<sup>7</sup> so I won't go into them here. However, I would like to emphasise the need to focus particularly on those **measures that smooth the reallocation of factors of production across the different sectors**, given that the sectoral composition of the Spanish economy looks set to differ in future from its current form. New actors, different ways of interacting with customers, novel technologies and a less stable and predictable environment will be key components of the future sectoral scenario.

Let's not forget, this sectoral restructuring process can only succeed if the existing social safety nets are also assessed to identify any aspects that need to be bolstered. Such processes typically entail transition costs that are predominantly borne by certain groups and perhaps certain geographical areas.

To conclude, the sectors that are better positioned to tackle the challenges of productivity and resilience have relatively little weight in the Spanish economy, particularly compared with other developed economies. Further, the sectors with the highest centrality have low productivity (e.g. hospitality) or are vulnerable to the emerging scenarios (e.g. the energy sector in the face of climate change).

We therefore stand at a crossroads where crucial strategic decisions must be made to position ourselves favourably in this new global environment. We must turn our attention to the reallocation of factors of production across sectors, a process that will no doubt be complex, but is also imperative if we are to improve our economy's adaptability to the new scenarios.

Economic authorities, employers' associations and institutions must be ready to contend with these new challenges, and those that still lie ahead, with a view to ensuring sustained, inclusive and sustainable economic growth.

Thank you very much for your attention.

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<sup>7</sup> See Hernández de Cos (2020), "[The main post-pandemic challenges for the Spanish economy](#)", Appearance before the Parliamentary Committee for the Economic and Social Reconstruction of Spain after COVID-19 / Congress of Deputies.