

Investment, productivity and balance of trade in the Spanish economy (2000-2023)

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Policy Brief nº. 21 April 2025 ISSN 2014-7457

> The evolution of the Spanish economy over the past decade is characterised by two phenomena that mark a shift from previous historical patterns. The first is a negative investment gap (as a percentage of GDP) compared to the biggest European countries, which has been blamed for negatively impacting productivity growth. The second is a persistent positive and persistent current account balance throughout the expansion phase of the cycle. While the first phenomenon would seem to indicate structural deficits in the Spanish economy, the second suggests an improvement in competitiveness. The two phenomena are related, as the downside of a positive balance of trade is the transferral of resources to other economies, helping to reduce the deficit accrued in the past, rather than reinforcing gross capital formation in the country. The report on the future of the Single Market coordinated by Enrico Letta explicitly highlights the systematic gap between saving and investment at a European level, which results in an annual flow of around "€300 billion of European families' savings [...] abroad, primarily to the American economy, due to the fragmentation of our financial markets" (Letta, 2024, p.11).

> This report aims to analyse the relationship between investment, productivity and the balance of trade in the specific case of the Spanish economy. The following section examines capital formation at an aggregate level, from an historical and comparative perspective, based on the percentage of GDP that investment accounts for, to then focus on the evolution of the capital stock. In this part of the analysis, it is important to distinguish between investment (a periodic flow) and capital stock (the cumulative result of past investment flows, deducting the fraction allocated to replacing depreciated capital). The main conclusion drawn in this section indicates that the gross investment deficit accrued over

the last few years, as percentage of GDP, can be attributed to a large extent to the need to redirect the excessive capital stock growth rate inherited from the past towards more sustainable long-term assets. The moderation of the investment flow allowed the evolution of the accumulated capital stock to adjust gradually to the growth potential of the economy. As this adjustment progressed, the investment gap compared to the core European countries gradually reduced and, although the convergence process was curtailed by the pandemic, it is expected to be complete within the next few years. Moreover, the evolution of the aggregate profitability of capital in the Spanish economy, as a decisive factor in long-term investment, has reached values in recent years compatible with a capital accumulation rate similar to those recorded by the main European economies.

The second section of the report focuses on the relationship between the accumulated capital stock and the labour productivity. The lack in productivity compared to the leading European economies is partly due to a low capital stock per worker, but it also reflects the lower productivity of the capital stock accumulated. The main cause of this is an investment bias towards activities with low added value, to the detriment of more intensive investments in tangible and intangible assets associated with technological progress.

The third section returns to the issue of the balance of trade and its relationship with a production model predominated by medium- and low-skilled activities. The improvement in the balance of trade over time corresponds to the decreasing weight of investment as a proportion of GDP, mainly in terms of residential investment, as a result of falling demand, as well as the surpluses accrued in the past. In the opposite direction, greater dynamism of gross capital formation in the next few years may be accompanied by a reduction of the



trade surplus. While the negative International Investment Position (IIP) of the Spanish economy still exceeds the safety parameters set by the European Commission, any evaluation of the balance of trade should take into account the extent to which the balance reflects the contribution of high- and low-added-value exportable goods and services , and whether the net liabilities accrued abroad are in the form of debt to finance consumption and/or residential investment, or direct long-term investment to boost activities with an intensive use of human and technological capital. Spain's investment deficit is mainly related to assets with greater technological content and a greater capacity to boost productivity in the economy as a whole. If this higher investment were allocated to the sectors that most drive an increase in productivity, the possible negative impact on the IIP would be small or irrelevant insofar as the performance of the capital invested would easily offset the liabilities incurred.

Lastly, in the final section, we outline some guidelines for economic policy designed to strengthen productive capital formation in the economy, emphasising the crucial role of public policy, in conjunction with business strategies, for accelerating the growth of productivity and GDP per capita.

1. The investment deficit

Evolution of investment (I): Flows

Graph 1 shows Gross Fixed Capital Formation (GFCF) as a percentage of GDP: United States (USA), Japan (JAP), EUR-5 (the sum total of Germany, France, Italy, the Netherlands and Belguim), and Spain. The two variables are calculated at constant prices, using the appropriate deflator in each case. The time series shown runs from 2000 to 2025. From 2000 to 2023, the data is based on observations or provisional estimates, while, for 2024 and 2025, the figures are taken from the European Commission's forecasts. Spain's (SPA) GFCF reached a maximum of 26.0% of GDP in 2007, when it matched the atypically high values recorded for the Japanese economy (JAP), before declining over the following years, to eventually fall below the US (USA) and European (EUR-5) economies from 2012 onwards. The trajectory of investment in the European economies of the selected sample is similar to the path followed by USA economy, while Japan surpasses the Western economies by around 3 or 4 percentage points throughout the last decade.

Graph 1. GFCF/GDP (%). Constant prices. 2000-2025



As we can see in Table 1, in the period 2000-2023 as a whole, average GFCF as a percentage of GDP is very similar in the three Western regions: 20.8% in the USA, 20.9% in the EUR-5 and 21.0% in Spain -- in contrast to 25.7% in Japan. In the long run, no clear relationship is observed between investment as a percentage of GDP in each of the areas and the respective growth rates of productivity and GDP per capita. Investing an average of 20.8% of GDP, the US economy achieved cumulative increases of 32.4% in GDP per capita (GDP/POP), and 35.8% in GDP per worker (GDP/EMP). These rates far exceed the growth of GDP per inhabitant and of productivity in Japan, which invested 25.7% of GDP over the same period, and in the 5 countries that make up the EUR-5, which invested a similar percentage to the USA (20.9%).

 Table
 1.
 GFCF/GDP, GDP/Population, GDP/Employment (%).

 Cumulative variations
 2000-2023

	USA	Japan	EUR-5	Spain
GFCF/GDP	20,8	25,7	20,9	21,0
GDP/POP	32,4	18,4	16,7	17,5
GDP/EMP	35,8	10,8	7,2	10,5

Source: Drafted by authors based on data from AMECO

In the period 2000-2023 overall, Spain recorded investment levels as a percentage of GDP and cumulative growth rates of GDP per inhabitant and per worker similar to or slightly higher than the EUR-5 group (Table 1). However, as we can see in Graph 1, the time profile of the investment takes a very different trajectory, with figures far above the European average in the first decade and slightly below the average in the second. Therefore, the fall recorded over the course of the second decade of the century could be interpreted as the rectification of the investment surplus generated over the previous decade. The fact that, between 2013 and 2020, the relative weight of gross investment as a



percentage of Spain's GDP gradually increased, moving back towards converging with the European average, seems to support this hypothesis. The impact of the pandemic, in an economy with a very high share of the worst affected activities, interrupted the convergence process that was under way. The figures for 2024 and 2025 are the European Commission's forecasts, and the extent to which the trend towards convergence does or does not resume remains it be seen.

The extent to which gross investment as a certain percentage of GDP translates into growth of GDP and productivity depends on factors such as the depreciation rate and the capital intensity of the production processes in each economy. For instance, an economy whose assets have a higher depreciation rate and which operates with a higher level of capital intensity will grow at a slower pace than an economy with a lower depreciation rate operating with a lower net capital as a proportion of GDP, even though both economies allocate the same percentage of GDP to investment.

Evolution of investment (II): Stocks

The growth of potential GDP and productivity does not depend to such an extent on the relative weight of investment as a percentage of GDP as it does on the growth profile of the net capital stock -as a whole and in relative terms with respect to potential GDP and the labour factor. Graph 2 shows the net capital stock growth rate at constant prices in the four areas under analysis: the USA, Japan, EUR-5 and Spain, for the period 2000-2025 (the figures for the last two years are forecasts). The conclusion drawn from this graph contrasts considerably from the previous one: the growth rate of the net capital stock in the Spanish economy is practically the same as rate recorded in the EUR-5 group. The decrease in GFCF as a percentage of GDP in the second decade of the century is the mechanism that allows the two growth rates to converge, supporting the hypothesis of a rectification of the investment surplus generated in the previous period. If we take the evolution of the net capital stock as a reference point, Spain does not display an investment deficit compared to the main European economies.

It is also worth highlighting the gap between the US and Japanese economies, with the figures being reversed compared to Graph 1: the growth in the capital stock (and, therefore, in the production capacity) in the United States (around 2%) is practically double the figure recorded in Japan (slightly over 1%). In other words,

while gross investment as a percentage of GDP in the United States is lower than in Japan, it is enough for the US economy to achieve a growth rate in its production capacity associated to the net capital stock far higher than in the Japanese economy.

Graph 2. Net capital stock at constant prices. Annual variation rates.



Capitalisation and growth

Two questions remain to be answered in this first section. The first is the extent to which the capital stock growth rate in Spain can be considered excessive, insufficient or adequate in each period. The second is the extent to which the rate of return on capital, as a determining factor of long-term investment, can be considered adequate for driving the rate of capital formation required by the Spanish economy.

To answer the first question, we start from the premise that the growth of the capital stock should evolve in line with the growth in GDP in the long term. Graph 3 shows the annual variation rates of the net capital stock (GK), real GDP (GY) and potential GDP (GY*) in the Spanish economy over the course of the period of reference. As we can see, the growth rates of capital stock and potential GDP evolve with similar trajectories, while capital accumulation and the observed growth in GDP evolve along divergent paths.

Specifically, between 2001 and 2014, the capital stock systematically increased above the growth in GDP, so that every additional euro invested generated a declining amount of output in the economy as a whole. Does this mean that, during this period, there was a surplus of investment in Spain that has been rectified in the subsequent years? The response depends on the



evaluation criteria used. For example, an economy with a relatively high propensity to save and invest would justify operating with a higher capital intensity (a level higher than the rate resulting from dividing the net capital stock by the GDP) in long-run equilibrium. However, during the same period, Spain incurred a large current account deficit, which implies that domestic saving was insufficient to cover the economy's investment needs. Therefore, it is hard to attribute the gap observed between the capital growth and the rise in GDP over the course of the long first decade of the century to an increasing propensity to forego present consumption capacity for greater consumption in the future. In any case, from 2014 to 2019, the pattern of growth changes and GDP begins to grow at a higher rate than capital. Disregarding 2020, when the pandemic struck, in the years since, the growth differential in favour of GDP seems to have held steady, coinciding with the period in which the domestic saving rate increased enough to generate a positive current account balance.

Graph 3. Net capital stock (GK), current GDP (GY) and potential GDP (GY*). Annual variation rates. Spain. 2000-2025



In conclusion, the recent changes in capital intensity in the Spanish economy do not seem to be attributable to a greater or lower propensity for domestic saving, but rather to changes in the propensity to invest, perhaps associated with changes in expectations in terms of yields and interest rates The investment surplus, which results in over-sizing the capital stock, are only evident in hindsight, once it has been confirmed that the expectations on which the projects were initially justified did not prove to be the case in reality. Oliver (2024, pp. 146-157) clearly summarises the factors that explain the increase in investment at the beginning of the century, as well as the subsequent downturn: the intensive drop in interest rates coinciding with Spain joining the Eurozone and the resulting credit boom, particularly in households to buy residential properties and among companies related to construction and real estate; the excessive degree of leverage of NFCs (non-financial corporations); political intervention in part of the financial system; and pressure from the European Commission to redress imbalances.

Capitalisation and profitability

The second question posed at the start of the previous section referred to the profitability of capital in the economy as a whole and throughout the period of reference. At an aggregate level, the gross profitability or the rate of return on the capital invested can be defined by multiplying the operating margin (the ratio between the gross operating surplus and GDP) and the capital productivity or rotation (the ratio between GDP and net capital stock). Graph 4 shows the evolution of the gross operating margin (m), adjusted to deduct revenues attributable to self-employed workers from the gross operating surplus (GOS), in the USA, Japan, EUR-5 and Spain, between 1986 (the year Spain joined the EEC) and 2025 (the figures for the last two years are based on forecasts of future values).





While there is an upward trend in the gross operating margin in the USA over the course of the period (from 30% in the early 1990s up to almost 40% in the forecast for 2025), the margin is almost stationary in the main European economies over the same period, hovering around 30%. In contrast, in the Spanish and Japanese economies, the aggregate margin follows an upward trend similar to the USA's, reaching levels of around 35%. The pandemic had a negative impact on both these economies in 2020 and 2021 but, in the case of Spain, in



the estimates for 2023 and forecasts for the following two years, the margin bounces back to almost 35%.

Therefore, the level of profit margins, at an aggregate level, do not seem to have posed an obstacle to investment for the Spanish economy as a whole –and particularly in the last decade. However, both Spain and Japan record significantly lower capital formation than the USA over the last few years. This is explained by the second component of profitability: capital productivity.

Graph 5 shows the evolution of the ratio between GDP and net capital stock (u=Y/K) in Spain, the USA, Japan and the EUR-5 group between 1986 and 2025.

As we can see, there is a downward trend in capital productivity in the Spanish economy between the turn of the century and the 2008 financial crisis. Setting aside the years most badly affected by the pandemic, this variable seems to have stabilised at levels considerably below those recorded in the European and Japanese economies –which, in turn, are far lower than the rates recorded in the USA. Other statistical sources from those used in this report (Penn World Table and BCL Database) confirm the reduction in Spain's physical capital productivity, albeit with a different intensity and evolution. In the case of the Penn World Table, this decline also affects France and Germany significantly, but there is less of an increase in the case of the USA. The figures from the BCL Database reinforce the downward trend in capital productivity in the Spanish economy and moderate the growth of the rate in the USA.



Graph 5. u = GDP / Net capital stock. Constant prices. 1986-2025

Graph 6 shows the rate of return or gross profitability of the capital (before depreciation and amortisation) for the economy as a whole, obtained by multiplying the gross operating margin by the capital productivity (r = mu).

There are two important points to highlight from the graph. Firstly, there is a large and growing gap between the USA and the other economies, suggesting greater business dynamism in the former, which is reflected both in the higher rate of capital formation and in the higher capital productivity and bigger margins.





Secondly, there is a downward trend in capital profitability in Spain, falling from around 12% at the turn of the century down to lows of around 10% in 2014. This declining profitability, sustained over time, is one of the factors that most helps explain the sudden drop in investment from 2009 onwards (coinciding with rising interest rates in a highly indebted country). From 2015 onwards (disregarding the worst years of the pandemic) the rate of return stabilised, as did the rate of capital formation —in both cases at levels similar to those of the biggest European economies.

2. Investment, productivity and structural change

The productivity gap

One of the features that characterise the evolution of the Spanish economy since the start of this century is the differential in the productivity of labour in comparison to the main European countries. Graph 7 shows the trajectory of GDP per worker in Spain at constant prices,



compared to the EUR-5 group, between 2000 and 2025 (the figures for 2024 and 2025 are forecasts).

As we can see in the graph, there are three clearly differentiated phases in the evolution of labour productivity in Spain. Generally speaking, productivity rises more in times of recession (2009-2013), coinciding with the destruction of employment, and stagnates in expansionary periods (2000-2007 and 2014-2019), when more jobs are created. From 2016 onwards, productivity growth levels off, both in Spain and in the EUR-5 group.





Graph 8 shows Spanish labour productivity as a percentage with respect to the EUR-5 group. The cyclical component of the differential in productivity compared to the EUR-5 suggests that the changes in employment, related to a sector composition with a large share of lower-added-value activities, have a stronger impact on the evolution of GDP per worker in Spain than in the other European economies of reference.

Graph 8. GDP per worker at constant prices. Spain as a percentage of the EUR-5. 2000-2025



Determinants of labour productivity

Productivity (of labour) is defined as the added value (Y) per unit of labour input (L). Based on the number of people employed (in the absence of homogeneous comparative data for hours worked in the database used), labour productivity (Y/L) can be expressed by multiplying two factors:

(i) cumulative investment (or capital stock, K) per worker (L).

(ii) investment efficiency (value generated per euro invested = Y/K).

The relation between these two factors and labour productivity can be expressed as the following accounting identity:

 $Y/L \equiv K/L * Y/K$

where Y represents the gross value added (GAV) or GDP, K is the capital stock, and L is the volume of work applied to production.

According to this identity, assuming other factors remain constant, the higher the cumulative investment (capital stock) per worker, the higher the labour productivity (GDP or GAV per worker) will be.

Graphs 9 (K/L) and 10 (Y/L) show the extent to which this relation holds true for a sample of developed economies, as a long-run average (2000-2023).





However, correlation does not imply causality. In principle, the causal relationship between investment and productivity can go in either direction: a more productive economy requires greater investment,



which, in turn, can lead to greater mayor productivity. Moreover, long-run increases in labour productivity depend on technical progress or total factor productivity (TFP), which, in turn, influences the second factor in the above identity: investment efficiency. The labour productivity gap between Europe and United States is associated with a lower capital stock per worker, but also, and more importantly, with the large differential in terms of total factor productivity between the two regions.



Graph 10. GDP per worker. Euros at 2015 levels. Average values 2000-2023

A possible source of this differential may be the lack of dynamism in terms of reallocating the available resources from less productive to more productive sectors. The greater dynamism of the US economy is reflected in the return on the capital invested (Y/K = GDP/Net capital stock). Likewise, the productivity gap that separates Spain from the more advanced European economies corresponds to a lower rate of return (efficiency) on the capital invested (Graph 11).



Graph 11. GDP/Net capital stock (Y/K). Average values 2000-2023

Determinants of capital productivity

Capital productivity (Y/K) is the inverse of capital intensity or the relation between an economy's net capital stock and GDP (K/Y). The capital intensity of an economy depends on aspects such as the relative prices of the factors of production (capital and labour), different propensities to save and invest, the sector composition, technology, and the higher or lower degree of incorporation of human capital in production processes. There are economies in which the industrial sector bears a lot of weight, such as Switzerland, Austria and Sweden. These economies operate with a higher capital intensity than Spain. However, they also record higher capital stocks per worker, resulting in greater labour productivity. The Spanish economy operates with a relatively high level of capital intensity (compared to other developed economies) and, at the same time, a relatively low capital stock per person (also in comparison to economies with a similar level of development). As a result, labour productivity in Spain is lower than the levels observed in economies with a similar degree of capital intensity.

The lower level of capitalisation per worker in the Spanish economy may be linked to the relative prices of the factors of production. The lower the cost of labour compared to capital, the more companies will choose more labour-intensive production processes over capital-intensive ones, and relatively more labourintensive activities will gain prominence in the economy as a whole. This line of reasoning may help explain some of the trends observed in Spain in certain periods. For instance, Salas (2022, 2024) blames the delay in the recovery of business investment after the pandemic on the relative costs of capital and labour, based on data on the capital stock of non-financial corporations in the period 2011-2023. However, the evolution of the relative costs of the factors of production does not seem a sufficient explanation for the long-term trend towards combining a relatively high capital/GDP ratio with a lower capital stock per worker than countries operating with a similar capital/GDP ratio.

As mentioned in the previous section, economic theory associates an economy's capital intensity with the propensity to save and invest. Economies with a greater propensity to sacrifice present consumption to be able to consume more in the future will tend to allocate a great proportion of its income to saving and investment. Assuming diminishing returns on the capital invested, these economies will end up operating (in long-run



equilibrium) with a greater capital stock as a percentage of GDP. However, neither is this clearly the main explanation in the case of the Spanish economy, in the throes of a rapid demographic ageing process. As an alternative explanation, some analysts focus on changes in the distribution of income associated with different propensities to consume (and save) for different income groups. If the higher-income segments of the population with greater propensity to save gain weight in the distribution of income, the aggregate saving rate will tend to rise. However, in an open economy, a higher propensity to save does not necessarily imply greater productive investment in the economy itself, accompanied by greater capital intensity: the surplus saving may go abroad, generating a positive current account balance in return.

In the case of Spain, a number of studies have drawn a link between the drop in average capital productivity and a worsening allocation of production resources during the period that triggered the financial crisis. This poor allocation led to the propensity to take on low-yield investment projects, and it was caused by the artificial lowering of the cost of capital. In turn, this lowering of prices was associated with expectations of exceptional appreciation in the value of real estate assets and access to low-cost financing from financial institutions, which in some cases were operating with non-economic motivations (see, for example: Díaz and Franjo, 2016; Gopinath et al., 2017; García Santana et al., 2020). Along similar lines, Myro (2023) relates the divergence in TFP between Europe and the USA (including the divergence in terms of physical capital productivity) with European economies' inability to increase their intangible assets at the pace that the USA managed to achieve. The author argues that investment in intangible assets would enable an economy to boost the productivity of its physical assets, particularly those related to information and communication technologies. Likewise, Escudero (2024) shows that, around the year 2000, physical capital stopped being a source of convergence with the USA, referring to te process as the "depletion of physical capital". Lastly, Pérez et al. (2023) analyse the consequences of the considerable bias towards investments in real estate assets and lower uptake of intangible assets associated with a greater capacity to spread technical progress throughout the economy as a whole. In recent times, we have witnessed a gradual increase in assets related to intellectual property, but the gap already accrued would be big enough to explain the low levels of capital productivity recorded to a large extent.

Sector composition and capital productivity

An additional explanation, complementary to those above, draws a link between changes in capital productivity and changes in the sector composition of the economy. In turn, the changes in sector composition are associated with the higher or lower availability of human capital with the qualifications and skills required by companies in each sector. For instance, when physical capital complements skilled labour, increasing the physical capital per worker may lead to a reduction in the capital/GDP ratio (i.e., a rise in capital productivity). The reason for this would be that labour productivity increases more than it would do exclusively due to investment in physical capital, due to the parallel increase in the human capital endowment. In contrast, when physical capital replaces skilled labour, the growth of investment in physical capital per worker may lead to an increase in the capital/GDP ratio (i.e., lower capital productivity) because, in this case, the rise in labour productivity would be less than it would be as a result of the investment in physical capital if the gualification of the workforce had remained constant.

This second effect may take place, at an aggregate level, in an economy in which skilled labour-intensive sectors, such as the industrial sector, lose weight in terms of total employment in favour of low-skilled labour-intensive sectors, such as construction, sales and hospitality. Alternatively, from a different perspective and illustrating the argument with specific examples, this effect occurs when residential investment accounts for a greater share of total investment, at the same time as the proportion of investment in industrial, logistical or technological assets declines. Supporting this idea, Graph 12 shows the relative weight of two groups of sectors as a percentage of total investment; the first includes all industry and advanced services (information and communications, and professional services); and the second mainly comprises hospitality, sales, construction and real estate activities.

Between 2000 and 2007, there was a rise in the proportion of investment allocated to sectors more directly associated with tourism, real estate and construction, while a reduced share of investment went to industry and advanced services. The financial crisis marks a turning point, after which this trend switched direction, with the former group losing ground and the latter gaining it. However, as the recovery that began in 2014 progressed, the group of sectors associated with low-added-value activities began to take a growing share



of the investment again, at the expense of more productive sectors.

Graph 12. Proportion (%) of total investment (GFCF) represented by investment in hospitality, sales, construction and real estate (TOU+CON+RE), and industry, ICT and professional services (IND+ICT+PRO). Spain, 2000-2021



In conclusion, an increase in labour productivity in the economy as a whole is associated with a rise in investment per job or per worker, but also, and more importantly, with: (i) the nature of the investment; (ii) the extent to which physical capital is complementary to human capital; and (iii) the sectors to which the investment is allocated.

3. Balance of trade and investment deficits

In view of the arguments and evidence presented in this report, it may be concluded that the Spanish economy does not suffer so much from an aggregate investment deficit, than from a set of specific deficits in human, industrial and technological capital. In the past, the trade-off for a growing trade deficit was a surplus of investment, largely residential and financed with foreign debt. Nowadays, the flipside of a current account surplus is a level of private saving that exceeds investment in the economy itself –and which also helps to finance the public deficit. A significant share of this surplus saving comes from companies, enabling them to reduce their debts accrued in the past.

At a macroeconomic level, there has also been a considerable reduction in the still high negative value of the International Investment Position (IIP) as a percentage of GDP (see Oliver, 2024, pp. 123-124). With

respect to Europe, the report coordinated by Enrico Letta (2024) raises concerns about surplus of private saving that feeds the EMU's trade surplus, and which he attributes to the fragmentation of the European financial markets. According to Letta, this saving does not go towards financing investment in the continent's companies and, to a large extent, is used to finance US companies, which may in some cases even end up buying European companies with these very funds. In this respect, Spanish companies are also currently net borrowers from other economic sectors and foreign sources.

However, the salient point is not so much of the quantity of savings received from or sent abroad, but rather the nature of the investment made in the country itself, regardless of whether this investment is domestically financed or funded from abroad. Likewise, a negative IIP mostly constituted by direct long-run assets and investments, and less by short-term debt obligations, does not necessarily pose a problem if it reflects the greater profitability opportunities of investing in productive assets in the country itself, rather than elsewhere. By definition, an economy's balance of trade is the difference between saving and investment from/in the country. With a certain value of the domestic saving rate and a particular level of capital intensity in the economy (ratio of capital/GDP), the potential growth rate of the production capacity, represented by the net capital stock, will rise as the trade surplus falls -or the trade deficit increases. The reason is the reduction in the surplus or rise in the deficit are necessarily offset by a lower flow of resources or funds lent to other countries -or a greater flow of incoming resources from abroad.

In the long run, significant trade deficits persisting over time, whether they be public or private, can eventually become unsustainable, particularly when the downside of this deficit is debt accumulation, with the added problem of varying interest and/or exchange rates. However, it is unclear whether a large trade surplus in itself, even disregarding any possible need to reduce the debt accrued in the past, actually generates any benefits for a country's economy. It is true that an economy with an ageing population may benefit from accumulating assets in other economies with greater opportunities for growth in the future, which implies a trade surplus. Meanwhile, export-led development strategies could also (but not necessarily) be offset by a trade surplus. However, with the exception of these particular cases, arguments for persistent, high trade surpluses tend to be underpinned by discredited commercial assertions. At a



regional level, the Catalan economy has traditionally operated with a high trade surplus, counting both the balance with foreign countries and with the rest of Spain, without this fact ever conclusively making any special contribution to the wellbeing of the Catalan population. The real advantage for an economy comes from the dynamism of its exports, even though this may not entail a high trade surplus, particularly when the exports incorporate a high added value per euro exported, insofar the greater internationalisation of the economy facilitates specialisation and boosts innovation.

Myro (2018) assesses the Spanish economy's capacity to grow without generating trade imbalances, concluding that annual increases in GDP of around 3% could be compatible with a stable or growing surplus in the trade of goods and services, thereby facilitating a reduction of unemployment and foreign debt. Table 2 compares the Myro's growth forecasts for GDP and the trade balance of goods and services over GDP (2018, p. 12) with the average values observed for these variables in the years 2017, 2018, 2019 and 2023 (the years affected by the pandemic are excluded: 2020, 2021 and 2022).

Table 2. Growth of GDP by volume and trade balance of goods and services over GDP (%). Average values observed for four years (2017, 2018, 2019 and 2023) compared to Myro's forecasts (2018)

	GDP	(X-M)/GDP
2017-2019 + 2023	2,4	3,3
Myro's forecast (Low scenario)	2,3	3,3
Myro's forecast (Medium scenario)	2,7	2,7
Myro's forecast /High scenario)	3,5	2,0

Sources: Myro (2018, p. 12) and drafted by authors based on data from the Banco de España.

As we can see from the table, Myro's forecasts for what he refers to as a low scenario, possibly made based on the official data available up to 2017, almost exactly match the average values observed for the period 2017-2023 (not counting the years affected by the pandemic). A higher GDP growth (for instance, 3.5%) would have represented a reduction of the trade surplus down to 2% of GDP, which is still compatible with a gradual improvement in the IIP and possibly an increase in GFCF as a proportion of GDP.

However, the fundamental issue is not whether investment overall could have increased to accelerate short-run GDP growth temporarily, partially sacrificing the trade surplus, but rather what kind of assets could have been invested in and their impact on long-term growth potential. Analysing the components that explain the trade surplus in greater detail, we can appreciate the extent to which it is the result of a production model biased towards lower-added-value services. On this point, Graph 13 compares two balances: the first between non-Spanish residents' consumption in Spain and residents' consumption in the rest of the world, as a percentage of GDP (% CR/GDP), and the second between exports and imports of goods, also as a percentage of GDP (% B/GDP).





The balance of (mainly industrial) goods is always negative, settling at around -2% in 2018, 2019 and 2023. Meanwhile, the balance of consumption outside the consumer's country of residence (primarily related to tourism) reaches values of around +3%, if we disregard the years affected by the pandemic. The comparison excludes the balance of non-tourism services, which has progressed very favourable in recent years. This may temper but not invalidate the conclusion: Spain's trade is mainly underpinned by low-added-value activities, which do not require investment with a high technological content, and which contribute very little to productivity growth.

4. Final considerations and guidelines for economic policy

Transforming the production model: a European challenge

At a conference in Brussels in 2024, Mario Draghi outlined some of the core ideas that underpinned the report to strengthen European competitiveness (Draghi,

2024), commissioned by the President of the European Commission, Ursula Von der Leyen, and published in September 2024. Draghi began his speech by warning that the existence and persistence of a large positive trade balance has led to insufficient attention being paid to the risks that threaten Europe's competitiveness. He went on to acknowledge that other regions of the world are no longer playing by the rules and are actively devising policies to enhance their competitiveness. At best, these policies are designed to re-direct investment towards their own economies at the expense of their competitors. The USA, for example, is implementing large-scale industrial policy measures to attract highvalue manufacturing capacity activities, including those of European firms. Draghi emphasises that Europe has never had an equivalent to the Industrial Deal, and currently lacks an overall strategic vision in multiple key areas for its future. European economies invest less in advanced and digital technologies than the USA and China, which have consolidated their status as leaders in this area. Moreover, Europe does not have a common strategy for protecting its traditional industries on a playing field governed by asymmetric rules of the game that distort free competition between countries.

From this starting point, Draghi goes on to focus on three key areas for action. The first involves taking full advantage of the economies of scale that a fully integrated European market would allow, particularly in fields such as telecommunications, defence and health. The second entails identifying the public goods that should be financed with European funding to stimulate investment on a larger, more efficient scale, in projects interconnected such as energy grids and supercomputing infrastructures, for instance. The third area involves securing the supply of essential resources and inputs, such as critical minerals and a sufficient supply of skilled workers. Some of the core ideas highlighted by Draghi can also be found in the report coordinated by his fellow Italian Enrico Letta (Letta, 2024), who also emphasises the importance of taking advantage of all the economies of scale that would be generated by a fully integrated single market at all levels: goods, services, people, capital, ideas and regulations. In particular, Letta (2023, p,11) explicitly refers to the importance of progressing towards a true Savings and Investments Union and the need to establish a coordinated industrial policy at a European scale. Lastly, Letta underlines the strategic value of economic and business ecosystems, which are the driving force for

knowledge generation and diffusion throughout the production sector.

Objective: Promoting (and modulating) structural and technological change

Any government action with a clear strategic view of the future strives to align public policies and business strategies in order to facilitate and stimulate investment in human, industrial and technological capital in all sectors of the economy -including those that are currently more intensive in terms of medium- and lowskilled labour- as a necessary condition for achieving sustained and sustainable increases in productivity. All economic sectors have the capacity to progress along the path of incorporating more capital -especially human capital with the required skills and qualifications. "industrialisation" of construction, greater The professionalisation in hospitality, and the more intensive application of digitalisation in retail sales are some of the examples of how the dynamics of structural change can become generalised throughout the production system. However, it is important to take into account the varying impact of technological change processes on different sectors, as well as the divergent repercussions in terms of physical capital, technological and human capital in each branch of activity. Technology is never neutral, and public policy plays a key role in ensuring that the "creative destruction", as a necessary driver of structural change, generates as much creativity and as little destruction as possible (Acemoglu, 2024).

"Reindustrialisation" –in the broadest sense of the term, applicable to all activities that generate added value based on human, industrial and technological capital–, must be the main driving force of the transformation of the production model, but this will only be possible if Spain successfully tackles the challenge of training, retaining and attracting talent. It is vital to start by making professional training a more effective instrument aligned with the needs and possibilities of the kind of companies that make up the economic fabric of the country. It is also necessary to continue reducing the school dropout rate, which remains high, as well as building stronger links between the worlds of work and education and promoting lifelong learning.

Public policy must also take into account the crucial role played by economies of agglomeration and specialisation in economic development. The Spanish economy has large business ecosystems that comprise a



cross-cutting diverse set of activities at all stages throughout the value chains, ranging from infrastructures and manufacturing right through to distribution and logistics, the provision of complementary technical, commercial and professional services. Key examples include areas such as mobility (encompassing everything from transport infrastructures to vehicles and multimodality), health (from the chemical and pharmaceutical industry through to medicine and biotechnology), energy (from building power plants to energy infrastructures and developing renewables) and food (from production to hospitality and gastronomy as a lifestyle), to name just a few

An initial general recommendation for economic policy with a view to promoting the development of these ecosystems would be to simplify the administrative processes that hinder business dynamism and discourage investment at a European, state, regional and municipal level. However, in a fragmented world in which strategic behaviours predominate and economies of scale and agglomeration are more important than ever, the public sector has to go further and proactively commit to facilitating, driving and, if necessary, complementing all investment projects with an industrial vocation (in the broadest sense of the term) and a long-term horizon, aligned with the strategic goals of sustainable growth. However, rather than a policy exclusively focused on public spending and planned vertically by the administration, business ecosystems have to be more involved in defining and applying public policies in favour of the production system. Administrations, local communities and companies share the same challenges, and tackling the successfully will require a high degree of coordination and consensus between all the parties.

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