

Manufacturing Industry

Sector Report

2021

The resurgence of industry
after the pandemic

An overview
of Spain's
manufacturing
industry

The manufacturing
industry during
the pandemic

Spain's automotive
industry: strategic
and undergoing
a transformation



SECTOR REPORT **Manufacturing Industry 2021**

The *Sector Report* is a publication produced by CaixaBank Research

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Summary

2021



02 AN OVERVIEW OF SPAIN'S MANUFACTURING INDUSTRY

The Spanish manufacturing sector is characterised by its high productivity, diversification and orientation towards exports. Company growth must be encouraged in order to boost competitiveness and the technological transformation, progressing towards a sustainable industrial model.



11 THE MANUFACTURING INDUSTRY DURING THE PANDEMIC

The sector has relatively successfully overcome the crisis, whose effects were intense but disparate depending on the branch of activity. The outlook is favourable for a sector that will be supported by investments under Spain's Recovery, Transformation and Resilience Plan.



23 SPAIN'S AUTOMOTIVE INDUSTRY

The automotive industry is key to the Spanish economy and a global benchmark but it was badly hit by the crisis. The sector's technological transformation towards electrification is essential in order to hold onto its privileged position.

«I don't spend my time pontificating about high-concept things; I spend my time solving engineering and manufacturing problems»

ELON MUSK



Manufacturing Industry

SPAIN'S MANUFACTURING INDUSTRY AND THE AUTOMOTIVE SECTOR

The industry suffered a severe setback in 2020 but the data reveal a rapid recovery, awaiting the impact of European funds and with the automotive industry as a benchmark and driver of technological transformation

SUPPLY

THE MANUFACTURING INDUSTRY PLAYS AN IMPORTANT PART IN THE ECONOMY

IN GVA **11.2%** EXPORTS OF GOODS IN 2020 **€232 MILLION**

EMPLOYMENT **10.4%**

Average annual growth was similar to that of the economy as a whole **before the pandemic** (2014-2019): **2.6%** per year

A big knock-on effect: for every extra euro in manufacturing output, **total output** increases by an **ADDITIONAL 1.1 euros**

Highly atomised business fabric: **MORE THAN 80%** are **microenterprises**

THE MOST IMPORTANT SECTORS:

AGRIFOOD **18.8%** OF MANUFACTURING GVA

AUTOMOTIVE **12.7%**

SITUATION

IMPACT OF THE PANDEMIC PENDING THE NGEU

The fall in GVA in S1 2020 exceeded the fall in GDP **-28.5% vs. -22.2%**

But the recovery was faster **-3.7% vs. -8.6%** at year-end 2020

OPTIMISM IN THE LABOUR MARKET: **2.1%** OF WORKERS **FURLOUGHED** IN APRIL

Mostly **PARTIALLY 40%**

The **worst hit** by the crisis: **TEXTILE, AUTOMOTIVE AND BEVERAGE SECTORS**

In contrast to: **FOOD, CHEMICALS AND PHARMACEUTICALS**

Exports and the NGEU funds will drive manufacturing's recovery in 2021

AUTOMOTIVE INDUSTRY

A KEY SECTOR UNDERGOING A TRANSFORMATION

Spain is a **global benchmark** for vehicle manufacture:

2ND PRODUCER in Europe **8TH PRODUCER in the world**

IT CONTRIBUTES **8.5%** OF GDP (11% with ancillary activities) **9%** OF EMPLOYMENT (1.8 million employees)

HIGHLY AUTOMATED **1,000 INDUSTRIAL ROBOTS PER 10,000 EMPLOYEES**

More than 80% of the vehicles manufactured are for export and **the balance of trade is very positive** **1.1%** GDP IN 2020

THE SECTOR IN 2020 **-19.6%** PRODUCTION **-32.3%** REGISTRATIONS **-15.5%** EXPORTS and up to **27%** OF ITS EMPLOYEES WERE FURLOUGHED

Technological transformation towards **electric vehicles:** production should be close to **1.5 million** IN 2030

Executive summary

The resurgence of industry after the pandemic

The arrival of the pandemic was a severe blow to a sector that was already going through a delicate situation due to trade tensions and disruptions in the automotive industry at a European level. The fall in manufacturing activity in Q2 2020 was sharper than the decline in the economy as a whole, although its subsequent recovery was more vigorous. Some sectors, such as textiles, footwear and beverages and even automobiles, were hit hard and are recovering more slowly, while other sectors, such as pharmaceuticals and food, were hardly affected at all. The lifting of restrictions, progress made with vaccinations and reduction in uncertainty will help to revive consumption and flows of international tourists, all of which are vital to our economy, and this in turn will support manufacturing.

But this is not a return to normality, to how products used to be manufactured. Manufacturing was already going through a far-reaching transformation, the fourth industrial revolution (or Industry 4.0), which involves extensive changes to production processes, from adopting new digital technologies (the internet of things, big data and cloud computing, to name just a few) to a new wave of factory automation, installing digitally-connected robots equipped with artificial intelligence (smart factories).

The pandemic may represent a turning point for manufacturing and accelerate some underlying trends that were already in operation in recent years. Firstly, new technologies make it easier to bring production centres closer to the end consumer, shortening supply chains. Secondly, it is essential to improve energy efficiency to ensure the business model is sustainable in the medium term. To promote these far-reaching changes, the green and digital transition of industry, it is important for the public and private spheres to be

able to collaborate readily and effectively, as well as extensive financing being available, and in this respect the European Next Generation EU funds will be an important point of support.

The Spanish economy has a manufacturing sector that is ready and able to take on this challenge. Manufacturing companies enjoy high labour productivity and are remarkably export-oriented: around 40% of the manufacturing sector's sales are for export, demonstrating the competitiveness of Spanish companies in the global arena. However, their small size compared with their European counterparts is a factor that may limit the ability of these companies to make the large investments required, including in technology. Specific support for SMEs is therefore vital, while an environment conducive to business growth must also be created.

Special mention should be made of the automotive industry and this is addressed in the last article in this report. The automotive industry capitalises on the challenges of technological transformation and adaptation to new environmental requirements, more so than any other sector. The pandemic is likely to help speed up the transition to more sustainable forms of mobility, such as electric cars, a development to which Spain's first Strategic Economic Recovery and Transformation Project (PERTE) will contribute.

Finally, we should not underestimate the significant positive synergies that can also be encouraged by industry's green and digital transition in the rest of the economic sectors, as well as in society as a whole. Consequently, the development of a new growth model for the Spanish economy based on innovation, productivity and sustainability depends, to a large extent, on its capacity to carry out these transformations.



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Company structure

An overview of Spain's manufacturing industry

The Spanish economy has a diverse, export-oriented and highly productive manufacturing sector. However, the business fabric is still highly fragmented compared to German industry, a European benchmark. Increasing company size and the productivity of companies, through investment in R&D and adopting new digital technologies, and moving towards Industry 4.0 are key in the increasing competitiveness of a fundamental sector for the economy and for the Spanish foreign sector. The sector must also evolve towards a more sustainable industrial model: only companies that successfully undertake the energy transition will be able to compete in a new environment in which sustainability will be a prerequisite for continuing to operate in the market.

The importance of the manufacturing industry for Spain's economy as a whole

Going back two decades, we can see that the manufacturing industry occupied an important position in the Spanish economy as a whole. However, from 2000 onwards, as was already happening in most advanced countries, it went through a very sharp decline that worsened during the Great Recession (2008-2013).¹ Specifically, between 2000 and 2014, 41% of manufacturing jobs were lost in Spain (1.16 million fewer employees) and, in relative terms, employment in the sector went from representing 17.8% of the total in 2000 to 10.4% in 2014. The decline in terms of gross value added (GVA) was also considerable (-11% in real terms between 2000 and 2014) but notably less than that of employment,² reflecting the significant gains in productivity achieved during this period (+3% per year per employee over the 14 years). Industry is precisely the sector that is most likely to reap the benefits of technological change: the automation and digitalisation of production processes boost labour productivity and make it possible to produce much more with the same number of workers.

The relative weight of manufacturing in the Spanish economy has remained fairly stable since 2014, after going through a sharp decline in the 2000s

① The deindustrialisation occurring in advanced countries can be explained by several factors, including productivity gains derived from technological advances as well as the offshoring of part of production with globalisation and the expansion of global value chains, the tertiarisation of advanced economies and also the subcontracting (or outsourcing) of certain services that were previously performed by manufacturing companies themselves but are now included in the service sector. For more details, see the «Industry 4.0» Dossier published in the *Monthly Report* of November 2016.

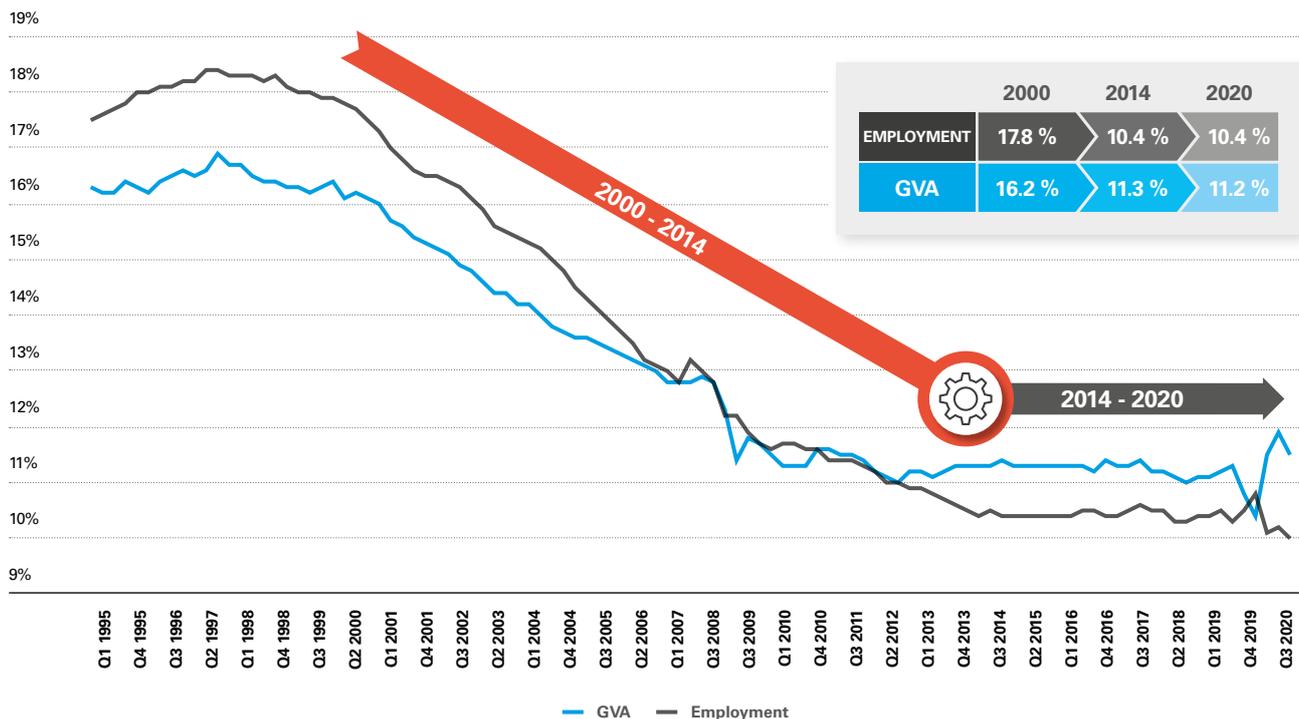
② The relative weight of manufacturing GVA fell from 16.2% in 2000 to 11.3% in 2014.

During the period of economic recovery after the global financial crisis, namely between 2014 and 2019, manufacturing grew at an average rate of 2.6% per year in real terms, very similar to the growth of Spain's economy as a whole, so that its relative weight in the economy as a whole remained stable, contributing around 11.2% of GVA and 10.4% of total employment.³

③ Average between 2014 and Q1 2021.

Share of the manufacturing sector

Out of total (%)



Source: CaixaBank Research, based on data from the National Statistics Institute.

The contribution made by manufacturing goes beyond its own production volumes. On the one hand, the sector has a significant knock-on effect on the rest of the sectors in the economy: Estimates based on input-output tables suggest that an increase of 1 euro in manufacturing output generates an increase in the economy's total output of an additional 1.1 euros (indirect effect). Manufacturing also has a positive impact on the trade balance: 39% of the sector's sales go abroad (27.5% to the EU and 11.3% outside).⁴ However, in addition to its economic impact, the industrial sector also plays a fundamental role in technological progress due to its high innovation intensity⁵ and the fact that it promotes the spread of technology to other business sectors and, in general, to society as a whole. These positive synergies generated by industry strengthen the case for a new industrial policy in advanced countries that promotes the development of a competitive and sustainable industrial sector.

④ Data from the National Statistics Institute (Industrial Structural Survey, 2018).

⑤ Innovation intensity (measured as expenditure on innovative activities as a percentage of turnover) in manufacturing is 1.6% compared to 1.1% for all companies. Data from the National Statistics Institute (Business Innovation Survey, 2019).

The manufacturing sector generates many positive synergies for the economy: it creates stable, good quality jobs, a reflection of its high productivity, and helps to spread technology throughout society



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Industry also generates stable, good quality jobs: 73% of those employed in the sector have been working in their current job for three years or more (compared to 69% in the economy as a whole), 17% of those employed in manufacturing have temporary contracts (compared to 24% in the economy as a whole) and workers in the sector earn wages that are 16.4% higher on average than in the economy as a whole.⁶ These better working conditions are not detrimental to company competitiveness; in fact they are associated with high levels of labour productivity. In fact, labour productivity in manufacturing is 42% higher than in the economy as a whole.⁷

Company size and productivity

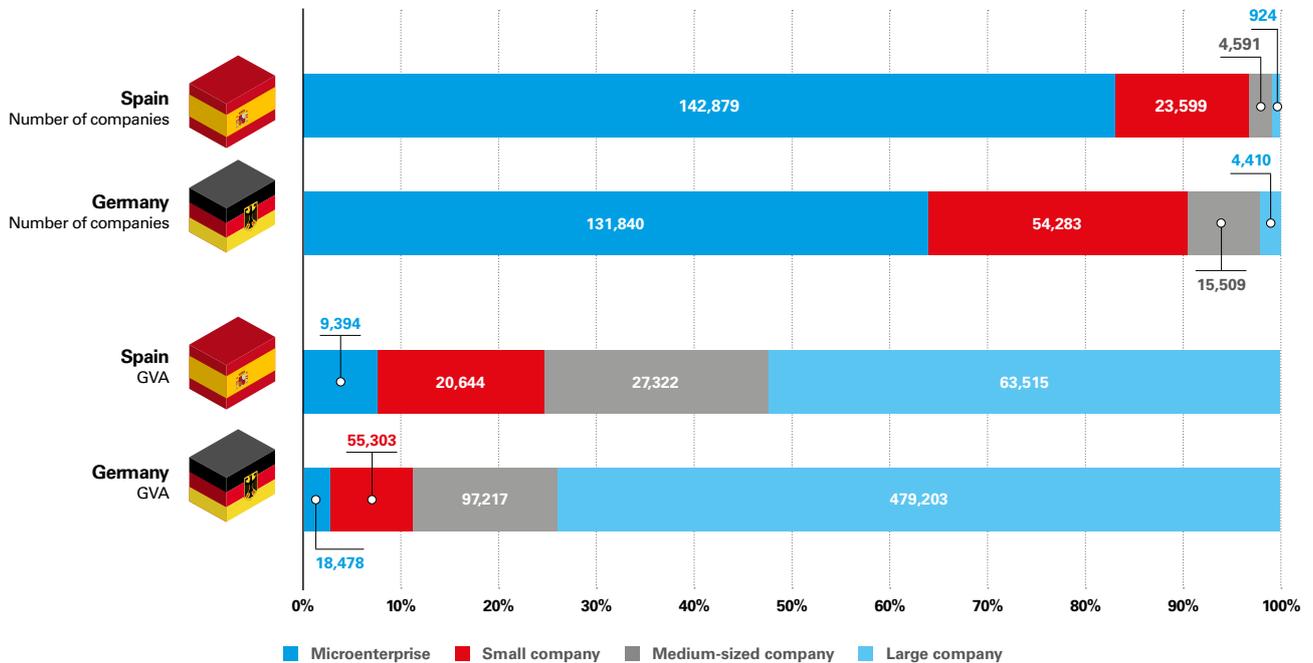
Manufacturing companies have a larger average size than in other sectors. In particular, 0.5% of companies in the sector are large (250 employees or more) compared to 0.1% of the total economy.⁸ However, an international comparison shows that the average size of Spanish companies is smaller than in Germany, an industrial benchmark for Europe, which has a 2.1% share of large manufacturing firms. These differences in the share of larger companies may seem small but they become amplified when the comparison is made in terms of value added: In Germany, large companies account for 74% of manufacturing GVA compared to 53% in Spain.

⁶ Data from the National Statistics Institute (EPA and ETCL, 2020).

⁷ This difference in labour productivity between manufacturing and services is commonly observed in OECD countries as a result of services being more labour-intensive.

⁸ Data from Eurostat (Structural Business Statistics, 2018).

Small firms dominate the manufacturing sector but large firms add more value



Note: The size of a company is defined according to the number of employees: micro (less than 10), small (10 to 49), medium (50 to 249) and large (more than 250).

Source: CaixaBank Research, based on data from Eurostat (Small Business Statistics, 2018).

Large companies are more productive, making them strong enough to compete in a globalised environment

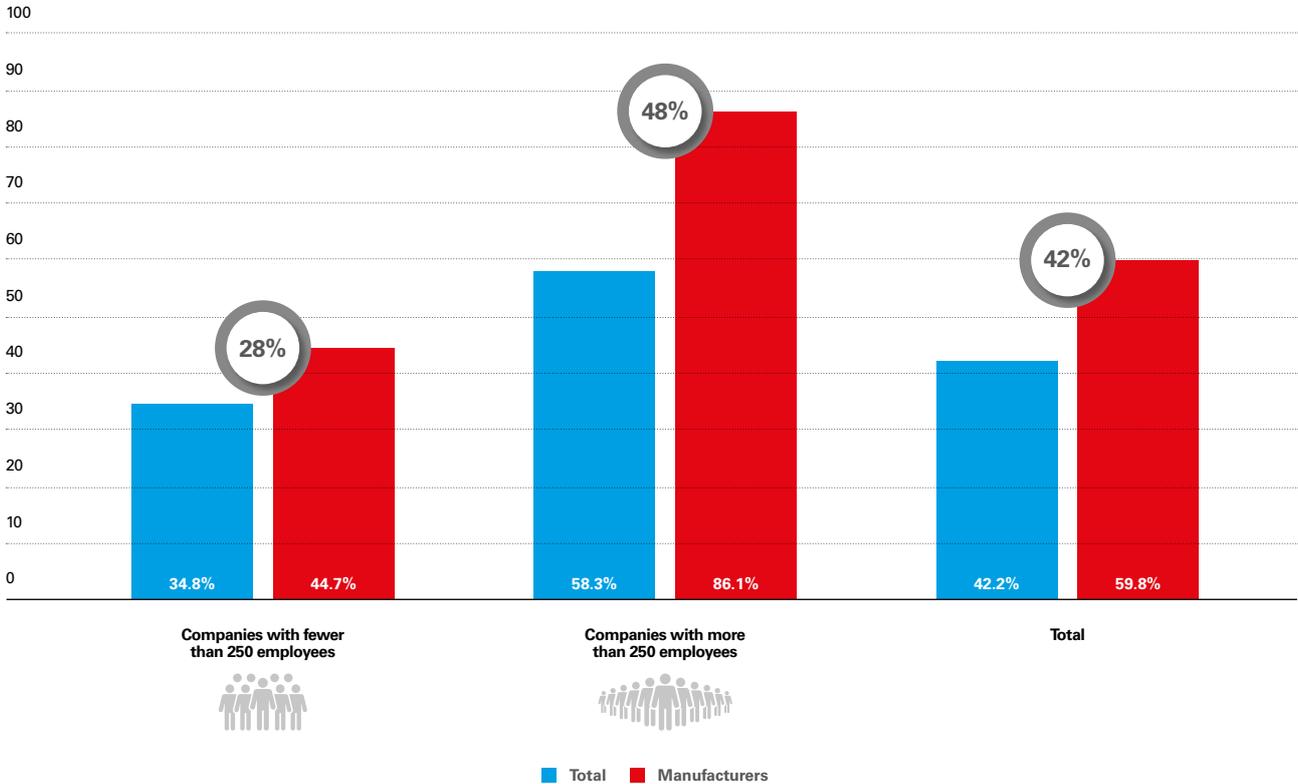
Company size matters because it is directly related to productivity: manufacturing companies with 250 or more workers are 48% more productive than small and medium-sized enterprises (SMEs) and, coincidentally, also 48% more productive than large companies in the economy as a whole. Consequently, one of the main challenges facing Spanish industrial companies is to increase their size, as this helps them to make the most of economies of scale, to access various sources of financing, invest in R&D and enter international markets. Spanish industry, therefore, would benefit from a process of consolidation that would increase the size of its companies. Other alternative formulas that make it possible to take advantage of synergies between companies are also positive, such as the concentration of the activity in a certain sector within the same geographical area, thereby generating industrial ecosystems and technological clusters.



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Spanish manufacturing companies are more productive than the total, especially large ones

Gross value added per employee (thousands of euros)



Source: CaixaBank Research, based on data from Eurostat (Small Business Statistics, 2018).

Going into more detail: the different branches of manufacturing

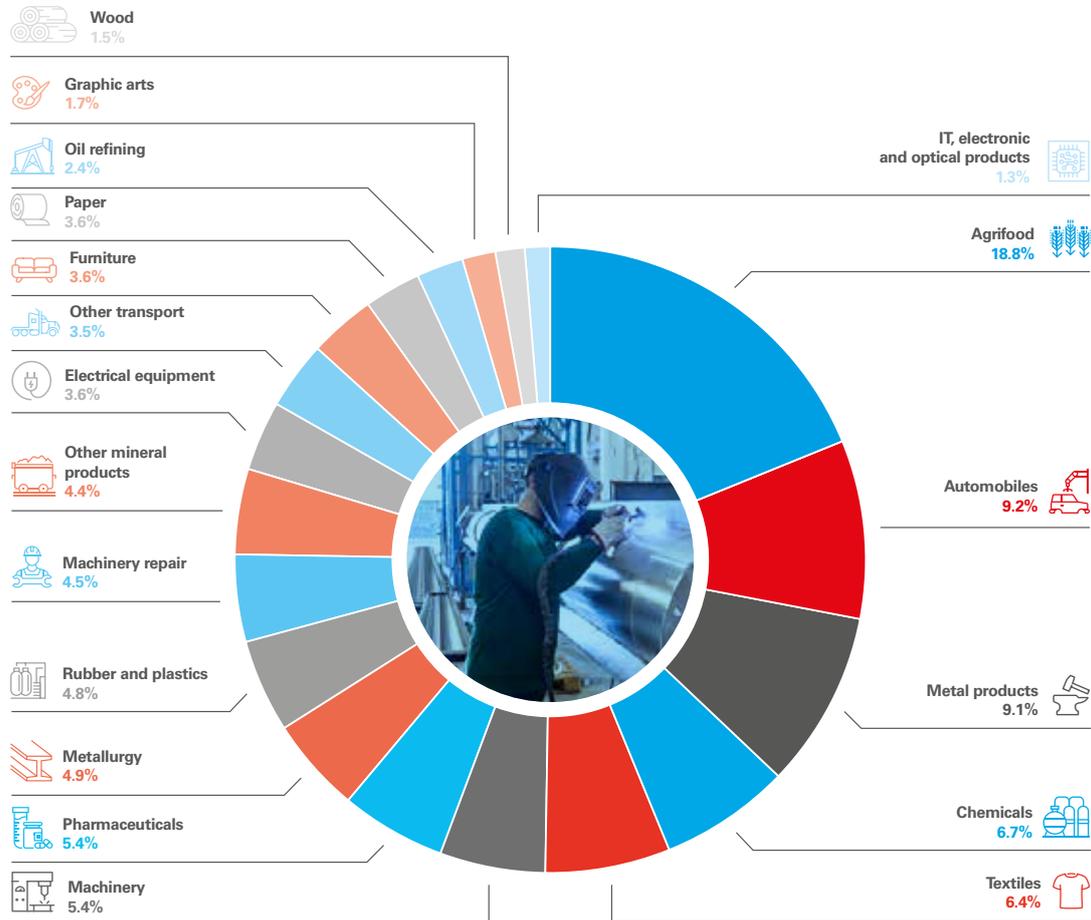
The manufacturing sector encompasses a wide range of activities,⁹ most significantly the agrifood industry (18.8% of manufacturing GVA), the car and other transport industry (12.7%) and the chemical-pharmaceutical industry (12.1%). At a geographical level, different production specialisation can be seen in different autonomous regions, although a common factor is the agrifood industry, which is in the top 3 manufacturing branches in all regions. Navarra, La Rioja and the Basque Country are the most industrial regions, as in all manufacturing's share of the region's GDP is over 20%, compared to 12.3% for Spain on average. On the other hand, Catalonia was the Autonomous Community that contributed the most to the national total (25.1%), followed by the Community of Valencia (11.4%).

⁹The manufacturing sector includes 24 industrial branches (NACE codes 10 to 33).

Spain's manufacturing sector is characterised by concentration in certain branches of activity, in which the agrifood industry stands out with a presence throughout the country, followed by the automotive industry and the chemical-pharmaceutical industry

GVA by branch of activity in the manufacturing sector

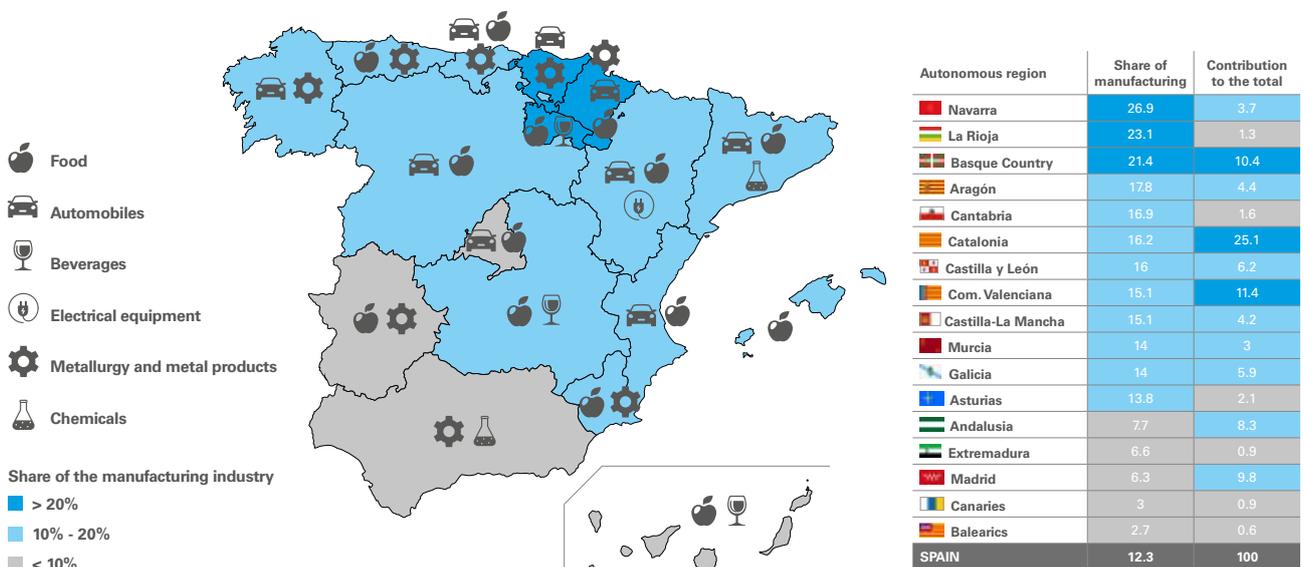
Out of the total manufacturing industry (%)



Note: Data from 2018.

Source: CaixaBank Research, based on data from the National Statistics Institute.

Production specialisation by autonomous region



Source: CaixaBank Research, based on data from the National Statistics Institute (2018).



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This diversity in manufacturing activities is also reflected in productivity, with very different levels across the different manufacturing branches. It is not surprising that pharmaceuticals, with 77% of the firms carrying out innovative activities, is by far the industry with the highest labour productivity (110,550 euros per worker per year). This is followed by chemicals (with a productivity of 94,400 euros) and beverage production (94,100 euros). In the latter case, however, the proportion of firms carrying out innovative activities is more or less in the lower range (28%).

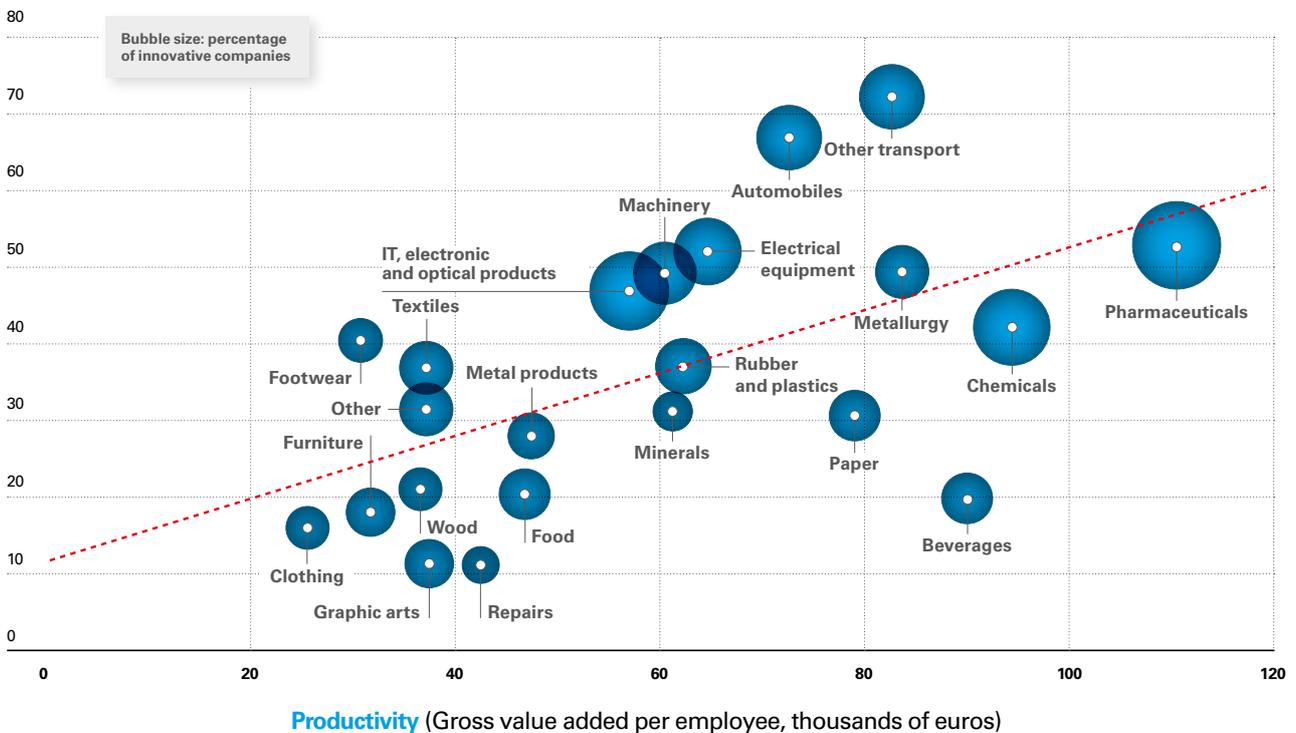
Export capacity, measured by the share of production destined for export, varies significantly from one industrial branch to another. The most open sector internationally is automobiles: 70% of the sector's sales are via exports (58% to EU countries plus 10% outside the EU), indicating this sector's high degree of integration in global value chains. This is followed by pharmaceuticals (53% export sales), electrical products (52%) and metallurgy (49%). In total, exports of manufactured goods peaked at €260 billion in 2019 (accounting for 20.9% of GDP).

The chart below shows a positive relationship between the share of export sales by the manufacturing branches and their productivity, which is largely linked to the degree of innovation of the companies in the sector (represented in the chart by the size of the bubbles). It is important to note, however, that not all differences in export performance across industries necessarily reflect differences in productivity. Some sectors, such as the food and beverage industry, allocate 80% of their production to the domestic market but they also sell their products very competitively in international markets (Spain is the seventh largest exporter of agrifood products in the world).¹⁰ That said, the sector must also satisfy domestic demand and, in addition, some products have low added value or transport costs are particularly high, making it a sector that is more dependent on domestic sales.

¹⁰ See the «Agrifood Sector Report» (2020).

Innovation, productivity and internationalisation: a winning combination

Sales abroad (%)



Source: CaixaBank Research, based on data from the National Statistics Institute (2018).

The future of manufacturing lies in the green and digital transition

Spain's industrial fabric is powerful enough for manufacturing to take off again, but the future is not set in stone. The sector is going through a new industrial revolution, Industry 4.0, which involves a far-reaching transformation of production processes, from adopting new digital technologies (the internet of things, big data or cloud computing, to name but a few) to a new wave of factory automation, with digitally connected robots equipped with artificial intelligence (smart factories).

So how is Spain's manufacturing industry performing in these areas? In terms of digitalisation, Spanish manufacturing companies have a similar degree of adoption to the European average but the gap with respect to the leading countries widened between 2015 and 2020. This is particularly true among SMEs, so there is plenty of scope for smaller companies to take greater advantage of the huge potential offered by new digital technologies.¹¹

With regard to automation, Spain has similar levels of automation to those of its main rivals (a density of 191 robots installed per 10,000 workers in the manufacturing sector, above the European average of 114),¹² but the speed of growth in this area in recent years is not enough for the country to catch up with the leading economies in our immediate vicinity, as is the case of Germany.¹³

¹¹ See the article «Spain in the digital race» published in the Dossier of the *Monthly Report* for March 2021.

¹² International Federation of Robotics.

¹³ See the Focus «Automation: a race we are not devoting enough effort to» published in the *Monthly Report* of April 2021.



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New digital technologies and robotisation promote the reindustrialisation of advanced countries

The advances made in these two areas, digitalisation and automation, will be key to bringing back to advanced countries part of the manufacturing production that had been offshored to emerging countries. While some of the forces that have led to the deindustrialisation of advanced economies in recent decades will continue to have an effect (such as the tertiarisation of economies), it is possible the offshoring trend will give way to one of reshoring. A trend that could accelerate in the wake of the current health crisis, as it has highlighted the limitations and fragility of relying on overly dispersed global value chains.¹⁴ The pandemic is also making a large number of firms rethink the need to locate factories closer to the end consumer. This would also make production more flexible, shorten time-to-market, enhance customisation and adaptation to the tastes and preferences of different consumers and lower transport costs and pollutant emissions.

¹⁴ See the article «Digitalisation and automation: what will we produce tomorrow?» published in the Dossier of the *Monthly Report* of March 2021, and the article «How COVID-19 will change the way we produce» published in the Dossier of the *Monthly Report* of May 2020.

Only companies that successfully undertake the energy transition will be able to survive in a new environment in which the sustainability of the business model will be a prerequisite to continue operating in the market

In this respect, it is essential the manufacturing sector undertake this digital transformation at the same time as evolving towards a more sustainable production model; i.e. the green transition and digital transition must go hand in hand. In fact, some experts are already talking about the green neo-industrialisation of advanced countries to underline the need to promote more energy-efficient production models that include circular economy criteria.¹⁵ The European Next Generation EU funds are emerging as a major lever to support the green and digital transformation of industry.

¹⁵ The manufacturing sector was responsible for 31.7% of the total greenhouse gases emitted by Spanish industry in 2019.

Situation and outlook

The manufacturing industry during the pandemic

Although manufacturing is not among the sectors hardest hit by the crisis, the COVID-19 shock occurred within a context of a prolonged weakness in the sector, not only in Spain but in Europe as a whole. After the initial harsh adjustment, brief and uneven across the various branches of activity, the sector quickly picked up again, approaching its pre-pandemic levels of activity and employment. The outlook for 2021 and 2022 is favourable, driven especially by exports and the investments made via the Recovery, Transformation and Resilience Plan (RTRP). Recent disruptions in global supply chains, caused by global transportation bottlenecks and component shortages, will have a limited, temporary impact.

Overview of the crisis so far

The crisis caused by the COVID-19 pandemic shattered the global economic and financial scenario in 2020. In just two months (March and April), the strict lockdowns and stoppages adopted to halt the spread of the virus caused an unprecedented shock in the world's major economies, with GDP plummeting in Q2 2020. This was followed, however, by a strong rebound as the health crisis was brought under control and lockdown measures were lifted. Nevertheless, after the summer the recovery gradually lost momentum against a background of successive outbreaks, once again forcing restrictions on activity for a large proportion of services in the main developed economies. As a result, in 2020 we witnessed a recession that is historic in its intensity – the most severe since the Second World War – but also in its brevity.





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In Spain, the extraordinary measures adopted to contain the spread of the virus limited people's movements and paralysed a large part of production, resulting in a record decline in GDP in the first half of the year (-22.2% compared to the end of 2019). The gradual lifting of restrictions allowed a phase of reactivation to begin, albeit incomplete and asymmetric across the different regions and sectors, so the year ended with a 10.8% drop in GDP, making us one of the worst hit countries in our environment, for several reasons. On the one hand, at the beginning of the crisis the effects of the pandemic were relatively more unfavourable and restrictions harsher in Spain. On the other hand, the large share of tertiary activities has also played an important role, especially those related to tourism (hotels, restaurants, leisure and transport), which are very labour-intensive and depend to a larger degree on social interaction, as well as some of the characteristics of our manufacturing industry, such as the large number of temporary workers and small company size.

Containment measures due to COVID-19 outbreaks and adverse weather conditions marked the close of 2020 and the beginning of 2021

As expected, the de-escalation and lifting of restrictions from May onwards encouraged a strong recovery in activity, boosting GDP to post 17.1% quarter-on-quarter growth in Q3 2020, a record-breaking rise. This strong upturn was largely driven by consumer spending as a large part of the pent-up demand that could not be met in the first part of the year was fulfilled. However, the downward trend over the quarter forewarned of the sharp slowdown that would occur after the summer as a result of the impact of the second wave of the pandemic, which forced the adoption of new containment measures to curb the rise in infections; as a result, GDP stagnated in the last quarter of the year and activity levels stood at 8.9% below those at the end of 2019.

The start of 2021 hasn't been any better. The impact of a third wave of the virus, with the consequent intensification of restrictions, was compounded by the Filomena weather front that caused serious mobility problems and paralysed much of the country, especially in the centre of the peninsula. GDP resumed its downward path in Q1 2021 with a slight fall of 0.5% quarter-on-quarter and the economy was 9.4% below its pre-crisis levels (Q4 2019). On a positive note, an upward trend in activity began to be observed in March and continued in the second quarter, which makes us optimistic and confident that the recovery of the economy will consolidate over the coming months. Progress in the vaccination rollout, the lifting of restrictions and reduction in uncertainty will contribute to this, which in turn will help to reactivate consumption and flows of international tourists, of vital importance to Spain's economy. We should also add the positive impact provided by the implementation of projects linked to the Next Generation EU (NGEU) funds.

CaixaBank Research's GDP growth forecast remains at 6.0% for 2021 and 4.8% for 2022. Thanks to this remarkable rebound in activity, GDP could reach its pre-crisis level by 2023.

Impact of the crisis on the manufacturing sector

Europe's manufacturing industry was not doing well when the pandemic crisis erupted. To a large extent, this weakness was related to trade tensions between the US and China and the disruptions in The automotive industry, a sector immersed in a technological transformation, partly due to the need to adapt its production to the new European environmental regulations.¹⁶

¹⁶ See «Spain's automotive industry: strategic and undergoing a transformation» in this *Sector Report*, and «The difficulties of the global manufacturing sector» published in the *Monthly Report* of December 2019.

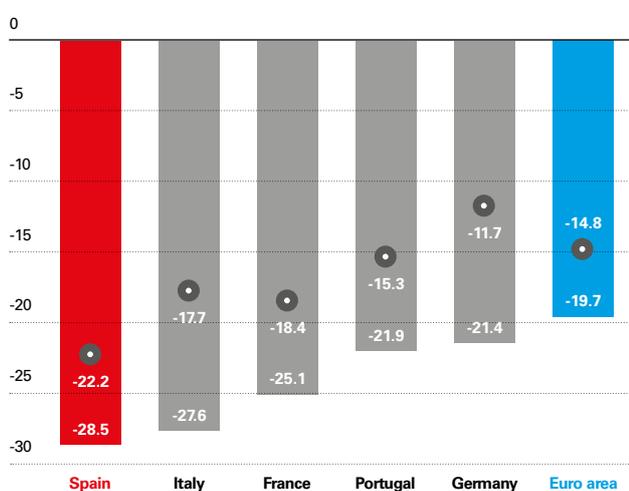
The impact of the crisis on manufacturing was stronger than on the economy as a whole, although its subsequent recovery was also more dynamic

The adjustment undergone by manufacturing in terms of GVA in Q2 2020 was sharper than for the economy as a whole, a phenomenon that was observed across the board in most European countries (as can be seen in the charts below) but which was particularly marked in Spain: manufacturing GVA plummeted by 28.5% in Q2 2020 compared to Q4 2019, outstripping the decline in GDP (-22.2%). Consequently, the sector lost relative weight in the economy as a whole in Q2 2020, contributing 10.4% of GDP, the lowest since the series began in 1995, compared to the 11.2% registered in 2019 as a whole.

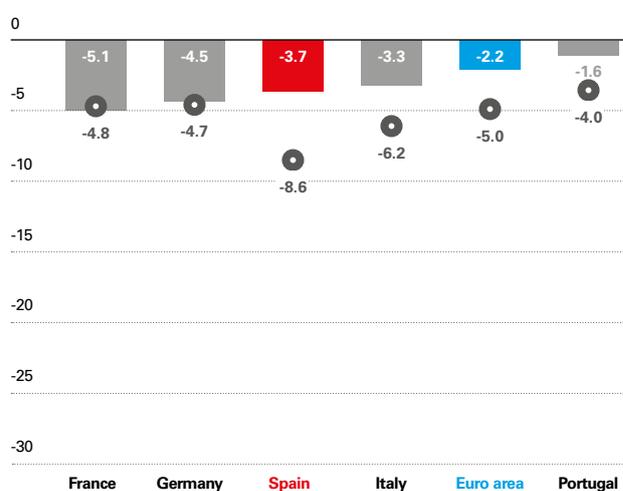
However, the sector recovered more quickly: in Q4 2020, manufacturing GVA in Spain was «only» 3.7% below its pre-crisis level, a gap that is narrower than the one recorded by its French and German counterparts. The reason for this rapid improvement was the fact that, unlike other activities that were more limited by the measures to curb the coronavirus, since May there have been hardly any restrictions to activity and, in addition, two important sales channels, exports and online trade, have remained active.

GDP and GVA of the manufacturing sector

Change Q2 2020 compared to Q4 2019 (%)



Change Q4 2020 compared to Q4 2019 (%)



■ Manufacturing ● GDP

Source: CaixaBank Research, based on data from Eurostat.



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If we compare the current crisis with that of 2008-2009, the slump in manufacturing GVA in 2020 was much greater but the exit more vigorous; in fact, in the previous recovery phase the 2007 levels were not reached by the time of the first outbreak of the COVID-19.

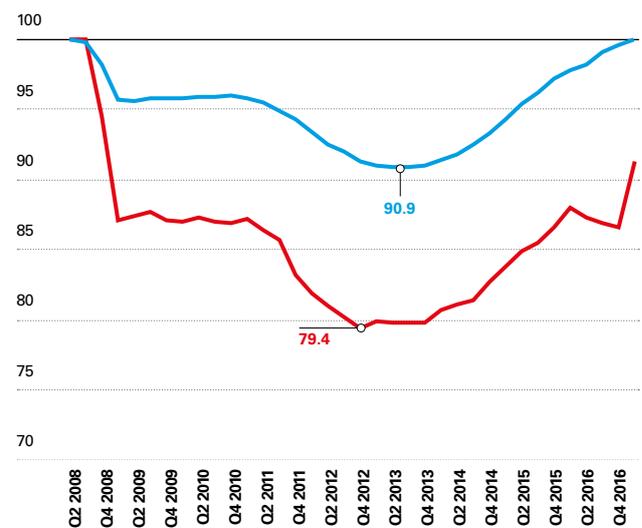
GVA manufacturers versus GDP

Level (Q4 2019 = 100)



GVA manufacturers versus GDP

Level (Q2 2008 = 100)



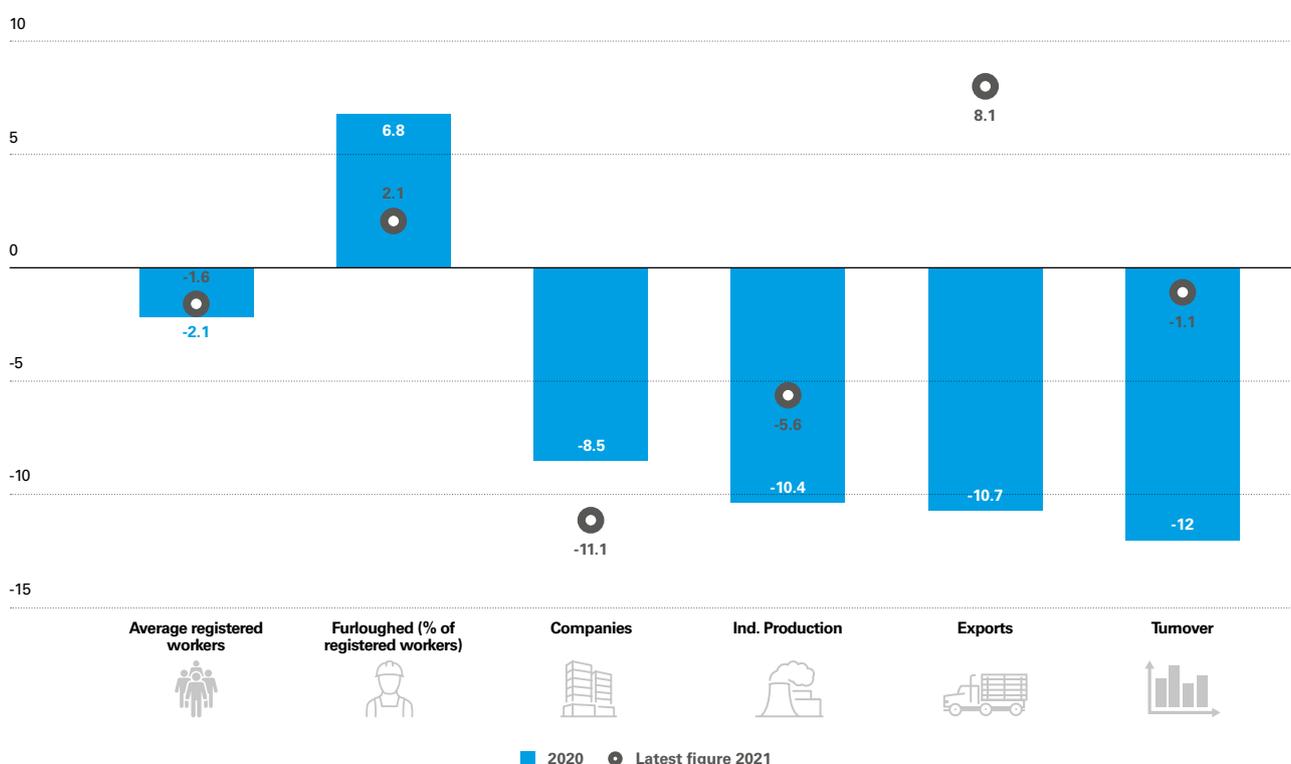
— GDP — GVA manufacturers

Source: CaixaBank Research, based on data from the National Statistics Institute.

High-frequency activity indicators show that manufacturing business has continued its recovery in the first few months of 2021. The industrial production index (IPI) shows that manufacturing has been improving and progressively approaching its pre-COVID-19 levels, albeit not without its ups and downs as a result of the restrictions adopted to deal with the successive waves of COVID-19. In March (the latest data available), the manufacturing IPI was 5.6% below its figure for March 2019, almost half the fall recorded in 2020 as a whole (-10.4%). Other activity indicators, such as turnover, show a similar trend.

Indicators of the manufacturing sector

Annual change (%)



Note: The figure from 2021 is compared to the same month in 2019.

Source: CaixaBank Research, based on data from the National Statistics Institute, Datacomex and MITRAMISS.

Impact on the labour market

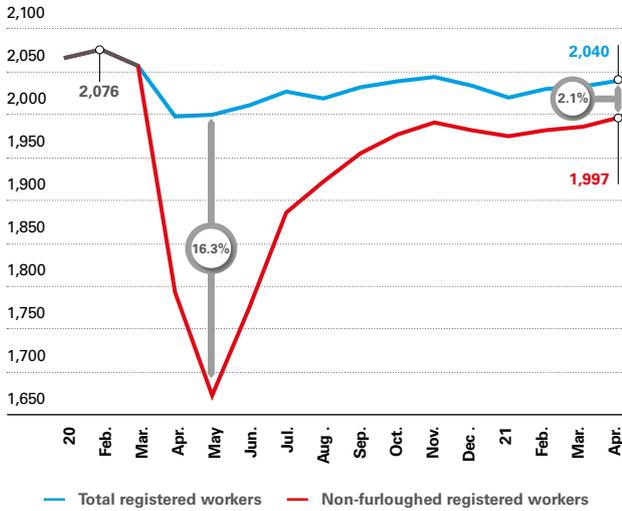
The pandemic hit the labour market very hard as the closure of non-core activities affected most manufacturing branches, with some exceptions such as the food and pharmaceutical industries. However, job losses were cushioned by the extensive use of temporary employment adjustment schemes: in the manufacturing sector as a whole, almost 327,000 workers registered with Social Security, 16.3% of the total, had been furloughed in May. Although this percentage is 3 points lower than the national figure, it hides huge differences between the different branches of activity: while in the textile and furniture industry it exceeded 30%, in the oil refining and pharmaceutical industries it was less than 2%.



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Registered workers in manufacturing

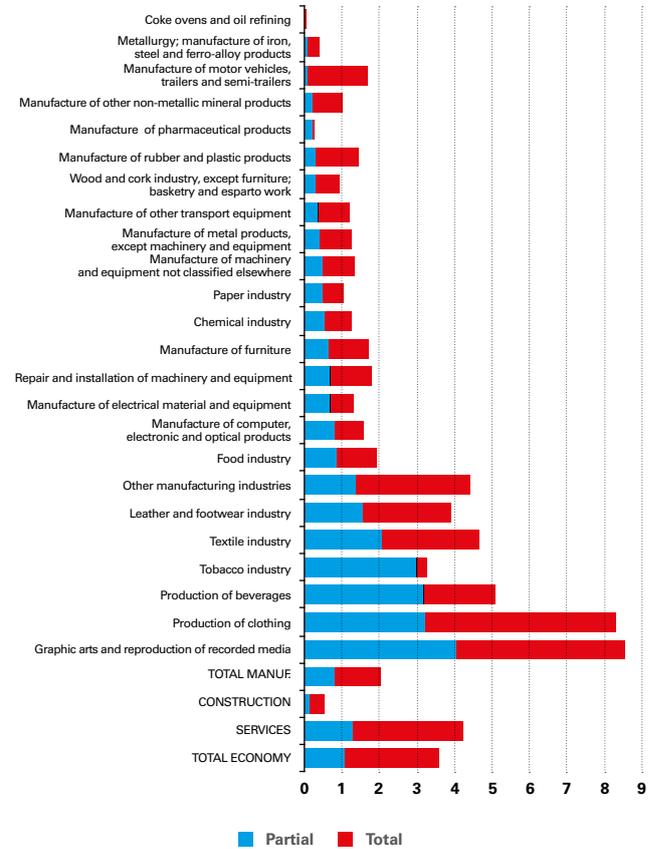
Annual change (%)



Source: CaixaBank Research, based on data from MITRAMISS.

Furloughs in manufacturing by type of suspension

Registered workers (%)



Note: Data from April.

Source: CaixaBank Research, based on data from MITRAMISS.

The outlook for maintaining employment is favourable given that the sector has a lower proportion of furloughed workers, and many of them only partly

After the second and third waves, and with the progress being made by the vaccination campaign, we are witnessing a gradual recovery in employment, albeit incomplete and uneven across the different areas of activity. In April 2021 (latest data available), 2.1% of workers were still furloughed and effective employment in the sector (total registered workers discounting those furloughed) was slightly below two million, 3.6% less than in April 2019. Only three activities (pharmaceuticals, computer products and chemicals) exceeded these employment levels, in contrast to the textile branches (clothing, leather and footwear) which were more than 20% lower.

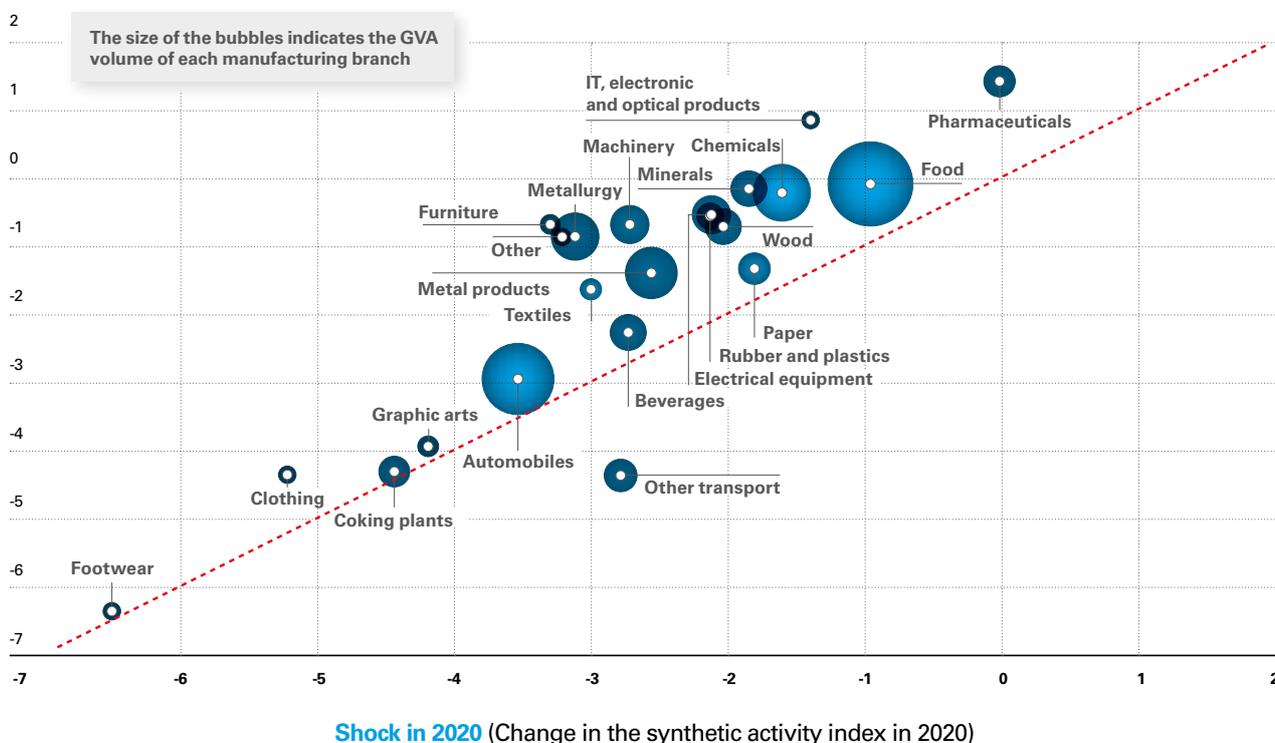
Manufacturing has not only seen a relatively low percentage of furloughs compared with the economy as a whole (3.6%) but also 40% of the cases are partial furloughs (compared with 31% for the economy as a whole), which is undoubtedly a positive sign insofar as it seems more likely that these workers will keep their jobs.

Synthetic indicator for manufacturing activity

Given the heterogeneity among manufacturing activities and the disparate signals provided by the different indicators used to analyse them, at CaixaBank Research we have compiled a synthetic index for manufacturing activity based on a principal component analysis of six indicators: (i) industrial production (IPI), (ii) turnover, (iii) number of companies registered with Social Security, (iv) employment (number of registered workers), (v) percentage of furloughed workers and (vi) manufacturing exports. This allows us to rank activities using a homogeneous measure and to find out which have been the most and least affected by the crisis, as well as how quickly the different manufacturing branches are recovering.

Synthetic index for activity in the manufacturing branches

Change in the synthetic activity index in March 2021 (compared to March 2019)



Note: The synthetic activity index in the manufacturing branches is obtained from a principal components analysis with six indicators (shares in brackets): IPI (24%), turnover (22%), number of companies registered with SS (18%), number of registered workers (14%), share of furloughed registered workers (14%) and exports (8%), in the period from January 2010 to February 2021 (last month with complete data). The sectors above the red dotted line (45 degree straight line) are the ones that have improved their position since the 2020 decline.

Source: CaixaBank Research, based on data from the National Statistics Institute, Datacomex and Ministry of Labour.

The following can be seen from the above chart, whose horizontal axis shows the average for the indicator in 2020 (i.e. the extent of the shock) and whose vertical axis indicates the recovery in March 2021:

- The textile branches (footwear and clothing) are not only the hardest hit by the crisis, they have also barely recovered (in the chart, the bubbles are very close to the straight red dotted line of 45 degrees), although it is true that their relative weight in the sector as a whole is limited (small bubbles). Restrictions, and especially lockdown, led to less demand for these goods. In this respect, the lifting of commercial restrictions, together with the savings accumulated by households and pent-up demand, invite optimism regarding the trend for these sectors over the coming months.



Manufacturing Industry



- The automotive, graphic arts and beverage industries were also hard hit and their recovery is incomplete. The automotive sector is analysed in depth in the article «The automotive sector in Spain: strategic and undergoing a transforming» in this report. In the case of the production of beverages, this was hit very badly by the stoppages in the HORECA channel. The reopening of hospitality establishments and the revival of tourism will have a positive effect on this sector.
- The food and chemical industries have been scarcely affected and are recovering rapidly. Both benefit from the fact that they supply essentials, such as food, and other products needed to combat the pandemic, namely antiseptics, disinfectants, etc.
- The manufacture of pharmaceutical products has hardly suffered from the shock as the crisis is health-related, and this is the manufacturing branch that has performed the best, followed by the manufacture of computer, electronic and optical products.

There is also a negative correlation between the size of the shock and some more structural variables, such as productivity, innovation intensity and the international openness of manufacturing branches. This suggests those branches with more innovative, productive and internationalised companies have weathered the storm better.

Textiles have been the hardest hit by the crisis, in contrast to food, chemicals and pharmaceuticals

The foreign sector is helping to cushion the downturn

Exports of manufactured goods, which account for 89% of all goods sold abroad, fell by 10.7% in 2020 to a total of 232 billion euros, breaking a decade of uninterrupted growth.¹⁷ However, in a context of plummeting domestic demand, imports fell more sharply (-12%), so that the trade deficit decreased by almost 85% to just 735 million euros, the smallest in six years.

¹⁷ According to WTO data for 2019, Spain ranks sixth in the EU and 15th in the world among exporters of manufactured goods, with a global market share of 1.8%.

Last year only exports of agrifood and pharmaceutical products managed to remain in the black

The fall in exports in 2020 was almost universal, with the exception of sales in the agrifood sector (+4.2%), pharmaceuticals (+5.6%) and, to a lesser extent, furniture and other manufacturing industries (+0.5%). At the opposite end of the scale were the automotive industry (-15.9%), textiles and footwear (-18.5%) and, above all, oil refining (-38.4%), largely due to the slump in prices.

The main destination countries were our EU partners; in particular, four of them (France, Germany, Italy and Portugal) accounted for 42% of the exports of manufactured goods: the main products came from the automotive industry in all cases, except for Portugal, which bought mainly products from the agrifood industry, especially meat products. The first non-EU destination is the US, which is in sixth place, with 5% of all manufacturing exports, while China is eighth with 3.1%: Notable in the first case are the sales of oils and, in the second, of meat products.

Exports of manufactured goods

NACE	INDUSTRIAL BRANCHES	Billion euros (2020)	Share 2020	Change 2020	Change Q1 2021*
29-30	 AUTOMOBILE AND OTHER TRANSPORTATION	52,039	22.4%	▼ -15.9	▼ -11.5
10-12	 AGRIFOOD	34,081	14.7%	▲ 4.2	▲ 15.8
23-25	 METALLURGY	29,095	12.5%	▼ -11.2	▲ 5.4
20	 CHEMICAL INDUSTRY	23,793	10.3%	▼ -11.3	▲ 2.1
26-27	 IT, ELECTRONIC, OPTICAL AND ELECTRICAL PRODUCTS	18,551	8.0%	▲ -5.7	▲ 7.8
13-15	 TEXTILES AND FOOTWEAR	17,432	7.5%	▼ -18.5	▼ -13.9
28 and 33	 MANUFACTURE, REPAIR OF MACHINERY AND EQUIPMENT	14,961	6.4%	▲ -9.5	▲ 0.3
21	 PHARMACEUTICAL PRODUCTS	12,777	5.5%	▲ 5.6	▼ 8.6
19	 COKING PLANTS AND OIL REFINING	9,352	4.0%	▼ -38.4	▼ -21.0
22	 RUBBER AND PLASTICS	8,273	3.6%	▲ -4.9	▲ 6.5
31-32	 FURNITURE AND OTHER	5,915	2.5%	▲ 0.5	▲ 8.3
16-18	 WOOD, PAPER AND GRAPHIC ARTS	5,825	2.5%	▲ -6.0	▲ -2.0
C	TOTAL MANUFACTURING INDUSTRY	232,093	100%	▼ -10.7	▲ -1.0

Note: (*) Change compared to the same period in 2019.



Manufacturing Industry

Food, IT products and chemicals have boosted exports at the start of the year

The first few months of 2021 have seen a weak but widespread improvement in manufacturing exports. However, in Q1 2021 they were still negative, posting a 1.0% drop compared to Q1 2019. On the positive side, agrifood exports continued to perform well (+15.8%), joined by those of computer and electronic products (+7.8%) and chemicals (+2.1%). On the other hand, exports of automotive, textile and footwear and oil refining products recorded double-digit decreases.

Thanks to the rapid recovery of international trade, after the collapse of goods trade in the first few months of last year, exports may become a lever for growth in 2021 and facilitate a dynamic exit from the crisis.

Ups and downs on the horizon

In a context of incipient recovery in the sector (the manufacturing PMI in April was at its highest level since 1999), some disruptions have arisen in supply chains due to bottlenecks in global transport and shortages of some components (semiconductors, microchips, metals, plastic raw materials, etc.), which could slow down production. This is confirmed by April's PMI, which indicates that business orders pending completion recorded the second strongest rise in the series, which began almost 19 years ago.

Supply-related challenges threaten the recovery for manufacturing



Firstly, the rapid and strong increase in demand for certain inputs for industry has found supply to be somewhat rigid as it has not increased at the same rate. Moreover, there has been a shortage of microchips, whose production is concentrated among a few East Asian manufacturers,¹⁸ undoubtedly aggravated by the considerable demand for electronic devices during the 2020 lockdowns but also by specific events, such as the cold snap in Texas in February, which forced production to stop, the fire in March at a Renesas factory in Japan and severe drought in Taiwan.¹⁹ As a result, the price of some materials has soared: the London Metal Exchange (LME) metals index has posted a cumulative increase of 24.9% since the end of 2020.²⁰

¹⁸ Basically, Taiwan, Korea and Japan. The Taiwan Semiconductor Manufacturing Company (TSMC) controls 60% of global production and 90% of the advanced microchip market, according to Bain&Company estimates.

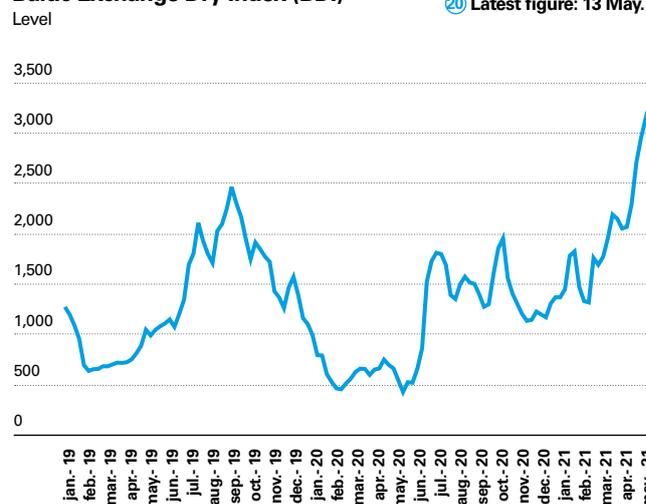
¹⁹ Large quantities of water are used in the production of semiconductors.

²⁰ Latest figure: 13 May.

London Metal Exchange (LME) Index



Baltic Exchange Dry Index (BDI)



Source: CaixaBank Research, based on data from Refinitiv.

Secondly, the recovery in international freight traffic, after the 2020 hiatus, is occurring at a time of container shortages (liners have not replenished the containers that were emptied at the start of the pandemic) and less airfreight capacity (due to the reduction in long-haul flights), resulting in longer delivery times and price tensions: the Baltic Index, an indicator of the cost of maritime transport,²¹ has more than doubled so far this year. To this situation must be added the increase in energy prices, although in the latter case there is an important base effect: just a year ago oil prices plummeted.

²¹ Index of dry bulk shipping freight rates for up to 20 key shipping lanes around the world. Latest figure: 13 May.

As a result of all of the above, production costs are tending to rise and, as a result, price tensions are appearing, both in industrial terms (the IPRI rose by 3.4% in April compared to April 2019)²² and consumption (inflation stood at 2.7% in May, the highest since February 2017).

²² The IPRI rose by 12.8% year-on-year in April, a rate not seen since 1984, due to the base year effect of 2020.

The effect of supply chain disruptions will be temporary and localised to a few activities



Manufacturing Industry



In any case, we believe this is a temporary impact, concentrated in just some activities, which should therefore not affect the outlook too much. On the one hand, the shortage of some components will affect certain activities, such as the automotive industry and, to a lesser extent, computer products, chemicals and electrical equipment, whose production chains may slow down, but without damaging the recovery of industry and the economy as a whole. For their part, transport problems can cause occasional delays, which we are confident will be overcome in the coming months.

As for inflationary pressures, these will continue over the coming months but should tend to normalise in the second half of the year as the base effect of the aforementioned oil prices fades and supply gradually adjusts to demand: in the case of metals, whose production is more diversified, supply will adjust more quickly so prices will tend to moderate in the coming months; microchip prices may take somewhat longer to get back to normal.

The outlook for the manufacturing sector in 2021 is favourable. In the short term growth may be modest and below GDP as the economy's recovery will be led by those activities that were hardest hit by the crisis, in particular trade and tourism. In the medium term, the sector's performance will be determined above all by its ability to adapt to the challenges of sustainability and digitalisation. In this respect, the ambitious Recovery, Transformation and Resilience Plan (RTRP), endowed with the NGEU funds, represents an opportunity not only to stimulate the recovery of industry but also to transform the productive fabric, through its modernisation and digitalisation.

A global benchmark

Spain's automotive industry: strategic and undergoing a transformation

The automotive industry is an important driver of growth and prosperity worldwide due to its contribution (i) in social terms, by facilitating people's mobility in an efficient, safe and affordable way, and (ii) in economic terms, as a driver of innovation, a generator of good quality jobs and a pillar of international trade. In the case of Spain, it has become a mainstay of our industry and a benchmark on a global scale, thanks to a large production capacity and high productivity resulting from a skilled workforce and a great degree of plant automation. The economic crisis caused by the pandemic has taken its toll on a sector that is in the midst of a technological transformation towards electrification. A necessary transition that will be strongly supported by the Next Generation EU (NGEU) funds.

Motor vehicles, a strategic sector

With almost 2.27 million vehicles manufactured in 2020, Spain is the second largest producer in Europe, after Germany, and the eighth largest in the world. At a European level, it is the leading manufacturer of commercial vehicles, the second for passenger cars and fourth in terms of components. If we compare the relative weight of the sector, in terms of GVA or exports, with that of the main producing countries in the euro area, Spain is at similar levels to France and Italy but far from the German giant. Far ahead are the Eastern European countries that have most recently joined the euro, such as the Czech Republic, Slovakia and Hungary, which are more specialised in producing vehicles thanks partly to the plants of large corporate groups being located in their countries, attracted by their skilled workforce, low labour costs and a long industrial tradition (some companies in the region, such as Skoda and Tatra, date back to the end of the 19th century).

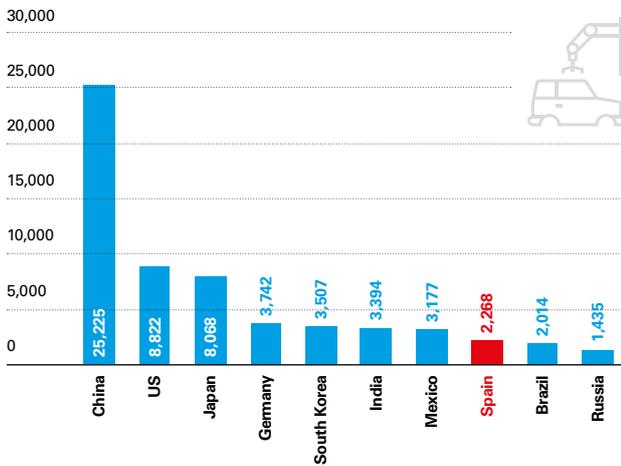




Manufacturing Industry

Major vehicle manufacturers

(Thousands)

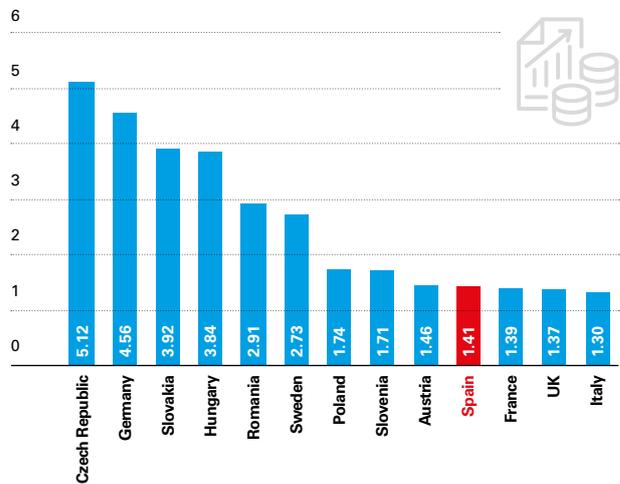


Note: Data from 2020.

Source: CaixaBank Research, based on data from OICA.

Relative weight of automotive GVA in European countries

GDP (%)



Note: Motor vehicles, trailers and semi-trailers and transport material. Data from 2018.

Source: CaixaBank Research, based on data from Eurostat.

The automotive sector plays an important role in Spain's economy as a whole: its contribution amounts to 11% of GDP if all activities related to the sector are included

In Spain, the manufacture of motor vehicles and other transport material²³ contributes 12.7% of GVA and 10.5% of manufacturing jobs, making it the second manufacturing activity after the agrifood sector (18.8% of manufacturing GVA). In addition to its direct contribution to the economy, the automotive sector also stands out for its extensive network of relationships with other activities and its knock-on effect, both economically and technologically. According to data provided by the employers' association ANFAC (National Association of Automobile and Truck Manufacturers), referring to 2019, the share of vehicle and component manufacturing amounts to 8.5% of GDP. If, in addition, we add the activities that are complementary to manufacturing (distribution and marketing, after-sales, financial services and insurance, transportation, service stations, rental and driving schools), the figure exceeds 11% of GDP. In terms of employment, this would reach 9% of workers (1.8 million), of which 66,000 are employed by carmakers (direct employment).

From the input-output tables²⁴ it can be seen that, beyond the intense intra-sectoral relations (37% of inputs and 18.7% of jobs begin and end in the sector itself), the sector also generates considerable demand for other sectors of activity (knock-on effect). In particular, intermediate consumption includes metal products (10.3% of the total), metallurgy (7.2%) and trade, both wholesale and retail (7.1% and 5.0%, respectively).

²³ Data from the National Accounting System 2018. The automotive industry includes the NACE codes 29 and 30.

²⁴ The input-output tables provide information both on the intermediate consumption required to manufacture each product and on the final destination of the product in question, whether it be end consumption, investment or exports.

The innovation and automation of production plants are key to the success of a such an export-oriented sector

The automotive sector has one of the highest rates of investment in modernisation, automation and R&D&I of all industrial sectors. Spanish production plants are among the most efficient and automated in Europe, with 1,000 industrial robots for every 10,000 employees, a figure comparable to the 1,311 robots in German plants.²⁵ Special mention should be made of the auxiliary industry (components, machinery, materials, etc.), which is highly competitive, innovative²⁶ and internationally renowned, manufactures a wide range of products and contributes more than 75% of the value of the vehicle. All this places the Spanish automotive industry among the most competitive in Europe: according to the KPMG index, it ranks third, behind only Germany and the United Kingdom.²⁷

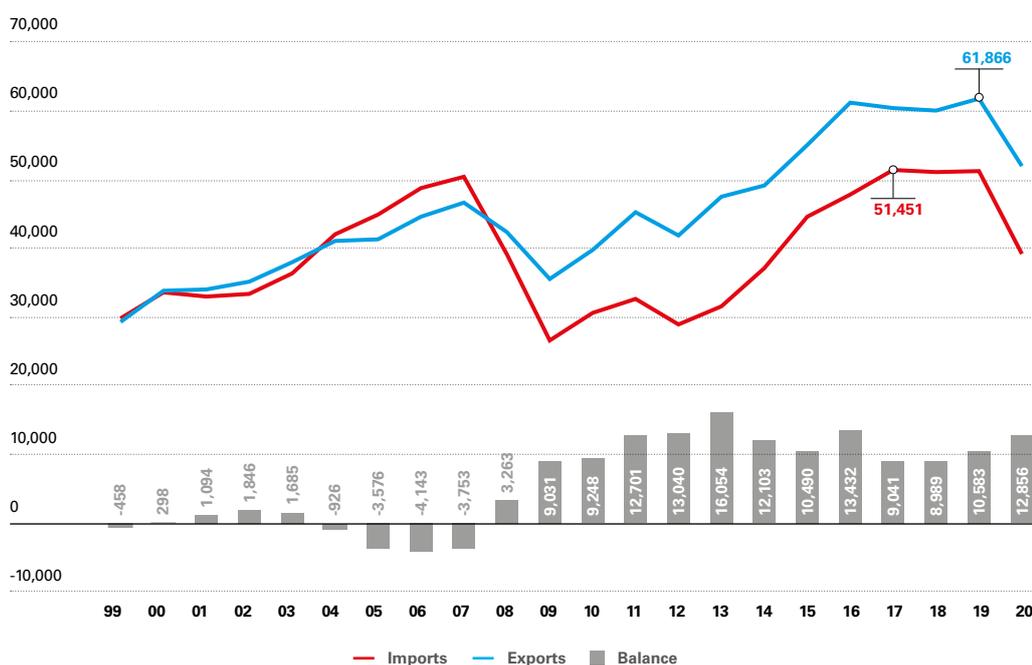
This is a strongly export-oriented sector: more than 80% of the vehicles manufactured in Spain are for export (in 2020 this figure reached 86%, very close to the record high of 2011). The propensity to export in the components segment is somewhat lower but still considerable (slightly less than 60% is exported). Exports by the automotive sector (NACE 29 and 30) totalled just over 52 billion euros in 2020, representing 19.9% of all goods exports (3.5% of GDP), far from the figures achieved at the end of the last century (28% of all goods exports) due to the greater diversification of the range of goods exported by the Spanish economy. Exports from the sector reach more than a hundred countries, although around 80% of sales go to the EU, mainly finished vehicles, while non-EU countries buy mostly components.

²⁵ Data for Spain from ICEX (2019) and data for Germany from the International Federation of Robotics (2019).

²⁶ It allocates more than 4% of its turnover to innovative activities, well above the national average (1.1%).

²⁷ *Agenda Sectorial de la Industria de Automoción*, 2017.

Automotive exports (Million euros)



Source: CaixaBank Research, based on data from Datacomex.



Manufacturing Industry

Only one in four of the vehicles sold in Spain has been manufactured in the country. The rest are imported from European countries such as Germany (25% of the total in 2020), France (12.3%) and the United Kingdom (6.4%), but also from Japan (7.3%) and Korea (4.4%). All in all, the balance of trade for the automotive sector is clearly favourable to the Spanish economy and, in spite of an international context marked by a slump in goods trade, the sector's surplus grew by 21.5% in 2020 to 12.86 billion euros, 1.1% of GDP.

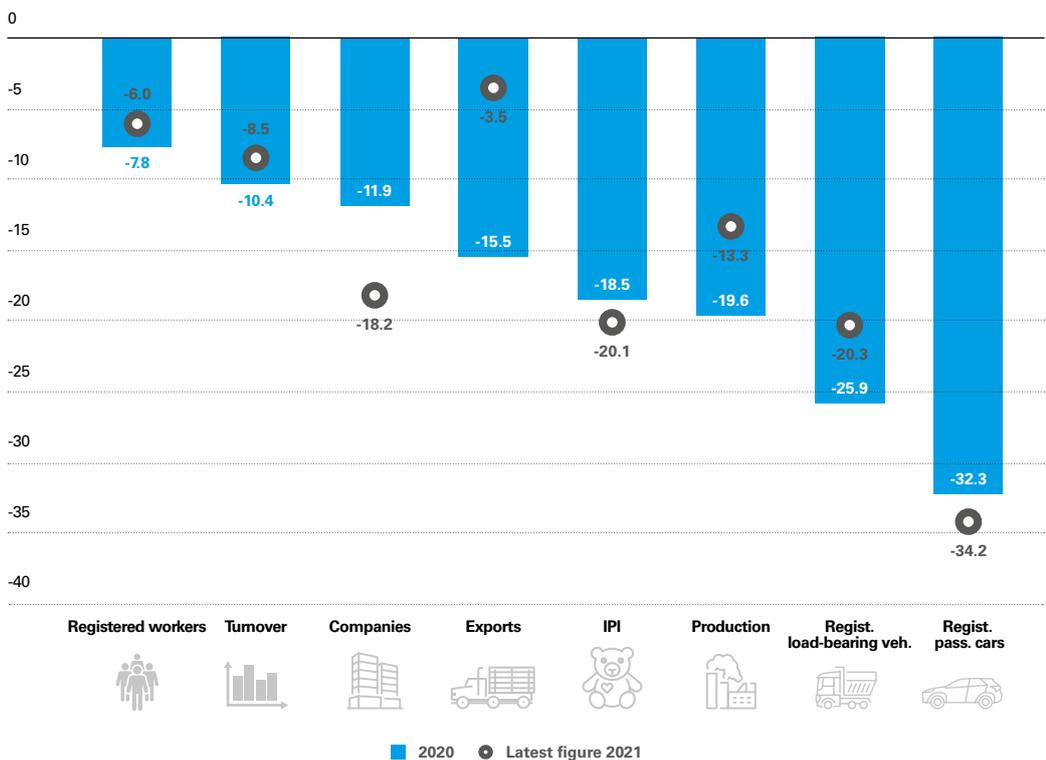
The sector has 17 vehicle manufacturing plants belonging to the world's leading automotive brands (nine of them for passenger cars and SUVs, including the closure of the Nissan plant last December), along with over 1,000 equipment and component manufacturers belonging to more than 700 corporate groups. The manufacturing plants are located in 10 different autonomous regions, so the sector is well established in the industrial fabric throughout the country. In recent years, the sector has become more concentrated, with the top five brands (Seat, Volkswagen, Peugeot, Toyota and Renault) now accounting for 37% of registrations and the top ten (Kia, Hyundai, Citroën, Mercedes and Dacia), 62.6%.

Impact of the COVID-19 crisis on the automotive sector

In 2020, the historic pandemic crisis dealt a severe blow to the automotive sector which was one of the hardest hit initially, first by global supply chain problems and then by restrictions on non-essential businesses. However, its capacity to recover, after the total stoppage in activity and demand, was greater than in other sectors.

Indicators for the automotive industry

Annual change (%)



Note: The figure from 2021 is compared to the same month in 2019.

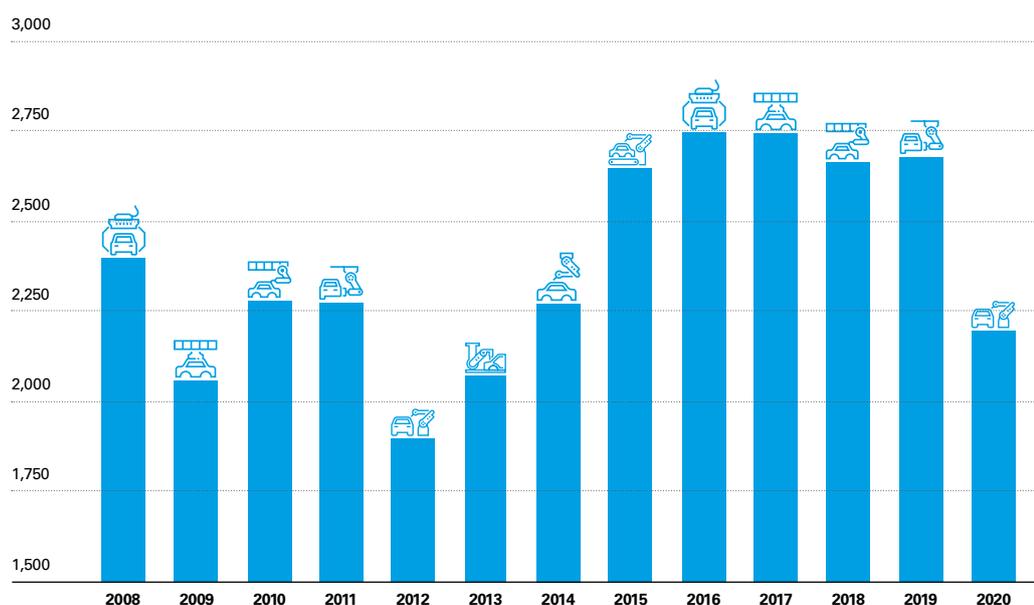
Source: CaixaBank Research, based on data from the National Statistics Institute, ANFAC and MITRAMISS.

The crisis aggravated a situation that was already delicate due to the effects of the new environmental regulations promoted at a European level. The sector's activity grew by a mere 0.1% in 2019 as a whole, a very slight improvement after falling by more than 1.0% in both 2017 and 2018.

The declaration of a state of emergency in mid-March 2020 brought the automotive industry to a complete standstill for about a month and a half. At the same time, the commercial network and dealerships were also closed; i.e. the capacity to meet the demand for vehicles was non-existent, with severe restrictions on movement and potential consumers confined to their homes, not to mention the uncertainty of the economic scenario in the short term. Consequently, all the indicators, for supply, demand and employment, deteriorated sharply in the first few months and then, with the easing of restrictions and consequent reopening of industry from May onwards, rebounded with some intensity, although the recovery at the end of 2020 was still incomplete.

Vehicles produced

(Thousands)



Source: CaixaBank Research, based on data from ANFAC.

The sector's production plummeted 99% year-on-year in April, hitting an all-time low. The subsequent reactivation, thanks mainly to foreign demand from European markets, allowed the figures posted in 2019 to be surpassed as of September. This did not prevent Spanish factories from closing the year with a reduction of 19.6%, producing a total of 2,268,185 vehicles, half a million units fewer than those manufactured the previous year. This is the lowest level of production in seven years and is 25% below the peak in 2000, when production exceeded three million. By segment, the manufacture of passenger cars, which represent 78.8% of the total, fell by 18.9%, while that of commercial and industrial vehicles fell by 18.6%; the sharpest fall corresponds to SUVs (-76.4%), although they account for just 9,094 units. In Q1 2021, vehicle production gradually picked up but very slowly (-13.3% compared to March 2019).



Manufacturing Industry

The industrial production index (IPI) shows that one of the activities hardest hit in 2020 was the manufacture of motor vehicles and other transport equipment, posting the largest decline since 2009 (-18.5%), being the industry that contributed most to the overall decrease in the IPI. In terms of turnover, the trend was similar: Despite a strong recovery in the final months of the year, even reaching double-digit growth rates, the collapse in the worst months of the crisis weighed down the year's overall balance, resulting in a cumulative decline of 10.4% in 2020. In March 2021, the sector's turnover was still 6.2% below its March 2019 levels.

The automotive industry was hit hard by the pandemic. Domestic demand plummeted and has yet to recover completely. In contrast, external demand proved to be more resilient

Domestic demand proved to be the weakest part of the sector and has not yet managed to recover from the initial impact of the pandemic. Although passenger car registrations recorded a one-off improvement in the summer months, they remained 10% to 20% below 2019 levels for the rest of the year and ended 2020 with a sharp cumulative decline, down 32.3% to 851,215, the lowest since 2013.

	PRODUCTION 2020			EXPORTS 2020		
	Units	Share (%)	Annual change (%)	Units	Share (%)	Annual change (%)
PASSENGER CARS	1,791,570	79.0	-18.9	1,580,297	81.0	-15.4
SUVs	9,094	0.4	-76.4	8,592	0.4	-76.7
COMMERCIAL AND INDUSTRIAL	467,521	20.6	-18.6	362,559	18.6	-10.6
LIGHT COMMERCIAL	257,810	11.4	-14.4	229,359	11.8	-11.8
VANS	172,806	7.6	-22.7	105,921	5.4	-16.8
LIGHT INDUSTRIAL	20,098	0.9	-38.3	14,591	0.7	15.2
HEAVY INDUSTRIAL	15,138	0.7	-29.1	11,629	0.6	215.6
TRACTOR UNITS	1,669	0.1	-69.8	1,059	0.1	-50.2
TOTAL VEHICLES	2,268,185	100.0	-19.6	1,951,448	100.0	-15.5

Source: ANFAC.

On the other hand, external demand showed some resistance. Although vehicle registrations also declined throughout the main European markets, they performed somewhat better than the Spanish market, with smaller falls in France (-25.5%), Germany (-19.1%), Italy (-27.9%) and the United Kingdom (-29.4%). This was key to cushioning the decline in Spanish production and was an important factor in exports gradually returning to «normal» in the second half of the year. The automotive sector is not only one of the main export sectors but also one of those that led the recovery in export sales in the last few months of the year, along with the food sector. In any case, the annual balance was negative with a fall of 15.5%, totalling 1,951,448 units exported: 1,580,297 were passenger cars (-15.4%), 8,592 SUVs (-76.7%) and 362,559 commercial and industrial vehicles (-10.6%).²⁸

²⁸ In monetary terms (customs), exports of NACE 29 and 30 categories posted positive figures as from the summer, although the year closed with a drop of 15.9%, weighed down by lower sales both of finished vehicles, fundamentally to Germany, Italy, Belgium and the United Kingdom, and of components, principally to Algeria, Germany and Portugal.



In 2020, the geographical concentration of the sector's exports remained high: France, Germany, Italy and the United Kingdom were the main export destinations for Spanish vehicles, accounting for 64.1% of the total; this is undoubtedly a risk factor should these markets weaken (e.g. as a result of Brexit) or the emergence of a shock. These markets were not immune to the COVID-19 crisis, so their demand for Spanish vehicles fell, in France (-9.1%), Germany (-19.6%), the United Kingdom (-26.1%) and Italy (-9.9%). On the other hand, the Turkish market performed well, with an extraordinary increase (+101.9%) that has placed it fifth in the ranking of export destinations.

Beyond the weakening of the main European destination markets, the truth is that, in recent years, a certain slowdown in vehicle exports had already been observed. This is due to several factors, including greater international competition and the low production of hybrid and electric models, which accounted for just 7% of exports in 2020.²⁹

Impact on employment

The closure of factories, with the consequent slump in production and sales, inevitably fed through to employment. Companies were forced to resort to furloughs, an instrument that made it possible to mitigate job losses: In May, almost 60,000 workers in the sector had been furloughed, accounting for 27% of workers registered with Social Security, well above the worst figure for the economy as a whole (19.2% in April), so that effective employment (registered workers minus furloughed) was almost 28% lower than a year earlier. Since then, we have seen a gradual return of workers to their jobs, although this upward trend was interrupted during the last few months of the year, coinciding with the third wave of the pandemic and the consequent tightening of restrictive measures: Last April (latest available data), effective employment was 6% lower than in the same month of 2019.

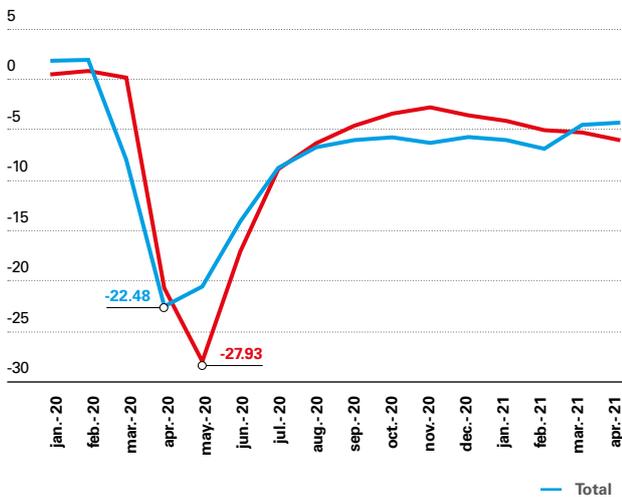
²⁹ The «demonisation» of diesel vehicles, which represent, in general, a very large part of the production of European manufacturers, is favouring Asian vehicles. In Spain, so far production has been slow to shift its focus towards less polluting vehicles and, moreover, such decisions need to be taken by the parent companies located in other countries.



Manufacturing Industry

Effective employment

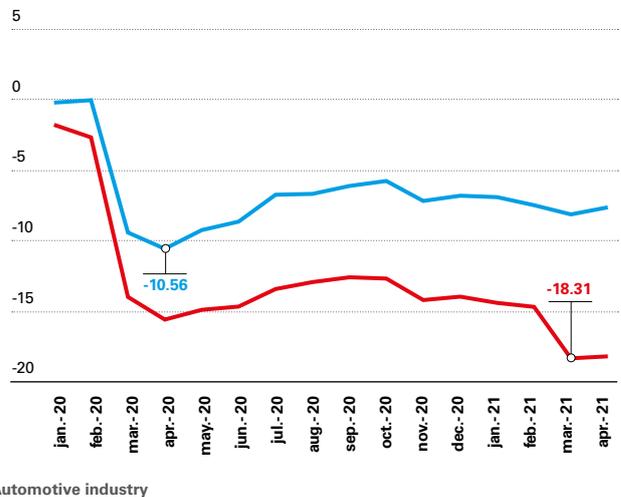
Annual change (%)



Note: Registered workers, excluding furloughed, average data. From March 2021 the data are compared to the same months in 2019.
Source: CaixaBank Research, based on data from MITRAMISS.

Companies registered with Social Security

Annual change (%)



Note: General regime. Data as of March 2021 are compared to 2019.
Source: CaixaBank Research, based on data from MITRAMISS.

In addition to the strong impact on employment, the sector suffered extensive losses in terms of its business fabric

Another effect of the crisis was the destruction of the business fabric, which in the automotive sector was greater than average: 409 companies³⁰ were lost between February and December 2020 (-14.3% compared with -6.8% overall and -9.3% in the manufacturing sector), so that the year ended with a total of 2,448 companies, 14% less than a year earlier and the lowest figure in the series, which began in 2009.

The outlook for the sector in 2021 is marked by the slow recovery in activity, within an uncertain environment that encourages households to save as a precaution and companies to delay investment plans. In the short term, many potential buyers are postponing their decision to buy or are opting for second-hand models, which means the stock of vehicles continues to age (the average age has reached 13.2 years, according to data from the dealers' association, Faconauto) and polluting emissions are not being reduced, an issue we address in the next section. Added to this is the rise in registration tax and the end of Spain's RENOVE scrappage scheme, which complicated the recovery in 2021. All in all, a significant improvement is expected in the second half of the year, driven by the economic recovery, which will gain traction, improved consumer confidence and the new incentive scheme to promote efficient, sustainable mobility (MOVES).

³⁰ Companies registered under the General Regime of Social Security. As an essential prerequisite for starting a business, entrepreneurs must apply to the General Treasury of the Social Security to register with one of its «regimes», which determines how the workers they employ will be registered with Social Security.

Challenges facing the sector

Globally, the automotive sector is undergoing major changes and facing important strategic challenges (combating climate change, digitalisation, changes in mobility preferences, etc.), which are forcing it to transform. Given this context, companies are becoming more concentrated while new players are emerging who see a business opportunity in electric technology. In the case of Spain, it is crucial for our automotive industry to tackle these challenges to be able to maintain its privileged position in an increasingly competitive global market, while at the same time representing an opportunity to channel the European reconstruction funds of the NGEU, as we discuss below.

One of the factors affecting the sector's performance is the necessary adaptation to the demanding decarbonisation targets set by the EU. In 2020, the industry was already tackling the entry into force of the new European emissions regulations CAFE (Corporate Average Fuel Emissions). In 2021, the targets set will apply to 95% of all vehicles registered by each group, excluding 5% of the most polluting cars, known as phase-in. However, as from 2021 the emissions of cars sold by each manufacturer must be below 95 grams of CO₂ per kilometre travelled (80 grams in 2025, 65 in 2030 and 0 in 2040). If they do not comply, marques face fines totalling millions. Therefore, the transition from the internal combustion engine to electric and connected vehicles must move forward, and major manufacturers must decide where they will locate the production of new models in the coming years.

Spain is lagging behind in terms of the penetration of e-vehicles and their charging infrastructure

2020 PRODUCTION BY ENERGY SOURCE

		Units	Share (%)	Annual change (%)
	PETROL	1,270,186	56.0	-27.3
	DIESEL	833,178	36.7	-16.6
	ELECTRIC	55,992	2.5	231.6
	HYBRID	83,965	3.7	30.769.5
	NATURAL GAS	19,360	0.9	-33.5
	LPG	0	0.0	-
	NON-PLUG-IN HYBRID	5,504	0.2	-52.4
TOTAL VEHICLES		2,268,185	100.0	-19.6

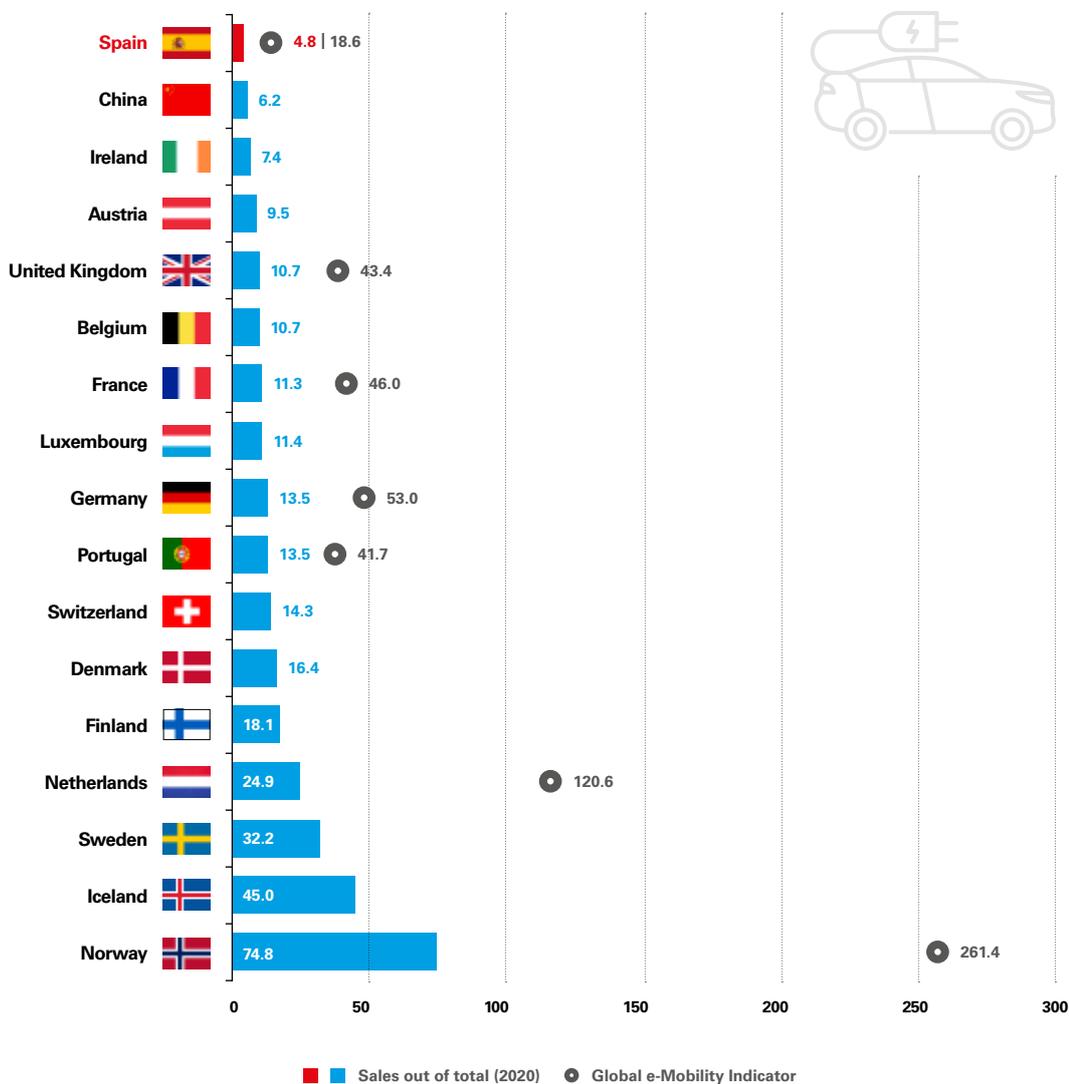
Source: ANFAC.



Manufacturing Industry

Although Spain's production of e-vehicles (electric and plug-in hybrids) increased eightfold in 2020 to almost 140,000 units, their relative weight is still moderate (6.2% of the total). To fully develop electric vehicles, it is also necessary to lower the price of batteries, improve their storage capacity in order to extend vehicle autonomy and also expand the charging infrastructure (create what is called an e-mobility network). However, in terms of penetration of e-vehicles and their charging infrastructure, Spain brings up the rear in Europe. The country currently has around 8,500 charging points, making its ratio of charging points per inhabitant one of the lowest in Europe.

Electric and plug-in hybrid vehicles



Note: Index based on 100, which measures the level of penetration of electric vehicles and their public access charging infrastructure, taking as a reference a medium-term target that allows progress to be made towards the targets set for 2030. Figure from Q4 2020.
Source: EV-Volumes and ANFAC.



The goals contained in Spain's Recovery, Transformation and Resilience Plan (RTRP),³¹ recently submitted to the European Commission, are in line with the EU's strategic agendas, particularly regarding the green transition, the Spain Industrial Policy 2030³² and the United Nations Sustainable Development Goals. The RTRP includes significant advances in terms of ecological transition and digitalisation, the two areas on which the NGEU focuses. The environmental area accounts for most of the investments, highlighting those aimed at sustainable mobility (measures to advance in the decarbonisation of transport and a modal shift) and the development of electric vehicles (charging network and aid for their purchase), with more than 13.2 billion euros.

The Spanish government will invest 13.2 billion euros of European funds in sustainable, safe and connected mobility, including a plan to deploy a charging infrastructure and promote electric cars

In order to streamline the management of funds, the RTRP includes a new form of public-private partnership, the so-called Strategic Projects for Economic Recovery and Transformation (PERTE). These are priority projects with a great capacity to boost economic growth, employment and competitiveness of the economy. Given the importance of the sector and the urgent need to speed up the technological transformation towards electric vehicles, the first PERTE presented was for the automotive sector: Future Fast Forward, an ambitious medium-term project (until 2030) which aims to achieve the production of a 100% Spanish connected electric vehicle.

³¹The RTRP covers 140 billion euros in transfers and loans from the NGEU funds until 2026.

³²This includes a digitalisation plan for four strategic sectors, including the automotive, a plan to modernise and improve the sustainability of industry, a plan to boost «green» driver industries and digitalisation and a circular economy strategy.



Manufacturing Industry

The main aspects of the Climate Change and Energy Transition Act to foster the transition to zero-emission mobility



- Cars and light commercial vehicles with zero direct emissions by 2050.
- Cars and commercial vehicles 0 g CO₂/km by 2040.



- Information platform on public access charging points.
- Mandatory installation of charging infrastructures at service stations with high sales volumes and buildings by 2023.
- A charging infrastructure at new service stations from 2021.



Source: CaixaBank Research, based on the CEOE report on the Climate Change and Energy Transition Act (2020).

The aim is for the project to receive the go-ahead from Brussels during the month of June, in order to start up by the end of the summer, and the first goal would be to manufacture 500,000 small electric cars in Martorell by 2025. In order for this commitment to be a success, the demand for e-vehicles must be boosted, implementation of the charging infrastructure must be speeded up and a battery plant must be set up. To meet Europe's CO₂ emission targets, there needs to be 30 million zero-emission vehicles on the road by 2030; in Spain, the production of e-vehicles would have to approach 1.5 million units.

On the other hand, last April the third edition was presented of the incentive scheme to promote efficient, sustainable mobility (MOVES), with an initial budget of 400 million euros until the end of 2023, which can be increased to at least 800 million euros. Also financed via NGEU funds, this reinforces direct aid for the purchase of electric vehicles, of up to 7,000 euros, and improves the aid provided for charging infrastructures for private individuals, home-owner communities and SMEs, as well as for fast and ultra-fast charging points. The Ministry for Ecological Transition estimates that this can contribute more than 2.9 billion euros to GDP and generate more than 40,000 jobs along the entire value chain.

Among the objectives of the recently approved Climate Change and Energy Transition Act³³ is that passenger cars and light commercial vehicles should have zero direct emissions by 2050; to this end, the sale of new internal combustion vehicles, excluding those for commercial use, will be banned from 2040. In addition, in order to guarantee a sufficient charging infrastructure, among other measures it will be compulsory to install (i) from 2023, charging points at service stations with large sales volumes (power ratings equal to or greater than 150 kW in direct current [DC]) and in buildings, and (ii) from 2021, at least one charging point with a rating equal to or greater than 50 kWDC at all new fuel supply facilities.

³³ The ultimate goal of this Act is to achieve «climate neutrality» by 2050: zero net greenhouse gas (GHG) emissions/removals and a 100% renewable electricity system.

The entire value chain within the framework of the sector's digital transformation, with the aim of providing vehicles with increasing technology by incorporating AI and big data analysis to make production-related decisions. Recently, SERNAUTO, the association for component manufacturers, presented its Strategic Agenda 2025 which serves as a roadmap for recovery after the pandemic and industrial and technological transformation. In order to reduce the number of road deaths to zero by 2050 (Vision Zero Plan), from July 2022 the EU will require all new vehicles (cars, trucks, buses and vans) to incorporate nine advanced driver assistance systems (ADAS) which, using a range of sensors and detection devices, will help to minimise the potential human errors that cause most accidents.³⁴ Some of this equipment can also help to develop autonomous vehicles.

A change in consumer preferences must also be added to all the above. This, in a context of greater mobile connectivity and together with mobility limitations in large cities (implementation of low-emission zones aimed at reducing the emission of polluting gases into the atmosphere),³⁵ helps to promote alternative transport models such as car sharing.³⁶ Certainly, the extension of this alternative could cause a substitution effect (according to estimates by industry experts, a shared car could take between 3 and 15 private cars out of circulation), which would lead to a reduction in the number of private cars in the medium term. However, it is to be expected that, in the short term, the demand for cars will increase due to the urgent need to renew an ageing and polluting stock of cars.



³⁴The mandatory ADAS are: intelligent speed assistance (ISA), an event data recorder (black box), drowsiness and attention warning, alcohol interlock installation facilitation, emergency stop signal, reversing detection, tyre pressure monitors and lane keeping assist and advanced emergency braking systems (the last two for passenger cars and vans only). According to Spain's Directorate-General for Traffic (DGT), the use of these systems reduces the risk of accident by 57%. Brussels estimates this will prevent 25,000 deaths and 140,000 serious injuries over the next 15 years.

³⁵The RTRP includes the introduction of Low Emission Zones (LEZs), which the Climate Change Act already makes mandatory in cities with more than 50,000 inhabitants and cities with more than 20,000 inhabitants when they have pollution problems.

³⁶This is an alternative to a privately owned individual car, allowing access to a fleet of vehicles located in the vicinity of the person's home and paid according to the length of time and kilometres the vehicle is driven.



Manufacturing Industry

Main indicators for the manufacturing sector

Annual change, unless otherwise specified

	Average 2000-2007	Average 2008-2014	Average 2015-2019	2020	2021	Date of latest data	Trend
Economic activity indicators							
Total GDP of the economy	3.7	-0.9	2.8	-10.8	-8.3	Q1 2021	☁
GVA manufacturing industry	1.9	-3.0	2.8	-10.7	-5.2	Q1 2021	☁
Industrial production index: manufacturing industry	1.4	-4.6	2.4	-10.4	-5.6 (*)	mar.-21	☁
Industrial production index: agrifood	1.8	-0.4	1.1	-5.4	-4.4 (*)	mar.-21	☁
Industrial production index: automotive	1.6	-4.5	3.1	-18.5	-13.4 (*)	mar.-21	☁
Turnover index: manufacturing industry	5.5	-2.7	3.0	-12.0	-2.9 (*)	mar.-21	☁
Turnover index: agrifood	4.1	0.8	2.7	-4.2	1.1 (*)	mar.-21	☁
Turnover index: automotive	4.7	-1.3	5.1	-10.4	-3.4 (*)	mar.-21	☁
Demand indicators							
Passenger car registrations	1.0	-7.5	8.3	-32.3	-39.3 (*)	apr.-21	☁
Registrations of load-bearing vehicles	3.5	-8.5	13.5	-25.9	-22.6 (*)	apr.-21	☁
Labour market							
Total registered workers in the economy	3.5	-2.1	3.1	-2.1	-0.9	apr.-21	☁
Registered workers, manufacturing industry	-	-3.6	1.8	-2.1	-1.5	apr.-21	☁
Total employees	4.2	-2.4	2.7	-2.9	-1.4	Q1 2021	☁
Employees, manufacturing industry	-	-5.3	3.1	-2.6	-3.4	Q1 2021	☁
Temporary employment rate (% of employees)	32.6	25.0	26.2	24.0	23.8	Q1 2021	☁
Temporary employment rate, manufacturing ind. (% of employees)	-	17.3	20.7	17.1	17.3	Q1 2021	☁
Foreign sector							
Manufacturing industry exports	7.6	3.7	4.5	-10.7	-1.0 (*)	mar.-21	☁
Agrifood exports	7.4	6.8	5.8	4.2	15.8 (*)	mar.-21	☁
Automotive exports	6.1	1.4	4.8	-15.9	-11.5 (*)	mar.-21	☁
Manufacturing industry imports	8.8	-1.4	5.5	-12.0	-5.9 (*)	mar.-21	☁
Agrifood imports	7.6	2.0	4.5	-6.5	-2.7 (*)	mar.-21	☁
Automotive imports	7.0	-2.5	6.9	-23.6	-16.9 (*)	mar.-21	☁
Manufacturing industry balance of trade (% of GDP)	-5.0	-1.0	-0.2	-0.1	0.3 (*)	Q1 2021	☁
Agrifood balance of trade (% of GDP)	-0.1	0.2	0.6	1.0	1.1 (*)	Q1 2021	☁
Automotive balance of trade (% of GDP)	-0.1	1.0	0.9	1.1	1.3 (*)	Q1 2021	☁
Financing							
Outstanding balance of credit to production activities	17.8	-4.4	-4.5	7.6	-	Q4 2020	☁
NPL rate, production activities (%)	1.0	11.9	10.0	5.0	-	Q4 2020	☁
Outstanding balance of credit to the manufacturing industry	9.4	-2.9	-1.5	7.1	-	Q4 2020	☁
NPL rate, manufacturing industry (%)	1.5	7.3	7.9	4.8	-	Q4 2020	☁

Notes: L2021 data are compared to those from the same period in 2019. For the indicators marked (*), the 2021 figure corresponds to the annual cumulative change up to the latest figure available. For the rest of the indicators, the year-on-year change for the latest figure available is shown.

Source: CaixaBank Research, based on data from the National Statistics Institute, Datacomex, ANFAC, the Ministry of Social Security and Bank of Spain.

CaixaBank Research

The *Sector Report* and the rest of the CaixaBank Research publications are available at the following website: www.caixabankresearch.com. Our research aims to stimulate debate and the sharing of opinions among all sectors of society, as well as raise awareness of the important social and economic issues of our time.



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