SPAIN: THE TORTUOUS PATH TO REINDUSTRIALISATION

In Spain, like in most Western countries, the 2008 crisis caused an unprecedented drop in industrial employment, the pain of which continues to be felt. In fact, there are almost 500,000 fewer manufacturing jobs than in 2008. Some of this decline, however, reflects an increasingly important shift from industrial firms to service offerings, which is not a bad thing. With the Covid-19 crisis and the EUR 69.5 billion Recovery and Resilience Plan (RRP), which will be rolled out over the next five years, strengthening industry in Spain has once again become an important area of focus for the authorities. A quarter of the RRP will therefore be dedicated to this objective. Spain currently enjoys comparative advantages in growth sectors such as the automotive sector and renewable energies, especially. Obstacles (low level of investment, shortage of skilled labour) remain significant, however, and will take time to resolve. In the long term, strengthening and modernising Spanish industry are two key levers to achieve the long-term goals set out in the España 2050 plan, which, among other things, foresees a significant increase in labour productivity and R&D by 2030, and still more by 2050.

What is the current situation?

The successive crises of 2008 and 2011 have left their mark on industry

Industry's share (excluding construction)[1] of total value added fell below the 15% threshold in 2019 (14.7%). At this level, Spain finds itself in the last third in Europe, around three points below the European average (see Chart 1). Despite a slight recovery in recent years, almost 480,000 industrial jobs – one in seven in the sector – have disappeared since the subprime mortgage crisis began in 2008.[2] Over the last 12 years, of all European countries, Spain is second only to Greece in terms of the biggest contraction in industrial employment (see Chart 2).

The two successive crises – of subprime mortgages followed by eurozone sovereign debt – left deep marks in the domestic industry. It suffered mainly due to the plunge in domestic demand (private consumption and investment), which was heavily impacted by the crisis itself, but also by the austerity policies that followed under Mariano Rajoy's government.[3] Between 2007 and 2013, industrial production fell by almost 30% (see Chart 3), which represents both the sharpest post-war decline for the country and one of the largest contractions in developed countries. Industrial production in Spain remains more than 20% below its historic level reached in summer 2007. Manufacturing employment fell by a similar extent in the period 2007-2013 (-29.2% or -877,436 jobs). This crisis was therefore damaging both in terms of its size and its duration, as Spain experienced four years of economic recession over the five years between 2009 and 2013.

However, the manufacturing sector's share of value added remained relatively stable for almost 10 years, before recovering in 2020 with the coronavirus crisis, which caused a much greater drop in service activity (see Chart 4). Nevertheless, the share of industrial employment has steadily declined and reached a new historic low in 2021. Since then, new jobs have been created in services, but they have not been able to offset the destruction of jobs in industry: at the end of 2019, total employment in the country remained more than 3% below the 2008 level.[4]

SHARE OF INDUSTRY (EX-CONSTRUCTION) IN TOTAL VALUE ADDED IN 2019 (%)

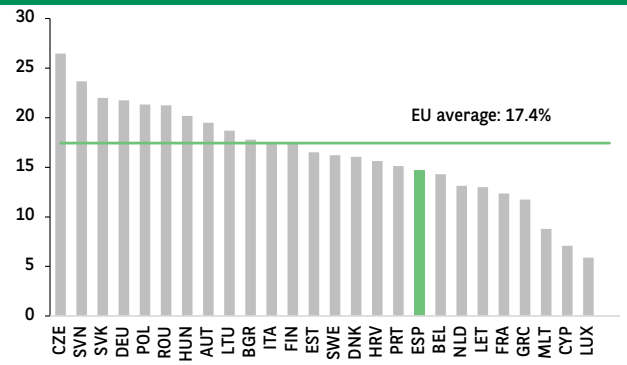

CHART 1 SOURCE: EUROSTAT, BNP PARIBAS

GROWTH IN INDUSTRIAL EMPLOYMENT BETWEEN 2008 AND 2019

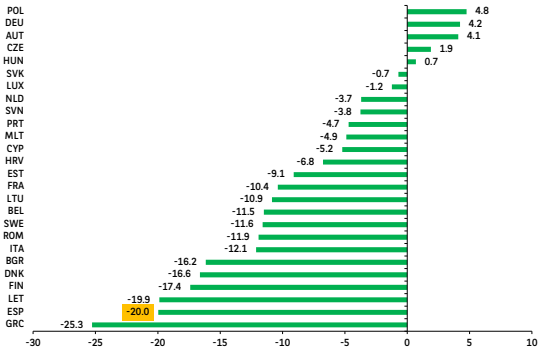

CHART 2 SOURCE: EUROSTAT, BNP PARIBAS

Few regions and sectors spared

The downturn has affected all regions of the country. Catalonia, the largest industrial region, has seen manufacturing employment shrink by almost 150,000 jobs since 2008 (see Table 1). Significant declines have also occurred in Madrid, Valencia and the Basque Country. Some regions have managed to maintain a relatively stable industrial base, with more contained job losses: this is the case for Navarra and Rioja, where almost a quarter of jobs still remain in industry, mainly in the

1 Throughout this article, construction will be excluded from the industrial sector. We will also take 2008 and 2019 as comparison points, with the first corresponding to the start of the subprime mortgage crisis and the second the level reached before the start of the Covid-19 crisis.

2 There is a difference in the estimate of employment between that reported in Chart 2 and that in Table 1 (this is explained by methodological differences, with Chart 2 based on Eurostat data (National Accounting methodology), while Table 1 is based on Spain's National Statistics Institute (INE) (Labour Force Survey methodology). For more information, see https://ec.europa.eu/eurostat.

3 Exports of goods recovered much faster, surpassing their 2008 level by the end of 2010.

4 Total employment reached 19,779,300 in 2019 compared to 20,469,65 in 2008, a decrease of 3.4% (source: INE).

SPANISH INDUSTRIAL EMPLOYMENT (IN THOUSANDS)

CHART 3 SOURCE: INE, BNP PARIBAS

WEIGHT OF SPANISH FIRMS IN GLOBAL VALUE CHAINS

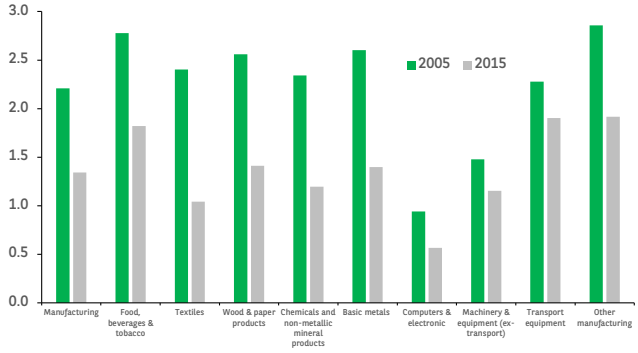

CHART 5 SOURCE: OECD, BNP PARIBAS

SHARE OF MANUFACTURING VALUE ADDED PRODUCED IN SPAIN (AS A % OF GLOBAL MANUFACTURING VA)

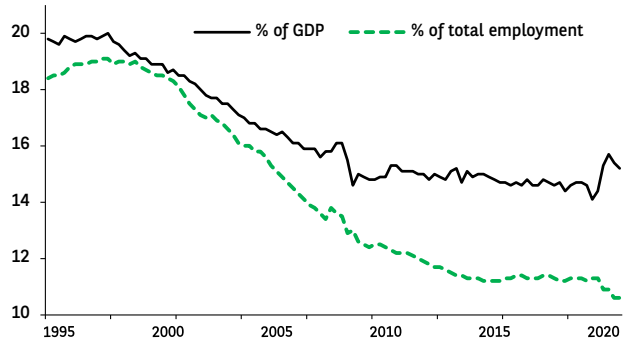

CHART 4 SOURCE: EUROSTAT, BNP PARIBAS

SHARE OF SPANISH VALUE ADDED EMBODIED IN THE COUNTRY'S FINAL DEMAND

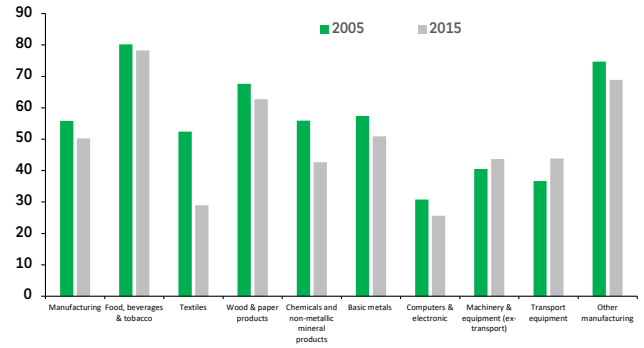

CHART 6 SOURCE: OECD, BNP PARIBAS

automotive and agribusiness sectors.

From a sector-based perspective, employment in textiles, one of the sectors most strongly competing with Asian countries, has continued to fall and now represents only 6% of total manufacturing employment.[5] Metallurgy (and its associated sectors) and the mining industry are also experiencing a sharp downturn due, on the one hand, to the consequences of the slowdown in property activity in Spain (a source of demand for building materials) and, on the other hand, to stronger foreign competition, particularly from China. Substantial declines have also occurred in smaller sectors such as furniture and wood. A handful of sectors – mostly more labour-intensive – have managed to increase their level of employment, albeit to a limited extent. For example, 13,000 jobs have been created in food (agribusiness and beverages) over the past ten years. This has accentuated the importance of this sector in the Spanish economy, when it was already the largest industry. Spanish industry remains strongly rooted around three businesses: agribusiness, metallurgy and the automotive business. Prior to the pandemic, these three sectors accounted for almost four in every ten industrial jobs. These figures corroborate the overall decline in Spain's participation in global value chains[6], a decline that was already underway before the 2008 and 2011 crises (see Chart 5), particularly in the textiles, chemical and electronics sectors – three sectors that have been hit hard by the growing competition from emerging countries. By extension, this phenomenon is also observed in the share of domestic inputs used in the country's final consumption, which has also fallen significantly (see Chart 6). As a result, industrial products consumed in Spain are being manufactured less and less within the nation's borders.

What factors contributed to this decrease?

The repercussions of the collapse in real estate activity

Global demand apart, the decline in industrial activity in Spain can be explained firstly by the profound impact of the correction of the real estate sector – and of construction in general – on the country's demand for materials. Since the 1990s, as the speculative real estate bubble has grown, Spain has focused part of its industrial production towards construction, much more so than other European countries

5 We refer here to the total of the three categories "textiles", "clothing" and "leather & footwear".

6 https://www.oecd.org/sti/ind/measuring-trade-in-value-added.htm

INDUSTRIAL EMPLOYMENT BY REGION AND BY SECTOR					
Industrial employment by region (in thousands)	**% total employment (2019)**	**2019**	**2008**	**Variation (thousands)**	**Variation (%)**
Andalusia	9.4	293.8	318.2	-24.4	-7.7
Aragon	19.6	115.1	132.8	-17.7	-13.3
Asturias	13.7	53.1	71.3	-18.2	-25.5
Balearic islands	6.5	37.0	42.4	-5.4	-12.7
Canary Islands	4.5	40.9	58.1	-17.2	-29.6
Cantabria	15.8	38.4	51.0	-12.6	-24.7
Castile and León	17.7	175.6	185.9	-10.3	-5.5
Castila-La-Mancha	16.5	136.0	150.0	-14.0	-9.3
Catalonia	18.1	621.2	767.4	-146.2	-19.1
Valencian Community	17.6	366.8	416.4	-49.6	-11.9
Extremadura	10.9	42.4	46.3	-3.9	-8.4
Galicia	16.4	179.4	215.1	-35.7	-16.6
Community of Madrid	8.9	276.6	325.1	-48.5	-14.9
Region of Murcia	13.8	84.7	94.6	-9.9	-10.5
Navarre	25.9	74.9	81.8	-6.9	-8.4
Basque Country	20.4	190.7	239.9	-49.2	-20.5
La Rioja	24.8	34.9	38.3	-3.4	-8.9
Ceuta	3.2	0.9	1.0	-0.1	-10.0
Melilla	2.2	0.6	0.8	-0.2	-25.0
Industrial employment by sector (in thousands)	**% industrial employment (2019)**	**2019**	**2008**	**Variation (thousands)**	**Variation (%)**
Extractive industry	1.2	32.6	52.7	-20.1	-38.1
Manufacturing industry	90.3	2494.9	2986.4	-491.5	-16.5
Food products	16.5	456.1	450.2	5.9	1.3
Beverages	2.3	64.5	57.4	7.1	12.4
Tobacco products	0.0	1.3	6.2	-4.9	-79.0
Textile	2.0	55.2	79.2	-24.0	-30.3
Wearing apparels	2.0	55.0	88.4	-33.4	-37.8
Leather & related products	2.0	56.0	58.2	-2.2	-3.8
Wood & products of wood	2.4	66.0	105.2	-39.2	-37.3
Paper & paper products	1.6	44.7	44.0	0.7	1.6
Printing & reproduction of recorded media	3.5	96.1	107.6	-11.5	-10.7
Coke & refined petroleum products	0.7	19.7	18.3	1.4	7.7
Chemical & chemical products	4.7	130.3	136.5	-6.2	-4.5
Pharmaceutical products	2.9	79.2	65.7	13.5	20.5
Rubber & plastic	3.8	104.9	107.6	-2.7	-2.5
Other non-metallic mineral products	3.9	108.9	212.1	-103.2	-48.7
Basic metals	3.2	87.3	115.4	-28.1	-24.4
Fabricated metal products, exc. machinery & equipment	8.6	237.4	374.4	-137.0	-36.6
Computer, electronic & optical products	1.7	46.7	56.9	-10.2	-17.9
Electrical equipment	2.5	69.2	98.0	-28.8	-29.4
Machinery & equipment	5.6	154.0	162.8	-8.8	-5.4
Motor vehicles, trailers & semi-trailer	8.3	228.1	236.7	-8.6	-3.6
Other transport equipment	2.7	74.6	69.6	5.0	7.2
Furniture	3.3	91.4	173.9	-82.5	-47.4
Other manufacturing	**2.1**	**57.9**	**55.3**	**2.6**	**4.7**
Repair and installation of machinery & equipment	**4.0**	**110.5**	**106.8**	**3.7**	**3.5**
Electricity & gas	**3.3**	**91.2**	**74.4**	**16.8**	**22.6**
Water, sanitation & waste management	**5.2**	**144.3**	**123.2**	**21.1**	**17.1**
TOTAL INDUSTRY	**100.0**	**2763.0**	**3236.7**	**-473.7**	**-14.6**

TABLE 1

SOURCE: INE, BNP PARIBAS

have done. The very brutal corrective phase led to a slump in demand for intermediate industrial goods in this sector (mainly in metallurgy and in machinery and equipment). The drop in demand for building materials would explain almost a third of the fall in industrial production seen in Spain during the 2008 crisis.[7]

Investment deficit

The chronic investment deficit is a second explanatory factor for the gradual contraction in industrial activity. Gross fixed capital formation (GFCF) in the manufacturing sector fell by almost 40% between 1999 and 2011. The share of GDP devoted to this expenditure has increased over the past five years, but remains lower than that of the other major European countries, especially Germany and Italy (see Chart 7). Even though the economic recession of 2009-2013 and the austerity policies implemented at that time accentuated the decline (in the level) of manufacturing investment, the phenomenon was already underway from the end of the 1990s, as shown in Chart 7.

GFCF IN MANUFACTURING SECTOR (% GDP)

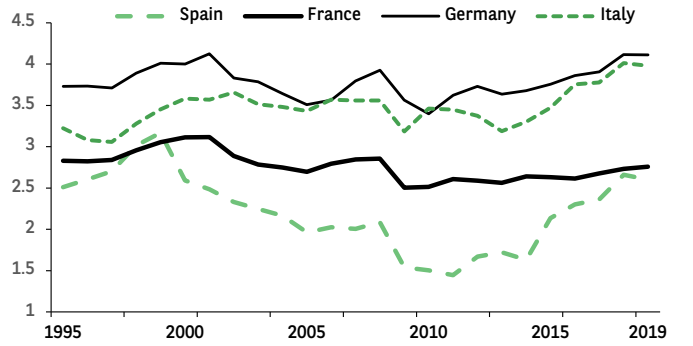

CHART 7 SOURCE: OECD, BNP PARIBAS

The "servitisation" of industry

A final phenomenon in play, which is not specific to the Spanish economy, is the growing trend of industrial companies to develop service activities in addition to their products. It can take various forms, such as consulting, financial services, logistics or support. This so-called "servitisation" concept is not new and is set to grow, particularly due to the ever-increasing digitisation of activities.[8] The boundary between services and industry is therefore becoming increasingly narrow. This structural change in internal production, such as the greater use of subcontracting (see box 2), would partly explain the drop in "traditional" industrial employment in favour of new positions in services.[9]

7 M. Tiana, The impact of the economic crisis on Spanish industry, Bank of Spain economic bulletin, November 2012.
8 For a recent study of this phenomenon, see Mastrogiacomo et al. (2019), A worldwide survey on manufacturing servitisation, International Journal of Advanced Manufacturing Technology.
9 S. Guillou, Is the decline of industry due to the growth of services? OFCE Blog, May 2016.

THE IMPACT OF COVID-19 ON SPANISH INDUSTRY: SHORT-LIVED CONSEQUENCES?

Given the nature of the current health crisis and the government's measures to stem the epidemic, industrial activity has held up much better than services. However, industrial production fell 9.6% in 2020. Although significant, this drop is far below that observed during the subprime mortgage crisis, when, in 2009, production contracted by 15.5%. There are also very marked variations between industries. The largest falls in activity were recorded in sectors closely linked to "compressible" household consumption, which was significantly reduced by lockdown measures (leisure, clothing, motor vehicles, transport). Industrial sectors that are more dependent on incompressible consumer spending (food, energy) or intermediates (raw materials, chemical industry, electronics) fared much better. Only the pharmaceutical sector grew in 2020, reflecting the significant increase in healthcare spending during the pandemic.

The gradual easing of restrictions during 2021 logically coincided with increased demand and a rebound in activity. Industrial production thus bounced back by 3.2% in the first half of 2020 compared to the previous half-year (H2 2020). Industrial employment returned in the summer of 2021 to near pre-pandemic levels.[1] In addition, opinion polls remained very positive during this period, with the Purchasing Managers' Index (PMI) relating to employment remaining at a historically high level (55.7 in August). It is therefore likely that the Covid-19 crisis, if it does not deteriorate in the coming months, will have far fewer damaging consequences for Spanish employment and industrial activity than had the 2008 crisis.

1 According to the Spanish Employment Office (SEPE), in August, industrial employment was only 0.5% below the level seen in February 2020.

EVOLUTION OF INDUSTRIAL PRODUCTION (%)

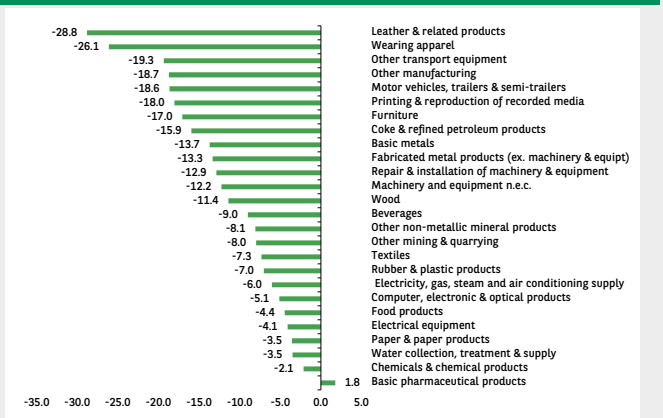

CHART 8 SOURCE: INE, BNP PARIBAS

BOX 1

THE MAJOR PERIOD OF INDUSTRIALISATION IN SPAIN

The end of the 1950s marks the beginning of a major period of industrial expansion in Spain, supported by significant economic liberalisation policies and extensive modernisation plans. The "Monetary devaluation and stabilisation plan", introduced in July 1959, started a marked devaluation of the peseta against the US dollar[1] , which helped to improve the competitiveness of Spanish exporting companies. A second major four-year investment plan was introduced in 1964. It initiated large-scale industrial modernisation projects in many sectors such as energy (electricity, coal, gas), the automobile sector and rail and road infrastructure. At the same time, Spain was admitted in 1959 to the OEEC[2] (OECD today) and entered the European Common Market in February 1962. From then, Spain was able to access new industrial opportunities. Further reforms, including fiscal simplification measures and stricter antitrust laws, enabled the country's industrial development to continue.

In addition to these structural reforms, Spain benefitted from lower labour costs during this period compared to its European neighbours, which promoted the flow of foreign capital into the country[3]. In the space of 15 years (1960-1975), industrial production in Spain more than quadrupled (see Chart A.1)[4]. It subsequently had more moderate progress, although still sustained. The share of Spanish goods exports in world trade also increased gradually (see Chart A.2). The 1960s therefore corresponded to a period of economic growth and very significant industrial employment for Spain, which enabled the country to keep unemployment at a very low rate (below 3%). In 1975, almost 2,874,000 people were working in the manufacturing sector – around 22% of the total working population[5] – a record level that will never be reached again.

The 1973 oil crisis triggered a period of economic difficulties for the country which lasted until the mid-1980s and ended with the elimination of almost a quarter of manufacturing jobs in the country[6]. Industrial employment then witnessed two cycles of rise and fall – in line with the economic cycle[7] – which peaked in 2001.

The late 1990s and early 2000s therefore really correspond to the beginning of the stagnation phase, then to the decline in industrial employment that the country is currently experiencing, which has increased significantly since the 2008 global economic crisis.

INDUSTRIAL PRODUCTION INDEX (2010=100)

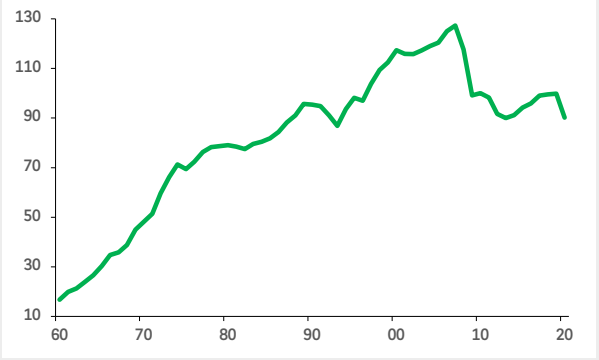

CHART A1

SHARE OF SPANISH GOODS EXPORTS IN WORLD TRADE (%)

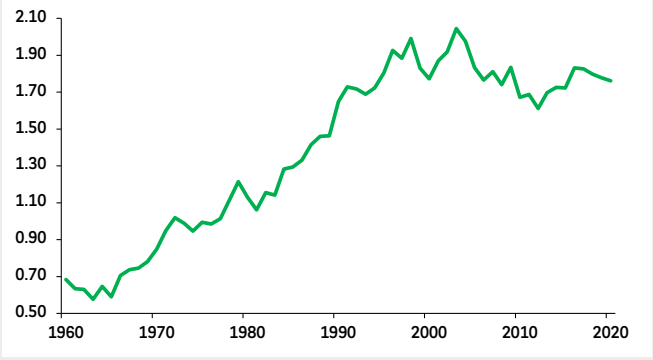

CHART A2

SOURCE: IMF, BNP PARIBAS

1 The Spanish currency was devaluated from 42 to 60 pesetas to a dollar.
2 Organisation for European Economic Cooperation
3 According to World Bank data, the net inflow of foreign direct investment rose from 0.37% of GDP in 1977 to 2.61% in 1990, a record at the time.
4 The industrial production index actually grew from 16.8 in 1960 to 69.4 in 1975 (2010=100), i.e. an increase of 313.1% (source: IMF).
5 The working population (15+ years) in Spain was 13,316,000 in 1975 (source: OECD).
6 Manufacturing employment fell from 2,965,299 in 1973 to 2,304,356 in 1985, a drop of 22.3% (source: AMECO European Commission).
7 Spanish GDP growth accelerated in the late 1980s, then slowed in the first half of the 1990s before accelerating again.

BOX 2

SOURCE: BNP PARIBAS

DEINDUSTRIALISATION: WHAT DOES THEORY SAY?

Theoretical studies on the phenomenon of deindustrialisation in advanced countries are basically focused on internal economic dynamics. They mainly identify two sources of explanation (see Chart B):

The first theory, highlighted by Baumol (1967),[1] concerns supply and focuses on differences in productivity between industry and services: at a constant production level, the faster increase in productivity in industry rather than in services leads to a progressively greater absorption of workers from the first sector into the second. However, this theory is not without criticism: lower labour in industry due to productivity gains can also lead to price decreases (the increase in productivity allows companies to lower their prices while maintaining the same margin), which leads to demand stimulus and therefore the need for labour. The net effects remain ambiguous, although a majority of studies agree on a net negative effect on manufacturing employment (Rowthorn and Ramaswamy, 1998).[2]

The second theory focuses on demand and relates a country's level of development to the structure of household demand. In other words, the more a country develops, the higher the per capita income, and the greater the increase of the share of spending on services. As a result, the elasticity of demand for goods decreases as household wealth grows. The decrease in the scale of industry in the economy could therefore be linked to this change in the structure of demand. Although this trend was not particularly evident in Spain, there is nevertheless a faster increase in household consumption of services than of goods, with average annual growth of 1.7% and 1.1% between 2000 and 2019, respectively (source: Eurostat).

Other studies highlight external causes, and mainly the role of global trade liberalisation. Industry in developed countries – and mainly those with a high level of low-skilled labour – is thus subject to greater competition from developing countries where labour costs are lower. This leads to relocation of jobs to these countries. In Spain's case, Donoso et al. (2014)[3] show that local industry's higher exposure to Chinese imports has led to more significant job losses in this sector. Autor et al. (2013)[4] reach a similar conclusion for the United States.

More explanations have emerged more recently. The first underlines the fact that more and more industrial companies are deciding to outsource some of the activities that are common to both industry and services, which would lead to the reclassification of some jobs from the first sector to the second sector (Baines et al., 2017)[5]. This is the case for support or assistance activities which are increasingly outsourced. Unlike other explanations, this phenomenon would not in itself mean a decline in industrial activity, but simply a new classification of jobs. The last explanation is the concept of industry servitisation (see What factors contributed to this decrease?).

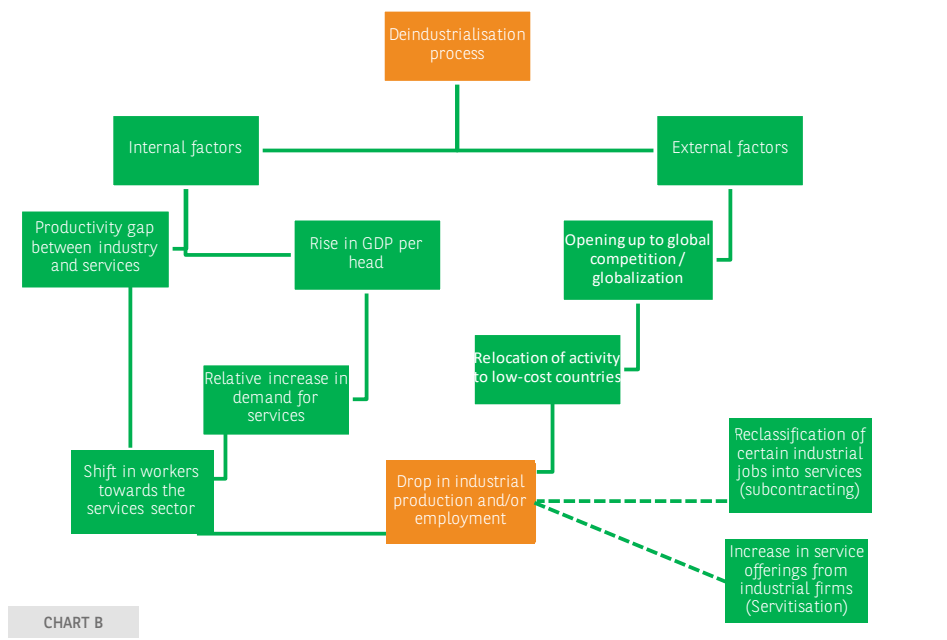

CHART B

1 WJ Baumol (1967), *Macroeconomics of unbalanced growth: the anatomy of urban crisis, American Economic Review.*
2 R. Ramaswamy et B. Rowthorn (1998), *Growth, Trade, and Deindustrialization, IMF Working Papers.*
3 Donoso et al. (2014), *Do Differences in the Exposure to Chinese Imports Lead to Differences in Local Labour Market Outcomes? An Analysis for Spanish Provinces, Regional Studies.*
4 D. Autor et al. (2013), *The China Syndrome: Local Labor Market Effects of Import Competition in the United States, American Economic Review.*
5 T. Baines et al (2017), *Servitization: Revisiting the State-of-the-art and Research Priorities, International Journal of Operations & Production Management.*

BOX 3

SOURCE: BNP PARIBAS

The national recovery plan or hopes for an industrial recovery

The revitalisation and modernisation of the industrial sector in Spain is a fundamental objective given the economic and environmental challenges facing the country, and the follow-on effects for employment. Industry also accounts for a large part of investment (particularly research and development) and economies of scale, and offers substantial export opportunities.[10]

The national Recovery and Resilience Plan (RRP)[11], developed over the past 12 months, was approved by the European Commission at the beginning of June. The first payments were made this summer with the transfer of an initial tranche of EUR 9 billion in July. This RRP will be implemented over five years (2021-2026) and will be provided with a total envelope of EUR 69.5 billion, precisely the total amount of subsidies allocated by the new European solidarity mechanism (Facility for the recovery and resilience). This PRR may nevertheless be extended to EUR 140 billion if Spain decides to use the loans offered by the European Commission under this new facility. According to estimates by the European Commission, the RRP would increase Spanish GDP by more than 2% by 2024.[12]

RRP measures targeting industry

The RRP is divided into ten main pillars and 30 components (see Table 2). The measures that we consider capable of supporting industry are highlighted in Table 2, which differentiates, on the one hand, the measures that are expected to have a direct and significant impact on industry (dark green) and, on the other hand, measures that have either an indirect (light green) or a very low (white) impact. Industry support measures are mainly concentrated in the fifth pillar (Modernisation and digitalisation of the industrial and SME fabric, restoring tourism and boosting Spain's entrepreneurial nation). At EUR 16.1 billion, this pillar accounts for almost a quarter of the total expenditure of the recovery plan for the period 2021-2026. In this respect, it is therefore the largest area of investment.

One feature of the Spanish RRP is the creation of a partnership between the public and private sector aimed at promoting investments in so-called strategic industries. This mechanism is one of the central elements of the España 2030 industrial policy (component 12 of the RRP). Named PERTE (for *Proyectos Estratégicos para la Recuperación y Transformación Económica*), this series of projects focuses on six sectors (see Chart 9), the specifications for each sector being defined by the government. The first PERTE project, and the only one to have yet (12 July) been finalised, concerns the automotive sector. Public support of EUR 4.3 billion is dedicated to this industry, mainly to speed up the development and production of electric and connected vehicles in the country.[13] The government's objective is to increase the share of the automotive sector to 15% of GDP by 2030, compared with around 10% today.[14] The specific objectives of the other five PERTE projects, as well as the budget allocated to each one, have not yet been disclosed at the time of finalising this article.

Alongside this direct support for industry, several measures are aimed at improving the competitiveness of SMEs (component 13 of the RRP) and the development of digital technologies (component 15). These two components aim to facilitate the creation, growth and restructuring of companies, to improve the business climate, as well as to boost productivity through the digitalisation, innovation and internationalisation of companies.

Finally, the RRP incorporates several industry programmes, introduced by the government in recent months, including the *España Digital 2025* plan (launched in July 2020 and corresponding to RRP component 15), the National Strategy for Artificial Intelligence (launched in November 2020 and corresponding to component 16), and the Spanish Strategy for Science, Technology and Innovation 2021-2027 (launched in September 2020).

THE PERTE PROJECTS

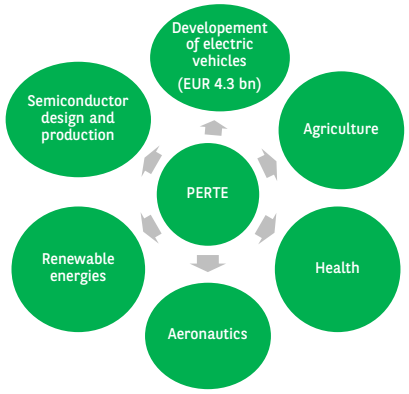

CHART 9 SOURCE: BNP PARIBAS

Can this plan succeed?

The purpose of this article is not to conclude on the effectiveness of future reforms and investments in Spain. Here we try to provide some food for thought by highlighting both the obstacles and opportunities relating to the success of industrial redevelopment in the coming years, in line with the national recovery plan.

The first hurdle will be non-price competitiveness and chronic lack of investment. As shown in the first part of this article, the share of capital expenditure remains insufficient when compared to the rest of Europe. Research and development (R&D) expenditure, in particular, accounted only for 1.25% of GDP in 2019, which is much lower than in other major industrialised countries (see Chart 10). In fact, Spain posted the second lowest ratio of R&D expenditure in Europe after Greece. Moreover, less than a third of R&D investment is directed towards the manufacturing sector, while other countries such as Germany, France and Italy devote almost half of it to this sector. Japan, on the other hand, spends three quarters of its R&D on it.

10 For a study of the link between industry and growth, see for example: *Manufacturing the future: is the manufacturing sector a driver of R&D, exports and productivity growth?* European Commission working paper, 2017.
11 https://www.lamoncloa.gob.es/temas/fondos-recuperacion/Documents/160621-Plan_Recuperacion_Transformacion_Resiliencia.pdf
12 The impact of the RRP on GDP could amount to 2.5 points when including second-order effects (the spillover effect). See *Quantifying Spillovers of Next Generation EU Investment*, European Commission, July 2021
13 It should be noted that of these EUR 4.3 billion, only EUR 3.5 billion corresponds to new financing. EUR 800 million corresponds to the amount of the MOVES III subsidy programme that was launched before the RRP (in April 2021).
14 Figure for 2019 (Source: INE)

THE SPANISH RECOVERY AND RESILIENCE PLAN (RRP) FOR 2021-2026				
		RECOVERY PLAN COMPONENTS (2021-2026)	**Amount (EUR billion)**	**Share of total (%)**
Pillar 1	1	Sustainable, safe and connected mobility in urban and metropolitan settings	6.54	9.40
	2	Redevelopment of housing and urban regeneration	6.82	9.81
	3	Environmental and digital transformation of the agri-food and fishing system	1.05	1.51
Pillar 2	4	Conservation and restoration of ecosystems and their biodiversity	1.64	2.36
	5	Preservation of coastline and water resources	2.09	3.01
	6	Sustainable, safe and connected mobility	6.67	9.59
Pillar 3	7	Roll-out and integration of renewable energy	3.17	4.55
	8	Electrical infrastructure & support for smart networks	1.37	1.96
	9	Hydrogen development	1.56	2.24
	10	Fair transition strategy	0.30	0.43
Pillar 4	11	Modernisation of public administrations	4.24	6.10
Pillar 5	12	España 2030 industrial policy	3.78	5.44
	13	SME support	4.89	7.04
	14	Tourism sector modernisation and competitiveness plan	3.40	4.89
	15	Digital connectivity, strengthened cybersecurity and 5G deployment	4.00	5.75
Pillar 6	16	National artificial intelligence strategy	0.50	0.72
	17	Capacity building for the national science, technology and innovation system	3.46	4.97
	18	Strengthening the national health system	1.07	1.54
Pillar 7	19	National plan for digital skills	3.59	5.17
	20	Strategic plan to promote vocational training	2.08	2.99
	21	Modernisation and digitalisation of the education system	1.65	2.37
Pillar 8	22	Supporting and strengthening inclusion policies	2.49	3.58
	23	Active employment policies	2.36	3.40
Pillar 9	24	Support measures for the cultural industry	0.33	0.47
	25	Support measures for the audiovisual sector	0.20	0.29
	26	Support measures for the sports sector	0.30	0.43
Pillar 10	27	Measures and actions to prevent and combat tax fraud	-	-
	28	Tax modernisation	-	-
	29	Improving efficiency of public spending	-	-
	30	Sustainability of the public pension system	-	-
		Total	**69.53**	**100.00**

High impact on industry
Medium/indirect impact
Low impact

TABLE 2

SOURCE: BNP PARIBAS, MONCLOA

The Spanish government hopes to significantly increase R&D expenditure's share of GDP over the next few years, to reach 3.0% of GDP in 2030 (the final objective being to reach 4.0% of GDP in 2050). This is one of the objectives set out in the España 2050 plan unveiled this summer (see next section). It is very ambitious: the ratio of R&D to GDP has never exceeded 1.4% in the past 25 years.

R&D EXPENDITURES (% OF GDP)

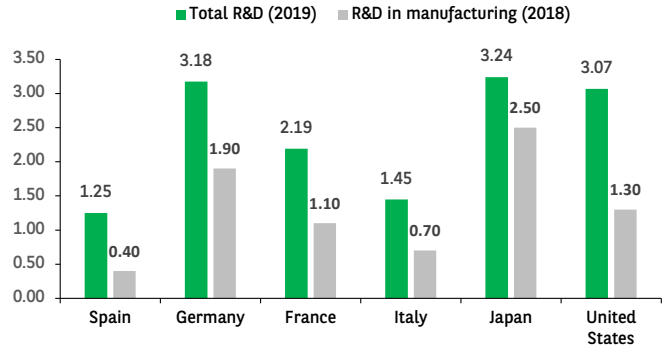

CHART 10 SOURCE: OECD, BNP PARIBAS

COMPETITIVENESS INDEX, SPAIN VERSUS GERMANY

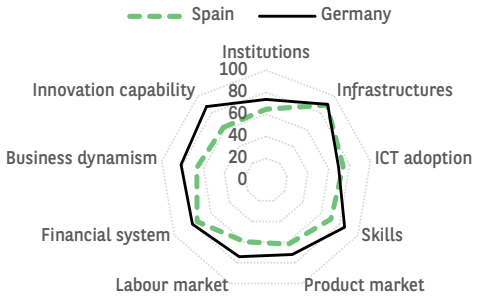

CHART 11 SOURCE: WORLD ECONOMIC FORUM, BNP PARIBAS

The problems with competitiveness can be seen at various levels, including the digitisation of activities, which today makes it possible to achieve significant productivity gains. The European Commission's DESI index[15] highlights Spain's significant delay in training workers in new digital technologies. Indeed, the proportion of people with basic digital skills is just above the European average (58% compared to 57% in the EU). Furthermore, Information and Communication Technology (ICT) specialists' share of total employment is below the European average (3.8% compared to an EU average of 3.9%). That said, Spain is relatively favourably positioned in the global DESI index – the country is ranked 11th in Europe – thanks to advanced digitisation of public services (2nd) and very widespread connectivity in the country (5th). The massive expansion of digital technologies into the economy is at the heart of the national recovery plan, notably through the España Digital 2025 programme (pillar 15), but the delay in training workers in this area, mentioned previously, remains a significant obstacle that will take time to resolve.

The Competitiveness Index developed by the World Economic Forum[16] incorporates a wider range of indicators, including business environment, market regulation and infrastructure quality. Compared with Germany – the European industrial heavyweight – there are significant differences in performance, particularly in the capacity to innovate (which harks back to the low level of expenditure in R&D), the regulation of product markets, and the dynamism and ease of creating a company (see Chart 11).

However, significant internal adjustments to restore the country's price competitiveness have been being made for several years. The increase in labour costs in the industrial sector has slowed sharply in recent years, settling at a level of growth closer to that of inflation (see Chart 12). Nevertheless, the recovery in competitiveness through wage moderation does not significantly stimulate long-term competitiveness, since it depends more on productivity gains, and therefore on non-price competitiveness.

An ageing population in Spain and the gradual decrease in the working population that could result may also be a barrier to industrial redevelopment. Eurostat forecasts that Spain's population will decline by 2.6% by 2030 as a consequence of a decline in the birth rate. The reduction will therefore increase the need to make additional productivity gains in order to remain competitive. Moreover, the situation in the labour market remains very sensitive, with long-term unemployment and youth unemployment still very high. The health crisis has exacerbated this phenomenon, even though exceptional state support has helped to cushion the impact on employment considerably.

Budget constraints remain tight despite still very favourable financing conditions. As the Covid-19 crisis has struck, public debt has increased dramatically in recent months. Spanish Central Government debt has jumped by almost 30 percentage points of GDP since the beginning of 2020, exceeding the 125% GDP threshold (see Chart 13). For the time being, budgetary constraints are very broadly relaxed, thanks in particular to the European measures put in place to absorb the economic impact of the pandemic (the ECB's asset purchase programme [PEPP], the European Recovery Fund, the suspension of the Maastricht criteria). All of this should make it easier to maintain high

ANNUAL GROWTH IN MANUFACTURING LABOUR COSTS

CHART 12 SOURCE: EUROSTAT, BNP PARIBAS

15 https://digital-strategy.ec.europa.eu/en/policies/desi

16 http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

public spending. Sovereign interest rates remain at historically low levels. However, once the pandemic has passed, monetary policies will gradually become less generous and budgetary room for manoeuvre could narrow accordingly, which could limit government's investment capacity. The debt level of Spanish companies has also increased with the health crisis (see Chart 14). Nevertheless, the significant deleveraging efforts by Spanish firms over the past few years will help the private sector to recover more strongly than in previous crises.

GENERAL GOVERNEMENT DEBT AS A SHARE OF GDP

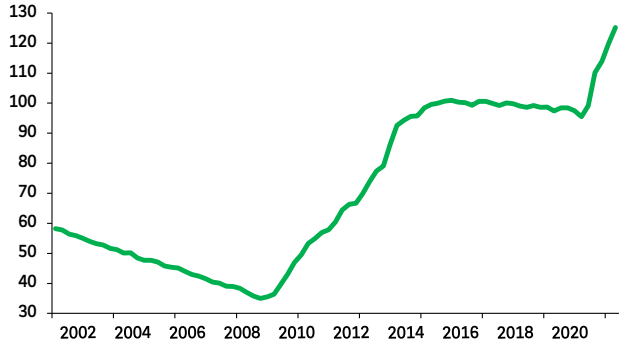

CHART 13 SOURCE: BANK OF SPAIN, BNP PARIBAS

NON-FINANCIAL CORPORATIONS CONSOLIDATED DEBT (% OF GDP)

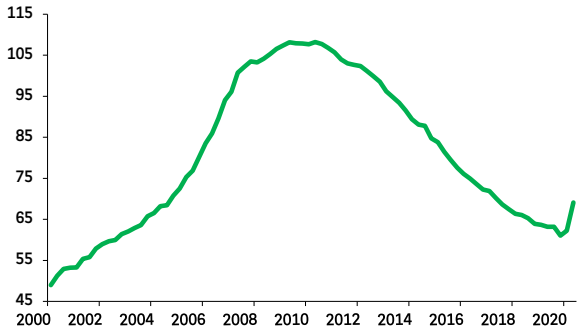

CHART 14 SOURCE: EUROSTAT, BNP PARIBAS

Comparative advantages to exploit

Nevertheless, Spain has assets it can lean on when looking to recover industrial activity over the coming years. As Europe's largest market for onshore wind power, competing with Germany for solar power, Spain is one of the most advanced countries in the development of renewable energy in Europe today. Eventually, job creation prospects are significant if the country manages to capitalise on this head start and, in particular, to take advantage of the "scale effects" that its current position confers on it. In particular, solar energy could create 1.73 million jobs in Europe by 2050, or almost half of the new jobs in renewable energies in Europe (between 3.3 million and 3.4 million).[17]

In its National Energy and Climate Plan for 2021-2030 (NECP)[18], the Spanish government plans to invest almost EUR 240 billion over the decade and, hopes with this plan, to create 270,000 net jobs annually on average between 2021 and 2030 (see Chart 15). The development of this industry will have significant knock-on effects for many other sectors of the economy, directly (construction, transport, professional and scientific activities, etc.) and indirectly (trade, hotels and catering, etc.) due to the increase in economic growth, employment and consumption. The expansion of the renewable energy sector, which is central given the climate challenges and increasingly stringent environmental rules imposed by the European Commission, is therefore one of the main drivers of growth and employment in Spain for the coming years.

The automotive sector is a significant second lever. Spain is the second largest car producer in Europe after Germany. The government hopes to create around 140,000 new jobs thanks to its EUR 4.3 billion investment programme in electric vehicles.[19]

IMPACT OF NECP ON EMPLOYMENT, GOVERNMENT FORECAST (NET CREATION, IN THOUSANDS)

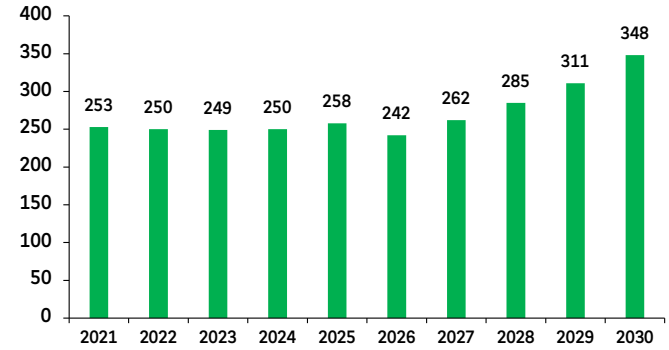

CHART 15 SOURCE: SPAIN NATIONAL ENERGY AND CLIMATE PLAN, BNP PARIBAS

Industrial redevelopment – an important factor for the success of the España 2050 plan.

These industrial agenda form part of a series of long-term objectives brought together within the España 205020 programme, which was unveiled at the beginning of July by the Spanish government. The plan, comprising nine principal elements and 40 quantified objectives, targets, among other things, a significant increase in productivity, employment rate and a drastic drop in CO2 emissions. The targets for productivity gains are very ambitious – an increase of 50% by 2050 – as are those for the share of total (public and private) research and development expenditure, which should more than triple to reach 4% of GDP (see Table 3). The government also wants to increase the share of large companies, which, in the long run, would allow greater economies of scale and investment to be leveraged, with the hope of boosting average productivity.

17 See Ram M. et al. Job creation during the global energy transition towards 100% renewable power system by 2050, Technological Forecasting and Social Change, February 2020.

18 https://ec.europa.eu/energy/sites/default/files/documents/es_final_necp_main_en.pdf

19 https://www.lamoncloa.gob.es/lang/en/gobierno/councilministers/Paginas/2021/202

20 https://www.lamoncloa.gob.es/presidente/actividades/Documents/2021/200521-Estrategia_Espana_2050.pdf

The decline in industry has not only impacted the country's productivity and competitiveness. it has also played a major role in the destabilisation of employment in Spain today. In turn, this has led to a mechanical slowdown in wage increases in the country, with wage growth rates in services actually remaining lower than those in industry (see Chart 16). Between 2010 and 2019, nominal wages in services thus increased by only 4.0%, which, taking inflation into account, represents a real drop of around 7%.21 In real terms, wages in industry fell by just 1%, with nominal wages increasing by 10% over the period 2010-2019. There are many reasons for this, including a sharp rise in employment in tourism-related sectors (catering, hotels, culture), which are generally more precarious and less lucrative.

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By unveiling its Recovery and Resilience plan and the España 2050 agenda in quick succession, the Spanish government intends to put industry at the heart of its economic and social development programme for years to come. The goals set for 2030 in terms of increased productivity and investment are ambitious but could run into a tight budgetary environment, as public debt has become very elevated in the wake of the coronavirus crisis. Furthermore, even though grants allocated by the European Recovery Fund offer additional budgetary margins, the government relies heavily on leverage to further mobilise private investment, which is not guaranteed. For example, with its EUR 4.3 billion support plan for the automotive sector, the government is counting on attracting almost EUR 20 billion of private investment. Eventually, the main objective of strengthening industry will be to create new job opportunities and reduce the unemployment rate, which remains far too high. With a target of a 12% jobless rate by 2030, the government still remains very cautious overall in terms of the success and impact of this industrial investment plan on employment and economic activity in the medium and long term.

GROWTH IN SALARY, INDUSTRY & SERVICES SECTORS

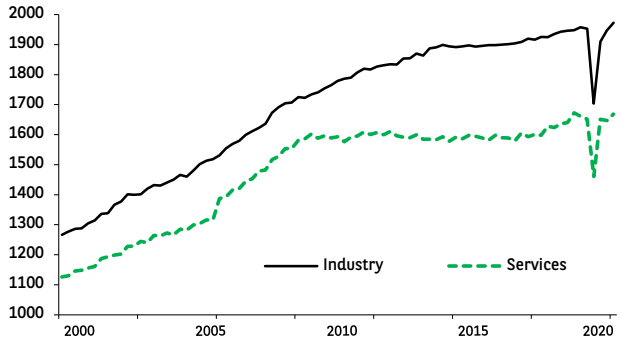

CHART 16 SOURCE: INE, BNP PARIBAS

Completed on 15 September 2021

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21 The consumer price index increased by 11.0% between 2010 and 2019. Source: INE.

SELECT OBJECTIVES FROM THE ESPAÑA 2050 PLAN

	2019*	2030	2040	2050
Hourly work productivity (constant euro, 2015)	42	46	53	63
R&D expenditure (in % of GDP)	1,2%	3,0%	3,5%	4,0%
Employment rate	62%	68%	72%	80%
Unemployment rate	18%	12%	10%	7%
Share of large companies (250+ employees)	31%	32%	33%	35%
CO_2 emissions	-	-23%	-57%	-90%
Gini index	34	32	31	29
Population at risk of poverty (% total population)	22%	18%	15%	10%

** Average for 2015-19*

TABLE 3

GROUP ECONOMIC RESEARCH

CONJONCTURE
Structural or thematic topics.

EMERGING
Analyses and forecasts for a selection of emerging economies.

PERSPECTIVES
Analyses and forecasts with a focus on developed countries.

ECOFLASH
Data releases, major economic events.

ECOWEEK
Recent economic and policy developments, data comments, economic calendar, forecasts.

ECOTV
A monthly video with interviews of our economists.

ECOTV WEEK
A weekly video discussing the main event of the week.

MACROWAVES
Our economic podcast.

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