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Is Spain becoming a manufacturing champion?

EXECUTIVE SUMMARY

Spain has emerged as the clear economic outperformer among Europe's four largest economies since the pandemic. **What initially appeared to be a cyclical tourism-driven rebound has gradually evolved into a broader dynamic involving demographic expansion – driven by immigration –, improving labour-market, strong services exports and large-scale European investment programmes that supported growth well beyond the reopening phase.** Since 2022, it has maintained annual growth rates between 2 and 6 times higher than those of the EU. Compared with Germany, France and Italy, Spain has entered the second half of the decade with a uniquely favourable combination of strengths.

At the same time, **while successive external shocks have taken a toll on the manufacturing sectors of Europe's major economies, Spanish manufacturing has demonstrated greater resilience.** Its broad-based outperformance across a wide range of sectors suggests its attractiveness no longer relies solely on lower labour costs. Spain is gradually shifting towards higher value-added sectors while leveraging other advantageous factors of production, such as its growing access to low-cost renewable energy, which has reduced its exposure to external energy shocks and could become an increasingly important source of industrial competitiveness in the coming years.

On the other hand, structural weaknesses remain. Productivity growth is still modest; unemployment remains comparatively high and fiscal pressures linked to ageing populations – through rising pension and healthcare expenditures – have not disappeared. Its energy potential is also hampered by a lack of investment in its grid and storage infrastructure. Despite recent positive developments, Spain has yet to translate structural levers into sustained productivity gains. **Considerable potential therefore remains to strengthen competitiveness, especially in electro-intensive sectors, as industrial electrification and decarbonisation gather pace.**

SOME OF
THE THINGS
YOU'LL
LEARN...

Spanish manufacturing hourly labour costs remain 14% to 43% below those in Germany, France and Italy.

p.3

The share of renewable electricity generation in Spain increased from 20% in 2006 to 58% in 2024.

p.4

Despite lower wholesale prices, Spanish energy-intensive industries paid electricity 167% and 36% more than in France and Germany respectively.

p.5

Spain recently ranked 6th among the countries with the highest announced amount of FDI in data centers.

p.7

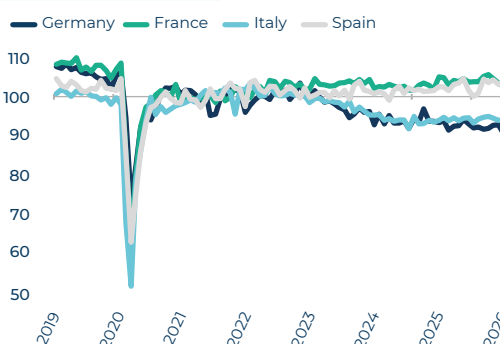
A more resilient
manufacturing industry

In the face of successive geopolitical shocks, the sectoral composition of European countries played a key role in shaping the impact of the inflationary shock on the real economy. Beyond its smaller contribution to the overall economy, Spanish industry has proved more resilient than that of other major European economies. Spain's manufacturing production is 4% above pre-Ukraine war levels¹, whereas that of Germany and Italy remains 7% and 5% below 2021 levels respectively (Chart 1). Only France has performed somewhat better, thanks to a strong aeronautics sector.

Germany and Italy were particularly exposed to sectors that have experienced a prolonged downturn since the energy crisis, notably automotive, machinery and equipment, and metallurgy, which account for 40-50% of their manufacturing gross value added (Chart 2). By contrast, Spain has benefited from a more balanced diversification, as well as stronger sectoral dynamics than the other European countries of the 'Big Four', particularly in higher value-added and energy-intensive industries.

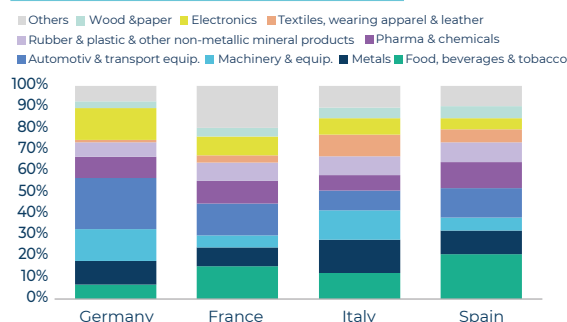
Between 2022 and 2025, most of Spain's manufacturing sectors experienced higher average production growth than those of Germany, France and Italy (EU-3) (Table 1). This resilience was especially visible in energy-intensive sectors, where the downturn was generally less pronounced than in the EU-3. It is particularly the case in paper, rubber and plastics, non-metallic minerals and chemicals (driven by strong growth in the perfumery and cosmetics segments). High and medium-high-technology sectors also stand out, notably pharmaceuticals, machinery and equipment, electrical equipment and electronic products.

Chart 1 - Eurozone manufacturing production (100 = 2021, CA & SA)



Sources: Eurostat, Coface

Chart 2 - Share of sectors within the manufacturing industry (% of total GVA, volume, 2023)



Sources: Eurostat, Coface

Table 1 - Sectoral matrix

	Spain < EU-3		Spain > EU-3			
	Industrial production (2022-2025 CAGR*)		Exports (2022-2025 CAGR*)		EU market share (difference between 2015 and 2025, pp)	
	Spain	EU-3	Spain	EU-3	Spain	EU-3
Total manufacturing	0.6%	-0.7%	5.6%	4.4%	0.1	-1.7
Food	-0.1%	0.1%	8.3%	9.0%	0.7	-0.8
Beverages	0.3%	-1.3%	3.8%	1.9%	-0.2	-1.2
Textiles	-1.8%	-2.4%	2.0%	1.2%	0.8	-1.4
Wearing apparel	-5.5%	1.8%	3.3%	5.2%	-1.6	-0.4
Leather	-3.6%	-1.0%	8.7%	4.2%	-0.5	0.0
Wood and cork	-3.8%	-5.0%	1.8%	-1.8%	0.4	-0.7
Paper	-1.1%	-3.4%	2.3%	1.5%	0.8	-0.7
Chemicals	-0.8%	-3.8%	7.0%	1.9%	1.5	-0.4
Pharmaceuticals	6.1%	3.5%	4.3%	7.7%	-0.7	-2.6
Rubber and plastic	-0.7%	-2.9%	5.7%	1.7%	0.6	-1.6
Other non-metallic mineral products	-3.1%	-4.9%	0.0%	1.9%	0.4	-1.3
Basic metals	-3.4%	-3.8%	2.4%	4.1%	0.2	0.4
Fabricated metal products	0.5%	-2.8%	5.6%	2.7%	0.2	-2.2
Computer, electronic and optical products	7.7%	2.3%	7.3%	3.3%	0.3	-1.4
Electrical equipment	1.7%	-1.0%	7.2%	3.9%	-0.4	-2.2
Machinery and equipment n.e.c.	1.0%	-1.7%	4.7%	3%	-0.2	-1.8
Motor vehicles, trailers and semi-trailers	2.5%	-1.2%	5.3%	4%	-1.3	-3.0
Other transport equipment	6.8%	6.4%	9.5%	12.9%	1.6	-2.6
Furniture	1.3%	-4.4%	4.3%	-0.7%	1.2	-0.5
Other manufacturing	2.9%	1%	7.3%	6.2%	0.3	-1.2

*Compound Annual Growth rate

Sources: Eurostat, European commission, Coface

Spanish export performance tells a similar story (Table 1).

The main exceptions are pharmaceuticals, owing to Italy's outperformance, and transport equipment, boosted by French aeronautics (which has gradually rebounded after hitting rock bottom in 2022) and Italian shipbuilding sector. Beyond weathering recent shocks, Spain's manufacturing exports have also maintained their market share within the EU since 2015 (Table 1), while France and Germany have seen their decline by 1.4 pp and 3.9 pp, respectively. Italy also showed a slight upward trend, gaining 0.2 pp in EU market share. The strongest market gains have been recorded in transport equipment (driven by aircraft and railway locomotive sub-segments), chemicals and furniture, largely at the detriment of Germany.

Overall, the widespread nature of Spain's manufacturing outperformance – spanning labour-intensive, energy-intensive, as well as higher value-added industries – suggests that sectoral composition is only part of the explanation. It also points to potential advantage in key production factors, particularly labour and energy costs, which may have supported overall competitiveness and helped Spanish manufacturers better withstand a challenging international environment than its peers.

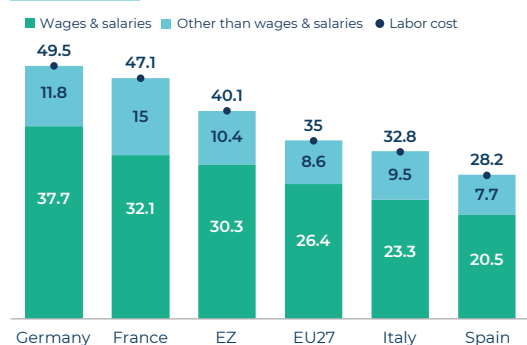
1 - At the same time, the real GVA of the Spanish manufacturing sector shows a substantial growth of about 12% between 2015 and 2025, compared with 2% in Italy and France and a decline of 5% in Germany.

A widespread labour cost advantage, but under pressure

Competitive labour cost

Labour represents a significant share of production costs, averaging 13% in the Spanish manufacturing sector (vs. 14% in Italy, 16% in France, and 20% in Germany). In 2025, Spanish manufacturing hourly labour costs remained 43% below Germany's, 40% below France's and 14% below Italy's, **(Chart 3)** despite rising faster since 2022².

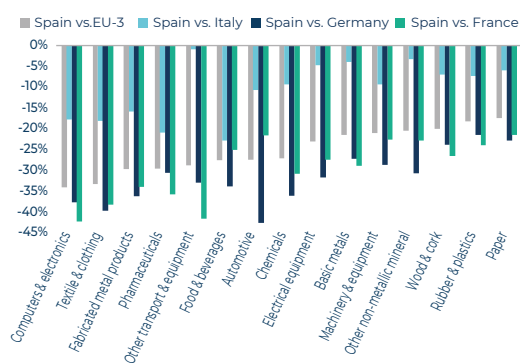
Chart 3 - Manufacturing hourly labour costs levels in 2025 (€)



Sources: Eurostat, Coface

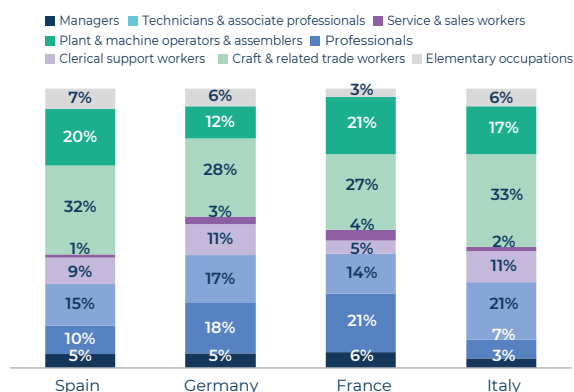
Spain's labour cost advantage is broad-based across manufacturing sectors, especially in higher value-added and labour-intensive industries such as textiles and agri-food **(Chart 4³)**. The gap with the other three countries is broadly homogeneous across the industry. Part of this advantage may reflect Spain's labour force composition, which is less intensive in highly qualified workers than in France and Germany **(Chart 5)**. However, the gap is not explained solely by this. Even among highly skilled occupations such as professionals, labour costs remain 40-50% lower in Spain than in France and Germany.

Chart 4 - Annual labour cost per employee difference with Spain by manufacturing industries in 2023



Sources: Eurostat, Coface

Chart 5 - Manufacturing employment by occupation in 2025 (% of total)

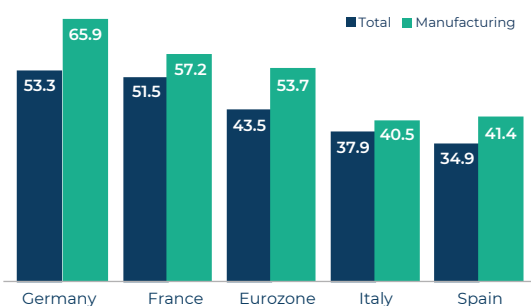


Sources: Eurostat, Coface

Despite a structural productivity gap, Spain remains relatively cost-competitive

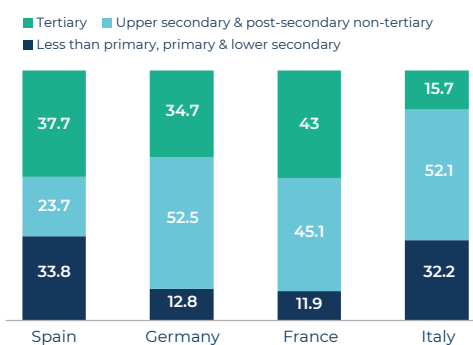
While Spain benefits from a clear labour-cost advantage, Spanish productivity remains below the euro-area average. Although this gap stems in particular from the country's specialisation in low-productivity sectors, such as tourism, it is also evident within manufacturing itself **(Chart 6)**, despite Spain having overtaken Italy since 2022. This underperformance reflects a less favourable human capital profile **(Chart 7)**, a productive structure more heavily reliant on SMEs, and lower innovation capacity⁴.

Chart 6 - Real labour productivity in 2025 (real GVA per hour worked)



Sources: Eurostat, Coface

Chart 7 - Employees by educational level in the manufacturing sector in 2025 (%)



Sources: Eurostat, Coface

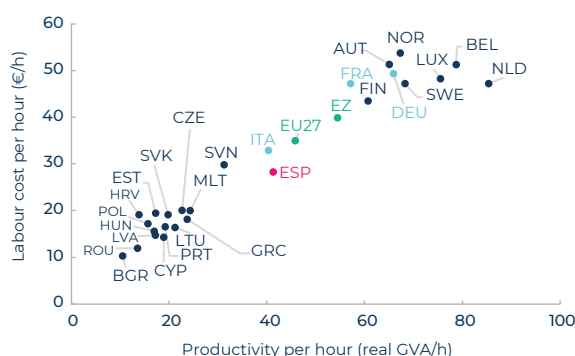
2 - Spanish manufacturing labour costs rose by 15% between 2022 and 2025, compared with 11-12% in Germany, France and Italy. This faster rise is driven by both higher non-wage costs (linked to recent pensions reforms) and wage increases. While the new solidarity contribution will mainly affect high-income earners and therefore have a limited impact on manufacturing in the near term, widespread collective bargaining and successive minimum wage increases have contributed to stronger wage growth in recent years.

3 - It should be noted that sectoral costs are calculated based on annual compensation per employee, rather than per hour worked, due to a lack of available data. However, in the manufacturing sector, Spanish workers work, on average, more hours than their French and German counterparts, but fewer than Italians. In this context, cost differences are likely to be underestimated relative to France and Germany and overestimated relative to Italy.

4 - "Spain's Productivity Gap Vis-à-Vis Europe and the United States: Diagnosis and Remedies", IMF Working Paper (2025).

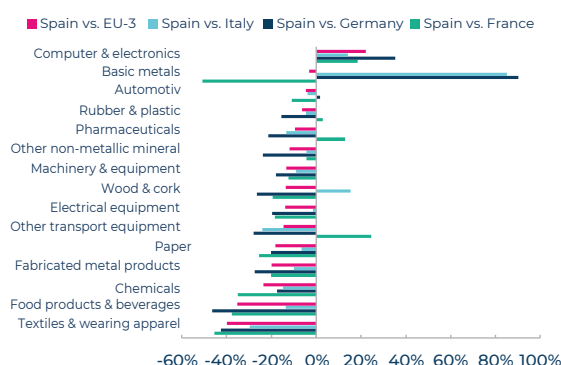
Despite its productivity shortfall, Spain maintains a strong competitive position among the Big Four thanks to its relatively low labour cost. Hence, we estimate that a manufacturing worker in Spain is between 10% and 20% less costly than in Germany, France, and Italy (Chart 8)⁵. In other words, its low labour costs more than offset its productivity deficit compared with all three. Moreover, it is the case in most manufacturing industries (Chart 9)⁶.

Chart 8 - Unit labour cost in the European manufacturing sector in 2025



Sources: Eurostat, Coface

Chart 9 - Unit labour cost gaps: Spain relative to selected European countries by manufacturing industries in 2023 (%)



Sources: Eurostat, Coface

Spain's cost-based competitiveness remains strong at present, but its sustainability could be jeopardised if rising labour costs were not matched by greater productivity gains. While manufacturing hourly labour costs increased by 15% between 2022 and 2025, real labour productivity rose by less than 3%. More broadly, Spain's recent strong employment growth has been concentrated in low value-added sectors and supported by strong immigration. As a result, cumulative real GDP growth has exceeded growth in GDP per capita since 2022 (+15% vs +11% respectively). If this divergence between employment-intensive growth and weak productivity persists, the competitive model that has supported Spanish manufacturing over the past decade could gradually erode. The strong growth in R&D expenditure (+46%) and investment in computer software (+35%) between 2021 and 2024, together with the ongoing digitalisation of the economy – notably supported by European recovery funds⁷ – are expected to contribute to future productivity gains. However, Spain still lags, as these intangible assets account for only 0.9% of GDP, compared with 2.3% in Germany.

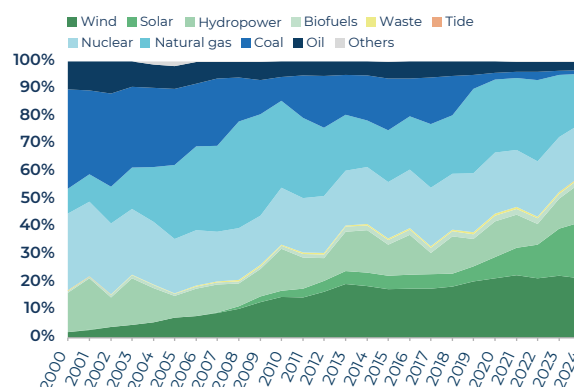
An energy potential that remains under-exploited

Renewable energies: a buffer against external energy shocks

In the current context of rising geopolitical tensions, energy prices have unsurprisingly been one of the key variables of production costs and thus industrial competitiveness. The wars in Ukraine and the Middle East have brought energy security issues back to the forefront, highlighting vulnerabilities related both to countries' structure of final energy consumption and the suppliers. **Electricity is of particular importance, as it accounts for around 30% of manufacturing energy consumption in Spain**, and even more in neighbouring countries (up to 42% in France).

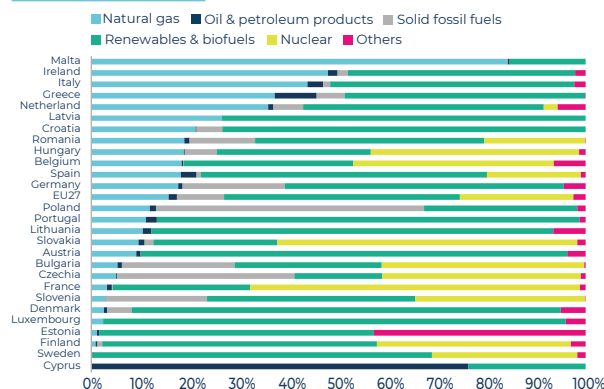
Over the past two decades, Spain has significantly increased its renewable electricity generation, driven by the rapid expansion of solar and wind power. While renewables accounted for less than 20% of its electricity generation in 2006, their share rose to 58% in 2024 (Chart 10). This structural shift has helped reduce Spain's carbon intensity whilst strengthening its electricity market in the face of external energy shocks, unlike countries more dependent on fossil fuels such as Italy, where natural gas accounts for 44% of its energy mix (Chart 11). A higher share of low-marginal-cost technologies such as renewables tends to put downward pressure on wholesale electricity prices and reduce exposure to fluctuations in fossil fuel prices. Beyond the share of each source in the energy mix, it is their marginal role in meeting demand that is decisive in electricity pricing, due to the very structure of the EU's energy market (Box 1 - next page).

Chart 10 - Electricity generation by fuel in Spain (% of total)



Sources: IEA, Coface

Chart 11 - Electricity generation by fuel type in the EU (% of total in 2024)



Sources: IEA, Coface

5 - Results should be interpreted with caution, as they implicitly assume a linear relationship between labour costs and value added.

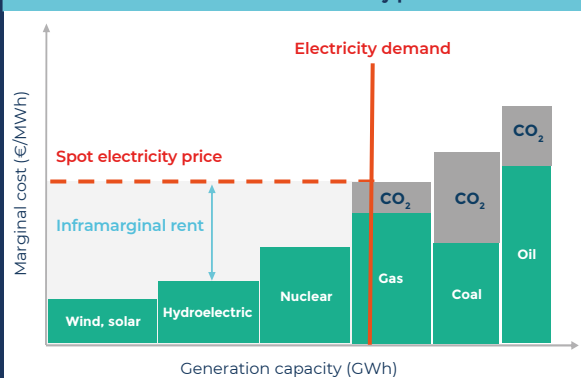
6 - Two exceptions stand out: electronics and base metals. The first case can be especially explained by the sector's relatively negligible size (1.7% of total GVA) and it is thus less likely to benefit from scale and agglomeration effects, unlike Germany for example (8.4%) with the Silicon Saxony cluster. As regards the base metals sector, this difference can be explained by variations in sub-segment specialisation, positioning along the value chain and production technologies.

7 - Approximately 26% of the total budget is allocated to digital initiatives.

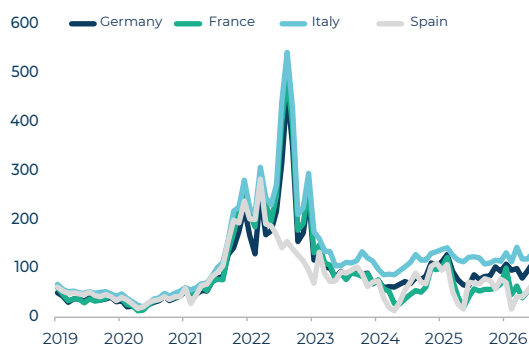
Box 1 – EU WHOLESALE ELECTRICITY MARKET PRICES – THE MERIT ORDER MECHANISM

European wholesale electricity prices are determined by the merit-order mechanism. Under this system, demand is met by ranking producers' supply bids according to their marginal cost of production. This production cost comprises three elements: fuel, carbon pricing (determined by the EU via ETS allowances system), and variable operating and management costs. Renewable energy sources therefore have the lowest variable costs (as they rely on free natural inputs); whereas fossil-fuel generation is largely determined by the cost of the underlying raw materials (and is thus more exposed to volatility in global energy markets).

Wholesale prices are then set by the marginal cost of the last – and most expensive – power plant required to meet demand (Chart 12). Electricity prices therefore remain influenced by fossil-fuel-fired power plants, particularly gas-fired ones (which are more flexible and easily mobilised), which remain an essential balancing component in ensuring supply flexibility during periods of high demand and/or low renewable energy output. Thus, even in countries with a large share of renewable generation, wholesale prices may still largely be set by the marginal cost of fossil fuels, as is the case in Germany⁸. A relatively limited use of fossil fuel can therefore drive up a country's wholesale electricity prices, regardless of the amount of renewable energy it uses.

Chart 12 – Merit order effect on electricity price determination

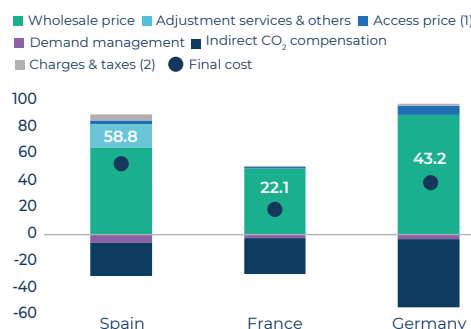
The role of gas in electricity price formation has fallen sharply in Spain. While gas influenced electricity price for 75% of the time in 2019, it accounted for just 15% by early 2026, compared with 89% in Italy and 40% in Germany⁹. As a result, Spanish wholesale electricity prices have become far less sensitive to fluctuations in gas markets and to external shocks, such as those triggered by Russia's invasion of Ukraine¹⁰ – to which Germany and Italy were particularly dependent. Thanks to wholesale electricity prices that are more decoupled from those of gas, they are generally more favourable than those of its European neighbours (Chart 13). In 2025, the wholesale price of electricity in Spain was on average 34% and 82% lower than in Germany and Italy, respectively. Only France recorded prices that were 6% lower, thanks to its nuclear power capacity.

Chart 13 – Monthly wholesale electricity prices (€/MWh)

Sources: Ember, Coface

Trompe-l'œil energy advantage at present

Spain's wholesale electricity advantage does not fully translate into lower energy costs for industry at present. Wholesale prices merely reflect the cost at which suppliers purchase electricity from generators and are just one component of the final bill. Network costs related to transmission and distribution, together with levies, taxes and other regulated charges can significantly offset the initial advantage of lower wholesale electricity prices. Thus, despite favorable wholesale prices, Spanish energy-intensive industries paid 167% more for electricity than their French counterparts and 36% more than Germans' in 2025 (Chart 14).

Chart 14 – Final electricity prices in the electricity-intensive industry in 2025 (€/MWh)¹¹

Sources: AEGE, Coface

This loss of competitiveness in the final bill stems mainly from lower subsidies and higher system-balancing costs. Germany, for instance, provides roughly twice as much compensation for indirect CO₂ costs (under the EU Emissions Trading System) as Spain and further supports the most electro-intensive industries through the "Super Cap" scheme, which limits the carbon-cost burden to 1.5% of gross value added. As these schemes specifically target the most energy-intensive industries – such as metallurgy, chemicals, paper and non-metallic minerals – the rest of Spain's industrial base retains an energy-cost advantage vis-à-vis Germany despite higher grid costs. By contrast, France continues to enjoy lower electricity costs overall, even excluding carbon compensation schemes, thanks to its nuclear fleet and the additional support provided through the ARENH mechanism¹².

Beyond the structure of the energy mix, the type of contract also plays a role. In this respect, Power purchase agreements¹³ (PPAs) have emerged as a strategic alternative for hedging against long term price volatility while supporting the financing of decarbonisation. Driven by the expansion of its renewable energy capacity, Spain has become Europe's leading PPA market, accounting for a quarter of contracted capacity (Chart 15 - next page). In 2025, PPA prices were on average 39% below wholesale electricity prices in Spain and Germany¹⁴. The Spanish PPA market is largely driven by demand from the ICT

8 - Although 56% of its electricity generation is covered by renewables, gas prices determine electricity prices more often. This is partly due to its definitive phase-out of nuclear power in 2023.

9 - Rosslowe, C., & Petrovich, B. (2026). Latest energy shock reminds Europe of its risky gas reliance. Ember. <https://ember-energy.org/latest-insights/latest-energy-shock-reminds-europe-of-its-risky-gas-reliance/>

10 - Following the invasion of Ukraine in 2022, Spain (and Portugal) also benefited from the Iberian exception, the mechanism of which allowed them to deviate from the European electricity market pricing system and thus cap the price of MIBGAS, the gas used for electricity generation, until the end of 2023.

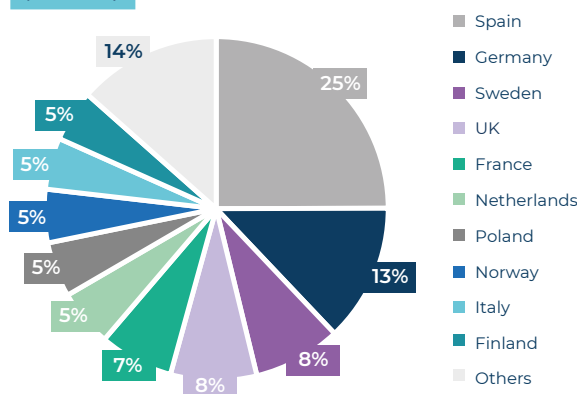
11 - Spain is currently the only European country with a tax on value of electricity production (IVPEE). Introduced in 2012 by Mariano Rajoy's first government, it imposes a 7% levy on revenue from all types of power generation. However, on 29 June 2026, the government announced to phase out this tax by 2028.

12 - Regulated Access to Historic Nuclear Electricity is a French mechanism enabling alternative suppliers to EDF to access up to 100 TWh per year at a regulated price (€42/MWh). ARENH has primarily benefited very large industrial electricity consumers. This scheme, introduced in 2011, was replaced by the Universal Nuclear Payment with effect from 1st January 2026.

13 - A PPA is a long-term electricity supply contract between a renewable energy producer and a consumer, enabling the consumer to secure a quantity of electricity at an agreed tariff over the long term (generally 10–15 years).

sector, which accounts for 40% of contracted capacity – of which Amazon alone accounts for nearly half – as well as from heavy industry (23%).

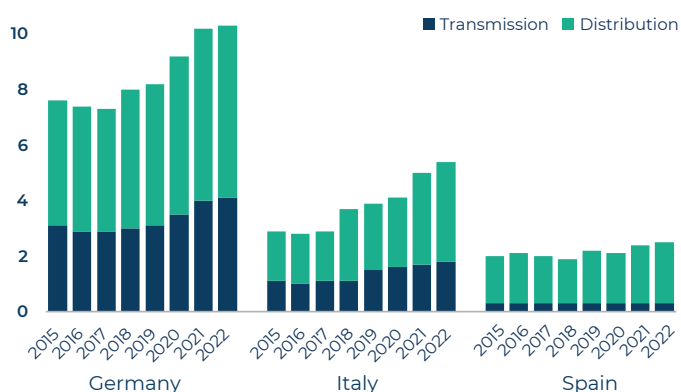
Chart 15 - PPA contracted capacity by country in Europe (% of total)



Sources: RE-Source, Coface

The widespread blackout that affected the Iberian Peninsula on 28 April 2025¹⁵ drew attention to the reliability of Spain's electricity network. Rapid electrification, together with the expansion of renewables and decentralised generation, requires the electricity grid infrastructure to be adapted. **Yet Spain is lagging behind in investment in both electricity grid and storage capacity.** While renewable electricity generation increased by more than 60% between 2019 and 2024 – driven by a near fourfold rise in solar power – grid investment remained virtually unchanged (**Chart 16**). Spain has the lowest ratio of grid-to-renewable investment in Europe, allocating just \$0.30 to grid for every dollar invested in renewables, compared with around \$0.70 in most European countries between 2019 and 2024¹⁶. This shortfall largely reflects regulatory caps in grid investment introduced in 2013 at 0.13% of GDP for transmission and 0.065% for distribution¹⁷. The Spanish government has, however, recently approved an additional €17.9 billion investment plan¹⁸ by 2030, of which up to €10.2 billion for the distribution network and €7.7 billion for transmission.

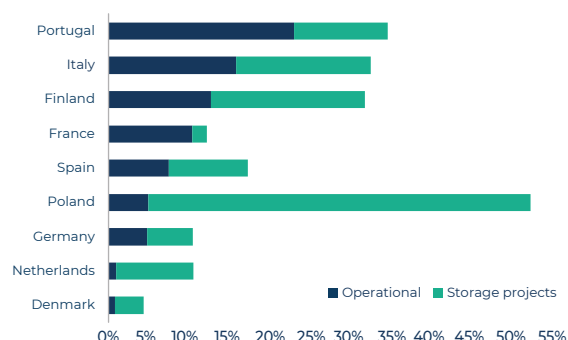
Chart 16 - Grid investments by country (billion USD)



Sources: IEA, Coface

Consequently, Spain's operational storage capacity represents only 7.5% of its installed solar and wind capacity (**Chart 17**). **In the absence of sufficient grid infrastructure, additional energy generation capacity remains underutilized and the deployment of new grid connections is being held back.** Up to 11% of renewable generation was curtailed in 2025 due to grid constraints and more than 85% of transmission nodes are reportedly saturated in Spain¹⁹. **Underinvestment contributes to congestion problems, resulting in additional system costs that are ultimately passed on to electricity consumers (Chart 14 - previous page).**

Chart 17 - Battery capacity relative to wind and solar capacity (%)



Sources: European Energy Storage Inventory, Ember, Coface

Energy potential that could be materialised in the future and benefit electro-intensive industries

Although Spanish industry is not yet fully benefiting from the country's low-cost renewable electricity potential, this trend could be reversed over the next decade. Germany's generous support schemes for energy-intensive industries, which currently offset part of Spain's wholesale electricity advantage, are due to expire in 2030. Unless extended, the electricity cost advantage is likely to shift structurally back in Spain's favour after the deadline. At the same time, continued investment in grids and storage capacity is expected to improve the integration of renewables and further enhance access to low-cost electricity, albeit potentially at the expense of higher network charges in the short term.

Making better use of this low cost green electricity potential would thus be of particular benefit to sectors that are both energy-intensive and highly electrified, such as rubber and plastics, metallurgy and automotive (Chart 18 - next page). More generally, **as industrial electrification and decarbonisation progress, electricity costs are expected to become an increasingly important determinant of competitiveness across a broader range of sectors.** However, electrification poses major technical challenges depending on the industry. According to the International Energy Agency²⁰, significant electrification potential remains in industrial processes requiring low- and medium-temperature heat (up to 300°C) by using heat pumps and electric boilers. Based on the structure of industrial heat consumption (**Chart 19 - next page**), the textile, agri-food, wood and paper sectors could be fully electrified, while 40 to 70% of the heat requirements in chemicals²¹ and pharmaceuticals, transport equipment, aluminium and machinery, could also be met by electricity. Conversely, industries relying on very high-temperature processes, such as steel and

14 - European Parliament. (2026). Overview of the diffusion of Power Purchase Agreements and Contracts for Difference across Member States. European Parliament.

[https://www.europarl.europa.eu/RegData/etudes/STUD/2026/780416/ECTI_STU\(2026\)780416_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2026/780416/ECTI_STU(2026)780416_EN.pdf)

15 - According to the *ENTSO-E final report* published in March 2026, "the power blackout resulted from a combination of multiple interacting factors, including oscillations, shortcomings in voltage and reactive power control, differences in voltage regulation practices, rapid reductions in generation and cascading generator tripping in Spain, as well as uneven stabilisation capabilities".

16 - Bloomberg, (2025).

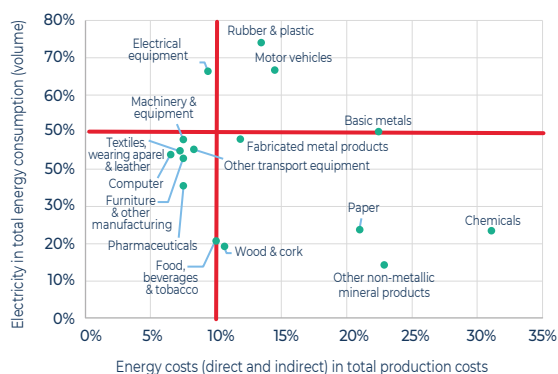
17 - This limit was originally introduced to ensure the financial sustainability of the electricity system following the accumulation of a large tariff deficit. It aimed to contain regulated network costs and prevent further increases in electricity charges that would ultimately be borne by end consumers.

18 - The planning is the responsibility of the Ministry for Ecological Transition, but the investments are carried out by the network operator.

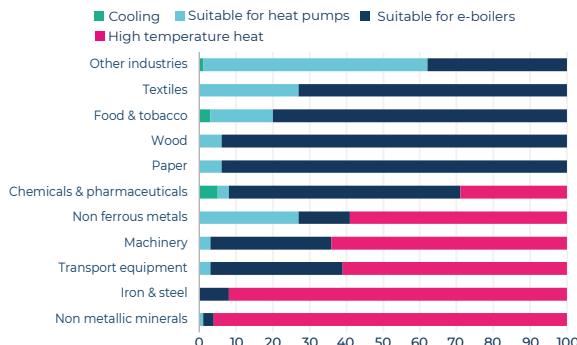
19 - Sources: Red Eléctrica and Industria y Energía y Opina 360.

20 - IEA, (2025). Renewables for Industry – Electrification of low-temperature heat and steam.

21 - It should also be noted that the potential for electrification within the chemical industry varies considerably depending on the processes involved and their structural dependence on fossil-based inputs (e.g. ammonia, plastics, etc.).

Chart 18 - Degree of electrification and energy intensity of manufacturing industries in Spain

Sources: European Commission, Eurostat, Coface

Chart 19 - Distribution of heat use in industrial sector of the EU (% of total)

Sources: IEA, Coface

non-metallic minerals, are difficult to electrify. Beyond manufacturing, low-cost electricity could also enhance Spain's attractiveness for fast-growing data centers

(Box 2), driven by the expansion of AI, where electricity accounts for an average of 40% of operating costs.

Box 2 - SPAIN AS A GROWING ALTERNATIVE EUROPEAN HUB FOR DATA CENTERS

Spain emerges as a strategic European data center hub. In the first three quarters of 2025, Spain ranked sixth among the countries with the highest announced amount of FDI in data centers²². In March 2026, installed capacity in Spain stood at around 360 MW, nearly three times the level recorded at the end of 2022. Although still far behind FLAP-D markets (Frankfurt, London, Amsterdam, Paris and Dublin), these traditional hubs are increasingly constrained by limited land availability, electricity bottlenecks and tighter regulations. As a result, **investment is gradually shifting towards alternative locations, with Spain emerging as one of the main beneficiaries.**

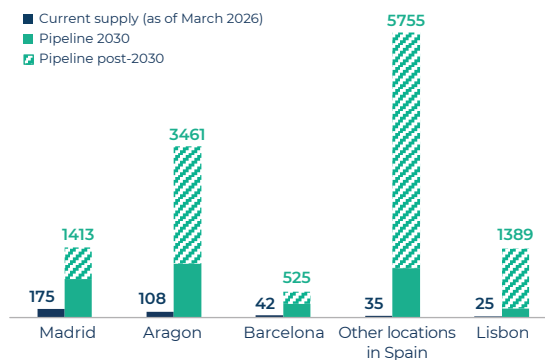
Supported by growing demand for cloud computing and artificial intelligence, Spain has attracted major hyperscalers such as Amazon, Microsoft, Oracle and Meta, alongside leading colocation operators²³. Operational capacity could exceed 3.5 GW by 2030, bringing Spain closer to Europe's largest markets. For comparison, Germany, currently Europe's leading data center hub, is expected to reach around 4.8 GW by that date²⁴.

In Spain, **Madrid remains the largest hub and Europe's leading secondary market²⁵, but project pipeline is increasingly concentrated in other regions, particularly Aragon (Chart 20²⁶)** driven by large-scale projects involving players such as Box2Bit, Merlin Edged, Forestalia and the US giant Amazon (AWS). In this regard, Amazon announced in March 2026 that it would increase its investment in this region to €33.7 billion, making it the company's largest investment outside the United States.

According to projections by the Spanish Data Center Association, cumulative direct and indirect investment in the sector could reach €67 billion to €79 billion between 2025 and 2030 (4 to 5% of GDP). Achieving this potential will depend on maintaining a favorable regulatory environment and ensuring adequate access to energy infrastructure²⁷. Spain's attractiveness currently rests on strong fibre-optic connectivity²⁸ and a growing network of submarine cables, strengthening its role as a digital gateway between Europe, the Americas, Africa and the Mediterranean. It also benefits from

abundant and affordable land²⁹ and limited exposure to natural hazards. Abundant renewable energy resources facilitate the use of long-term power purchase agreements (PPAs)³⁰ which enable operators to have greater visibility on future electricity costs while meeting sustainability objectives.

However, the rapid expansion of the sector is increasing pressure on the electricity grid, particularly around Madrid. Although data centers accounted for only 0.8% of Spain's electricity consumption in 2025, Ireland's experience illustrates the risks associated with rapid growth: in 2021, grid operator EirGrid imposed a moratorium on new data center connections in Dublin due to network congestion. Ensuring sufficient grid capacity will therefore be critical to sustaining Spain's ambitions in the sector.

Chart 20 - Power load capacity, current supply and pipeline (in MW IT)

Sources: Colliers, Coface

22 - UNCTAD, (January 2026), information from The Financial Times Ltd, fi Markets.

23 - Colocation providers are companies that develop and operate data centers in order to lease hosting capacity and technical infrastructure to third parties, enabling them to deploy their servers without having to bear the fixed costs associated with building and managing data centers. In Spain, for example, there are: Merlin Edged, Nabiax, Equinix, Digital Realty and Box2Bite.

24 - Federal Ministry for Economic Affairs and Climate Action. (2025). Status and development of the German data center landscape.

25 - Berlin, Brussels, Madrid, Milan, Munich, Stockholm, Warsaw, Vienna, and Zurich.

26 - Colliers. (2026). Data center snapshot: Iberian region (October 2025–March 2026). <https://www.colliers.com/es-es/research/data-center-snapshot-iberian-region-oct-2025-mar-2026>

27 - Spain DC. (2025). Informe anual 2025. <https://spaindc.com/wp-content/uploads/2025/09/SpainDC-Informe-Anual-2025.pdf>

28 - In 2025, national FTTH coverage had reached over 90% of households – well above the EU average of 69%.

29 - The cost of land for power stations averages €2.3 million per MW IT in the FLAP-D regions, compared with €1.5 million in Madrid and €1 million in Barcelona. JLL Research. EMEA year end data center report 2025.

<https://www.jll.com/en-uk/insights/emea-data-centre-report>

30 - Examples include the contracts signed between Amazon and Grenergy (469 MW), Digital Realty and BRUC (five PPAs covering approximately 347 GWh), Repsol and Microsoft (230 MW) and Equinix and Ignis (225 MW).

CONCLUSION

Spain's industrial outperformance over recent years reflects more than a favourable post-pandemic rebound. While a more balanced industrial structure has helped shield the economy from the sectors most affected by the energy crisis, Spanish manufacturing has also demonstrated stronger dynamics across a broad range of activities, including energy-intensive industries, labour-intensive sectors and several higher value-added segments.

Two competitive advantages stand out: lower labour costs and growing renewable energy capacity leading to lower wholesale electricity prices. While the former is already well-established and remains significant despite recent increases in wages and social contributions; the benefits of the latter are only partially reflected in industrial electricity costs mostly due to higher grid costs.

Looking ahead, Spain is well positioned to benefit from the growing electrification and decarbonisation of industry, particularly in electricity-intensive sectors and emerging activities such as data centers. Yet the long-term sustainability of its industrial success will also depend on its ability to overcome persistent structural weaknesses, notably weak productivity. As labour costs rise and global competition intensifies, maintaining its competitive edge will increasingly require translating its energy transition, industrial diversification and demographic dynamism into lasting productivity gains through investment and human capital development. Ultimately, Spain's challenge is no longer simply to grow faster than its neighbours but to move from a growth model driven largely by labour force expansion towards one based on efficiency, innovation and higher value creation.

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