



# European Construction Sector Observatory

Country profile **Spain**

January 2020



## In a nutshell

The Spanish economy recorded a strong growth in 2018, even though it marked a slight slow-down in comparison to previous years. In 2018, the country's GDP grew by 2.4%, a slight decrease from 2.9% in the previous year.

Mirroring the trends of the overall economy, the broad construction sector in Spain also gained momentum. The **volume index of production** in the narrow construction sub-sector increased by 6.0% between 2015 and 2018. Likewise, the volume index of production in the construction of civil engineering and the construction of buildings grew by 12.3% and 5.3% over the time period.

Volume production in the construction of civil engineering between 2015 and 2018

↑ 12.3%

Even though the **turnover** of the broad construction experienced a 41.8% decline between 2010 and 2014, it increased continuously until 2018, reflecting the growth of volume index of production. However, the turnover of the broad construction sector reported a decline of 18.3% between 2010 and 2018, reaching EUR 226.5 billion. This decline was mainly due to a 27.9% and 7.3% decrease in the turnover of the narrow construction and manufacturing sub-sectors. In contrast, the turnover of the real estate activities and architectural and engineering sub-sectors increased by 35.4% and 0.5% respectively in the same period. However, the turnover of the broad construction sector has continuously increased since 2013, when it reached its bottom low of EUR 155.3 billion.

Turnover of the broad construction sector between 2010 and 2018

↓ 18.3%

In parallel, the **profitability** in the sector has also experienced a decline between 2010 and 2017. While the gross operating rate of the broad construction sector increased from 13.0% to 14.0%, three out of four sub-sectors experienced a decline (the narrow construction, real estate activities and architectural and engineering activities sub-sectors), thus indicating lower profit margins.

This may be partly explained by two factors: the decline observed in the **apparent labour productivity** and the increase of **construction costs** (and especially input material cost). Between 2010 and 2018, the apparent labour productivity across the narrow construction and real estate sub-sectors declined by 13.3% and 11.1% respectively. In parallel, input materials cost increased by 7.3% between 2015 and 2018.

Apparent labour productivity in the narrow construction sub-sector between 2010 and 2018

↓ 13.3%

**Employment** in the Spanish broad construction sector recorded a decline of 15.7% over the 2010-2018 period. This fall was mainly due to decline in the employment across all the sub-sectors except for the real estate activities sub-sector, which experienced a 39.7% increase between 2010 and 2018. Employment in the manufacturing, narrow construction and

architectural and engineering activities sub-sectors decreased by 23.7%, 22.9% and 4.5% respectively, over the same time period.

Employment in the broad construction sector between 2010 and 2018  **15.7%**

The **investment index in the broad construction sector** has experienced a steady growth since 2015, rising by 14.7% over the 2015-2018 period. The growth was mainly driven by investments in dwellings. The latter rose by 30.8% between 2015 and 2018, in line with the high demand for housing. Investment in non-residential buildings and civil engineering remained rather stable, growing by 0.4% over the same period, due to the ongoing commitment to fiscal deficit reduction.

Total investment in the broad construction sector between 2015 and 2018  **14.7%**

The housing market is driving the growth of the construction sector. The **house price index** for total dwellings has increased by 18.6% between 2015 and 2018. This was mainly driven by a 20.1% rise in the price of new dwellings and an 18.3% growth in

the price of existing dwellings. Also, the demand for housing is expected to increase in the years to come, and the need for additional housing has been estimated at 140,000 annually until 2024.

In addition, the government has taken several actions to address the housing shortage and the issue of affordability and renting. In March 2018, the Spanish government approved the new State Housing Plan for the period 2018-2021.

House prices index between 2015 and 2018  **18.6%**

While the sector's prospects are positive, it faces some key challenges. These include labour shortage, the issue of late payment, as well the indebtedness of construction SMEs. These may threaten the long-term sustainable development of the sector.

**Overall, the outlook for the broad Spanish construction sector is positive, mainly driven by the housing market. Tackling challenges such as labour and skill shortages will help realising the full potential of the construction sector.**

# Table of Contents

<b>In a nutshell</b> .....	<b>2</b>
<b>1 Key figures</b> .....	<b>5</b>
Construction market.....	5
Productivity .....	6
Turnover and profitability .....	6
Employment .....	7
<b>2 Macroeconomic indicators</b> .....	<b>9</b>
Economic development.....	9
Demography and employment.....	9
Public finance .....	10
Entrepreneurship and access to finance .....	10
<b>3 Key economic drivers of the construction sector</b> .....	<b>11</b>
Business confidence .....	11
Domestic sales .....	11
Export of construction-related products and services .....	12
Access to finance in the construction sector.....	12
Access to housing .....	13
Infrastructure.....	15
<b>4 Key issues and barriers in the construction sector</b> .....	<b>16</b>
Company failure .....	16
Trade credit .....	16
Late payment.....	17
Time and cost of obtaining building permits and licenses .....	17
Skills shortage .....	17
Sector and sub-sector specific issues .....	18
<b>5 Innovation in the construction sector</b> .....	<b>20</b>
Innovation performance.....	20
Eco-innovation and digitalisation .....	21
<b>6 National and regional regulatory framework</b> .....	<b>23</b>
Policy schemes.....	23
Building regulations.....	25
Insurance and liability related regulations .....	25
<b>7 Current status and national strategies to meet Construction 2020 objectives</b> .....	<b>27</b>
TO 1 – Investment conditions and volumes .....	27
TO 2 – Skills.....	29
TO 3 – Resource efficiency / Sustainable construction .....	30
TO 4 – Single Market .....	31
TO 5 – International competitiveness .....	32
<b>8 Outlook</b> .....	<b>33</b>

# 1

## Key figures

### Construction market

The **number of enterprises** in the Spanish broad construction sector amounted to 698,086 in 2018<sup>1</sup> (Figure 1). Companies in the narrow construction sub-sector accounted for 54.8% of the total number of enterprises, followed by real estate activities (26.3%), architectural and engineering activities (14.1%) and manufacturing (4.8%). While the number of construction companies experienced a sharp drop between 2010 and 2013 (-12.4%), it recovered steadily from then onwards. Put in comparison to 2010, the number of companies hence increased by 9.4%.

**The largest increase in the number of enterprises since 2010 has been reported in the real estate activities sub-sector (+51.8%), followed by the narrow construction sub-sector (+3.1%).**

Conversely, the number of companies in the manufacturing sub-sector and architectural and engineering activities sub-sector decreased by 18.0% and 6.2%, respectively, over the same time period.

Number of companies in the broad construction sector between 2010 and 2018

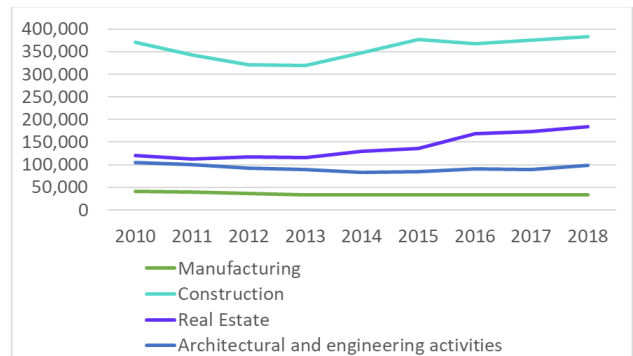
↑ 9.4%

During the period 2015-2018, the **volume index of production** in the narrow construction sub-sector experienced a 6.0% increase. In addition, the volume index of production of construction of the civil engineering reported a 12.3% increase, followed by the construction of buildings (+5.3%), over the same period of time (Figure 2).

Production of civil engineering between 2015 and 2018

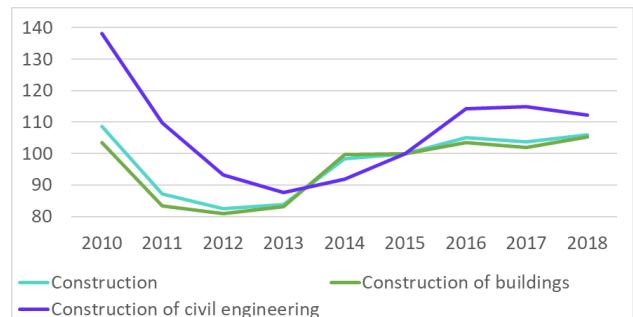
↑ 12.3%

Figure 1: Number of enterprises in the broad construction sector in Spain between 2010 and 2018



Source: Eurostat, 2019.

Figure 2: Volume index of production in the Spanish construction sector between 2010 and 2018 (2015=100)



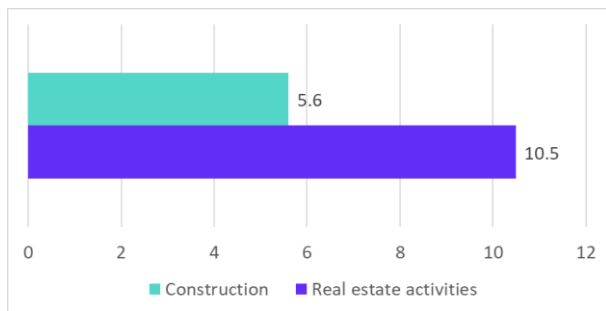
Source: Eurostat, 2019.

In 2018, the total **value added at factor cost**<sup>2</sup> of the broad construction sector amounted to EUR 75.5 billion with narrow construction sub-sector having the largest share (55.9%). After a decline between 2010 and 2012, the total value added of the broad construction sector increased constantly until 2018. However, it remained 21.3% below the 2010 level.

The **share of gross value added** of the broad construction sector in the GDP<sup>3</sup> decreased from 20.4% in 2010 to 17.7% in 2017<sup>4</sup>. In 2018, the real estate activities sub-sector had the largest contribution (10.5%), followed by the narrow construction sub-sector (5.6%) (Figure 3).



Figure 3: Gross value added as share of GDP in the Spanish broad construction sector in 2018 (%)



Source: Eurostat, 2019

The gross value added of the construction sub-sectors is not equally distributed over the 19 NUTS-2 statistical regions of Spain. In fact, the regions of *Comunidad de Madrid*, *Andalucía* and *Cataluña* accounted for 14.9%, 14.7% and 14.7% of the gross value added of the narrow construction sub-sector in 2017. The same regions accounted for 16.3%, 16.0% and 20.9% of the gross value added of the real estate activities sub-sector, respectively over the same year.

### Productivity

**Apparent labour productivity**<sup>5</sup> in the broad construction sector decreased from EUR 40,150 in 2010 to EUR 38,569 in 2017 (-3.6%). This decline is reflected in some of the construction sub-sectors. The apparent labour productivity in the narrow construction and real estate activities sub-sectors reported decreases of 13.3% and 11.1% respectively between 2010 and 2018<sup>6</sup>. Conversely, the manufacturing and architectural and engineer sub-sectors increased by 3.4% and 0.6%, respectively, during the same period (Figure 4).

Labour productivity in the narrow construction sub-sector between 2010 and 2018


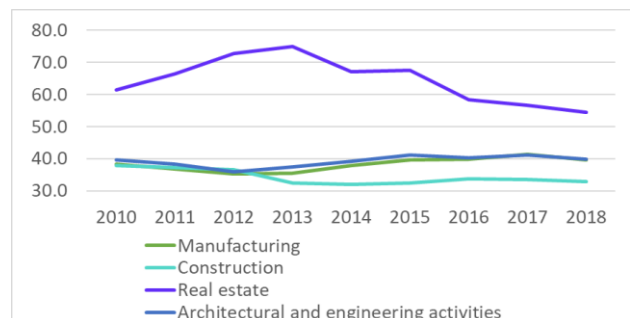

13.3%

Figure 4: Labour productivity in the broad construction sector in Spain between 2010 and 2018 (EUR k)



Source: Eurostat, 2019.

In 2017, a five-year **National General Collective Agreement** was signed between partners in the construction sector: the National Confederation of Construction (CNC), which represents employers, and the two trade unions CCOO Construction and Services and UGT-FICA. It is the 6<sup>th</sup> General Agreement from the construction sector and its objective is to increase productivity and competitiveness in the construction sector among other things. It is one of the biggest agreements in the Spanish economy since it involves directly around 800,000 employees<sup>7</sup>. The agreement aimed at promoting the use of new technology, including the "BIM Environment", a new collaborative work methodology, based on the use of an intelligent 3D model. In addition, it aimed to keep improving the qualification and necessary skills of employees in the sector with specific formation given by the Construction Labour Foundation (FLC).

### Turnover and profitability

The **turnover** of the broad construction sector reported a decline of 18.3% between 2010 and 2018, reaching EUR 226.5 billion. This overall decline was mainly due to a 27.9% and 7.3% decrease in the turnover of the narrow construction and manufacturing sub-sectors. In contrast, the turnover of the real estate activities and architectural and engineering sub-sectors increased by 35.4% and 0.5% respectively in the same period. However, the turnover of the broad construction sector has continuously increased since 2013, when it reached its bottom level of EUR 155.3 billion. In particular, it jumped from EUR 195.8 billion in 2017 to EUR 226.5 billion in 2018, marking a 15.7% growth.

Turnover of the real estate activities sub-sector between 2010 and 2018

↑ 35.4%

Similarly, the **gross operating surplus** of the broad construction sector in Spain declined by 24.0% between 2010 and 2017, going from EUR 36.0 billion to EUR 27.4 billion. As for the turnover trends, the gross operating surplus for the broad construction sector dropped until 2013, before growing continuously until 2017. In 2016, it stood at EUR 27.0 billion, significantly below the EU-28 average of EUR 509.9 billion.

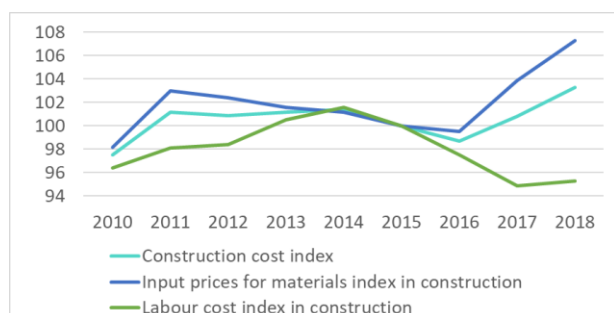
The **gross operating rate** of the broad construction sector<sup>8</sup>, which gives an indication of the sector's profitability, stood at 14.0% in 2017, slightly higher than the 2010 value (13.0%). The most profitable sub-sector was the real estate activities, with a gross operating rate of 37.1% in 2017. However, three out of four sub-sectors experienced a decline in gross operating rate (the narrow construction, real estate activities and architectural and engineering activities sub-sectors).

In parallel, **construction costs** increased by 3.3% during the period 2015-2018, mainly driven by the rise in input prices for construction materials (+7.3%). Labour costs decreased by 4.7% in the same period (Figure 5).

Construction cost index between 2015 and 2018

↑ 3.3%

Figure 5: Construction cost index between 2010 and 2018 (2015=100)



Source: Eurostat, 2019.

## Employment



The number of people employed in the broad construction sector declined sharply from 2010 to 2013, from 2.4 to 1.6 million people (-35.0%). It has slowly recovered since 2013, reaching 2.0 million in 2018.

Thus, during the period 2010-2018, the total number of people employed in the broad construction sector decreased by 15.7%. The narrow construction sub-sector employs 63.6% (1.3 million people) of the number of people employed in the broad construction sector. The real estate, architectural and engineering activities and manufacturing sub-sectors employed 14.0% (282,256 workers), 11.9% (240,409 workers), and 10.5% (210,946 workers) of people respectively in 2018 (Figure 6).

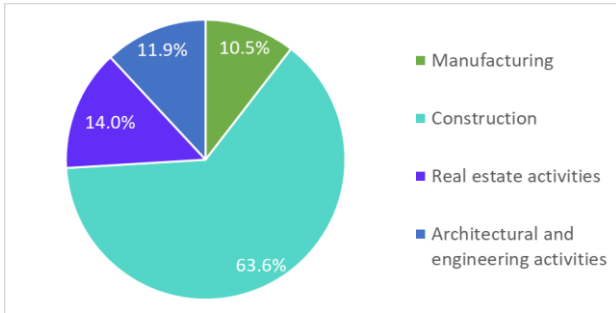
Among all sub-sectors, only the real estate activities experienced an increase (+39.7%) in terms of people employed between 2010 and 2018. This reflects the rise in activities and profitability of the sub-sector. Employment in manufacturing and narrow construction sub-sectors declined by 23.7% and 22.9%, respectively. Similarly, architectural and engineering activities sub-sector registered a decline of 4.5% in the same period.

However, employment in the construction sub-sectors is not equally spread over Spain. In fact, the regions of *Comunidad de Madrid*, *Andalucía* and *Cataluña* accounted for 46.4% and 59.2% of the total employment of the narrow construction sub-sector and the real estate activities sub-sector, respectively, in 2017.

In terms of **employment by occupation**, the number of professionals, clerical support workers and technicians and associate professionals in the real estate activities sub-sector increased most between 2010 and 2018 (+175.0%, +101.2% and +85.2% respectively). Similarly, in the manufacturing sub-sector, employment of professionals, and clerical support workers grew by 45.5% and 33.1%, respectively. Conversely, it recorded declines in the employment of skilled agricultural, forestry and fishery workers (-33.3%) and managers (-32.8%). Most of the drops in terms of employment occupation were recorded in the

narrow construction sub-sector. In this sub-sector, the number of plant and machine operators and assemblers, managers, and elementary occupations dropped by 51.3%, 45.6%, 28.7%, respectively, over the same time period.

Figure 6: Percentage of people employed per construction sub-sectors Spain in 2018



Source: Eurostat, 2019.

The number of **self-employed people** in the narrow construction sub-sector decreased from 399,900 in 2010 to 321,400 in 2018, representing a

decline of 19.6%. Conversely, the number of self-employed persons in the real estate sub-sector has recovered rapidly from the crisis, reaching 50,700 in 2018, an increase of 66.2% compared to 2010. In 2018, self-employed people in the narrow construction and real estate activities sub-sectors represented 11.0% and 1.7%, respectively, of the total self-employed in the general economy.

The share of **people employed by SMEs in the broad construction** sector in Spain has remained stable for the past decade. In 2017<sup>9</sup>, SMEs employed 88.4% of the entire workforce of the broad construction sector, as compared to 89.4% in 2010.

Number of self-employed workers in the narrow construction sub-sector over 2010-2018 period

↓ **19.6%**



## 2

# Macroeconomic indicators

## Economic development

In 2018, Spain's GDP recorded robust growth, amounting to EUR 1,169.2 billion, a 2.4% and 8.4% increase in comparison to 2017 and 2010 respectively.

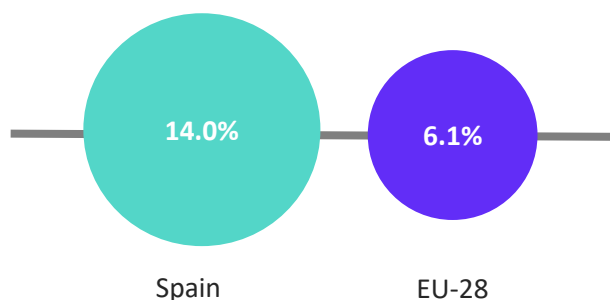
The growth of GDP is supported by private consumption and capital formation. The **potential GDP** stood at EUR 1,157.3 billion, which is very close to the actual GDP. This resulted into a positive output gap of 1.0% in 2018 as compared to a negative **output gap** of 0.1% in 2017. This shows that the economy is working at full capacity.

In 2018, the country's **inflation** stood at 1.7% as compared to 2.0% in 2017. Due to the widening output gap and increase in the minimum wage, the country's core inflation is expected to rise gradually<sup>10</sup>.

## Demography and employment

The **unemployment rate** in Spain stood at 14.0% in 2018, well above the EU-28 average of 6.1%. It has been decreasing significantly since 2013 when it reached 23.9%. The **youth unemployment rate** (below the age of 25) stood at 34.3% in 2018, well above both the EU-28 average of 15.2%. However, the situation has improved since 2014, when the youth unemployment rate stood at 55.5%.

Unemployment rates in 2018



In terms of demographics, the **total population** in Spain amounted to 46.8 million people in 2018, 0.5% below the 2010 levels. However, the low employment rates, especially among young people, have contributed to the outflow of labour force from the country, decreasing its factual population<sup>11</sup>. The number of Spanish people registered abroad has increased from 1.4 million in 2008 to 2.5 million in 2018<sup>12,13</sup>. This has been compensated by the immigration flow in the country<sup>14</sup>. In fact, the **net migration rate** in 2018 stood at 332,447.

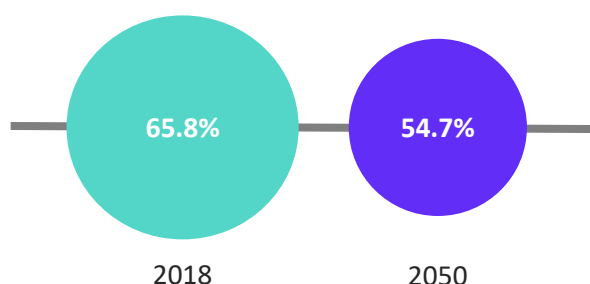
The population of Spain is expected to increase 3.0% until 2030. Between 2030 and 2050, the population is expected to grow by 3.9%, reaching 50.0 million people. In 2018, Spain's **working age population** accounted for 65.8% of the total, exceeding the EU-28 average of 64.7%. However, it is expected to decrease to 63.6% by 2030, and to 54.7% by 2050 – below the EU-28 average of 57.1%. In parallel, due to the increase in life expectancy among other factors, the proportion of elderly people will increase from current 19.2% in 2018 to 32.4% by 2050. This is above the EU-28 average of 28.5%.

Spain faces specific territorial cohesion challenges, that are similar to many other EU Member States. Its population is leaving rural areas to live in urban areas; and the average age of the population in rural areas is higher than in urban areas. In turn, this demographic trend creates demographic pressure in some urban areas<sup>15</sup>.

Most of the major urban areas in Spain have experienced rapid population growth, leading to problems related to urban sprawl, poverty, traffic congestion, and bad air quality. Similarly, depopulation and acute ageing processes are taking place in certain rural and smaller urban areas, making them less attractive for doing business and making the cost of providing public

services high. Currently, there are 14 provinces which are heavily affected by demographic decline, with more than 25% of their population aged 65 or older. This puts additional pressure on the provision of healthcare and long-term care services<sup>16</sup>.

Share of working age population in Spain



## Public finance

**Government spending** has been decreasing, reaching 41.7% of GDP in 2018, 4.3 percentage points lower than in 2010 and lower than the EU-28 average of 45.6%. This reflects in part the ongoing commitment to fiscal deficit reduction. In parallel, the **government deficit** declined in the past years, reaching -2.5% in 2018. This is much lower than the 2010 level (-9.5%), but remains higher than the EU-28 average of -0.6%. On the other hand, **government debt** accounted for 97.6% of GDP in 2018, decreasing slightly since 2014 level. However, it remains much higher than the 2010 levels (60.5%) and the EU-28 average of 80.0%.

## Entrepreneurship and access to finance



Spain was ranked 97<sup>th</sup> out of 190 economies in terms of starting a business in 2019, according to the Doing Business 2020 Report<sup>17</sup>.

Registering a firm requires completing 7 procedures and 12.5 days, considerably above the OECD high income average (4.9 procedures and 9.2

days). Furthermore, the cost of starting a business represents 3.9% of income per capita, compared to the 3.0% OECD high-income average. The paid-in capital for a new firm stood at 11.6% in 2019, again considerably higher than the respective OECD average (7.6%)<sup>18</sup>.

In terms of four SBA (Small Business Act) principles ('second chance', 'responsive administration', access to finance, and skills & innovation), Spain performs in line with the EU average. However, Spain is lagging behind in the "State aid and public procurement", "Single market" and "environment and internationalisation"<sup>19</sup>.



According to the 2019 Global Competitiveness Report, Spain ranked 26<sup>th</sup> when it comes to its financial system.

Spain performs well in terms of Credit gap (1<sup>st</sup>), Domestic credit to private sector (22<sup>nd</sup>), and Insurance premium (27<sup>th</sup>). In parallel, the indicators for Venture capital availability (29<sup>th</sup>) and Financing of SMEs improved (40<sup>th</sup>) in comparison to the previous year. However, the indicators relating to the banking system score relatively poor. Spain ranked 104<sup>th</sup>, 72<sup>nd</sup> and 68<sup>th</sup>, respectively, for the following indicators: Banks' regulatory capital ratio, Non-performing loans and Soundness of banks<sup>20</sup>.

**Loans advanced to Spanish non-financial corporations** have been decreasing steadily over the past years. In 2018, these amounted to EUR 88.6 billion. This is the lowest amount in the past few years, and especially in comparison to 2013, when loans advanced to Spanish resident non-financial corporations amounted to EUR 1,009.4 billion.

Access to finance is being supported by several EU Institutions, such as the European Investment Bank or European Investment Fund (EIF). Spain was the first EU-28 country to implement EIF's SME Initiative, which entails an innovative use of Structural and Investment Funds (ESIF 2014-2020)<sup>21</sup>.

## 3

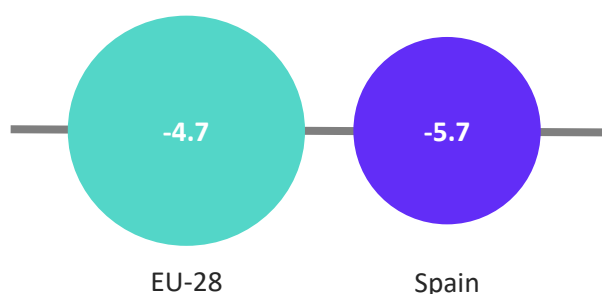
# Key economic drivers of the construction sector

## Business confidence

Business confidence has generally been improving in Spain since 2010, with the consumer confidence indicator increasing from -22.9 in 2010 to -5.7 in 2018. However, this is still below the -4.7 EU-28 average.

The **industry confidence** indicator turned negative in 2018, standing at -0.1. While this is well above than the 2010 levels of -13.7, it is below the EU-28 average of 6.0. Last, the **construction confidence** indicator improved from -29.7 in 2010 to -4.6 in 2018. While this is an improvement, it is also well below the EU-28 average of 4.1.

Consumer confidence indicator in 2018



In parallel, the **investment ratio** declined from 20.0% in 2010 to 17.4% in 2013 before increasing again from 2014 onwards. The investment ratio reached 18.9% in 2018, and with the growing confidence in the sector, it is expected to continue its upward trend. Similarly, **investment per worker** increased in recent years, reaching EUR 90,546 in 2017. This is a 50.3% increase in comparison to 2010.

Investment per worker over 2010-2017 period



50.3%

## Domestic sales

The ranking of the most domestically sold construction products has generally remained constant in Spain between 2010 and 2018.

All products in the top five of the most domestically sold construction products experienced decreases in terms of sales value over the 2010-2018 period except “Prefabricated structural components”, which increased by 9.8%. The largest decrease was reported in the sales of “Ready-mixed concrete” (-44.7%), followed by “Portland cement etc.” (-44.6%), “Doors, windows and their frame etc.” (-21.3%), and “Prefabricated buildings of metal” (-5.5%). The top five most domestically sold construction products, both in Spain and the EU, are summarised in Table 1: Five most domestically sold construction products in Spain and in the EU in 1. Together, these made up 47.0% of all Spanish construction product sales in 2018.

Table 1: Five most domestically sold construction products in Spain and in the EU in 2018

Spain				EU-28
	Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
1	Doors, windows etc. (Group 251210)	1,433.8	11.8	Other structures (Group 251123)
2	Ready-mixed concrete (Group)	1,185.6	9.8	Doors, windows etc. (Group)

Spain				EU-28
	Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
	236310)			251210)
3	Prefabricated structural components for building etc. (Group 236112)	1,111.7	9.2	Ready-mixed concrete (Group 236310)
4	Prefabricated buildings of metal (Group 251110)	1,063.2	8.8	Prefabricated buildings of metal (Group 251110)
5	Portland cement, aluminous cement, etc. (Group 235112)	901.4	7.4	Prefabricated structural components for building etc. (Group 236112)

Source: PRODCOM, 2019.

## Export of construction-related products and services

Table 2 presents the **top five most exported construction products**, both in Spain and in the EU. These accounted for 60.0% of all construction exports from Spain in 2018. As compared to 2010, there were three changes in the ranking of the top most exported construction products in 2018. “Towers and lattice masts”, “Portland cement, aluminous cement” and Marble, travertine, alabaster” were replaced with “Ceramic tiles and flags”, “Other structures and parts” and “Fibreboard of wood”. Between 2010 and 2018, the values of the exports of “Boards, blocks and similar articles”, “Mortars” and “Barrels and coopers' products of wood” have increased by 1167.7%, 263.7% and 248.3%, respectively. Nevertheless, the overall export sales have increased between 2010 and 2018.

Table 2: Five most exported construction products in Spain and in the EU in 2018

Spain				EU-28
	Product	Value (EUR m)	Share in construction product export sales (%)	Product
1	Ceramic tiles and flags (Group 233110)	2,730.0	37.5%	Ceramic tiles and flags (Group 233110)
2	Other structures (Group 251123)	487.9	6.7%	Other structures (Group 251123)
3	Articles of cement, concrete etc. (Group 236919)	444.0	6.1%	Fibreboard of wood (Group 162115)
4	Other worked ornamental etc. (Group 237012)	419.7	5.8%	Marble, etc. (Group 237011)
5	Fibreboard of wood (Group 162115)	287.1	3.9%	Prefabricated buildings of metal (Group 251110)

Source: PRODCOM, 2019.

In terms of **cross-border provision of construction services**<sup>22</sup>, Spain exported services for EUR 1.3 billion in 2018, an increase of 8.1% in comparison to 2012<sup>23</sup>. In parallel, Spain imported a total of EUR 97 million in construction services in 2018, 55.5% lower compared than the 2012 level<sup>24</sup>. Last, Spain exhibited a **trade surplus** of EUR 1.2 billion in services in 2018.

## Access to finance in the construction sector

The economic crisis has affected the ability of Spain’s construction sector to access loans and other sources of finance. The total volume of **loans to narrow construction sub-sector** in Spain has drastically decreased in the last years, reaching EUR 27.6 billion in 2018, 75.9% less than in 2010 (EUR 114.5 billion). This indicates difficulties for the construction sector (and especially SMEs) to obtain credit and access the financial market.



The EIB Investment Survey for 2019 shows that 67% firms in the construction sector consider availability of finance as a long term barrier<sup>25</sup>.

As per the survey, 14% construction firms sector are dissatisfied with the cost of finance obtained, whereas 9% are dissatisfied with collateral requirements<sup>26</sup>. According to Survey on the Access to Finance of Enterprises (SAFE) report 2019, 8% of Spanish SMEs consider access to finance as their most important concern, above the EU-28 average of 7%<sup>27</sup>. Between April and September 2019, 31% of SMEs in Spain applied for a bank loan, higher than the EU-28 average of 24%. Only 3% of SMEs did not apply because of fear of rejection<sup>28</sup>. This could potentially benefit the construction sector.

Furthermore, Spanish SMEs also get financial assistance from the European Commission. Over the past five years, one of the Commission's top priorities has been to boost funding opportunities for SMEs in Europe.

In November 2019, the European Investment Bank (EIB) invested around EUR 61 million of Alhambra SME Funding 2019-1 DAC (Alhambra 2019-1). This is the first-ever securitisation of loans, originated by Be-Spoke Capital, a new direct lending platform<sup>29</sup>.

This newly established platform will provide support to Spanish SMEs and mid-caps with long-term financing opportunities that would complement the offer of traditional lenders. The agreement is supported by the European Fund for Strategic Investments (EFSI), the main pillar of the Investment Plan for Europe (Juncker Plan).

Loans to the narrow construction sub-sector between 2010 and 2018

↓ 75.9%

## Access to housing

The **number of households** has been steadily growing since 2010, reaching 18.6 million in 2018 (+5.3%).

The share of total population in cities and greater cities has increased significantly from 2010 to 2018, going from 55.9% to 78.4%. This indicates that urbanisation is a key issue affecting the construction sector development.

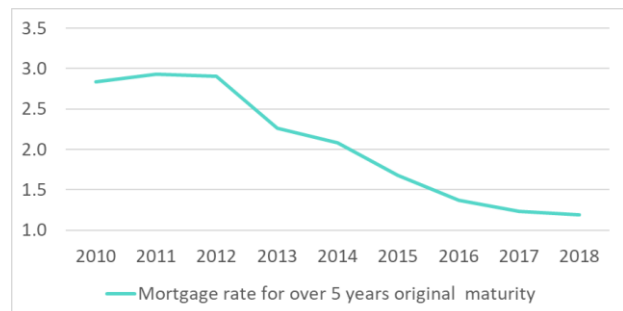
At the same time, the annual **mean equivalised net income** increased slightly by 0.1% between 2010 and 2018, reaching EUR 16,937. That being said, it has been constantly increasing since 2014. In 2017, it stood at EUR 16,390, below the EU-28 average of EUR 19,387. Together with the general population growth, these figures support the rising housing demand and ensuing need for new residential properties, especially in urban areas.

Number of total households between 2010 and 2018

↑ 5.3%

In parallel, **interest rates on mortgages** declined from 2.8% in 2010 to 1.2% in 2018 (Figure 7).

Figure 7: Mortgage rates for loans for over five years original maturity (%) between 2010 and 2018



Source: ECB MFI Interest Rate Statistics, 2019.

However, this decline did not drive households residential loans up. In fact, the **total outstanding residential loans to households** decreased by 20.9%, from EUR 620.4 billion in 2010 to EUR 490.8 billion in 2018.

According to the European Central Bank (ECB), the Spanish mortgage market declined to around 42.7% of GDP in 2018, from 61.5% of GDP in 2011<sup>30</sup>.



Despite this decline, loans for new housing have recently risen. During the first ten months of 2018, the total number of new home mortgages increased by 10.7% y-o-y to 295,418. This remains well below the average of 1.13 million new home mortgages granted every year between 2003 and 2008<sup>31</sup>.

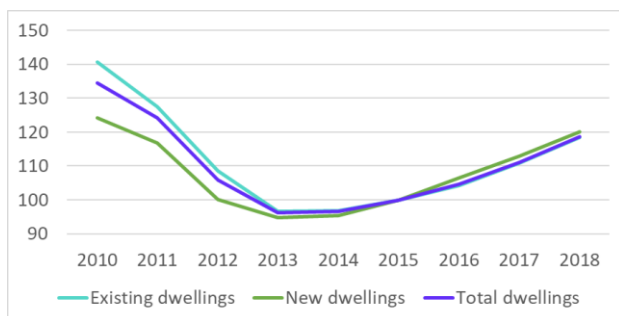
The growth in the household debt was primarily driven by significant growth in new credit to finance durable consumer spending, as well as growth in lending for house purchases and a reduction in the repayment of mortgage<sup>32</sup>.

Residential loans for households in Spain between 2010 and 2018 ↓ 20.9%

Spain experienced one of the highest **price increases** prior to the economic crisis, resulting in a housing bubble<sup>33</sup>. The housing bubble exploded together with the economic crisis, leading to a dramatic decrease in housing prices and construction activities until 2013. However, this downward trend started recovering in 2014 onwards (Figure 8). The housing price index increased by 18.6% in 2018 in comparison to 2015, driven by a 20.1% increase in the price of new dwellings and a 18.3% growth in the price of existing dwellings. However, house prices remain below the pre-crisis level, in nominal terms and real terms (around 22% and 32%, respectively)<sup>34</sup>.

Housing price index between 2015 and 2018 ↑ 18.6%

Figure 8: House price index in Spain between 2010 and 2018 (2015=100)



Source: Eurostat, 2019.

Following the housing price increase, housing affordability has become an increasing issue, especially in a context where the unemployment rate is high.

Several actions have been adopted by the government to address the housing shortage and the issue of affordability and renting. In March 2018, the Spanish government approved the new State Housing Plan for the period 2018-2021.

The general strategy for access to housing in Spain is set out in the National Housing Plan 2018-2021, which updated the Housing Plan 2013-2016.

Through a range of schemes to support rental housing, urban rehabilitation and renovation, the new Plan’s objective is to facilitate access to housing for the most vulnerable groups, and to reactivate employment in the construction sector<sup>35</sup>.

In order to regulate housing “as a public service in the general interest,” the Socialist Party (PSOE) government drafted a set of initiatives in 2018 that would affect property owned by banks and developers, but also private citizens. The initiatives are part of a report by the Housing Secretary General’s Office, which is meant to influence existing and potential laws regarding housing<sup>36</sup>.

Furthermore, the building stock distribution of residential dwellings in terms of ownership has slightly decreased from 79.8% in 2010 to 76.3% in 2018, among which 29.4% have a mortgage or a loan. The population earning above 60% of median equivalised income experienced a slight decline in terms of dwelling owned – 81.7% in 2018, from 83.9% in 2010. In the same line, the population earning below 60% of median equivalised income shows a sharp decline in ownership. It reduced from 64.2% in 2010 to 56.7% in 2018.

The demand for housing is expected to increase in the years to come, and the need for additional housing has been estimated at 140,000 annually until 2024. The rise in demand also explains the rise in the residential transactions in the real estate. According to Statista, in 2018, around 581,790 residential real estate transactions took place in Spain, as compared to 491,290

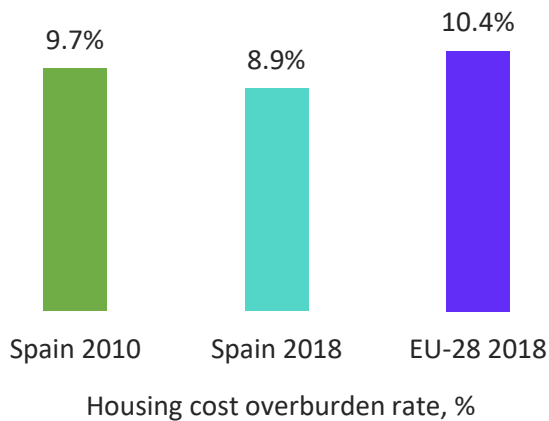


transactions in 2010, representing an increase of 18.4% during the period<sup>37</sup>.

In parallel, the number of dwellings for which **building permits** were granted increased significantly by 91.8% between 2015 and 2018. In case of one dwelling buildings and two dwelling buildings, it rose by 56.7% and 117.9%, respectively, over the same period. In absolute terms, a total of 78,000 new dwellings were granted permits across the country in 2018, an increase of 23.1% from 2017<sup>38</sup>. This, in turn, may have contained the rise of house price.

Residential building permits between 2015 and 2018  **91.8%**

The **housing cost overburden rate**<sup>39</sup> stood at 8.9% in 2018, slightly below the EU-28 average of 10.4% and the 2010 level (9.7%)<sup>40</sup>. Likewise, the **severe housing deprivation rate**<sup>41</sup> stood at 1.5% in 2018, which is well below the 4.0% EU-28 average<sup>42</sup>. Last, the **overcrowding rate**<sup>43</sup> in 2018 stood at 4.7%, below the EU-28 average of 15.5%<sup>44</sup>. All in all, these indicators seem to suggest that housing quality in Spain scores above the EU-28 average.



## Infrastructure



Spain ranks 7<sup>th</sup> out of 141 countries regarding the quality of its infrastructure, according to the 2019 Global Competitiveness report<sup>45</sup>, five positions above the previous year's.

More specifically, it ranks the best (1<sup>st</sup>) for its road connectivity, 8<sup>th</sup> for Airport connectivity and 9<sup>th</sup> for its Efficiency of train services. It ranks 11<sup>th</sup> in terms of quality of road infrastructure and liner shipping connectivity. Conversely, it performs comparatively worse in terms of efficiency of air transport services (18<sup>th</sup>) and railroad density (28<sup>th</sup>).

Over the years, Spain has developed a broad and modern network of infrastructures for all modes of transport. Nonetheless, some Spanish transport infrastructures, such as ports, high speed rail connections and airports, still operate well below their capacity. Indeed, in 2016, the share of freight transported by rail remained low at 5.1%. Road transport is prominent for both passengers and freight in Spain. The country's rail segment still lacks multi-modal connections with ports and logistic hubs<sup>46</sup>.

Furthermore, the **Trans-European Transport Network (TEN-T)** Atlantic and Mediterranean corridors are not complete yet. By addressing these challenges through infrastructure investment, Spain would contribute to the connectivity of its territory, in particular with France, and to the competitiveness of its economy. The country also needs to pay attention to the maintenance of the extensive road network in order to keep the existing high level of road safety standards and ensuring connectivity<sup>47</sup>.

## 4

# Key issues and barriers in the construction sector

## Company failure

Reflecting the increasing number of companies in the broad construction sector, Spanish construction companies have shown positive demographic trends between 2010 and 2017.

With the exception of the real estate activities sub-sector, all sub-sectors experienced a decrease in terms of company deaths and an increase in terms of company births. Within the narrow construction sub-sector, the number of **company deaths** decreased by 40.4% between 2010 and 2017, from 60,979 to 36,318. Conversely, the number of **company births** increased by 41.8% from 37,010 in 2010 to 42,477 in 2017 in the same period. The companies created in 2017 in the real estate activities sub-sector experienced an increase of 58.8% compared to the 2010 values. On the other hand, the company deaths in the same sub-sector decreased by 12.3% between 2010 and 2017. Last, the architectural and engineering sub-sector experienced a 22.4% increase in company births and a 25.9% decrease in the number of company deaths over the 2010-2017 period. In other words, 2017 confirms the positive development (and recovery) of the construction sector.

Number of company births in the real estate activities sub-sector between 2010 and 2017

↑ 58.8%

Moreover, newly created companies in the construction sector represented 23% of new companies in Spanish economy<sup>48</sup>. At the same time, the number of bankruptcies in the sector stood at 962 in 2017 – which is the lowest level

since 2010, and far from the record level reached in 2013 (when close to 3,000 construction companies went bankrupt<sup>49</sup>).

## Trade credit

In Spain, 37.2% of the total **value of B2B sales** was transacted on credit in 2018, in line with the average for Western Europe (37.4%). This represents a decrease from 2017 and 2016 values (38.8% and 42.8% respectively). In 2018, 46.9% of B2B transactions on credit are domestic, while 27.5% are foreign. The main reason for granting trade credit to the B2B customers is the wish to grow business. Also, selling on credit is considered as a way to reward loyalty, build trust and attract new customers. The main reasons for SMEs not to extend credit to their domestic B2B customers were that buyer's payment behaviour is poor and that the level of economic or political risk is high<sup>50</sup>.



Domestic B2B customers are almost twice as likely to receive credit terms as foreign B2B customers<sup>51</sup>.

Spanish companies mainly grant trade credit to their foreign B2B customers to further open up sales and expand their international business. Long-term cooperation also influences this decision as it helps build trust and provides insight into the customers' payment behaviour<sup>52</sup>. The trade credit remains more widespread among SMEs, both in terms of credit granted and received.

## Late payment

According to the Payment Practices Barometer October 2019 survey report, around 88% of Spanish companies<sup>53</sup> reported that they were adversely impacted due to late payment of invoices by B2B customers.

This is slightly above the Western Europe average of 85%. The average payment terms offered to domestic B2B customers stand at 48 days from invoicing (compared to 47 days last year), significantly above the 34 days regional average. The terms in the country are the third longest observed in Western Europe, after Italy (51 days) and Greece (66 days)<sup>54</sup>.

According to the survey findings, 66.9% of the total value of the B2B invoices issued by respondents was paid on time, higher than 57.7% in the last year. Due to the improvement, Spanish respondents cash in past due payments earlier than last year (on average within 63 days from invoicing, down from 69 days last year)<sup>55</sup>.

In 2018, the B2B customers in the construction sector were given 60 days to pay their invoices. In 2018, these customers paid on average, 18 days after the due date. The main reason for payment delays were insufficient availability of funds<sup>56</sup>.

## Time and cost of obtaining building permits and licenses



Spain ranked 79<sup>th</sup> globally, among 190 economies, in the 2020 in “Dealing with construction permits”<sup>57</sup>.

Completing the formalities to build a warehouse<sup>58</sup> requires 13 **administrative procedures** (above the OECD average of 12.7 for high-income countries) and takes 147 days (in comparison to the 152.3 days for OECD high-income countries) (Table 3)<sup>59</sup>. Nevertheless, the cost of completing the formalities to build a warehouse represents 4.7% of the value of the warehouse, above the OECD high-income average of 1.5%. Specifically, **obtaining a building permit** takes 45 days and costs EUR 52,005.

Table 3: Construction procedures timing and costs in Spain

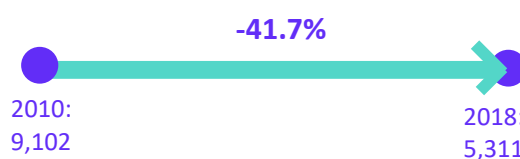
Procedure	Time to complete	Associated costs
Obtain results of geotechnical study / soil test	17 days	EUR 1,875
Request and obtain the official alignment ( <i>alineamiento oficial</i> )	14 days	EUR 186
Obtain results of topographical study	7 days	EUR 800
Obtain approval of draft project proposal and implementation plan ( <i>Visado del proyecto básico y proyecto de ejecución</i> ) from College of Architects of Madrid	3 days	EUR 1,155
Request and obtain a building permit ( <i>licencia de obras</i> )	45 days	EUR 52,005
Notify labour authority of the start of construction ( <i>apertura del centro de trabajo</i> ) at the Ministry of Employment, Tourism and Culture	1 day	No charge
Receive initial inspection	1 day	EUR 375
Obtain completion certificate ( <i>visado del certificado final de obra - CFO</i> ) from College of Architects of Madrid	3 days	EUR 204
Request final inspection in connection with the occupancy permit ( <i>licencia de primera ocupación y funcionamiento</i> )	1 day	EUR 1,116
Receive final inspection	1 day	No charge
Obtain occupancy permit ( <i>licencia de primera ocupación y funcionamiento</i> )	60 days	No charge
Register the new building	18 days	EUR 1,255
Request and obtain water connection	10 days	EUR 1,200

Source: Doing Business overview for Spain, World Bank, 2020.

## Skills shortage

The number of **job vacancies**<sup>60</sup> in the narrow construction sub-sector decreased by 41.7% from 9,102 to 5,311 between 2010 and 2018.

Number of job vacancies in the narrow construction sub-sector between 2010 and 2018



**Adult participation in education** and training in the narrow construction sub-sector has been fluctuating in recent years. After an initial increase during the period 2010-2013, the adult participation in trainings for the narrow construction decreased, reaching in 2018 6.3%, i.e. -1.0 percentage point below the 2010 levels. Conversely, adult participation in education grew in the real estate activities sub-sector from 6.5% in 2010 to 10.3% in 2018.

The number of **tertiary education students in engineering, manufacturing and construction** has increased by 17.1% since 2010, reaching 63,260 students in 2017<sup>61</sup>. This highlights the increasing interest of students in engineering (+27.9%), manufacturing and processing activities (+36.8%), and their reluctance to engage in architecture and building studies (-18.8%).

Number of tertiary education students in engineering, manufacturing and construction between 2010 and 2017



Experts believe that the focus in vocational education should be put on the quality of the training, the attractiveness of the sector and the creation of further job opportunities<sup>62</sup>. Indeed, the construction sector has traditionally been one of the main employers of relatively low-skilled workers. This is the case particularly for young people aged 15-24, educated below upper secondary level<sup>63</sup>. Many of these, currently unemployed, will need to be retrained, especially taking into account new (technological) development in the construction sector. Skills shortage is a key issue, that may impede the growth of the sector especially in the big cities (such as Madrid and Barcelona), which is expected to hire 150,000 workers in the next few years<sup>64,65</sup>.

Furthermore, skills polarisation and skills mismatches also affect the performance of the labour market in Spain and weight on the productivity growth. In 2018, the proportion of low and high qualified adults on total employment in Spain stood at 32.8% and 43.2% respectively. This is above the EU-28 averages of 16.3% and 35.8% respectively. However, the proportion of mid

qualified adults (23.9%) stood below the EU-28 average (47.7%)<sup>66</sup>.

## Sector and sub-sector specific issues

### Material efficiency and waste management

In 2016<sup>67</sup>, Spain produced 129.0 million tonnes of waste, out of which 35.8 million tonnes, i.e. 27.8% of the total, were generated from the construction and demolition (C&D) activities<sup>68,69</sup>.

This is 6.2% lower than the C&D waste generated in 2010 and well below the EU-28 average of 923.7 million tonnes<sup>70</sup>. From the total waste, 53.7% ended up in landfill, 5.7% was reused in backfilling operations and 37.1% was recycled<sup>71</sup>. Currently, Spain segregates around 15% of the waste on-site and aims to raise that share up to 80% in the future<sup>72</sup>.

During 30-31 October 2019, the Spanish recycling industry organised the first International Congress of Construction and Demolition Waste Recycling (C&D WASTE) in Madrid, with the slogan "For a Sustainable Circular Economy in Construction"<sup>73</sup>.

Currently, the **recycling rate** of CDW in Spain is approximately 40%, which is still considerably below the 70% target for 2020 set by the EU Waste Framework Directive. It is also well below the recycling rates in other countries such as the Netherlands, Denmark and Germany that exceed the recycling rate of 80%<sup>74</sup>. To reach this goal, a Demolition Waste National Plan was approved in 2016 for the period 2016 – 2022 (*Plan Estatal Marco de Gestión De Residuos (PEMAR)*)<sup>75</sup>. It aims to reduce resources, increase the recycle rate and improve its use efficiency. The plan has a specific chapter targeting construction waste and demolition in order to promote actions for reutilization and recycling of construction material to ensure that Spain complies with legal EU objectives. Some objectives include promoting the use of sustainable and non-dangerous construction materials, studying the durability and recycling possibility of the materials, and increasing taxes or to encourage the use of-sustainable products. It also focuses on R&D, which will play an important role in achieving the EU recycling target.

According to sources from the Ministry of Ecological Transition, Spain is facing disciplinary actions from the European Union for failing to meet the Waste Framework Directive, due to its poor management of construction waste<sup>76</sup>.

### Climate and energy

**Emissions of greenhouse gases** (carbon monoxide and dioxide, methane, nitrous oxides and particulate matter) from activities in the narrow construction and real estate sub-sectors amounted

to 633,387 tonnes and 64,029 tonnes in 2018, respectively. These declined by 54.3% and 37.8% respectively in comparison to the 2010 levels. This can be explained by the decreasing activity of the sector, as well as by the implementation of more environmental-friendly practices and processes.

Emissions of greenhouse gases from narrow construction sub-sector between 2010 and 2018



**54.3%**

## 5

# Innovation in the construction sector

## Innovation performance



Spain's overall performance in terms of innovation and R&D expenditure is below the EU average, classifying the country as a Moderate Innovator, according to the Innovation Union Scoreboard 2019<sup>77</sup>.

Spain performs well in terms of human resources and innovation friendly environment. The country also scores high on Sales of new-to-market and new-to-firm product innovations, Broadband penetration, and New doctorate graduates. At the same time, its weakest innovation dimensions include Innovators, Linkages and Firm investments<sup>78</sup>.

The gross domestic expenditure on R&D as share of GDP stood at 1.20% in 2019, which is slightly less than the 2014 levels (1.24%) and the EU 2020 target of 2.0%<sup>79</sup>.

This situation is reflected in the construction sector by the **business enterprise R&D expenditure (BERD)**, which, despite some fluctuations, generally displayed a negative trend across all sub-sectors between 2010 and 2017<sup>80</sup> (Figure 9). BERD dropped in the narrow construction sub-sector, by 29.5%, between 2010 and 2017. The drop was less important in the professional, scientific and technical activities sub-sector, which experienced a 13.2% decrease over the same period of time. In contrast, BERD in the real estate activities sub-sector experienced a significant increase of 37.1% over the 2010-2017 period. In absolute terms, professional, scientific and technical activities sub-sector remains the most important sub-sector in terms of BERD, with EUR 537.0 million invested in 2017. It is followed by the narrow construction and real estate activities sub-sectors with EUR 112.0 million and EUR 11.0 million, respectively.

Business enterprise R&D expenditure in the narrow construction sub-sector between 2010 and 2017



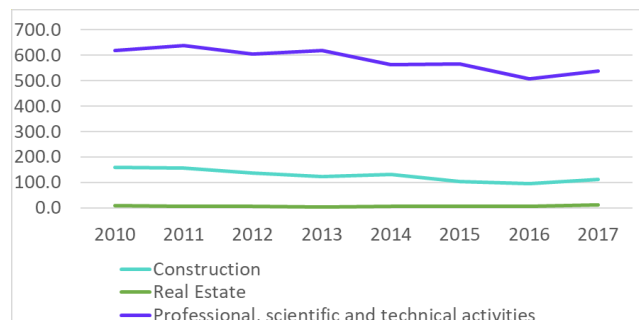
29.5%

Business enterprise R&D expenditure in the real estate activities sub-sector between 2010 and 2017



37.1%

Figure 9: Business enterprise R&D expenditure (BERD) per construction sub-sector in Spain between 2010 and 2017<sup>81</sup> (EUR m)



Source: Eurostat, 2019.

In parallel, the total **R&D personnel** (full-time equivalents – FTE<sup>82</sup>) in the narrow construction sub-sector reached 1,525 in 2017<sup>83</sup>, i.e. 29.3% lower than in 2010 (2,068). Likewise, the professional, scientific and technical activities sub-sector experienced a (slighter) decline in terms of R&D personnel, decreasing by 2.1%. Conversely, the real estate activities sub-sector reported a significant increase of 108.1% in the period, increasing from 74 in 2010 to 154 in 2017.

R&D personnel in the narrow construction sub-sector between 2010 and 2017



29.3%



The limited investments on innovation of the Spanish construction sector are also reflected by the 26.5% drop in the number of **construction-related patent applications**, which fell from 98 in 2010 to 61 in 2018.

In 2018, there were 21 Spanish firms ranked amongst the top 1,000 EU companies by R&D spending, including five construction-related firms. The highest-ranking Acciona (141<sup>st</sup> place) has spent EUR 225.4 million on R&D in 2018<sup>84</sup>. Ferrovial, the Spanish Construction and Materials (C&M) company, and ACS were ranked 434 and 562 having spent between EUR 48.0 million and EUR 29.6 million.

The Spanish government is taking several measures to uplift the country's performance in terms of research and innovations. The Ministry of Science, Innovation and Universities allows for a more comprehensive vision of policy needs and synergies in policy-making. Also, the Spanish Research Agency has been operational for a few years and manages public research grants. The government is also making several efforts to improve coordination between national and regional initiatives in research and innovation policies<sup>85</sup>.

**Under the National Plan for Scientific and Technical Research and Innovation 2017-2020, the 'Torres Quevedo' Programme provide funding (subsidies, loans, returnable advanced payments, credit lines, or a combination of these forms) to cover the expenses related to the hiring, training and mobility of staff involved in research, development and innovation projects for three-year period<sup>86</sup>.**

Furthermore, the Spanish Innovation Agency (CDTI) has started an impact evaluation of the innovation programmes. In this regard, the Government is developing an ambitious information system on science, technology and innovation aimed to facilitate monitoring and evaluation. The system will consist of regional data and will be available for regional administrations<sup>87</sup>.

During 2018, Spain announced a call for financial support for research, development and innovation projects under the 'Connected Industry 4.0' initiative<sup>88</sup>.

## Eco-innovation and digitalisation



**Spain ranked 11 in the 2018 Eco-Innovation Scoreboard, scoring 105, slightly above the EU-28 average of 100<sup>89</sup>.**

The country's strongest performance lies in resource efficiency outcomes in which it scores 162, well above the EU-28 average of 100. Spain also stands above the EU-28 average when it comes to eco-innovation activities and eco-innovation outputs<sup>90</sup>. However, the country scored below the EU-28 average when it comes to eco-innovation inputs (69) and socioeconomic outcomes (73), Spain scores 69 and 73, respectively<sup>91</sup>. In recent years, Spain has made progress promoting a more sustainable and digitalised construction, resulting in a slightly more innovative construction sector.

In the European Commission Digital Economy and Society Index (DESI) 2019, Spain ranked 11<sup>th</sup> out of the 28 EU Member States, with a performance above the EU-28 average (56.1 against 52.5). Spain is ranked 9<sup>th</sup>, 11<sup>th</sup> and 17<sup>th</sup> in the areas of Connectivity, Use of internet services and Human capital. In terms Integration of digital technology, its performance slightly deteriorated in 2019 in comparison to 2018<sup>92</sup>.

Spain transposed the EU Directive 2014/24/UE, according to which, EU Member States are to encourage the use of Building Information Modelling (BIM) in construction projects financed by EU public funds as of 2016.

Effective from December 2018, BIM may be required in the public procurement tenders by contracting authorities for public construction tenders in Spain and its associated state-owned companies such as ADIF, Renfe (Public railway company), and Aena (Public Airline company), etc<sup>93</sup>. In some regions, for example in Cataluña (Resolución TES/188/2019), there have been approved norms for the compulsory use of BIM in certain contracts.

At the level of the General National Administration, Royal Decree 1515/2018, of December 28, provides for the creation of the Interministerial Commission for the incorporation of the BIM methodology in public procurement. Its

purpose is to promote and ensure the coordination of the General National Administration and its public bodies in the implementation of the BIM methodology in public procurement. The Commission has the function of preparing the implementation Plan of the BIM methodology in public procurement of the General National Administration and its public bodies. The Plan will determine the actions for the gradual and progressive implementation of BIM, the minimum thresholds for the mandatory application, the measures for the incorporation of SMEs, etc. The Plan, once adopted, will need to be approved by the Council of Ministers.

Further to encourage the BIM implementation, the Ministry of Infrastructure launched the Innovation Plan for Infrastructure and Transport 2018-2020. This plan analyses the use of BIM in airports, train stations, harbours and linear infrastructures, including some pilot projects to learn from for the incoming BIM Mandate for infrastructures in 2019<sup>94</sup>. Furthermore, the adoption of BIM in Spain is also on the rise. The implementation is benefited from the support of the esBIM Spanish Commission, formed in 2015<sup>95</sup>. According to esBIM, around 85 projects were tendered with BIM requirements between January 2017 and March 2018<sup>96</sup>. In practice, according to esBIM Survey 2017, around 25% of construction firms have already started to use BIM; 90% of professionals have heard about BIM and around 35% of professionals that take part in design stages use BIM<sup>97</sup>.

*BuildingSMART* Spanish Chapter is a non-profit association, which aims to promote efficiency in the construction sector through the use of open standards of interoperability based on BIM, in order to reduce the costs and time while increasing the quality. This association is composed of a

variety of construction agents, including promoters, investors, developers, manufacturers and universities<sup>98</sup>.

**Innovation in the construction sector will also be supported by the State Waste Prevention Programme (*Programa Estatal de Prevención de Residuos 2014-2020*), which recognises the importance of R&D projects in the minimisation and management of C&D waste<sup>99</sup>.**

The Programme aims to involve Public Administrations in promoting R&D projects aiming to:

- Develop selective demolition techniques to facilitate reuse of waste;
- Develop tools to assess the environmental performance of construction products and their possible reuse.

In addition, the 'MINETAD programme 2017 under the strategic action for digital economy and society framework' (*Programa MINETAD 2017 en el marco de la Acción Estratégica de Economía y Sociedad Digital*) aims to improve research, technology development and innovation in the digital economy. Likewise, the 'CDTI NEOTEC 2017 for Technologic businesses' (*CDTI NEOTEC 2017 para empresas de base tecnológica*) measure aims to support and fund the development of new technology<sup>100</sup>.

Last, the Spanish Government is currently working on the Strategy "**Spain Start-Up Nation**", a comprehensive strategy to embed innovation and digitalisation in all aspects of economy and society. This strategy would consist of a new plan for the deployment of digital infrastructure; investment in enabling digital technologies; programs to promote skills and talent, or a national strategy on Artificial Intelligence<sup>101</sup>.

## 6

# National and regional regulatory framework

## Policy schemes

Since 1980s, there have been three-year state Housing Plans in Spain, which have largely defined the housing policies in the country, thus establishing the State's housing policy priorities. The housing policies are implemented through a multi-level governance structure, that is mainly split between the central and regional governments. Such an approach helps regions maintain broad powers to develop their own policies and measures in this domain.

In March 2018, the government of Spain approved the **State Housing Plan** for the period 2018-2021 (SHP 2018-21). The objectives of this plan are to strengthen the rental market and activate the construction sector, by promoting employment in building rehabilitation, urban regeneration and renewal<sup>102</sup>. The new Plan (SHP 2018-21) for this period is similar to its predecessor (2013-2016<sup>103</sup>).

**The State Housing Plan 2018-2021 (*Plan Estatal de Vivienda 2018-2021*)<sup>104</sup> has been launched in early March 2018. The Plan<sup>105</sup> focuses on boosting housing rental aids and facilitating quick access to "decent and adequate" housing for those with financial difficulties<sup>106</sup>.**

To achieve its objectives, the Plan (SHP 2018-21) is structured around nine programmes:

- Programme 1: **Subsidisation of agreed loan.** This programme focuses on maintaining the subsidies for agreed loans regulated in the previous state housing plans that comply with current legislation in the matter.
- Programme 2: **Aid for housing rental.** This programme aims to facilitate access to

rental housing for the population with limited economic means. It provides up to 40% of the monthly rent, or up to 50% for people over 65 years old.

- Programme 3: **Aid for people in situations of eviction or launching of their habitual residence.** This programme focuses on people who are in a situation of eviction from their habitual residence, by providing a house in a social rental regime. Such support can be up to 400 euros per month (up to 100%) to be agreed by the competent social services.
- Programme 4: **Promotion of the housing park for rent.** This programme aims to promote the stock of dwellings (new or from refurbishment) intended for rental or transfer in use, both public and private, for a minimum period of 25 years. This is done through the use of subsidies that can go up to EUR 36,750/dwelling with a limit of 40% to 50% of the investment.
- Programme 5: **Promoting the improvement of energy efficiency and sustainability in housing.** This programme aims to regulate aid for works to improve energy efficiency and the sustainability of single-family homes and buildings of the collective residence type. The amount of the subsidy varies, but generally does not upper than 40% of the total investment.
- Programme 6: **Promotion of conservation, improved safety of use and accessibility in housing.** This programme aims to finance the execution of works for the conservation, improvement of the safety of use and universal accessibility both in

residential buildings and in single-family homes, whether urban or rural, and in homes located in residential buildings. The amount of the subsidy varies, but generally does not go upper than 40% of the total investment.

- **Programme 7: Promotion of urban and rural regeneration and renewal.** This programme aims to finance the refurbishment of residential buildings and individual dwellings, as well as the development of adjacent public spaces and works for the construction of buildings and dwellings to replace others which have previously been demolished in the same area. The amount of the subsidy varies, but generally does not go upper than 40% of the total investment.
- **Programme 8: Help for young people.** This programme aims to facilitate the access of decent and adequate housing for young people under 35 years of age, either on a rental basis or through direct aid for the acquisition of housing located in municipalities with less than 5,000 inhabitants. This is done by providing a subsidy covering up to 50% of the monthly rent.
- **Programme 9: Promotion of housing for the elderly and people with disabilities.** This programme aims to encourage the promotion of housing or its rehabilitation to allocate them for a minimum period of 40 years to rent or transfer of use for elderly or disabled people, having adapted common facilities and services. This is done by providing a subsidy, covering up to 400€ usable m<sup>2</sup>/housing with a limit of 40% of the investment.

These programmes focus public assistance on the most vulnerable social groups such as households experiencing forced evictions, low income group households, young people, the elderly and people with disabilities, as well as the rural population<sup>107</sup>.

The programmes included in the Plan are co-financed by the Central Administration and the Autonomous Communities. The Central Administration budget earmarked for housing subsidies for the period 2018-2021 stood at

EUR 1.4 billion, representing an increase of 62.5% as compared to the amount implemented/executed under the SHP 2013-16 (EUR 888 million)<sup>108,109</sup>.

Furthermore, the plan is being implemented in a context of increasing housing demand driven by large domestic and foreign investment groups, accompanied by a rise in the price of rental housing in large cities. This impedes the access to housing of low income households, in a context of an unemployment rate which remains high and a large share of precarious jobs<sup>110</sup>.

To reduce the number of homelessness people, the Spanish government adopted the first **“Comprehensive National Homelessness Strategy 2015-2020”** (ENI-PSH) in November 2015<sup>111</sup>. The ‘homelessness’ used in the ENI-PSH 2015-2020 is defined according to the typology proposed by the European Federation of National Organisations working with the Homeless (FEANTSA). The ENI-PSH 2015-2020 is based on three principles:

- Housing First – as opposed to the traditional policy that prioritised municipal shelters;
- comprehensive care focusing the homeless persons themselves, including employment, education and healthcare;
- the principle of offering a diversity of support services, the provision of which depends on the Autonomous Communities and local governments.

The objective of the ENI-PSH is to stop homelessness as well as to reduce the number of persons living on the street and foster their social inclusion. Its aim is to reduce the population of homeless people from around 23,000 in 2015, down to 20,000 in 2018 and 18,000 by 2020<sup>112</sup>.

However, this strategy has not been implemented in the country yet. While no action plan has been approved, the regions approved plans to combat homelessness<sup>113</sup>.

## Building regulations



The *Building Technical Code (Código Técnico de la Edificación)* is the regulatory standard that lists the basic security and habitability requirements since 2006.

The code sets out main regulations and legislation in the construction sector<sup>114</sup> and covers (amongst others) mandatory requirements for accessibility, user protection and sustainability. In terms of energy use specifically, the Code details requirements and measures to reduce the energy demand and consumption of buildings, defines the performance of thermal installations, sets the minimum share of solar energy for hot water generation and the minimum contribution of photovoltaic energy in electricity production<sup>115</sup>. With the Building Technical Code, all construction stakeholders are bound to use the technical norms. The local administration manages the urbanism regulation and housing planning, whereas the national authority is responsible for regulating dwellings rents<sup>116</sup>. Minor changes were made in 2017 including the security (i.e. fire extinction) or energy saving measures<sup>117</sup>. Moreover, since 2013, according to the royal Decree 235/2013<sup>118</sup>, housing, retail and office buildings tenants or buyers should receive an Energy Performance Certificate.

The code was drafted by Technical Construction Quality Committee (CTCE) including representatives of national government administration and local administration<sup>119</sup>.

## Insurance and liability related regulations

No significant changes have been made in liability nor insurance regulations during the past few years. There is no standard form of construction project contract in Spain. A decennial insurance policy providing cover against structural defects is the only insurance that is legally required for residential properties. It is provided by the developer once the works are completed<sup>120</sup>.

The *Law of Construction Order*<sup>121</sup> (*Ley de Ordenación de la Edificación, LOE*), law 38/1999 of 5 November 1999, governs liability in construction with the purpose of protecting the final users against delay and insolvency of property developers<sup>122</sup>.

The Act is applicable to all new construction works as well as to alterations and refurbishments of permanent structures.

The LOE has introduced three different durations of liability<sup>123</sup>. For all of them, the starting point is the handover of the completed building:

- One year for material disorders resulting from an incorrect work (applicable to building contractors only);
- Three years for damages affecting the use of the building as residential dwellings (for all participants in the construction process);
- Ten years for material damages affecting the structure (for all participants in the construction process).

If the cause of the damage or the individual responsibility cannot be determined, the participants can be jointly and severally liable. The property developer is jointly liable with all the other parties. Legal actions need to start within the two years after the date when the damage occurs<sup>124</sup>.

The liability durations are different for public sector contracts. As for private sector contracts, the handover is the starting point for the duration.

- 15 years for damage of the work resulting from a contract breach (for the building contractor);
- 10 years for damages resulting from defective design (for professional consultant).

Three insurances exist and correspond to the three different liabilities (applicable to construction professionals):

- One year insurance taken out by the building contractor and covering a minimum of 5% of the building work value;

- Three years insurance arranged by the property developer (minimum 30% of building work value);
- Ten years insurance taken out by the property developer (minimum 100% of building work value).

Nevertheless, the law grants the choice between insurance or financial guarantees insurance are the preferred means of security to cover the liabilities and that the use of financial guarantees is minimal. Three-annual and decennial liability insurances are delivered in a form of a single policy. The subscription of insurance is often taken through professional organisations where the parties belong<sup>125</sup>.

According a memorandum of the *Law of Construction Order*<sup>126</sup>, only the last one is mandatory. However, in the future and by a Royal Decree, taking into account the circumstances of the building sector and the insurance sector, the compulsory nature of the other guarantees could be established.

In Spain, assistance with assuring ongoing compliance of the construction works with the technical requirements is provided by a registered architect. During the construction phases, a 'building book' is assembled, reflecting how technical compliance has been achieved. A single site inspection is carried by the local authority at the end of the project<sup>127</sup>.



## 7

# Current status and national strategies to meet Construction 2020 objectives

## TO 1 – Investment conditions and volumes

Total investments by the broad construction sector<sup>128</sup> have fluctuated over the 2010-2017<sup>129</sup> period.

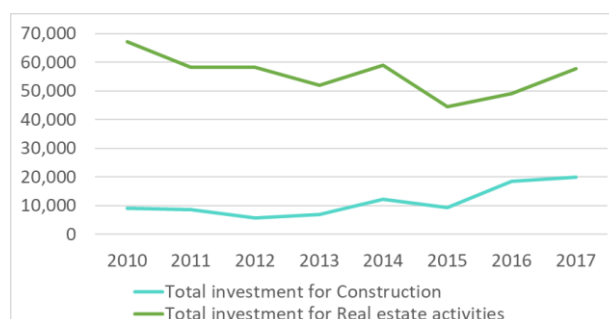
After a general decline from 2010 to 2015, investment by the real estate activities sub-sector picked up again, reaching EUR 57.8 billion in 2017. However, it has not yet recovered from the 2010 level, when investment stood at EUR 67.1 billion. This represents an overall decline of 13.9% between 2010 and 2017 in the sub-sector. Conversely, the investment by the narrow construction sub-sector, after reaching a bottom low in 2012, continuously increased reaching EUR 19.9 billion in 2017. This is well above the 2010 levels (+120.5%) (Figure 10).

Investments by the narrow construction sub-sector between 2010 and 2017

↑ 120.5%

In terms of **investment in intangible assets**<sup>130</sup>, the narrow construction sub-sector invested EUR 298.0 million in intellectual property products in 2017, experiencing a 36.2% decrease in comparison to the 2010 levels. In contrast, investment in intellectual property products by the real estate activities sub-sector increased to EUR 364.2 million in 2017 from EUR 97 million in 2010, representing a significant growth of 275.5% during the period.

Figure 10: Investment by the Spanish broad construction sector between 2010 and 2017 (EUR million)



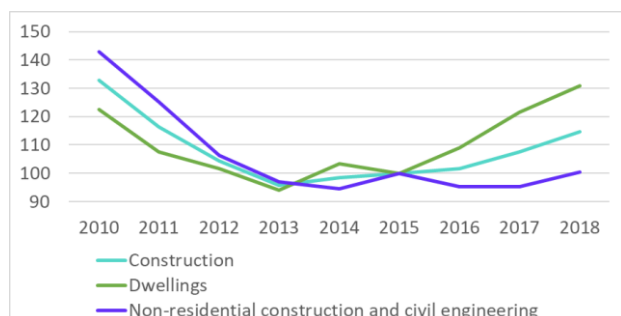
Source: Eurostat, 2019.

The investment index in the **broad construction sector**<sup>131</sup> experienced a steady growth since 2015, rising by 14.7% over the 2015-2018 period (Figure 11). This trend was mainly driven by investment in dwellings (+30.8% over the same time period), which reflected the high demand for housing (see Access to housing). Investment in non-residential buildings and civil engineering also increased, albeit at a slower pace, by 0.4% over the same period. In real terms, investment in the broad construction sector totalled EUR 110.3 billion in 2016<sup>132</sup>, out of which EUR 53.4 billion was invested in dwellings and EUR 56.9 billion in non-residential and civil engineering<sup>133</sup>.

Investments in broad construction sector between 2015 and 2018

↑ 14.7%

Figure 11: Investment index in the Spanish construction sector between 2010 and 2018 (2015=100)



Source: Eurostat, 2019.

**Total inland infrastructure investment** as a share of GDP declined from 1.4% in 2010 to 0.5% in 2017. Investment in air and rail infrastructures in Spain dropped the most, with a 74.5% and 70.9% fall respectively, between 2010 and 2017. Investment in road and sea infrastructures also fell heavily over the same period, by 53.0% and 59.1% respectively.

In 2018, investments in infrastructures amounted to EUR 8.5 billion, representing an increase of 12.7% over the budgeted amount in 2017. Transport sectors such as railways and roads, accounted for around 70% of the total investment<sup>134</sup>.

Investments in air infrastructures between 2010 and 2017

↓ 74.5%

Investments in rail infrastructures between 2010 and 2017

↓ 70.9%

**Household renovation spending** experienced a decreasing trend from 2010 to 2013, declining by 23.1%. However, it increased again over the following years reaching EUR 5.6 billion in 2018, 8.2% below the EUR 6.1 billion level registered in 2010. Renovation spending accounted for 0.7% of household disposable income in 2018, slightly lower than the 0.9% level recorded in 2010.

**The Ministry of Public Works defined the integrated planning model for infrastructure, transport services and housing policy, established within the 2012-2024 Infrastructure, Transport and Housing Plan<sup>135</sup>.**

This planning model aims to set the priorities to be implemented by 2024 in these fields. Together with this plan, the Ministry also launched the *National Logistics Strategy*<sup>136</sup>, which aims to boost competitiveness, promote the coordination between private companies and public administration and develop optimised logistics strategies within the sector.

In 2017, the Spanish Government presented the plan for **Internationalisation of Transport and Infrastructure 2018-2020**. The plan includes activities and initiatives to generate business opportunities for Spanish companies abroad and reinforce their international operations and the technological, innovative and corporate image of Spain. With regards to the internationalisation of transport and infrastructure, the plan focuses on 11 priority markets that include Saudi Arabia, Australia, Canada, Colombia, the United Arab Emirates, the United States, Mexico, Norway, Peru, Sweden and the United Kingdom – as well as other nine markets of opportunity, which are Argentina, Chile, Denmark, Egypt, India, Israel, Malaysia, Morocco and Singapore. In these 11 priority markets, the plan includes a set of projects amounting more than EUR 2.5 billion in the next ten years<sup>137</sup>.



**The use of European funds is a key element for the development of infrastructure in Spain.**

Spain is one of the largest beneficiaries of EU funds. For the 2014-2020 Multiannual Financial Framework, Spain was allocated a total amount of EUR 39.9 billion, under the EFSI. As of December 2018, the country received around EUR 24.0 billion for specific projects, representing about half of the total budget available for the 2014-2020 period (including the national contribution).

In addition, around EUR 600 million were granted to projects on strategic energy infrastructure and cross-border interconnections through the Connecting Europe Facility EU funding instrument<sup>138</sup>. This tends to show the importance of European funding when it comes to infrastructure financing.

In October 2019, the Connecting Europe Facility (CEF) Committee selected five railway projects with Spanish participation. These projects will receive funds under the 2019 CEF call for proposals<sup>139</sup>.

## TO 2 – Skills

Even though it remains below the 2018 EU-28 average of 79.5%, the **employment rate of vocational education and training (VET) graduates** in Spain grew significantly from 58.5% in 2017 to 70% in 2018. In 2017, Spanish students had limited exposure to work-based learning and a few VET programmes were provided for it. This was one of the reasons for the low employability of VET graduates in the year. However, due to government’s initiatives and measures, the employability improved in 2018.

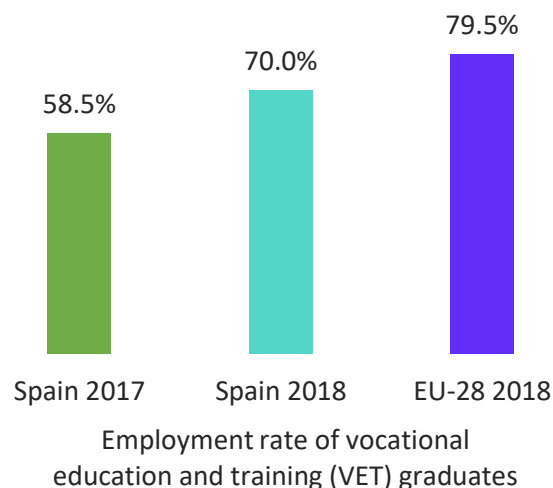
One of the key factors affecting the employment rate of VET graduates is linked to the difficulties of bringing young people’s skills closer to labour-market needs. Participation of upper secondary students in VET in 2017 slightly increased to 35.3% (35% in 2016), which is however well below the EU-28 average of 47.8%<sup>140</sup>. To address these issues, the Spanish government proposed a plan in September 2018. The plan includes:

- developing new specialisation courses for VET graduates aspiring to adapt their skills as per the labour-market needs;
- updating occupational standards and qualifications;
- making progression easier to intermediate and higher VET programmes; and
- improving the validation of non-formal and informal learning

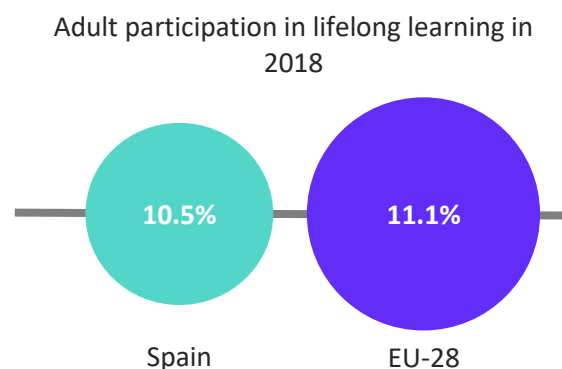
In December 2018, the government tripled the budget for VET teacher training and mobility to EUR 8.6 million. It will be co-financed by the European Social Fund. The government also updated the National Catalogue of Professional Qualifications and the Catalogue of VET Diplomas<sup>141</sup>.

Spain has also introduced several measures on promoting and improving Dual-VET. The Royal Decree 28/2018 reduced the age limit for participation in dual-VET. Further, in February

2019, the Spanish government presented its strategic plan for dual vocational training, announcing more active participation of companies in the continuous professional development of teachers and in designing occupational standards and training programmes<sup>142</sup>.



Regarding **adult learning**, much of the measures have focused on ensuring that both employed and unemployed adults upgrade their skills and acquire new ones. Contrary to VET, **adult participation in lifelong learning** is increasing in Spain but it is still well below the EU benchmark. In 2018, the participation rate of adults in education and training stood at 10.5%, slightly below the EU-28 average of 11.1%, but much lower than the EU benchmark of 15%. Around 39.9% of adults in Spain still lack an upper-secondary qualification. This is well above the EU-28 average of 21.9%<sup>143</sup>.



To reach the 2020 EU energy objectives in the construction sector the **BUILD UP SKILLS Construye 2020** project was launched. The project aims to promote the qualification of workers in the construction sector, mainly in the building sector, creating courses to increase the professional

competencies on Energy Efficiency (EE) and Renewable Energies installation (EERR) in buildings<sup>144</sup>.

The Spanish Construction Labour Foundation (Fundación Laboral de la Construcción – FLC) a bipartite non-for profit body, created by social partners in construction sector, introduced a skill training on innovative techniques and tools for energy efficiency building<sup>145</sup>. Furthermore, the FLC is in charge of issuing and monitoring the **Construction Professional Card** (*Tarjeta Profesional de la Construcción* - TPC), which contains information on the worker's experience in the sector, his professional qualifications and the training received. This tool contributes to the standardisation of training among construction professionals<sup>146</sup>.

In addition, the *Spanish Construction Labour Foundation* offers several courses (online and/or presential) for a high variety of construction jobs such as plumbing, machinery use, or working in risky conditions courses<sup>147</sup>.

Last, the Construction Labour Foundation signed in 2018 a collaboration agreement with the Spanish Association of Manufacturers of Light Facades and Windows (Asefave) to update the professional skills of exterior carpentry installers through training. This shows that the skill shortage is seriously taken into account, and is tackled cross-sectorally<sup>148</sup>.

### TO 3 – Resource efficiency / Sustainable construction

The Spanish government published its Fourth National Energy Efficiency Action Plan 2017-2021, in line with the requirements of the EU Energy Efficiency Directive (EED).

In accordance with the option provided in Article 7(2) and (3) of the Directive, the cumulative energy savings target has been lowered from 21,305 ktoe to 15,979 ktoe, for the period between 1 January 2014 and 31 December 2020. However, this does not mean that Spain has not made progresses in terms of energy efficiency.

Between 2004 and 2014, Spain achieved an annual average improvement of 2.4 %, slightly higher than the corresponding EU average (2.2 %). The country also reduced its primary energy consumption by 24.7% compared to the baseline scenario<sup>149</sup>.

**In March 2019, the European Commission referred Spain to the Court of Justice of the EU for not complying with the requirements on individual metering in multi-apartment and multi-purpose buildings laid down in the EED<sup>150</sup>.**

The **Action Plan for Energy Savings** launched in 2011 for the period 2011-2020 aims to improve the energy efficiency of the existing building stock, and focuses on thermal and lighting equipment. It aims at the renovation of 8.2 million m<sup>2</sup> per year and the replacement of 500,000 devices per year<sup>151</sup>. This plan is managed by the *Institute for Diversification and Energy Savings*<sup>152</sup> (*Instituto para la Diversificación y el Ahorro de la Energía* - IDAE), a public body under the Ministry of Energy, in charge of contributing to the achievement of the objectives that Spain has in terms of energy efficiency, renewable energy and other carbon technologies. This public body promotes/manages among others several energy efficiency of existing buildings related programmes such as **JESSICA-FIDAE Fund** or the **Aid Programme to Improve the Energy Efficiency of Existing Buildings** (PAREER-CRECE Programme)<sup>153</sup>.

In 2016, the following lines of action, programmes and policy measures were approved: i) Aid programme for renovation of municipal street lighting, ii) aid programme for energy efficiency measures in SMEs and large industrial enterprises; iii) Aid programme for modal shift and more efficient use of transport modes; iv) aid programme to improve energy efficiency in desalination plants v) aid programme to improve energy efficiency in railway systems; vi) aid programme to improve the energy efficiency of existing buildings; and iv) a communication campaign ('Energy Saving and Efficiency 2017')<sup>154</sup>.

The Green Building Council Spain developed the *VERDE methodology*, to evaluate and certify sustainable buildings according to the Building Technical Code approach<sup>155</sup>.

In Spain, regions have also a key role to play to improve energy efficiency including for buildings. In fact, Order ETU/120/2017 on 1 February 2017 establish how regional governments and local authorities should submit information on their energy saving and efficiency programmes. Therefore regional initiatives also support sustainable construction. In Andalusia, the

**Sustainable construction support programme**<sup>156</sup> (*Programa de impulso a la construcción sostenible*) provides property owners with financial support for works improving energy efficiency and promoting the use of renewable energies. The purpose of the programme is to support sustainable investments in construction by boosting the economy with a EUR 250 million fund corresponding to 68,000 works, focusing on the most efficient and relevant energy source, with the objective of saving 66,000 tonnes of petrol per year, and reducing the global energy bill by EUR 500 million.

The Ministry of Public Works promotes sustainable construction and urbanism with a triple dimension: economic, social and environmental. Public policies related to land arrangement and transformation have to be in line with the **principle of sustainable development**.

## TO 4 – Single Market



Spain reports a modest performance with respect to the metrics of the EU Single Market Scoreboard, with several indicators declining between 2018 and 2019<sup>157</sup>.

Even though the country recorded some progresses with its transposition deficit (1.5% in 2019 vs. 1.7% in 2018), it is well below the EU-28 average of 0.7%. In fact, Spain has the highest transposition deficit among the 28 Member States. In the infringement category, there were 52 pending cases in Spain, which is well above the EU-28 average of 25 cases<sup>158</sup>. Last, trade integration in the Single Market for goods and services is below the EU average in Spain<sup>159</sup>. On the other hand, Spain ranked above EU-28 average in terms of the internal market information system indicator.

Public procurement transparency and competition issues constitute a hindrance towards the establishment of a **competitive construction Single Market**. Spain scores unsatisfactorily in with regards to 9 out of 12 public procurement indicators. To address this issue, the government developed and reformed the **Public Procurement Law**, that entered in force in March 2018<sup>160</sup>. The law transposes Directives 2014/23/EU and 2014/24/EU of the European Parliament and of the Council, of 26 February 2014. It includes several

new elements applicable to public procurement, such as broader subjective scope, modification of contract types, simplified procedures, and system for modification contracts. Other elements include push for innovation, free competition, incentives for SMEs, greater access to special challenge, new provisions for contract performance by public entities, and augmented transparency.



In recent years, many corruption cases have been identified such as kickbacks. Multiple cases of fraud, bribery and money laundering have emerged in urban planning and the construction sectors since the ending of the Spanish building boom in 2008 with almost 1,800 judicial proceedings being opened in illegal land use cases in one year alone<sup>161</sup>.

Spain follows a horizontal authorisation scheme for cross-border provision of construction services. This scheme, known as the Registry of Accredited Companies (*Registro de Empresas Acreditadas – REA*) is implemented through the Law 32/2006. According to the latter, Spanish and foreign service providers (in case where the posting of workers last for a period over eight days) requires them to demonstrate that construction health and safety requirements have been complied with. To simplify this process, the first communication of displacement required will have the character of application for registration. This means that they will be considered provisionally registered, until the labour authority effectively registers or denies the inscription in its Registry<sup>162</sup>. Spain is the only Member State which imposes a targeted control on health and safety for the construction sector in the framework of an authorisation procedure. Also, because of the limited nature of the duration of the authorisation (three years), foreign service providers have to restart the procedure from the beginning upon its expiry, with all fees and costs applicable. Furthermore, no mutual recognition of such authorisation is in place, thus constituting a burden for cross-border service providers. Nevertheless, tacit approval applies, thus lighting the procedure<sup>163,164</sup>.



**CEVIPYME is a platform that provides SMEs with information and personal assistance on how to protect their intellectual property rights. Its objective is to grow the number of patent, trademark and design applications filed<sup>165</sup>.**

The CEVIPYME (*centro de apoyo a la PYME en materia de gestión de Propiedad Industrial, Intelectual e innovación*) provides assistance to the SMEs to access intellectual property protection for their products and services<sup>166</sup>.



**As for the implementation of Eurocodes, 44 EN Parts are published as National Standards and the EN 1999 series is ratified, although the use of Eurocodes is not compulsory nor is it enforced in public procurement.**

National Annexes have been published on ten Eurocodes Parts and no other national standards are used in parallel with Eurocodes for structural design<sup>167</sup>.

## TO 5 – International competitiveness



**Spain ranked 23<sup>rd</sup> out of 141 economies, in the 2019 Global Competitiveness Index, as compared to 26<sup>th</sup> in 2018<sup>168</sup>.**

The country benefits from excellent infrastructure (10<sup>th</sup>), an important domestic market size (7<sup>th</sup>), and strong innovation capacity (25<sup>th</sup>). However, its performance in terms of the **internationalisation of its SMEs** is below the EU average. In particular, the country still has one of the lowest scores in the EU on advance rulings. Further, Spain performs slightly below-average in number of procedural formalities, mainly on the streamlining of border controls, single windows, post-clearance audits, and authorised economic operators<sup>169</sup>. However, it performs well as compared to other EU countries in the areas of formalities in automation, which mainly focuses on electronic exchange of data, automated border procedures, and use of risk management.

On the other hand, despite the poor performance in many criteria, the number of companies exporting on a regular basis increased to 51,768 in 2018, an increase of 2.4% in comparison to 2017. This was mainly due to the Strategy for the internationalisation of the Spanish Economy 2017-2027<sup>170</sup>.

In order to address issues and foster the internationalisation process of Spanish companies, the government has taken several measures. These include institutional support (establishment of an SME internationalisation umbrella organisation, ICEX) and dedicated financial support<sup>171</sup>.

In addition, the ‘Strategic Framework in SME Policy 2030’ includes the adoption of measures to improve the information available on international markets and business opportunities. It also consists of steps to improve specialised training activities to help SMEs grow in new markets and to create new financial instruments to meet the requirements of SMEs<sup>172</sup>.

Furthermore, in 2018, the Spanish government launched the digital **Xpande Program** within the framework of the Smart Growth Operating Program, for the period 2014-2020<sup>173</sup>. The support programme has two phases:

- personalised advice to develop SMEs’ internationalisation business plans, and
- financial assistance to implement the business plan (up to 70% of a maximum budget of EUR 9,000)

Such measures will help the government to tackle the persisting issues and foster the internationalisation process of Spanish companies. Also, a decline in the import elasticity to final demand, and the rising internationalisation of Spanish firms, suggest that a structural change has taken place in the Spanish economy.

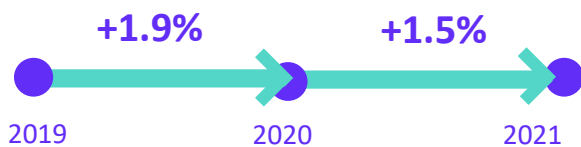


## 8

# Outlook

The Spanish economy has been on a declining trend since 2015 and is expected to moderate further in the coming years. Indeed, Spain's GDP is expected to grow annually by 1.9% and 1.5% in 2019 and 2020, respectively. The GDP is thus forecasted to reach EUR 1,208 billion.

Expected GDP growth between 2019-2021



In parallel with this overall economic trend, the outlook for the Spanish broad construction sector is moderate. The **volume index of production** of the narrow construction and construction of buildings sub-sectors are projected to grow by 3.3 and 1.8 index point (ip) in 2019 and by 3.9 ip and 2.0 ip in 2020. Similarly, the volume index of production of civil engineering is expected to grow slightly lower by 2.8 ip and 1.7 ip in 2019 and 2020.

Following these trends, the **turnover** is projected to increase slightly by 1.3% in 2019, compared to 2018, and by 1.1% in 2020 (from 2019 levels), reaching EUR 232.0 billion by 2020.

Similarly, the total **value added** of the broad construction sector is expected to increase. It is forecasted to grow by 1.7% in 2019, compared to 2018, and 1.5% in 2020 (from 2019 levels), amounting to EUR 78.0 billion by 2020.

As a result, the **total number of workers employed** in the broad construction sector is also projected to increase moderately on an annual basis by 1.3% in 2019, and 1.1% in 2020, reaching 2,063,915. This will put further pressure on the labour shortage situation, already quite pressing in 2018.

Expected total value added of the broad construction sector between 2018 and 2020

↑ 3.3%

In terms of residential housing, around 140,000 new residential dwellings annually will need to be constructed up to 2025 in order to satisfy internal demand<sup>174</sup>. In addition, **housing investment** is projected to grow by 3.9% in 2020<sup>175</sup>. This area is thus expected to contribute significantly to the overall growth of the Spanish construction sector.

The Spanish government has planned to invest EUR 103.8 billion on 814 major projects in transport infrastructure, drinking water facilities and urban development between 2017 and 2021<sup>176</sup>. However, with the ongoing commitment to fiscal deficit reduction, investments in **civil engineering** may very well stagnate in the short-term future.

The outlook for the Spanish construction sector is hence moderate, with the residential market driving its growth in the coming years. The sector still faces various challenges, notably labour and skills shortage, and low profitability. More needs to be done to ensure its sustainable development.

# References

- 1 Please note that this 2018 data is a nowcast – please refer to the methodology notes for further details
- 2 Please note that the share of each sub-sector in the value added of the broad construction sector should not be compared to the shares of the Gross Value Added in the GDP, since the GDP also includes taxes and excludes subsidies.
- 3 Please note that the share of each sub-sector in the value added of the broad construction sector should not be compared to the shares of the Gross Value Added in the GDP, since the GDP also includes taxes and excludes subsidies.
- 4 No data available for more recent years.
- 5 Apparent labour productivity refers to the gross value added per person employed.
- 6 Please note that this 2018 data is a nowcast - please refer to the methodology notes for further details.
- 7 Confederación Nacional de la Construcción, Firma Del Vi Convenio General Del Sector De La Construcción, July 2017  
<http://www.cnc.es/archivos/NP%20FIRMA%20VI%20CGSC.pdf>
- 8 The gross operating rate is the ratio of Gross Operating Surplus to Turnover, and is an indicator of profitability.
- 9 Data for sequent years is not available.
- 10 European Commission (2019). European Semester Country Reports – Spain. 2019.  
[https://ec.europa.eu/info/sites/info/files/file\\_import/2019-european-semester-country-report-spain\\_en.pdf](https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-spain_en.pdf)
- 11 Financial Times, Migration: the drain from Spain. <http://www.ft.com/cms/s/0/f7bdd5ce-995e-11e3-91cd-00144feab7de.html>
- 12 El Mundo (data: Instituto Nacional de Estadística) El número de españoles en el extranjero aumenta un 56% desde el inicio de la crisis  
<http://www.elmundo.es/sociedad/2016/03/17/56ea7da022601d7f648b463f.html>
- 13 Statistics of Spaniards Resident Abroad, January 2019. [https://www.ine.es/en/prensa/per\\_e\\_2019\\_en.pdf](https://www.ine.es/en/prensa/per_e_2019_en.pdf)
- 14 See more information at <https://www.economista.es/economia/noticias/9580550/12/18/La-poblacion-de-Espana-sigue-creciendo-gracias-a-la-inmigracion-ya-somos-467-millones.html>
- 15 European Commission (2019). European Semester Country Reports – Spain. 2019.  
[https://ec.europa.eu/info/sites/info/files/file\\_import/2019-european-semester-country-report-spain\\_en.pdf](https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-spain_en.pdf)
- 16 Ibidem.
- 17 World Bank (2019). Doing Business 2020. <https://www.doingbusiness.org/content/dam/doingBusiness/country/s/spain/ESP.pdf>
- 18 Ibidem.
- 19 SBA Fact Sheet 2019 – Spain, <https://ec.europa.eu/docsroom/documents/38662/attachments/27/translations/en/renditions/native>
- 20 World Economic Forum (2019). The 2019 Global Competitiveness Report.  
[http://www3.weforum.org/docs/WEF\\_TheGlobalCompetitivenessReport2019.pdf](http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf)
- 21 European Investment Fund, EUR 170 million of loans for Spanish SMEs as EIF and Ibercaja sign new guarantee agreement.  
[http://www.eif.org/what\\_we\\_do/guarantees/news/2017/ibercaja-smes-spain.htm](http://www.eif.org/what_we_do/guarantees/news/2017/ibercaja-smes-spain.htm)
- 22 According to Eurostat, construction services comprises Construction Abroad (code 250) and Construction in the Compiling Economy (code 251). They do not include architectural services, or engineering services.
- 23 Data before 2012 is not available.
- 24 Data before 2012 is not available.
- 25 EIB Investment Survey 2019. [https://www.eib.org/attachments/efs/eibis\\_2019\\_spain\\_en.pdf](https://www.eib.org/attachments/efs/eibis_2019_spain_en.pdf)
- 26 Ibidem.
- 27 SAFE report 2019. <https://ec.europa.eu/docsroom/documents/38462>
- 28 Ibidem.
- 29 EIB and Be-Spoke Capital provide long term financing opportunities for SMEs and mid-caps in Spain. November 2019.  
[https://ec.europa.eu/commission/presscorner/detail/en/IP\\_19\\_6513](https://ec.europa.eu/commission/presscorner/detail/en/IP_19_6513)
- 30 Spanish housing market continues to grow stronger. February 2019. <https://www.globalpropertyguide.com/Europe/Spain/Price-History>
- 31 Ibidem.
- 32 European Commission (2019). European Semester Country Reports – Spain. 2019.  
[https://ec.europa.eu/info/sites/info/files/file\\_import/2019-european-semester-country-report-spain\\_en.pdf](https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-spain_en.pdf)
- 33 Global Property Guide, Spanish house prices rising, foreigners buying, economy growing. July 2016.  
<http://www.globalpropertyguide.com/Europe/Spain/Price-History>
- 34 European Commission (2019). European Semester Country Reports – Spain. 2019.  
[https://ec.europa.eu/info/sites/info/files/file\\_import/2019-european-semester-country-report-spain\\_en.pdf](https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-spain_en.pdf)
- 35 Housing Plan in Spain for 2018-2021. July 2018. <https://ec.europa.eu/social/BlobServlet?docId=19993&langId=en>
- 36 Ibidem.
- 37 Statista. Number of residential real estate transactions in Spain between 2005 and 2018,  
<https://www.statista.com/statistics/771712/residential-real-estate-transactions-in-spain/>
- 38 Spain Residential, World research 2019. <https://pdf.euro.savills.co.uk/global-research/spain-residential-report-2019.pdf>
- 39 The housing cost overburden rate is the percentage of the population living in households where the total housing costs represent more than 40 % of disposable income.
- 40 Eurostat, Housing cost overburden rate by age, sex and poverty status - EU-SILC survey.  
[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc\\_lvho07a&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_lvho07a&lang=en)
- 41 Eurostat, Severe housing deprivation rate is defined as the percentage of population living in the dwelling which is considered as overcrowded, while also exhibiting at least one of the housing deprivation measures. Housing deprivation is a measure of poor amenities

## Country Fact Sheet Spain

and is calculated by referring to those households with a leaking roof, no bath/shower and no indoor toilet, or a dwelling considered too dark.

See more information at [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc\\_mdho06b&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_mdho06b&lang=en)

The overcrowding rate is defined as the percentage of the population living in an overcrowded household

Eurostat, Overcrowding rate. [http://ec.europa.eu/eurostat/product?code=ilc\\_lvho05a&language=en&mode=view](http://ec.europa.eu/eurostat/product?code=ilc_lvho05a&language=en&mode=view)

World Economic Forum, The 2019 Global Competitiveness Report.

[http://www3.weforum.org/docs/WEF\\_TheGlobalCompetitivenessReport2019.pdf](http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf)

European Commission (2019). European Semester Country Reports – Spain. 2019.

[https://ec.europa.eu/info/sites/info/files/file\\_import/2019-european-semester-country-report-spain\\_en.pdf](https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-spain_en.pdf)

Ibidem.

See more information at <https://www.focuspiedra.com/la-construccion-es-el-sector-que-mayor-numero-de-nuevas-empresas-genera/>

See more information at <https://www.idealista.com/news/inmobiliario/empresas/2018/06/26/766274-las-queiebras-de-empresas-de-la-construccion-siguen-cayendo-asi-han-evolucionado>

Ibidem

Payment Practices Barometer 2018, Spain <https://group.atradius.com/publications/payment-practices-barometer-spain-2018.thml>

Ibidem.

Payment Practices Barometer October 2019, Spain <https://group.atradius.com/publications/payment-practices-barometer-spain-2019.html>

Ibidem.

Ibidem.

Payment Practices Barometer 2018, Spain <https://group.atradius.com/publications/payment-practices-barometer-spain-2018.thml>

World Bank Group, Doing Business 2018 – Economic profile for Spain.

<http://www.doingbusiness.org/data/exploreeconomies/spain/#dealing-with-construction-permits>

The warehouse in this example is defined as a structure for general storage activities, with two stories, above ground and with total constructed area of approx. 1,300 square meters. The ground, on which the warehouse is built is owned by the company that will use it and valued at 50 times income per capita. There are architectural and technical plans prepared for the warehouse, which are also taken into account and counted as procedures if their preparation requires obtaining further documentation or getting prior approvals from external agencies. Finally, in this example the warehouse takes 30 weeks to construct, excl. all delays due to administrative and regulatory requirements.

Ibidem.

No data available for the real estate activities

No data is available for subsequent years

El Mundo, SOS: se busca mano de obra especializada en la construcción. 2018.

<http://www.elmundo.es/economia/2018/02/05/5a73377fca4741b0348b469f.html>

OECD, OECD Skills Strategy Diagnostic Report Spain 2015. [https://skills.oecd.org/developskills/documents/Spain\\_Diagnostic\\_Report.pdf](https://skills.oecd.org/developskills/documents/Spain_Diagnostic_Report.pdf)

See more information at : <https://www.elmundo.es/comunidad-valenciana/2018/10/09/5bbb9e0f46163f59808b4592.html>

See more information at <https://www.economista.es/construccion-inmobiliario/noticias/9151649/05/18/La-construccion-en-riesgo-por-falta-de-mano-de-obra-cualificada-segun-AGV.html>

Education and Training Monitor 2019- Spain. [https://ec.europa.eu/education/sites/education/files/document-library-docs/et-monitor-report-2019-spain\\_en.pdf](https://ec.europa.eu/education/sites/education/files/document-library-docs/et-monitor-report-2019-spain_en.pdf)

No data is available for subsequent years

See more information at [https://www.ine.es/en/prensa/cma\\_2016\\_res\\_en.pdf](https://www.ine.es/en/prensa/cma_2016_res_en.pdf)

Eurostat, Generation of waste by waste category, hazardousness and NACE Rev. 2 activity.

<https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>

Ibidem.

Eurostat, Waste Statistics. [http://ec.europa.eu/eurostat/statistics-explained/index.php/Waste\\_statistics](http://ec.europa.eu/eurostat/statistics-explained/index.php/Waste_statistics)

Congreso Internacional de Reciclaje de Residuos de Construcción y Demolición (RCD), October 2019.

<https://www.congresorcd.es/uploads/app/532/elements/file/file1572457222.pdf>

Catalogue of Pavements with Recycled Aggregates from Construction and Demolition Waste, October 2018. <https://www.mdpi.com/2504-3900/2/20/1282/pdf>

Ibidem.

Ministry of Environment, Programa Estatal de Prevención de Residuos (PEMAR) 2016-2022. [http://origin.magrama.gob.es/es/calidad-y-evaluacion-ambiental/planes-y-estrategias/pemaraprobado6noviembrecondae\\_tcm7-401704.pdf actualizado ANFABRA 11 02 2014 tcm7-310254.pdf](http://origin.magrama.gob.es/es/calidad-y-evaluacion-ambiental/planes-y-estrategias/pemaraprobado6noviembrecondae_tcm7-401704.pdf actualizado ANFABRA 11 02 2014 tcm7-310254.pdf)

Why most recyclable construction waste is being dumped illegally in Spain, August 2019.

[https://elpais.com/elpais/2019/08/29/inenglish/1567070392\\_869233.html](https://elpais.com/elpais/2019/08/29/inenglish/1567070392_869233.html)

European Commission, Innovation Union Scoreboard 2019. Country profile for Spain <https://ec.europa.eu/docsroom/documents/35912>

Ibidem.

Ibidem.

No data is available for subsequent years

No data is available for subsequent years

A full-time equivalent (FTE) is a unit to measure employed persons in a way that makes them comparable, although they may work a different number of hours per week. The unit is obtained by comparing an employee's average number of hours worked to the average

number of hours of a full-time worker. A full-time person is therefore counted as one FTE, while a part-time worker gets a score in proportion to the hours worked.

83 No data is available for subsequent years

84 European Commission (2019). The 2019 EU Industrial R&D Investment Scoreboard. [https://iri.jrc.ec.europa.eu/scoreboard/2019-eu-industrial-rd-investment-scoreboard#field\\_data](https://iri.jrc.ec.europa.eu/scoreboard/2019-eu-industrial-rd-investment-scoreboard#field_data)

85 European Commission (2019). European Semester Country Reports – Spain. 2019. [https://ec.europa.eu/info/sites/info/files/file\\_import/2019-european-semester-country-report-spain\\_en.pdf](https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-spain_en.pdf)

86 SBA Fact Sheet 2019 – Spain, <https://ec.europa.eu/docsroom/documents/38662/attachments/27/translations/en/renditions/native>

87 Ibidem.

88 SBA Fact Sheet 2019 – Spain, <https://ec.europa.eu/docsroom/documents/38662/attachments/27/translations/en/renditions/native>

89 Eco-innovation scoreboard 2018, [https://ec.europa.eu/environment/ecoap/indicators/index\\_en](https://ec.europa.eu/environment/ecoap/indicators/index_en)

90 Ibidem.

91 Ibidem.

92 Digital Economy and Society Index (DESI): Spain 2019. <https://ec.europa.eu/digital-single-market/en/countries-performance-digitisation>

93 BIM Community, The implementation of BIM in Spain: Past, Present and Future, July 2018. <https://www.bimcommunity.com/news/load/920/the-implementation-of-bim-in-spain-past-present-and-future>

94 Ibidem.

95 See more information at <https://www.bimcommunity.com/news/load/920/the-implementation-of-bim-in-spain-past-present-and-future>

96 BIM Community, The implementation of BIM in Spain: Past, Present and Future, July 2018. <https://www.bimcommunity.com/news/load/920/the-implementation-of-bim-in-spain-past-present-and-future>

97 See more information at <http://www.construtec.ifema.es/en/2018-key-bim-spain/>

98 BuildingSMART Spanish Chapter website <https://www.buildingsmart.es/>

99 Overview of national waste prevention programmes in Europe- Spain. October 2016. <https://www.eea.europa.eu/themes/waste/waste-prevention/countries/spain-waste-prevention-fact-sheet>

100 European Commission (2018) SBA Fact Sheet Spain <https://ec.europa.eu/docsroom/documents/32581/attachments/27/translations/en/renditions/native>

101 European Commission (2019). European Semester Country Reports – Spain. 2019. [https://ec.europa.eu/info/sites/info/files/file\\_import/2019-european-semester-country-report-spain\\_en.pdf](https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-spain_en.pdf)

102 Housing Plan in Spain for 2018-2021, July 2018. <https://ec.europa.eu/social/BlobServlet?docId=19993&langId=en>

103 Please refer to the relevant Policy Fact Sheet (*Plan Estatal de Vivienda – State Housing Plan*) for further details.

104 Ministerio de Fomento: Real Decreto 106/2018, de 9 de marzo, por el que se regula el Plan Estatal de Vivienda 2018-2021. [https://www.boe.es/diario\\_boe/txt.php?id=BOE-A-2018-3358](https://www.boe.es/diario_boe/txt.php?id=BOE-A-2018-3358)

105 Ibidem

106 El Mundo, Lluvia de ayudas a la vivienda. <http://www.elmundo.es/economia/vivienda/2017/05/12/591491b4ca474194378b469a.html>

107 Housing Plan in Spain for 2018-2021, July 2018. <https://ec.europa.eu/social/BlobServlet?docId=19993&langId=en>

108 Ibidem.

109 Adopted the new State Housing Plan 2018-2021, March 2018, <http://bluessimongroup.com/en/2018/03/adopted-the-new-state-housing-plan-2018-2021/>

110 Ibidem.

111 National strategies to fight homelessness and housing exclusion Spain. <https://ec.europa.eu/social/BlobServlet?docId=21628&langId=en>

112 Spain’s First comprehensive National Homelessness Strategy, July 2016. <https://ec.europa.eu/social/BlobServlet?docId=15715&langId=en>

113 National strategies to fight homelessness and housing exclusion Spain. <https://ec.europa.eu/social/BlobServlet?docId=21628&langId=en>

114 Código Técnico de la Edificación (CTE), Presentación. <http://www.codigotecnico.org/index.php/menu-que-cte/menu-presentacion>

115 Código Técnico de la Edificación (CTE), Documento Básico Ahorro de energía. September 2013. <https://www.codigotecnico.org/images/stories/pdf/ahorroEnergia/DBHE.pdf>

116 Banco Bilbao Vizcaya Argentaria, <http://www.actibva.com/magazine/economia/el-sector-de-la-construccion-en-espana>

117 Instituto para la Diversificación y ahorro de la Energía. Código Técnico de la Edificación <http://www.idae.es/tecnologias/eficiencia-energetica/edificacion/codigo-tecnico-de-la-edificacion>

118 Real Decreto 235/2013, de 5 de abril, por el que se aprueba el procedimiento básico para la certificación de la eficiencia energética de los edificios. <https://www.boe.es/buscar/act.php?id=BOE-A-2013-3904>

119 European Commission, Liability and insurance regimes in the construction sector: national schemes and guidelines to stimulate innovation and sustainability. April 2010. <http://www.elios-ec.eu/sites/default/files/pdf/Eliospecialreporton27MemberStates.pdf>

120 DLA Piper real World, <http://www.dlapiperrealworld.com/law/index.html?t=construction&s=forms-of-contract-procurement-methods&q=insurances&c=ES>

121 Boletín Oficial del Estado, Ley de Ordenación de la Edificación <https://www.boe.es/buscar/pdf/1999/BOE-A-1999-21567-consolidado.pdf>

122 European Commission, Liability and insurance regimes in the construction sector: national schemes and guidelines to stimulate innovation and sustainability. April 2010. <http://www.elios-ec.eu/sites/default/files/pdf/Eliospecialreporton27MemberStates.pdf>

123 Ibidem.

124 Ibidem.

125 Ibidem.

126 Ley 38/1999, de 5 de noviembre, de Ordenación de la Edificación. Jefatura del Estado «BOE» núm. 266, de 6 de noviembre de 1999 Referencia: BOE-A-1999-21567 TEXTO CONSOLIDADO Última modificación: 15 de julio de 2015 <https://www.boe.es/buscar/pdf/1999/BOE-A-1999-21567-consolidado.pdf>

- 127 Ibidem.
- 128 This includes total investment by the construction and real estate sub-sectors, defined as gross fixed capital formation, i.e. acquisitions minus disposal, of total fixed assets (e.g. machinery and equipment, vehicles, dwellings and other buildings).
- 129 Data for sequent years is not available.
- 130 Investment in machinery, equipment & weapons systems for narrow construction sub-sector and real estate activities sub-sector is not available.
- 131 This includes total investment (i.e. gross fixed capital formation) in dwellings and non-residential construction and civil engineering by investors in the general economy (e.g. industry, financial and non-financial services, households, agricultural sector, etc.).
- 132 Data for sequent years is not available.
- 133 The indicator gross fixed capital formation in non-residential and civil engineering refers to the Eurostat indicator «Other buildings and structures»
- 134 Construction and projects in Spain overview, April 2019. [https://uk.practicallaw.thomsonreuters.com/w-019-9922?transitionType=Default&contextData=\(sc.Default\)&firstPage=true&bhcp=1](https://uk.practicallaw.thomsonreuters.com/w-019-9922?transitionType=Default&contextData=(sc.Default)&firstPage=true&bhcp=1)
- 135 La Moncloa, Infrastructure and transport: <http://www.lamoncloa.gob.es/lang/en/espana/spaintoday2015/infrastructure/Paginas/index.aspx>
- 136 Ministerio de Fomento, Estrategia logística de España [https://www.fomento.gob.es/MFOM/LANG\\_CASTELLANO/PLANES/ESTRATEGIA\\_LOGISTICA/](https://www.fomento.gob.es/MFOM/LANG_CASTELLANO/PLANES/ESTRATEGIA_LOGISTICA/)
- 137 New 2018-2020 Spanish rail market plan, December 2017. <https://www.railwaypro.com/wp/new-2018-2020-spanish-rail-market-plan/>
- 138 European Commission (2019). European Semester Country Reports – Spain. 2019. [https://ec.europa.eu/info/sites/info/files/file\\_import/2019-european-semester-country-report-spain\\_en.pdf](https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-spain_en.pdf)
- 139 European Commission selects five railway projects with Spanish participation to receive CEF funding. October 2019. <http://spanishrailwaysnews.com/noticias.asp?not=9059&cs=home>
- 140 European Commission, Education and Training Monitor 2019 Spain. [https://ec.europa.eu/education/sites/education/files/document-library-docs/et-monitor-report-2019-spain\\_en.pdf](https://ec.europa.eu/education/sites/education/files/document-library-docs/et-monitor-report-2019-spain_en.pdf)
- 141 Ibidem.
- 142 Ibidem.
- 143 Ibidem
- 144 Build Up Skills Spain. "Construye 2020" . <http://construye2020.eu/>
- 145 Fundación Laboral de la Construcción, La Fundación Laboral de Extremadura, pionera en cursos sobre nuevas técnicas y uso de herramientas empleadas en la eficiencia energética. January 2016. <http://www.fundacionlaboral.org/actualidad/noticia/la-fundacion-de-extremadura-pionera-en-ofrecer-cursos-sobre-nuevas-tecnicas-y-uso-de-herramientas-empleadas-en-la-eficiencia-energetica>
- 146 Tarjeta Profesional de la Construcción (TPC), <http://www.trabajoenconstruccion.com/home.aspx>
- 147 OFERTA FORMATIVA de la Fundación Laboral de la Construcción <http://ofertaformativa.cursosenconstruccion.com/?territorialayout>
- 148 See more information at <https://www.fundacionlaboral.org/actualidad/notas-de-prensa/la-fundacion-laboral-firma-un-acuerdo-con-asefave-para-actualizar-las-competencias-de-instaladores-de-carpinteria-exterior>
- 149 Government of Spain (2017). 2017-2020 National Energy Efficiency Action Plan. [https://ec.europa.eu/energy/sites/ener/files/documents/es\\_neeap\\_2017\\_en.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/es_neeap_2017_en.pdf)
- 150 Commission refers Spain to Court for heat and hot water metering in multi apartment buildings, March 2019. [https://europa.eu/rapid/press-release\\_IP-19-1473\\_en.htm](https://europa.eu/rapid/press-release_IP-19-1473_en.htm)
- 151 Ministerio de Industria, Turismo y Comercio: Plan de acción de ahorro y de eficiencia energética 2011-2020 [http://www.minetad.gob.es/energia/es-ES/Novedades/Documents/PAEE2011\\_2020.pdf](http://www.minetad.gob.es/energia/es-ES/Novedades/Documents/PAEE2011_2020.pdf)
- 152 Instituto para la Diversificación y el Ahorro de la Energía <http://www.idae.es/index.php/reلمenu.30/relcategoria.101/idpag.11/mod.pags/mem.detalle>
- 153 Government of Spain (2017). 2017-2020 National Energy Efficiency Action Plan. [https://ec.europa.eu/energy/sites/ener/files/documents/es\\_neeap\\_2017\\_en.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/es_neeap_2017_en.pdf)
- 154 Government of Spain (2017). 2017-2020 National Energy Efficiency Action Plan. [https://ec.europa.eu/energy/sites/ener/files/documents/es\\_neeap\\_2017\\_en.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/es_neeap_2017_en.pdf)
- 155 Green Building Council España, Certificación VERDE. <http://www.gbce.es/es/pagina/certificacion-verde>
- 156 Agencia Andaluza de la Energía, Programa de Impulso a la construcción sostenible en Andalucía. [https://www.agenciaandaluzadelaenergia.es/sites/default/files/Documentos/pics\\_resumen\\_programa.pdf](https://www.agenciaandaluzadelaenergia.es/sites/default/files/Documentos/pics_resumen_programa.pdf)
- 157 European Commission (2019). The EU Single Market Single Market Scoreboard. [https://ec.europa.eu/internal\\_market/scoreboard/docs/2019/member-states/es\\_en.pdf](https://ec.europa.eu/internal_market/scoreboard/docs/2019/member-states/es_en.pdf)
- 158 Ibidem.
- 159 Ibidem.
- 160 Spain's new public procurement law enters into force, March 2018. <https://www.herbertysmithfreehills.com/latest-thinking/entra-en-vigor-la-nueva-ley-de-contratos-del-sector-p%C3%B3Bblico>
- 161 GAN (2018). Spain Corruption Report. <https://www.business-anti-corruption.com/country-profiles/spain/>
- 162 See more information at <https://www.citizensadvice.org.es/faq/register-of-accredited-companies-construction/>
- 163 European Commission, Simplification and mutual recognition in the construction sector under the Services Directive. November 2015. 05 February 2015 <https://publications.europa.eu/en/publication-detail/-/publication/3e6f95eb-c658-11e5-a4b5-01aa75ed71a1>
- 164 Study on costs involved in accessing markets cross-border for provision of construction services, September 2018. <https://op.europa.eu/en/publication-detail/-/publication/ac972617-b7cf-11e8-99ee-01aa75ed71a1>
- 165 SBA Fact Sheet 2019 – Spain, <https://ec.europa.eu/docsroom/documents/38662/attachments/27/translations/en/renditions/native>

## Country Fact Sheet Spain

- 166 SBA Fact Sheet 2017- Spain, <http://ec.europa.eu/DocsRoom/documents/26562/attachments/27/translations/en/renditions/native>
- 167 JRC Report EUR 27511 EN, State of implementation of the Eurocodes in the European Union. 2015. <http://eurocodes.jrc.ec.europa.eu/showpublication.php?id=537>
- 168 World Economic Forum, Global Competitiveness Report 2018-2019. [http://www3.weforum.org/docs/WEF\\_TheGlobalCompetitivenessReport2019.pdf](http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf)
- 169 SBA Fact Sheet 2019 – Spain, <https://ec.europa.eu/docsroom/documents/38662/attachments/27/translations/en/renditions/native>
- 170 SBA Fact Sheet 2019 – Spain, <https://ec.europa.eu/docsroom/documents/38662/attachments/27/translations/en/renditions/native>
- 171 Ibidem.
- 172 Ibidem.
- 173 Ibidem.
- 174 El Mundo, “España necesitará 140.000 nuevas casas al año hasta 2025, cuando el precio volverá a niveles de 2007” <http://www.elmundo.es/economia/2016/06/10/575a8de0468aebec358b4614.html>
- 175 See more information at <https://externalcontent.blob.core.windows.net/pdfs/Spain-Economic-Outlook-3Q19.pdf>
- 176 Construction in Spain: Key Trends & Opportunities to 2022, June 2019. [https://finance.yahoo.com/news/construction-spain-key-trends-opportunities-132700227.html?guccounter=1&guce\\_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce\\_referrer\\_sig=AQAAAEzpaerQfYli6pvsmPsz8GEicjmS0efdFhXzRnM3nngbelnym2mVdBNVZ-RnAFRNG5GRlkXgOgTffIMVaWa9kH24CSFO79xf2c6sz6AzhSmWaJQSUyZU\\_E3kuWZEyLrrSWStHG7bBKGXu34HzmbBo\\_qWdQQbtiYsxThNnJKBgr4](https://finance.yahoo.com/news/construction-spain-key-trends-opportunities-132700227.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAAEzpaerQfYli6pvsmPsz8GEicjmS0efdFhXzRnM3nngbelnym2mVdBNVZ-RnAFRNG5GRlkXgOgTffIMVaWa9kH24CSFO79xf2c6sz6AzhSmWaJQSUyZU_E3kuWZEyLrrSWStHG7bBKGXu34HzmbBo_qWdQQbtiYsxThNnJKBgr4)