European Construction Sector Observatory

Country profile **Portugal**

October 2021

In a nutshell

Since 2010, Portugal's GDP has decreased by 1.4%, amounting to EUR 184.9 billion in 2020. This represented a 7.6% decline as compared to the 2019 level (EUR 200.0 billion).

In line with the overall economy, the **number of enterprises** in the broad construction sector decreased by 3.6% between 2010 and 2020, totalling 174,298 in 2020.The largest drop was reported by the architectural and engineering activities (-33.7%) sub-sector, followed by the manufacturing (-30.2%) and the narrow construction (-10.4%) sub-sectors. In contrast, the real estate activities sub-sector registered a 65.5% increase over the same reference period.

Number of enterprises in the narrow construction sub-sector between 2010 and 2020 ↓ **10.4%**

Conversely, the **volume index of production** in the broad construction sector slightly increased by 0.7% over the 2015-2020 period, primarily driven by a 1.0% and 0.1% increase in the production of construction of buildings and construction of civil engineering between 2015 and 2020, respectively.

In 2018, the **total turnover** of the broad construction sector stood at EUR 40.3 billion, representing a decline of 21.1% as compared to 2010 (EUR 51.1 billion). It further increased to EUR 41.0 billion in 2020, registering an overall decline of 19.7% over the 2010-2020 period. This decrease was primarily due to a 32.7% drop in the narrow construction sub-sector, followed by the architectural and engineering activities (-20.9%) and the manufacturing (-16.0%) sub-sectors over the same reference period. In contrast, the real estate activities sub-sector posted a growth of 53.4% between 2010 and 2020.

Total turnover in the broad construction sector between 2010 and 2020 ↓ **19.7%**

In parallel, the **gross operating rate** of the broad construction sector, an indicator of the sector's profitability, increased from 9.7% in 2010 to 12.1% in 2018, well below the EU-27 average of 16.7%.

In the context of **employment**, there were 545,060 persons employed in the Portuguese broad construction sector in 2020, representing a decline of 15.6% since 2010. This was mainly due to reductions recorded in the employment for the manufacturing (-28.8%), the architectural and engineering activities (-28.8%) and the narrow construction (-18.4%) sub-sectors over the 2010-2020 period. In contrast, employment in the real estate activities sub-sector experienced an increase of 42.7% during the same reference period.

Persons employed in the broad construction sector between 2010 and 2020 ↓ **15.6%**

In order to provide **housing** to everyone and make it affordable, the Portuguese government has taken several measures. In August 2020, the Portuguese Government announced its plans to create a pool with currently vacant (or available) properties across the country, that will be turned into affordable rental housing. The investment is expected to reach EUR 2.3 billion.

With regards to the **civil engineering market**, the National Investment Programme 2030 (PNI) is designed to provide investments worth EUR 22.0 billion into the areas of transport, energy and environment projects. It represents a total estimated investment of EUR 43.0 billion.

Portugal will receive up to EUR 13.9 billion in grants and EUR 2.7 billion in loans as part of the Recovery and Resilience Facility.

The plan, approved by the European Commission in June 2021, includes key measures to foster Portugal's green and digital transition. An overall EUR 610 million will be allocated for energy efficiency renovation interventions of public and private buildings. The plan also includes infrastructure investments worth EUR 690 million, aimed at improving the country's road transport connectivity by expanding the road network by completing missing links. It also invests in the expansion of the network of publicly accessible electric vehicle charging stations[1].

Currently, the Portuguese construction companies are struggling with a shortage of craftsmen (in particular bricklayers, electricians). In order to compensate for the shortage of labour, companies are relying on foreign workers. However, such a process is undermined by several barriers such as low salaries (in comparison to some other European countries) and a complex tax system. Finally, the issue of late payment, coupled with the limited access to finance (both issues disproportionally affecting SMEs) undermine the liquidity of the sector. Both factors limit the growth of the SME segment in the construction sector.

The outlook for the Portuguese construction sector remains positive, driven by housing and non-residential markets. The former is driven by: i) foreign investment in high quality real estate projects; and ii) government policy as the Instrumento Financeiro para a Reabilitação e Revitalização Urbanas - IFRRU programme, a financial instrument aimed to support investments in urban renewal, but also policy initiatives related to supporting energy efficiency renovation, and planned investments in affordable housing. The non-residential market is also expected to grow, with tourism-related investments such as hotels, restaurants and more generally hospitality facilities.

Table of Contents

1

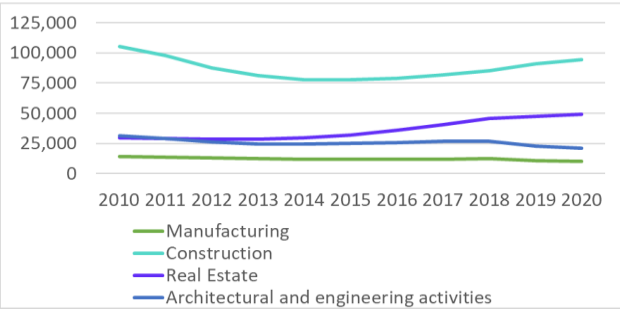
Key figures

Construction market

In 2020[2], there were 174,298 **enterprises** in the broad construction sector in Portugal, with the narrow construction sub-sector accounting for 54.2% (Figure 1). This represents a reduction of 3.6% since 2010 (180,901), after growing by 20.9% between 2014 and 2020. Among the sub-sectors, the architectural and engineering activities sub-sector experienced the largest drop over 2010-2020 (-33.7%), reaching 20,993 in 2020 as compared to 31,659 in 2010. It was followed by the manufacturing (-30.2%) and narrow construction (-10.4%) sub-sectors, reaching 9,925 and 94,452 firms, respectively in 2020. In contrast, the number of enterprise in the real estate activities sub-sector grew by 65.5% during the period, increasing from 29,566 in 2010 to 48,929 in 2020.

Number of enterprises in the real estate sub-sector between 2010 and 2020	↑ **65.5%**
Number of enterprises in the narrow construction sub-sector between 2010 and 2020	↓ **33.7%**

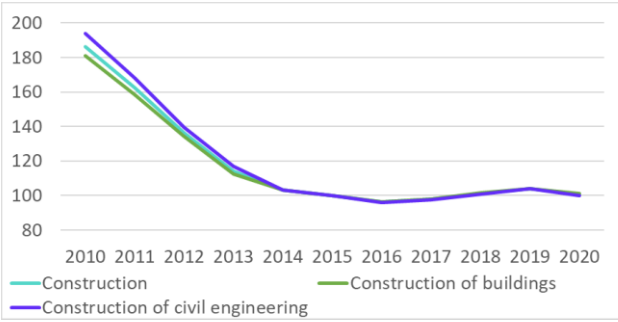
Figure 1: Number of enterprises in the Portuguese broad construction sector between 2010 and 2020



Source: Eurostat, 2021.

The **volume index of production** in the broad construction sector recorded a slight growth of 0.7% between 2015 and 2020. The growth was primarily driven by 1.0% and 0.1% increases in the construction of buildings and construction of civil engineering respectively, in the same period (Figure 2).

Figure 2: Volume index of production in the Portuguese construction sector between 2010 and 2020 (2015=100)

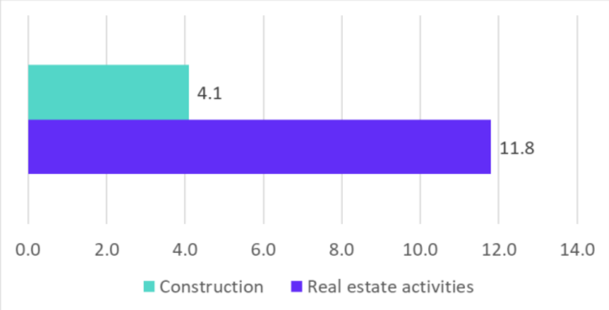


Source: Eurostat, 2021.

The **total added value**[3] of the broad construction sector amounted to EUR 12.5 billion in 2020[4], with the narrow construction sub-sector contributing to 57.8% (EUR 7.2 billion) of the total. However, the added value of the narrow construction subsector declined by 15.1% between 2010 and 2020. The real estate activities sub-sector, which recorded the highest increase of 57.5% in 2020 over 2010, contributed to 21.1% of the total (EUR 2.7 billion). It was followed by the manufacturing (EUR 1.8 billion), and architectural and engineering activities (EUR 0.9 billion) sub-sectors, contributing to 14.2% and 6.9% of the total, respectively.

The **share of gross value added of the narrow construction sub-sector in the GDP** stood at 4.1% in 2020, below the EU-27 average of 5.1%. Conversely, for the real estate activities sub-sector, it stood at 11.8% in 2020, above the EU-27 average of 10.3% (Figure 3).

Figure 3: Gross value added as a share of GDP in the Portuguese construction sector in 2020[5] (%)



Source: Eurostat, 2021.

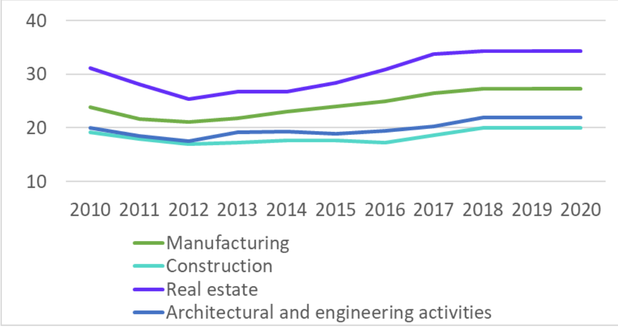
There are seven NUTS-2 statistical regions in Portugal including North (*Norte*), Algarve, Centre (*Centro*), Lisbon metropolitan area (*Área Metropolitan a de Lisboa*), Alentejo, Autonomous Region of the Azores (*Região Autónoma dos Açores*), Autonomous Region of Madeira (*Região Autónoma da Madeira*). The gross value added is not equally split over these regions. In 2018[6], the Lisbon Metropolitan Area, the Northern region and the Centre region accounted for 83.8% and 83.0% of the **gross added value** in the narrow construction and real estate activities sub-sectors respectively.

Productivity

The **apparent labour productivity**[7] in the Portuguese broad construction sector increased from EUR 20,919 in 2010 to EUR 23,212 in 2018[8], representing an increase of 11.0% during the period. It remains well below the EU-27 average of EUR 51,960.

Between 2010 and 2020, the manufacturing sub-sector exhibited the highest growth (+14.2%) in labour productivity, increasing from EUR 23,843 in 2010 to EUR 27,235 in 2020. It was followed by the real estate activities sub-sector growing from EUR 31,100 in 2010 to EUR 34,349 (+10.4%) in 2020. The architectural and engineering activities sub-sector came third (+9.6%), increasing from EUR 20,000 to EUR 21,919. The lowest increase in productivity was in the narrow construction sub-sector from EUR 19,200 to EUR 19,953 (+3.9%) in the same reference period.

Figure 4: Labour productivity in the construction sector in Portugal between 2010 and 2020 (EUR k)



Source: Eurostat, 2021.

Turnover and profitability

In 2018, the **turnover** of the Portuguese broad construction sector reduced to EUR 40.3 billion as compared to EUR 51.1 billion in 2010, registering a 21.2% decline over the 2010-2018 period. In 2020, it grew to EUR 41.0 billion, an increase of 1.9% over 2018. This represents a 19.7% decrease over 2010-2020.

In 2020, over half of the total turnover (57.2%) was generated by the narrow construction sub-sector, followed by the real estate activities (22.0%), manufacturing (15.9%) and architectural and engineering activities (4.9%) sub-sectors. Turnover in the real estate activities sub-sector recorded the highest increase (+53.4%), growing from EUR 5.9 billion in 2010 to EUR 9.0 billion in 2020. In contrast, the narrow construction sub-sector declined from EUR 34.9 billion in 2010 to EUR 23.5 billion in 2020 (-32.7%). It was followed by the architectural and engineering activities sub-sector (-20.9%), falling from EUR 2.6 billion to EUR 2.0 billion. The manufacturing sub-sector declined to EUR 6.6 billion in 2020 as compared to EUR 7.8 billion in 2010 (-16.0%).

Turnover in the broad construction sector between 2010 and 2020 ↓ **19.7%**

The **gross operating surplus** in the broad construction sector slightly declined by 2.1% between 2010 and 2018[9], reaching EUR 4.9 billion in 2018, after increasing continuously since 2012 (the 2018 level was 46.0% above the 2016 level).

The overall decline in the broad sector was mainly due to the decreases recorded in the narrow construction (-27.8%) and architectural and engineering activities (-5.8%) sub-sectors, reaching a value of EUR 1,909.2 million and EUR 378.5 million in 2018, respectively. Conversely, growth was recorded in the real estate activities (56.8%) and manufacturing (1.6%) sub- sectors during the same period, reaching EUR 1,770.2 million and EUR 796.6 million, respectively in 2018.

Gross operating surplus in the broad construction sector between 2010 and 2018 ↓ **2.1%**

Gross operating surplus in the real estate activities sub-sector between 2010 and 2018 ↑ **56.8%**

Similarly, the **gross operating rate** of the broad construction sector[10], which gives an indication of the sector's profitability, stood at 12.1% in 2018[11] as compared to 9.7% in 2010. This is below the EU-27 average of 16.7%. In terms of sub-sectors, the real estate activities remain the most profitable, with a gross operating rate of 21.1%, 1.9 percentage points (pps) increase since 2010. Similarly, the narrow construction sub-sector also witnessed a marginal growth of 1.4 pps compared to 2010, reaching 9.0% in 2018. In contrast, the architectural and engineering services (14.6%) and manufacturing (9.9%) sub-sectors witnessed a slight drop in the gross operating rate across sub-sectors, -1.1 pps and -0.2 pps respectively, between 2010 and 2018.

The cost is an important element affecting the profitability of the construction sector in Portugal. Over the 2015-2020 period, the **construction cost index** for residential buildings experienced a 10.0% rise (Figure 5). This was driven by the increase in both input prices for materials (+5.9%) and labour costs (16.4%) in the same reference period. This rise in labour costs is partly explained by the rise of the minimum salary in Portugal.

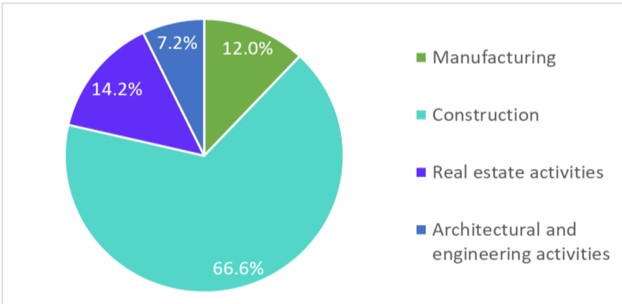
Figure 5: Construction cost index between 2010 and 2020 (2015=100)

Source: Eurostat, 2021.

Employment

In 2020[12], 545,060 **persons were employed** in the Portuguese broad construction sector. While the number of people employed in the sector has dropped by 15.6% since 2010 level (646,085 persons), it has continuously increased since 2014 (+19.1%). The narrow construction sub-sector employed 66.6% of the total workforce (i.e. 363,030 persons) of the broad construction sector, followed by the real estate activities (14.2% i.e. 77,168 persons), manufacturing (12.0% i.e. 65,520 persons) and architectural and engineering activities (7.2% i.e. 39,342) sub-sectors (Figure 6).

Figure 6: Percentage of people employed per construction sub-sectors in Portugal in 2020



Source: Eurostat, 2021.

Number of persons employed in the broad construction sector between 2010 and 2020 ↓ **15.6%**

Except for the real estate activities sub-sector, which experienced an increase in terms of persons employed in the sector (+42.7% over the 2010-2020 period), all the other sub-sectors registered a downturn with the largest decline being in the narrow construction sub-sector (-18.4%).

In terms of **employment by specific occupation**, the demand for workers in the narrow construction sub-sector declined especially regarding the elementary occupations (-53.7%), clerical support workers (-52.5%), managers (-49.8%), plant and machine operators and assemblers (-42.5%) and craft and related trades workers (-38.8%) in the 2010-2020 period. In parallel, increase in demand was recorded for technicians and associate professionals (+42.4%) and professionals (+12.4%) for the same period. Similarly, in the real estate activities and manufacturing sub-sectors, demand for technicians and associate professionals grew (+130.9% and +100.0% respectively) in the same period. Amongst all the sub-sectors, the highest increase (+288.3%) in demand was observed for professionals in the manufacturing sub-sector over 2010-2020.

Demand for service and sales workers in the manufacturing sub-sector between 2010 and 2020 ↑ **288.3%**

There are also some regional disparities in terms of employment, whereby the Lisbon Metropolitan Area, the Northern and the Centre regions concentrated 84.8% and 82.7% of employees in the narrow construction and the real estate activities sub-sectors respectively in 2018. The Northern region, which accounted for the highest number of employees in the narrow construction sub-sector, i.e. 39.5%, reported a 25.7% decline over the 2010-2018 period, reaching 119,420. In parallel, in the real estate activities sub-sector, the Lisbon Metropolitan Area (accounting for the highest share of employees, i.e. 43.0%) reported a growth of 49.7% during the same period, reaching 16,590 people.

The number of **self-employed workers** in the narrow construction sub-sector declined by -25.5% between 2010 and 2020, thus representing 11.5% of the self-employed in the general economy, slightly below the EU-27 average of 11.7%. Conversely, self-employed workers in real estate activities sub-sector significantly grew by 37.7% in the same period.

Number of self-employed workers in the narrow construction sub-sector between 2010 and 2020 ↓ **25.5%**

Over the 2010-2020 period, **full-time employment** in the real estate activities and manufacturing sub-sectors increased by 62.9% and 2.5% respectively, while it declined by 36.8% in the narrow construction sub-sector. In terms of **part-time employment**, the real estate activities sub-sector reported the increase of 22.6%, while the narrow construction and manufacturing sub-sectors decreased by 26.5% and 20.3% respectively between 2010 and 2020.

Full time employment in the narrow construction sub-sector between 2010 and 2020 ↓ **36.8%**

Due to the ongoing COVID-19 pandemic, the Portuguese government has taken measures with regards to employment. The government has provided support to companies that are facing a crisis, allowing employers to choose between:

- suspension of the employee's employment contract; or
- reduction of employees' working hours, in accordance with the general Lay Off regime, established in the Labour Code.

In these cases, the employees concerned are entitled to financial support of two thirds of the gross salary paid by the Government. The employers are provided temporary exemption from payment of social security contributions. Notably, this support is applicable for one month, and can be extended to a maximum of three months[13]. Owing to the COVID-19 crisis, over 100,000 Portuguese companies applied to temporarily lay off staff in 2020.

2

Macroeconomic indicators

Economic development

After a deep financial and economic crisis 2007-2013, Portugal's economy has been on the recovery path since 2014 (+12.7% growth between 2014 and 2019), with its GDP amounting to EUR 199.0 billion in 2019 — an increase of 6.2% above the 2010 level (EUR 187.4 billion). However, in 2020 its GDP fell to EUR 184.9 million due to the COVID-19 pandemic — exhibiting a decrease of 1.4% from 2010.

In 2020, Portugal's GDP witnessed a 7.6% decline year over year (YoY), well below the 2.5% growth recorded in 2019 (YoY).

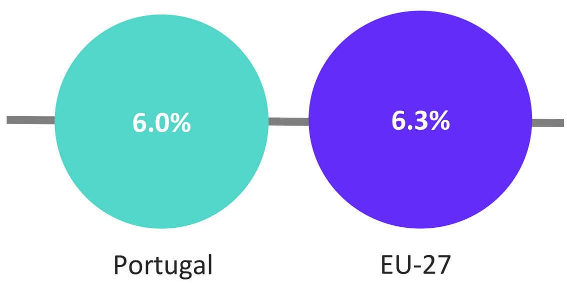
In 2020, Portugal's **potential GDP** stood at EUR 195.9 billion, translating into a negative **output gap** of -5.6%, slightly above the EU-27 average of - 5.9%. This shows that there is under-utilisation of resources in the national economy. The **inflation rate** has been fluctuating since 2010, dropping at - 0.2% in 2014 and increasing to 1.2% in 2018. It dropped again to -0.1% in 2020[14].

Demography and employment

Employment has been growing in Portugal over the past few years, in line with an improved economic outlook.

As a result of such improved economic outlook, **the unemployment rate** (persons between 25 and 64 years old) has been continuously falling after the 2013 peak (15.2%), reaching 5.8% in 2019 – slightly below the EU-27 average of 6.0% and its lowest since 2005. However, in 2020 it slightly increased to 6.0%, remaining still below the EU-27 average of 6.3%. Similarly, **youth unemployment** (persons below the age of 25) stood at 22.6% in 2020 – 4.3 pps increase from 2019 and above the EU-27 average of 16.8%. This is slightly below the 2010 level of 22.8%.

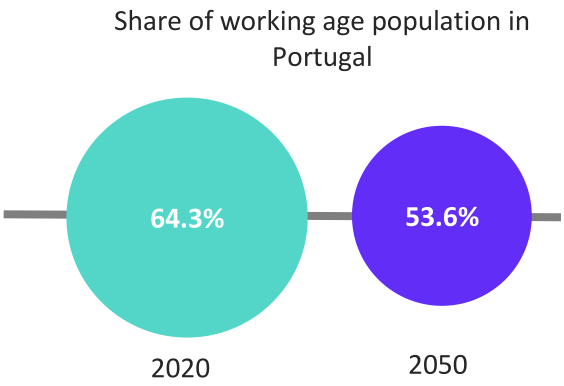
Unemployment rate in 2020



In terms of demographics, Portugal's **total population** reached 10.3 million people in 2020, 2.6% below the 2010 level (10.6 million). It is projected to decline to 10.1 million by 2030 (-2.0%) and to 9.4 million by 2050 (-8.9%). In parallel, **net migration** has been negative since 2011, with 8,310 people leaving the country in 2016. Due to improvements in the labour market, migration inflows surpassed outflows for the first time in 2017 and it has continued the same way till 2020. The positive migration stood at 41,274 people in 2020. This is also evident from the increase in the number of registered foreign residents in Portugal. By 2020, the number stood at 662,095, an increase of approximately 12.0% over the previous year. Foreign residents represent over 6% of the country's population, the highest value ever recorded. The positive net migration also contributes to mitigating the population decline[15,16].

Portugal's **working age population**, which made up 64.3% of the total in 2020, is expected to fall to 53.6% by 2050, as the share of people aged 65 or older will increase from 22.2% to 33.7% in the same period.

Expected rise in the ageing population highlights potential opportunities for the construction sector – notably relating to e.g. care facilities.[17]



Public finance

In 2020, general **government expenditure** in Portugal accounted for 48.4% of the GDP (against the EU-27 average of 53.4%), which represents a decrease from 2010 (-3.5%). The same year, general **government deficit** stood at 5.7% of GDP, which is well above the 2010 level of 11.2% and the EU-27 average of 6.9%. This is partly due to the COVID-19 crisis, weaker cyclical revenue and increased spending needs[18]. General **government gross debt** accounted for 133.6% of GDP. This is higher than in 2010 (100.2%), and well above the EU-27 average of 90.7%.

Entrepreneurship and access to finance

According to the World Bank Doing Business 2020 report, Portugal ranked 63rd out of 190 countries in ease of starting a business in 2019. This is a decline in comparison with previous year's ranking (34th)[19,20].

As per the report, starting a business in Portugal requires 6 procedures, taking 6.5 days and costing 1.9% of income per capita[21]. In terms of entrepreneurship, 53.5% of the Portuguese adult population perceive that there are good opportunities in starting a firm in the country, and 19.8% of the adult population, currently not involved in entrepreneurial activities intended to start a business in the coming three years[22,23].

Portugal is one of the EU's strongest performers in terms of entrepreneurship.

Its entrepreneurial ecosystem is based on tech-based start-ups and is supported by vouchers to support entrepreneurial projects at the ideas stage and training activities. In addition, the government has incorporated entrepreneurship into the education curriculum, and mentoring initiatives have been launched in collaboration with university incubators and start-ups[24].

Access to finance is still the biggest concern for 9.1% of Portuguese small and medium-sized enterprises (SMEs) (in line with the 9.9% EU-27 average), according to the Survey on the Access to Finance of Enterprises (SAFE) results 2020[25]. As per the report, there has been a gradual improvement in credit conditions. 4.7% of SMEs that applied for a loan saw their application rejected in 2020, compared to the 6.3% at the EU-27 average. However, loans to non-financial corporations have substantially decreased by 35.5% over 2010-2020, going from EUR 114.6 billion to EUR 73.9 billion.

Loans to non-financial corporations between 2010 and 2020 ↓ **35.5%**

In 2020, Portuguese SMEs were severely affected by the COVID-19 pandemic, with the government taking numerous policy measures to support the economy[26].

The Portuguese government launched several measures to mitigate the effects of the pandemic in 2020, including financial support lines for micro and small firms, as well as for medium-sized firms (*Linha de Apoio à Economia – COVID 19*), temporary suspension of some taxes, and extraordinary support measures and incentives to protect jobs. The government announced additional measures in mid-January 2021 in response to the second lockdown including subsidies for businesses particularly hard hit by the crisis[27].

According to World Bank Doing Business report 2020[28], Portugal ranked 119th out of 190 countries for the ease of getting credit[29].

To improve the condition of access to finance for the businesses and SMEs, the Portuguese government has taken several initiatives. Some notable measures include[30]:

- **Capitalizer Credit Line 2018-COVID-19,** implemented by IAPMEI (*Instituto de Apoio Às Pequenas e Médias E mpresas e ao Investimento*) - Agency for Competitiveness and innovation in March 2020 to help SMEs with liquidity needs. The line had the conditions of counter-guarantee of 100% and maximum financing of EUR 1.5 million in working capital and plafond treasury appropriation per company.
- **Specific Support line for Medium-sized companies, small mid-caps and mid-caps,** implemented by IAPMEI (*Instituto de Apoio Às Pequenas e Médias E mpresas e ao Investimento*) - Agency for Competitiveness and innovation in September 2020 to help SMEs with liquidity needs. The new line of support will finance treasury needs that have been affected by the COVID-19 pandemic. To apply, companies will have to present a sharp drop of at least 40% of their turnover and not able to have any financing operation, approved or contracted.
- **Tax measures to support micro, small and medium-sized enterprises in the framework of the response to COVID-19** have been introduced by the Assembly of the Republic in July 2020. The measures included temporary suspension of some taxes.

3

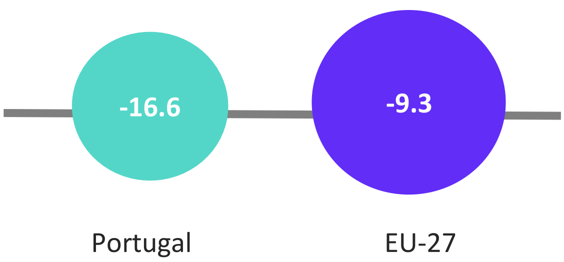
Key economic drivers of the construction sector

Business confidence

Over the 2010-2018 period, business confidence indicators have improved in Portugal. However, in the period 2019-2020, business confidence indicators have deteriorated. In fact, in 2020, the **consumer confidence indicator** declined to -23.9, remaining slightly above the -25.8 in 2010. This is considerably better than its bottom low in 2012 (-41.4), and worse than the EU-27 average of -14.6. The **industry confidence indicator** also reported a decrease, from -9.4 in 2010 to -17.0 in 2020, remaining below the -14.4 EU-27 average and the 2019 level (-3.6). The **construction confidence indicator,** historically weak (-66.8 in 2012), reached -16.6 in 2020. It is however below the EU-27 average of -9.3 and the previous year (5.4). These indicators, hence, seem to confirm that the confidence in the sector has largely weakened from 2019 to 2020.

in July 2021, the construction confidence indicator deteriorated to -9.4 from - 3.9 in June[31]. Similarly, in July 2021, consumer confidence indicator decreased to -17.0 from - 12.6 in June 2021 as COVID-19 cases jumped in Portugal followed by a partial return of restrictions, putting an end to two months of recovery since May 2021[32].

Construction confidence indicator in 2020



The **investment ratio** has increased since 2013, from 14.7% to 18.9% in 2020. However, this is below the EU-27 average of 21.8% and the 2010 level of 19.8%. Likewise, **investment per worker** has been increasing, reaching EUR 24,522 in 2018[33] (+21.9% since 2010). In the real estate activities sub-sector, investment per worker increased from EUR 31,600 in 2010 to EUR 41,600 in 2018[34] (+31.6%). Similarly, investment per worker in the architectural and engineering activities sub-sector increased from EUR 2,400 in 2010 to EUR 3,400 in 2018[35] (+41.7%). In contrast, investment per worker in the narrow construction sub-sector decreased, from EUR 3,700 in 2010 to EUR 3,400 in 2018[36] (-8.1%).

Domestic sales

Except for "Prefabricated structural components" which was replaced by "Natural cork, debacked or roughly squared", the ranking of the **most domestically sold construction products** in Portugal remained the same during the 2010-2020 period. The top five most domestically sold construction products are presented in Table 1, including a comparison with the top sellers in the EU-27. These represented 44.7% of total domestic construction product sales in 2020.

Table 1: five most domestically sold construction products in Portugal and in the EU in 2020

	Portugal			EU-27
	Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
1	Doors, windows, etc. (group 251210)	603.4	13.6	Other structures (group 251123)

	Portugal			EU-27
	Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
2	Prefabricated buildings of metal (group 251110)	368.3	8.3	Ready-mixed concrete (group 236310)
3	Portland cement, aluminous cement, etc. (group 235112)	341.8	7.7	Doors, windows, etc. (group 251210)
4	Natural cork, etc. (group 162921)	336.9	7.6	Prefabricated buildings of metal (group 251110)
5	Ready-mixed concrete (group 236310)	329.5	7.4	Prefabricated structural components etc. (group 236112)

Source: PRODCOM, 2021.

Export of construction-related products and services

The exports value of construction-related products and services has strongly increased. The top five most exported construction products in Portugal and in the EU-27 are summarised in Table 2. Together, these made up 58.0% of all construction products exports in 2020 in Portugal. The structure of exports of construction products has remained relatively stable during the 2010-2020 period, with one exception including "Marble, travertine, alabaster" which was replaced by "Ceramic tiles and flags" in the ranking.

Table 2: five most exported construction products in Portugal and in the EU in 2020

	Portugal			EU-27
	Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
1	Blocks, plates, sheets, etc. (group 162923)	478.8	17.5	Ceramic tiles and flags (group 233110)
2	Articles of natural cork (group 162922)	430.7	15.8	Other structures (group 251123)
3	Doors, windows and their frame (group 251210)	270.6	9.9	Fibreboard of wood (group 162115)
4	Ceramic tiles and flags (group 233110)	219.2	8.0	Doors, windows, etc. (group 251210)
5	Other worked ornamental (group 237012)	185.0	6.8	Builders joinery and carpentry, of wood, n.e.c. (group 162319)

Source: PRODCOM, 2021.

In terms of **cross-border provision of construction services**[37], Portugal **exported** EUR 684.0 million worldwide in 2020 (+32.3% in comparison to 2010), of which EUR 572.0 million (i.e. 83.6%) to the EU-27. The services that Portuguese companies perform abroad include architectural, engineering and other technical services. In parallel, it **imported** a total of EUR 252.0 million in construction services in 2020 (+165.3% in comparison to 2010), with EUR 212.0 million (i.e. 84.1%) from the EU-27. Portugal therefore achieved a **trade surplus** of EUR 432.0 million in 2020.

Access to finance in the construction sector

According to the Survey on the Access to Finance of Enterprises (SAFE) results 2020, bank loans are still the main source of financing for 55.9% of SMEs in Portugal, well above the EU-27 average of 47.6%[38].

As per the report, between April and September 2020, 37.2% Portuguese SMEs applied for a bank loan, while 1.8% did not apply due to fear of rejection. Out of those who applied for a bank loan, 4.7% saw their applications rejected, below the EU-27 average of 6.3%[39].

In December 2020, bank credit granted to the construction and real estate sector in Portugal recorded a YoY change of 5.0% in line with resilience of construction investment during the COVID-19 pandemic[40].

According to the European Investment Bank (EIB) Investment Survey 2020, although the level of dissatisfaction on access to finance remain generally low, Portuguese construction firms are quite dissatisfied with the cost of external finance and the collateral requirements (4.0% and 18.0% respectively). Also, 7.0% construction firms reported to be financially constrained, versus 4% on EU average[41].

As per the survey, 58.0% firms in the construction sector consider "availability of finance" as a long-term impediment[42].

The Portuguese government has taken several measures to improve access to finance, which include:

- under the **"Capitalise"** programme, an additional EUR 3.7 billion was provided to support micro, small and medium-sized enterprises (MSMEs), midcaps, SME exports, and the development of innovative products or services or process innovation by SMEs.
- the adoption of **"financing line for financial intermediaries"** (*Linha de Financiamento a Intermediários Financeiros*), the Development Finance Institution (*Instituição Financeira de Desenvolvimento*) which provides support for the financing of SMEs and midcaps.
- provision of EUR 50.0 million credit line was made available under the "Capitalise" programme for businesses that are exposed to the UK market.
- **"Business Development Support Line ADN 2018**" provides EUR 10.0 million to support microenterprises access financing at the early stages of their life cycle[43].

In March 2020, the Portuguese Government launched a set of credit lines worth EUR 3.0 billion to support the companies or sectors most affected by the COVID-19 pandemic. The line covers several sectors including transport, real estate and construction[44].

Furthermore, in April 2020, the European Commission approved a scheme (under the Temporary Framework) worth EUR 13.0 billion to support Portuguese companies affected by the COVID-19 outbreak. It enables Portugal to provide direct grants and public guarantees on loans to help SMEs and large companies cover investment and working capital needs[45].

In July 2020, the European Investment Bank (EIB) Group and Banco Santander Consumer Portugal (BSCP) collaborated to support Portuguese small and medium-sized enterprises (SMEs) and mid-caps affected by the COVID-19 crisis[46].

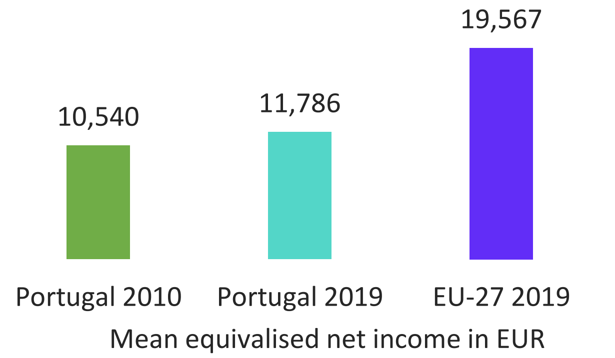
The EIB and BSCP have signed two agreements to provide EUR 587.0 million to inject liquidity and finance investments at a critical time[47].

In August 2020, the European Commission approved under State aid rules, the plans notified by Portugal to set up a new national development bank, *Banco Português de Fomento* (BPF), to promote the growth of the Portuguese economy. BPF's activities, which will benefit from the RRP loans, will target market failures in lending and capital markets, focusing specifically on improving access to finance for projects in research and innovation, sustainable infrastructure, social investment and skills as well as projects increasing the competitiveness of Portuguese companies and encouraging investments by the public sector[48].

Access to housing

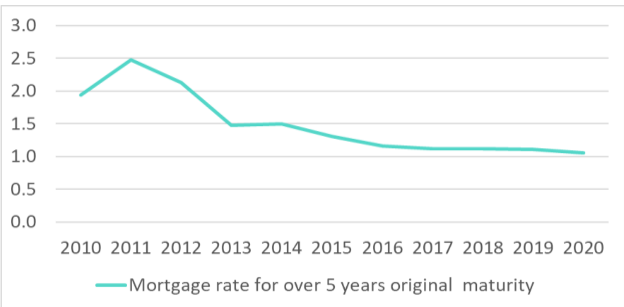
The **number of households** in Portugal reached 4.1 million in 2020, a 3.2% increase since 2010 (3.9 million households). At the same time, the share of the total **population living in cities and greater cities** has remained stable, increasing slightly from 65.0% in 2010 to 66.2% in 2020.

In parallel, the **mean equivalised net income** reached EUR 11,786 in 2019[49], above the 2010 level (EUR 10,540) and below the EU-27 average of EUR 19,567. It represents a 11.8% rise over the period. This reflects rising wages (partly driven by the increase of the minimum wage from EUR 600.0 to EUR 635.0 in 2020) which translates into higher purchasing power[50].



In addition, **interest rates** on mortgages (over a five-year maturity) declined from 1.9% in 2010 to 1.1% in 2017. Since then they remained constant over the 2018-2020 period 1.1% (Figure 7), thus supporting housing demand.

Figure 7: Mortgage rates for loans for over 5 years original maturity (%) between 2010 and 2020



Source: ECB MFI Interest Rate Statistics, 2021.

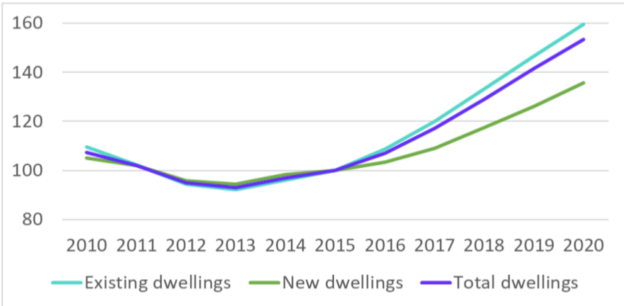
Housing prices in Portugal experienced a slow growth in 2020. According to Statistics Portugal (INE), in the third quarter of 2020, while the total number of housing transactions in Portugal reduced to 122,066 units, the value of transactions increased by 7.7% YoY to EUR 18.65 billion as compared to the third quarter of 2019[51].

According to Global Property Guide research, the house price to GDP per capita ratio in Portugal is still one of the lowest in Europe. In terms of square metre prices, it has some of the lowest prices for city-centre property in Europe[52].

The **house price index** for existing dwelling and new dwelling increased in 2020 to a level sharply above the 2015 value (+59.4% and +35.6% respectively) (Figure 8).

House price index for existing dwelling between 2015 and 2020 **59.4%**

Figure 8: House price index in Portugal between 2010 and 2020 (2015=100)



Source: Eurostat, 2021.

The continuous rise in the housing price since 2013 has led to housing affordability problems in some regions[53]. Outstanding residential loans to households declined by 18% between 2010 and 2019. Because of the low interest rates, total outstanding housing loans slightly increased by 1.6% in November 2020 from the previous year, to EUR 95.9 billion[54].

Outstanding residential loans to households between 2010 and 2019 **18.0%**

Residential construction recovered considerably following the end of the bailout package in 2014, with the number of new residential construction projects started recovering, with 14,143 completed in 2017 and 20,259 completed in 2018. It further increased to 24,031 in 2019, representing an increase of 18.6% in comparison to 2018. Similarly, the number of completed dwellings rose by 8.8% YoY to 7,565 units in 2016, by 13.1% to 8,553 units in 2017, by 38.2% to 11,820 units in 2018 and by 24.0% to 14,190 units in 2019[55].

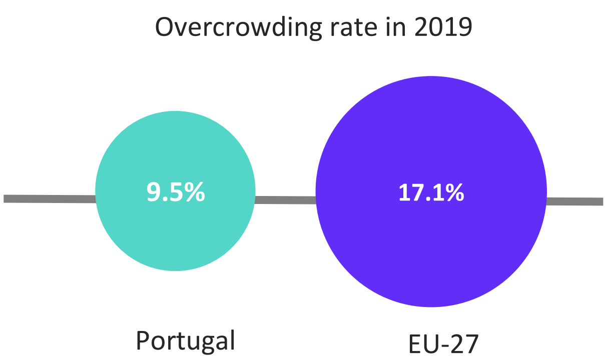
According to the *Instituto Nacional de Estatistica* (INE), the number of licensed dwelling permits in Portugal declined slightly by 1.3% to 24,031 units in November 2020, from the previous year, in contrast to an annual average growth of 28.0% from 2015-2019[56].

At the same time, the number of **building permits index** for dwellings grew by 191.1% between 2015 and 2020. Similarly, for single-dwelling buildings and two-and-more-dwelling buildings, the building permits index rose by 104.3% and 361.8% respectively.

Building permits index for dwellings between 2015 and 2020 ↑ **191.1%**

Furthermore, in terms of the **home ownership rate**, 76.8% of the population earning above 60% of median equivalised income owned their dwelling in 2019 as compared to 77.0% in 2010. This is above the EU-27 average of 73.6%. In contrast, the population earning below 60% of median equivalised income shows a decline in ownership. It declined from 65.4% in 2010 to 59.8% in 2019, above the EU-27 average of 50.3%.

Moreover, the **housing cost overburden rate**[57] was at 5.7% in 2019[58], below the EU-27 average of 9.4%[59]. Likewise, the **overcrowding rate**[60] was at 9.5% in 2019, well below the EU-27 average of 17.1%[61], while the **severe housing deprivation rate**[62] reached 4.1% in 2019, in line with the EU-27 average of 4.0%[63].



Infrastructure

According to the 2019 Global Competitiveness Report, Portugal ranks 21st out of 141 economies in its overall infrastructure quality[64].

According to the report, Portugal scores particularly well in the quality of its road infrastructure (8th). In road connectivity and airport connectivity, it is ranked 14th and 30th, respectively. Furthermore, it ranks 31st in railroad density and 32nd in the efficiency of train services[65].

Portugal has made limited progress regarding the Connecting Europe Facility (CEF) projects under the 2020 *Ferrovia* programme. There has also been limited progress in terms of port infrastructure, including key projects in Sines (*Terminal Vasco da Gama*) and Barreiro which are still at the early or preparatory stages of the public tendering process[66].

In October 2020, the Prime Minister of Portugal announced to invest EUR 43.0 billion on public infrastructure. This would also include a high-speed rail link between Lisbon and Porto, to be carried out by 2030[67].

The prime focus of investment will be transport and energy, with around EUR 21.7 billion earmarked for transport projects and EUR 13.0 billion directed towards clean energy projects largely centred around hydrogen production. The plan has already been approved by the parliament and will be financed from the national budget (EUR 12.0 billion), the European structural funds (EUR 12.0 billion), recovery funds (EUR 3.3 billion) and from private investment (EUR 12.0 billion)[68].

The Portuguese RRP includes investments in the country's infrastructure, through its 'Infrastructure' component. This component of the Portuguese plan addresses the challenge of low territorial cohesion and the low competitiveness of firms in the inland regions caused by inadequate links to the road network.

The infrastructure component of the Portuguese RRP includes 6 investments, with a total estimated cost of EUR 690 million[69].

4

Key issues and barriers in the construction sector

Company failure

Between 2010 and 2018[70], the narrow construction sub-sector experienced a 31.5% increase in **company births** (11,345) and a decline of 50.8% in **company deaths** (7,818). Likewise, the architectural and engineering sub-sector experienced an increase in company's birth (+7.1%, up to 3,946 in 2018) and a reduction of company's death, by 40.0% (down to 3,636). Conversely, the real estate activities sub-sector experienced a significant increase in terms of company's birth (+202.8%, up to 7,709 in 2018) and death (up +12.0%, up to 3,386) in the same period.

Company death in the narrow construction sub-sector between 2010 and 2018 ↓ **50.8%**

Company birth in the real estate activities sub-sector between 2010 and 2018 ↑ **202.8%**

The number of bankruptcies in Portugal increased by 64.5% in August 2020 reaching 199 companies, (78 more than August 2019). However, the construction and public works sector was the only area of the Portuguese economy that saw a reduction at 4.4% in the number of insolvencies in 2020 as compared to 2019[71].

In July 2020, the Council of Ministers approved a draft law to establish an extraordinary procedure for companies' viability (*Processo Extraordinario de Viabilizacao de Empresas*- PEVE).

PEVE is intended for companies proven to be in a difficult economic situation of imminent or current insolvency, but still deemed viable, following the consequences of the economic slowdown caused by the COVID-19 pandemic. It will be in force until 31 December 2021; however, the Government may extend PEVE's duration[72].

As per Eurostat, in the first quarter of 2021, the number of registrations of new businesses declined by 14.9%, the largest among the EU countries, as compared to the fourth quarter of 2020. At the same time, the number of bankruptcies fell by 8.9% in the first quarter of 2021, as compared with the last three months of 2020[73].

Trade credit

According to the SAFE survey results 2020, trade credit constitutes a relevant source of financing for 48.8% of SMEs in 2020, above the EU-27 average of 27.7%[74].

As per the report, 17.1% of Portuguese SMEs used trade credit in the last six months (between April and September 2020), as compared to EU-27 average of 13.6%.

Furthermore, there is no indication of increased needs to use trade credit with over 66.7% of respondents SMEs reporting their credit requirement remaining unchanged during the same period. This is slightly higher than the EU-27 average of 65.8%. In terms of availability, 11.5% of respondents consider that trade credit availability improved in 2020 (compared to EU-27 average of 13.4%)[75].

Late payment

According to a recent report by *Crédito y Caucion*, the Portuguese construction sector, is facing delays in payments from public purchasers[76].

In the fourth quarter of 2020, the percentage of construction companies that paid by due date was 18.1% vs 16.4% in average, whereas 7.2% of construction companies vs 8.6% in average paid over a 90-day period, according to the CRIBIS D&B Payment Study[77].

In December 2020, 16.4% of firms in Portugal made their payment by the due date, while 8.6% firms took more than 90 days, according to CRIBIS D&B Payment Study[78].

Micro companies are the most punctual payers (18.5%), while large companies (80.4%) tend to pay with a delay exceeding 30 days (only 5.6% of them pay in due time). Around 8.9% micro companies exceed an average of 90 days beyond agreed payment terms, followed by small companies (6.3%). This may reflect the imbalanced power relationship between large and small companies, which have less leverage than their counterpart[79].

The Late Payment Directive was transposed by the Decree-Law no. 62/2013, which establishes that businesses should be paid within a maximum of 60 calendar days. On an average, payment terms in Portugal are 66 days. However, longer payment terms are possible, provided they are expressly agreed in the contract, and not unfair to the creditor. It is common for companies in Portugal to contractually agree on payment terms longer than 66 days[80].

As per the European Payment Report 2020[81], 83.0% of respondents in Portugal consider "Risk of a pan-European recession" as a main payment challenge of their customers paying on time and in full over the next 12 months.

According to the report, 48.0% respondents agreed that late payments have an adverse impact on their liquidity, as compared to EU average of 45.0%. Moreover, 55.0% of SME respondents from Portugal prefer introduction of new legislation to solve the problem of late payments. This is above the EU average of 50.0%[82].

Time and cost of obtaining building permits and licenses

According to the World Bank's Doing Business 2020 report, Portugal ranked 60th in "**dealing with construction permits**"[83]. The number of necessary procedures for obtaining a construction permit for a warehouse[84] amounts to 14, more than the OECD high-income average of 12.7 procedures (Table 3). Likewise, the time required to complete the procedures to build a warehouse (160 days), is above the 152.3-day OECD high-income average. On the other hand, it costs 1.2% of the value of the warehouse to complete all the formalities, compared to the 1.5% OECD high-income average.

Table 3: Construction procedures timing and costs in Portugal

Procedure	Time to complete	Associated costs
Obtain approval of project designs from Municipality and other relevant entities	75 days	EUR 379
Obtain building permit and pay fee[85]	30 days	EUR 2,235
Inform the Municipality about the beginning of construction	1 day	no charge
Inform the Labour Conditions Agency about the new construction site	1 day	no charge
Receive inspection from the Labour Conditions Agency	1 day	no charge
Receive inspection from Municipality	1 day	no charge
Receive inspection from Institute of Public Markets, Real Estate and Construction	1 day	no charge
Submit application for a water and sewage connection at the Water and Sanitation Authority	1 day	no charge
Receive inspection by Water and Sanitation Authority	1 day	EUR 451

Procedure	Time to complete	Associated costs
Obtain water and sewerage connection	31 days	EUR 7,571
Submit application for occupancy permit	1 day	no charge
Obtain occupancy permit	10 days	EUR 388
Register the building with the Tax Authority	1 day	no charge
Register the building with the Real Estate Registry	5 days	EUR 60

Source: Doing Business overview for Portugal, Word Bank, 2020.

Skills shortage

The number of job vacancies in the narrow construction sub-sector grew by 117.6%, between 2014 and 2020 (from 738 to 1,605 in 2020). [86]

In contrast, **job vacancy** in the real estate activities sub-sector decreased from 227,219 in 2014 to 215,512 in 2020, representing a decrease of 5.2% during the period.

In parallel, **adult participation in education and training** in the narrow construction sub-sector has generally been fluctuating over the past, growing from 2.8% in 2010 to 4.5% in 2019. However, it slightly reduced to 3.8% in 2020. At the same time, it stood at 16.1% for the real estate activities sub-sector in 2018[87].

Nevertheless, the number of **tertiary students** in engineering, manufacturing and construction increased by 10.5% from 14,412 in 2010 to 15,926 in 2019[88]. However, 2,649 tertiary students were enrolled in architecture and building in 2019[89] as compared to 5,170 in 2010, which represents a decline of 48.8% in the number of tertiary students, over the above reference period.

Number of tertiary students in architecture and building between 2010 and 2019 ↓ **48.8%**

Companies in Portugal are struggling with a shortage of craftsmen (in particular bricklayers, electricians) in the construction sector. In order to compensate for the shortage of labour, companies are importing workers. However, this process is impeded by several barriers such as low salaries, a complex tax system, and increasing housing prices[90]. In addition, the *Federação Portuguesa da Indústria da Construção e Obras Públicas* (FEPICOP - Portuguese Construction and Public Works Industry Federation) underscores the need to develop an integration programme aiming at helping migrants learn the local language, construction regulations, etc. with a view to keep them in the formal economy.

According to a talent shortage survey report, 60.0% of Portuguese employers faced difficulties in recruiting the right talent in 3rd quarter of 2021. This is above the 2016 level (35.0%)[91].

As per the survey, small companies faced the most difficulties in filling job vacancies (69.0%), followed by micro companies (67.0%), large companies (58.0%) and medium companies (52.0%)[92].

Given the recent boom in tourism and the ensuing need to upgrade existing infrastructure and build new residential dwellings, additional workers will be required over the upcoming years. The labour shortage is particularly felt in the urban areas of Lisbon and Porto. Migrant workers may help in addressing such a shortage[93].

Between 2011 and 2015, almost 600,000 Portuguese persons emigrated abroad[94]. According to World Bank calculations, currently around 20.0% of Portugal's population resides abroad[95].

To get back its educated young people and skilled workforce, who emigrated during the global financial and economic crisis, the Portuguese government introduced the ***"Regressar"*** programme in July 2019. The programme offers returnees EUR 2,614 in cash, a 50% income tax deduction for five years and up to EUR 3,886 to support with relocation costs, depending on the number of the returnees' dependents coming home with them[96].

Statistics Portugal conducted a Survey on the Identification of Qualifications Needs in Enterprises (IINQE) in collaboration with ANQEP (*Agência Nacional para a Qualificação e o Ensino Profissional*) and DGEEC (*Direção-Geral de Estatísticas da Educação e Ciência*). As per the survey in the years 2021-2022 the enterprises intend to recruit 345, 584 workers, which will correspond to a gross increase of 10.8% of their employed persons. About 49.9% of the workers to be recruited should have a non-higher education course (professional), 32.2% a higher education course and for 17.9% no specific qualification level is indicated. These recruitment intentions correspond to gross increases of 17.8% of workers with higher education courses and 9.1% of workers without higher education qualifications[97].

Sector and sub-sector specific issues

Material efficiency and waste management

Over the 2010-2018[98] period, mineral waste from construction and demolition activities in Portugal grew by 1.5%, reaching 998,424 tonnes (against 983,940 tonnes in 2010). This is well below the EU-27 average of 280.7 million tonnes in 2018[99].

Waste management, including construction and demolition waste (CDW), is governed by the Decree Law 46/2008 of 12 March, as amended by Decree No. 73/2011 of 17 June. Legislation and policy in waste must respect several priorities, namely prevention and reduction, preparation for reuse, recycling and other forms of recovery and disposal. Responsibility for the management of CDW lies with all stakeholders in its life cycle, from the original product to the waste produced and to the extent of their involvement[100]. The main challenges to meeting the 70% CDW recycling targets by 2020 is the lack of compliance with the legislation, and a lack of enforcement through inspection or audit procedures. Restrictive rules on the use of CDW, as well as overall limitations of the recycling process, e.g. high costs and lack of comprehensive policy on the use of recycled waste also have a negative impact[101]. Moreover, the geographically dispersed and temporary nature of construction work makes it difficult to control and supervise the environmental performance of the companies in the sector[102].

In the context of the Construction and Demolition Waste Prevention and Management Plan, eight LiderA courses were organised from February 2019 to October 2019[103]. These courses included: a plan for soil decontamination; an asbestos management programme; a construction waste prevention and management plan; water efficiency; energy efficiency; almost zero energy in buildings; integration of solar energy and LiderA advisors[104].

The Smart Waste Portugal Association, in collaboration with Engineering, Innovation and Environment, the Faculty of Engineering of the University of Porto (FEUP) and the Portuguese Technology Platform for Construction (PTPC), is developing the Circular Buildings project, financed by the EEA Grants[105].

The project aims to develop decision support tools to promote increased reuse of materials and reduction in waste production in the construction sector. The project started in May 2021 and will run for a period of twelve months[106].

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 have shown a decreasing trend since 2010, due to the slowdown of construction activities. Emissions in the narrow construction sub-sector fell from 1,887,260.6 tonnes in 2010 to 1,381,730.4 tonnes in 2019 (-26.8%), while emissions from the real estate activities sub-sector declined from 25,851.0 tonnes to 18,042.6 tonnes over the same period (-30.2%).

Greenhouse gases emissions in the narrow construction sub-sector between 2010 and 2019 ↓ **26.8%**

5

Innovation in the construction sector

Innovation performance

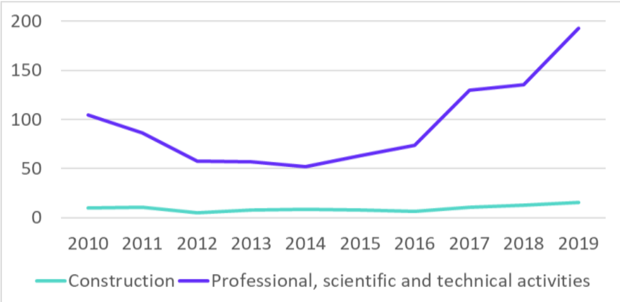
Portugal is classified as a 'Moderate Innovator' according to the European Innovation Scoreboard 2021. Its innovation performance has increased over the 2014-2020 period[107].

As per the report, Portugal's main strengths lie in Attractive research systems, Digitalisation and Use of information technologies. The top three indicators include Foreign doctorate students, International scientific co-publications, and Job-to-job mobility of HRST. On the other hand, its performance has decreased due to reduced performance on the indicators using innovation survey data, hiding strong performance increases on Tertiary education, Government support for business R&D, ICT specialists, Job-to-job mobility of HRST, and Environment-related technologies. Portugal has below average shares of In-house business process innovators and Innovators that do not develop innovations themselves and is showing below average scores on the Climate change related indicators[108].

Portugal's moderate performance in innovation is also reflected in the construction sector, where **business enterprise R&D expenditure (BERD)** is well above the 2010 level (Figure 9). After dropping from EUR 9.7 million in 2010 to a bottom low of EUR 5.2 million in 2012, BERD in the narrow construction sub-sector increased to EUR 15.6 million in 2019[109], marking 25.2% and 60.5% increases over the previous year and 2010 respectively. Likewise, BERD in professional, scientific and technical activities continuously decreased over 2010-2014, dropping from EUR 104.8 million to EUR 51.8 million in 2014. Over the 2014-2019 period, it rose significantly by 272.0%, reaching EUR 192.7 million. This represents a 83.9% increase between 2010 and 2019.

BERD in the narrow construction sub-sector between 2010 and 2019 ↑ **60.5%**

Figure 9: Business enterprise R&D expenditure (BERD) per construction sub-sector in Portugal between 2010 and 2019[110] (EUR m)



Source: Eurostat, 2021.

In parallel, the total **R&D personnel** (full-time equivalents – FTE[111]) in the narrow construction sub-sector stood at 307 FTE in 2019, which is higher than the 2010 level (155 FTE), representing a 98.1% increase in the 2010-2019 period. The professional, scientific and technical activities sub-sector reported 2,962 FTE in 2019. This represents a 121.0% increase in comparison to the 2010 level.

In addition, the number of annual construction-related patent applications stood at eight in 2019, which is well above the 2010 level of two patent applications. However, no Portuguese construction-related firm ranks within the top 1,000 EU companies by R&D, according to the 2020 EU Industrial R&D Investment Scoreboard[112]. According to FEDICOP, the lack of a consistent policy and incentives (through e.g. public procurement) prevents companies to invest in R&D investment.

Eco-innovation and digitalisation

According to the 2019 Eco-Innovation Index, Portugal scored 100, at par with the EU-28[113] average of 100[114].

Portugal performance increased over the past few years (101 in 2017 & 2018, 96 in 2016, 92 in 2015 and 2014, 81 in 2013) and is currently ranked 12th among EU Member-states in the 2019 Eco-Innovation Index[115].

According to the **European Commission Digital Economy and Society Index (DESI) 2020**, Portugal ranks 19th, with a 49.6 score, out of the EU-28[116]countries (average score: 52.5). As compared to the previous year, Portugal's performance has improved in the human capital aspect. This is mainly due to an improvement in the basic level of digital skills and a higher proportion of ICT graduates. Nonetheless, it still performs below the European standards in human capital and use of internet services. In terms of the integration of digital technology, Portugal experienced the biggest fall from 11th in 2018 to 16th position in 2019, i.e. 40.9 score (EU-28[117] average: 41.4)[118].

Furthermore, 24.0% of Portuguese SMEs (excluding microenterprises) have high levels of digital intensity as compared to 60.0% of larger firms. In 2019, the share of companies that sell online reduced to 16.5%, below the EU-28[119] average of 18.0%. Conversely, the share of e-commerce in corporate turnover increased to 15.0%, above the EU-28[120] average of 11.0%[121].

In 2019, Portugal made an effort to improve the digital skills of the population with the implementation of the **National Digital Competences Initiative e.2030, Portugal (INCoDe.2030)**. INCoDe.2030 acts as a National Coalition for Digital Skills and Jobs. The country has also achieved the 95.0% of the first phase of *Indústria 4.0*[122].

In 2019, Portugal commenced the second phase of the *Indústria 4.0* national strategy with a funding of EUR 600.0 million. It consisted of three main objectives including the reskilling, upskilling and training over 200,000 workers, promoting digital transition in over 20,000 firms and scaling up over 350 projects[123].

The Sustainable Construction Platform, a non-profit organisation linking businesses, R&D centres, as well as municipalities, manages the Sustainable Habitat Cluster. This is a broad cluster dedicated to promoting eco-innovation in the built environment[124].

For the period 2014-2020, the Cluster is participating in various EU-funded projects. The **"SUDOKET - Mapping, consolidation and dissemination of Key Enabling Technologies for the construction sector in the SUDOE space"** project runs from April 2018 until September 2021 with an eligible investment of EUR 2.1 million[125]. The objective of SUDOKET project is to promote growth and technological leadership in the field of "Innovative Buildings". It also aims at enhancing research, innovation and development capabilities based on Key Enabling Technologies (KETs), in technology centres and innovation and industry[126].

The "CircularBuild – Development and validation of the concept of circularity applied to modular prefabricated construction" project runs from September 2020 until August 2022 with an eligible investment of EUR 5.7 billion[127].

The objective of CircularBuild project is to investigate alternative materials for panels – replacing those currently used – that enable the complete circularity of the modular panels production system, allowing a total reuse of waste generated by the "deconstruction" of houses as raw material for new panels/ new houses, without compromising the building's performance in terms of energy efficiency, consequently contributing, directly and widely, to the new paradigm of "Zero Carbon Buildings"[128].

According to **EIB Group survey on investment and investment finance 2020 for Portugal,** 68.0% firms have implemented, either fully or partially, at least one of the digital technologies in 2020, below the EU-27 average (63.0%). As per the report, around 30.0% of the construction firms adopted Internet of Things (IoT) in 2020. Similarly, Drones and 3-D printing were adopted by 21.0% and 11.0% respectively by the Portuguese construction firms in 2020. Contrarily, only 9.0% of construction firms adopted Augmented or virtual reality[129].

The **Portuguese Technological construction platform** (PTPC) is an initiative launched in 2004, operating to strengthen the competitiveness and sustainability of the construction sector. The PTPC is composed of 50 members, including SMEs and large businesses, public bodies, industry associations as well as science and technology entities. It promotes initiatives in research and innovation in the construction sector[130].

The European Economic Area (EEA) Grants introduced **Call#2- Projects for promoting the circular economy in the construction sector.** The main objective of this Call is the development and implementation of construction projects which provide economic and environmental benefits, projects promoting the performance and environmental profile of materials, components and products developed in Portugal, including buildings, through the application and promotion of methodologies and innovative technologies. It also provides support to the projects promoting cooperation between companies to reduce construction and demolition waste and promote materials and products incorporating materials recovered from waste. The amount of funding available is EUR 3.5 million with maximum grant for each project amounting to EUR 0.5 million. The duration of the projects is between 12 and 24 months with the final date of eligibility being April 2024[131].

In terms of the implementation of BIM, Portugal has not yet reached the maturity level of other developed countries. The existing public procurement law favours a procurement process based on the fragmentation of the different steps, rather than a cooperative approach needed for the use of digitalisation tools. It does not provide incentives for the implementation of alternative solutions, thus preventing enterprises from investing in innovation.

Stakeholders (AECOPS - *Associação de Empresas de Construção e Obras Públicas e Serviços*), report that there could be more progress on the country's agenda on digitalisation in construction, such as the adoption of BIM[132].

Despite the current lack of official central government support regarding BIM, the **Technical Committee for BIM Standardisation (CT197-BIM)** was created. The committee is involved in developing standardisation procedures regarding information classification systems, information modelling, guidelines, and processes throughout the life cycle of construction projects[133].

EEA grants EUR 25.8 million to SECClasS (Sustainability Enhanced Construction Classification System) - a research project which aims to promote Circular Economy in the Construction industry by introducing an Information Classification System optimized for Sustainability[134].

The system will be oriented towards the BIM methodology and will serve not only the sustainability component but also the other BIM uses, such as the management of the BIM process, quantification, compatibility of specialties (clash detection) or work planning in all stages of the life-cycle. The main goal is to improve buildings' performance and to reduce waste through the use of digital tools that provide informed management and selection of construction materials and elements[135].

In December 2020, PTPC organised the remote workshop on **Metabuilding- "Innovation support to SMEs in the construction sector"**. It is a project funded by the European Commission's Horizon 2020 program that aims to finance and support SME innovation initiatives and projects and boost the construction sector at the European level. It aims to bring innovation to the "traditional" value chain of the construction sector, through collaboration with other innovative sectors. The first seed call was responded by 159 SMEs out of which 30 proposals have received funding of EUR 0.1 million. The 2nd call of the project opened on 15th June 2021 and will end on 15th September 2021[136].

The 4th Portuguese congress on "Building Information Modelling" (PTBIM 2022) is scheduled to be held from 4th to 6th May 2022[137].

The aim of the PTBIM Congress is to promote a forum for technical and scientific discussion in Portugal, including the active participation of the professional and academic communities in the areas of architecture and engineering. It will also focus on the problems and efforts for the implementation of BIM in the Portuguese construction sector[138].

The Recovery and Resilience Plan of Portugal assigns 22% of total allocation for investments supporting the digital objective. It includes EUR 650.0 million for the Component digital transition of businesses, supporting small and medium enterprises and their workers with tailored digital skill trainings and tailored coaching to help them make the best use of digital technologies[139].

6

National and regional regulatory framework

Policy schemes

Up until the early 2000s, housing policy in Portugal was predominantly based on granting subsidies and competitive interest rates on mortgages to support home ownership. Therefore, in order to develop the national rental market as required under the Economic Adjustment Programme of 2011-2014, the government introduced several reforms to the tenancy law, traditionally characterised by rent freezing.

In 2015, a comprehensive National Housing Strategy (*Estratégia Nacional para a Habitação* - ENH) for the period 2015-2031 was approved. The strategy encompasses a set of measures under three main pillars, aiming at creating a harmonised and operational framework that brings together and implements the various legal regimes already in place. Namely, the three priority areas identified are urban rehabilitation, rental housing and better-quality housing[140].

For instance, the **New Urban Lease Regime** (*Novo Regime do Arrendamento Urbano* – NRAU) aimed at giving more flexibility to landlords, by easing the lease regime, accelerating termination of lease and reducing eviction time to three months, among others[141]. However, amendments to the NRAU came into force in June 2017 to increase the protection of the tenant by extending the period during which landlords need to wait before being able to increase the rents. This period has been brought up to eight years, compared to the initial five years, for lower-income tenants (i.e. with annual incomes below EUR 38,990)[142] and to ten years (compared to the initial five) for tenants over 65 or who are over 60% disabled[143].

In February 2019, the Portuguese government introduced two new laws. First, Law no. 12/2019 brought a fifth amendment to the NRAU. It is aimed at prohibiting and punishing the harassment in letting. Second, Law no. 13/2019 is intended to provide measures to correct the disparity between tenants and landlords, thus safeguarding interest of tenants and reinstating greater stability in urban letting. The main objective of these amendments is to enhance the protection of the legal position of tenants in the landlord-tenant relationship[144].

> **Law no. 13/2019 has considerably made modifications in the legal rules on urban letting. It targets and changes the Civil Code, the New Urban Letting Rules and the Legal Rules on the Execution of Works in Rented Properties (among others)[145].**

The key highlights among the amendments made to the **New Urban Letting Rules** include:

- creation of the **Lease Injunction (*Injunção em Matéria de Arrendamento*- IMA),** a procedure that permits tenants the right to require the landlord to repay any amount spent by the tenant to carry out any work on the rented property;
- expanding the situations of transfer upon death of the lease agreement;
- limiting the landlord's ability to oppose the renewal or to terminate limited term residential lease agreements[146].

The Portuguese government has introduced various programmes to finance the construction of social rental dwellings for vulnerable households. For instance, the **Resettlement Programme** (*Programa Especial de Realojamento* - PER), launched in 1993, aims at providing municipalities with resources to support the construction, acquisition or rental of social dwellings for the resettlement of affected occupiers[147].

The Porta 65 – Jovem Programme is a financial support system for young people for paying their rent. Any person between 18 and 35 years old can apply. In the case of a young couple, one member can be 36 years old, the other can be 34 years old at most[148].

The programme **Social Rental Market** (*Mercado Social de Arrendamento*), established in 2012, targets households with incomes that are too high to make them eligible for social housing, but too low to rent a dwelling at market price. The scheme allows the rental of repossessed properties at a 20-30% lower price than the regular market[149].

In May 2018, the Portuguese government launched Financial Instrument for Urban Rehabilitation and Revitalization (IFRRU) 2020. It is an incentive programme, integrated into PORTUGAL 2020, to support the complete renovation of buildings and implement energy efficiency measures[150]. This programme is co-financed by the EIB, the Council of the European Development Bank (CEB) and the EU. It has a financing capacity of EUR 1.4 billion. By September 2019, 151 funding contracts were signed in total for the financing of EUR 479.0 million[151].

In addition, the Ministry of Environment also created the *Fundo Nacional de Reabilitação do Edificado* (the National Fund for Building Rehabilitation), to develop and implement real estate rehabilitation projects for the promotion of renting, especially housing[152].

Another programme addressing the priority of urban renewal is the **Rehabilitate for Rent** (*Reabilitar para Arrendar*), with an initial budget of EUR 50.0 million from a loan from the EIB to the *Instituto da Habitação e Reabilitação Urbana* (IHRU). The interventions foreseen under the programme include the rehabilitation or reconstruction of social dwellings, municipal spaces for public use and public buildings (including student accommodation). Financing of the interventions takes the form of 30-year loans with an interest rate around 3%, which will fund 50% of the total cost[153]. Since its introduction in 2015 to August 2018, only ten projects were submitted for the evaluation by the EIB, which required the Portuguese state to extend its guarantee for the EUR 25.0 million loan[154].

In August 2020, the Portuguese Government announced its plans to create a pool with currently vacant (or available) properties across the country, that will be turned into affordable rental housing. The investment is expected to reach EUR 2,300 million[155].

In this regard, 18,660 properties have already been identified, of which at least 20% should be transferred to municipalities or handed over to public-community partnerships. This property pool estimates direct investment by the State of around EUR 1,700 million, to which another EUR 600 million will be added from municipalities or other entities. The properties will be selected by the Housing and Urban Rehabilitation Institute (IHRU), and the list includes palaces, old convents, villas, land, farms, apartments and apartment blocks[156].

In 2018, the government introduced a national plan entitled ***"Plano Nacional para o Alojamento no Ensino Superior* (PNAES, or National Plan for Higher Education Housing)"** to create **affordable housing** for students. The plan spans across 42 municipalities with an objective to create 11,500 beds for university students throughout the next four years and a total of 30,000 in 10 years. In April 2019, the government introduced its plan to renovate 263 buildings and turn them into affordable student housing[157].

In 2018, the government approved a set of seven key measures for the New Generation of Housing Policies (NGPH), which mainly targets the issue of access to housing. The measures consist of:

- **First Right - Programme for access to housing** (*"Primeiro Direito - Programa de Apoio ao Acesso à Habitação"*) aiming at creating conditions for access to adequate housing for people living in undignified housing situations who do not have the financial capacity to find a solution on the market.
- **Affordable lease programme** (*"Programa de Arrendamento Acessível" or PAA*), to respond to the needs of a large part of the population with intermediate incomes, who find it difficult to obtain adequate housing in the market without incurring costs, but

whose incomes are higher than those that would allow access to public housing support

- **Key in hand - Housing Mobility Programme for Territorial Cohesion** (*"Chave na Mão - Programa de Mobilidade Habitacional para a Coesão Territorial"*) to facilitate the housing mobility of families who live in large cities and who want to settle in territories of low density.
- **Habitat Housing Programme** (*"Programa Da Habitação ao Habitat"*) to promote the socio-territorial integration of public rental neighbourhoods and the overall improvement of the living conditions of its residents.
- **differentiated stand-alone rates for long-term leases** (*"Taxas autónomas diferenciadas para arrendamentos de longa duração"*) to promote greater contractual tenure stability, by granting owners a reduction of 14% to 28% when applied to contracts over 10 years and a reduction of 10% for contracts over 20 years.
- **legislative changes on urban leasing** (*"Alterações legislativas em matéria de arrendamento urbano"*) to remedy situations of imbalance between tenants and landlords' rights, to protect tenants in a particularly fragile situation, and to promote security and tenancy stability.
- **extraordinary regime for the temporary supply of electricity to substandard housing** (*"Regime extraordinário relativo ao abastecimento provisório de energia elétrica às habitações precárias"*) which is a scheme that will cover families in a vulnerable economic and social situation, and through which "the conditions will be created for the connection to the public electricity distribution network"[158].

In July 2019, the Portuguese Parliament passed a law "Right to Housing". The new law sets out a legal basis for housing being treated as a citizen's right. It became effective on October 1, 2019. Under the new law, the Portuguese government becomes responsible for ensuring adequate housing for all citizens as "the guarantor of the right to housing". The law focuses on the "social function of housing" rather than social housing as such[159].

In April 2020, the Portuguese government approved the Law No. 4-C / 2020, establishing an exceptional regime in the context of COVID 19 pandemic for circumstances of delayed rent payment under the urban housing and non-housing leases[160].

The regime states different rules for residential and non-residential leases. In cases of residential leases, the expected financial support is provided when there is a drop in the income of tenants and landlords. While, in the case of non-residential leases, the legislation is applicable in postponing of rent payments[161].

The "Porto com Sentido" program aims to promote affordable housing in Porto through the inclusion in the rental market of properties available in the sales and rental market and local lodging properties (AL)[162].

The second public consultation of the Porto com Sentido program, aimed at property owners, was launched to contract leases. The objective is to rent up to 500 properties of type T0 to T4, with gross area over 52 m^2, throughout the city. This second public consultation runs between March 1 and November 30, 2021[163].

The Portuguese RRP includes an 'Housing' component, aimed at addressing the challenges related to the structural shortage of permanent and temporary housing solutions for the more vulnerable groups and contributes indirectly to reinforcing the social protection system. The component includes 1 reform and 6 investments for a total estimated cost of EUR 2.7 billion[164].

Through such investments, among other objectives, the Portuguese plan aims at increasing the social and affordable housing supply, including addressing other related needs, such as the lack of basic infrastructure and equipment, unhealthy and insecure places of residence, precariousness or lack of contractual ties, overcrowding or inadequacy of housing for the special needs of residents with disabilities or reduced mobility.

Building regulations

In Portugal, public work contracts are regulated by Decree-Law No. 18/2008, which enforces the **Public Contracts Code** (*Código dos Contratos Públicos* - CCP), with subsequent amendments, and **Decree-Law No. 214-G/2015**, which amends Decree-Law No. 555/1999 on the Legal Regime on Urbanisation and Building (*Regime Jurídico da Urbanização e Edificação* - RJUE), and Decree-Law No. 111-B/2017[165,166]. As for private construction works, these are governed by the Civil Code, enacted by Decree-Law No. 47344[167]. Moreover, health and safety regulations in the construction of buildings are defined in Decree-Law No. 273/2003, which takes into account the minimum health and safety requirements of Directive 92/57/EEC[168,169].

Insurance and liability related regulations

In Portugal, under the Law 31/2009, contractors and sub-contractors need to be insured for labour accidents, equipment and vehicles (i.e. covering all machinery involved in the construction works, both on-site and in nearby public spaces)[170].

Furthermore, professionals involved in design, supervision and project management in both public and private construction projects are required to take insurance covering non-contractual liability, i.e. damages to third parties outside the scope of the construction contract resulting from negligence or omissions when performing their professional duties[171].

Liability for construction defects is framed by article 1225 of the **Civil Code**, the **Consumer law 24/96**, as amended, and **Decree 67/2003** (with subsequent amendments)[172]. The general limitation period is 20 years. Both the code and decree set out a legal guarantee for construction, refurbishment or alteration works in buildings that carry on for five years starting from the handover. The implication is that claims for defects should be done within five years following the date of completion. The guarantee concerns developers and is applicable in the case of collapse (e.g. due to issues related to soil, construction, faults and repairs) and defects in the building[173]. Conversely, the guarantee for materials and equipment is two years. As for architects and engineers, their liability lasts five years following the completion of works, but they are only liable in case of a breach of technical and safety rules[174].

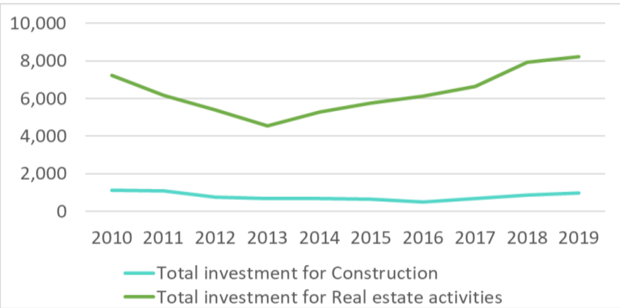
7

Current status and national strategies to meet Construction 2020 objectives

TO 1 – Investment conditions and volumes

Total investment by the broad construction sector[175] fluctuated over the past years, particularly since 2010 (figure 10). Namely, investment by the narrow construction sub-sector dropped from EUR 1.1 billion in 2010 to a bottom low of EUR 508.5 million in 2016 (-54.6%). It then increased to EUR 965.0 million in 2019[176], representing an increase of 12.5% over the previous year and a 13.8% decline over 2010. Investment by the real estate activities sub-sector also experienced a similar trend, decreasing from EUR 7.2 billion in 2010 to EUR 5.7 billion in 2015 (-20.5%), although it has been picking up slightly since 2014. In 2019[177], it reached EUR 8.2 billion, marking a decrease of 13.7% over 2010.

Figure 10: Investment by the Portuguese broad construction sector between 2010 and 2019[178] (EUR million)



Source: Eurostat, 2021.

Investment by the narrow construction sub-sector 2015-2020 **13.8%**

Investment in intellectual property products by the narrow construction sub-sector increased by 38.2%, from EUR 38.7 million in 2010 to EUR 53.5 million in 2019[179]. The increase reached 138.4% in the real estate activities sub-sector with EUR 26.7 million in 2019[180] as compared to EUR 11.2 million in 2010.

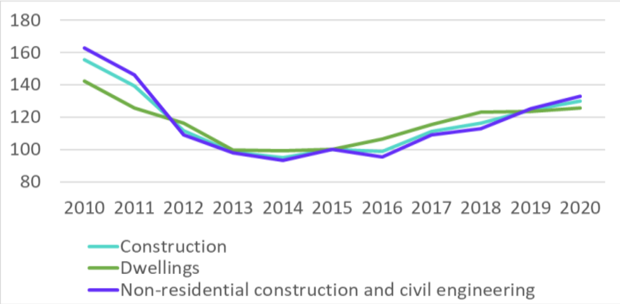
Investment in intellectual property products by the narrow construction sub-sector between 2010 and 2019 **38.2%**

The investment index in the broad construction sector[181] has experienced a moderate growth since 2015, rising by 30.1% over 2015-2020 (Figure 11).

This was mainly driven by investment in dwellings by the whole economy and non-residential construction and civil engineering which increased by 25.8% and 32.7% respectively, between 2015 and 2020. In absolute terms, **investment in the broad construction** sector totalled EUR 17.9 billion in 2018[182], out of which EUR 11.5 billion was invested in non-residential and civil engineering and EUR 6.4 billion was invested in dwellings.

Total investment in dwellings by the whole economy during 2015-2020 **25.8%**

Figure 11: Investment index in the Portuguese broad construction sector between 2010 and 2020 (2015=100)



Source: AMECO, 2021.

Investments in rail infrastructure have dropped from EUR 403.0 million to EUR 216.0 million over 2010-2019[183] (-46.4%). Similarly, investments in air transport infrastructure decreased from EUR 127.0 million in 2010 to EUR 76.9 million in 2019[184] (-39.9%)[185].

Rail infrastructure investment between 2010 and 2019 **46.4%**

This demonstrates that Portugal has made limited progress in terms of investments in railway infrastructure. In addition, the pace of the execution of main projects under the 2020 *Ferrovia* programme that are co-financed by the **Connecting Europe Facility** has been slow.

Moreover, total **household renovation spending** in Portugal stood at EUR 226.8 million in 2019[186] in absolute terms, accounting for 0.2% of the total household disposable income. Since 2010, renovation spending as a share of household disposable income has almost remained constant.

According to estimates by Invest Porto, an initiative established by the Porto City Council in 2015 to support foreign investment attraction, a pipeline of office projects representing over 150,000m^2 will be added to the Portuguese market by 2025[187].

Railway interoperability is still a major concern in Portugal, while their importance is key. However, railways are still underused in the connections to Spain (both East-West and North-South corridors)[188]. In this context, Portugal launched a project during 2018, with a budget of EUR 509.0 million, to build a rail link between Évora (in southern Portugal) and the Spanish border. Portugal is contributing EUR 277.0 million whereas the remaining EUR 232.0 million in being financed by the EU. The construction is expected to be completed by 2022[189].

In November 2019, *Infraestructuras de Portugal*, a state-owned company, and the consortium of Sacyr Somague – Sacyr Infraestructuras signed a EUR 130.5 million contract for the construction of the Alandroal – Elvas rail section (connection to the East Line), on the new Évora Line. This will have a total length of 100 kilometres, of which 80 kilometres will have to be constructed. It is expected to be completed by 2023190.The **National Investment Programme 2030 (PNI)**, approved in January 2019 by the Portuguese government, is expected to further stimulate the construction sector[191].

The PNI 2030 programme is designed to provide investments worth EUR 22.0 billion into the areas of transport, energy and environment projects. It represents a total estimated investment of EUR 43.0 billion by 2030[192].

Out of the total planned investment of EUR 43.0 billion, EUR 12.0 billion (28%) will be financed from the state budget over the different years of implementation of this plan until 2030. Another EUR 12.0 million comes from the multiannual financial framework that will apply in the 2021-2027 cycle. The Recovery and Resilience Program will contribute EUR 3.3 million and EUR 14.2 million originated from private investment, through maritime, road concessions in the areas of energy or environment[193].

As a part of the mobility plan, Portugal is planning to invest EUR 300 million by 2030 for the construction of new bike lanes and linking existing ones, to encourage the use of bicycles in place of cars[194].

Moreover, Portugal is also one of the beneficiaries of EU support. The EU cohesion policy plays an important role in supporting public investments. In March 2020, the European Commission approved an investment package worth more than EUR 1.4 billion of EU Cohesion funds in 14 large infrastructure projects in 7 Member States, namely

Croatia, Czechia, Hungary, Poland, Portugal, Romania and Spain. The projects cover several key areas such as environment, health, transport and energy for a smarter, low-carbon Europe. The Cohesion Fund will invest EUR 107.0 million to upgrade Porto's metro line system[195].

In January 2021, the European Investment Bank (EIB) announced to provide EUR 65.0 million to EDP Renováveis S.A. (EDPR) to finance the construction and operation of two onshore wind farms in the Portuguese districts of Coimbra and Guarda[196].

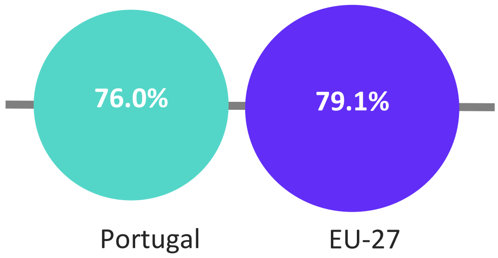
The wind farms are expected to have a total capacity of 125 MW and create approximately 560 jobs during the project's construction phase[197].

In 2020, the EIB Group invested almost EUR 295.0 million in infrastructure[198]. In parallel, Portugal also benefitted from investments from the **European Fund for Strategic Investments** (EFSI). As of December 2020, the financing under EFSI amounted to EUR 4.0 billion and is set to trigger additional investments of EUR 14.0 billion. Under the infrastructure and innovation window, 30 projects have been approved, amounting to EUR 1.5 billion and are set to trigger EUR 6.0 billion in total investments. Under the SMEs window, 20 agreements have been approved, involving a total financing of EUR 2.5 billion, and are set to trigger investments of up to EUR 8.1 billion[199].

TO 2 – Skills

Over the years, vocational education and training (VET) has become a national political priority in Portugal and the provision of training opportunities has also improved significantly over the past decade. In Portugal, **enrolment in upper secondary** VET declined 39.7% in 2018[200], below the EU-27 average of 48.4%. However, the **employment rate of the recent VET graduates** slightly reduced to 76.0% in 2019[201], from 77.4% in 2018, slightly below the EU-27 average of 79.1%. The share of **early leavers from education and training** declined from 11.8% in 2018 to 10.6% in 2019 (in comparison to the 10.2% EU-27 average)[202].

Employment rate of recent VET graduates, 2019



In parallel, **adult participation in lifelong learning** has remained stable over the past few years, at 10.5% in 2019[203], but slightly below the EU-27 average of 10.8%[204].

Adult participation in learning remains low in Portugal. In 2020, adult participation (18 to 64 age group) in education and training in the narrow construction sub-sector stood at 3.8%, well below the EU-27 average of 7.4%. In the real estate activities sub-sector, it stood at 16.1% in 2018[205], in line with the EU-27 average of 16.4%.

Portugal has taken several significant VET and adult learning measures including certified modular training and recognition, validation and certification of competences, particularly within the ***Qualifica*** programme which was launched in 2017. By 2019, more than 444,000 adults were involved in the Qualifica (well below the 2020 target of 600,000). Around 51,600 people have improved the level of their educational attainment through this programme[206].

The Portal of Sustainable Construction (*Portal da Construção Sustentável* - PCS) is dedicated to promoting sustainable methods including through training and consulting[207].

Moreover, the National Energy Agency (*Agência para a Energia* – ADENE) manages the **ADENE Academy** (*Academia ADENE*), which offers training modules for construction professionals focusing on energy efficiency skills. The Academy introduced an online platform that allows users to quickly and effectively access the available courses and select the ones that are in line with their needs. The training offer includes energy certification of buildings, energy auditing, installation of renewable energy systems, as well as other skills such as project management[208].

In its recovery and resilience plan, Portugal has assigned EUR 559 million to the component Digital schools and EUR 1 325 million to the component Qualifications and skills.[209].

The key actions of the plan include the modernisation of training provision, educational establishments and vocational training, as well as the Adults Incentive programme, which boasts complementary mechanisms for promoting lifelong learning. Two of them are part of the *Qualifica* Programme: the National Adult Literacy Plan and Qualifica Accelerator[210].

Targeting working-age adults with low-level qualifications, both employed and unemployed, it is predicted that 225 local projects promoting level B1/B2/B3 qualifications will get off the ground by 2025, thus helping to implement the National Adult Literacy Plan. Additionally, support will be given to adults currently involved in RVCC processes, with a target of 100 thousand adults becoming qualified this way by 2025, via the Qualifica Accelerator[211].

The "Young + Digital" Programme" created by Ordinance no. 250-A/2020, aims to consolidate the quality, effectiveness and agility of vocational training and qualification, helping young adults acquire digital skills[212].

In 2020, towards the digital training needs 13 training pathways were designed, which consisted of 25 and/or 50 hours short training courses[213].

TO 3 – Resource efficiency / Sustainable construction

The main national strategy documents on energy efficiency in Portugal are the **National Energy Efficiency Action Plan 2017-2021** (*Plano Nacional de Ação para a Eficiência Energética* – PNAEE) and the **National Energy and Climate Plan 2021-2030** (NECP). As per PNAEE, the savings target is estimated at 2,394,064 tonnes of oil equivalent (toe) (in final energy) by 2020, and 44% has been executed so far[214].

The **National Energy and Climate Plan for 2021-2030** (*Plano Nacional Energia e Clima – "PNEC 2030"*) was approved by Resolution of the Council of Ministers 53/2020 and published on 10 July 2020. The PNEC 2030 was developed as the main instrument of Portugal's energy and climate policy for the next decade, to move towards a carbon neutral future. Eight national objectives were defined in the PNEC 2030 with the aim to achieve carbon neutrality by 2050 and to foster energy transition through a commitment to renewable energies and energy efficiency[215].

The **Energy Efficiency Fund** (*Fundo de Eficiência Energética* – FEE), is a financial instrument supporting the implementation of the PNAEE. In the context of residential buildings, FEE supports the energy efficient renovation of dwellings (namely thermal insulation of roofs and facades) built prior to 1991 and with low energy classes. Through a total allocation of EUR 1.0 million, it co-finances up to 50.0% of the cost of the insulation interventions, up to a maximum of EUR 1,500 for roofs and EUR 3,000 for facades[216].

The Efficient House 2020 programme offers loans on favourable terms for operations that promote the improvement of the environmental performance of private housing buildings[217].

The programme has received funds worth EUR 200.0 million for the period from 2018 to 2021 from the EIB and from the adhering banks (*Caixa Geral de Depósitos S.A (CGD)*, *Millennium BCP* and *Novo Banco*). Loans provided under the programme can be used to finance energy efficiency interventions such as the replacement of windows and roofs, thermal insulation, installation of solar panels, as well as deep renovation. Around 12,000 homes are targeted, and the average cost of the works is expected to be between EUR 12,500 and EUR 13,000[218].

Furthermore, the **energy certification of buildings** was made compulsory in 2013 thorough the Decree-Law No. 118/2013 for buildings to be placed on the market for sale or rental. Also, the fees payable for the issuance of energy certificates for residential and commercial buildings were reduced in March 2016. This was mainly to promote energy efficiency among households with a reduced income as well as SMEs, by making certificates more affordable[219].

Moreover, for the assessment of the environmental performance and sustainability of buildings, Portugal has developed two voluntary mechanisms to support sustainable construction.

The first, **LiderA** (Leadership for the Environment for sustainable construction - *Liderar pelo Ambiente para a construção sustentável*), assigns a performance class from G up to A+++, with E being the reference and A corresponding to a performance of 50% above E. The evaluation is based on six principles of good environmental performance (including the use of resources, environmental comfort and sustainable use), and translated into 22 areas and 43 criteria[220]. The second, **SBToolPt** (Sustainable Building Tool Portugal), is based on an international tool and is structured into three dimensions (environmental, social and economic), covering 9 categories and 30 parameters. The evaluation results in a classification from E to A+, with D being the conventional practice and A/A+ the best practice[221]. The use of EU Cohesion policy funds for the renovation of buildings, including public infrastructure, households and SMEs, is progressing in line with its operational programme, and is also expected to deliver significant energy savings[222].

In December 2018, Portugal introduced a strategic plan to achieve carbon neutrality by 2050 which requires an estimated additional annual investment of EUR 2.0 billion from 2020 to 2050. The main areas for decarbonisation mainly focus on buildings, an increase of renewable electricity, and mobility and electrification of the transport sector[223].

In its Recovery and Resilience Plan, published in June 2021, Portugal announced its plans to invest around EUR 610.0 million for energy efficiency and renewable energy in buildings and EUR 185.0 million to support 264 megawatts (MW) of renewable gas production (hydrogen and biomethane)[224].

Moreover, in February 2021, Portugal approved a long-term strategy for building renovation (ELPRE) that aims to rapidly increase the pace of renovations through specific public and private investments to be made in buildings until 2050. It draws the pathway to achieve a reduction of 45-55% of Green House Gases (GHG) emissions by 2030, 65-75% by 2040 and 85-90% by 2050, involving a total investment of EUR 143.0 million by 2050[225].

As a part of the Economic and Social Stabilisation Program (PEES), the Portuguese government launched the "More sustainable buildings" initiative (*Edifícios mais sustentáveis*) in September 2020[226].

The programme aims to rehabilitate and improve the energy and water performance of buildings. The total amount budgeted for the program is EUR 4.5 million, available until December 2021. Private owners of properties built before the end of 2006 can ask for the refund up to 70% of their expenses related to energy optimisation[227].

The first International Construction, Energy, Environment & Sustainability (CEES) conference will be held in Portugal from 12th to 15th October 2021. The conference is organised by Itecons- Institute for Research and Technological Development for Construction, Energy, Environment and Sustainability- a non-profit organization classified as an institution of public utility that provides applied research, testing, consultancy and training in the fields of construction, energy, environment and sustainability[228].

The CEES aims to bring together construction, energy and environment researchers, engineers, planners, stakeholders, and policy makers to increase the sustainability of the built environment and construction activities[229].

TO 4 – Single Market

According to the EU Single Market Scoreboard 2020, Portugal performs well in terms of trade integration in the single market for goods and services[230].

As per the report, Portugal's performance regarding the transposition of EU directives such as average delay for overdue directives (8.8 months) was better than the EU-28 average (11.5 months) in 2019, but below the 2018 level (7.2 months). In terms of transposition deficit, Portugal scored (0.5%) in 2019, slightly above 2018 (0.4%), but better than the EU-28 average (0.6%). However, the number of pending cases under infringement (32 cases) worsened in 2019 as compared to the 2018 (26 cases), above the EU-28 average (29 cases). This is primarily due to limited use of the EU Pilot tool which increased the number of infringement proceedings against many member states. In 2019, performance in Public Procurement was unsatisfactory and below the EU-28 average. In terms of Internal Market Information System, Portugal performed poor in all five indicators as compared to EU-28 average. Its trade integration in the single market for goods and services is slightly above the EU-28 average[231].

Portuguese SMEs face difficulties in accessing the public procurement market, with the share of public contracts awarded to them being one of the lowest in the EU. Also, new and growing SMEs in Portugal struggle affording the costs of market entry to enter new markets in the EU[232].

Since the enforcement of the Public Procurement Code (*Código dos Contratos Públicos* – CCP) in January 2018, the number of direct award procedures granted over January 2019-September 2019, declined by around 12.0%, as compared to the same period in 2018. Similarly, the value of the contracts fell by around 20.0%[233].

The Institute of Public Procurement, Real Estate and Construction (IMPIC) of Portugal runs a centralised database that collects all public procurement information in one place[234].

IMPIC is also investing in a new business intelligence platform with automated procedures for data extraction and report generation[235].

In May 2021, a conference on public procurement – "Steering the Future: Green, sustainable and digital procurement", was co- organised by the Portuguese Presidency of the Council of the European Union and by the European Commission. The conference was the main European event on the subject to be held in the first half of 2021, with the aim of looking at the challenges faced by Europe in terms of green and sustainable public procurement, the importance of the digital transformation and the potential of structured information[236].

Portugal has taken several initiatives to help its SMEs benefit from the single market. For instance, setting up an online portal and a SOLVIT centre (which helps businesses whose rights were breached by public authorities in another EU country). As part of the Startup Portugal+ programme, Portugal is working on future support measures for scale-ups, for modernisation of industry and for promoting more and better access to the single market[237].

The SIMPLEX programme launched in 2016 includes 255 measures for legislative and administrative simplification, six of which directly concern the construction and real estate markets and implemented by the Institute of Public Markets, Real Estate and Construction (*Instituto dos Mercados Públicos, do Imobiliário e da Construção* – IMPIC)[238].

In July 2020, the Portuguese government announced Simplex 20-21, a program that has 158 measures which aims to improve the public administration[239].

The program aims to bring a profound change into the culture and the Portuguese public administration model and simplify the interactions between the public administration and private individuals through the automation and dematerialisation of processes[240].

TO 5 – International competitiveness

According to the World Bank Doing Business 2020 report, Portugal ranked 1st out of 190 countries, in ease of trading across borders in 2019[241,242].

As per the report, in Portugal it takes one hour and nil hour to be documentary and border compliant[243], respectively. In terms of costs, business need to spend nothing for both documentary and border compliance[244].

In terms of the **internationalisation of construction companies**, the export value of all construction-related projects in Portugal stood at EUR 2.7 billion in 2020, representing an increase of 32.8% compared to its value of EUR 2.1 billion in 2010. Portugal's share of exports of all construction-related products in 2019 stood at 48.2% of the total production value. This is well above the EU-27 average of 11.3% and the 2010 level (40.3%) for the same period. In 2020, the share of exports of all construction-related products stood at 45.3% of the total production value.

Exports value of all construction-related products between 2010 and 2020	↑ 32.8%

In the context of **inward FATS (Foreign affiliates statistics)**[245]**,** value added at factor cost in the narrow construction sub-sector decreased by 42.1% between 2010 and 2018[246]. Similarly, turnover in the narrow construction sub-sector dropped by 45.7% during the 2010-2018 period respectively. In similar lines, turnover in the manufacturing sub-sector[247], in terms of **outward FATS**[248] grew by 106.6% between 2010 and 2018[249].

The Councils of Ministers, in July 2020, approved the International Programme 2030 (*Internacionalizar 2030*) which sets targets and measures for exports to reach 53.0% of GDP in 2030. It also aims to increase "stock" of foreign direct investment (FDI) by 4.0% per year[250].

The programme will focus on the internationalisation of the Portuguese economy by:

- expanding exports of goods and services,
- increasing the number of exporters, diversifying export markets,
- amplifying the volume of FDIs,
- strengthening Portuguese direct investment abroad (IDPE), and
- enlarging the national added value (VAB).

Moreover, to provide support for the internationalisation of construction and real estate companies (particularly SMEs), IMPIC and the Portuguese Agency for Investment and Foreign Trade (*Agência para o Investimento e Comércio Externo de Portugal* – AICEP) signed a cooperation agreement with the aim of facilitating the exchange of information and promoting knowledge of available measures that foster internationalisation and foreign market access[251].

In order to support the export promotion and markets' diversification, in particular markets outside the European Union, the Portuguese government raised the ceiling for export credit insurance lines with State guarantees from EUR 100 to EUR 200 million in the surety bond line for construction works abroad. The measure is a part of the Stability Programme 2020 which focuses on identifying COVID-19-related measures with an impact on the economy[252]. The Association of Civil Engineering and Public Works Professionals (AICCOPN) plays a key role in supporting the internationalisation of the construction sector. It promotes the **International Portuguese Construction Network** project, with the support of EU funds under the operation programme COMPETE 2020. The project seeks to qualify Portuguese construction companies for internationalisation by allowing access to and the sharing of market knowledge. Furthermore, the project promotes Portuguese companies by setting up a support network abroad and creating the Global Portuguese Construction (GPC) collective brand[253].

***TEKTÓNICA* 2021 - International Building and Construction Fair will be held from 6th to 9th October, 2021. It is the biggest building and construction fair in Portugal. It promotes the internationalisation of the Portuguese construction sector[254].**

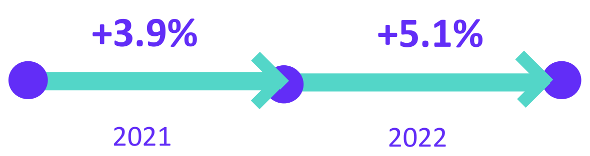
8

Outlook

Over the 2020-2022 period, the Portugal's GDP is expected to increase by 9.2%, primarily driven by massive infrastructural investment backed by EU funding.

The Portugal's **GDP** is forecast to annually increase by 3.9% in 2021 and by 5.1% in 2022, totalling EUR 202.0 billion by end-2022.

Expected GDP growth in 2021 and 2022



Mirroring the broad economic developments, the **volume index of production** of the broad construction sector is projected to increase annually by 6.1% and 8.6% in 2021 and 2022 respectively[255].

Similarly, the **turnover of the broad construction sector** is also projected to increase by 7.2% in 2021 as compared to 2020. In parallel, the **total value added** of the broad construction sector is expected to reach EUR 13.4 billion in 2021, increasing by 7.2% over 2020.

Likewise, the **number of persons employed** in the broad construction sector is projected to rise by 6.8% in 2021 over 2020, reaching 581,954 persons in 2021[256].

With regards to the housing market, the Portuguese government has taken several initiatives. Recently, in August 2020, the Portuguese Government announced its plans to create a pool with currently vacant (or available) properties across the country, that will be turned into affordable rental housing. The investment is expected to reach EUR 2,300 million. It has already identified 18,660 properties, of which at least 20% would be transferred to municipalities or handed over to public-community partnerships.

The **civil engineering** sector is expected to be driven by the government's focus on the development of road, port and railway infrastructure. In fact, the National Investment Programme 2030 (PNI), with investment more than EUR 22.0 billion, is expected to further stimulate the construction sector. Furthermore, as a part of the mobility plan, Portugal is planning to invest EUR 300 million by 2030 for the construction of new bike lanes and linking existing ones, to encourage the use of bicycles in place of cars. This too would drive the growth in the Portuguese construction sector.

In case of EU approved grants, in March 2020, the European Commission approved an investment package worth more than EUR 1.4 billion of EU Cohesion funds in 14 large infrastructure projects in 7 Member States, including Portugal. The projects cover several key areas such as environment, health, transport and energy for a smarter, low-carbon Europe. The Cohesion Fund will invest EUR 107.0 million to upgrade Porto's metro line system.

Such investments will have a significant impact in stimulating the construction sector, together with the construction-related investments of Portugal's RRP, which allocate over EUR 610 million to energy efficiency renovations and EUR 690 million to infrastructure investments.

Overall, the Portuguese construction sector is forecasted to recover from 2021 onwards, driven by infrastructural projects such as PNI 2030 and mobility plan, backed by EU funding. Output in civil engineering is expected to be primarily driven by investment in railways and road infrastructure.

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4 Please note that this 2020 data is a nowcast - please refer to the methodology notes for further details.

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