




European Construction Sector Observatory

Country profile Romania

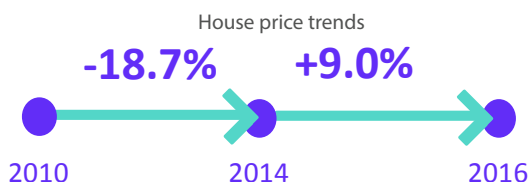
June 2018

In a nutshell

The economic crisis had severe repercussions on the Romanian economy and, consequently, on the **construction sector**. However, in recent years, the Romanian construction sector has been recovering. In fact, there were 89,943 enterprises in 2016 in the broad construction sector, a 7.6% increase since 2010, whereas employment increased less significantly by 2.9% since 2010, reaching 608,715 people in 2016. Similarly, production in construction increased by 1.8%, with an impressive 21.4% increase in the production of buildings but a 9.7% in civil engineering production over 2010-2016. Profitability also picked up, with the turnover of the broad construction sector increasing by 19.8% to reach EUR 30.6 billion in 2016.

Number of enterprises in the Romanian broad construction sector increased between 2010-2016  **7.6%**

Residential construction and the **housing market** suffered following the crisis, with house prices decreasing by 18.7% between 2010 and 2014, but subsequently picking up by 9.0% until 2016. The number of issued residential building permits fell significantly in the aftermath of the crisis but is recovering and has reached 35,496 for the first ten months of 2017. Moreover, despite having the highest homeownership rate, Romania reports an above average housing cost overburden rate, highlighting housing affordability issues, as well as the highest overcrowding and severe housing deprivation rates in the EU, underscoring poor housing conditions. To address these issues whilst stimulating residential construction, the government introduced several schemes, such as the First Home Programme with a budget of RON 2 billion (EUR 428.8 million) for 2018, which provides state guarantees of up to 50% of the value of the mortgage. Furthermore, the National Housing Agency implements several affordable home programmes, including the Rental Housing Units for Young People and the Mortgage-financed Dwellings Programme.



The important cut in public spending on **infrastructure projects** over the last years has severely affected the quality of infrastructure, especially roads and highways, and was coupled with poor absorption of EU funds and questionable public procurement transparency. However, considerable investments are planned through the General Master Plan for Transport, which details strategic interventions in transport infrastructure up until 2030, for a total value of EUR 43.5 billion (with EUR 27.1 billion for road and EUR 10.2 billion for railway projects). In addition, Romania benefits from EUR 9.5 billion from the EU Regional Funds under the 2014-2020 Large Infrastructure Operational Programme (LIOP), to be invested in transport, environment and energy projects.

Given the **poor energy efficiency** condition of the building stock, Romania is taking action to stimulate its renovation, focusing particularly on residential buildings. The Thermal Rehabilitation Programme, with a budget of EUR 8.8 billion for 2017, covers up to 80% of the costs incurred for thermal rehabilitation interventions of apartment blocks. However, the construction industry is facing considerable pressure, particularly in insulation and thermal rehabilitation, with 50,000 such workers being estimated to be needed by 2020 to satisfy this demand. To this end, both public and private training initiatives were introduced to upskill the workforce.

Infrastructure and residential construction are predicted to drive the revival of the Romanian construction sector in the future, with growth forecast at an annual rate of 2.0% in 2018, 3.8% in 2019 and 5.4% in 2020. However, improved absorption of EU funds, better project selection and management and greater procurement transparency are essential to ensure the sustained expansion of the sector.

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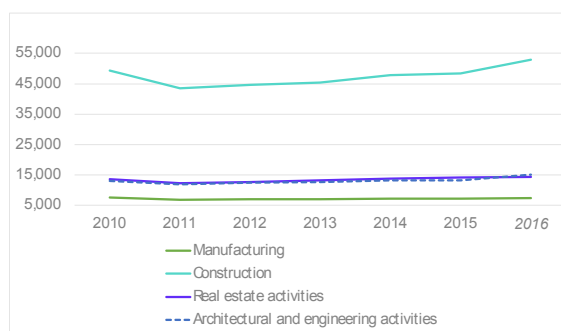
Key Figures

The **number of enterprises** in the broad construction sector in Romania totalled 89,943 in 2016¹ (Figure 1). Companies in the narrow construction sector accounted for 58.9% of the total, followed by architectural and engineering activities (16.9%), real estate activities (16.0%) and manufacturing (8.2%). The overall number of enterprises in the broad construction sector increased by 7.6% between 2010 and 2016. After a drop in 2011 from 83,559 to 74,673 enterprises, this number increased continuously driven by the 16.8% growth in companies in architectural and engineering activities, the 7.3% growth in companies in the narrow construction sector and the 6.1% growth in companies in real estate activities. **Production** in construction increased by 1.8% over 2010-2016. Specifically, production in construction of buildings increased by 21.4%, while production in civil engineering experienced a 9.7% fall over the same period (Figure 2).

Production in construction
change, 2010-2016

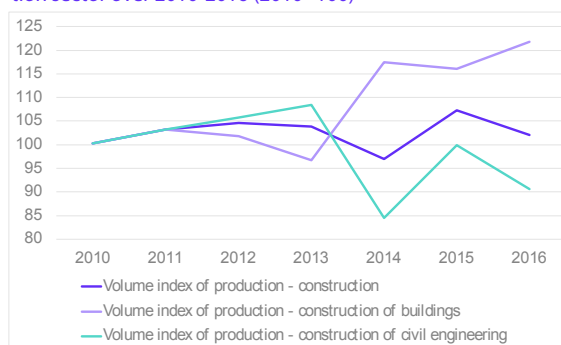
↑ 1.8%

Figure 1: Number of enterprises in the construction sector in Romania over 2010-2016



Source: Eurostat, 2017.

Figure 2: Volume index of production in the Romanian construction sector over 2010-2016 (2010=100)

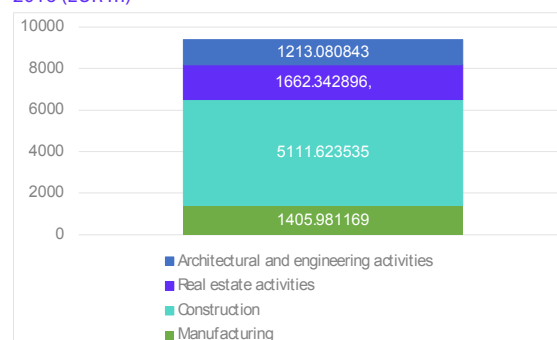


Source: Eurostat, 2017.

In 2016², the total **value added** of the broad construction sector was EUR 9.4 billion (Figure 3). The construction sub-sector had the largest share (54.4%, i.e. EUR 5.1 billion), followed by real estate activities (17.7%, i.e. EUR 1.7 billion), manufacturing (15.0%, i.e. EUR 1.4 billion) and architectural and engineering activities (12.9%, EUR 1.2 billion).

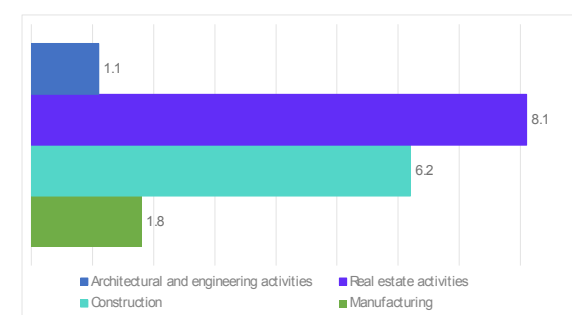
The share of gross value added of the broad construction sector in the GDP³ reached 17.2% in 2014, with real estate activities having the largest contribution (8.1%) (Figure 4). This is in line with EU-28 average which stands at 16.9%.

Figure 3: Value added in the construction sector in Romania in 2016 (EUR m)



Source: Eurostat, 2017.

Figure 4: Gross value added as a share of GDP in the construction sector in Romania in 2014 (%)

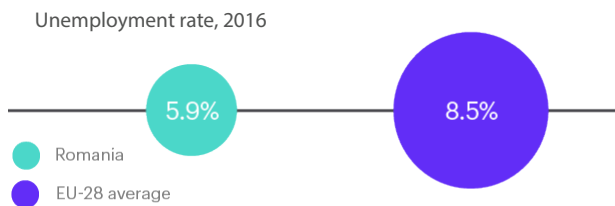


Source: Eurostat, 2017.

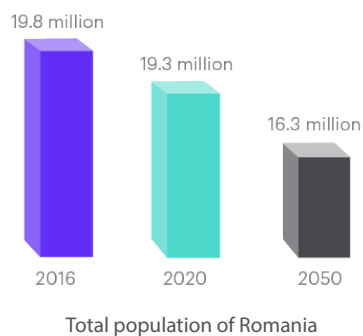
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Macroeconomic Indicators

In 2016, Romania's **GDP** amounted to RON 631.3 billion (EUR 135.5 billion), representing a 4.8% increase since the previous year and exceeding the 2010 level by 18.2%. The same year, the country's potential GDP was RON 631.8 billion (EUR 135.6 billion), resulting in only a very slight negative output gap. The **inflation rate** increased to 6.1% in 2010 but has been gradually and constantly decreasing since then to drop to -1.1% in 2016. The **unemployment rate** in Romania stood at 5.9% in 2016, below the EU-28 average of 8.5% and the lowest since 2010, though still above pre-crisis value. Youth unemployment (below the age of 25) stood at 20.6% in 2016, above the EU-28 average of 18.7% and above pre-crisis levels⁴.



The **total population** of Romania amounted to 19.8 million people in 2016. It is projected to drop to 19.3 million by 2020 and further down to 16.3 million in 2050. In parallel, the negative net migration from the country (-53,944 people in 2016) will contribute to the population decline, potentially affecting the supply of workers. In 2016, Romania's **working age population** accounted for 67.1% of the total and is projected to decrease considerably in the future to 55.3% of the country's population by 2050. The population aged 65 or older accounted for 17.4% and it is forecast to reach 29.8% by 2050. Together, the negative net migration and demographic decline are expected to drive the demand for hospitals and care homes.



Romania was severely hit by the crisis in 2008, and was therefore granted a EUR 20 billion bailout package from the IMF, European Commission and World Bank in 2009⁵. Its fiscal situation has been improving over time. In 2016, the general **government expenditure** in Romania represented 34.7% of GDP, below the EU-28 average of 46.6%. Furthermore, the country achieved a **government deficit** of -3.0% of GDP in 2016, in line with the 3% threshold of the EU's Stability and Growth Pact (SGP) and a considerable improvement since the peak in 2009 (-9.5%). However, after a continual improvement since 2010, 2016 marks an important deterioration from the situation in 2015, when government deficit stood at -0.8%. The general **government gross debt** amounted to 37.6% of GDP in 2016, well below the EU-28 average of 83.5% but above the 2008 value (13.2%). The official **interest rate** of the Romanian Central Bank (*Banca Națională a României*) has shown a generally decreasing trend between 2010 and 2016, falling from 7.3% to 1.8%, respectively. This is as a reaction to the decreasing inflation rate, and reflects the Bank's aim to support lending in domestic currency, stimulate investments and accelerate economic growth.

In 2017, Romania jumped to the 45th position out of 190 countries in terms of ease of starting a business, according to the Doing Business 2018 report, an important increase from its 62th position the previous year.

Completing all formalities to register a new firm takes 12 days, above the OECD high income average of 8.5, and entails 6 procedures, above the average of 4.9⁶. The costs incurred account for 0.4% of income per capita, considerably below the OECD average of 3.1%, and the required paid-in minimum capital is only 0.5% of income per capita, compared to the average of 8.7%. According to the SBA Fact Sheet 2017, Romania performs above the EU average in the area of **entrepreneurship**, in line with the 2016 results. The country presents a high proportion of adults intending to start a business in the next three years (29% compared to the EU average of 12.1%), high early stage entrepreneurial activity (including among women) and high media attention given to successful entrepreneurs.

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Romania ranked 68th in the World Bank's 2017-2018 Global Competitiveness Report in terms of **financial market development**⁷. The best performing indicator is soundness of banks (79th). Conversely, Romania ranks 119th for ease of access to loans, affordability of financial services and financing through local equity market while it ranks 126th for venture capital availability. Indeed, access to financing is reported to be the first barrier for doing business, followed by inefficient government bureaucracy and tax rates. Despite an overall 13.5% increase

between 2010 and 2012, from RON 104.6 billion (EUR 22.4 billion) to RON 118.8 billion (EUR 25.5 billion), **loans to non-financial corporations** declined by 14.4% over 2012-2016, reaching RON 101.6 billion (EUR 21.8 billion) in 2016. **Financial support** to SMEs is amongst other sources provided through EU funding. The European Investment Fund (EIF) managed the EUR 225 million JEREMIE (Joint European Resources for Micro to Medium Enterprises) initiative, through which a portfolio risk sharing loan, portfolio guarantee and equity fund were created, allowing the provision of 6,000 new loans to SMEs and investments totalling over EUR 600 million. As a continuation of the programme, the EIF signed an agreement in September 2016 establishing the EUR 59.3 million Competitiveness Fund-of-Funds for SMEs, EUR 40 million of which will be dedicated to entrepreneurship and seed funds for innovative companies and EUR 19 million to a risk-sharing loan instrument⁸. In addition, the EIF manages the SME Initiative, launched in Romania in 2016, which is expected to generate over EUR 540 million of new SME loans at favourable terms through a risk-sharing mechanism⁹.

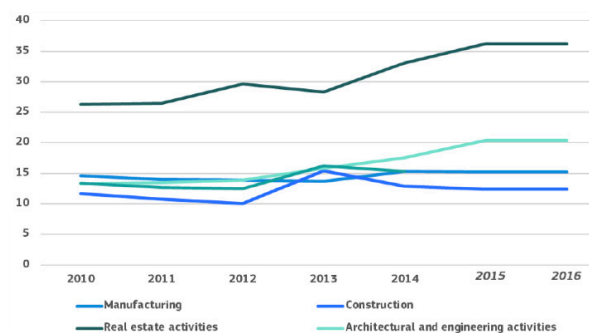
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Key economic drivers of the construction sector

Productivity

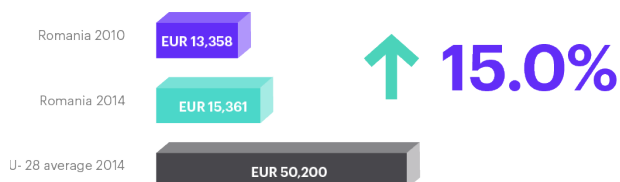
Despite some fluctuations, **labour productivity** in the broad construction sector experienced a 15.0% increment between 2010 and 2014, from EUR 13,358 to EUR 15,361 (Figure 5). This is significantly lower than EU-28 average, which stood at EUR 50,200 in 2014. The architectural and engineering activities sub-sector saw the highest increase in productivity, growing by 53.3% from EUR 13,300 to EUR 20,400 between 2010 and 2016¹⁰. This was followed by real estate activities, which increased by 37.9% from EUR 23,300 to EUR 36,300 over the same period. Furthermore, the construction and manufacturing sub-sector both increased, by 6.2% and 4.3% respectively. The former increased from EUR 11,700 to EUR 12,400, while the latter increased from EUR 14,600 to EUR 15,300.

Figure 5: Labour productivity in the construction sector in Romania over 2010-2016 (EUR k)



Source: Eurostat, 2017.

Labor productivity in the broad construction sector



Profitability

The **turnover** of the broad construction sector is currently recovering from the fall it experienced during the crisis. In fact, between 2010 and 2016, turnover increased by 19.8% from EUR 25.5 billion to EUR 30.6 billion, while still being below pre-crisis levels. Specifically, turnover in the architectural and engineering activities increased most, by 46.4% from EUR 1.7 billion to reach EUR 2.5 billion. Turnover in the manufacturing sub-sector also increased significantly, from EUR 4.4 billion in 2010 to reach EUR 5.8 billion in 2016, representing a 20.3% increase. Similarly, **gross operating surplus** has been recovering since the crisis, reaching EUR 5.3 billion in 2014, an 8.4% increase from 2010, when it stood at EUR 4.9 billion. The **gross operating rate** of the broad construction sector¹¹, which gives an indication of the sector's profitability, increased by 9.9% between 2010 and 2014, comparable to pre-crisis levels. In parallel, construction costs for residential buildings have generally seen an increasing trend, with the construction cost index rising by 10.6% over 2010-2016, spurred by the 32.3% increase in labour costs (Figure 6: Construction cost index for residential buildings over 2010-2016 (2010=100)).

Turnover of the broad construction sector

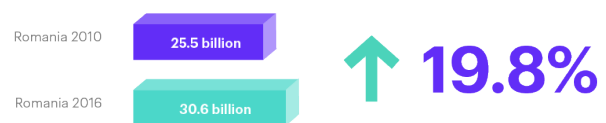
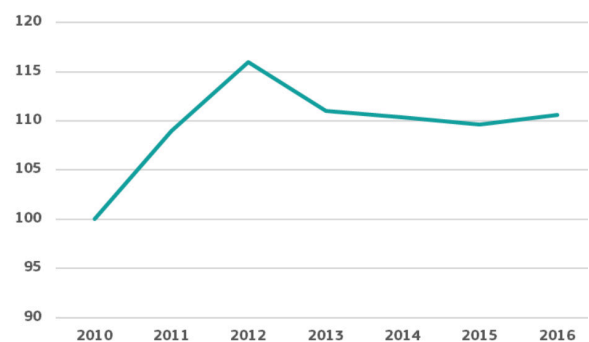


Figure 6: Construction cost index for residential buildings over 2010-2016 (2010=100)



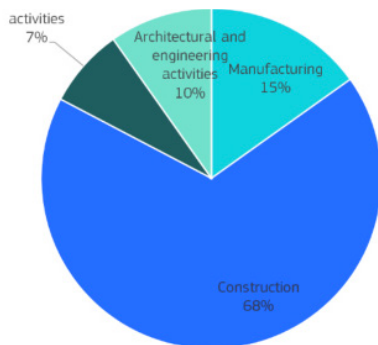
Source: Eurostat, 2017.

Employment

In 2016¹², the broad construction sector **employed** 608,715 people, 2.9% more compared to 2010, but almost 200,000 less workers than in 2008. The construction sub-sector employed 411,280 people in 2016, followed by manufacturing, architectural and engineering activities and real estate activities (Figure 7). All sub-sectors experienced increases in employment between 2010 and 2016. Specifically, employment in architectural and engineering activities increased most from 53,191 to 59,503, representing an 11.9% increase. With regards to the other three sub-sectors, employment increased by 3.3% in real estate activities, by 2.1% in the narrow construction sector and by 1.4% in the manufacturing sub-sector. As for **employment by specific occupation**, the number of technicians and associate professionals in the construction sub-sector saw the largest decline, from 30,900 in 2010 to 19,600 in 2016 (-36.6%), followed by managers in the manufacturing sector, dropping from 29,700 to 20,000 (-32.7%). Plant and machine operators were the single largest occupation in the sector, which increased by 5.7% over the same period, from 413,200 to 436,700.



Figure 7: Percentage of people employed by construction sub-sectors in Romania in 2016

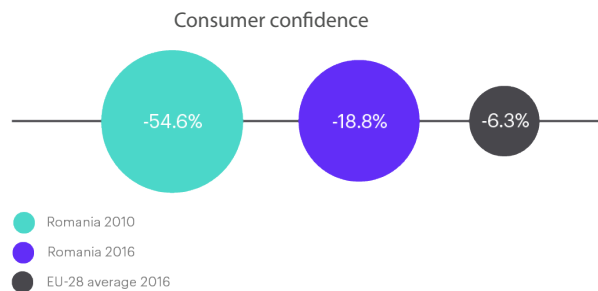


Source: Eurostat, 2017.

The number of **self-employed workers** in the construction sub-sector has been fluctuating in recent years, peaking at 177,800 in 2010 and slightly decreasing to 174,100 in 2016. Their share in the total number of self-employed persons in the general economy went up from 10.5% in 2010 to 13.0% in 2016.

SMEs have been playing an increasingly important role in terms of employment, since they employed 84.7% of the total workforce of the broad construction industry in 2014, compared to 80.1% in 2010.

Business confidence



The **consumer confidence indicator** has been negative since 2000, bottoming out in 2010 at -54.6 following the crisis. Despite some fluctuations, it has been improving since then, reaching -18.8 in 2016, close to pre-crisis levels. Similarly, **industry confidence** dropped increased from -8.4 in 2010 to reach 0.4 in 2016, again close to pre-crisis levels. After dropping to -40.8 in 2010, the **construction confidence indicator** increased to -13.1 in 2016. Overall, confidence in Romania is lower than the EU-28 average, which respectively stood at -3.6, 3.2 and -6.7 for the three indicators above. Similarly, **investment per worker** increased to EUR 67,526 in 2014, i.e. 45.5% above the 2010 value (EUR 46,402). Conversely, **investment ratio** did not pick up between 2010 and 2016 and remains below its pre-crisis levels. In fact, over that period it decreased from 25.9% to 23.1%. Yet, this is still above the EU-28 average which amounted to 19.8% of GDP in 2016.

Domestic sales

The ranking of the most domestically sold construction products has remained constant in Romania between 2010 and 2016. The value of domestic sales of 'Other structures' and 'Builders joinery and carpentry' experienced a 22.4% and a 25.7% decrease over 2010-2016, respectively. Conversely, 'Prefabricated buildings of metal' saw a 27.0% increase in their domestic sale values. The **top 5 most domestically sold construction products**, both in Romania and in the EU, are presented in Table 1. Together, these made up 58.4% of all Romanian construction products sales in 2016.

Table 1: 5 most domestically sold construction products in Romania and in the EU in 2016

Romania			EU-28
Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
Portland cement, aluminous cement, etc. (group 235112)	467.4	17.2	Other structures (group 251123)
Prefabricated buildings of metal (group 251110)	404.5	14.9	Doors, windows, etc. (group 251210)
Ready-mixed concrete (group 236310)	266.4	9.8	Ready-mixed concrete (group 236310)
Other structures (group 251123)	259.4	9.6	Prefabricated buildings of metal (group 251110)
Builders joinery and carpentry, of wood, n.e.c. (group 162319)	184.8	6.8	Prefabricated structural components for building or civil engineering, etc. (group 236112)

Source: PRODCOM, 2017.

Export of construction-related products and services

The **5 most exported construction products**, both in Romania and in the EU (Table 2) accounted for 66.0% of all construction exports from Romania in 2016. The ranking of the most exported products has remained relatively stable since 2010. Moreover, the value exported of 'Particle boards and similar' has stayed constant between 2010 and 2016 at EUR 160 million, while it had increased to EUR 408 million in 2013. Conversely, the exported value of 'Builders' joinery and carpentry' increased by 373.3% over the same period, from EUR 23.7 million to reach EUR 112.0 million.

Table 2: 5 most exported construction products in Romania and in the EU in 2016

Romania			EU-28
Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
Particle boards and similar (group 162113)	160.5	25.7	Ceramic tiles and flags (group 233110)
Builders' joinery and carpentry of wood, etc. (group 162319)	112.0	17.9	Other structures (group 251123)
Other structures (group 251123)	73.7	11.8	Marble, etc. (group 237011)
Windows, French windows and their frames, etc. (group 162311)	36.1	5.8	Prefabricated buildings of metal (group 251110)
Towers and lattice masts of iron or steel (group 2251122)	30.6	4.9	Builders' joinery and carpentry of wood, etc. (group 162319)

Source: PRODCOM, 2017.

In terms of cross-border provision of construction services, Romania exported EUR 399.8 million worldwide in 2016, 4.4% below the 2013¹³ value (EUR 418.2 million). This is an improvement over 2015, when exports stood at EUR 373.6 million.

Specifically, 83.5% of exports (EUR 333.7 million) were made to the EU-28, i.e. 3.6% below the 2013 level (EUR 346.2 million). Similarly, the value of exports to countries outside the EU-28 decreased slightly, at EUR 66.1 million in 2016. In parallel, Romania imported a total of EUR 105.4 million in construction services from the world in 2016, a 47.2% drop since 2013 (EUR 199.6 million), with EUR 76.6 million from EU-28 countries (i.e. 72.7% of imports). Romania therefore reported a trade surplus of EUR 294.4 million in 2016.

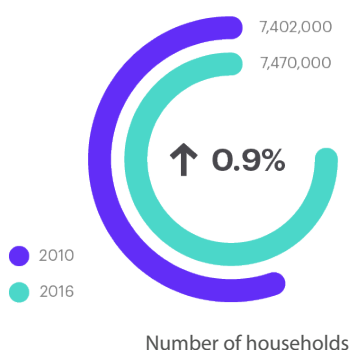
Access to finance in the construction sector

After a sharp increase during the crisis and until 2013, the value of **credit extended to the narrow construction sector** in Romania showed a strong negative trend. Overall, over the 2010-2016¹⁴ period, credit extended decreased from RON 307.9 billion (EUR 66.0 billion) to RON 21.9 billion (EUR 4.7 billion), a 92.9% drop. Nevertheless, between January and September 2016, 26.4% of new loans issued by banks went to the construction and real estate sectors, the highest share across sectors in the general economy.

Due to their lower ability to cope with adverse economic conditions, construction and real estate companies have a limited borrowing potential, being less able to qualify for new loans.

In general, due to their lower ability to cope with adverse economic conditions, construction and real estate companies have a limited borrowing potential, being less able to qualify for new loans. Furthermore, they report the highest credit risk, with a non-performing loan ratio of 30.6% for construction and 19.3% for real estate companies in September 2017¹⁵. This is, however, a significant improvement from September 2016, when the non-performing loan ratio stood at 35.9% for construction and 26.8% for real estate companies in September 2016, the highest across all sectors in the economy. A recent survey of companies done by the EIB shows that around 7% of firms in the manufacturing sector are **finance constrained**¹⁶ and about 12% in the construction sector. Moreover, about 15% of firms in the manufacturing sub-sector and in the narrow construction sector reported investing too little¹⁷.

Access to housing

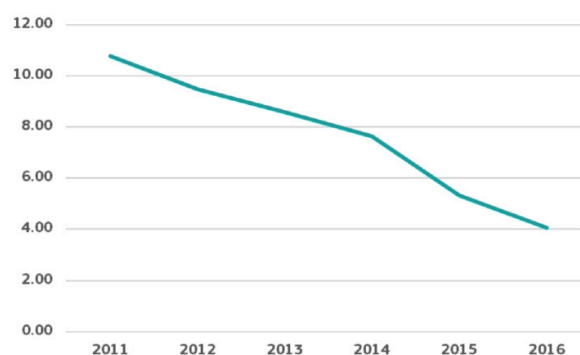


The **number of households** in Romania reached 7,470,000 in 2016, 0.9% higher than 2010 (7,402,000), but lower than in the early 2000s.

35.0% of the population lives in cities and greater cities which, combined with population decline and negative net migration, may slow down the demand for new residential construction.

However, a number of factors have contributed to a revival of the demand on the real estate market. The **mean equivalised net income** has increased by 19.1% since 2010 amounting to RON 11,884 (EUR 2,622) in 2015, giving households a larger purchasing power. In parallel, **mortgage rates** have fallen continuously since the peak in 2009, from 11.1%. In fact, between 2010 and 2016, rates have decreased from 10.8% to 3.4% (Figure 8). Consequently, total **outstanding housing loans** to households have experienced a 71.1% surge since 2010, from EUR 6.7 billion to EUR 11.5 billion in 2015, also spurred by policy schemes such as the First Home Programme, to which almost 50% of total outstanding housing loans can be ascribed¹⁸ (see Policy schemes).

Figure 8: Mortgage rates for loans for over 5 years original maturity (%)



Source: ECB MFI Interest Rate Statistics, 2017.

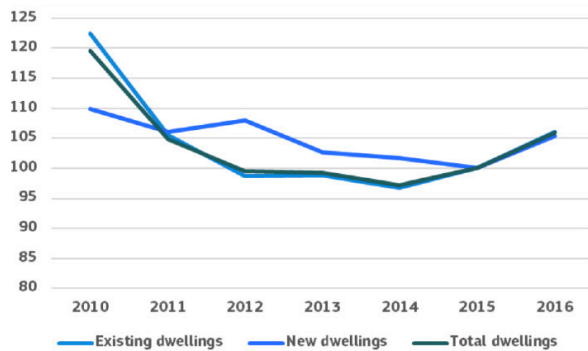
The house price index change, 2010-2016 ↓ 11.4%

On the supply side, construction of residential buildings has been picking up, supported by the decline in construction costs and the recovering housing prices. The **house price index** (for total dwellings) had undergone a 18.7% decrease between 2010 and 2014, subsequently picking up by 9.0% until 2016, though still 11.4% lower than 2010 (Figure 9). The recovery of property prices has been particularly noticeable in Romania's largest cities, such as Bucharest (+12.6% from January to September 2017), Brasov (+11.0%), Constanta (+13.4%), Timisoara (+9.4%) and Cluj-Napoca (+16.4%)¹⁹.

In parallel, between 2010 and 2016, issued **residential building permits** decreased by 8.4%. However, the number of issued building permits for dwellings increased to 37,672 in 2014, and to 39,112 in 2015 (+3.8% relative to 2014)²⁰. Nevertheless, in 2016, 38,653 building

permits for dwellings were issued, i.e. 1.2% lower than 2015²¹. For the first ten months of 2017 this number stood at 35,496 units. These figures are still below the peak of 61,092 in 2008²². Overall, residential construction output has been improving since 2014, with 47,017 new dwellings being completed in 2015 (+10.4% compared to 42,589 in 2014) and 52,206 (+11.0) in 2016²³.

Figure 9: House price index in Romania over 2010-2016 (2010=100)

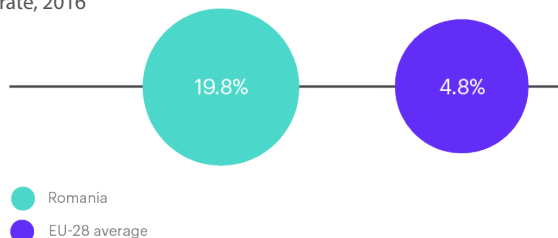


Source: Eurostat, 2017.

The homeownership rate in Romania is the highest in the EU, with 96.0% of the population owning their own property in 2016 (compared to the EU-28 average of 69.5% in 2015).

This share does not display major differences between the population whose income is above or below 60% of the median equivalised income, with the homeownership rate standing at 96.5% and 94.3% for the two income groups, respectively. However, the **housing cost overburden rate**²⁴ was at 14.4% in 2016, above the EU-28 average of 11.1%²⁵, highlighting housing affordability issues. Moreover, housing quality in Romania is poor, with the **overcrowding rate**²⁶ in 2016 being at 48.4%, well above the EU-28 average of 16.8% and the worst in the EU²⁷. Similarly, the **severe housing deprivation rate**²⁸ reached 19.8% in 2016, again, well above the EU-28 average of 4.8% and the worst in the EU²⁹.

Severe housing deprivation rate, 2016



Infrastructure

According to the 2017-2018 Global Competitiveness Report, Romania ranks 83rd out of 137 economies in terms of its **infrastructure**³⁰. It performs particularly poorly in terms of the quality of its roads (120th), air transport (89th) and port infrastructure (92nd) and slightly better with regard to the quality of its railroad infrastructure, ranking 73th.

The poor quality of Romanian infrastructure stems from the lack of a structured framework for the selection, prioritisation and execution of public infrastructural projects, and the dominance of large and inefficient state-owned companies, particularly in the transportation network.

The poor quality of Romanian infrastructure stems from the lack of a structured framework for the selection, prioritisation and execution of public infrastructural projects, and the dominance of large and inefficient state-owned companies, particularly in the transportation network. As a result, the government's project pipeline is clogged with old projects, with excessively long implementation periods and low prospective completion rates³¹. Moreover, political interference and the lack of professional capacity to manage large projects are stressed as important hurdles in the development of infrastructures in Romania. Particularly, changes in political priorities and corruption have stifled investments and blocked the deployment of EU Funds, crucial in the construction of new infrastructures. Investment in infrastructure³² is further discussed in section TO 1 - Investment conditions and volumes.

4

Key issues and barriers in the construction sector

Company failure

The broad construction sector has generally seen an increase in the number of company births and a decrease in **company deaths** across all sub-sectors between 2010 and 2014. Namely, **company births** in the construction sub-sector increased from 4,559 in 2010 to 7,600 in 2014 (+66.7%), whereas the number of deaths decreased from 10,038 to 7,932 (-21.0%). Company births in the architectural and engineering activities sub-sector increased from 638 in 2010 to 1,839 in 2014 (+188.2%), whereas company deaths decreased from 2,596 to 1,419 (-45.3%). Company births in real estate activities also increased from 957 to 1,824 over 2010-2014 (+90.6%), whereas company deaths decreased from 2,003 to 1,426 (-28.8%).

The construction industry ranks second in the Romanian economy for the **number of insolvencies**, after the retail and wholesale sector. According to the National Trade Registry's Office, 1,518 construction firms went insolvent in 2015, while this number dropped to 1,290 in 2016 before increasing in 2017 to reach 1,472. This is a remarkable 48.7% decrease from 2,870 in 2014³³. As for real estate services, 250 companies were declared insolvent in 2017, a 74.3% decrease since 2014 (971). Insolvencies in real estate activities represented 2.7% of total insolvencies, while this stood at 16.2% for construction firms³⁴.

Despite these improvements, the Romanian Association of the Romanian Building Industry (*Asociația Română a Antreprenorilor de Construcții* - ARACO) states that, in order to truly reduce the number of insolvencies and redundancies in the sector, government measures for a sounder financial support of European programmes and investments are essential. Not enough effort put into the restructuring of insolvent construction companies, since it is more lucrative for legal administrators to liquidate insolvent businesses. In fact, they cash around 10% of the total value of the liquidated assets, without therefore being incentivised to restructure the insolvent businesses.

Trade credit

In the Romanian construction sector, **trade credit** is not a common source of finance for operations. More widespread forms of financing of construction activities are debt finance and equity finance. Public authorities sometimes use mezzanine finance and bond issues to obtain funding for public buildings or rehabilitation of public infra-

structure. Some of the Romanian residential developers have started to create their own financial systems, whereby the buyer may put a down payment in monthly instalments over a maximum period of five years, and can take a loan to cover the remaining amount that is usually 40-50% of the value of the property³⁵, being an alternative to mortgage loans.

The Romanian construction sector has a continued history of late payments, particularly from the public administration.

The Romanian construction sector has a continued history of **late payments**. Despite the transposition of the 2011 Late Payment Directive with Legea 72/2013 in April 2013, payment culture is still worrisome, particularly from the public administration³⁶. The country also has the largest share in Central and Eastern Europe (CEE) of construction companies paying their suppliers late. Romanian construction and real estate companies accounted for 16% of the total overdue payments of non-financial corporations in 2014³⁷. More recently, Romania made some progress in reducing the amount of time it takes for payments to be made, however the number of invoices, which are never paid, stood at 4% in 2017, the highest in the region³⁸.

According to European Payment Report, payment terms on average allowed by businesses to their customers (B2C) reached 21 days, 31 days for B2B and 35 for PA2B in 2017. The average time taken by customers (B2C) to pay was 15 days, 28 days for B2B and 40 days for PA2B. Although the Payment Index shows an improving trend with a slight increase going up from -0.3 in 2016 to 0.1 in 2017, the performance of late payments in public sector is still poor³⁹. Debtors in financial difficulties and administrative inefficiency are main causes of late payments.

According to Days Sales Outstanding (DSO), payment duration in the construction sector in Romania is on average between 90 to 120 days, below the national average of 73 in 2017⁴⁰, and the level of protracted payments remains high. As construction projects usually take an extended amount of time to be finished, buyers depend heavily on protracted payments, which is increasing the risk in the value chain. Similarly, public sector institutions are taking more time to make payments than private companies, which contributes to overall late payment practices⁴¹. Moreover, the construction sector reports the highest percentage of companies with up to 30 days of delay in

payment, amounting to 31%. Conversely, the manufacturing sector in stands as the best sector with regards to payment in time, with 31% of companies doing so⁴².

Time and cost of obtaining building permits and licenses

Romania ranked 150th out of 190 in 2017 in 'Dealing with Construction Permits', according to the World Bank's Doing Business Report 2018. This is a significant drop from its 95th rank in the previous year.

Building a warehouse requires **24 administrative procedures** (above the OECD high-income average of 12.5) and four more than the year before. It takes 260 days (well above the 154.6 average) and again, well above 2016 (Table 3)⁴³. The estimated cost is 2.1% of the cost of the warehouse, slightly higher than the OECD high-income average of 1.6%. Namely, obtaining the urban planning certificate is an essential requirement, since it defines the relevant technicalities (utilities, accessibility, proximity, height of the building, land use, etc.) but it does not allow the initiation of the works⁴⁴. The **building permit** is thus required, which takes 30 days to obtain and costs RON 18,777, which continuously increased since 2015. Once obtained, it is valid for 12 months, setting the maximum timeframe for the start of construction. Upon completion of the building, it takes 129 days to obtain the final assessments, including 75 days for water and sewage connection⁴⁵.

Table 3: Construction procedures timing and costs in Romania

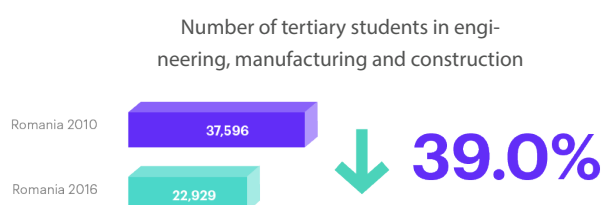
Procedure	Time to complete	Associated costs
Obtain topographical documentation	7 days	RON 2,000 / EUR 429
Obtain approval of topographical documentation and land registry excerpt	15 days	RON 220 / EUR 47
Obtain urban planning certificate (Certificat de Urbanism)	30 days	RON 14 / EUR 3
Obtain project clearance from Environmental Protection Agency	21 days	RON 500 / EUR 107
Obtain project clearance from water supply and sewerage authority	18 days	RON 72 / EUR 15
Obtain project clearance from Health Department	15 days	No charge
Obtain project clearance from General Inspectorate for Emergency Situations	7 days	RON 250 / EUR 53.6

Procedure	Time to complete	Associated costs
Obtain project clearance from the electric power supply authority	15 days	RON 95 / EUR 20
Obtain updated land registry excerpt	2 days	RON 20 / EUR 43
Sign contract with the solid waste authority	1 day	RON 2,667 / EUR 572
Notarize statement about non-existence of land disputes	1 day	RON 15 / EUR 3.2
Register project with the Order of Architects & pay architecture stamp duty	1 day	RON 989 / EUR 212
Obtain building permit	30 days	RON 18,777 / EUR 4,028
Notify the City Hall of the start of construction works	1 day	no charge
Notify the Bucharest Construction Inspectorate of start of construction works & submit schedule of inspections	1 day	RON 11,266 / EUR 2416
Notify the Bucharest Labour Inspectorate of the start of construction	1 day	no charge
Receive foundations work inspection	1 day	no charge
Receive frame inspection	1 day	no charge
Notify City Hall of completion of works and request final assessment	15 days	no charge
Notify Bucharest Construction Inspectorate of completion of construction & request final assessment	75 days	RON 2,300 / EUR 493
Receive final inspection and obtain final assessment from the Acceptance Commission	30 days	no charge
Obtain water and sewage connection	75 days	RON 2,300 / EUR 493
Obtain certification attesting the existence of the construction from the City Hall	30 days	No charge
Register the building with the Real Estate Registry	7 days	RON 999 / EUR 214

Source: Doing Business overview for Romania, World Bank, 2017.

Skills shortage

The number of **job vacancies** in the construction sub-sector decreased by 50.8% between 2010 and 2013, from 1,565 to 770. Nevertheless, they have been picking up since then, reaching 1,479 in 2015, though still much lower than before the crisis hit. On the other hand, in real estate activities the number of vacancies has recovered by growing 419.2% between 2010 and 2015 from 26 to reach 135. In parallel, **adult participation in education and training** in the construction sub-sector was a mere 2.2% in 2013, though higher than 2009 (1.2%). Moreover, the number of **tertiary students** in engineering, manufacturing and construction decreased by 39.0% from 37,596 in 2010 to reach 22,929 in 2015. Specifically, tertiary students in architecture and building dropped by 10.1% from 4,416 to 3,971 over the same period.



Romania is currently facing high labour shortages in the construction sector. This is, moreover, expected to increase in the coming year given the introduction of the second national plan for local development (PNDL II) and the planned investment of RON 30 billion (EUR 6.4 billion) in rural areas for water, sewerage projects as well as schools or kindergartens⁴⁶. According to the Federation of Owners of Building Companies (*Federatia Patronatul Societatilor din Constructii* – PSC), there will be a lack of more than 200,000 workers in the construction sector in coming years, inter alia, in order to build projects funded by the EU⁴⁷.

Overall, 27% of the national construction workforce is unskilled. In total, by 2020, there will be the need for 50,000 qualified workers for the insulation and thermal rehabilitation of buildings.

Training courses for these professions last two months, improving salary expectations by up to 15%. In fact, due to the low wages, the best and most skilled workers often prefer to work on their own account and migrate to third countries offering higher salaries⁴⁸. To prevent the migration of skilled workers and therefore address labour shortages, the Federation of Owners of Building Companies (*Federatia Patronatul Societatilor din Constructii* – PSC) believes that wages in the sector should be increased and even doubled over the coming years, so as to attract back to Romania skilled workers who left⁴⁹.

Sector & sub-sector specific issues

Material efficiency and waste management

In 2014, 422 million tonnes of **construction and demolition (C&D) waste** were collected (compared to 481 million tonnes in 2012⁵⁰), accounting for 8.5% of the total collected waste⁵¹. Although there is currently no specific legal framework governing the management of C&D waste, art.17 of the Law nr. 211/2011 defines the obligation to achieve a level of valorisation of 70% of the mass of the non-hazardous waste from construction and demolition activities in 2020, in compliance with Directive 2008/98/EC. It indicates measures such as the effective separation of C&D waste from other wastes, monitoring of its real composition, processing and separation of C&D waste materials based on mobility, and reutilisation of resulting fractions in road infrastructure⁵².

Climate and energy

The broad construction industry accounted for 12.3% of all greenhouse gases emissions in 2014⁵³. **GHG emissions** (carbon monoxide and dioxide, methane, nitrous oxides and particulate matter) from activities in the construction and real estate sub-sectors amounted to 1,858,181 tonnes and 452,584 tonnes in 2014, respectively. This represents a 15.6% increase for the construction sub-sector and a 7.2% decrease for real estate activities.

5

Innovation in the construction sector

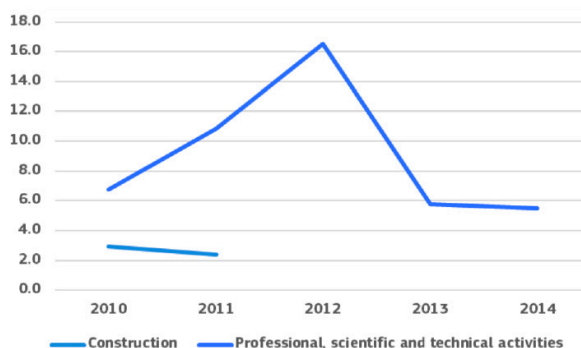
Innovation performance

With an overall innovation and R&D expenditure performance well below the EU average, Romania is classified as a **Modest Innovator**, being the worst performing country in the EU.

With an overall innovation and R&D expenditure performance well below the EU average, Romania is classified as a **Modest Innovator** the lowest classification according to the European Innovation Scoreboard 2017, being the worst performing country in the EU⁵⁴. Its innovation performance has been declining by 14.1% relative to that of the EU in 2010. Its relative strengths lie in an Innovation-friendly environment, Sales impacts, and Human resources, while its relative weaknesses lie in Innovators, Firm investments, and Finance and support.

Business enterprise R&D expenditure (BERD) in the broad construction sector is generally very low, in line with the country's weak position in innovation (Figure 10). BERD in the construction sub-sector fell by 85.5% between 2010 and 2014⁵⁵, from EUR 2.9 million to EUR 0.4 million, the lowest across the construction industry. Real estate activities had a BERD of EUR 0.95 million in 2012⁵⁶. On the contrary, professional and technical activities such as engineering and architecture reported the highest BERD expenditure in 2014, amounting to EUR 5.5 million. However, this number is 18.8% below 2010 levels and significantly below pre-crisis levels.

Figure 10: Business enterprise R&D expenditure (BERD) per construction sub-sector in Romania over 2010-2014 (EUR m)



Source: Eurostat, 2017.

In line with the low BERD expenditure, the total **R&D personnel** (full-time equivalents – FTE⁵⁷) in the construction sub-sector fell by 63.2%,

from 125 in 2010 to 46 in 2014. Likewise, the number of FTE in the real estate sub-sector was the lowest across all sub-sectors, having fallen by 75.0% over 2012-2014, from 20 to 5. As with BERD expenditure, the professional and technical activities sub-sector reported the largest number of FTE, which increased by 87.1% over 2010-2014, from 233 to 436, though significantly lower than the peak of 1,216 in 2012.

Coherently with the situation depicted by the BERD and the FTE, the number of **construction-related patent applications** in the European Patent Office (EPO) and United States Patent and Trademark Office (USPTO) was very low, standing between 0 and 2 each year between 2010 and 2016. Furthermore, no Romanian construction-related firms were part of the top 1,000 EU companies by R&D (industrial sector ICB-3D)⁵⁸.

Eco-innovation and digitalisation

The **National Strategy for Research, Development and Innovation for 2014-2020** (*Strategia națională de cercetare, dezvoltare și inovare 2014-2020*) highlights the importance of the modernisation of the current research infrastructure and identifies the financial support for the construction of new and development of existing infrastructure as a key priority area⁵⁹. The Research Institute for Construction Equipment and Technologies (*Institutul de Cercetări pentru Echipamente și Tehnologii în Construcții* – ICECON) takes part in national and European research projects related to materials, innovative construction products and technologies and C&D waste valorisation, as well as being involved in the development of technical regulations, standards and good practices in construction, in line with EU regulations. Instances of EU projects include 'Innovative strategies, methods and tools for occupational risks management of manufactured nanomaterials in the construction industry' and 'Performance of bio-based building materials'⁶⁰.

There is currently a push in Romania for a **wider usage of Building Information Modelling (BIM)**. In fact, the Ministry of Regional Development and Public Administration is developing a construction code which includes BIM – it is however unclear what the provisions will be. Moreover, the Ministry of Transportation has started using BIM in the management of projects, but it is not yet a requirement. Overall, BIM remains mostly used in private projects and is often pushed by foreign investors who require its usage to all involved parties of the construction projects. In order to raise awareness, the Society of Construction Law in Romania offers Seminars on BIM. Still, more trainings should be offered in order to increase the currently low level of usage of BIM in Romania⁶¹.

6

National & Regional Policy & Regulatory Framework

Policy schemes

To facilitate access to housing loans and stimulate the construction sector, the government launched the **First Home Programme** (*Programul Prima Casă*) in June 2009. Under the programme, managed by the National Guarantee Fund for Loans to SMEs, the state issues guarantees of up to 50% of the value of the mortgage offered by adhering banks⁶². For newly built dwellings, the borrower must pay 5% of the house price upfront, for dwellings up to EUR 70,000 and any amount above the EUR 66,500 threshold. For old dwellings, 5% of the price must be paid upfront, for dwellings priced at up to EUR 60,000, as well the difference between EUR 57,000 and the house price⁶³. The total budget for 2016 was set at RON 2.94 billion (EUR 630.4 million). For 2017, the scheme was amended to further stimulate the purchase of newer dwellings and therefore have a greater impact on the residential building sector. Thus, guarantees of 50% will apply to the purchase of new dwellings (with a maximum age of 5 years), whereas guarantees of 40% of the value of the loan are granted for the purchase of properties older than 5 years. The budget for 2017 was initially set at RON 2.5 billion (EUR 536.1 million), i.e. 15% lower than 2016, but was recently increased to RON 2.7 billion (EUR 579.0 million) through an unallocated RON 175.5 million (EUR 37.6 million) from the 2016 budget⁶⁴. The budget will decrease in 2018 to stand at around RON 2 billion (EUR 428.8 million) and will further decrease in the following years, to reach a planned RON 1.5 billion (EUR 321.7 million) budget in 2021^{65 66}. Given the smaller budget in 2018, the eligibility criteria are expected to be stricter. Specifically, the scheme is expected to only be available to Romanian with incomes below RON 5,000 (EUR 1,072.3) per month. Overall, since 2009 and until November 2017, 238,305 were granted worth a total of RON 20.8 billion (4.5 billion)⁶⁷.

Another policy in place in order to foster access to housing is the **reduced 5% VAT** rate applying to dwellings under the value of RON 450,000 (EUR 96,500) and with a maximum usable area of 120 square meters, excluding any housing annexes. Moreover, at the time of purchase, the dwelling should be fit to live and the land on which the house or the individual plot of land of the apartment cannot exceed 250 square meters⁶⁸.

Given the high rate of severe housing deprivation, housing affordability issues (see Access to housing) and the low share of social housing (only 2.3% of the total housing stock), the government is actively supporting the construction of new social dwellings, through the National Housing Agency (*Agencia Națională pentru Locuine* - ANL). The two main programmes of the ANL are "Rental Housing Units for Young People" and "Mortgage-financed Dwellings". These were launched in 2001 and are still ongoing. For 2018, the budget coming from state subsidies for housing construction is, however, expected to be cut by 52% to stand at RON 128.8 million (EUR 28 million)⁶⁹.

The **Rental Housing Units for Young People** (*Programul de construcții locuine pentru tineri, destinate închirierii*) entails the construction of rental dwellings for young people aged 18 to 35, who cannot afford to buy or rent a property at market price. The units are raised on lots offered by city councils, and can be bought by the tenants after minimum one year of lease⁷⁰.

According to ANL, in 2015 there were more than 130,000 requests from young people, and 87,000 apartments were allocated, with the total funding amounting to RON 87.5 million (EUR 19.3 million).

The same year, 707 new dwellings were started, 1,149 were under construction and 733 were delivered⁷¹. For the year 2017, ANL plans to have 2,800 dwellings under construction⁷².

The **Mortgage-financed Dwellings Programme** (*Locuințe prin credit ipotecar*) entails the construction of dwellings that can be purchased through a mortgage, aiming to increase the stock of privately owned properties. The ANL partially covers the instalments. In 2014, the allocated funds amounted to RON 8.4 million (EUR 1.9 million) and 186 new dwellings were constructed. The eligible dwellings are built on lands assigned by the local authorities to the ANL⁷³.

In addition, under the authority of the Ministry of Regional Development and Public Administration, the National Company for Investment (*Compania Națională de Investiții* - CNI) launched the **National Programme for Public or Social Buildings** in 2001, currently ongoing. With a budget of RON 695.75 million (EUR 155.4 million) for 2015, the Programme finances the construction of public or social buildings, such as cultural institutions, hospitals, schools, sport halls, etc.⁷⁴

Insurance and liability related regulations

According to the Law on The Quality of Constructions (Law Nr. 10/1995, modified by the Law nr. 177/2015⁷⁵), the construction contractor is liable for the timely execution of the works under the agreed conditions, hidden defects and the quality of the building structure and materials. Hidden defects in the construction are guaranteed by the contractor for ten years, whereas defects affecting the structural core of the construction are guaranteed for the entire life of the building⁷⁶. However, parties can negotiate to limit or extend liability, unless otherwise provided by law. Contractually, parties can predetermine the value of the loss and agree to cap contractor liability. Contractor's liability can be limited as a result of a negotiation process. There is no unified practice in relation to the establishment of a cap on liability. If agreed, it is usually established as a percentage of the entire value of the contract (usually a minimum of 10%). Generally, only delay penalties are capped⁷⁷.

The use of voluntary insurance is expanding in the construction sector. Several types are available, including civil liability towards third parties, civil liability of civil engineers and architects, professional civil liability arising from the design activity and the "All Risks" insurance for construction fitting works and for the constructor's liability. Moreover, after the handover of the construction works, Law no. 260/2008 on the mandatory insurance of homes against earthquakes, landslides and floods stipulates that all natural and legal persons must insure their property⁷⁸.

Insurance costs differ according to the level of complexity of the project. For a simple project (e.g. an office building), the value of the policy will be 0.14 – 0.16% of the value of the project. For the rehabilitation of a railway, the cost is 0.4-0.5%. If the projects are very complex, involving digging and other dangerous activities, (e.g. building an underground line) the value may be between 0.8 and 1%⁷⁹.

Building regulations

The main laws to be followed regarding construction works include⁸⁰:

- Law on Building Permits (50/1991; 125/1996; 453/2001)
- Law on Construction Quality (10/1995)
- Housing Law (114/1996 and Ordinance 44/1998)
- Government Decision on General Urban Regulation (525/1996)
- Law on Territorial Planning and Urbanism (350/2001)
- Law on Protection of the National Cultural Heritage (1998)

Other important legislations which regulate construction activities at a broader general level include the **Romanian Constitution and the New Romanian Civil Code** (entered into force in October 2011). Laws and regulations for specific building types (residential, hotels, office buildings, schools, hospitals, etc.) are also in place⁸¹.

In October 2016, both the Law on Building Permits and the Law on Territorial Planning and Urbanism were amended by Law 197/2016. Various modifications have thus been introduced to streamline the legislative framework and ensure compliance with the provisions, including the possibility to issue building permits in 15 days from the submission date in cases of urgency, as opposed to the standard 30 days. Moreover, fines for breach of the conditions stated in the construction permit have been increased substantially, up to a maximum of RON 100,000 (EUR 22,000) compared to RON 10,000 (EUR 2,200) prior to the amendment⁸².

The Law on Building Permits and Law on Territorial Planning and Urbanism have further been amended in December 2016 by the Government Emergency Ordinance No. 100/2016 ("GEO 100"). These changes include stricter rules in order to initiate an urban zone plan ("*Plan Urbanistic Zonal* – PUZ) for investment projects located within city limits.

Moreover, in order to increase transparency, the decision-making process through which county councillors vote for or against an urban planning documentation will need to be recorded in written. Overall, the amendments aim to make the planning procedure for construction work tougher, increase transparency and reduce corruption⁸³.

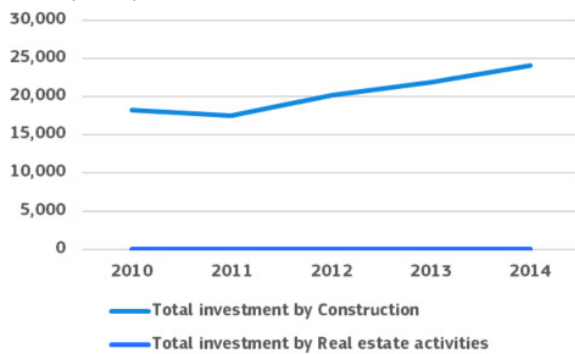
7

Current Status & National Strategy to meet Construction 2020 Objectives

TO 1 - Investment conditions and volumes

Total **investment by the narrow construction sub-sector**⁸⁴ has been on an increasing trend after dropping to a record low of EUR 17.5 billion in 2011, but has not yet reached pre-crisis levels (Figure 11). Namely, it reached EUR 24.0 billion in 2014, 31.5% higher than in 2010.

Figure 11: Investment by the Romanian narrow construction sector (EUR m)



Source: Eurostat, 2017.

↑ 1.8%

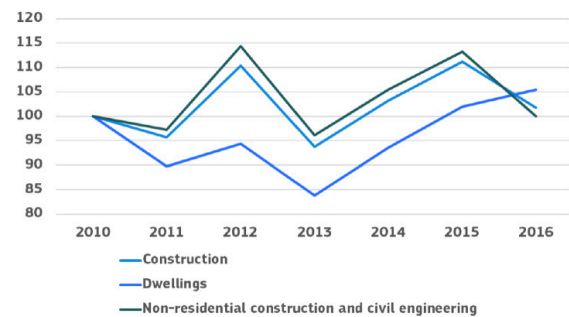
Total investment in the broad construction sector, change 2010-2016

Total **investment in construction**⁸⁵ dropped until 2009, yet, it has been slightly recovering since then increasing by 1.8% between 2010 and 2016 (Figure 12). Investment in non-residential construction and civil engineering experienced the hardest hit as a result of the cut in government spending due to the crisis, falling by 47.4% over 2008-2009. It has been on the recovery path since then, despite some fluctuations increasing by 13.3% in 2015 compared to 2010, but only by 0.1% in 2016 compared to 2010.

Similarly, investment in dwellings experienced a prolonged decline in the aftermath of the financial crisis, but has started to pick up in 2013 increasing by 25.8% until 2016. In absolute terms, investment in the construction sector totalled EUR 17.6 billion in 2014, out of which EUR

3.7 billion was invested in dwellings and EUR 13.9 billion was devoted to non-residential and civil engineering⁸⁶.

Figure 12: Investment in the Estonian construction sector between 2010-2016 (2010=100)



Source: AMECO, 2017.

Total **inland infrastructure investment** as a share of GDP experienced a declining trend since 2010, dropping from 2.7% to 2.1% in 2014. Investment in rail infrastructure, however, has picked up significantly by 64.5% between 2010 and 2014 from EUR 168.8 million to reach EUR 277.7 million, but was still 12.2% lower than 2008. Over the 2010-2014 period, the country saw a 12.5% decrease in road infrastructure investment from EUR 2.9 billion to EUR 2.5 billion.

Household renovation spending as a share of household disposable income significantly increased between 2010 and 2011 from 1.2% to 4.8%, representing an overall increase in renovation spending from EUR 899.5 to EUR 3684.4. Since then, household renovation spending as a share of household expenditure decreased to reach 2.9% in 2015. This is still much higher than EU-28 average which stood at 0.8% in 2015.

To offset the decline in investments, the Romanian government approved a series of measures and legislative amendments in 2015, such as **VAT reduction** for tourism services from 24% to 9%, which is expected to boost investments in hospitality and accommodation services construction⁸⁷. Moreover, the standard VAT rate was cut from 24% in 2015 to 20% in 2016 and 19% in 2017, being reduced to 5% for properties with an area of up to 120 square meter⁸⁸.

In September 2016, the government approved the revised **General Master Plan for Transport** (*Master Planul General de Transport*). It details strategic interventions in transport infrastructure up until 2030, with a total value of EUR 43.5 billion⁸⁹. For road transport in particular, the Plan foresees the construction of 1,219 kilometres of 11 new highways until 2030, as well as 1,907 kilometres of 19 expressways, for a total investment in the sector of about EUR 27.1 billion. Specifically, an investment of EUR 13.3 billion is devoted to highways, EUR 10.8 billion for expressways, EUR 2.5 billion for other roads and rehabilitations and EUR 0.46 billion for bypasses. Instances of main road projects include the Sibiu - Pitesti highway, as well as the Ploiesti-Buzau-Bacau-Pascani expressway. An additional EUR 10.2 billion is dedicated to the railway sector, for 25 projects including the modernisation and electrification of 1,357 kilometres of railway and the development of over 1,000 kilometres of high-speed railway lines⁹⁰.

In 2017, Transport Minister Felix Stroe presented a package of priority infrastructure projects to be implemented in the future multiannual financial framework 2018-2027.

The road infrastructure package includes two highways and three fast roads. This includes the South Road, a 397 km long expressway, providing a fast road connection between Bucharest, Craiova, Drobeta Turnu-Severin, Caransebes and Lugoj, with an expected cost of EUR 2.5 billion.

The implementation of this plan, and infrastructural investments in general, will be supported through national and EU funds.

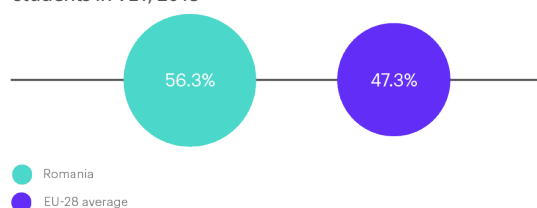
With regards to **national funds**, the government established in 2018 a Sovereign Development and Investment Fund holding a mixture of equity in state-owned companies and cash. The Romanian State contributed EUR 2 billion. The aim of the fund is to make profit by developing and financing bankable and sustainable infrastructure projects and in other sectors of the economy⁹².

In terms of EU funding, Romania has a total allocation of EUR 30.8 billion from **European Structural and Investment Funds** (ESIF), with EUR 6.1 billion specifically for network infrastructures for transport and energy⁹³. The European Commission adopted the 2014-2020 Large Infrastructure Operational Programme (LIOP) for Romania in July 2015, an investment package of almost EUR 9.5 billion from the EU Regional Funds to be invested in transport, environment and energy projects⁹⁴. In this respect, the European Investment Bank (EIB) plays a crucial role, providing EUR 1.04 billion worth of new loans in 2016 alone, of which EUR 760 million dedicated to priority infrastructure projects such as large-scale energy infrastructure and environmental improvement (EUR 360 million) and water and municipal solid waste management (EUR 300 million under the Large Infrastructure Operational Programme)⁹⁵. In addition to ESIF, Romania had signed agreements for EUR 1.2 billion for projects under the Connecting Europe Facility (CEF) by the end of 2016⁹⁶.

However, Romania's low absorption rate of EU funds limits the effective economic impact of investments. As of end of October 2016, the absorption of EU funds under the 2007-2013 programming period stood at 77.5%, the second lowest in the EU, whereas absorption of EU funds for the 2014-2020 period stood at 0.98%, compared to the EU average of 2.6%⁹⁷. Efforts in this respect have been made through an agreement with the European Bank for Reconstruction and Development (EBRD), aiming to support Romania in efficiently using EU structural funds in priority areas including infrastructure⁹⁸.

TO 2 – Skills

Participation of upper secondary students in VET, 2015



Participation of upper secondary students in **vocational education and training** (VET) stood at 56.3% in 2015, a slight decrease compared to 2014, but above the EU average of 47.3%. Despite this, the employment rate of VET graduates was well below the EU average, standing at 63.3% in 2016, compared to the EU average of 75%. This is attributable to the fact that VET qualifications and curricula are insufficiently aligned with the needs of the labour market. Moreover, adult participation in **lifelong learning** was at 1.2% in 2016, the lowest in the EU (10.7%). The country is taking steps to address the shortfalls of its VET system, with a national VET strategy being adopted in 2016 to improve the alignment of qualifications with the labour market, increasing participation and improving the quality of the training staff. Furthermore, efforts are being made to implement a dual VET system to increase the participation of companies in the training process and further hone the practical skills of students⁹⁹.

The construction sector used to be an attractive domain for higher education graduates in Romania, particularly prior to the crisis, when it was booming. However, in recent years, the comparatively lower entry-level salaries for educated graduates have shifted their preference towards jobs in alternative sectors, with the ICT industry being the preferred sector for 73% of them, compared to only 15% for the construction sector¹⁰⁰.

In 2014, the Federation of Owners of Building Companies started a programme, co-financed through the European Social Fund, aiming to provide guidance, training and qualifications to 962 people in construction related jobs¹⁰¹. The project, called **"Qualify! Give yourself a chance at a better life!"** (*Califica-te! Da-ti o sansa la o viata mai buna*), seeks to increase the competitiveness and adaptability

of the construction workforce through the promotion of the benefits of life-long professional training and its access and participation. The programme entails training courses based on the needs of the construction market, including insulation, carpentry, floor fitting, blacksmithing, installation of aluminium and plastics fittings, etc.

Another important private initiative was initiated by **Henkel Romania Adhesives Division**. The Austrian corporation, in a consortium with the Romanian-German Foundation from Timisoara and Sibiu, offered free professional training and latest information on construction adhesive substances and technologies to 740 construction workers. The project aimed to increase the skill level of construction workers and sellers of construction products, and included training courses on fittings, tile laying and installation of thermo-insulation systems for buildings. The courses were based on a dual vocational education training method, combining both theoretical and practical knowledge. Over its 18 months of implementation, 90% of participants obtained qualification certificates recognised both at the national level by the Ministry of Education, as well as at the European level. The project was co-financed through the European Social Fund and had a budget of about EUR 1 million¹⁰².

Moreover, the **Casa de Meserii a Constructorilor** - CMC (The Builder Vocational Training School) is responsible for the development of the human capital base in the construction sector and the promotion of continuous professional training. To this end, it offers a variety of courses, including stonemasonry, plastering, waterproof insulation, roofing and flooring, but also project management and 'training of trainers'. In order to ensure that the training offer is in line with the requirements of the industry, CMC promotes the collaboration between a variety of stakeholders, from national trade associations to relevant employer associations, which are actively involved in defining the needs and actions to be taken for the development of the construction human capital. Moreover, CMC also participates in national and international projects to support adult education and training, develop energy efficiency-related skills and expand the skilled workforce in the sector¹⁰³.

Finally, under Horizon 2020, the EU funds the project **Fit-to-nZEB** from 2017 to mid-2019 aiming to provide innovative training schemes for retrofitting dwellings to nZEB-levels. The five goals of this project comprise the elaboration of a set of learning outcomes on deep energy renovation; the development of new training schemes; the review of national educational plans; the training of trainers and the support and monitoring of pilot courses¹⁰⁴.

TO 3 - Resource efficiency / Sustainable construction

Energy efficiency and sustainable construction strategies in Romania are governed by Law no. 121/2014 on energy efficiency, implementing Directive 2012/27/ EU on energy efficiency.

This law defines the main actions to be taken in order to achieve the 2020 energy saving targets. In addition, **Law 159/2013** transposes the provisions of Directive 2010/31/EC into national legislation, by amending **Law 372/2005** regarding the energy performance of buildings (e.g. nZEB, EPCs, etc.). The Romanian government approved in January 2016 a further amendment to Law no. 372/2005 on the energy performance of buildings. The Law stipulates the obligation of mayors in urban areas with more than 5,000 inhabitants to initiate multi-annual local plans to increase the number of new and existing buildings whose energy consumption is nearly zero. Based on local plans, the Ministry of Regional Development will develop a national plan to increase the number of new nearly-zero energy buildings (nZEB) and encourage the effective transformation of existing buildings into nZEB.

In line with the requirements of the Energy Efficiency Directive (2012/27/ EU), the Romanian government approved the **National Energy Efficiency Action Plan (NEEAP)** for 2014-2020, setting out the estimated energy consumption and planned energy efficiency measures to meet the 2020 energy efficiency targets. The Romanian NEEAP has two objectives, namely the reduction of primary energy consumption to 43 million tonnes of oil equivalent (toe) by 2020 and the reduction of final energy consumption to 30 million toe¹⁰⁵. These goals will be achieved through a series of programmes initiated by the Regulatory Authority for Energy, including the 'The Thermal Rehabilitation of Blocks of Flats Programme', the 'Heating 2006-2020 - heat and comfort' and the 'Energy efficiency improvement in households and low-income communities'. These are coordinated by the Ministry of Regional Development, Public Administration and European Funds.

The **Thermal Rehabilitation Programme** (*Programul de Reabilitarea termica a blocurilor de locuinte*)¹⁰⁶, launched in 2009 by the Ministry of Regional Development and still ongoing, aims to increase energy efficiency of residential buildings built between 1950-1990 in order to reduce the specific annual consumption of energy for heating below 100kWh/m². Under the programme, which had a total budget of RON 50 million (EUR 11.3 million) for 2015 and RON 25 million (EUR 5.6 million) for 2016, 80% of the costs of rehabilitation works are covered by state and local budgets, with homeowners (beneficiaries) providing the remaining amount¹⁰⁷. Eligible activities under the programme include the thermal insulation of the external walls of the block, replacement of windows and exterior doors of apartments and thermal and hydro-insulation of the roofs and floors. Since its introduction, 1,652 apartment blocks and about 62,000 flats have been rehabilitated, although this

corresponds to only about 2% of the 85,000 eligible blocks. The government planned to finance the thermal rehabilitation of about 6,000 flats in 2017, almost double the figure for 2016, through a budget of EUR 8.8 billion¹⁰⁸. This is supplemented by EU funds. Indeed, in March 2016, a call for projects for energy efficient activities in residential buildings was launched in the framework of the Operational Programme Regional Development 2014-2020, with a total financial allocation of EUR 447.8 million. The 192 projects received at the close of the call in November 2016, with a value of EUR 335.6 million, are in the process of being evaluated¹⁰⁹.

The programme **Heating 2006-2020 - Warmth and comfort** (*Programul Termoficare 2006-2020 - caldura si confort*), initially introduced in 2006 and planned until 2015, was extended until 2020, with a total available budget of RON 2.12 billion (EUR 465.8 million)¹¹⁰. The programme aims to modernise, refurbish and develop centralised heat supply of local authorities, as well as improving the quality and accessibility of the heat supply. Under the scheme, local administrations can benefit from a co-financing from the state of up to 70% of the value of investments¹¹¹.

Moreover, the project **Energy efficiency improvement in households and low-income communities** (*Proiectul Imbunatatirea eficientei energetice in gospodariile si comunitatile cu venituri reduse din Romania*) was carried out between 2011 and 2016 with the overall aim of reducing CO2 emissions from buildings by promoting the specialisation of construction professionals (architects, building engineers, energy auditors, etc.) in energy efficiency techniques. The project, which targeted local authorities in six pilot municipalities, included both a training and an actual intervention component, and resulted in the thermal rehabilitation and installation of central heating in social housing blocks, through the organisation of courses that trained 826 construction professionals. It benefited from a budget of USD 3.05 million (EUR 2.8 million) from the Ministry of Regional Development and the United Nations Development Programme (UNDP)¹¹².

The EIB also contributes to the goals under National Energy Efficiency Action Plan (NEEAP). For instance, in 2016, the EIB lent EUR 19.5 million, to finance the second phase of the **refurbishment programme for multi-family housing** in Bucharest. The first tranche of EUR 22.5 million had already been made available in October 2014. Overall, around 50% savings in the heating energy consumption is expected with a targeted energy savings of 74 GWh when 140 buildings comprising 9,500 apartments are fully refurbished¹¹³. In the last 25 years, since the EIB Group has operated in Romania, EUR 480 million were approved for the improvement of energy efficiency in residential buildings in Bucharest¹¹⁴.

In 2017, the government approved a **state aid scheme** in order to boost investments in the construction and/or refurbishment of generation capacities for energy production from less exploited renewable energy resources, such as biomass, biogas and geothermal energy. The aid amounts to EUR 100 million and targets enterprises active in electricity and thermal energy production and local municipalities. A non-refundable financing of up to EUR 15 million can be provided for up to 45% of total eligible expenses¹¹⁵.

In 2017, the government approved a state aid scheme in order to boost investments in the construction and/or refurbishment of generation capacities for energy production from less exploited renewable energy resources.

TO 4 - Single Market

Romania scores relatively well with respect to the metrics of the **EU Single Market Scoreboard**, particularly in terms of Infringements, Internal Market Information System, trade integration in the single market for goods, which is above the EU average.

Nevertheless, it performs less well with regard to Transposition of law and Public Procurement. It scores poorly with respect to the one bidder (i.e. the proportion of contracts awarded with just one bidder), no calls for bids (i.e. the proportion of procurement procedures negotiated with a company without a call for tender), aggregation (i.e. the proportion of procurement procedures with more than one public buyer) and award criteria (i.e. the proportion of procedures awarded only on the basis of lowest price) indicators¹¹⁶.

Indeed, public contracts in the construction sector are often awarded to companies based on corrupted practices or political connections, leading to low quality construction works that do not compare with the amounts of investments flowing in. According to a study carried out under the EU-funded project ANTICORRP, procurement of non-EU funded contracts is more prone to corruption, particularly at the county and local level, due to weak administrative capacity, and especially when state-owned companies are implicated¹¹⁷.

A survey by the European Commission conducted in 2014 shows that more than one-third of surveyed citizens believe that "bribery and abuse of office" are widespread among officials issuing building permits. In 2016, a senior advisor to former Bucharest mayor was sentenced to four years in jail for committing such a crime. In fact, he had obtained building permits in exchange of a EUR 200,000 bribe.

To address the issue of corruption, dedicated anti-corruption agencies were set up, such as the **National Integrity Agency** (ANI), aiming to enforce conflict of interest legislation¹¹⁸, and the **National Anti-corruption Directorate** (DNA), a special criminal prosecution agency. The 2001 Freedom of Information Act (FOIA, Law 544/2001) was implemented, and measures to increase public procurement

transparency and simplification were introduced. For instance, in February 2014, an updated **Electronic Public Procurement System (SEAP) platform** was launched, aiming to provide electronic services to public administration institutions¹¹⁹. In May 2016, the EU directives on procurement were transposed in the national legislation and entered into force, while all the necessary secondary legislation was adopted by the end of 2016 together with a law imposing systematic ex-ante controls on conflicts of interests. In 2015, a new Agency for Public Procurement (ANAP) was established in order to strengthen preventive and detection measures in the area of public procurement and is in charge of conducting the ex-ante checks¹²⁰.

Moreover, the **National Anti-corruption Strategy 2016-2020** (*Strategia Națională Anticorupție 2016-2020* – SNA) was adopted in August 2016 to further combat corruption and ensure integrity in the public sector¹²¹. Nevertheless, through emergency ordinance 13/2017, the government approved amendments to the Penal Code in January 2017, seeking to decriminalise government corruption and abuse of power. Although the amendments were withdrawn through emergency ordinance 14/2017 following significant protests from the population, such developments may compromise efforts in the fight against corruption¹²². These criticisms – raised amongst other by the European Commission – were reiterated in early 2018, in the midst of a new proposed legislation aiming to curb the powers of Romania's National Anti-corruption Directorate (DNA). The proposed legislation would also make it harder to prosecute corruption. For instance, under the new draft law, offenders would not be legally punished for causing financial damage of less than EUR 200,000¹²³.

An important role regarding the integration of the Romanian construction market in the EU and the standardisation of construction products is played by the Institute for Research of Equipment and Technologies in Construction (*Institutul de Cercetări pentru Echipamente și Tehnologii în Construcții* - ICECON). The Institute evaluates and verifies performance in the field of construction products (in conformity with EU Regulation no 305/2011)¹²⁴. Furthermore, the Ministry of Regional Development, Public Administration and European Funds, acts as the **Product Contact Point for Construction**, providing information on the requirements applicable to construction products covered by harmonised standards or European technical assessments¹²⁵.

Regarding the implementation of **Eurocodes**, Romania has made some steps forward. All Eurocode parts are published as National Standards, with National Annexes being published on all Parts, while 11 Eurocode parts are compulsory for structural design. However, there is no regulatory framework enforcing the use of the Eurocodes in public procurement¹²⁶.

TO 5 - International competitiveness

Romania ranks 68th out of 137 economies in the 2017-2018 Global Competitiveness Index, falling twice consecutively in the last two years¹²⁷.

The country's performance in terms of the **internationalisation of its SMEs** is largely in line with the EU average, with the time and cost of the administrative processes required for export-related documentation being below the EU average. Namely, the cost of export-related document compliance was negligible in 2016, compared to the EU average of USD 16.4 (EUR 15.3), taking 1 day (against the EU average of 1.4)¹²⁸.

The Ministry for Business Environment Commerce and Entrepreneurship provides support for the internationalisation of Romanian companies, through its **Export Promotion Tools and Programs Directorate**. Its objectives include the increase of the number of Romanian companies exporting, the promotion of quality Romanian goods and services abroad, the diversification of export markets and the improvement of the methods used to identify new international opportunities¹²⁹.

In January 2017, the Ministry for Business Environment Commerce and Entrepreneurship launched the **Programme to support the internationalisation of Romanian economic operators** (*Programul de susținere a internaționalizării operatorilor economici români*) for the period 2017-2020. The programme facilitates the promotion of products and services of Romanian SMEs in foreign markets, stimulating communication and business partnerships and preparing entrepreneurs to expand to new markets. Under the initiative, up to 500 beneficiaries a year can obtain state grants of up to RON 50,000 (EUR 11,000). Such grants can be used for participation in international fairs, exhibitions and trade missions abroad, development of the company's visual identity, online presence to facilitate the promotion of goods and services, as well as training courses and market research to prepare for internationalisation¹³⁰. The allocated budget amounts to RON 18 million (EUR 4 million)¹³¹.

Moreover, the Ministry supports Romanian firms by financing the **participation to various international fairs and exhibitions** as well as economic mission abroad. These include events relevant for construction companies, such as the Fensterbau Frontale event in Nuremberg or the Construma Budapesta event in Budapest, one of the most important exhibition for the construction sector in Central and Eastern Europe¹³².

In 2010, the Federation of Owners of Building Companies put in place a **strategy to strengthen the international presence of Romanian construction companies**, particularly in priority areas such as the Middle East, North Africa and Russia¹³³. Business trips are included in the strategy in order to put Romanian companies in contact with the international markets of interest, helping them create local partnerships and secure contracts. Missions have already been carried out in Iraq (Kurdistan), Algeria, Moscow and Russia (Kaluga region), and are supported by the Ministry of Economy.

Nevertheless, difficulties have been reported in relation to the political instability of some third countries. For instance, Hidroconstructia, one of the largest Romanian construction companies, has been facing issues in the implementation of its projects in Kurdistan, due to socio-economic and political instability. The projects, with a total value of over USD 200 million (EUR 181 million), were halted temporarily or significantly slowed down, with negative consequences on

project costs and profitability¹³⁴. Still, Hidroconstructia was granted a USD 23 million (EUR 18.6 billion) guarantee from EximBank in early 2018 allowing the Romanian company to run a USD 115.5 million contract in Jordan, as a result of winning a tender organised by the Arabian Potassium Company. Under the contract, Hidroconstructia will conduct various construction works, including waterproofing, metallic, mechanical and electrical works¹³⁵.

8

Outlook

The Romanian construction sector has experienced a considerable decline since 2008, in terms of workforce, number of companies and production. the UK and EU.

The Romanian construction sector has experienced a considerable decline since 2008, in terms of workforce, number of companies and production. However, the outlook for 2018 and following years is indicative of a gradual recovery across the industry, supported by a buoyant economic context. GDP is set to grow by 3.7% in 2018 to RON 682.8 billion (EUR 146.5 billion). The improved macroeconomic situation will therefore be accompanied by positive growth in the construction sector, forecast at an annual rate of 2.0% in 2018, 3.8% in 2019 and 5.4% in 2020. This is expected to slow down in subsequent years, at an average annual rate of 2.5% over 2021-2026¹³⁶.

GDP growth forecast
2016-2018  **3.7%**

Moreover, the number of workers in the broad construction sector is set to pick up, increasing by 11.6% in 2018 compared to 2016, reaching 679,538 people. Similarly, the number of companies in the sector is projected to increase by 12.5% between 2016 and 2018, reaching 101,210 firms. In the same vein, the value added of the broad construction sector is expected to continue its strong recovery and increase by 11.3 over the same period to reach EUR 10.5 billion. These developments will be accompanied by an 11.1% increase in turnover in 2018 relative to 2016, reaching EUR 34.0 billion.

Number of enterprises in
the broad construction
sector forecast 2016-2018  **12.5%**

The housebuilding segment will be one of the main drivers of the recovery of the Romanian construction sector, as supported by a combination of governmental housing schemes, increasing household spending power and a more attractive mortgage market. Indeed, resi-

dential construction is expected to grow at an average rate of 4.9% until 2020¹³⁷. Moreover, renovation and thermal rehabilitation of residential buildings also displays an important market potential, as around two-thirds of the dwellings are older than 35 years and lack efficient thermal insulation. This market alone is estimated by the Ministry of Regional Development to be worth EUR 1.5 billion yearly, if backed by proper government support and EU funding¹³⁸.

The non-residential sector experienced a promising growth in 2016, with 956,000 m2 of retail, logistic and office spaces being completed and delivered, an 88% increase compared to 2015. This rapid pace of development continued during 2017 and is expected to continue in 2018. It is predicted that demand will rise for new office constructions as current and new players in the market will plan to increase their occupied space by 20-50%. As for the retail real estate segment, no new significant projects were announced in Bucharest for the coming years, yet, given the high level of growth it is expected that investments will continue to grow. Such investments will focus on less populated cities and in the expansion of modern retail space¹³⁹.

The civil engineering segment is also set to be a main driver of growth for the construction sector, due to the important planned investments in public infrastructure and substantial contributions from EU funds. In particular, transport infrastructure is expected to be the leading segment, spurred by extensive investments under the General Transport Master Plan, with railway infrastructure alone being forecast to grow at an annual average of 5.5% until 2020¹⁴⁰. However, hurdles remain in the investment and management of large infrastructure projects in Romania. For instance, 2017 saw the construction of 24km highways nationwide, significantly below the government target. Given low EU funds absorption and limited state budget, it is expected that the construction of at least 156km of roads in 2018, as targeted by the government, will not be achieved¹⁴¹.

In this respect, greater and improved absorption of available EU funds will play a fundamental role in increasing the quality and quantity of public spending on infrastructure and removing a major barrier to the growth prospects of the sector. In addition, acceleration of public procurement and project management reforms and greater transparency are needed to realise the full potential of infrastructure investments¹⁴².

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