



European Construction Sector Observatory

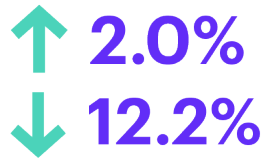
Country profile Croatia

June 2018

In a nutshell

The Croatian construction industry was severely hit by the economic crisis, but is showing signs of stabilisation with production increasing by 2.0% between 2014 and 2016. Still, the situation is far from recovery, with production in the construction sector in 2016 still 30.1% below its 2010 level. The number of enterprises has also stabilised and is slowly recovering but has decreased overall by 20.4% over the 2010-2016 period. The total turnover of the broad construction industry also experienced a 12.2% decline compared to 2010 levels amounting to EUR 9.2 billion in 2016. Again, signs of stabilisation and recovery are here, as total turnover has increased by 10.8% since 2014.

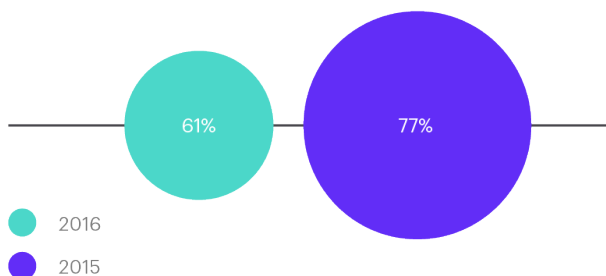
Production between 2014-2016



Broad construction total turnover
2010-2016

Difficulties in financing the construction sector are important in Croatia. A number of issues affect the performance of the Croatian construction sector, such as difficulties in obtaining credit. In 2016, only 61% of SMEs surveyed applying for a loan received it, down from 77% in 2015. Bank interest also remain high in comparison with other EU countries and are considered by 25% of SMEs interviewed as the most important limiting factor for financing through loans. Overall, the financial sector is often reluctant in supporting the construction industry, in particular in case of large infrastructural projects. In order to support such projects a legal regime has been put in place for "projects of strategic importance" which includes the creation of a one-stop-shop.

SMEs applying for a loan and receiving it



Total investment in construction increased by 10% over 2010-2016, however after reaching its peak in 2012 experienced a downward trend. Investment in non-residential construction and civil engineering experienced a similar trend, rapidly growing up until 2012, sharply declined and remained below the 2010 levels. In contrast, investment in dwellings rapidly increased by 116.1% over 2010-2016.

Despite high levels of unemployment, the sector is confronted by the lack of qualified personnel (e.g. bricklayers, carpenters, welders, roofers, etc.). In 2017, it is estimated that there would be a lack of 10,000 construction workers. In order to increase the match between education and employment, the government is planning and adopting several measures. In fact, the VET system is currently being updated and a new legislation for lifelong learning is in the pipeline. Recently, the Croatian Qualification Framework was put in place.

Despite high levels of unemployment, the sector is confronted by the lack of qualified personnel (e.g. bricklayers, carpenters, welders, roofers, etc.). In 2017, it is estimated that there would be a lack of 10,000 construction workers.

Housing policy in Croatia aims to boost the availability of dwellings, but also to ensure a good quality and affordable housing stock. To this end, the government introduced dedicated policy schemes, such as the Programme of State-subsidised Housing Construction. In 2017, a new subsidised loan scheme was put in place by the government in order to increase the access to housing for individuals below the age of 45.

Finally, the improved macroeconomic context is also expected to lead to a slight revival of the construction sector. Indeed, its total output value is forecast to rise at an average annual growth rate of 1.8% over the 2016-2020 period. This increase can be attributed to rising investments in public infrastructure supported strongly by EU, as well as commercial and energy projects. The continuously raising EU support of Croatia though EU structural funds is believed to have a reassuring impact on private investors. Thus, foreign direct investment in the country is on raise since 2014 (7.5% of the GDP) providing additional capacities for the economic growth and development.

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Key Figures

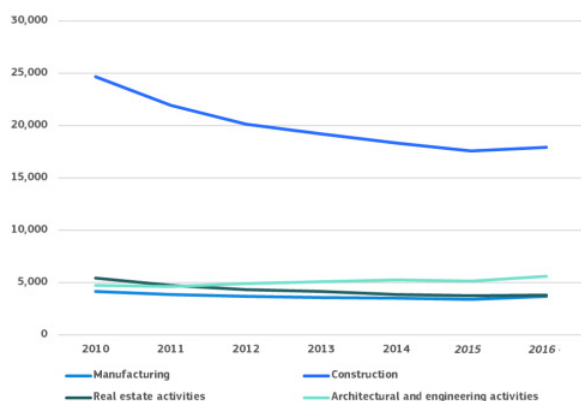
In 2016¹, there were 31,146 enterprises operating in the broad construction sector in Croatia, with the construction sub-sector (NACE F) accounting for 57.6% of the total number of firms (Figure 1).

Compared to 2010, the number of firms operating in the broad construction sector decreased by 20.4%, with the real estate sub-sector experiencing the greatest drop (-30.2%), followed by construction (-27.3%) and manufacturing (-11.2%). Conversely, the number of enterprises in architectural and engineering activities increased by 19.0% during the same period. Production in construction dropped significantly between 2010 and 2015, but showed signs of improvements in 2016², as reflected in Figure 2. In general terms, the volume index of production in construction fell by 30.1% since 2010. This decline was led by the construction buildings, which decreased by 33.6%, whereas production of civil engineering decreased by 26.7%.

Volume index of production
in construction

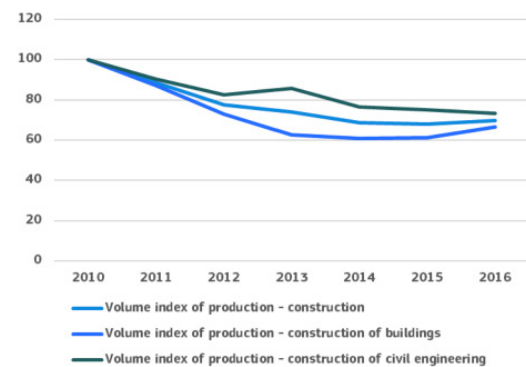
↓ 30.1%

Figure 1: Number of enterprises in the Croatian construction sector between 2010-2016



Source: Eurostat, 2017.

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



Source: Eurostat, 2017.

The total added value³ of the broad construction sector amounted to EUR 3.2 billion in 2016⁴ with the construction sub-sector accounting for 55.2% of the total (EUR 1.8 billion), followed by manufacturing (18.7%) architectural and engineering activities (13.7%) and real estate activities (12.7%) (Figure 3). The share of gross value added of the broad construction sector in GDP reached 16.0% in 2014, with real estate activities having the largest contribution (Figure 4).

Total added value of the broad construction 2016

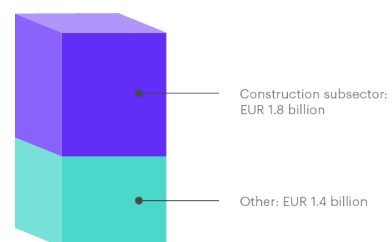
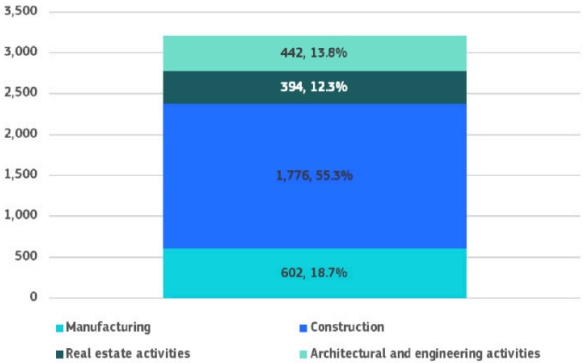
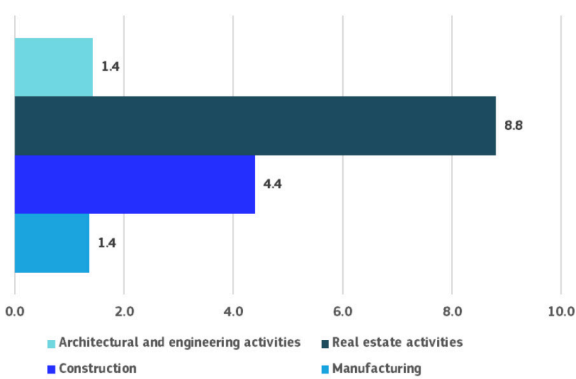


Figure 3: Value added in the Croatian construction sector in 2016 (EUR m)



Source: Eurostat, 2017.

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

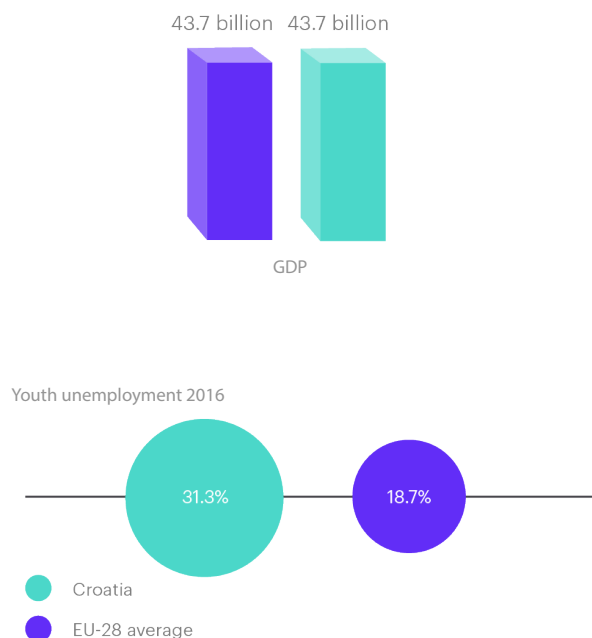


Source: Eurostat, 2017.

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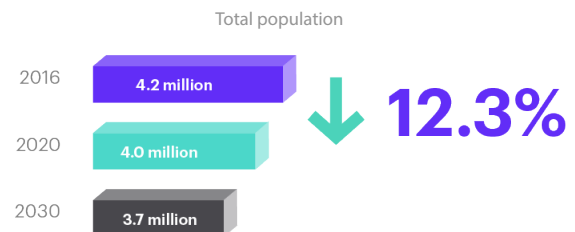
Macroeconomic Indicators

In 2016, Croatian GDP amounted to HRK 329.6 billion (EUR 43.7 billion), standing at the same level as in 2010. In addition, the potential GDP in 2016 was HRK 333.8 billion (EUR 44.3 billion), resulting in a small negative output gap of 1.3%, close to the EU-average of -0.75%. The inflation rate in Croatia experienced strong variations since 2000. After peaking rapidly decreasing to 1.1% in 2010 it picked up again up to 3.4% in 2012. Since then, the inflation rate has declined significantly, leading to a significant slowdown in real activity, reaching its bottom low in 2016 at -0.6%. The economic crisis had severe consequences on employment. In fact, the average unemployment rate in Croatia reached 13.3% in 2016, significantly above the EU-28 average of 8.5% and much higher than 2010 (11.8%)⁵. Still, this is much better than in 2013, when unemployment reached 17.4%. Youth unemployment (below the age of 25) followed a similar trend, reaching 31.3% in 2016, significantly above the EU-28 average of 18.7% and the 2010 levels (32.4%). Again, the trend is positive, with youth unemployment rate reaching 50% in 2013.



The total population in Croatia amounted to 4.2 million people in 2016. However, the population is projected to decline to 4.0 million by 2030 and to 3.7 million by 2050, 12.3% below the 2016 level. In 2016, the Croatian working age population made

up 66.2% of the total population, in line with the EU-28 average of 65.8%. By 2050, the share of the working age population will have decreased to 57.8%, while people aged 65 or older will make up 29.0% of the overall population. In addition, net migration has turned from positive to negative in 2010, underscoring the fact that more and more Croatian citizens are migrating to other countries. This trend has become sharper after Croatia's accession to the EU, as net migration went from -4,255 in 2010 to -17,945 in 2015.



Over the past years, the Croatian government has taken a path of fiscal consolidation at times of economic slowdown⁶. General government expenditure accounted for 48.4% of GDP in 2016, which represented a slight increase from 47.5% in 2010. In 2016, the government deficit stood at -0.8%, an important improvement from previous years. In fact, in 2010, this stood at -6.2%, while in 2015 it decreased to 3.4%. General government gross debt accounted for 87.6% of GDP, an important increase from 2010, when it amounted for 58.3%. Despite high values in 2010, when the official interest rate stood at 9%, the Croatian Central Bank (Hrvatska narodna banka) has been cutting the official interest rate over the last years. In fact, interest rates have decreased by 6.5 percentage points over 2010-2016, reaching 2.5% in 2016, the lowest value of since 2000. This decrease was a policy driven objective. According to a recent publication on financial stability published by the Croatian National Bank⁷, the government has been focused on ensuring monetary stability by aligning prices with the government inflation target and maintaining the stability of the entire financial system, as response to the financial crisis. By basing its monetary policy on a stable exchange rate, the Central Bank expects to limit the impact of foreign shocks and stimulate real activity⁸.

Croatia ranks 87th in 2017 out of 190 in terms of starting a business, slightly better than the previous year (95th)⁹.

Eight procedures are required to register a firm, significantly above the OECD high income average of 5.2, but taking 7 days to complete (below the average of 8.5). The cost of starting a business represents 7.2% of income per capita, well above the 3.1% OECD high income average, and the minimum paid-in capital amounts to 12.5% of income per capita, above the 8.7% OECD high income average, but an important improvement from the previous year, when it stood at 25.5%. Croatia has not been able to develop a favourable business environment for SMEs and start-ups and a very limited number of venture capital initiatives has been launched. In order to strengthen risk capital financing for innovative SMEs, helping them to be able to internationalise and to become more competitive. The Croatian Ministry of Finance has unlocked a number of Loan Agreements with international financial institutions, such as the World Bank¹⁰ or the European Investment Bank. These policies includes the promotion of SMEs as well as support to facilitate long-term financing to local financial institutions¹¹. Further to this, several associations have been created to help aspiring

Croatian entrepreneurs to build their companies, such as ZIP¹² and Startup Croatia¹³. Croatia ranks 95th out of 137 economies in terms of financial market development, according to the 2017-2018 Global Competitiveness Report, with the soundness of banks and ease of access to loans ranking the country at the 69th and 97th position, respectively¹⁴.

However, access to finance is considered one of the most problematic factors for doing business in Croatia, with affordability and availability of financial services scoring 105th and 110th, respectively, and availability of venture capital ranking 114th.

Indeed, credit extended to non-financial corporations has been decreasing over the past years, as outstanding loans went down by 19.4% over 2010-2016, from EUR 14.0 billion to EUR 11.3 billion.

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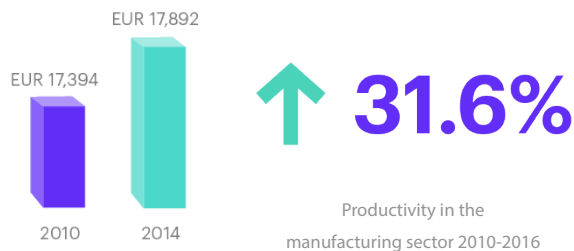
Key economic drivers of the construction sector

Productivity

Labour productivity in the Croatian broad construction sector has stayed relatively constant between 2010 and 2014, experiencing a small increase by 2.9% from EUR 17,394 to EUR 17,892. This is significantly lower than the EU-28 average which stood at EUR 50,200 in 2014.

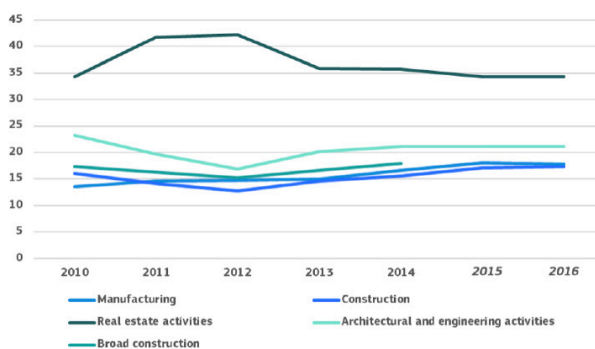
In particular, the narrow construction sector reported the lowest productivity at EUR 17,304 in 2016¹⁵, which however increased by 7.5%, from EUR 16,100 in 2010.

Productivity in the manufacturing sub-sector has also rebounded since 2010, going from EUR 13,585 to EUR 17,874, a 31.6% increase. On the other hand, productivity in real estate activities stayed constant at about EUR 34,300 during the 2010-2016 period. At the same time, productivity in the architectural/engineering activities and manufacturing sub-sectors has shown a decreasing trend, declining from EUR 23,200 to EUR 21,156, a 8.8% drop (Figure 5).



Labor productivity in the construction sector

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



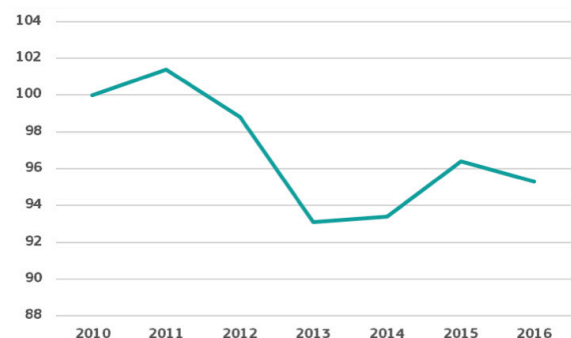
Source: Eurostat, 2017.

Profitability

The total turnover of the broad construction industry in 2016¹⁶ amounted to EUR 9.2 billion, 12.2% below the levels of 2010, when it stood at EUR 10.5 billion.

This represents a 10.8% increase since 2014, when turnover stood at EUR 8.4 billion. More than half of the total turnover was generated by the construction sub-sector (61.2%), followed by manufacturing (20.1%), architectural and engineering activities (9.6%) and by real estate (9.0%). The gross operating surplus of the broad construction sector followed a similar trend, decreasing by 8.6% from 2010 to 2014 to stand at EUR 1.4 billion. This amount to a significant jump of 41.0% since 2012. Similarly, the gross operating rate of the broad construction sector¹⁷, which gives an indication of the sector's profitability, decreased significantly between 2010 and 2012, before picking up again by 46.2% until 2014. Overall, the gross operating rate reached 16.3% in 2014, 2.2 percentage points above 2010 levels. This is still slightly below the EU-28 average, which amounted to 17.9% in 2014. In line with the above, construction costs of residential buildings have decreased, with the construction cost index¹⁸ declining by 4.7% over the 2010-2016 period.

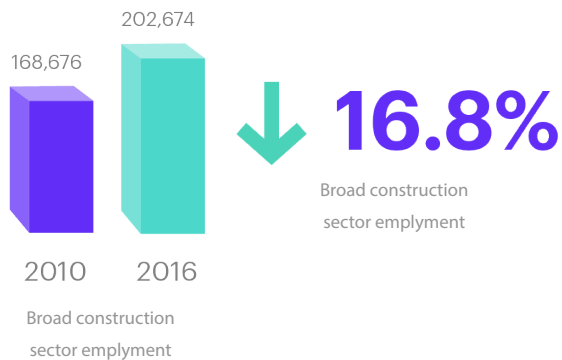
Figure 6: Construction cost index for residential buildings over 2008-2016 (2010=100)



Source: Eurostat, 2017.

Employment

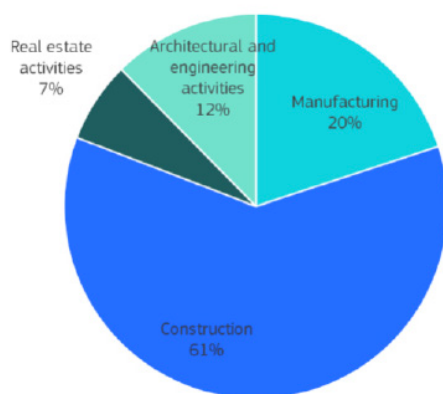
In 2016¹⁹, the broad construction sector employed 168,676 people. The number of employees in the sector has decreased by 16.8% since 2010, when the sector counted 202,674 employees. Still, since 2015, the number of employees has picked up by 4.8%.



The construction sub-sector employed 60.8% of the total construction workforce in 2016 (Figure 7), but has experienced a 24.9% decline in terms of number of employees between 2010 and 2016. On the other hand, the number of employees in the manufacturing and architectural and engineering activities sub-sectors have stayed relatively constant, declining respectively by 1.5% and 2.4%. Over the same period, the number of employees in real estate activities has increased by 9.5%.

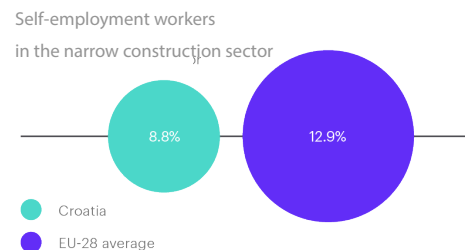
The construction sub-sector employed 60.8% of the total construction workforce in 2016, but has experienced a 24.9% decline in terms of number of employees between 2010 and 2016.

Figure 7: Percentage of people employed by construction sub-sector in Croatia 2016



Source: Eurostat, 2017.

In parallel, the number of self-employed workers in the narrow construction sector represented 8.8% of all the self-employed in the general economy in 2016, 1.2 percentage point higher than in 2010 and below the EU-28 average of 12.9%. Furthermore, the share of workers employed by SMEs in the broad construction sector reached 83.3% in 2014.



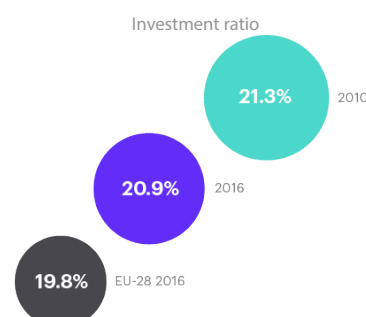
Business confidence

Business confidence in the overall economy has generally been negative over the last few years. However, there has been a sustained upward trend since 2012 with regards to consumer, industry and construction confidence indicators.

In fact, the consumer confidence indicator increased from -43.8 to -18.5 between 2010 and 2016, which is lower than the EU-28 average which stood at -6.3.

Similarly, the industry confidence indicator increased from -15.6 to reach positive values in 2016, standing at 3.0, above the EU-28 average of -2.5. Finally, the construction confidence indicator experienced the highest increase over the period, by reaching -9.8, up from -43.3 in 2010. This is above the EU-28 average of -13.9. Moreover, the investment ratio has declined slightly by 1.9%, from 21.3% in 2010 to 20.9% in 2016. However, this is still above the EU-28 average of 19.8%.

An important issue related to low business confidence is the unexpected and recurrent changes in the legislative framework, such as the amendment of the real estate tax, which creates an uncertain investment environment²⁰. However, a series of important projects signed by Croatian building companies, such as the EUR 12.5 million project for road construction in Georgia, has led to a boost in confidence, with investment in construction companies rising in early 2017²¹.



Domestic sales

The ranking of the most domestically sold construction products in Croatia remained largely unchanged since 2010. In 2015, 'Assembled parquet panels' entered the ranking of the top 5 most domestically sold construction products replacing 'Particle boards and similar boards of wood or other ligneous materials'. The list is presented in Table 1, including a comparison with the most sold products in the EU-28. These represented 57.0% of total domestic construction product sales in 2015. It is important to note that the value of domestic sales of construction products decreased significantly between 2010 and 2015 for all top 5 most sold products, with the exception of 'Other structures and parts of structures, etc.' which has experienced a more than seven-fold increase. Between 2014 and 2015, the value of domestic sales for the other three products in the top 5 has picked up, on average by 19.4%, except for 'Portland cement and similar', which decreased by 12.8%.

Table 1: 5 most domestically sold construction products in Croatia and in the EU in 2015

Croatia			EU-28
Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
Other structures and parts of structures (group 251123)	390.4	35.7	Other structures (group 251123)
Ready-mixed concrete (group, 236310)	70.7	6.5	Doors, windows, etc. (group 251210)
Ceramic tiles and flags (group 233110)	59.2	5.4	Ready-mixed concrete (group 236310)
Assembled parquet panels (group 162210)	53.3	4.9	Prefabricated buildings of metal (group 251110)
Portland cement and similar (group 235112)	50.0	4.6	Prefabricated structural components for building or civil engineering, etc.(group 236112)

Source: PRODCOM, 2017.

Export of construction-related products and services

The ranking of the most exported products remained stable since 2010, with the sole exception of 'Cement clinkers' appearing in the top 5 and replacing 'Assembled parquet panels' in 2015. The top 5 most exported construction products in Croatia and in the EU-28 are summarised in Table 2. Together, these made up 60.4% of all construction products exports in 2015.

Table 2: 5 most exported construction products in Croatia and in the EU in 2015

Croatia			EU-28
Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
Portland cement and similar (group 235112)	112.6	24.9	Ceramic tiles and flags (group 233110)
Prefabricated buildings of metal (group 251110)	76.7	17.0	Other structures (group 251123)
Veneer sheets and sheets for plywood and other wood (group 162121)	32.3	7.1	Fibreboard of wood or other ligneous materials (group 162114)
Other structures and parts of structures (group 251123)	31.3	6.9	Marble, travertine, etc. (group 237011)
Cement clinkers (group 235111)	20.2	4.5	Doors, windows, etc. (group 251210)

Source: PRODCOM, 2017.

In terms of cross-border provision of construction services, the value of Croatia exports of construction services worldwide amounted to EUR 110.1 million in 2016, 53.1% below the 2010 value (EUR 234.8 million).

Exports of construction services to the EU-28 amounted to EUR 67.0 million, again well below the 2010 levels, which amounted to EUR 166.4 million. On the contrary, imports from the world increased, going up more than eight-fold from EUR 4.3 million to EUR 40.9 million. Over the period 2010-2016, the share of imports from the EU in total imports increased from 55.8% to 74.8%, overtaking the EU-28 average of 71.0%. Overall, Croatia achieved a trade surplus of EUR 69.2 million in 2016.

Access to finance in the construction sector

In general terms, access to finance for small and medium-sized enterprises significantly improved on the past years. For instance, according to the 2016 SAFE report, 27% of the Croatians SMEs interviewed reported improvements in the availability of bank loans, whereas only 8% thought the situation deteriorated²². However, in 2016, only 61% of SMEs surveyed applying for a loan received it, down from 77% in 2015²³. Bank interest rates remain high in comparison with other EU countries and is considered by 25% of the SMEs interviewed as the most important limiting factor to get financing through loans²⁴. There is a need to diversify sources of external financing, in addition to bank financing²⁵. Indeed, there is a lack of information and an insufficient knowledge of alternative sources of finance products, reducing the demand of these type of funding²⁶.

Bank interest rates remain high in comparison with other EU countries.

In addition to the difficulties faced by SMEs in obtaining funding, access to finance has been recognised as a main obstacle to the construction sector, as the financial sector is often reluctant in supporting the construction industry, in particular in case of large infrastructural projects. As a result, the 2013 'Strategic Guidelines for the Development of the Construction Sector' by the Ministry of the Economy foresee measures aimed at facilitating access to loans, guarantees and other financial instruments for construction projects, as well as support to the use of EU financial instruments²⁷.

In November 2017, it was announced that the European Investment Bank (EIB) signed a EUR 250 million loan deal in order to support investment in SMEs together with the Croatian Bank for Reconstruction and Development (HBOR). This is part of a wider EUR 800 million package aimed at supporting investment in Croatian SMEs, specifically those who create employment for the youth²⁸. Moreover, the EIB announced the same month, a lending deal of EUR 40 million to a Croatian Bank (Privredna Banka Zagreb) with the aim to finance SMEs projects and midcap companies²⁹.

Access to housing

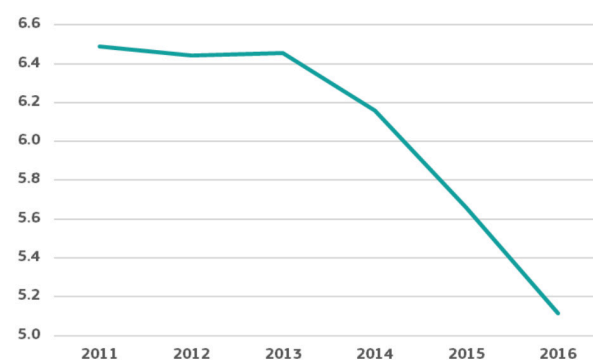
The number of households in Croatia has remained relatively stable over the past decade. The number of total households has only decreased by 2.5% between 2010 and 2016, from 1.52 million to 1.48 million. Furthermore, the urbanisation rate has increased by 2.5% over the last decade, reaching 59% in 2015, according to the World Bank³⁰. This evolution is in line with the increasing abandonment of rural areas all over Europe. Still,

the percentage of population living in densely-populated area decreased from 32% to 25% between 2010 and 2015. Moreover, over the same period, the percentage of population living in intermediate urbanised area increased from 21% to 29%. Both of these data points are well below EU-28 averages, which respectively stood at 40.4% and 31.7% in 2015.

As a consequence of the economic crisis, the Croatian mean equivalised net income decreased by 4.4% since 2010, reaching HRK 46,471 (EUR 6,087) in 2015, well below the EU-28 average, which amounted to EUR 18,463. This is 5.1% year-on-year improvement since 2014, showcasing the recovery in the economy. In line with such recovery, the number of building permits for residential buildings increased by 33.2% between 2015 and 2016, after decreasing by 48% between 2010 and 2015. This represented the issuance of 8,018 building permits in 2016 compared to 6,328 the year before³¹. Moreover, in 2016, 7,809 new dwellings were completed³². Moreover, The demand is further boosted by the decrease of interest rates. In fact, interest rates on mortgages (Figure 8) have been declining constantly since 2011, standing at 6.5% to reach 5.1% in 2016.

Overall, outstanding residential loans to households decreased slightly since 2010 from EUR 8.3 billion to reach EUR 7.7 billion in 2015, a 6.3% decrease.

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



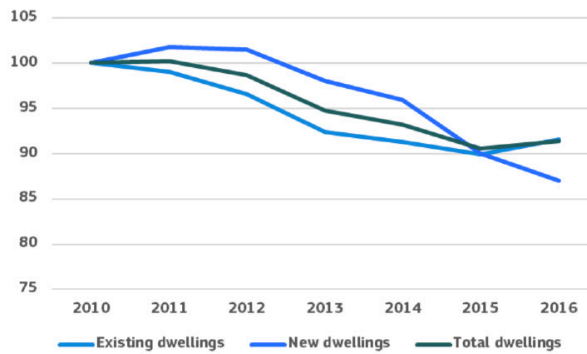
Source: ECB MFI Interest Rate Statistics, 2017.

House prices have also been affected by these developments. Between 2010 and 2016, house prices experienced an 8.7% decrease. In line with the heightened demand in 2016, driven by higher incomes and lower interest rates, house prices started picking up. Specifically, there has been a 1.8% increase for existing dwellings. Overall, house prices increased by 0.9% on average for both existing and new dwellings between 2015 and 2016, as represented in the Figure 9 below.

House prices

↓ 8.7%

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



Source: Eurostat, 2017.

The majority of the building stock in Croatia is owner-occupied, as in 2015 owners held 90.3% of the building stock. This is a 2.1 percentage point increase since 2010. Overall 85.1% of Croatian own a property with no outstanding mortgage. Income plays only a small role in the likelihood of being a homeowner. In fact, 90.9% of owners earn above the 60% of median equivalised income. This number amounts to 88.0% for those earning below that threshold. In Croatia, the housing cost overburden rate³³ was at 6.4% in 2016, below the EU-28 average of 11.1%³⁴, while the severe housing deprivation rate³⁵ reached 7.1% in 2016, above the EU-28 average of 4.8%. However, this number has been decreasing by 5.2 percentage points since 2010³⁶.

Infrastructure

Croatia ranks 48th out of 137 for its infrastructure, according to the 2017-2018 Global Competitiveness Report³⁷. In particular, it performs best in terms of the quality of its roads (19th), although further efforts are required to improve the quality of the overall infrastructure (37th), notably upgrading the railroad and air transport infrastructure, which rank 70th and 74th, respectively. These points have been identified as priority axes by the European Commission's operational programme Transport³⁸ for developing the transport sector in the country. Other international institutions, such as the World Bank³⁹ and the United Nations⁴⁰ have also pointed out this need⁴¹.

In 2014, in order to boost investment in infrastructure, the government enacted an updated legal regime for projects of strategic importance. This led to the clarification of eligibility criteria and increased capacity for the verification of project applications. The selection of a project as a "strategic investment" allows to fast stream its development with the simplification of administrative procedures and the support of a one-stop-shop.

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Key issues and barriers in the construction sector

Company failure

The business demography in the construction sector experienced both a decrease in the number of company births and a decrease in the number of company deaths for the construction and real estate sub-sectors over 2012 and 2014. Namely, company births in the construction sub-sector declined by 6.5%, from 1,207 in 2012 to 1,129 in 2014. Company births went down in the real estate sub-sector (-37.6%) reaching 189 in 2014. Similarly, company deaths declined by 20.9% and by 16.9%, for narrow construction and real estate, respectively. On the other hand, the architectural and engineering sub-sector experienced a decrease in company deaths (-37.6) over 2012-2014, but at the same time an important increase in the number of company deaths, which increased from 294 in 2012 to 447 in 2014 (+52.0%).

Overall, in 2016, 14,181 simple limited liability companies ("EUR 2 companies" make up 54.1% of the total number of established companies) were created in Croatia.

The construction sector came third with about 900 companies established (preceded by the trade and hospitality sectors). The number of such companies established in the construction is on an upward trend since 2014, when the number of companies established stood below 800. With regards to bankruptcies in the general economy, 878 operators were undergoing a bankruptcy procedure in 2016⁴².

Trade credit

Trade credit is not very wide-spread in Croatia, as only 15% of SMEs consider it a relevant source of finance, according to the 2016 SAFE Survey.

This is below the EU-28 average, where 35% of survey respondents consider trade credit relevant for their business⁴³. There has been a 2 percentage point decrease compared to the 2015 survey, with respect to the relevance of trade credit for SME financing in Croatia, while the EU-28 average decreased by 1 percentage point⁴⁴.

Late payment

According to the European Payment Report 2017, Croatia presents below average payment stability⁴⁵. Late payments are common, both for business-to-business (B2B) and public sector payments. Indeed, for B2B transaction, the average payment time is 44 days, while the average payment terms granted are 30 days, resulting in an average delay of 15 days. This represents a 4-day improvement over 2016. Public sector payments tend to be even slower, but average delay has improved greatly: payments terms are set on average at 35 days, while actual payments happens after 47 days⁴⁶. This amounts to a delay of 12 days compared to 26 days in 2016. Financial difficulties are considered as one of the main causes for delays in payments.

Moreover, intentional late payments have recently greatly increased from 24% to 49% between 2016 and 2017, to represent the second cause of late payments in 2017.

Croatia transposed the Late Payment Directive prior to EU accession in 2013 by introducing the Croatian Financial Operations and Pre-Bankruptcy Settlement Act "Zakon o financijskom poslovanju i predstečajnoj nagodbi" (entered into force in 2012). Payment terms are fixated at 30 days in B2B transactions unless agreed otherwise. Nevertheless, payment terms cannot exceed 60 days, or, in very exceptional circumstances 360 days. For transactions between business and the public administration the standard payment terms are 30 days; in exceptional cases these terms can be prolonged to 60 days maximum⁴⁷. However, the Late Payment Directive is considered to have little effect in improving payment morale and is not well known among stakeholders, according to the European Payment Report 2016⁴⁸. Furthermore, it appears that even if companies are aware of the Late Payment Directive, they are often afraid of harming business relationships by claiming their rights under the Directive⁴⁹.

Time and cost of obtaining building permits and licenses

Croatia ranked 126th in 2016 with respect to “Dealing with construction permits”, according to the World Bank Doing Business 2018, which is 2 positions higher than the previous year (128th)⁵⁰. Indeed, Croatia compares poorly to OECD high-income countries with respect to the number of procedures and the cost required to building a warehouse. In Croatia, 18 procedures are required, while in OECD high-income the average stands at 12.5 (Table 3). Furthermore, the cost of building a warehouse represents 9.4% of the value of the warehouse, considerably higher than the OECD high-income average of 1.6%. Conversely, it takes 126 days to build a warehouse, which is below the OECD high-income average of 154.6 days.

Croatia aims to improve the cadastre, the land registry as well as the spatial planning system in order to ease administrative burden, increase legal security, as well as foster investment.

These measures will be implemented between 2016-2020 and will be kick-off by the introduction of a Functional Integration Plan⁵¹.

Table 3: Construction procedures timing and costs in Croatia

Procedure	Time to complete	Associated costs
Receive clearance from the waste collection department	30 days	no charge
Receive clearance from the National Croatian Electric Grid	1 day	no charge
Receive clearance from the Sanitary Inspectorate	24 days	HRK 70
Receive clearance from the Local Water Authority	14 days	no charge
Receive clearance from the Inspectorate for Fire at the Ministry of Interior Affairs	3 days	no charge
Obtain excerpt from the Land Registry for subject and bordering lands	1 day	HRK 20
Obtain the list of land owners adjacent to the future construction site	1 day	HRK 70
Obtain authentication of the online cadastral map by the Cadaster	1 day	HRK 110

Obtain decision from the Municipal Authority regarding utilities	22 days	HRK 292,613
Hire an external supervising engineer to conduct inspections during construction	1 day	HRK 26,250
Request and receive building permit	30 days	HRK 14,000
Pay water contribution to the state company Croatian Waters (Hrvatske Vode)	15 days	HRK 19,156
Submit commencement notice	1 day	HRK 20
Receive random inspection from the Municipality	1 day	no charge
Obtain water and sewage connection	20 days	HRK 8,000
Apply for occupancy (use) permit	1 day	HRK 20
Receive final inspection	1 day	HRK 2,040
Receive occupancy (use) permit	21 days	HRK 14,000

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

Skills shortage

Skills shortages are a critical challenge for the Croatian construction sector. Indeed, the job vacancy rate for narrow construction increased substantially from 0.3 in 2012 to 1.4 in 2015. Similarly, the job vacancy rate for real estate activities went up from 0.2 in 2012 to 0.3 in 2015. Adult participation in education and training in narrow construction is low (2.1% in 2016) and declining from the peak of 2.4% in 2012. Still, over the period 2010-2016, there has been an upward trend going up from 1.2 to reach 2.1%. In the same vein, the number of tertiary students in engineering, manufacturing and construction, has overall increased by 26.9% between 2010 and 2015, going up from 4,217 to reach 5,325. The highest increased occurred in the engineering branch, whereby 4,275 students graduated in 2015 up from 2,257 in 2010, which amounts to a 89.4% increase.

Nonetheless, the industry is missing a number of important skills and qualifications among its workforce, notably mechanical engineers. This is due to the increase in demand in manufacturing since Croatia became a full member of the European Single European Market in 2013⁵². Similarly, bottleneck vacancies are also present within the technical domain, for instance civil and electrical engineers are in high demand⁵³. Moreover, due to attractively issues bricklayers, carpenters, welders, roofers, joiners as well as plumbers^{54, 55}. Prior to the crisis, shortages of skills were often resolved by hiring workers from neighbouring countries in the Balkans, notably Bosnia Herzegovina. Currently, employers are experiencing difficulties in finding new workers in these fields to replace those who retire, specifically for bricklayers and carpenters⁵⁶.

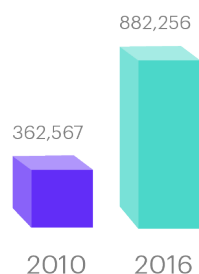
The President of the Croatian Chamber of Trades and Crafts estimated that the sector was lacking 10,000 construction workers in 2017.

With construction showing signs of recovery, the sector is confronted again by the lack of qualified personnel. The President of the Croatian Chamber of Trades and Crafts estimated that the sector was lacking 10,000 construction workers in 2017⁵⁷. One of the challenges of the Croatian construction industry, is the outflow of construction workers to Western Europe, where workers enjoy better conditions⁵⁸. According to industry stakeholders, another challenge faced by the sector includes the fact that construction companies are often not able to employ people registered as unemployed, as these already work in the grey market. Finally, a further issue comes from the missing links between the education system and market needs.

Sector & sub-sector specific issues

Material efficiency and waste management

In 2012, Croatia reported 682,058 tonnes of construction and demolition (C&D) waste, which constitutes a minor increase of 0.12% with respect to 2011⁵⁹. In terms of waste treatment, the following practices were observed in Croatia in 2012: 65% of non-hazardous waste was land-filled, while 32% was recovered in a different way other than energy recovery; backfilling represented 1%. For hazardous waste, most of it was recovered other than energy recovery (74%), while 14% was landfilled, and 11% was energy recovered⁶⁰. In 2014, Croatia reported 1.6 million tonnes of production waste, of which 26% came from construction and demolition waste, including excavated soil from polluted locations. The amount of construction waste collected has gradually increased in Croatia from 362,567 tonnes in 2010 to 882,256 tonnes in 2015. Overall 40% of this waste is disposed by landfilling⁶¹.



Amount of construction waste collected (tonnes)

The legal framework for C&D waste is defined by the Act on Sustainable Waste Management (OG 94/13) and the Rules on construction waste management (OG 38/08) as well as the Rules on the method and procedures for managing waste containing asbestos (OG 42/07) and Instructions on handling waste containing asbestos (OG 89/08). Furthermore, the Croatian Waste Management Strategy introduced in 2005 covering the period until 2025 provides guides for strengthening C&D waste management. In addition to the Waste Management Strategy, a Waste Management Plan 2017-2022 of Croatia defines the measures to be put in place in order to reduce waste and increase recycling⁶². For example, HRK 45 million (EUR 6 million) were spent in 2016 in constructing recycling yards and supplying communal equipment⁶³. By 2020, the goal is to separately collect 75% of construction and demolition waste⁶⁴.

Climate and energy

Emissions of greenhouse gases (carbon monoxide and dioxide, methane and nitrous oxides) from construction and real estate activities in Croatia amounted to a total of 1,314,833 and 112,216 tonnes, respectively. This is down from tonnes in 2010 and 108,702 tonnes in 2013, respectively.

Emissions in both sub-sectors have declined substantially from 2010, when they stood at 1,628,093 and 153,608, respectively. This represents a 19.2% decrease for construction and a 26.9% decrease for real estate.

5

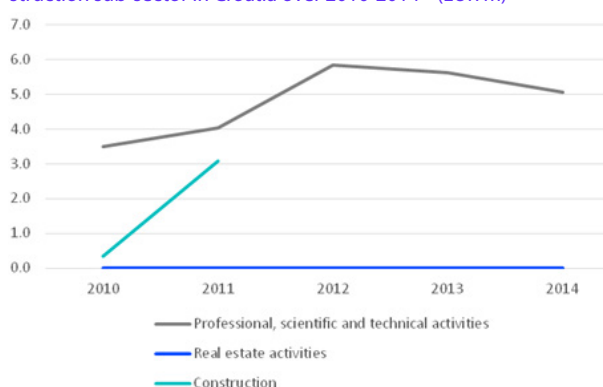
Innovation in the construction sector

Innovation performance

Croatia is considered a Moderate Innovator, according to the European Innovation Scoreboard 2017, with its innovation performance declining by 1.4% relative to the EU-28 average in 2010. Its areas of strengths include Firm investments, Human resources, and Employment impacts, whereas it lags behind in Intellectual assets, Attractive research systems and Innovators⁶⁵.

This trend is reflected in the construction sector, where business enterprise R&D expenditure (BERD) has experienced a strong decline since 2010 (Figure 10). In fact, BERD in narrow construction grew declined from EUR 7.0 million to EUR 0.1 million over the 2010-2014, a significant 99.2% drop. Similarly, BERD in the professional, scientific and technical activities sub-sector experienced an 83.1% decrease over the same period, declining from EUR 0.7 million to EUR 0.1 million. Moreover, from 2010 to 2014, the real estate sub-sector made no R&D expenditure in Croatia.

Figure 10: Business enterprise R&D expenditure per construction sub-sector in Croatia over 2010-2014⁶⁶ (EUR m)



Source: Eurostat, 2017.

Likewise, the total R&D personnel (full-time equivalents – FTE)⁶⁷ in the broad construction sector dropped across all sub-sectors as of 2010. Similarly to BERD, R&D FTE in the construction sub-sector initially decreased from 184 in 2010 to 6 in 2014, after reaching 0 in 2013. This represents a 96.7% drop over the period. Again, the situation is similar as BERD for R&D FTE in the professional, scientific and technical activities sub-sector

with R&D personnel decreasing from 17 in 2010 to 2 in 2014. R&D FTE in the real estate sub-sector were negligible, in line with its BERD.

Furthermore, Croatia has been filing an average of 1.3 construction-related patent applications per year over the period 2010-2016, with 2010 reporting the highest number of patents (4), whereas 0 patents were reported in 2016. No Croatian Construction & Materials firms rank within the top 1,000 EU companies by R&D (industrial sector ICB-3D), according to the 2016 EU R&D Scoreboard⁶⁸.

R&D in Croatia is constrained by the small size of knowledge-intensive sectors, the lack of qualified personnel as well as a lack of financing. Indeed, investment in R&D increased to 0.84% of GDP in 2016 from 0.74% in 2010, significantly below the 2020 national target of 1.4%, with government sector R&D investment dropping from 0.2% in 2010 to 0.18% in 2016 and business R&D investment averaging only 0.37% of GDP in 2016^{69, 70}.

R&D in Croatia is constrained by the small size of knowledge-intensive sectors, the lack of qualified personnel as well as a lack of financing.

Eco-innovation and digitalisation

In order to strengthen R&I in the private sector, the government has an availability of over EUR 700 million from EU funds for direct co-funding of research and development activities in the public and private sectors for the period 2014-2020.

Focus is to be given to investments in the thematic areas identified in the Croatian Smart Specialisation Strategy 2016-2020 including Energy and Sustainable Environment as well as Transport and Mobility⁷¹.

In addition, the Ministry of Entrepreneurship and Crafts and the Ministry of Environment and Nature Protection aim to support technological innovation in SMEs through the Enterprise Impulse programme, making grants available to innovation projects in the manufacturing, environmental protection and information technology sectors⁷². Grants under the programme range between HRK 10,000 (EUR 1,327.2) and HRK 15 million (EUR 2 million), with a total budget for the grants of HRK 3.9 billion (EUR 517.6 million)⁷³.

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With respect to innovation in construction, the government also supports participation of local research institutions and companies in EU-funded projects. Instances include ECO-SANDWICH,

supported by the Ministry of Environment and Nature Protection and the Ministry of Construction and Physical Planning, among others, and led by the Faculty of Civil Engineering of the University of Zagreb. The project developed an innovative prefabricated wall panel using recycled construction and demolition waste and mineral wool produced with an innovative sustainable technology, achieving a reduction of primary energy consumption in the building stock due to its enhanced insulation and ventilation properties⁷⁴. The first three dwelling property was delivered in 2016 with a total cost amounting to EUR 313 661. 11 more of these passive houses are expected to be built in this standard and will be used as social housing⁷⁵.

Building Information Modelling (BIM) is still not widely used in the Croatian construction sector.⁷⁶ To foster its usage, the Croatian Chamber of Construction Engineers published the "General Guidelines for BIM Approach in Civil Engineering" in June 2017. This will support the implementation of BIM, in the planning, designing and management of construction projects as well as raise awareness about the benefits of using BIM throughout the entire lifecycle of a project. Such guidelines also aim to create a common understanding and language among various stakeholders involved in BIM in Croatia⁷⁷.

6

National & Regional Policy & Regulatory Framework

Policy schemes

Housing policy in Croatia aims to boost the availability of dwellings, but also to ensure a good quality and affordable housing stock for all population groups. To this end, the government introduced a number of policy schemes.

The Programme of State-subsidised Housing Construction (Poticana stanogradnja - POS) was launched to offer housing at more favourable terms compared to market conditions, and boost the construction sector at the same time.

The programme provides state funding for the construction of residential properties, with the local governments providing plots and covering the costs of connection to municipal infrastructure. The programme allows beneficiaries to obtain a mortgage for the purchase of the POS-funded apartments at preferential rates. Namely, a loan can be secured without a guarantor, with an average interest rate of around 3.9%, with a repayment period of 30 or 31 years. The loan is granted for the purchase of dwellings with a maximum price of EUR 1,125.7/m² of usable area. The POS scheme is managed by the Agency for Transactions and Mediation in Immovable Properties (Agencija za pravni promet i posredovanje nekretninama - APN)⁷⁸. As from October 2015, 573 apartments had been built under the programme in Split⁷⁹.

In April 2017, the government of Croatia adopted the Housing Loan Subsidy Act. The scheme provides for citizens below the age of 45, a subsidised loan for the purchase of a house or an apartment. For the first four years, the interest rate is capped to 3.75% per year. The repayment depends on household characteristics, such as the number of children. Overall, the APN received 2399 requests in October 2017 and approved 2321 applications⁸⁰.

A document on Croatian architectural policies for 2013- 2020 was also introduced. Given the importance of the role of architecture in terms of its cultural, aesthetic and social value, the Ministry of Environmental Protection, Physical Planning and Construction, the Physical Planning Council of the Republic of

Croatia, the Croatian Chamber of Architects, and the Association of Croatian Architects signed a common Statement through which they committed to promote and actively participate in activities related to the adoption of the document, known as Apolitika 2013-2020. The policies detailed in the document aim to achieve three main objectives, namely raising the level of building culture to improve the quality of built space; improving the quality of lives by enhancing the quality of the built environment; achieving high quality architecture as an incentive for national development and progress. To achieve these objectives, Apolitika defines various measures within 10 thematic areas, including housing, the built heritage, building and designing space, and spatial development and planning⁸¹.

In 2013, the Ministry of the Economy also launched the Strategic Guidelines for the Development of the Construction Sector in order to strengthen its competitiveness and tackle some of the industry's main challenges. The five priority axes of the Guidelines are to strengthen the institutional and infrastructural support, provision to support research, development of human resources, improve access to finance, and strengthening the societal contribution of the construction sector⁸².

In 2013, the Ministry of the Economy also launched the Strategic Guidelines for the Development of the Construction Sector in order to strengthen its competitiveness and tackle some of the industry's main challenges.

Finally, the Ministry of Veterans' Affairs manages the Housing Care Programme for Homeland War Victims, which entails the construction, purchase and adaptation of apartments and family houses for Homeland War veterans with disabilities. The land for the construction of such dwellings is provided by the local governments (cities and municipalities), as well as the connection with municipal infrastructure, while construction activities are carried out by the Ministry of Construction and Physical Planning. In the period 1997-2013 a total of 6,248 apartments were built, with a total investment value of HRK 2.3 billion (EUR 306.1 million)⁸³.

Insurance and liability related regulations

In Croatia, all-risk insurance (covering additional risks such as liability towards third persons and contractual liability for completion of works within a time limit) is generally required under a construction contract⁸⁴. Building contracts, as well as contracts for designing construction works, are regulated under the Croatian Obligations Act (Zakon o obveznim odnosima, Official Gazette Nos. 35/05, 41/08, 125/11 and 78/15)⁸⁵.

Moreover, any party carrying out construction works is liable towards the investor, as well as any person acquiring the building, for any substantial defects appearing within ten years from the handover of the construction, and defects in other parts of the building appearing within two years from the completion of the building. This also applies to the designer, if the defects result from a flaw in the project, and to the supervisor. In general, the limitation period of the liability amounts to five years⁸⁶.

Building regulations

Before January 2014, the Croatian legal framework for consisted of the Physical Planning and Building Act. The inconsistencies and ambiguities encountered when applying such Act led to the creation of three separate laws which entered into force on January 2014⁸⁷.

In Croatia, the Building Act regulates the design, construction, use and maintenance of construction works, in order to ensure the protection and planning of space in accordance with the

regulations governing physical planning and providing the essential requirements for construction works. These requirements concern mechanical resistance and stability; fire safety; hygiene, health and the environment; safety and accessibility; noise protection; energy economy and heat retention; and sustainable use of natural resources⁸⁸. The Building Act was amended in 2017 in order to remove barriers and simplify the current system of issuing acts for the construction and use of buildings. Another important change came with the clarification in terms energy efficiency certification and the abolishment of unnecessary certifying obligations needed from the owner⁸⁹.

Physical planning is regulated by the Physical Planning Act. The Act defines the aims, principles and subjects of physical planning, as well as planning requirements. It also provides for the adoption of the Spatial Development Strategy of the Republic of Croatia, and defines the principles of building land development and supervision⁹⁰.

In parallel, the Building Inspection Act regulates the organisation of building inspection, supervision of construction activities, maintenance and use of construction works, as well as the implementation of building surveillance, among others⁹¹. Finally, health and safety on construction sites is regulated by the Act on Safety at Work (Official Gazette No. 71/14, 118/14 and 154/14)⁹².

7

Current Status & National Strategy to meet Construction 2020 Objectives

TO 1 - Investment conditions and volumes

Total inland infrastructure investment as a share of GDP has been on a declining trend from 2010 to 2014 dropping from 1.3% to 1.0%. This decrease is mostly due to the decline in road infrastructure investment which fell by 45.8% from EUR 512.3 million to EUR 279.5 million. On the other hand, investment in rail infrastructure increased by 56.7% over the same period, from EUR 83.4 million to EUR 130.7 million. Investment in air infrastructure has also seen an impressive increase going up 177.1%, from EUR 28.1 million to EUR 77.9 million between 2010 and 2014.

Positive trends have also been recorded in infrastructure maintenance, specifically in air and road infrastructure.

The former increased by 91.0% between 2010 and 2014, increasing from EUR 2.3 million to EUR 4.4 million, while the latter experienced a 32.0% increase from EUR 194.9 million to EUR 257.4 million over the same period. Investment in rail infrastructure grew relatively more moderately by 17.6% from 2010 to 2014, reaching EUR 105.7 million up from EUR 89.9 million.

Prior to the crisis, Croatia recorded strong public sector investment, which led to a significant improvement of the country's quality of infrastructure, reaching the EU average according to the metrics of the World Economic Forum 'Quality of Infrastructure' Index in the year 2010. However, the economic crisis brought about a reduction in public sector spending, which was also reflected in the deterioration of infrastructure quality, as measured by the Index⁹³. The investment gap has affected a number of areas, such as the completion of the TEN-T infrastructure and railroad development. Indeed, the core TEN-T road network in Croatia is completed at 61%, below the 74% completion rate in the EU⁹⁴.

The National Reform Programme of 2016 outlines the need to develop rail and road connections as part of the Trans-European Transport Network (TEN-T), remove bottlenecks in road transport and improve the connectivity at urban and sub-urban level⁹⁵. Out of the total investment, EUR 400 million will come from the European Regional Development Fund (ERDF) while

EUR 910 million are supported by the Cohesion Fund (CF)⁹⁶. In addition to ESIF funding, the Connecting Europe Facility (CEF) will provide EUR 44 million in funding for transport projects⁹⁷.

In August 2017, Croatia introduced its 2017-2030 National Transport Development Strategy with the aim to invest EUR 2 billion in transport infrastructure, which will be heavily supported by EU funds. In terms of operational goals, the strategy aims at improving passenger connectivity, long distance accessibility, connectivity with neighbouring countries, improved freight accessibility, and a better organisational and operational set up of the transport system. The Strategy sets 37 specific objectives and 18 measures across 6 sectors: rail, road, air, maritime and inland waterway, public urban, suburban and regional transport⁹⁸. More than 20 transport projects are planned to be conducted with such investment. Projects include the purchase of electric trains, the improvement of the tram infrastructure and the renovation of Dubrovnik Airport⁹⁹.

In August 2017, Croatia introduced its 2017-2030 National Transport Development Strategy with the aim to invest EUR 2 billion in transport infrastructure, which will be heavily supported by EU funds.

A number of flagship projects are already underway, such as the project "Road Connection with Southern Dalmatia", which includes the construction of the Pelješac Bridge, i.e. the largest infrastructure project in the country and one of the largest bridges in Europe. The project is supported by EU funds worth HRK 2.4 billion (EUR 320 million)¹⁰⁰. Also, the project "Development of the Dubrovnik Airport" is considered a key infrastructural project worth HRK 1.1 billion (EUR 150 million)¹⁰¹.

The European Investment Bank (EIB) is a further source of investment in Croatia's infrastructure. For instance, it provided a EUR 80 million loan for the expansion of Zagreb airport.

Overall 5% of the EIB's total lending for Croatia in 2015 went to transport infrastructure¹⁰². In 2016, EIB loans amounted to EUR 530 million, of which 8% were spent on infrastructure. Overall, between 2012 and 2016, the EIB has invested EUR 2.4 billion in

awareness of job opportunities, introducing peer-coaching, as well as enhancing training capacity also with the support of innovative financing¹¹¹.

TO 2 – Skills

Participation to the vocational education and training (VET) system is very high in Croatia, amounting to 70.4% compared to the EU average of 47.3% in 2015. Nevertheless, this number has decreased in recent years¹⁰⁴. Moreover, employment prospects for upper secondary graduates have increased significantly with an employment rate of 70.3% in 2016 up from 45.7% in 2015. Still, this number is below the EU-28 average of 75%¹⁰⁵. However, the majority of VET graduates do not manage to find employment in the field for which they have earned a qualification, as on average only 45% of them are able to find employment in their educational field¹⁰⁶.

Indeed, one of the main challenges of Croatia's educational system is the mismatch between labour market needs and the education supply. This stems in part from outdated VET curricula and lack of work-based learning¹⁰⁷. Moreover, adult learning is low compared to the EU average standing at 3.0%, well below the EU-28 average of 10.8%¹⁰⁸. Thus, the ongoing discrepancy between labour markets and the education system has led to the paradox situation, whereby despite high levels of unemployed, there are significant skills shortages and employers are not able to hire the needed workforce, notably in the construction sector (see Skills shortage)¹⁰⁹.

To respond to these challenges, the government introduced the Croatian Qualification Framework (CROQF) aimed at better aligning higher education and VET with labour market needs.

This led to the introduction of new qualifications, specifically of energy efficient building technicians. Furthermore, the government is currently undertaking a broader reform of the VET system through the 2016-2020 programme and action plan adopted in 2016. It aims, inter alia, to improve the overall quality of VET by developing new ways of learning and increasing the employability of students. Finally, it is tackling lifelong learning, by introducing a new adult learning education legislation, initially planned to be adopted in 2016, but progress has since stalled¹¹⁰.

The construction sector is also taking initiatives to address the challenges related to skills. Indeed, human resources development is recognised as one of the key weaknesses according to the Strategic Guidelines for the Development of the Construction Sector. With respect to skills, the Guidelines aim at strengthening the human capital basis, fostering the links between the construction sector and VET supply, promoting

Furthermore, the project CROSSKILLS, as part of the EU Build Up Skills Initiative was in place in Croatia between September 2014 and August 2017.

Furthermore, the project CROSSKILLS, as part of the EU Build Up Skills Initiative was in place in Croatia between September 2014 and August 2017. The initiative provided building workers and trainers with comprehensive life-long training plans. This included the training of prefabricated construction fitters, plasterers, carpenters, bricklayers, house painters and roofers. It established an accreditation scheme for training providers as well as a certification scheme for workers. Overall, at least 1200 building workers were trained and were certified in energy efficiency. Moreover, 10 training centres and 200 trainers were accredited in Croatia.

Finally, the project Green Building (Zelena gradnja) was launched in 2015 and aims at developing qualifications standard for sustainable and green buildings.

Among others, this includes the creation of a university graduate programme in sustainable and green buildings with a specific focus on the Mediterranean area¹¹².

TO 3 – Resource efficiency / Sustainable construction

The building sector accounts for around 40% of the total energy consumption in Croatia, and energy efficiency of buildings is therefore a key priority of the government. The framework for energy efficiency in the building sector is given by the Third National Energy Efficiency Action Plan (NEEAP III), adopted in 2014, which presents a comprehensive strategy for increasing energy efficiency in Croatia. Specifically, with respect to the building/construction sector, the NEEAP includes the National Plan for Increasing the Number of Nearly Zero Energy Single-Family Homes by 2020, as well as a Strategy for stimulating investments in the energy renovation of buildings. In order to achieve the total national energy saving target of 54,250 PJ by 2020, the NEEAP defines several measures and programmes in the final consumption sectors, namely housing, services, industry and transport. In particular, measures related to residential buildings, public sector buildings and commercial non-residential buildings are expected to result in total savings of 14,395 PJ, 3,054 PJ and 9,193 PJ over 2014-2020, respec-

tively¹¹³. Croatia's Fourth National Energy Efficiency Action Plan (NEEAP IV) was drafted in April 2017¹¹⁴.

Four main building retrofit (renovation) programmes are defined in the NEEAP III, specific to different types of buildings, and have been adopted by the government. These are implemented and co-funded by the Environmental Protection and Energy Efficiency Fund (Fond za zaštitu okoliša i energetska učinkovitost – FZOEU)¹¹⁵. The Programme of energy renovation of family houses 2014-2020 (Energetska obnova obiteljskih kuća), introduced in 2014, aims to increase the energy efficiency of existing homes, reducing energy consumption and emissions of CO₂, as well as the monthly costs for energy, thus improving the quality of life. The scheme focuses specifically on residential buildings having a maximum of three housing units or with a gross floor area of up to 600 m², and built before 1987¹¹⁶. The programme provides grants and subsidies for the renovation of the building envelope, the replacement of the heating system and the use of renewable energy systems (RES). On an annual basis, the programme aims to involve 2,000 family houses throughout the country, thermally insulate 100,000 m² of the outer wall area, and install 35,000 m² of windows¹¹⁷. As of 2016, the scheme benefits from EUR 100 million. Approximately EUR 30 million are dedicated to the renovation of family houses¹¹⁸. In 2016, HRK 265 million (EUR 35 million) were paid to renovate around 5,000 family houses¹¹⁹. Between 2017 and 2020, it is expected to target the renovation of 4000 family homes in Croatia every year. Moreover, in 2018, it is planned to adjust the eligibility criteria, such that vulnerability of families will be taken into greater account in order to benefit from the programme¹²⁰.

In 2014, the Ministry of Construction and Physical Planning also adopted the Programme of energy renovation of apartment (multi-residential) buildings 2014-2020 (Energetska obnova višestambenih zgrada). Over the first three years of the programme, the FZOEU provided HRK 268 million (EUR 35.8 million) in grants. Moreover, from 2016, the scheme benefits from EUR 70 million from the European funds under the Operational Programme Competitiveness and Cohesion¹²¹. In October 2016, the Ministry of Construction and Physical Planning made available a scheme for the energy renovation of multi-residential buildings, aiming to stimulate the use of renewable energy sources. Specifically, single architectural units with a minimum of 66% of useful surface dedicated to housing are eligible. The budget of this programme is HRK 152 million (EUR 20.2 million) from the European Regional Development Fund (ERDF), and renovation projects will be co-financed at 60%, with a maximum amount of grant funds of HRK 13 million (EUR 1.7 million) per project. Energy audits and preparation of energy certificates and project documentation will be co-funded at 85%¹²². In 2016, 63 buildings were co-financed amounting to HRK 50 million (EUR 6.6 million)¹²³. The targeted amount of the total surface of multi-apartment buildings to be renovated is expected to increase between 2017-2020, from 1% to 2%, given the increased demand from citizens¹²⁴. However, a regulatory obstacle to the energy efficient renovation

of apartment (multi-residential) buildings is the requirement of the Act on Ownership which makes the consent of all residents (100 % consent) necessary for the renovation works to be carried out on the building. This hinders the implementation of energy efficiency measures, especially for large buildings, which are the ones that would particularly benefit from renovation¹²⁵. Nevertheless, action is being taken to address this issue (see TO 4 - Single Market).

In 2014, the government also adopted the Programme of energy renovation of commercial non-residential buildings 2014-2020 (Energetska obnova nestambenih zgrada), aiming to bring existing commercial buildings (offices, hotels, restaurants, retail buildings, industrial facilities, etc.) built before 1987 to the B, A or A+ energy class. Under the scheme, the FZOEU grants subsidies and no-interest loans for thermal insulation of the building envelope, for complete renovation, i.e. thermal insulation of the building envelope and renovation of the building energy system (i.e. heating, cooling and ventilation system, hot water and lighting systems, etc.), as well as for the construction of new low-energy passive buildings¹²⁶. The programme aims to renovate 3% of heated usable floor area of commercial non-residential buildings every year, equal to approximately 480,000 m², and reduce the annual energy consumption for heating the average of 220–250 kWh/m² to 45 kWh/m²¹²⁷.

With respect to public buildings, the government adopted the Programme of energy renovation of public sector buildings 2014-2015 (Energetska obnova javnih zgrada), implemented by the Agency for Transactions and Mediation in Immovable Properties (APN), which saw the renovation of 200 public buildings and the mobilisation of HRK 400 million (EUR 53.2 million) worth of investments. Under the scheme, the FZOEU co-finances 40% of the cost of interventions on the building envelope, thermal-technical systems, electrical systems, and water supply systems, in line with the requirement of the Energy Efficiency Directive 2012/27/EU to annually renovate 3% of the total floor area of central government buildings. The scheme aimed to reduce energy consumption in public buildings by 30-60% to 150 kWh/m² per year (compared to the average consumption of 250 kWh/m²) and reduce of CO₂ emissions by 20,500 tonnes per year¹²⁸. Additional public buildings will be renovated under a second scheme, the Programme of energy renovation of public sector buildings 2016-2020¹²⁹. The funds amount to EUR 76 million with the objective to reduce the energy consumption in public sector buildings at an annual level of at least 50%¹³⁰.

TO 4 - Single Market

Croatia has a generally good performance relative to the metrics of the EU Single Market Scoreboard, particularly in terms of Infringements, Internal Market Information System and trade integration in the Single Market for goods and services. Conversely, its overall performance in Public Procurement and Transposition of Law is unsatisfactory. On the former, Croa-

tia's performance in terms of one bidder (i.e. the proportion of contracts awarded where there was just one bidder), award criteria (i.e. the proportion of procedures awarded only on the lowest price basis) and no calls for bids (i.e. the proportion of procurement procedures negotiated with a company without a call for bid) is among the worst in the EU. Regarding Transposition of Law, there was a huge increase between 2015 and 2016, partly due to the higher number of directives to transpose. Croatia is now among the five countries in the EU with a score above 1.5%, standing at 2.2% in terms of transposition deficit¹³¹.

Public institutions responsible for public procurement present insufficient administrative capacity, often resulting in inaccurate tender documentation, lengthy procedures and even cancellations of tenders, particularly in case of complex tenders involving EU funds (indeed, 42% of these were cancelled in 2014). This has negative repercussions on the absorption of EU Funds (absorption rate of 46% for the 2007-2013 period), especially for large infrastructural projects such as transport, waste and water management¹³². Moreover, in Croatia, a considerable share of total public procurement is spent on construction, with the highest value contracts in the sector accounting for about a quarter of the total value of public procurement in 2010. The construction sector has also become increasingly dependent on government contracts in recent years, with public contracts accounting for about 65% of the total value of construction works in 2013. Taking into account that the leaders of the authorities dealing with public contracts are often tied to a political party, and that such authorities are subject to weaker institutional controls, public procurement in the Croatian construction sector is highly susceptible to corruption and political favouritism¹³³.

From January 2017, the public procurement rules were modernised in Croatia in order to fully transpose the EU procurement package. The law passed in 2013 already included rules on electronic bid submission, rules on in-house exemptions and on the modification of existing contracts. Building on this, the amendment in 2017 imposes several new rules such as the use of the most economically advantageous tender as the sole award criterion. Moreover, the European Single Procurement Document (ESPD) is now required as a self-declaration form for bidders¹³⁴.

From January 2017, the public procurement rules were modernised in Croatia in order to fully transpose the EU procurement package.

To address these issues, the government adopted the Strategy for the Development of Public Administration 2015-2020 which, among others, aims to increase the efficiency and effectiveness of the public administration system, particularly in

relation to the use of EU funds, ensure greater transparency and accessibility of public bodies, and eradicate corruption. Furthermore, the State Office for Central Public Procurement is launching unified procurement procedures for various procurement categories, aiming to bring about financial and time savings. Thus, in April 2016, the State Office started gathering data and assessing the feasibility of the implementation of a unified procurement for printing services and the ongoing maintenance of buildings¹³⁵. Another strategy introduced by the government is the National Anti-Corruption Strategy 2015-2020 and action plan for 2015-2016 in order to put effective measures in place, in particular to reduce corruption in public procurement. However, there is limited progress with regards to the implementation of concrete¹³⁶.

Croatia also presents a restrictive regulatory environment for business services and regulated professions.

Nevertheless, with the adoption of the Action Plan on reducing the administrative burden in the economy in 2015, the country has made progress in removing many barriers in the service market across several sectors and professions, including property sales, construction, architects, engineers and land surveyors. Thus, 20% of the identified administrative burden in these areas has been reduced and regulations in the field of architectural services are now largely harmonised with the EU Services Directive. In 2017, fixed tariffs and deregulated prices were abolished for architects, engineers, agents and real estate brokers¹³⁷. Moreover, the need for licenses in order to provide construction services were revoked, together with the existing limitation with regards to the number of construction workers needed¹³⁸.

In terms of Points of Single Contact, the Ministry of Construction and Physical Planning acts as the main Product Contact Point for Construction (PCPC), according to Regulation EU 305/2011 on construction products¹³⁹. The PCPC gives access to national technical rules related to construction products in Croatia and provides free information and advice on provisions aimed at fulfilling basic requirements for construction works applicable for the intended use of construction products. For instance, it provides information on the application of the principle of mutual recognition, the contact data of the competent authorities in Croatia, including the details of the bodies responsible for overseeing the implementation of national regulations, as well as information on construction products in the harmonised and non-harmonised areas (i.e. areas where the CE mark is affixed on products or not, respectively). The PCPC typically responds within 15 working days of receipt of the query¹⁴⁰.

Finally, with respect to the implementation of Eurocodes, all EN Parts are published as National Standards in Croatia. National Annexes are published to all Eurocode Parts, except EN 1997-2 and are available in English (with the exception of those to EN 1991, EN 1992 and EN 1993).

The use of Eurocodes is not compulsory, but since there is no other national scheme available, they are the only means for structural design. No other National Standards are used in parallel with Eurocodes¹⁴¹.

Through the portal, exporters and entrepreneurs can share their experience on trade opportunities and obstacles in a foreign market, give suggestions regarding the organisation of export, as well as asking questions to the community.

TO 5 - International competitiveness

Croatia ranks 77th out of 137 economies in the 2017-2018 Global Competitiveness Index¹⁴². Its overall performance in terms of the internationalisation of its SMEs is above the EU average. Namely, the time and cost for documentary compliance required to export are below the respective EU averages. Indeed, it took 1 hour for documentary compliance compared to the EU-28 average of 1.39 hours and it was free to do so, compared to the EU-28 average of USD 16.4 (EUR 14.0)¹⁴³.

Croatia ranks 77th out of 137 economies in the 2017-2018 Global Competitiveness Index.

In order to strengthen Croatian export activities, the government established in 2013 the Commission for the Internationalisation of the Croatian Economy, tasked with the preparation of the Export Support Action Plan 2014-2015. The Export Action Plan, adopted in 2014, consists of 13 activities and 41 measures under three main areas, aiming to support exporters in all phases of export, from product development, financing, training and removal of administrative barriers in the country, to support in expanding to international markets. The necessary financial resources required for the implementation of the Action Plan were estimated at HRK 1 billion (EUR 132.8 million)¹⁴⁴. The Action Plan, however, omitted to specify targeted measures for the internationalisation of SMEs, for example, through training and advisory programmes. The Support Action Plan was not renewed or extended in 2016¹⁴⁵.

As part of the Action Plan, an export website (Izvozni Portal) was introduced in 2015, containing current news about domestic companies export deals, export-related economic trends, changes in legislation regulating exports, as well as information on the work of the Commission for Internationalisation of the Croatian Economy and on the implementation of the government's Action Plan.

The website also contains services for exporters, such as a test of export readiness and information on export grants, events, trade fairs, visits by national trade delegations, information on export procedures and export markets, international public

tenders and taxation matters¹⁴⁶. Consultations are also available for existing and potential exporters needing support in the internationalisation of their businesses. For instance, in 2016, workshops and events were organised in order to present the Croatian Bank for Reconstruction and Development programs for exporters, which included a conference on micro-credit¹⁴⁷. Various trade missions for companies in the construction and infrastructure sectors, among others, were organised in 2015. Instances include visits to Belarus, with the aim to strengthen cooperation in these areas, business forums and B2B meetings in Kazakhstan, and a delegation to Iraq¹⁴⁸.

Moreover, the Croatian Competitiveness Cluster for the Construction Industry (Hrvatski klaster konkurentnosti građevinske industrije - HKKGI), an industry platform for networking and cooperation between entities in the construction sector, scientific research and the public sector, aims to improve the competitiveness in the Croatian construction sector. To this end, the HKKGI seeks to strengthen cooperation with other partners on joint EU projects, carry out development studies and identify important new markets and opportunities for cooperation, as well as bring about the internationalisation of cluster members through meetings with foreign business partners, participation in international conferences, fairs and exhibitions, and providing information and consulting to cluster members on new business opportunities¹⁴⁹.

Furthermore, the Croatian Bank for Reconstruction and Development (Hrvatska banka za obnovu i razvitak – HBOR) provides loans and insures export transactions against political and commercial risks, issuing guarantees and giving business advice.

As an export bank, HBOR offers various programmes for exporters with the objective of enabling their equal competition in the international market. For instance, as part of the Export Preparations programme, HBOR is offering a more favourable interest rate for beginner exporters (2%)¹⁵⁰. In November 2016, the Croatian Bank for Reconstruction and Development (HBOR) decided to reduce the interest rates by 1 percentage point for two loan programs ("Economy" and "New Production")¹⁵¹. Nevertheless, financial support for export activities of SMEs is very limited¹⁵², and no specific schemes are available for construction companies.

8

Outlook

The financial crisis resulted in a prolonged period of economic decline in Croatia, which saw its GDP fall by 4.0% over 2010-2014.

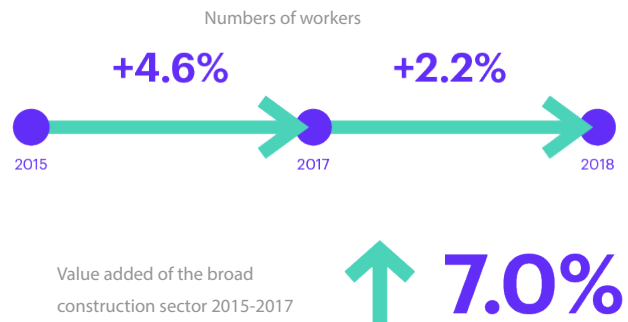
The year 2015 marked the reversal of this trend, with modest economic growth being expected to continue in the coming years.

Indeed, GDP is predicted to grow by 2.9% in 2017 and by a further 2.6% in 2018. The improved macroeconomic context is also expected to be accompanied by improvements in business confidence, which will lead to a slight revival of the construction sector. Indeed, its total output value is forecast to rise at an average annual growth rate of 1.8% over the 2016-2020 period. This increase can be attributed to rising investments in public infrastructure, as well as commercial and energy projects over the forecast period¹⁵³.



In parallel, after a continuous decline since 2010, the number of workers employed in the broad construction sector in Croatia is projected to experience a 4.6% increase between 2015 and 2017 to reach 171,803 people. The number is expected to grow further by 2.2% to reach 175,531 employees in 2018. Similarly, the number of firms operating in the broad construction sector started picking up in 2015 and is expected to grow by 7.2% until 2017. In 2018, the number of enterprises in the construction sector will further increase by 3.3% to reach 33,138. Positive developments have occurred since 2013 with regards to value added of the broad construction sector. Since 2015, the value added increased by 7.0% until 2017 to reach EUR 3.27 billion. This will further grow by 2.3% to reach EUR 3.35 billion in 2018. Moreover, 2015 will also mark a reversal of the decreasing trend for the turnover of the broad construction sector, which will see a 6.4% increase in 2017 compared to 2015, and a 1.7% growth in 2018 from 2017, reaching EUR 9.5 billion.

The slight recovery of the construction sector will mainly depend on the infrastructure segment, although the most considerable source of investment in this area will be the flow



of EU funds. In particular, the railway and energy infrastructure sub-sectors will benefit in the short term from EU financial vehicles, namely the ERDF, the CF and the CEF (see TO 1 - Investment conditions and volumes), which will support the funding of the TEN-T transport corridors and TEN-E energy networks. Due to the EU focus on developing and modernising the Rhine-Danube, Orient-East Med and Baltic-Adriatic corridors through the CEF, railways will particularly benefit from this facility¹⁵⁴. Nationally, the country's focus on reducing energy dependency is expected to drive large infrastructure projects in the coming years, such as the construction of a new heat and power-generation plant, estimated to cost HRK 4.2 billion (EUR 555 million)¹⁵⁵.

The real estate market in Croatia is split on the one hand with the coastal areas, popular for foreigners which boost prices and the rest of the country where prices stagnate due to limited EU support and low foreign direct investment (FDI)¹⁵⁶.

The growing importance of tourism is expected to support the real estate market in these coastal areas. This is strengthened with the plan from the Ministry of Tourism to invest HRK 18.4 billion (EUR 2.4 billion) until 2020 in the construction of new facilities for tourists, specifically with the construction of 20,000 rooms¹⁵⁷. Overall, following several years of decline, 2016 will mark the start of a modest recovery for the residential construction market, with house prices being expected to slightly increase due to important projects in the pipeline. Moreover, demand from wealthy foreign buyers is projected to grow, especially for high-end residential properties¹⁵⁸.

As for non-residential construction, after an increase in demand in 2016, with a large decrease in the vacancy rate, the situation is expected to stabilise in 2017, due to the cautious attitude of investors towards the economic situation¹⁵⁹.

This is predicted to result in the stagnation or even slight decline of rental rates. In this respect, the office sector appears to be the most stable, compared to the retail and industrial real estate segments, due to the importance of the tertiary sector and the improving relations with other EU countries. Indeed, Zagreb will see the highest investor interest, with important international companies like IBM making a move into the office market, which will boost business confidence¹⁶⁰. An additional 26,300 sqm office space will be added to the office market in Zagreb in 2017¹⁶¹. Nevertheless, the prospects of the office sector are dampened by the large availability of office space, coupled with generally subdued demand, namely in cities such as Split and Zadar, where the market will remain stagnant in 2017¹⁶².

Similarly, the retail real estate segment is affected by a lack of consumer demand and low household spending, and vacancies are foreseen to be high in Split and Zadar due to the economic conditions. The situation in Zagreb is expected to

be more positive, with sustained demand for prime units from both domestic and foreign companies. Nevertheless, the beginning of economic recovery and the predicted rise in disposable income may stimulate market growth in 2017¹⁶³. As for the industrial real estate segment, its prospects depend largely on investment in infrastructure projects, namely transport (railway network), which in turn rely on a stable macroeconomic context. Therefore, moderate activity is anticipated in the market, which will focus predominantly on the capital Zagreb, with rental rates remaining fairly stable¹⁶⁴.

In conclusion, there are signs of a slow economic recovery and the gradual reversal of the declining trend in the construction sector. Progress in reforming public administrations and liberalising the market according to the EU Services Directive is expected to bring positive impacts on the sector and economy as a whole.

Progress in reforming public administrations and liberalising the market according to the EU Services Directive is expected to bring positive impacts on the sector and economy as a whole.

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