



European Construction Sector Observatory

Country profile **Croatia**

November 2020



In a nutshell

In 2019, Croatia's GDP increased by 3.0% over the previous year, primarily driven by the rise in the labour market, increasing wages and a robust increase in investments.

Between 2010 and 2019, the Croatian GDP experienced an increase of 11.9% amounting to HRK 383.3 billion (EUR 50.7 billion) in 2019.

The **number of enterprises** in the broad construction sector decreased by 6.4% over the 2010-2019 period, totalling 36,620 enterprises. The decline was mainly due to the reduction in the number of enterprises in the real estate activities (-18.9%), the manufacturing (-13.3%) and the narrow construction (-10.4%) sub-sectors. In contrast, the number of enterprises in the architectural and engineering activities sub-sector increased by 38.2% over the same period.

Number of enterprises in the architectural and engineering activities sub-sector between 2010 and 2019

↑ **38.2%**

Similarly, the **volume index of production** in the broad construction sector recorded an increase of 19.8% during 2015-2019, mainly driven by a 39.2% increment in the construction of buildings, partially offsetting a 1.2% decline in the construction of civil engineering over the same reference period.

Volume index of production in the construction of buildings between 2015 and 2019

↑ **39.2%**

Correspondingly, the **total turnover** of the broad construction sector slightly declined by 4.6% between 2010 and 2017, reaching EUR 10.0 billion. However, it further increased to EUR 12.6 billion in 2019, representing a 20.4% increase over the 2010 level. This overall increase was mainly driven by the turnover growth in the real estate activities (+60.4%), the manufacturing (+48.2%) and the narrow construction (+15.7%) sub-sectors over the 2010-2019 period.

Turnover in the real estate activities sub-sector between 2010 and 2019

↑ **60.4%**

Similarly, the **gross operating rate** of the broad construction sector, which is used to assess the profitability of the sector, stood at 15.6% in 2017, 1.4 percentage points (pps) higher than in 2010 (14.1%). This is slightly below the EU-27 average of 16.6%. Among the sub-sectors, the real estate activities remained the most profitable (33.0%), followed by the architectural and engineering activities (18.8%), the manufacturing (13.0%) and narrow construction (12.8%) sub-sectors in 2017.

There were 195,578 **persons employed** in the Croatian broad construction sector, marking a 3.5% decline over the 2010 level (202,674 persons). This was mainly due to the reduction registered over the same period in the narrow construction sub-sector (-7.3%), accounting for more than half (64.7%) of the total workforce in the broad construction sector in 2019. This decline was partly mitigated by the growth of persons employed in the manufacturing (+18.4%), the architectural and engineering activities (+11.0%),

and the real estate activities (+6.0%) sub-sectors during 2010-2019.

The **shortage of professional and skilled workforce** in the construction sector continues to be a major concern. In response, the authorities are facilitating the access to the labour market for foreign workers by significantly increasing the number of work permits in several sectors including construction.

The demand for housing in the **housing market** remained strong over the past few years. In fact, Croatia is facing a surge in real house prices in some areas, with rental prices rising steeply above inflation and GDP growth. These trends have made housing less affordable. To address this issue, the Croatian government adopted the **Subsidised Loan Programme** to provide affordable housing to its citizens. During the four years of its

implementation (2017-2020), more than 13,000 subsidised loans were approved, proving the relevance of such a programme.

With regards to the investment in civil engineering, in March 2020, the EU approved more than EUR 119.0 million from the EU Cohesion Fund to finance infrastructure projects in Croatia. In October 2019, the government also announced its plan to invest EUR 3.5 billion for the modernisation of existing railway infrastructure and the construction of new railway infrastructure by 2030.

The ongoing COVID-19 pandemic is expected to have some impact on the ongoing projects in Croatia. Nevertheless, excess demand for housing is expected to support investment in the Croatian construction sector. Investment in infrastructure projects is also likely to be conducive to the sector's growth in the midterm.

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Key figures

Construction market

In 2019¹, there were 36,620 enterprises in the broad construction sector in Croatia, with the narrow construction sub-sector accounting for 60.4% of the total **number of enterprises** (Figure 1). Compared to 2010, the number of enterprises in the broad construction sector decreased by 6.4% in 2019. The real estate activities sub-sector experienced the largest drop (-18.9%), followed by the manufacturing (-13.3%) and the narrow construction (-10.4%) sub-sectors between 2010 and 2019. Conversely, the number of enterprises in the architectural and engineering activities sub-sector increased by 38.2% during the same period.

Number of enterprises in the architectural and engineering activities sub-sector between 2010 and 2019

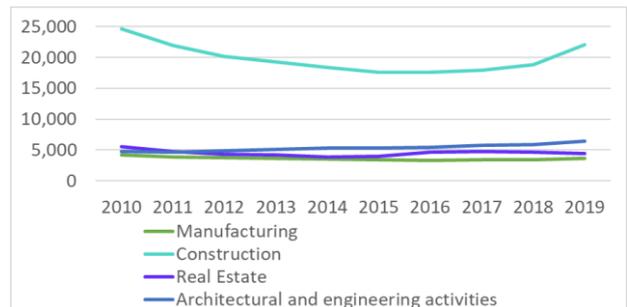
↑ 38.2%

The **volume index of production** in the broad construction sector has been growing since 2015, increasing by 19.8% over the 2015-2019 period. Similarly, the volume index of production in the construction of buildings rose by 39.2% in the same period. On the contrary, construction of civil engineering witnessed a drop of 1.2% over the period of 2015-2019 (Figure 2).

Volume index of production in the construction of buildings between 2015 and 2019

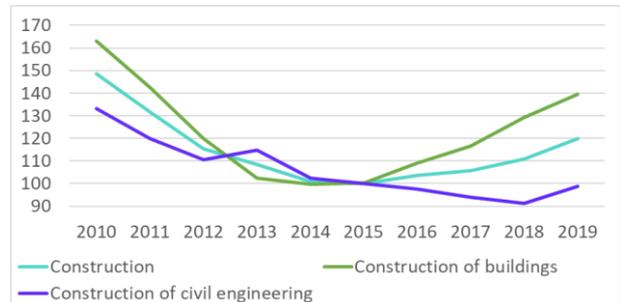
↑ 39.2%

Figure 1: Number of enterprises in the Croatian construction sector between 2010 and 2019



Source: Eurostat, 2020.

Figure 2: Volume index of production in the Croatian construction sector between 2010 and 2019 (2015=100)



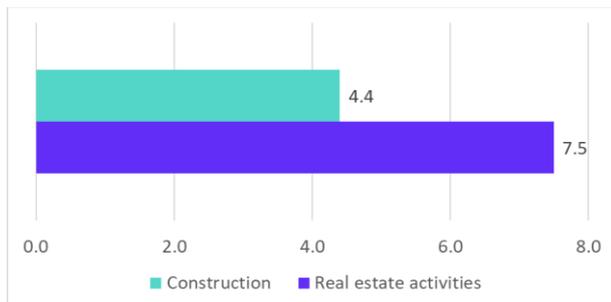
Source: Eurostat, 2020.

The **total added value at factor cost²** of the broad construction sector amounted to EUR 4.4 billion in 2019³. This represents a 25.4% growth over the 2010 level (EUR 3.5 billion). The narrow construction sub-sector accounted for 60.4% of the total (EUR 2.7 billion) in 2019, followed by the manufacturing (17.9%), the architectural and engineering (11.8%) and the real estate activities (9.9%) sub-sectors.

The **share of gross value added (GVA)** of the broad construction sector stood at 14.7% in 2017, below the EU-27 average of 16.4%. In 2019, the share of GVA of the narrow construction and real estate activities sub-sectors stood at 4.4% (EU-27 average 5.0%) and 7.5% (EU-27 average 9.7%) respectively (Figure 3).

There are two statistical (NUTS level 2) regions in Croatia. In terms of **regional gross value added**, *Kontinentalna Hrvatska* had the largest share both in the narrow construction (56.8%, i.e. EUR 1.2 billion in 2017⁴) and the real estate activities sub-sectors (55.7%, i.e. EUR 2.1 billion) in 2017⁵. Similarly, GVA for *Jadranska Hrvatska* region amounted to EUR 883.6 million and EUR 1.7 billion in the narrow construction and real estate activities sub-sectors respectively in 2017.

Figure 3: Gross value added as a share of GDP⁶ in the Croatian broad construction sector in 2019 (%)



Source: Eurostat, 2020.

Productivity

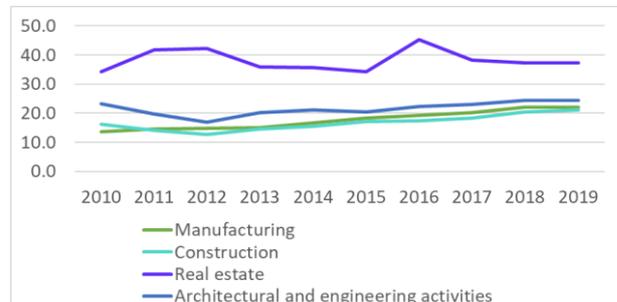
The **apparent labour productivity**⁷ in the broad construction sector increased from EUR 17,393.9 in 2010 to EUR 20,680.3 in 2017 (+18.9%). This is well below the EU-27 average of EUR 50,079.

With regards to the sub-sectors, the manufacturing sub-sector recorded the highest increase of 47.8%, growing from EUR 13,585 in 2010 to EUR 20,076 in 2017. This was followed by the narrow construction sub-sector (+13.7%), growing from EUR 16,100 to EUR 18,300, and the real estate activities sub-sector (+11.4%), growing from EUR 34,300 to EUR 38,200 over the same 2010-2017 period. On the contrary, the architectural and engineering activity sub-sector witnessed a fall of 0.9%, declining to EUR 23,000 in 2017 from EUR 23,200 in 2010. Over the 2017-2019 period, the narrow construction, the manufacturing and the architectural and engineering activities sub-sectors registered a growth of 15.3%, 9.6% and 6.0%, currently ending at EUR 21,100, EUR 22,000 and EUR 24,372 respectively. During the same period, the real estate sub-sector witnessed a drop of 2.2%, ending at EUR 37,374 (Figure 4).

Productivity in the manufacturing sub-sector over 2010-2019

↑ 62.0%

Figure 4: Labour productivity in the broad construction sector in Croatia between 2010 and 2019 (in EUR k)



Source: Eurostat, 2020.

Turnover and profitability

The **total turnover** of the broad construction sector amounted to EUR 10.0 billion in 2017, representing a decline of 4.6% compared to 2010. However, it increased in 2019⁸, reaching EUR 12.6 billion. This is a 20.4% above the 2010 level (EUR 10.5 billion), showing a broad recovery of the sector. This growth was mainly driven by the real estate activities, the manufacturing and the narrow construction sub-sectors, which grew by 60.4%, 48.2% and 15.7% respectively between 2010 and 2019. On the contrary, the architectural and engineering activities sub-sector witnessed a drop of 12.1% during the same period. In 2019, more than half of the **total turnover** in 2019 was generated by the narrow construction sub-sector (64.8%, i.e. EUR 8.2 billion). It was followed by the manufacturing (19.1%, i.e. EUR 2.4 billion), the real estate activities (8.1%, i.e. EUR 1.0 billion) and the architectural and engineering activities (8.0%, i.e. EUR 1.0 billion) sub-sectors.

Turnover in the real estate activities sub-sector between 2010 and 2019

↑ 60.4%

The **gross operating surplus** of the broad construction sector reached EUR 1.6 billion in 2017⁹. This represents a rise from 2010 levels (+5.1% between 2010 and 2017). Notably, the manufacturing sub-sector, has more than doubled its gross operating surplus, rising constantly from EUR 129.2 million in 2010 to EUR 272.1 million in 2017 (+110.6%). In the same period, the real estate activities sub-sector registered growth of 32.6%,

from EUR 273.0 million to EUR 362.0 million. Conversely, the narrow construction sub-sector experienced a 15.1% decrease, coming down to EUR 756.9 million from EUR 891.8 million. Likewise, the architectural and engineering activities sub-sector gross operating surplus declined by 11.4%, from EUR 187.9 million in 2010 to EUR 166.5 million in 2017.

Gross operating surplus in the manufacturing sub-sector between 2010 and 2017  **110.6%**

Similarly, the **gross operating rate** of the broad construction sector¹⁰, which gives an indication of the sector’s profitability, reached 15.6% in 2017. This is 1.4 pps above the 2010 level, reflecting low margins in the sector and indicating a sluggish profitability growth. More specifically, the manufacturing, the architectural and engineering activities and the narrow construction sub-sectors showed an increase in profitability (+5.1, +2.5 and +0.2 pps respectively) in the same period, reaching 13.0%, 18.8% and 12.8% respectively in 2017. The real estate activities sub-sector showed the largest drop in profitability over 2010-2017 (-9.7%), reaching 33.0% in 2017. It is, by far, the most profitable sub-sector in the broad construction sector in Croatia.

Construction costs have been fluctuating, with the construction cost index increasing by 4.6% over the 2015-2019 period. In 2019, this rose by 4.3 index points (ip) from the previous year.

Figure 5: Construction cost index¹¹ between 2010 and 2019 (2015=100)



Source: Eurostat, 2020.

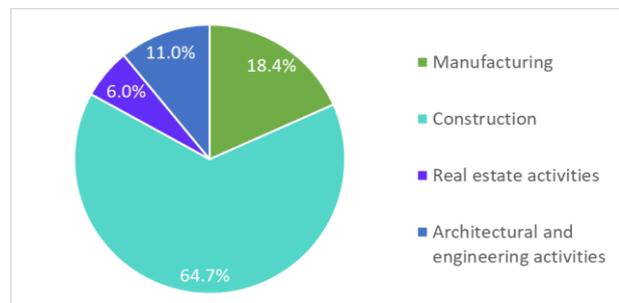
Employment

In 2019¹², there were 195,578 persons employed in the Croatian broad construction sector, marking a decrease of 3.5% as compared to the 2010 level (202,674 persons). The narrow construction

sub-sector, which experienced a 7.4% decline in the number of persons employed between 2010 and 2019, accounted for more than half (64.7%, i.e. 126,478 persons) of the total workforce in the broad construction sector in 2019 (Figure 6). This was followed by the manufacturing (18.4%, i.e. 35,892 persons), the architectural and engineering activities (11.0%, i.e. 21,417 persons) and the real estate activities (6.0%, i.e. 11,790) sub-sectors. Employment in the real estate activities sub-sector increased by 12.5% over the 2010-2019¹³ period, followed by the manufacturing (4.9%) sub-sector. In contrast, the narrow construction sub-sector reported a decrease of 7.8% over the same reference period. Likewise, the number of persons employed in the architectural and engineering activities sub-sector fluctuated throughout the period and eventually was similar to 2010 levels.

Number of persons employed in the real estate activities sub-sector between 2010 and 2019  **12.5%**

Figure 6: Percentage of people employed per construction sub-sectors in Croatia in 2019



Source: Eurostat, 2020.

In terms of **employment by specific occupations**, the manufacturing sub-sector experienced a moderate increase of 35.6% in the demand for crafts and related trades workers between 2010 and 2019, followed by the demand for professionals (+22.0%). However, there was a decline of 27.1% in the demand for service and sales workers while the plant and machine operators suffered a drop of 11.4% in demand during the same time period. Similarly, the narrow construction sub-sector recorded one of the largest declines in the demand for technicians and associate professionals (-23.3%), craft and related trades workers (-21.6%), clerical support workers (-20.0%) and managers (-17.0%) respectively¹⁴. The demand for professionals in the narrow

construction sub-sector witnessed an increase of 54.3% during 2010-2019, which was accompanied by an increase of 14.7% in the demand for elementary occupations.

Demand for professionals in the narrow construction sub-sector between 2010 and 2019  **54.3%**

In addition, the share of **self-employed workers** in the general economy in the narrow construction sub-sector increased from 7.6% in 2010 to 10.0% in 2019. This is slightly below the EU-27 average of 11.9%. In the real estate activities sub-sector, the share of self-employed workers was about 0.7% in 2019, slightly above the 2010 level (0.5%) and below the EU-27 average of 1.4%.

Both **full-time and part-time employment** in the narrow construction sub-sector witnessed a decline of (-13.0%) and (-16.3%) respectively between 2010 and 2019. On the contrary, temporary employees in the narrow construction

sub-sector showed a significant increase of 36.9% during the same period. Similarly, full-time employment in the real estate activities sub-sector marked an increase of 21.1% during 2010-2019.

Full-time employment in the real estate activities sub-sector between 2010 and 2019  **21.1%**

As stated earlier, there are two statistical (NUTS level 2) regions in Croatia namely *Kontinentalna Hrvatska* and *Jadranska Hrvatska*. Both regions witnessed a decline of (-16.2%) and (-15.0%) respectively in the number of persons employed over the 2010-2017 period in the narrow construction sub-sector. With regards to the number of persons employed in the real estate activities sub-sector, *Kontinentalna Hrvatska* registered an increase of (+94.7%) followed by *Jadranska Hrvatska* (+93.5%) during the same reference period.

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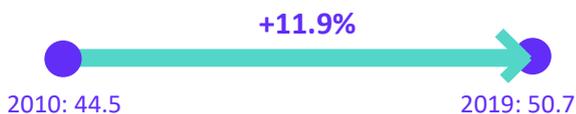
Macroeconomic indicators

Economic development

In 2019, Croatia's GDP rose by 3.0%, following a smaller rise by 2.7% in 2018, mainly driven by the growth in the labour market, rising wages and a strong increase in investments.

Over the 2010-2019 period, the Croatian GDP experienced an increase of 11.9% amounting to HRK 383.3 billion (EUR 50.7 billion) in 2019. In addition, the **potential GDP** in 2019 was HRK 369.7 billion (EUR 48.9 billion) translating into a positive **output gap** of 3.7%. The positive output gap indicates that the Croatian economy tends to overwork its resources, with actual outputs exceeding full capacity output. The **inflation rate** stood at 0.8% in 2019, after witnessing a long fluctuation period since 2010.

Croatian GDP over 2010-2019 (EUR billion)



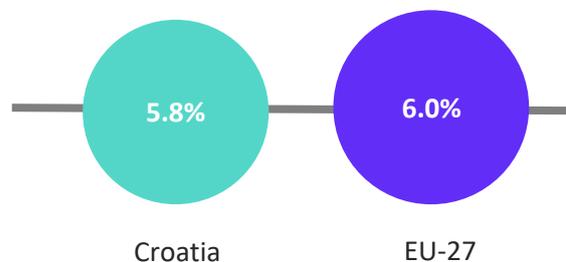
Demography and employment

The **total population** in Croatia amounted to 4.1 million people in 2019. It has shrunk by 5.3% over the 2010-2019 period and is projected to further decline to 3.8 million by 2030 and to 3.4 million by 2050. In 2019, the Croatian **working age population** made up 65.0% of the total population, slightly above the EU-27 average of 64.6%. By 2050, the share of the working age population is expected to decrease to 57.4%, while people aged 65 or older is predicted to make up 30.2% of the overall population. This shift in terms of population may imply an increasing need for adequate care buildings and infrastructure. This in turn may generate more opportunities for the Croatian construction sector.

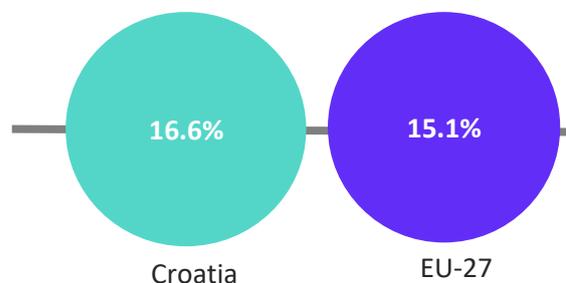
Since 2010, the net migration rate has remained negative, emphasising the increasing emigration of Croatian citizens towards other EU countries. However, in 2019, the net migration rate declined by 43.1% coming down to -2,422 people from -4,255 in 2010.

The average **unemployment rate** in Croatia decreased to 5.8% in 2019 from 7.1% in 2010, thus standing slightly below the EU-27 average of 6.0%. This marks an improvement from the peak of unemployment in 2014, when it reached 14.7%. **Youth unemployment** (below the age of 25) followed a similar trend, reaching 16.6% in 2019, above the EU-27 average of 15.1%. Yet again, the trend is positive, as youth unemployment reduced significantly from 2013, when it peaked at 50.0%.

Unemployment rate in 2019



Youth unemployment rate in 2019



Public finance

General government expenditure accounted for 47.1% of GDP in 2019, which represented a slight decrease from 48.5% in 2010. In 2019, the **government deficit** stood at -0.4%, a significant improvement from previous years. In 2010, it stood at -6.5%, while in 2015 it amounted to -3.3%. **General government gross debt** accounted for 73.2% of the GDP in 2019, which is well above 2010 levels of 57.8%. The Croatian Central Bank (*Hrvatska narodna banka*) adjusted its official interest rate downwards from 9.0% in 2010 to 2.5% in 2019 in an effort to spur private consumption.

Entrepreneurship and access to finance



According to the **Global Competitiveness Report 2019** by the World Economic Forum, Croatia ranked **104th out of 141 economies in terms of financing of SMEs¹⁵**.

As per the report, Croatia ranked 50th in market capitalisation as a percentage of GDP, 56th in domestic credit to the private sector and 106th in venture capital availability. In relation to entrepreneurship, Croatia ranked 126th in growth of innovative companies, 127th in its willingness to delegate authority, 130th in companies embracing

disruptive ideas and 137th in attitudes towards entrepreneurial risk¹⁶.

In the **Doing Business 2020** report, Croatia ranks **51st out of 190 economies¹⁷**. This represents an improvement in the ranking, compared to the previous year (58th in 2019)¹⁸. The country performs especially well in the categories “Trade across borders” (1st), and “Enforcing contracts” (27th).

Croatia scores below the EU-28¹⁹ average in terms of “access to financing” in the current reference period, according to the Small Business Act for Europe (SBA) fact Sheet 2019²⁰. During the 2018-2019 period, the country has taken some initiatives with respect to improving access to finance and entrepreneurship:

- creation of a new venture capital fund, **ESIF Venture Capital Fund**, by the Ministry of Regional Development and EU Funds, which also includes an accelerator component to improve venture capital investments in domestic SMEs.
- the entrepreneurship promotion “**Promocija poduzetništva**” measure was launched by the government, which aims to encourage the promotion of entrepreneurship in the wider society by organising and introducing promotional activities to create a more positive environment for entrepreneurs.

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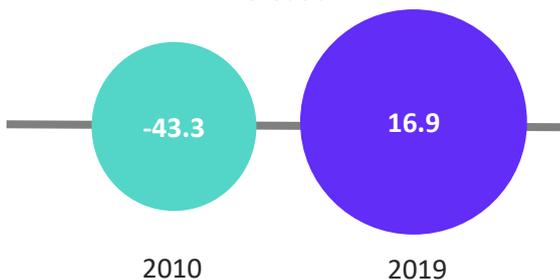
Key economic drivers of the construction sector

Business confidence

Over the 2010-2019 period, business confidence improved gradually in the broad construction sector.

Despite its negative value, the **consumer confidence** indicator increased from -36.1 to -4.3 between 2010 and 2019. This is higher than the EU-27 average which stood at -6.2 in 2019. Similarly, the **industry confidence** indicator improved from -15.6 in 2010 to 8.4 in 2019. This is significantly above the EU-27 average of -4.8 in 2019. Finally, the **construction confidence** indicator experienced the largest increase over the period, reaching 16.9 in 2019, up from -43.3 in 2010. This is a significant improvement, especially in comparison to the EU-27 average of 5.1.

Construction confidence indicator in Croatia



Similarly, the Croatian **investment ratio** improved from 20.1% in 2010 to 21.6% in 2019. Conversely, **investment per worker** declined by 75.0% between 2010 and 2017 in the architectural and engineering activities sub-sector, from EUR 2,000 to EUR 500. It was followed by the real estate activities sub-sector (-60.8%), declining from EUR 39,800 in 2010 to EUR 15,600 in 2017. Similarly, the narrow construction sub-sector registered a decrease of 58.6% in investment per

worker in the same period, from EUR 7,000 to EUR 2,900.

Domestic sales

The ranking of the **most domestically sold construction products** in Croatia has seen some fluctuation in recent years. The list is presented in Table 1, including a comparison with the highest numbers of products sold in the EU-27 region. These represented 39.4% of total domestic construction product sales in 2019. During the same period, the largest increases in sales was recorded for the product category “Prefabricated wooden buildings” (+459.3%), though it only accounted for EUR 25.8 million and doesn’t belong to the top five most domestically sold construction product. Notably, “Towers and lattice masts of iron and steel” (+291.2%) recorded the second highest increase in sales value over the 2010-2019 period.

Table 1: Five most domestically sold construction products in Croatia and in the EU in 2019

Croatia				EU-27
	Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
1	Ready-mixed concrete (group, 236310)	117.6	10.5	Other structures and parts of structures (group 251123)
2	Other structures and parts of structures (group 251123)	92.9	8.3	Doors, windows, etc. (group 251210)
3	Portland cement, etc. (group 235112)	86.7	7.8	Ready-mixed concrete (group 236310)
4	Ceramic tiles	78.9	7.1	Prefabricated

Croatia				EU-27
	Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
	and flags (group 233110)			buildings of metal (group 251110)
5	Doors, windows, etc. (group 251210)	63.8	5.7	Prefabricated structural components (group 236112)

Source: PRODCOM, 2020.

Export of construction-related products and services

The ranking of the **most exported construction products** varied between the 2010-2019 period. During the period, the largest increase was recorded in the product category “Prefabricated structural components for building, etc.” (+730.0%), which was not in the top five most exported construction products in 2019. This was followed by “Prefabricated buildings of metal” (+728.8%) and “Doors, windows and their frames, etc.” (+292.0%). The largest decrease in sales value was recorded in the category “Non-refractory ceramic building bricks, etc.” (-28.2%), in the same reference period. The **top five most exported** construction products in Croatia and in the EU-27 are summarised in Table 2. Together, these made up 60.5% of all construction products exports in 2019.

Table 2: Five most exported construction products in Croatia and in the EU in 2019

Croatia				EU-28
	Product	Value (EUR m)	Share in construction product exports (%)	Product
1	Portland cement etc. (group 235112)	130.3	18.5	Ceramic tiles and flags (group 233110)
2	Prefabricated buildings of metal (group 251110)	114.8	16.3	Other structures and parts of structures (group 251123)
3	Other structures and parts of structures (group 251123)	71.6	10.1	Fibreboard of wood, etc. (group 162115)

Croatia				EU-28
	Product	Value (EUR m)	Share in construction product exports (%)	Product
4	Pellets and briquettes, etc. (group 162915))	57.0	8.1	Doors, windows, etc. (group 251210)
5	Veneer sheets and sheets for plywood, etc. (group 162124)	53.1	7.5	Marble, travertine, alabaster, etc. (group 237011)

Source: PRODCOM, 2020.

In terms of **cross-border provision of construction services**²¹, Croatia exported EUR 194.0 million of construction services worldwide in 2018²², highlighting a 17.4% decline from 2010 (EUR 234.9 million). Notably, in 2018 almost 61.3% of total exports (EUR 118.9 million) came from the EU-27, compared to 70.9% (EUR 166.4 million) in 2010. In parallel, Croatia imported a total of EUR 117.0 million in construction services from the world in 2018²³, a 2621.0% increase since 2010 (EUR 4.3 million), with EUR 43.1 million coming from the EU-27 and EUR 73.9 million from outside the EU-27. Consequently, Croatia achieved a **trade surplus** of EUR 77.0 million in 2018²⁴.

Access to finance in the construction sector

According to the 2019 Survey on the access to finance of enterprises (SAFE) report²⁵, access to finance is the third biggest issue for SMEs, after “finding customers” and “competition”.

As per the report, access to finance is the most important concern for 7.0% of Croatian SMEs, at par with the EU-28 average of 7.0%. Banks loans are still a relevant source of external financing for 48.0% of SMEs in Croatia, above the EU-28 average of 45.0%. Between April and September 2019, 23.0% Croatian SMEs applied for a bank loan, while 4.0% did not apply due to fear of rejection. Out of those who applied for a bank loan, 6.0% saw their applications rejected, which is below the EU-28 average²⁶ of 7.0%²⁷.

According to EIB Investment Survey (EIBIS) 2019 report, Croatian construction firms are more cautious about external finance than firms in other sectors²⁸.

In fact, as per the report, 48.0% construction firms in Croatia consider “availability of finance” as a long-term barrier to investment. Moreover, the highest levels of dissatisfaction among Croatian firms in the construction sector are due to collateral requirements (24.0%), followed by maturity terms (11.0%) and cost of finance (8.0%)²⁹.

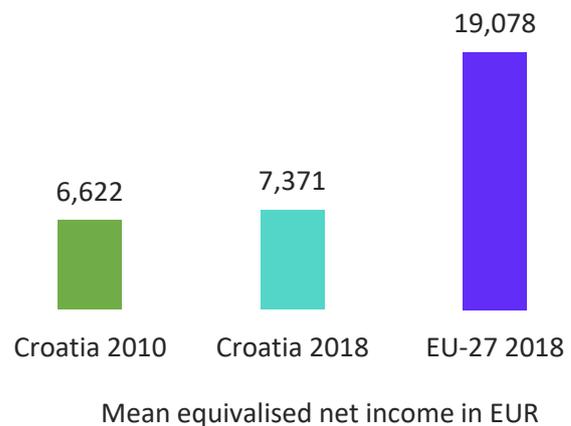
Croatia largely benefits from the European Fund for Strategic Investments. By November 2019, 10 agreements with intermediary banks had been approved for SMEs, financed by the European Investment Fund (EIF) and backed by the European Fund for Strategic Investments (EFSI), amounting to EUR 176 million in total financing³⁰. This is further set to trigger an investment of EUR 583.0 million, thereby improving access to finance for approximately 2,920 SMEs and mid-cap companies. In addition, the EIF and the Croatian Bank for Reconstruction and Development (HBOR) launched a new equity investment programme in Croatia in 2019 to support fast-growing SMEs and mid-caps that operate or are established in the country³¹.

Access to housing

The total number of households in Croatia reduced from 1.52 million in 2010 to 1.47 million in 2019, marking a 3.1% drop.

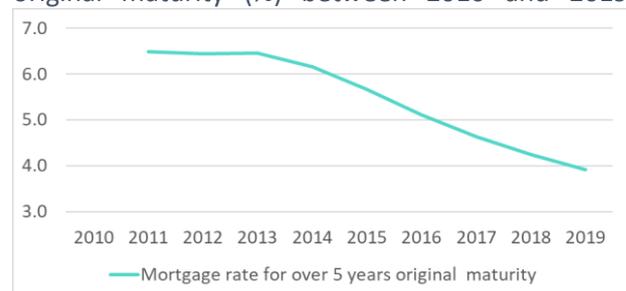
The **urbanisation rate** decreased over the same period. While in 2010, 32.1% of the population lived in densely populated areas, this share fell to 29.6% in 2019. Also, the share of population living in intermediate urbanised areas increased over the same period, reaching 32.8% in 2018, as compared to 20.5% in 2010. While historically the urban population has been increasing, recent trends reflect a preference (and/or a requirement related to housing affordability) for living in smaller localities, rather than cities.

In parallel, the **mean equivalised net income** in Croatia increased by 23.5% over the 2010-2019 period, amounting to EUR 8,089. In 2018, it stood at EUR 7,371, significantly below the EU-27 average of 19,078.



Moreover, housing loans³ to households declined, with a total of **outstanding residential loans** decreasing by 11.7%, from EUR 8.3 billion in 2010 to EUR 7.3 billion in 2018³². At the same time, the **interest rates** on mortgages (for over 5 years original maturity) declined from 6.5% in 2011³³ to 4.2% in 2018. It currently stands at a bottom low of 3.9% (Figure 7).

Figure 7: Mortgage rates for loans for over 5 years original maturity (%) between 2010 and 2019



Source: ECB MFI Interest Rate Statistics, 2020.

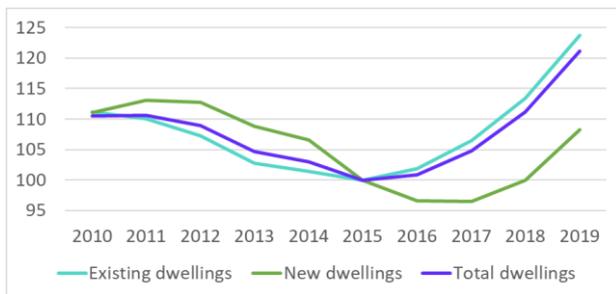
Between 2015 and 2019, the **house prices index** for total dwelling increased by 21.1%, mostly driven by a 23.7% and an 8.3% increase in existing dwelling units and new dwelling units over the same reference period, respectively (Figure 8). A favourable macroeconomic environment, with rising employment and low interest rates driving the increase in property prices in Croatia³⁴.

Nevertheless, this masks considerable regional disparities. In 2019, house prices in Zagreb (the capital city) annually rose by 14.5%, well above the rise on the Adriatic coast (+9.1%) and in the rest of the country (+3.3%). Housing rent is also growing in Croatia³⁵. During the period 2015-2019, the rentals index for housing increased by 3.0%. Rising house prices coupled with an upswing in rent

prices could create housing affordability issues in Croatia.



Figure 8: House price index in Croatia between 2010 and 2019 (2015=100)



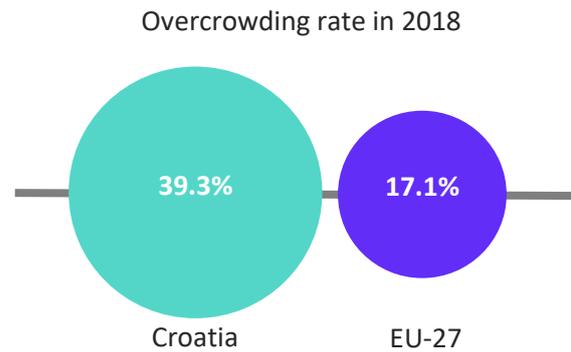
Source: Eurostat, 2020.

From the supply side, the **number of building permits** issued in Croatia stood at 9,932 in 2019, representing a decline of 1.5% from the 2010 level (10,087), according to the Croatian Bureau of Statistics³⁶. This also marks a 5.6% growth over the previous year. In July 2020, the number of building permits issued declined by 15.3% Year-on-Year (YoY), to 676, after decreasing by 6.6% in June 2020³⁷.

Much of the **building stock** in Croatia is owner-occupied, as home ownership rates for the population who earn **above 60% of the median equivalised income**³⁸ in Croatia increased from 88.4% in 2010 to 90.0% in 2019. It stood at 90.9% in 2018, above the EU-27 average of 74.0%. Similarly, for the **population who earn below 60% of the median equivalised income**, the home ownership rate grew from 87.3% in 2010 to 88.2% in 2019. This is also above than the 2018 level of 86.9% and the EU-27 average of 49.8%.

The **overcrowding rate**³⁹ stood at 39.3%⁴⁰ in 2018, well above the EU-27 average of 17.1%. In 2019, it decreased to 38.5%. The **severe housing deprivation rate**⁴¹ stood at 6.2% in 2018, above the EU-27 average of 4.3%. It further decreased to 5.9% in 2019. Whereas, the **housing cost overburden rate**⁴² stood at 5.1% in 2018 as compared to the EU-27 average of 9.6%. The

Croatian housing cost overburden rate decreased to 4.7% in 2019.



Infrastructure



According to the World Economic Forum Global Competitiveness Index 2019, Croatia ranks 32nd out of 141 countries in terms of its overall infrastructure quality⁴³.

Croatian infrastructure performs best in the quality of its roads (13th) and its railroad density (21st). Notably, its liner shipping connectivity and airport connectivity ranks 47th and 56th, respectively. The efficiency of its seaport services and air transport services also score well, ranking 48th and 63rd, respectively⁴⁴.

Croatia is making a significant effort in the modernisation and upgrading of its rail network. Although, investments in rail infrastructure have been growing in recent years, the country still has a clear investment backlog, which slows the shift from road transport to rail. The absence of any significant progress in the restructuring of the sector's state-owned companies further impedes the progress. Croatia is taking considerable measures with respect to sustainable urban and railway transport. In 2019, it signed several contracts for key railway projects and opened the first new railway line in over 50 years. Moreover, Croatia has made progress in expanding the TEN-T rail network, but has not made significant improvements in sustainable urban transport⁴⁵.

4

Key issues and barriers in the construction sector

Company failure

During the period 2012⁴⁶-2017⁴⁷, the **business demography** in the broad construction sector in Croatia changed considerably. The number of **company births** in both the narrow construction and real estate activities sub-sectors increased by 29.6% (from 1,207 firms to 1,564 firms) and 50.5% (from 303 firms to 456 firms), respectively between 2012 and 2017⁴⁸. Conversely, company births declined by 26.8% (from 564 firms to 413 firms) in the architectural and engineering activities sub-sector in the same period.

Similarly, the number of **company deaths** in the narrow construction sub-sector declined by 47.2% while the real estate activities sub-sector saw an increase of 25.4%, totalling 1,391 and 705 firms respectively, over the same period. On the other hand, the architectural and engineering activities sub-sector experienced a reduction of 15.0% in **company deaths** between 2012 and 2017⁴⁹, totalling 250 firms.

Company birth in the real estate activities sub-sector between 2012 and 2017



50.5%

Company deaths in the narrow construction sub-sector between 2012 and 2017



47.2%

Over the 2012-2020 period, a total of 8,959 company bankruptcy proceedings were initiated, out of which 3,188 have resulted in settlement; while five bankruptcy proceedings are still pending⁵⁰.

In May 2020, as part of the COVID-19 measures, the Croatian Parliament passed a New Act on Intervention Measures in Enforcement and Insolvency Proceedings for Duration of Special Circumstances (the Act). The Act explains the rules for a period of “special circumstances” which are defined as events which could not have been foreseen and affected, and which endanger lives, assets of larger value, considerably undermine the environment, economic activity or cause significant economic damage. The period of special circumstances begins on the date that the Act went into force (i.e. May 01, 2020) and will continue for three months⁵¹.

Trade credit

According to the SAFE 2019 report, trade credit constitutes a relevant source of financing for 13.3% of Croatian SMEs, significantly below the EU-28⁵² average of 31.0% in 2019⁵³.

As per the report, during the last six months, only 1.8% of the SMEs have obtained trade credit from their business partners, as compared to the EU-28 average of 16.7%. Additionally, out of 7.5% of SMEs who applied for trade credit in the last six months, 57.4% SMEs received everything they applied for as compared to EU-28 average⁵⁴ of 73.5%.

Furthermore, there is no indication of an increased need to use trade credit with over 75.8% of SMEs reporting that their credit needs have remained unchanged over the last six months. This is below the EU-28 average of 72.9%. 15.4% of Croatian SMEs consider that trade credit availability improved in 2019 (compared to the EU-28 average of 15.2%), and 56.4% of respondents consider the availability to have remained unchanged (compared to EU-28 average⁵⁵ of 70.7%)⁵⁶.

Late payment



In 2019, 19.4% of firms in the Croatian construction sector made their payment by the due date, while 6.2% of firms took more than 90 days, according to the CRIBIS D&B Payment Study⁵⁷.

As per the European Payment Report 2020, 33.0% of respondents in Croatia ranked “Risk of a pan-European recession” as one of the main payment challenges in terms of their customers paying on time and in full over the next 12 months⁵⁸. This is below the EU-28⁵⁹ average of 57.0%. At the same time, 39.0% respondents agreed that late payments have an adverse impact on their liquidity, below the EU-28 average of 45.0%. Lastly, 58.0% of Croatian SMEs prefer the introduction of new legislation to solve the problem of late payments, above the EU-28 average⁶⁰ of 50.0%⁶¹.

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 fixed at 30 days in B2B transactions unless otherwise agreed. Nevertheless, payment terms cannot exceed 60 days, or, in very exceptional circumstances 360 days. For transactions between business and public administration the standard payment terms are 30 days; in exceptional cases these terms can be prolonged to 60 days maximum⁶². However, the Late Payment Directive is considered to have little effect in improving payment morale and is not well known among stakeholders.

Time and cost of obtaining building permits and licenses



As per the 2020 World Bank's Doing Business Report⁶³, Croatia ranked 150th out of 190 economies in “Dealing with construction permits”, an improvement over 159th rank in 2019.

22 procedures are required to complete the formalities to obtain a construction permit in

Croatia, compared to 12.7 in the OECD high-income countries (Table 3). The cost associated with completing the formalities to get a building permit in Croatia is higher than the OECD average, amounting to 9.2% of the value of the warehouse⁶⁴, as compared to 1.5% in the OECD high-income. Conversely, Croatia's performance is better than OECD high-income average when it comes to the time necessary to complete the formalities to obtain a construction permit, being 146 days as compared to 152.3 days in OECD high-income countries⁶⁵.

In 2018, Croatia made dealing with construction permits easier and more affordable by reducing the cost of clearance from the Local Water Authority. It is part of a series of measures in the national Functional Integration Plan, aiming to foster investment, increase legal security and ease the administrative burden⁶⁶. The government also made the transfer of property cheaper and more efficient by lowering real estate taxes and establishing a digital land registry.

Table 3: Construction procedures timing and costs in Croatia

Procedure	Time to complete	Associated costs
Obtain geomechanics study (soil study)	15 days	HRK 25,000.0 (EUR 3,306.3)
Hire a geodetic engineer to produce a geodetic study	15 days	HRK 10,000.0 (EUR 1,322.5)
Obtain notification on conditions from the Inspectorate for Fire at the Ministry of Interior Affairs	15 days	no charge
Obtain notification on conditions from National Croatian Electric Grid	15 days	no charge
Obtain notification on conditions from waste collection department	15 days	no charge
Obtain notification on conditions from the Local Water Authority	15 days	no charge
Receive clearance from the waste collection department	30 days	no charge
Receive clearance from the Inspectorate for Fire at the Ministry of Interior Affairs	25 day	HRK 350.0 (EUR 46.3)
Receive clearance from the Sanitary Inspectorate	24 days	HRK 70.0 (EUR 9.3)
Receive clearance from the National Croatian Electric Grid	15 days	no charge
Receive clearance from the Local Water	14 days	no charge

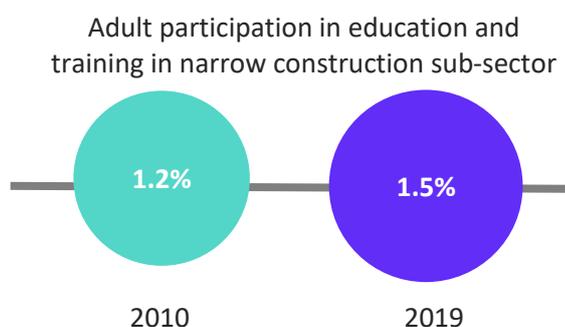
Authority		
Obtain excerpt from the Land Registry for subject and bordering lands	1 day	HRK 20.0 (EUR 2.6)
Request and receive building permit	30 days	HRK 1,070.0 (EUR 141.5)
Obtain decision from the Municipal Authority regarding utilities	22 days	HRK 292,613.0 (EUR 38,698.1)
Pay water contribution to the state company Croatian Waters (Hrvatske Vode)	15 days	HRK 11,705.0 (EUR 1,548.0)
Hire an external supervising engineer to conduct inspections during construction	1 day	HRK 68,327.0 (EUR 9,036.2)
Submit commencement notice	1 day	HRK 20.0 (EUR 2.6)
Receive random inspection from the Ministry of Construction and Physical Planning	1 day	no charge
Obtain water and sewage connection	20 days	HRK 8,000.0 (EUR 1,058.0)
Apply for occupancy (use) permit	1 day	HRK 20.0 (EUR 2.6)
Receive final inspection	1 day	HRK 2,040.0 (EUR 269.8)
Receive occupancy (use) permit	21 days	HRK 1,070.0 (EUR 141.5)

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

Skills shortage

One of the most important challenges of the Croatian construction sector is to meet the demand for skills. The **job vacancy rate** for the narrow construction sub-sector increased from 0.4% in 2013⁶⁷ to 1.8% in 2019, below its 2018 level (2.2%). Similarly, the job vacancy rate for the real estate activities sub-sector grew from 0.6% in 2013⁶⁸ to 0.9% in 2019, below the previous year (1.2%).

Adult participation in education and training in the narrow construction sub-sector has increased to 1.5% in 2019, as compared to 1.2% in 2010 and 1.1% in 2018.



At the same time, the **number of tertiary students** in engineering, manufacturing and construction, increased by 40.4% between 2010 and 2018⁶⁹, going up from 4,217 to reach 5,921. The growth was mainly driven by the increase in the number of students in engineering (+67.7%) and manufacturing and processing (+17.1%) between 2010 and 2018, totalling 3,786 and 748 respectively. Similarly, the number of students in architecture and building witnessed a growth of 3.0% over the same period, reaching 1,362 students.

Number of tertiary students in engineering, manufacturing and construction between 2012 and 2018  **40.4%**

In Croatia, labour shortages have become more pronounced across sectors. According to the European Business Survey (EBS), the share of employers reporting labour shortages has increased substantially in recent years. 23.5% of employers in the industry, construction and services sectors reported labour shortages in 2018, as compared to 16.9% in 2017. The labour shortages are most noticeable in the Croatian construction sector, as half of the employers (51.3%) reported labour shortages as a factor limiting building activity⁷⁰.

According to EIB Investment Survey 2019 report, 94.0% respondents in the construction sector cited availability of skilled staff as a long-term barrier to investment in Croatia⁷¹.

Moreover, the percentage of skilled employees in the Croatian construction sector decreased from 22.0% in 2010 to 16.3% in 2017⁷², according to the Croatian Bureau of Statistics⁷³.

The Croatian government has taken several initiatives in order to tackle the problem of labour shortage. It has introduced targeted scholarships in vocational secondary schools to support training in 62 occupations in high demand⁷⁴.

Croatian authorities have also facilitated access to the labour market for foreign workers by considerably increasing the number of work permits in the construction, tourism and hospitality sector for 2018 and 2019. They also simplified the procedure to identify foreign professionals' qualifications⁷⁵.

The number of authorised permits for foreign workers in the Croatian construction sector increased from 500 in 2016 to 33,300 in 2020, which represents 42.0% of the total number of authorised permits in 2020⁷⁶.

In terms of permits for foreign workers, the most sought-after construction professionals in 2020 included carpenters, masons, unskilled construction workers, assemblers, steel-benders, concrete workers, and plasterers⁷⁷.

Furthermore, in order to attract new talent to the construction sector and change the sector's image, construction worker rights are being protected by a Trade Union in the construction sector in Croatia. The Trade Union and the Construction Employers' Association have created collective bargaining agreements for the construction sector to apply better working conditions and increases in the wages of construction workers. The Union and the Construction Employers' Association expect that raises in wages will attract new employees into the market⁷⁸.

Sector and sub-sector specific issues

Material efficiency and waste management

In the European Union, construction and demolition waste (CDW) constitute one of the heaviest and most voluminous waste streams. CDW accounts for approximately 25% to 30% of all waste generated in the EU. CDW mainly consists of several materials, including concrete, bricks, gypsum, wood, glass, metals, plastic, solvents, asbestos and excavated soil, many of which can be recycled⁷⁹. In 2018⁸⁰, Croatia reported 490,355 tonnes of mineral waste, categorised as hazardous and non-hazardous, from the construction and demolition activities. This represents an increase of

19.8% over the 2017 level (23,528 tonnes) and well below the EU-27 average of 300.0 million tonnes⁸¹.

The legal framework for CDW 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).

The Croatian Waste Management Strategy introduced in 2005, that covers the period until 2025, provides guidelines for strengthening CDW management. Additionally in 2017, the Waste Management Plan 2017-2022 of Croatia was adopted, defining the measures to be put in place in order to reduce waste and increase recycling^{82, 83}. By 2020, the goal is to separately collect 75.0% of construction and demolition waste⁸⁴. However, its implementation still faces bottlenecks. Croatia has a low record of recycling waste materials as only 25.0% of its waste materials were recycled in 2018 against the EU-28 average of 47.0%. Out of total waste, 66.0% accounts for municipal waste in landfills, significantly above the EU-28 average of 22.0%. Thus, continued strong measures could help the country to converge to the EU-28 average⁸⁵ and contribute to achieving the European target of zero pollution⁸⁶.

Climate and energy

Emissions of greenhouse gases (carbon monoxide and dioxide, methane and nitrous oxides) from the narrow construction and real estate activities sub-sectors in Croatia amounted to a total of 1,342,767 tonnes and 153,340 tonnes respectively in 2018⁸⁷, respectively. In 2018, emissions in the narrow construction sub-sector declined by 14.0% as compared to the 2010 level (1,561,481 tonnes). Conversely, in the real estate activities sub-sector, emissions recorded an increase of 0.5% in 2018, over the 2010 level (152,617 tonnes).

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



14.0%

5

Innovation in the construction sector

Innovation performance

According to the European Innovation Scoreboard 2020⁸⁸, Croatia is classified as a Moderate Innovator, with a continuous increase in performance since 2012.

As per the report, Innovators and Firm investments are the strongest innovation dimensions of Croatia. Further, areas of non-R&D innovation expenditures, SMEs with marketing or organisational innovations, Innovative SMEs collaborating with others and Enterprises providing ICT training rank high in the Scoreboard⁸⁹. On the other hand, Intellectual assets, Sales impacts and Finance and support are the weakest innovation dimensions. Croatia's lowest indicator scores are for Exports of knowledge-intensive services, Design applications, Venture capital expenditures, and Lifelong learning⁹⁰.

The **business enterprise R&D (BERD) expenditure** has witnessed a considerable decline since 2010 (Figure 9). BERD in the narrow construction sub-sector declined from EUR 7.0 million to EUR 51,000 over the 2010-2017⁹¹ period, a drop of 99.3%. Similarly, BERD in the professional, scientific and technical activities sub-sector experienced a 22.9% decrease over the same period, declining from EUR 0.7 million to EUR 0.5 million. Lastly, from 2010 to 2017, the real estate activities sub-sector had reported no R&D expenditures at all.

BERD expenditure in narrow construction sub-sector over 2010-2017 period

↓ 99.3%

Figure 9: Business enterprise R&D expenditure (BERD) per construction sub-sector⁹² in Croatia between 2010 and 2017⁹³ (EUR m)



Source: Eurostat, 2020.

In parallel, the **total R&D personnel** (full-time equivalents – FTE)⁹⁴ in the broad construction sector dropped across all sub-sectors as of 2010. R&D FTE in the narrow construction sub-sector decreased from 184 in 2010 to one in 2017⁹⁵ (-99.5%), after reaching zero in 2013. On the contrary, in the professional, scientific and technical activities sub-sector R&D personnel increased by 164.7% from 17 in 2010 to 45 in 2017. R&D FTE in the real estate activities sub-sector were negligible, in line with its BERD expenditure. Likewise, the number of researchers (FTE) witnessed a considerable decline of 99.3% from 142 in 2010 to one in 2017 in the narrow construction sub-sector while the professional, scientific and technical activities sub-sector registered a 183.3% increase reaching 34 in 2017 from 12 in 2010.

Furthermore, Croatia has not filed any **construction-related patent applications** since 2016. During the period 2010-2019, only 9 patents were filed, with 2010 reporting the highest number of patents (4). No Croatian Construction & Materials firms rank within the top 1,000 EU companies by R&D (industrial sector ICB-3D), according to the 2019 EU R&D Scoreboard⁹⁶.

The investment in R&D increased significantly, but remains low and highly dependent on EU funds. Overall investment in R&D stood at 1.0% of GDP in

2019, as compared to 0.8% in 2015⁹⁷. Nonetheless, Croatia is not on track to meet its 2020 national target of 1.4% of GDP⁹⁸. Croatia's R&D intensity continues to be flat, primarily due to its SMEs being weak innovators and government support in R&D-based innovative firms is lacking. Companies are mainly concentrated in low and medium-tech sectors, particularly in trade and tourism, which resulted in the current low level of investment in R&D⁹⁹.

The Croatian government established the National Innovation Council (*Nacionalno inovacijsko vijeće*) to coordinate the implementation of the smart specialisation strategy until 2020 and making more effective use of its RD&I potential. This National Innovation Council further set up Thematic Councils for Innovation (*Osnivanje Tematskih vijeća za inovacije*) which was the result of the effort of the Ministry of the Economy, Entrepreneurship and Crafts to encourage innovation activities and participation by representatives of the SME sector¹⁰⁰.

Eco-innovation and digitalisation



According to the 2018 Eco-Innovation Scoreboard (Eco-IS), Croatia scored 88, in comparison to the EU-28¹⁰¹ average of 100¹⁰², falling under the Average Eco-I performers group.

As per the report, Croatia's score was below EU-28¹⁰³ average on four out of the five indicators, namely Eco-innovation inputs, Eco-innovation activities, Eco-innovation outputs and Resource efficiency outcomes, with Eco-innovation inputs being the worst scorer. However, it scored well above EU-28 average¹⁰⁴ in Socio-economic outcomes¹⁰⁵.

According to the **European Commission Digital Economy and Society Index (DESI) 2020**, Croatia

ranked 20th, with a score of 47.6, out of EU-28 Member States (average score: 52.6)¹⁰⁶. As compared to the previous year, Croatia improved its score in terms of connectivity, human capital, use of internet services, integration of digital technology and digital public services. Among all dimensions, Croatia ranked highest (12th) in integration of digital technology by enterprises and SMEs, scoring the ninth highest in selling online cross-border to other EU Member States¹⁰⁷.

Furthermore, the Croatian government has been actively promoting BIM by introducing it to the Croatian Ministries and by creating the HR BIM Task Group, established by the Ministry of Construction and Physical Planning. The EU Handbook for the introduction of Building Information Modelling by the European Public Sector was recently translated into the Croatian language¹⁰⁸.

Presently, there are only two universities in Croatia that provide specific construction management courses at the master's degree level, namely University J. J. Strossmayer Osijek and University of Zagreb. These construction management courses encompass BIM knowledge. However, there is still a literature gap about the usage of BIM knowledge at Croatian universities¹⁰⁹.

To help introduce the construction sector to digitalisation, the Croatian government developed an Information System for physical planning and construction which includes e-permits, e-plans, e-inspection, e-energy certificates, etc. Another step in this direction was Croatia's participation in the DigiPLACE project. It is an EU-funded project with a budget of EUR 1.0 million which aims to assess the feasibility of European digital platforms for construction, and their integration of several digital technologies, applications and services¹¹⁰.

6

National and regional regulatory framework

Policy schemes

The Croatian housing policies are implemented to boost the availability of dwelling units, 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 affordable housing terms compared to market conditions and boost the construction sector at the same time. The programme offers state funding for the construction of residential properties, with 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 POS-funded apartments at preferential rates. It offers loans with an average interest rate of less than 3.0%, minimum accompanying costs, with a repayment period of up to 30 and 31 years (the latter using a one-year grace period), respectively. The loan is granted for the purchase of a dwelling unit with a maximum price of EUR 1,125.7/m² of usable area¹¹¹. The POS scheme is managed by the Agency for Transactions and Mediation in Real Estate (*Agencija za pravni promet i posredovanje nekretninama* - APN)¹¹².

Until 2019, around 8,322 apartments with a total investment value of over HRK 4.3 billion (EUR 568.7 million) were constructed through the POS programme – with the Croatian government investing about HRK 1.1 billion (EUR 145.4 million)¹¹³.

In April 2017, the government of Croatia adopted the **Subsidised Loan Programme (*Subvencioniranje stambenih kredita*)**. The scheme provides citizens below the age of 45 with a subsidised loan for the purchase of a house or an apartment or the construction of house. It grants subsidies of up to a maximum of EUR 1,500.0 per square meter or up to a maximum loan amount of EUR 100,000.0 in equivalent value in HRK. For the first five years, the interest rate is capped at 3.8% per year. The repayment depends on household characteristics, such as the number of children in the household¹¹⁴. In 2019, the government received 4,260 requests for the subsidised loans, out of which 4,150 were approved and 110 requests were rejected. On September 28, 2020, the fifth round of applications for subsidised housing loans started. And by October 16, 2020, the APN had received 3,847 requests, which are being processed as per the order of receipt¹¹⁵.

During the four years of implementation, 13,011 subsidised loans have been granted under the Subsidised Loan Programme. In the same period, 8,153 families solved their housing issue by buying an apartment, 3,525 by buying a house and 1,333 by constructing a house. Moreover, by September 2020, the government had granted almost HRK 244.0 million (EUR 32.3 million) in subsidies¹¹⁶.

A policy on **Croatian architectural policies for 2013-2020** was introduced in November 2012. 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, 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 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 planning¹¹⁷.

In November 2019, the Croatian Construction Ministry announced that a national development strategy to 2030 is already underway. The aim of this strategy will be to reduce CO2 emissions and improve energy efficiency over the 2020-2030 period¹¹⁸.

Building regulations

In Croatia, the Croatian Obligations Act (*Zakon o obveznim odnosima*, Official Gazette Nos. 35/05, 41/08, 125/11 and 78/15) regulates contracts for the carrying out of building works (building contracts). It also regulates contracts for the design of building works, which, in general, are considered service agreements¹¹⁹.

Furthermore, a building permit (and, depending on the size of the construction, a location permit) for construction of a new building or for the refurbishment of an existing building must be received by the investor before a contractor begins the construction work¹²⁰.

Additionally, the Ministry of Construction and Physical Planning has introduced an “e-permit” system, facilitating obtaining building permits electronically¹²¹.

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 supervision¹²².

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 others¹²³. 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)¹²⁴.

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 contract¹²⁵. Building contracts, as well as contracts for designing construction works, are regulated under the **Croatian Obligations Act** (*Zakon o obveznim odnosima*, Official Gazette No. 35/05, 41/08, 125/11 and 78/15)¹²⁶.

In addition, any party carrying out construction works is responsible to 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 years¹²⁷.

7

Current status and national strategies to meet Construction 2020 objectives

TO 1 – Investment conditions and volumes

Total inland infrastructure investment¹²⁸ as a share of GDP reached 0.7% in 2018¹²⁹, dropping from 1.3% in 2010. Notably, investment in road infrastructure declined by 44.6%, from EUR 515.3 million in 2010 to EUR 285.5 million in 2018. On the other hand, investment in air infrastructure witnessed a significant increase of 249.9% from EUR 28.1 million to EUR 98.4 million over the same period. Similarly, investment in rail infrastructure registered an increase of 19.4%, from EUR 83.4 million in 2010 to EUR 99.6 million in 2018.

Air infrastructure investment between 2010 and 2018  **249.9%**

Road infrastructure investment between 2010 and 2018  **44.6%**

A similar down trend was observed in road infrastructure maintenance, which declined by 0.8% from EUR 195.0 million in 2010 to EUR 193.3 million in 2018. On the contrary, investment in air infrastructure maintenance increased by 183.2% between 2010 and 2018, reaching EUR 6.6 million. Investment in rail infrastructure maintenance increased by 7.6% over the 2010-2018 period, amounting to EUR 96.7 million.

Investment in air infrastructure maintenance between 2010 and 2018  **183.2%**

Progress has been slow in the modernisation and upgrading of the Croatian rail network. Despite the

increase in investments in the rail infrastructure in recent years, there is a clear investment backlog, which slows the modal shift. Several contracts for key railway projects were signed by Croatia in 2019 and the first in over 50 years new railway line was started¹³⁰. As of March 2019, Croatia's score in completed TEN-T conventional rail core network stood at 5.0% to 6.0% against the EU-28 average¹³¹ of 60.0%¹³². It is estimated that the development of Zagreb node, the Dugo Selo-Novska section and Zagreb–Rijeka are the critical missing components in the development of rail TEN-T corridors. On the other hand, Croatia's road infrastructure is quite well maintained, despite the decrease of investment previously observed.

In March 2020, the EU approved more than EUR 119.0 million from the EU Cohesion Fund to finance the infrastructure projects in Croatia¹³³.

Under this, the EU will finance the purchase of 21 new Electric Multiple-Units (EMUs), including 11 suburban EMUs and 10 regional EMUs, by the HZ Passenger Transport, a national operator in Croatia. The project will contribute to the modernisation of Croatia's rolling stock and improve connectivity and mobility¹³⁴.

In October 2019, the Ministry of Maritime Affairs, Transport and Infrastructure of Croatia announced its plan to invest EUR 3.5 billion for the modernisation of existing railway infrastructure and the construction of new railway infrastructure by 2030. Under this plan, a notable project is the renovation of the 229 km railway line connecting the capital Zagreb with the Adriatic city of Rijeka¹³⁵.

In its endeavour to improve its infrastructure situation, the Croatian government also plans to increase its renewable energy share in its total

energy consumption to 36.4% by 2030, compared to 28.0% in 2018¹³⁶. To this end, it is spearheading the development of the liquid natural gas (LNG) terminal on the Adriatic island of Krk. The European Commission has already approved Croatia's EUR 233.6 million LPG terminal development plan with EUR 100.0 million state aid¹³⁷.

In August 2017, Croatia introduced its **2017-2030 National Transport Development Strategy** with the aim to invest EUR 2.0 billion in transport infrastructure, which will be heavily supported by EU funds. The Strategy sets out 37 specific objectives and 18 measures across 6 sectors: rail, road, air, maritime and inland waterway, public urban, suburban and regional transport¹³⁸. More than 20 transport projects are in the purview of such investment. Projects include the purchase of electric trains, the improvement of the tram infrastructure and the renovation of the Dubrovnik Airport¹³⁹.

Croatia is one of the biggest beneficiaries of the EU support funding. EU programmes such as the **Connecting Europe Facility** allocated EUR 430.5 million to specific projects on strategic transport networks. Additionally, **Horizon 2020** allocated EU funding of EUR 84.0 million (including 40 SMEs with about EUR 15.2 million)¹⁴⁰.

In 2019, the EIB Group invested almost EUR 249.0 million in infrastructure¹⁴¹.

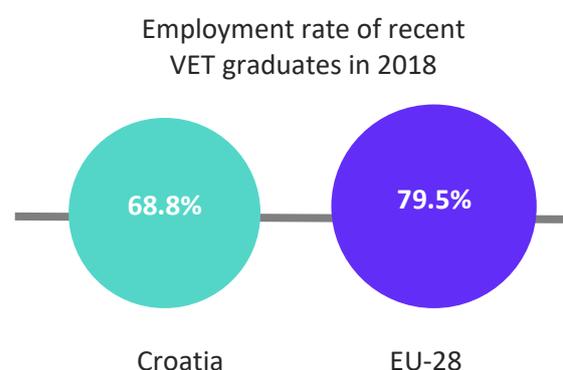
In parallel, Croatia also benefitted from investments from the **European Fund for Strategic Investments** (EFSI). As of July 2020, financing approved under EFSI amounted to EUR 445.0 million, with an additional investment of EUR 1.7 billion set to be triggered. Under the Infrastructure and Innovation window, nine projects have been approved, amounting to EUR 117.0 million and are set to trigger EUR 776.0 million in total investments¹⁴².

Furthermore, the Croatian government has significantly increased its absorption rate for EU funds. Currently, the rate stands at 78.0%, slightly higher than the EU-28 average¹⁴³ of 77.0% and considerably greater than its 2018 level of 52.0%. This has enabled Croatia to invest heavily in infrastructure¹⁴⁴.

TO 2 – Skills

Croatia is reforming vocational education and the training system. In 2019, the share of **students enrolled in formal VET programmes** stood at 68.5%. Nevertheless, vocational education is still considered a less preferable education option in the country. In order to address this, the Croatian Agency for VET and Adult Education is making an effort to promote VET through skills competitions and job fairs for students¹⁴⁵.

In 2018¹⁴⁶, the **employment rate of recent VET graduates** for Croatia considerably improved to 68.8%, as compared to 59.4% in 2017, but remained below the EU-28¹⁴⁷ average of 79.5%¹⁴⁸. Notably, over half of registered unemployed people in 2018¹⁴⁹ were VET graduates. There is no policy for combined school and work-based learning in the formal VET system in Croatia. Around 23.0% of Croatian VET participants reported spending half or more of their secondary education in the workplace for training purposes in 2018, significantly lower than the EU-28 average¹⁵⁰ of 32.0%¹⁵¹.



In the context of **early leavers from education and training** (age 18-24), Croatia stands in a much better position with only 3.3%, as compared to the EU-28¹⁵² average of 10.6% in 2018, but the overall quality of education remains a challenge¹⁵³.

Adult participation (age 25-64) in learning is significantly lower (2.9%), as compared to the EU-28¹⁵⁴ average of 11.1% in 2018¹⁵⁵. This can be attributed to the outdated adult policy education framework and inefficiencies in assessment of programmes.

Adult education staff who work in the initial and continuing training opportunities for adults are insufficiently supported. Teachers and trainers who work as external associates are not employed in the adult education institutions¹⁵⁶.

Responding to these challenges, the government introduced the **Croatian Qualification Framework (CROQF)**, aimed at better aligning adult and higher education and VET with labour market needs. This led to the introduction of new qualification standards and learning outcomes¹⁵⁷, specifically relating to energy-efficient building technicians. Furthermore, curricula will be developed for each of the VET sectors and 30.0% of the curricula can be adopted to the local needs by concerned VET institutions. The amendments to the adult learning policy presented in the Adult Education Act, which includes self-assessment provision, external evaluation of educational institutions and a professional licensing system for teaching staff is still to be adopted¹⁵⁸.

The Croatian Agency for VET and Adult Education (AVETAЕ), in partnership with WorldSkills Europe and WorldSkills International, organised the “Promotion of student competences and VET through skills competitions and fairs” project. Launched in 2017, this project has an estimated cost of EUR 5.5 million and has an implementation period of five years. The project aims to improve student competences and presentational skills by modernising vocational competitions and motivating students to increase participation¹⁵⁹.

TO 3 – Resource efficiency / Sustainable construction

Croatia is yet to implement the policies set out in the National Energy and Climate Plan (NECP), highlighting its investment and policy needs until 2030. The NECP would cover broad areas including renewable energy, energy efficiency, security of supply, climate mitigation and adaptation to be achieved by 2030¹⁶⁰.

The NECP framework covers all five dimensions of the Energy Union including energy security (diversification, imports, flexibility), internal energy market (interconnections, transmission infrastructure, market integration, energy poverty), energy efficiency, decarbonisation (GHG emissions and removals, renewable energy) and

research, innovation and competitiveness¹⁶¹. The implementation phase is expected to start by 2021. By July 2024, a revised NECP draft will be submitted to the European Commission.

Under its National goals for 2030, Croatia set a renovation obligation, aiming to renovate 3.0% of the cooling and/or heating systems in government buildings¹⁶².

Over the 2021-2030 period, Croatia expects to construct 10,930,698 m² in new buildings and renovate 8,630,863 m² in existing buildings, thereby achieving an annual reconstruction rate of 1.6%¹⁶³.

In line with the article 2.a of the Directive 2018/844, Croatia is planning to adopt a long-term renovation blueprint with well-defined indicators for 2030, 2040 and 2050¹⁶⁴. Currently, the action plan is under development and its preliminary results will be integrated in the final version of NECP.

Launched in 2014, the **Programme of energy renovation of family houses 2014-2020** (*Energetska obnova obiteljskih kuća*), aims to increase the energy efficiency of existing homes, reduce 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 that have a maximum of three housing units or with a gross floor area of up to 600 m² and built before 1987¹⁶⁵. 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)¹⁶⁶. This scheme, which showed great interest from citizens, was temporarily suspended after a public call on September 1, 2020. The Fund for Environmental Protection and Energy Efficiency (EPEEF) introduced a new public call in the first quarter of 2021, worth approximately HRK 200.0 million (EUR 26.5 million), with the same conditions as in 2020¹⁶⁷.

In 2014, the Ministry of Construction and Physical Planning adopted the **Programme of energy renovation of apartment (multi-residential) buildings 2014-2020** (*Energetska obnova višestambenih zgrada*). As of March 2018, a total of 576 contracts were signed for the energy renovation of multi-residential buildings,

amounting to over EUR 75.4 million in grants from the Fund¹⁶⁸.

In 2014, the Croatian government adopted the **Programme of energy renovation of commercial non-residential buildings 2014-2020** (*Energetska obnova nestambenih zgrada*), aimed at bringing existing commercial buildings (offices, hotels, retail buildings, 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 as well as for the construction of new low-energy passive buildings¹⁶⁹. The programme focuses on renovating 3.0% of heated usable floor area of commercial non-residential buildings every year, equal to approximately 480,000 m², and reducing the annual energy consumption for heating an average of 220–250 kWh/m² to 45 kWh/m²¹⁷⁰.

With respect to public buildings, the government adopted the **Programme of energy renovation of public sector buildings** (*Energetska obnova javnih zgrada*), implemented by the Agency for Transactions and Mediation in Real Estate (APN). Under the scheme, the FZOEU co-finances 40.0% 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 3.0% of the total floor area of central government buildings. Currently, 871 public buildings (including hospitals, schools and kindergartens) are being renovated under this scheme. The renovations are expected to bring about 60.0% of energy savings in the buildings¹⁷¹.

As part of the National Development Strategy by 2030, the Ministry of Construction and spatial planning (MGIPU) introduced amendments and the enactment of legislation, strategies and programmes in 2019, to direct long-term integral renovation of buildings. The amendments include the adoption and implementation of the Long-Term Reconstruction Strategy National Building Fund by 2050. The steps to decarbonise the national stock of buildings are explained in the long-term strategy, which is expected to be adopted in 2020 in accordance with the time limit defined in Article 53, Regulation (EU) 2018/1999¹⁷².

TO 4 – Single Market

According to the EU Single Market Scorecard 2020, Croatia performs well in trade integration in the single market for goods and services¹⁷³.

As per the report, Croatia's transposition deficit stood at 0.2% in 2019, below the 0.5% proposed target (in the Single Market Act) and the EU-28 average deficit of 0.6%. Similarly, its conformity deficit stood at 1.9% in 2019, above the previous year (0.9%) and the EU-28 average¹⁷⁴ of 1.2%. Due to limited use of the EU Pilot tool, Croatia reported an increase in the number of infringement proceedings against it, reaching 26 pending cases in 2019. This is below the EU-28 average¹⁷⁵ of 29 cases¹⁷⁶.

In the Internal Market Information System, Croatia performed moderately well in four out of the five indicators. Similarly, the country's trade integration in the single market for goods and services stood above the EU-28¹⁷⁷ average. In addition, in terms of public procurement Croatia's performance was satisfactory in 2019¹⁷⁸.

Croatia is responsible for notifying the European Commission of any draft legislation it intends to table that concerns products or services. Currently, the government issues a low volume of notifications under the Single Market Transparency Directive¹⁷⁹.

In 2019, Croatia notified six draft laws, that consisted of two for each sector including agriculture, fishing and foodstuffs; environment and construction¹⁸⁰.

Furthermore, more than 60.0% of Croatian firms believe that corruption is widespread in public procurement managed by both national and local authorities. Companies indicate that favouritism in the decision of government officials and diversification of public funds are both very common¹⁸¹.

In order to improve the situation, the government adopted the **Strategy for the Development of Public Administration 2015-2020**. The strategy 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. However, the

implementation of the strategy remained relatively limited. Furthermore, the State Office for Central Public Procurement also launched unified procurement procedures for various procurement categories to bring about financial and time savings¹⁸².

With regard to the implementation of **Eurocodes**, all EN Parts are published as National Standards in Croatia. Although the use of Eurocodes is not mandatory, in the absence of any other national scheme, in practice the Eurocodes become obligatory. National Annexes are published on all Eurocode Parts, except EN 1997-2, and are available in English (apart from those in the EN 1991, EN 1992 and EN 1993 series)¹⁸³.

TO 5 – International competitiveness

According to the **Global Competitiveness Index 2019**¹⁸⁴, Croatia ranks **63rd out of 141 economies, five positions above the previous index (68th)**.

As per the report, in terms of trade openness, Croatia ranks sixth in trade tariffs out of 141 economies, 22nd in terms of prevalence of non-tariff barriers and 40th in border clearance efficiency. It is ranked 113rd in complexity of tariffs¹⁸⁵.

Croatia is the third-best performing EU member state on internationalisation, according to the SBA Fact Sheet 2019¹⁸⁶. It scores above the EU-28¹⁸⁷ average in all sets of indicators for internationalisation. Croatia is one of the top-scoring EU Member States for four out of five indicators and is ranked first in indicators including trade community involvement, advance rulings, automation formalities and cooperation with the border agency¹⁸⁸.

The **internalisation of construction products** in the Croatian construction sector has shown signs of growth for the past few years. **The export values of all construction-related products** increased from EUR 331.8 million in 2010 to EUR 705.7 million in 2019, exhibiting an increase of 112.7%. Moreover, Croatia's share of exports of all construction-related products stood at 55.5% of the total production value in 2018, higher than the 2010 level of 36.2% and above the EU-27 average

of 11.4%. In 2019, the share slightly reduced to 56.0%.

Export values of all construction-related products between 2010 and 2019

 **112.7%**

Conversely, the export value of architectural services declined by 96.9% between 2010 and 2019, from EUR 2.5 million to EUR 0.1 million. This is below the EU-27 average of EUR 57.9 million.

Exports value of all architectural services between 2010 and 2019

 **96.9%**

With regards to **inward FATS (Foreign affiliates statistics)**¹⁸⁹, value added at factor cost in the narrow construction sub-sector grew by 97.2%, while it rose by 306.8% in the real estate activities sub-sector between 2010 and 2017¹⁹⁰. Similarly, turnover in the narrow construction and the real estate activities sub-sectors grew by 76.2% and 215.1% respectively over the 2010-2017 period. In terms of **outward FATS**¹⁹¹, turnover and the number of people employed in the real estate activities sub-sector increased by 200.0% and 50.0% respectively between 2010 and 2017¹⁹².

During 2018-2019, the government implemented the **“Business internationalisation of SMEs – phase II”** (*Internacionalizacija poslovanja MSP-ova - faza II30*). It aims to strengthen the international competitiveness of SMEs by facilitating the presentation of their products/services. It provides support for their international market cooperation with foreign partners and introduces products to new foreign markets¹⁹³. The **Croatian Competitiveness Cluster for the Construction Industry** (*Hrvatski klaster konkurentnosti građevinske industrije - HKKGI*), an industry networking platform for cooperation between entities in the construction sector, scientific research and the public sector, focuses on improving the competitiveness of the Croatian construction sector. The HKKGI works with other partners on joint EU projects, carries out development studies and identifies important new markets and opportunities for cooperation. It also supports the internationalisation of cluster members through meetings with foreign business partners, as well as participation in international conferences, fairs and exhibitions¹⁹⁴.

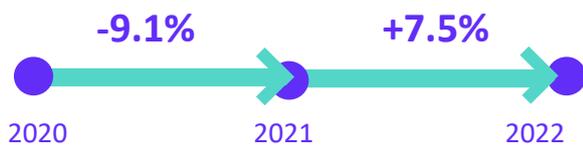
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Outlook

The Croatian economy's growth is expected to slow down in 2020, primarily due to the COVID-19 epidemic followed by the global economic lockdown. Nonetheless, the economy is expected to rebound in 2021.

Croatia's GDP is estimated to decline by 9.1% in 2020 and then grow by 7.5% in 2021, reaching HRK 374.3 billion (EUR 49.5 billion) in 2021.

Expected GDP growth between 2019-2021

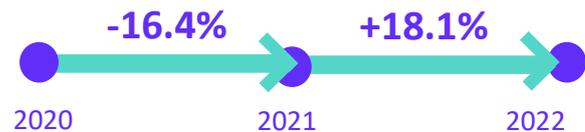


In line with the general economy, the **number of enterprises** in the broad construction sector is expected to decline by 16.3% YoY in 2020, and then increase by 14.7% in 2021, totalling 35,148 enterprises.

Similarly, the **turnover** in the broad construction sector is forecasted to decline by 16.2% in 2020 and then increase by 19.5% in 2021, amounting to EUR 12.6 billion. Similarly, the **total value added** of the broad construction sector is expected to decrease by 15.8% in 2020 and then grow by 18.3% in 2021, reaching EUR 4.4 billion in 2021.

In parallel, the number of **persons employed** in the broad construction sector is also expected to decrease by 16.4% to 163,457 persons in 2020 and then increase by 18.1% to 193,053 persons in 2021. This decline is projected to come from all the sub-sectors including the manufacturing (-22.2%), the real estate activities (-19.0%), the narrow construction (-16.1%) and the architectural and engineering activities (-7.6%) sub-sectors in 2020.

Number of persons employed in the broad construction sector between 2020 and 2022



The **housing market** has been a key factor behind the revival of the construction sector, with the house price index being on the rise since 2015, after decreasing for five consecutive years. Moreover, on-going and new government schemes backed by EU funding such as subsidised loans for social housing are expected to add further market momentum.

The civil engineering sector is expected to be driven by a robust pipeline of EU-backed projects, especially related to infrastructure and tourism. Moreover, the government's plan to invest EUR 3.5 billion for the modernisation of existing railway infrastructure and the construction of new railway infrastructure by 2030, will further boost the sector. Under this plan, a notable project is the renovation of the 229 km railway line connecting the capital Zagreb with the Adriatic city of Rijeka. With ongoing legislative amendments and continuous government commitment to increasing infrastructure investment, this trend can be further improved.

Overall, the economic outlook for the Croatian broad construction sector is positive. A strong housing market coupled with a solid pipeline of EU-backed projects and procedure simplification relating to construction will further support the development of the construction sector. However, the COVID-19 outbreak and the Zagreb earthquake are expected to weaken the short-term outlook of the sector¹⁹⁵.

References

- 1 Please note that this 2019 data is a nowcast - please refer to the methodology notes for further detail
- 2 Please note that the share of each sub-sector in the value added of the broad construction sector should not be compared to the shares of the Gross Value Added in the GDP, since the GDP also includes taxes and excludes subsidies.
- 3 Please note that this 2019 data is a nowcast - please refer to the methodology notes for further details.
- 4 Data for subsequent years unavailable.
- 5 Ibidem.
- 6 Data unavailable for the manufacturing and architectural and engineering activities in 2019
- 7 Apparent labour productivity refers to the gross value added per person employed.
- 8 Please note that this 2019 data is a nowcast - please refer to the methodology notes for further details.
- 9 Data for subsequent years unavailable.
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