

# European Construction Sector Observatory

Country profile **Croatia**

November 2021




## In a nutshell


**In 2020, Croatia's GDP contracted by 8.0% over 2019, mainly due to lower domestic and external demand and a sharp drop of 60.0% in tourism activities (year-on-year).**

Between 2010 and 2020, the Croatian GDP experienced an increase of 3.1% amounting to HRK 353.7 billion (EUR 46.0 billion) in 2020.

The **number of enterprises** in the broad construction sector decreased by 11.6% over the 2010-2020 period, totalling 34,570. The decline was mainly due to the fall in the number of enterprises in the manufacturing sub-sector (-26.6%), followed by the narrow construction (-16.4%) and the real estate activities (-4.9%) sub-sectors between 2010 and 2020.


Number of enterprises in in the narrow construction sub-sector 2010 and 2020  **16.4%**

The **volume index of production** in the broad construction sector exhibited an increase of 24.2% over the 2015-2020 period. The growth was mainly driven by 43.6% and 3.6% increases registered in the volume index of production in the construction of buildings and construction of civil engineering respectively, over the same reference period.

Volume index of production in the construction of buildings between 2015 and 2020  **43.6%**

Correspondingly, the **total turnover** of the broad construction sector grew by 4.0% between 2010 and 2018, reaching EUR 10.9 billion. It further increased to EUR 11.5 billion in 2020, exhibiting an increase of 9.8% over the 2010 level of EUR 10.5

billion. This growth was mainly driven by the real estate activities, the manufacturing, and the narrow construction sub sectors, which grew by 72.9%, 25.7% and 5.7% respectively between 2010 and 2020.

Turnover in the broad construction sector between 2010 and 2020  **9.8%**

Similarly, the **gross operating rate** of the broad construction sector, which is used to assess the profitability of the sector, stood at 14.6% in 2018<sup>1</sup>. This is 0.4 pps above the 2010 level, reflecting low margins in the sector and indicating a sluggish profitability growth.

Demand 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. Over the 2017-2021 period, 22,145 subsidised loans were approved.

**Under its EUR 6.3 billion 2021-2026 Recovery and Resilience Plan (RRP), Croatia has allocated EUR 763.9 million for the renovation of buildings. EUR 591.4 million for the reconstruction of buildings damaged in earthquakes, including their energy renovation.**

EUR 95.6 million have been allocated for residential buildings and EUR 479.8 million for public buildings and buildings with a status of cultural good. The government has launched a Renovation of Buildings

initiative aimed at promoting the decarbonisation of the sector while supporting the post-earthquake buildings renovation. The initiative plans to support the renovation of at least 225,000 m<sup>2</sup> of private building stock, 562,000 m<sup>2</sup> of public buildings and 31,000 m<sup>2</sup> of cultural buildings, while achieving at least a 30.0% increase in primary energy savings compared to the pre renovation state.

With regards to investment in **civil engineering**, the Croatian government allocated EUR 728.0 million of its RRP funding for investment in sustainable mobility. This includes upgrading railway lines, installing 1,300 electric charging stations as well as introducing zero emission vehicles and vessels. Croatia also plans to improve public transport in Zagreb by developing autonomous electric taxis under its new urban mobility ecosystem. Additionally, the government has allocated EUR 227.0 million for supporting employment and social inclusion including redesigning active labour

market policies to boost employment, financing training and upskilling programme vouchers, as well as improving the adequacy and coverage of social benefits.

Support to upskilling / reskilling is important as 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.

Overall, the Croatian construction sector has a positive outlook. Non-residential and civil engineering markets are expected to be the primary growth drivers. Additionally, investment in public sector infrastructure, reconstruction of buildings, digitalisation of economy and EU backed projects are expected to lead the future growth of the sector.

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## 1

## Key figures

## Construction market

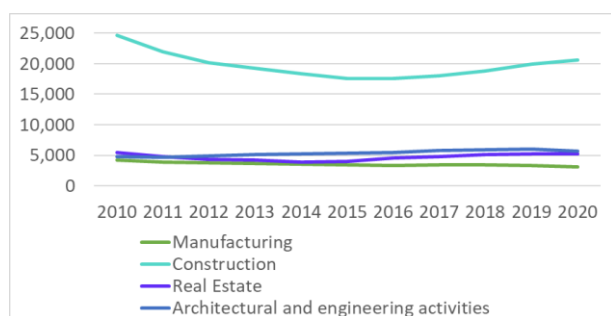
In 2020<sup>2</sup>, there were 34,570 **enterprises** in the broad construction sector in Croatia, with the narrow construction sub-sector accounting for 59.7% of the total (Figure 1). Compared to 2010, the number of enterprises in the broad construction sector decreased by 11.6% in 2020. The manufacturing sub-sector experienced the largest drop (-26.6%), followed by the narrow construction (-16.4%) and the real estate activities (-4.9%) sub-sectors between 2010 and 2020. The number of enterprises in the architectural and engineering activities sub-sector increased by 18.6% during the same period.

Number of enterprises  
in the narrow  
construction sub-sector  
between 2010 and 2020



16.4%

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



Source: Eurostat, 2021.

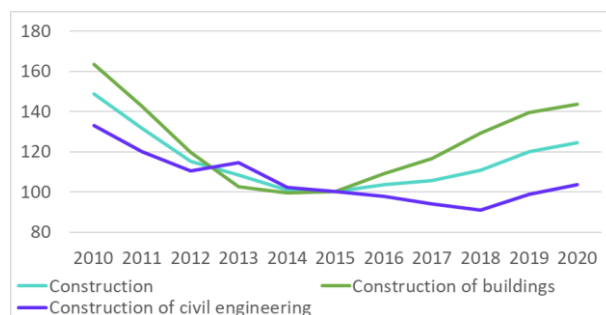
The **volume index of production** in the broad construction sector has been growing since 2015, increasing by 24.2% over the 2015-2020 period. This growth was mainly driven by 43.6% and 3.6% increases registered in the volume index of production in the construction of buildings and construction of civil engineering respectively, over the same reference period (Figure 2).

Volume index of  
production in the  
construction of  
buildings between 2015  
and 2020



43.6%

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



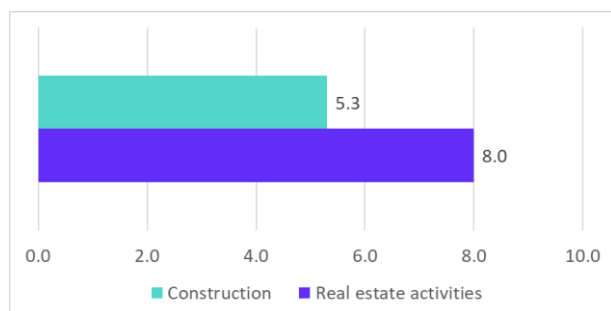
Source: Eurostat, 2021.

The **total added value at factor cost**<sup>3</sup> of the broad construction sector amounted to EUR 3.9 billion in 2020<sup>4</sup>. This represents a 10.3% growth over the 2010 level (EUR 3.5 billion). The narrow construction sub-sector accounted for 54.0% of the total (i.e. EUR 2.1 billion) in 2020, followed by the manufacturing (17.3%, i.e. EUR 673.2 million), the real estate activities (17.2%, i.e. EUR 668.3 million), and the architectural and engineering (11.5%, i.e. EUR 447.2 million) sub-sectors.

The **share of gross value added (GVA)** of the broad construction sector stood at 14.6% of Croatia's GDP in 2018<sup>5</sup>, below the EU-27 average of 16.4%. In 2020, the share of GVA of the narrow construction and real estate activities sub-sectors in Croatia's GDP stood at 5.3% (EU-27 average 5.1%) and 8.0% (EU-27 average 10.3%) respectively (Figure 3).



Figure 3: Gross value added as a share of GDP<sup>6</sup> in the Croatian broad construction sector in 2020 (%)



Source: Eurostat, 2021.

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 (55.5%, i.e. EUR 1.3 billion in 2018<sup>7</sup>) and the real estate activities sub-sectors (55.6%, i.e. EUR 2.2 billion) in 2018<sup>8</sup>. Similarly, GVA for *Jadranska Hrvatska* region amounted to EUR 1.0 billion and EUR 1.7 billion in the narrow construction and real estate activities sub-sectors respectively in 2018<sup>9</sup>.

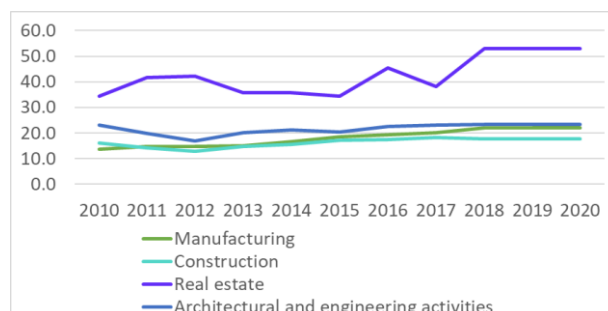
## Productivity

The **apparent labour productivity**<sup>10</sup> in the broad construction sector increased from EUR 17,393.9 in 2010 to EUR 21,691.7 in 2018 (+24.7%). This is well below the EU-27 average of EUR 51,960.1.

With regards to the sub-sectors, the manufacturing sub-sector recorded the highest increase of 62.2%, growing from EUR 13,585 in 2010 to EUR 22,042 in 2020. This was followed by the real estate activities sub-sector (+54.3%), growing from EUR 34,300 to EUR 52,911, and the narrow construction sub-sector (+10.6%), growing from EUR 16,100 to EUR 17,802 over the same period. The architectural and engineering activities sub-sector witnessed a slight increase of 0.7%, to EUR 23,354 in 2020 from EUR 23,200 in 2010 (Figure 4).

Productivity in the narrow construction sub-sector over 2010-2020 **↑ 10.6%**

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



Source: Eurostat, 2021.

## Turnover and profitability

The **total turnover** of the broad construction sector amounted to EUR 10.9 billion in 2018, representing a growth of 4.0% compared to 2010. It further increased to EUR 11.5 billion in 2020, exhibiting an increase of 9.8% over the 2010 level of EUR 10.5 billion. This growth was mainly driven by the real estate activities, the manufacturing, and the narrow construction sub-sectors, which grew by 72.9%, 25.7% and 5.7% respectively between 2010 and 2020. The architectural and engineering activities sub-sector witnessed a drop of 22.5% during the same reference period.

In 2020, more than half of the **total turnover** was generated by the narrow construction sub-sector (64.9%, i.e. EUR 7.5 billion). It was followed by the manufacturing (17.7%, i.e. EUR 2.0 billion), the real estate activities (9.6%, i.e. EUR 1.1 billion) and the architectural and engineering activities (7.7%, i.e. EUR 0.9 billion) sub-sectors.

Turnover in the broad construction sector between 2010 and 2020 **↑ 9.8%**

The **gross operating surplus** of the broad construction sector reached EUR 1.6 billion in 2018<sup>11</sup>. This represents a rise of 7.2% from the 2010 level (EUR 1.5 billion). The manufacturing sub-sector has more than doubled its gross operating surplus, rising constantly from EUR 129.2 million in 2010 to EUR 293.8 million in 2018 (+127.4%).

In the same period, the real estate activities sub-sector registered growth of 90.0%, from EUR 273.0 million to EUR 518.8 million. The narrow construction sub-sector experienced a 31.2% decrease, coming down to EUR 613.5 million in 2018 from EUR 891.8 million in 2010. Likewise, the architectural and engineering activities sub-sector gross operating surplus declined by 13.3%, from EUR 187.9 million in 2010 to EUR 163.0 million in 2018.

Gross operating surplus  
in the narrow  
construction sub-sector  
between 2010 and 2018

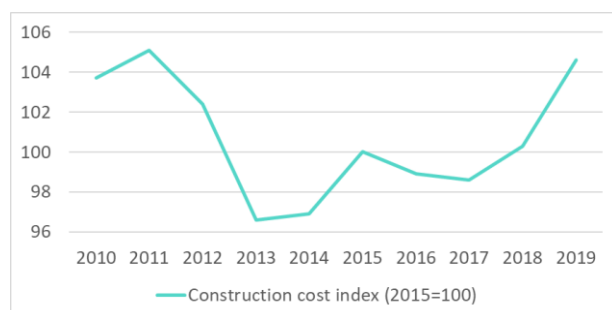


31.2%

Similarly, the **gross operating rate** of the broad construction sector<sup>12</sup>, which gives an indication of the sector's profitability, stood at 14.6% in 2018<sup>13</sup>. This is 0.4 pps above the 2010 level, reflecting low margins in the sector and indicating a sluggish profitability growth. More specifically, the real estate activities, the manufacturing, and the architectural and engineering activities sub-sectors showed an increase in profitability (+5.5, +5.0, and +1.0 pps) in the same period, reaching 48.2%, 12.9% and 17.3% respectively in 2018. The narrow construction sub-sector showed the largest drop in profitability over 2010-2018 (-3.3 pps), reaching 9.3% in 2018.

**Construction costs** have been fluctuating, with the construction cost index increasing by 4.6% over the 2015-2019<sup>14</sup> period. In 2019, it rose by 4.3 index points (ip) from the previous year, affecting the profitability of the broad construction sector.

Figure 5: Construction cost index<sup>15</sup> between 2010 and 2019<sup>16</sup> (2015=100)



Source: Eurostat, 2021.

## Employment

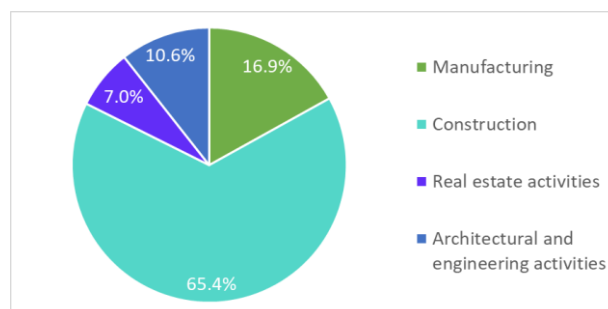
In 2020<sup>17</sup>, there were 180,293 **persons employed** in the Croatian broad construction sector, marking a decrease of 11.0% compared to the 2010 level (202,674 persons). The narrow construction sub-sector, which experienced a 13.6% decline in the number of persons employed between 2010 and 2020, accounted for more than half (65.4%, i.e. 117,973 persons) of the total workforce in the broad construction sector in 2020 (Figure 6). This was followed by the manufacturing (16.9%, i.e. 30,541 persons), the architectural and engineering activities (10.6%, i.e. 19,149 persons) and the real estate activities (7.0%, i.e. 12,631) sub-sectors. Employment in the real estate activities sub-sector increased by 20.6% over the 2010-2020<sup>18</sup> period. In contrast, the narrow construction, the manufacturing, and the architectural and engineering activities sub-sectors experienced declines of 13.6%, 10.7% and 10.6% respectively over the same reference period.

Number of persons  
employed in the narrow  
construction sub-sector  
between 2010 and 2020



13.6%

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



Source: Eurostat, 2021.

In terms of **employment by specific occupations**, the manufacturing sub-sector experienced a moderate increase of 35.1% in the demand for crafts and related trades workers between 2010 and 2020, followed by the demand for professionals (+14.0%). However, there was a significant decline of 50.8% in the demand for service and sales workers, while plant and machine operators suffered a drop of 15.3% in demand during the same period.

Similarly, the narrow construction sub-sector recorded one of the largest declines in the demand for managers (-20.8%), followed by craft and related trades workers (-13.1%), clerical support workers (-20.0%) and plant and machine operators and assemblers (-9.6%)<sup>19</sup>. The demand for professionals in the narrow construction sub-sector witnessed an increase of 74.3% during 2010-2020, which was accompanied by increases of 27.7% and 5.6% in the demand for clerical support workers and technicians and associate professionals, respectively.

Demand for professionals in the narrow construction sub-sector between 2010 and 2020

↑ 74.3%

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 9.5% in 2020. This is below the EU-27 average of 11.7%. In the real estate activities sub-sector, the share of self-employed workers was 0.8% in 2020, slightly

above the 2010 level (0.5%) and below the EU-27 average of 1.6%.

**Full-time employment** in the real estate activities and manufacturing sub-sectors witnessed growth of 31.6% and 3.6% respectively between 2010 and 2020, whereas it declined by 7.1% in the narrow construction sub-sector. Similarly, **part-time employment** in the manufacturing and narrow construction sub-sectors grew by 55.6% and 9.3% respectively in the same reference period.

There are two statistical (NUTS level 2) regions in Croatia namely *Kontinentalna Hrvatska* and *Jadranska Hrvatska*. Both regions witnessed a decline of (-4.4%) and (-2.9%) respectively in the number of persons employed over the 2010-2018<sup>20</sup> period in the narrow construction sub-sector. With regard to the number of persons employed in the real estate activities sub-sector, *Kontinentalna Hrvatska* registered an increase of (+70.5%) followed by *Jadranska Hrvatska* (+69.5%) during the same reference period.



## 2

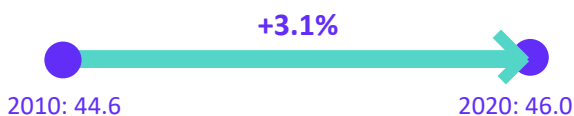
# Macroeconomic indicators

## Economic development

In 2020, Croatian's economic activity was heavily impacted by the COVID-19 pandemic and two severe earthquakes. The country's GDP contracted by 8.0% in 2020. The decline, one of the largest in the EU<sup>21</sup>, was mainly due to lower domestic and external demand and a sharp drop of 60.0% in tourism activities (year-on-year)<sup>22</sup>.

Over the 2010-2020 period, Croatian GDP experienced an increase of 3.1% amounting to HRK 353.7 billion (EUR 46.0 billion) in 2020. In addition, **potential GDP** in 2020 was HRK 374.4 billion (EUR 48.7 billion) resulting in a negative **output gap** of 5.5%. This negative output gap indicates that the Croatian economy tends to underutilise its resources, with actual outputs standing lower than full capacity output. The **inflation rate** stood at 0.0% in 2020.

Croatian GDP over 2010-2020 (EUR billion)



## Demography and employment

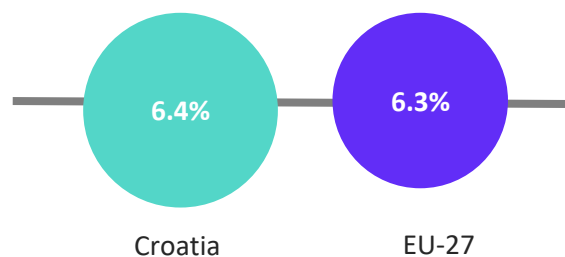
The **total population** in Croatia stood at 4.1 million people in 2020. It has shrunk by 5.7% over the 2010-2020 period and is projected to further decline to 3.8 million by 2030 and to 3.4 million by 2050. In 2020, the Croatian **working age population** made up 64.6% of the total population, slightly above the EU-27 average of 64.3%. 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 population may imply an increasing need for adequate care buildings and infrastructure.

This in turn may generate more opportunities for the Croatian construction sector.

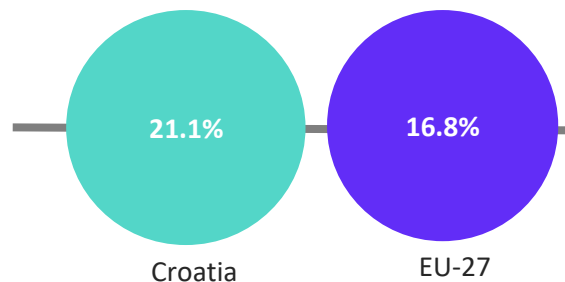
Since 2010, the net migration rate has remained negative, emphasising the increasing emigration of Croatian citizens to other EU countries. However, in 2020, the net migration rate declined by 85.1% coming down to -632 people from -4,255 in 2010.

The average **unemployment rate** in Croatia was 6.4% in 2020 from 9.7% in 2010, thus standing slightly above the EU-27 average of 6.3%. 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, being 21.1% in 2020, above the EU-27 average of 16.8%, but down from the 50.0% peak reached in 2013.

Unemployment rate in 2020



Youth unemployment rate in 2020



## Public finance

**General government expenditure** accounted for 55.4% of GDP in 2020, compared to 48.9% in 2010. In 2020, the **government deficit** stood at 7.4%, well above the previous year (0.3%). **General government gross debt** accounted for 88.7% of GDP in 2020, which is well above the 2010 level of 57.7%.

## Entrepreneurship and access to finance



According to the World Bank Doing Business 2020 Report, Croatia ranked 114<sup>th</sup> out of 190 countries in ease of starting a business in 2019. This is a decline in comparison with previous year's ranking (58<sup>th</sup>)<sup>23,24</sup>.

As per the report, starting a business in Croatia requires 7 procedures, taking 9.5 days and costing 6.2% of income per capita<sup>25</sup>. In terms of entrepreneurship, 47.2% of the Croatian adult population perceive that there are good opportunities in starting a firm in the country, and 24.3% of the adult population, currently not involved in entrepreneurial activities, intended to start a business in the coming three years<sup>26</sup>.

In terms of the start-up environment, the government adopted a new measure, the Development of the Entrepreneurial Support Institutions Network by Hamag Bicro, Croatian Agency for SMEs, Innovations and Investments. The measure supports the development of an enhanced network of entrepreneurial support institutions

that guarantees professional advisory and expert services to entrepreneurs<sup>27</sup>.

In 2020 Croatian small and medium-sized enterprises (SMEs) were severely affected by the COVID-19 pandemic. The earthquakes of March and December 2020 also added to the negative impact. All sectors were impacted due to the crisis leading to the downturn of SME value added and employment. However, the construction sector performed relatively well with SME value added growing by 3.0% and SME employment by 1.6%. The government undertook several policy measures to support the economy<sup>28</sup>.

To address the liquidity and employment issues related to the COVID-19 crisis, the government of Croatia disbursed EUR 1.0 billion for the implementation of various measures to preserve jobs and support businesses<sup>29</sup> (see more information in Section. Access to finance in the construction sector in Chapter 3).

As per the World Bank Doing Business 2020 Report, in terms of access to finance, Croatia ranked 104<sup>th</sup> out of 190 countries for the ease of getting credit<sup>30</sup>.

The Croatian government has undertaken initiatives to improve the conditions of access to finance for SMEs and entrepreneurship in the country, such as the introduction of the **COVID-19 working capital loan**, by the Ministry of Economy and Sustainable Development and Hamag Bicro, to provide additional liquidity to micro and SME businesses affected by the COVID-19 pandemic, while reducing interest rates and reducing the level of collateral required. This measure was implemented in April 2020 with an overall budget of EUR 248.0 million.

## 3

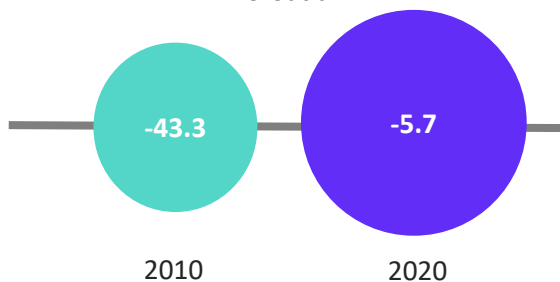
## Key economic drivers of the construction sector

### Business confidence

Over the 2010-2019 period, business confidence improved gradually in the broad construction sector. However, in 2020 it deteriorated due to the global COVID-19 pandemic.

Despite its negative value, the **consumer confidence** indicator increased from -36.1 to -15.5 between 2010 and 2020. This is lower than the EU-27 average which stood at -14.6 in 2020. Similarly, the **industry confidence** indicator improved from -15.6 in 2010 to -10.5 in 2020. This is significantly above the EU-27 average of -14.4 in 2020. Finally, the **construction confidence** indicator experienced the largest increase over the period, reaching -5.7 in 2020, up from -43.3 in 2010. This is a significant improvement, especially in comparison to the EU-27 average of -9.3.

Construction confidence indicator in Croatia



The Croatian **investment ratio** improved from 20.1% in 2010 to 23.2% in 2020. Conversely, **investment per worker** declined by 70.0% between 2010 and 2018 in the architectural and engineering activities sub-sector, from EUR 2,000 to EUR 600.

It was followed by the narrow construction sub-sector (-55.7%), declining from EUR 7,000 in 2010 to EUR 3,100 in 2018. The real estate activities sub-sector registered a decrease of 33.9% in investment per worker in the same period, from EUR 39,800 to EUR 26,300.

In September 2021, Croatia's consumer confidence index worsened by 3.0 pp (percentage points) from August 2021 but improved by 6.6 pp compared to September 2020<sup>31</sup>.

### 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. They represent 40.8% of total domestic construction product sales in 2020. Within the top five most domestically sold construction products, "Other worked ornamental or building stone" (+173.5%) recorded the highest increase in sales value over the 2010-2020 period. During the same period, the largest increase in sales was recorded for the product category "Prefabricated wooden buildings" (+513.4%), though it only accounted for EUR 28.3 million and does not belong to the top five most domestically sold construction products. Notably, "Towers and lattice masts of iron and steel" (+301.7%) recorded the second highest increase in sales value over the 2010-2020 period.

Table 1: Five most domestically sold construction products in Croatia and in the EU in 2020

Croatia				EU-27
	Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
1	Ready-mixed concrete (group, 236310)	132.4	12.1	Other structures and parts of structures (group 251123)
2	Other structures and parts of structures (group 251123)	103.6	9.5	Ready-mixed concrete (group 236310)
3	Portland cement, etc. (group 235112)	73.1	6.7	Doors, windows, etc. (group 251210)
4	Ceramic tiles and flags (group 233110)	69.8	6.4	Prefabricated buildings of metal (group 251110)
5	Other worked ornamental or building stone (group 237012)	68.3	6.2	Prefabricated structural components (group 236112)

Source: PRODCOM, 2021.

## Export of construction-related products and services

The ranking of the **most exported construction products** varied between the 2010-2020 period. The largest increase was recorded in the product category “Prefabricated buildings of metal” (+1014.8%), which ranks first among the most exported construction products in 2020. This was followed by “Prefabricated structural components for building” (+390.8%) and “Doors, windows and their frames, etc.” (+322.6%), which do not belong to the top five most domestically sold construction products. The largest decrease in sales value was recorded in the category “Cement clinkers” (-34.6%), 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, they made up 63.0% of all construction products exports in 2020.

Table 2: Five most exported construction products in Croatia and in the EU in 2020

Croatia				EU-27
	Product	Value (EUR m)	Share in construction product exports (%)	Product
1	Prefabricated buildings of metal (group 251110)	154.4	20.2	Ceramic tiles and flags (group 233110)
2	Portland cement etc. (group 235112)	140.8	18.4	Other structures and parts of structures (group 251123)
3	Other structures and parts of structures (group 251123)	66.7	8.7	Fibreboard of wood, etc. (group 162115)
4	Pellets and briquettes, etc. (group 162915)	60.4	7.9	Doors, windows, etc. (group 251210)
5	Assembled parquet panels (group 162210)	58.8	7.7	Builders joinery and carpentry, of wood, n.e.c. (group 162319)

Source: PRODCOM, 2021.

In terms of the **cross-border provision of construction services**<sup>32</sup>, Croatia exported EUR 153.5 million of construction services worldwide in 2020, a 34.7% decline from 2010 (EUR 234.9 million). In 2020 almost 62.7% of total exports (EUR 96.2 million) went to the EU-27, compared to 67.9% (EUR 159.5 million) in 2010. Croatia imported a total of EUR 61.0 million in construction services from across the world in 2020, a 1318.6% increase since 2010 (EUR 4.3 million), with EUR 42.5 million coming from the EU-27 and EUR 18.5 million from outside the EU-27. Consequently, Croatia achieved a **trade surplus** of EUR 92.5 million in 2020.

## Access to finance in the construction sector

**According to the 2020 Survey on the Access to Finance of Enterprises (SAFE) report<sup>33</sup>, access to finance is not a major concern for the majority of Croatian SMEs.**

As per the report, access to finance is the most important concern for 8.3% of Croatian SMEs, below the EU-27 average of 9.9%. Banks loans are still a relevant source of external financing for 50.9% of SMEs in Croatia, above the EU-27 average of 47.6%. Between April and September 2020, 22.7% Croatian SMEs applied for a bank loan, while 4.7% did not apply due to fear of rejection. Out of those who applied for a bank loan, 6.5% saw their applications rejected, which is on par with the EU-27 average of 6.3%<sup>34</sup>.

**According to the EIB Investment Survey (EIBIS) 2020 report, Croatian construction firms (23.0%) are more cautious about external finance than firms in other sectors<sup>35</sup>.**

In fact, as per the report, 65.0% construction firms in Croatia consider “availability of finance” as a long-term barrier to investment. The highest levels of dissatisfaction among Croatian firms in the construction sector are collateral requirements (24.0%), followed by the cost of finance (22.0%) and maturity terms (12.0%)<sup>36</sup>.

Croatia benefits from the European Fund for Strategic Investments (EFSI). By November 2019, 10 agreements with intermediary banks had been approved for SMEs, financed by the European Investment Fund (EIF) and backed by EFSI, amounting to EUR 176 million in total financing<sup>37</sup>. This is set to trigger further investment of EUR 583.0 million, thereby improving access to finance for approximately 2,920 SMEs and mid-cap companies. In addition, in 2019, the EIF and the Croatian Bank for Reconstruction and Development (HBOR) launched a new equity investment programme to support fast-growing SMEs and mid-caps that operate or are established in the country<sup>38</sup>.

In May 2020, the European Commission approved a EUR 322.0 million scheme for loan guarantees and subsidised loans to support micro companies and SMEs affected by the COVID-19 outbreak in Croatia. The scheme will be managed by HAMAG-BICRO -

the Croatian Agency for SMEs, Innovations and Investments<sup>39</sup>.

In October 2020, the European Investment Bank (EIB) and Croatian Bank for Reconstruction and Development (HBOR) agreed on a financial package in the form of loans to support the recovery of SMEs and mid-caps from the COVID-19 pandemic. Under the agreement, the EIB will contribute EUR 100.0 million to the SMEs and mid-caps in Croatia<sup>40</sup>.

In November 2020, the EIB and HBOR also created a new EUR 142.5 million credit line for Croatian SMEs to recover from the COVID-19 pandemic. The credit line will support SMEs via more affordable financing to preserve liquidity, support investments and maintain jobs, and speed up the recovery of the economy<sup>41</sup>.

In May 2021, the World Bank approved a loan to the HBOR to the amount of EUR 200.0 million for the HEAL Croatia Project (Helping Enterprises Access Liquidity in Croatia). The loan will provide liquidity and financial restructuring to firms that have been hit by the COVID-19 pandemic and by the two devastating earthquakes of 2020. The project will support firms focused on export, both SMEs and mid-caps. It will increase access to finance for firms from less developed regions of Croatia, women-owned or managed firms, and young enterprises<sup>42</sup>.

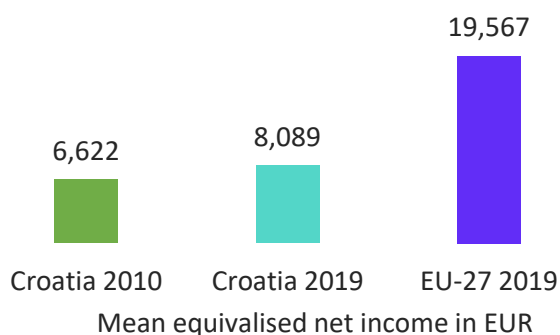
## Access to housing

**The total number of households in Croatia reduced from 1.52 million in 2010 to 1.46 million in 2020, marking a 3.8% 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 29.8% in 2020. Also, the share of population living in intermediate urbanised areas increased over the same period, reaching 33.7% in 2020, 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.

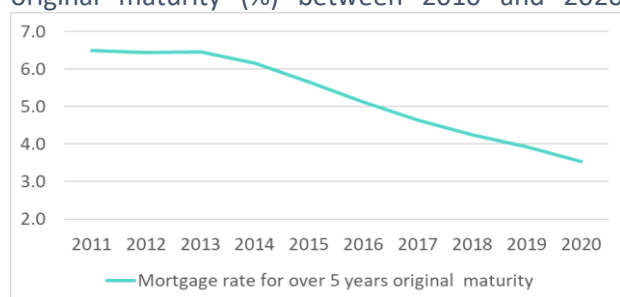
In parallel, the **mean equivalised net income** in Croatia increased by 30.5%, from EUR 6,622 in 2010 to EUR 8,643 in 2020. In 2019, it stood at EUR 8,089, significantly below the EU-27 average of 19,567.





Housing loans granted declined, with the total of **outstanding residential loans** decreasing by 6.5%, from EUR 8.3 billion in 2010 to EUR 7.7 billion in 2019<sup>43</sup>. At the same time, the **interest rates** on mortgages (for over 5 years original maturity) declined from 6.5% in 2011<sup>44</sup> to 3.9% in 2019. It currently stands at a low of 3.5% (Figure 7).

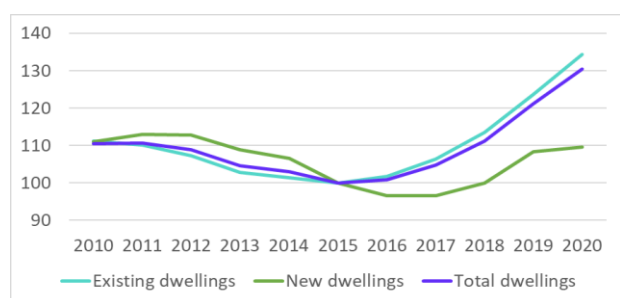
Figure 7: Mortgage rates for loans for over 5 years original maturity (%) between 2010 and 2020



Source: ECB MFI Interest Rate Statistics, 2021.

Between 2015 and 2020, the **house price index** for total dwellings increased by 30.4%, mostly driven by a 34.3% and a 9.6% 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 is driving the increase in property prices in Croatia<sup>45</sup>.

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



Source: Eurostat, 2021.

House price index for total dwelling between 2015 and 2020

↑ 30.4%

However, there exist considerable regional disparities. In 2020, house prices in Zagreb (the capital city) annually rose by 9.2%. This is well above the rise in Split, the country's second largest city (+3.6%). In Croatia's third largest city Rijeka, house prices increased by 9.1% compared to the fourth largest city Osijek (+6.6%). Housing rent is also growing in Croatia<sup>46</sup>. During the period 2015-2020, the rental index for housing increased by 5.2%. Rising house prices coupled with an upswing in rent prices could create housing affordability issues in Croatia.

In 2020, despite the COVID-19 pandemic, the number of new dwellings sold in Croatia was the second highest since 2006, falling only by 6.8% to 3,222 units from the record 3,458 units sold in 2019, according to the Croatian Bureau of Statistics (CBS)<sup>47</sup>.

On the supply side, the **number of building permits** issued in Croatia stood at 9,403 in 2020, representing a decline of 6.8% from the 2010 level (10,087), according to the Croatian Bureau of Statistics<sup>48</sup>. This also marks a 5.3% decline over the previous year. In August 2021, the number of building permits issued increased by 8.9% year-on-year (YoY), to 804, after increasing by 17.8% in July 2021<sup>49</sup>.

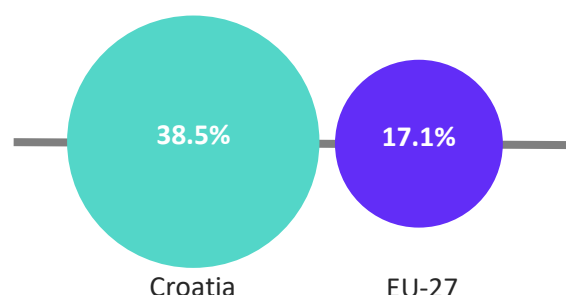
Much of the **building stock** in Croatia is owner-occupied. Home ownership rates for the population who earn **above 60% of the median equivalised income**<sup>50</sup> in Croatia increased from 88.4% in 2010 to 91.6% in 2020. It stood at 90.1% in 2019, above the EU-27 average of 73.6%. Similarly, for the **population who earn below 60% of the median equivalised income**, the home ownership rate grew from 87.3% in 2010 to 90.0% in 2020. This is also above the 2019 level of 88.2% and the EU-27 average of 50.3%.

The **overcrowding rate**<sup>51</sup> stood at 38.5% in 2019, well above the EU-27 average of 17.1%. In 2020, it decreased to 36.2%. The **severe housing deprivation rate**<sup>52</sup> stood at 5.9% in 2019, above the EU-27 average of 4.0%. It decreased to 5.1% in 2020. The **housing cost overburden rate**<sup>53</sup> stood at 4.7% in 2019, above the EU-27 average of 9.4%. The



Croatian housing cost overburden rate decreased to 4.2% in 2020, below the EU-27 average of 9.9%.

Overcrowding rate in 2019



## Infrastructure



According to the World Economic Forum Global Competitiveness Index 2019, Croatia ranks 32<sup>nd</sup> out of 141 countries in terms of its overall infrastructure quality<sup>54</sup>.

Croatian infrastructure performs best in the quality of its roads (13<sup>th</sup>) and its railroad density (21<sup>st</sup>). Its liner shipping connectivity and airport connectivity rank 47<sup>th</sup> and 56<sup>th</sup>, respectively. The efficiency of its seaport services and air transport services also score well, ranking 48<sup>th</sup> and 63<sup>rd</sup>, respectively<sup>55</sup>.

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 significant 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 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

(Trans-European Transport Network) rail network but has not made significant improvements in sustainable urban transport<sup>56</sup>.

In February 2021, the transport ministry of Croatia made an announcement regarding a major reform of the country's railway system. The Croatian rail company *HŽ Infrastruktura* plans to invest EUR 4.5 billion in the modernisation of 750 kilometres (km) of railway lines over the next 10 years, mostly relying on EU funds. Between 2020 and 2030 the company plans to upgrade as many as 750 km of railway lines. The projected speed of passenger trains is 160 km an hour, while freight trains will be able to develop a speed of 120 km per hour. The company currently has nine projects in the pipeline<sup>57</sup>.

In July 2020, the European Bank for Reconstruction and Development (EBRD) announced a EUR 55.0 million loan to Croatia to finance the construction of two sections of a Corridor Vc motorway. The financing is complimented by a EUR 52.0 million loan provided by the Croatian Bank for Reconstruction and Development (HBOR). The loan will go towards the construction of the 17.5 km Halasica bridge, the Beli Manastir motorway section leading to Croatia's border with Hungary in 2022, as well as a 5-km motorway section between the town of Beli Manastir and the Hungarian border<sup>58</sup>.

**The Recovery and Resilience Plan (RRP) of Croatia includes measures for the development for a competitive, energy-sustainable and efficient transport system. The plan allocates EUR 728.0 million for upgrading railway lines, autonomous electric taxis with supporting infrastructure adapted for people with disabilities, installing 1,300 charging stations for electric vehicles, introducing zero-emission vehicles and vessels<sup>59</sup>. (For details please refer to Chapter 7, TO3- Resource efficiency/sustainable construction).**

## 4

## Key issues and barriers in the construction sector

### Company failure

During the period 2012<sup>60</sup>-2018<sup>61</sup>, **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 73.8% (from 1,207 firms to 2,098 firms) and 102.0% (from 303 firms to 612 firms), respectively<sup>62</sup>. However, company births declined by 19.5% (from 564 firms to 454 firms) in the architectural and engineering activities sub-sector in the same period.

The number of **company deaths** in the narrow construction sub-sector declined by 48.1% while the real estate activities sub-sector saw an increase of 4.1%, totalling 1,367 and 585 firms respectively, between 2012 and 2018<sup>63</sup>. On the other hand, the architectural and engineering activities sub-sector experienced a reduction of 27.6% in **company deaths** between 2012 and 2018<sup>64</sup>, totalling 213 firms.

Company births in the narrow construction sub-sector between 2012 and 2018



**73.8%**

Company deaths in the narrow construction sub-sector between 2012 and 2018



**48.1%**

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 pending<sup>65</sup>.

### Trade credit

According to the Survey on the Access to Finance of Enterprises (SAFE) 2020 report, trade credit constitutes a relevant source of financing for 21.7% of Croatian SMEs, significantly below the EU-27 average of 27.7% in 2020<sup>66</sup>.

As per the report, during the last six months, only 3.9% of SMEs have obtained trade credit from their business partners, compared to the EU-27 average of 13.6%. Additionally, out of 11.9% of SMEs who applied for trade credit in the last six months, 51.8% received everything they applied for compared to EU-27 average of 67.3%<sup>67</sup>.

There is no indication of an increased need to use trade credit with over 48.2% of SMEs reporting that their credit needs have remained unchanged over the last six months. This is above the EU-27 average of 64.7%. Last, 4.1% of Croatian SMEs consider that trade credit availability improved in 2020 compared to the EU-27 average of 13.5%<sup>68</sup>.

### Late payment



In the fourth quarter of 2020, 24.6% of firms in the Croatian construction sector made their payments by the due date, while 7.5% of firms took more than 90 days, according to the CRIBIS Dun & Bradstreet Payment Study<sup>69</sup>.

As per the European Payment Report 2021, 42.0% 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 months<sup>70</sup>.

This is below the EU-28<sup>71</sup> average of 40.0%. At the same time, 53.0% respondents expect debtors' liquidity challenges, due to the impact of COVID-19, to be a major challenge to prompt and full customer payments over the next twelve months, above the EU-28 average of 48.0%. Lastly, 34.0% of the respondents believe late customer payments are a threat to their survival, above the EU-28 average<sup>72</sup> of 28.0%<sup>73</sup>.

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 (or in payments owed by the public health sector) these terms can be prolonged to 60 days maximum<sup>74</sup>. However, the Late Payment Directive is considered to have little effect in improving payment frequency and is not well known among stakeholders.

## Time and cost of obtaining building permits and licenses



According to the 2020 World Bank Doing Business Report<sup>75</sup>, Croatia ranked 150<sup>th</sup> out of 190 economies in "Dealing with construction permits", an improvement over 159<sup>th</sup> rank in 2019.

As per the report, 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 warehouse<sup>76</sup>, compared to 1.5% in the OECD high-income countries.

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 compared to 152.3 days in OECD high-income countries<sup>77</sup>.

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 burden<sup>78</sup>. 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 Authority	14 days	no charge
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	1 day	HRK 68,327.0 (EUR 9,036.2)

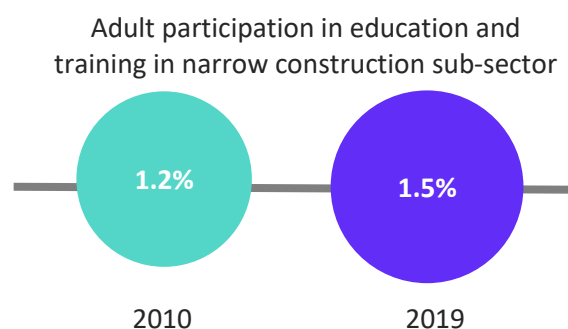
conduct inspections during construction		
Submit commencement notice	1 day	HRK 20.0 (EUR 2.6)
Receive random inspection from the Ministry of Construction and Physical Planning	1 day	no charge
Obtain water and sewage connection	20 days	HRK 8,000.0 (EUR 1,058.0)
Apply for occupancy (use) permit	1 day	HRK 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<sup>79</sup>.

## 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 2013<sup>80</sup> to 1.7% in 2020, below its 2019 level (1.8%). The job vacancy rate for the real estate activities sub-sector grew from 0.5% in 2013<sup>81</sup> to 0.5% in 2020, below the previous year (0.9%).

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



The **number of tertiary students** in engineering, manufacturing and construction increased by 47.9% between 2010 and 2019<sup>82</sup>, going up from 4,217 to reach 6,235. This growth was mainly driven by the increase in the number of students in engineering (+85.8%) and manufacturing and processing (+17.7%) between 2010 and 2019, totalling 4,194 and 752 respectively. Conversely, the number of students in architecture and building witnessed a decline of 4.5% over the same period, reaching 1,262 students.

Number of tertiary students in engineering, manufacturing and construction between 2010 and 2019

↑ 47.9%

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, compared to 16.9% in 2017. The labour shortages are most noticeable in the Croatian construction sector, and half of the employers (51.3%) reported labour shortages as a factor limiting building activity<sup>83</sup>.

**According to the EIB Investment Survey 2020, 96.0% of respondents in the Croatian construction sector cited availability of skilled staff as a long-term barrier to investment<sup>84</sup>.**

The percentage of skilled employees in the Croatian construction sector decreased from 22.0% in 2010 to 16.3% in 2017<sup>85</sup>, according to the Croatian Bureau of Statistics<sup>86</sup>.

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 demand<sup>87</sup>.

**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 recognise foreign professionals' qualifications<sup>88</sup>.**

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 2020<sup>89</sup>.

**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 plasterers<sup>90</sup>.**

In order to attract new talent to the construction sector and change the sector's image, construction workers' 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 increase in the wages of construction workers. The union and the Construction Employers' Association expect that raises in wages will attract new employees into the market<sup>91</sup>.

The construction sector of Croatia is the third largest employer in the country. In 2020 contractors employed about 23,000 foreign workers as per the Croatian Chamber of Commerce (HGK). It is also expected that contractors will have to hire another 10,000 imported workers. Companies in the sector are of the opinion that manpower will be the main obstacle to reconstruction in the earthquake-hit areas<sup>92</sup>. As a result, from January 2021 to June 2021, 2,434 employers submitted 14,437 applications to the Croatian Employment Service (CES) for positions in the Croatian construction industry. Most of them were submitted on the lookout for masons, building workers, carpenters, civil engineering workers, facade workers, reinforcement workers, installers of building elements, ceramic tile installers and house painters. The CES approved 9,541 of them, on the basis of which the Ministry of the Interior (MUP) could issue a work permit for a foreign worker from a third country<sup>93</sup>.

## Sector and sub-sector specific issues

### Material efficiency and waste management

In 2018<sup>94</sup>, Croatia reported 490,355 tonnes (hazardous and non-hazardous) of mineral waste categorised under the construction and demolition from the construction activities<sup>95</sup>.

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).

Construction and  
demolition waste  
between 2010 and 2018

 **34.4%**

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<sup>96,97</sup>. By 2020, the goal was to separately collect 75.0% of construction and demolition waste<sup>98</sup>. However, its implementation still faces bottlenecks. Croatia has a low record of recycling waste materials with only 25.0% 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 average<sup>99</sup> and contribute to achieving the European target of zero pollution<sup>100</sup>.

**In 2020, the first construction waste disposal site in the Split-Dalmatia county of Croatia began. The construction of a recycling yard for Split-Dalmatia construction waste was initiated by CEMEX Croatia and the City of Kastela. With a capacity of 100 tonnes per day, which reaches 30,000 tonnes per year, the new Split-Dalmatia construction waste recycling yard will cover an area totalling 6,300 metres squared. In the first phase of this project, CEMEX will invest around HRK 3.0 million (EUR 0.4 million) in construction and equipping. An additional HRK 1.5 million (EUR 0.2 million) will be subsequently invested in increasing the yard's capacity and further improving its general efficiency<sup>101</sup>.**

In September 2020, the European Commission approved an investment of EUR 48.0 million from the Cohesion Fund for waste management projects for the counties of Zadar and Lika-Senj. The aim is to reduce municipal waste taken to landfills by over 60 %, from 97,900 tonnes in 2012 to 35,970 tonnes by 2023. The project will include a site for processing construction and demolition waste, with a 15,000 tonnes/year capacity. The commission expects the project to be completed by the summer of 2022<sup>102</sup>.

Also in September 2020, the Minister of Economy and Sustainable Development and the World Bank Country Manager for Croatia entered into an agreement under which the World Bank will provide technical assistance to the government of Croatia in the transformation of its solid waste management



system. The technical assistance will help incorporate circular economy approaches into Croatia's post-2022 National Waste Management Plan (NWMP) in line with European Union (EU) directives and the circular economy package. The aim is to achieve a target of at least 65.0% of municipal waste by weight to be recovered by recycling and prepared for re-use. Also, the amount of municipal waste landfilling should be reduced to 10.0% by weight by 2035<sup>103</sup>.

### 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 1,319,002 tonnes and 148,436 tonnes respectively in 2019<sup>104</sup>. In 2019, emissions in the narrow construction sub-sector declined by 13.4% compared to the 2010 level (1,523,483 tonnes). Similarly, in the real estate activities sub-sector, emissions recorded a decrease of 1.6% in 2019, compared to the 2010 level (150,774 tonnes).

Emissions of greenhouse gases from the narrow construction sub-sector between 2010 and 2019

 **13.4%**

The low-carbon development strategy of Croatia includes a reduction of emissions from the 1990 level under two scenarios. The first scenario envisages a cut in emissions of 33.5% by 2030, and of 56.8% by 2050. In this scenario, emission reductions are achieved through the application of

a series of cost-effective measures, strong incentives for energy efficiency and the use of renewable energy sources that could be largely market-competitive in electricity generation after 2030<sup>105</sup>. The second scenario is similar in terms of reducing emissions, aiming for a reduction of 36.7% by 2030. However, by 2050 it aims at an 80% reduction through the use of new and future technologies<sup>106</sup>.

Croatia has the lowest greenhouse gas emissions among the EU member states. Its total emissions accounted for 0.7% of the EU total in 2019 and fell by 17.0% between 2005 and 2019. This is slightly below the EU-wide emissions reduction of 19.0% in the same period. The manufacturing and construction sector accounted for the highest reduction (43.0%) in emissions from 12.0% to 9.0% during the 2005-2019 period<sup>107</sup>.

**As part of the Recovery and Resilience Plan, Croatia has allocated around 40.3% of the total budget towards climate-related measures and investments, thus meeting the climate target of 37.0%. All the components and the measures included in the plan will contribute to the reduction of greenhouse gases and creating a more sustainable economy. The plan also contains two investments for carbon capture and geological storage. Two pilot projects will be able to capture over 240,000 tonnes of CO<sub>2</sub> annually, directly contributing to national greenhouse gases reduction from industrial processes<sup>108</sup>.**



## 5

# Innovation in the construction sector

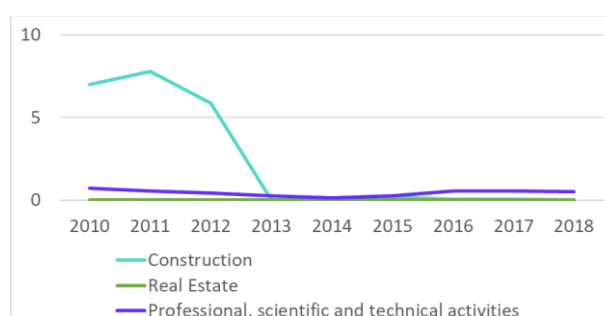
## Innovation performance

According to the European Innovation Scoreboard 2021<sup>109</sup>, Croatia is classified as an 'Emerging Innovator', marking a strong improvement in performance over the previous year and since 2014<sup>110</sup>.

As per the report, the strong performance between 2020 and 2021 was mainly driven by increases for several indicators using innovation survey data, Digital skills, and Venture capital. The country's top three innovation indicators include Product innovators, Business process innovators, and Enterprises providing ICT training. The country has below average shares of In-house business process innovators and innovators that do not develop innovations themselves. Croatia also had below average scores on the climate change related indicators<sup>111</sup>.

**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 zero over the 2010-2018<sup>112</sup> period. BERD in the professional, scientific and technical activities sub-sector experienced a 29.6% 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 reported no R&D expenditures at all.

Figure 9: Business enterprise R&D expenditure (BERD) per construction sub-sector<sup>113</sup> in Croatia between 2010 and 2018<sup>114</sup> (EUR m)



Source: Eurostat, 2021.

In parallel, **total R&D personnel** (full-time equivalents – FTE)<sup>115</sup> 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 zero in 2018<sup>116</sup> (-100.0%). In the professional, scientific and technical activities sub-sector R&D personnel increased by 11.8% from 17 in 2010 to 19 in 2018. R&D FTE in the real estate activities sub-sector were negligible, in line with its BERD expenditure. Likewise, the **number of researchers** (FTE) in the narrow construction sub-sector witnessed a considerable decline from 142 in 2010 to zero in 2018, while the professional, scientific and technical activities sub-sector registered a 16.7% increase from 12 in 2010 to 14 in 2018.

Croatia has not filed any **construction-related patent applications** since 2016. During the period 2010-2020, only nine patents were filed, with 2010 reporting the highest number of patents (four). No Croatian construction & materials firms rank within the top 1,000 EU companies by R&D (industrial sector ICB-3D), according to the 2020 EU R&D Scoreboard<sup>117</sup>.

The country receives a continuous support from the World Bank for its research, development and innovation (RDI) related activities. The bank has been a partner to Croatia for over 27 years. During

this period, it has provided support to more than 50 projects, worth almost US\$5.0 billion (EUR 4.4 billion), produced numerous studies, and provided technical assistance to help strengthen institutions and support the design of policies and strategies<sup>118</sup>.

**In September 2021, the Minister of Science and Education of Croatia and the World Bank Country Manager for Croatia, entered into an advisory agreement under which the World Bank would provide technical assistance to support the government of Croatia in enhancing the effectiveness of, and improving institutional capacity for, implementation of research and innovation policies in Croatia<sup>119</sup>.**

The advisory project will provide long-term technical assistance and input to the design, implementation, monitoring and evaluation (M&E) of research, development and innovation (RDI) policy during the European Union programming period 2021-2027<sup>120</sup>.

## Eco-innovation and digitalisation



**According to the 2021 Eco-Innovation Scoreboard (Eco-IS), Croatia scored 86, in comparison to the EU-28<sup>121</sup> average of 121, falling under the 'Countries catching up with Eco-I' performers group<sup>122</sup>.**

As per the report, Croatia's score was below EU-28<sup>123</sup> average on all the five indicators, namely eco-innovation inputs, eco-innovation activities, eco-innovation outputs, resource efficiency outcomes, and socio-economic outcomes<sup>124</sup>.

According to the **European Commission Digital Economy and Society Index (DESI) 2021**, Croatia ranked 19<sup>th</sup>, with a score of 46.0, out of EU-28 member states (average score: 50.7)<sup>125</sup>. With regard to the integration of digital technology, human capital and connectivity, the country was ranked 13<sup>th</sup>, 16<sup>th</sup> and 20<sup>th</sup> respectively.

While Croatia has good fast broadband coverage (86% national and 39% rural), its overall fixed broadband take-up is slightly below the EU-28 average. One of the positive developments in connectivity is the assignment of a harmonised spectrum for 5G in August 2021. This is a significant development for further acceleration of the digital

transformation and is bringing benefits to both businesses and individuals<sup>126</sup>.

In the context of basic digital skills, it remains low in Croatia (53.0%) compared with the EU average of 56.0% in 2019. The country is successfully progressing with its implementation of the e-Schools programme, with all Croatian schools (1,320) included in the second phase of the programme<sup>127</sup>.

**As per DESI 2021, Croatian enterprises actively participate in online commerce, with 30% of SMEs selling online and 10% selling across borders to other EU countries<sup>128</sup>.**

There has also been a sharp rise in usage of e-invoices, with enterprises' usage growing from 12% in 2018 to 43% in 2020. This is linked to the amendment of the law on public procurement which made e-invoices mandatory for enterprises<sup>129</sup>.

**As a part of its EUR 6.3 billion Recovery and Resilience Plan (RRP), Croatia has allocated a total of EUR 1.3 billion (around 20.4% of the plan's budget) towards digital initiatives<sup>130</sup>.**

The economy component of the plan includes investments supporting the digital transition of a total of EUR 576.0 million, with the largest investments in the digitalisation of transport (EUR 281.0 million) and energy (EUR 155.0 million)<sup>131</sup>.

The Croatian government has been actively promoting BIM (Building Information Modelling) 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 language<sup>132</sup>.

Presently, there are only two universities in Croatia that provide specific construction management courses at the Master's degree level, namely the University J. J. Strossmayer Osijek and the 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 universities<sup>133</sup>.

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. This 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 the integration of several digital technologies, applications and services<sup>134</sup>.

## 6

# National and regional regulatory framework

## Policy schemes

Croatian housing policies are implemented to boost the availability of dwelling units, as well as 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 State-subsidised Housing Construction programme (*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. 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). The loan is granted for the purchase of a dwelling unit with a maximum price of EUR 1,125.7/m<sup>2</sup> of usable area<sup>135</sup>. The POS scheme is managed by the Agency for Transactions and Mediation in Real Estate (*Agencija za pravni promet i posredovanje nekretninama* - APN)<sup>136</sup>.

**Up till 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)<sup>137</sup>.**

In April 2017, the government of Croatia adopted the **Subsidised Loan Programme (*Subvencioniranje stambenih kredita*)**. This 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 metre, 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<sup>138</sup>. In 2020, the government received 8,332 requests for the subsidised loans, out of which 8,153 were approved and 179 requests were rejected. So far in 2021, 4,739 requests have been received. Out of this, 4,599 requests have been approved, with the average amount of subsidised loan being EUR 75,000 with an average repayment period of 22 years. The next round of applications is expected to start in spring 2022<sup>139</sup>.

**Over the 2017-2021 period, 22,145 loans have been granted under the Subsidised Loan Programme<sup>140</sup>.**

As per Croatia's National Energy and Climate Plan (NECP) estimates, the country needs investments amounting to EUR 19.0 billion for the 2021-2030 period. The majority of this investment amount will be directed towards increasing energy efficiency in the building sector (construction and renovation) along with electricity production<sup>141</sup>.

Under the 2021-2026 EUR 6.3 billion national Recovery and Resilience Plan (RRP), Croatia plans to launch 222 individual measures consisting of 76 reforms and 146 investments for the whole economy. A considerable portion of this will be directed towards achieving the green transition, digital transformation, sustainable and inclusive growth as well as territorial cohesion. The country has allocated EUR 738.7 million to promoting a resilient, green and digital economy. This alone includes more than 100 measures to reduce the administrative and fiscal burden of businesses,

amounting to EUR 400.0 million. It help also accelerate the process of digitalisation of public services and liberalisation of regulated professions to further improve the business environment in Croatia. Improved access to capital and tailored support for innovative start-ups and SMEs will further increase the innovative capacity of the Croatian business sector. Although indirectly, these measures will promote the development of the Croatian construction sector in the long run<sup>142</sup>.

Specific to the construction sector, Croatia has introduced the Renovation of Buildings initiative dedicated energy-efficiency renovation as part of its RRP<sup>143</sup>.

**The Renovation of Buildings initiative is aimed at promoting the decarbonisation of the sector while supporting the post-earthquake renovation of buildings. It focuses on comprehensive renovation of multi-dwelling, public and cultural buildings. Its target is to achieve at least a 30.0% increase in primary energy savings compared to the pre-renovation state<sup>144</sup>.**

This initiative intends to boost the country's renovation rate by addressing some major challenges such as the shortage of skilled workers in energy and renovation as well as the heavy administrative burden involved in the process. It strives to improve the energy efficiency of Croatia's domestic building stock. Overall, the initiative aims to support the renovation of at least 225,000 m<sup>2</sup> of private building stock, 562,000 m<sup>2</sup> of public buildings and 31,000 m<sup>2</sup> of cultural buildings. It also includes a pilot project for the establishment of an energy management system to develop a new financing model for the renovation of the public building stock. Furthermore, it provides a tailored support to develop workforce skills relevant to the post-earthquake reconstruction and energy efficiency renovations<sup>145</sup>. Additionally, the Croatian RRP includes EUR 188.4 million of investments for risk prevention and management of non-climate related natural risks (i.e. earthquakes) and risks linked to human activities (e.g. technological accidents), including awareness raising, civil protection and disaster management systems, infrastructures and ecosystem-based approaches.

## Building regulations

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 agreements<sup>146</sup>.

A building permit (and, depending on the size of the construction, a location permit) for the 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 work<sup>147</sup>.

Additionally, the Ministry of Construction and Physical Planning has introduced an e-permit system, facilitating obtaining building permits electronically<sup>148</sup>.

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 supervision<sup>149</sup>.

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 others<sup>150</sup>. 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)<sup>151</sup>.

## 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 contract<sup>152</sup>. 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)<sup>153</sup>.

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 years<sup>154</sup>.



# Current status and national strategies to meet Construction 2020 objectives

## TO 1 – Investment conditions and volumes

**Total inland infrastructure investment**<sup>155</sup> as a share of GDP reached 0.9% in 2019<sup>156</sup>, slightly lower compared to 1.3% in 2010. Notably, investment in road infrastructure declined by 31.1%, from EUR 515.3 million in 2010 to EUR 354.8 million in 2019. On the other hand, investment in air transport infrastructure witnessed a significant increase of 307.9%, from EUR 28.1 million in 2010 to EUR 114.7 million in 2019. Similarly, investment in rail infrastructure registered an increase of 53.7%, from EUR 83.4 million in 2010 to EUR 128.2 million in 2019.

Air transport infrastructure investment between 2018 and 2019



**307.9%**

Road infrastructure investment between 2010 and 2019



**31.1%**

Over the 2010-2019 period, investment in air, road and rail **infrastructure maintenance** increased by 189.0%, 31.7% and 12.2%, reaching EUR 6.7 million, EUR 256.8 million and EUR 100.8 million, respectively.

Investment in air transport infrastructure maintenance between 2010 and 2019



**189.0%**

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 waterways, as well as public urban, suburban and regional transport<sup>157</sup>. Projects include the purchase of electric trains, the improvement of the tram infrastructure and the renovation of the Dubrovnik Airport<sup>158</sup>.

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 the existing railway infrastructure and the construction of a 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 Rijeka<sup>159</sup>.

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 2018<sup>160</sup>. 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 aid<sup>161</sup>.

In March 2020, the EU approved more than EUR 119.0 million from the EU Cohesion Fund to finance infrastructure projects in Croatia<sup>162</sup>. Under this project, the EU will finance the purchase of 21 new Electric Multiple-Units (EMUs), including 11 suburban EMUs and 10 regional EMUs, by HZ Passenger Transport, a national operator in Croatia. The project will contribute to the modernisation of Croatia's rolling stock and improve connectivity and mobility<sup>163</sup>.

**In 2021, the Croatian government allocated EUR 728.0 million (from its EUR 6.3 billion RRP) for investment in sustainable mobility. This includes upgrading railway lines, installing 1,300 electric charging stations as well as introducing zero-emission vehicles and vessels<sup>164</sup>.**

With regard to railways, the majority of investments are aimed at modernising and electrifying the TEN-T rail network to accelerate the modal shift from road to railways. This also involves reconstruction and electrification of the 22 km railway section *Dugo Selo - Novska*, sub-section *Kutina - Novska*, along the TEN-T rail network and the Alpine-Western Balkans rail-freight corridor. The country also plans to improve public transport in Zagreb by developing autonomous electric taxis under its new urban mobility ecosystem. The RRP also includes deploying 1,300 charging stations for electric vehicles, offering incentives for the purchase of 2,000 cleaner vehicles through support schemes as well as launching a EUR 65.5 million electronic motorways toll system. These initiatives are aimed at reducing heavy congestion and wait time along with air pollution<sup>165</sup>.

**In 2020, the EIB Group invested almost EUR 5.0 million in Croatian infrastructure<sup>166</sup>.**

Croatia also benefitted from investments from the **European Fund for Strategic Investments (EFSI)**. As of December 2020, total financing approved under EFSI amounted to EUR 443.0 million, with an additional investment of EUR 1.6 billion set to be triggered. Under the Infrastructure and Innovation window, nine projects have been approved, amounting to EUR 105.0 million and are set to trigger EUR 620.0 million in total investments. Under the SMEs window, 12 agreements have been approved, involving a total financing of EUR 338.0 million, and are set to trigger investments of up to EUR 956.0 million benefitting almost 5,442 SMEs and mid-cap companies from improved access to finance<sup>167</sup>.

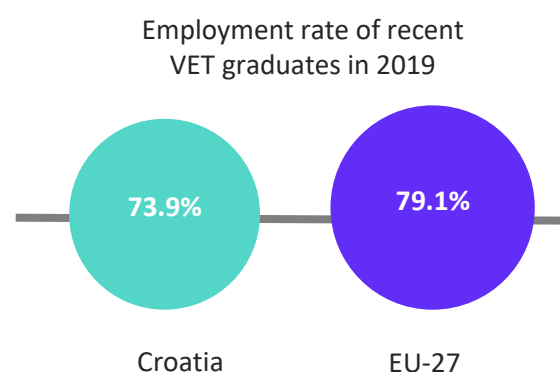
## TO 2 – Skills

Croatia continues to reform its vocational education and the training system. In 2019<sup>168</sup>, the **employment rate of recent VET graduates** for Croatia considerably improved to 73.9%, compared to 68.8% in 2018. This is still slightly below the EU-27 average of 79.1%<sup>169</sup>. Despite the Croatian ministerial campaign promoting enrolment in the

apprenticeship VET scheme (JMO), and offering considerably more scholarships and grants, the overall participation in work-based learning programmes increased slowly<sup>170</sup>.

**The Croatian government anticipates that the establishment of Regional Centres of Competences and the experimental programme in dual education will improve the quality of VET programmes and further facilitate in the identification of skills needed in the market<sup>171</sup>.**

After the centres become fully operational, they will also be providing a comprehensive set of services in addition to the regular VET educational offer. In response to rapid globalisation and market demand, the Croatian government plans to completely shift to a learning outcomes-oriented system linked to the labour market by 2022-2023<sup>172</sup>.



Participation in **adult learning** increased to 3.5% in 2019, marginally above the 2.9% in 2018 but well below the EU-27 average of 10.8% in 2019<sup>173</sup>. This can be attributed to insufficient funding and low interest. Additionally, funding for adult education is still not comprehensive and separate from the mainstream education system. In fact, it is in the third lowest among the EU member states<sup>174</sup>.

**In September 2020, the Croatian government adopted the Adult Education Act, thereby making it obligatory for institutions to continuously align their education programmes with occupational standards to make participants ready for the job market on completion<sup>175</sup>.**

The act introduced a major change involving the recognition of knowledge and skills previously acquired from life or work in order to allow for greater mobility within the lifelong learning system<sup>176</sup>.

Under its national RRP, Croatia has allocated EUR 227.0 million for supporting employment and social inclusion in the country. This includes redesigning active labour market policies to boost employment, financing training and upskilling programme vouchers, developing new social services as well as improving the adequacy and coverage of social benefits<sup>177</sup>.

Croatia has also allocated EUR 995.0 million for improving access to early childhood education and care, introducing vouchers for upskilling as well as strengthening the attractiveness and progression system of researcher's careers<sup>178</sup>.

The Croatian government has already 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 outcomes, 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 of VET institutions<sup>179</sup>.

### TO 3 – Resource efficiency / Sustainable construction

The Croatian government has allocated EUR 763.9 million out of its EUR 6.3 billion RRP towards renovation of buildings. Out of this, EUR 591.4 million is assigned for the reconstruction of buildings damaged in the earthquakes, including their energy renovation – EUR 95.6 million for residential and EUR 479.8 million for public buildings and buildings with a status of cultural good<sup>180,181</sup>.

Additionally, the government has allocated EUR 134.0 million for the wider energy renovation of buildings not affected by earthquakes – EUR 40.0 million for multi-unit buildings and EUR 94.0 million for public buildings. About EUR 40.0 million is also allocated for the energy renovation of heritage buildings. EUR 5.3 million is allocated for skills development related to green jobs needed for post-earthquake reconstruction and energy renovation and EUR 4.0 million for improving the administrative efficiency and digitalisation of the renovation process. Furthermore, EUR 2.7 million is assigned for the development of a model green urban renewal strategy, green infrastructure pilots

and circular economy projects, along with EUR 1.6 million for the establishment of systematic energy management models<sup>182</sup>.

Under its national goals for 2030, Croatia set a renovation obligation to renovate 3.0% of the cooling and/or heating systems in government buildings<sup>183</sup>. Over the 2021-2030 period, Croatia expects to construct 10,930,698 m<sup>2</sup> in new buildings and renovate 8,630,863 m<sup>2</sup> in existing buildings, thereby achieving an annual reconstruction rate of 1.6%<sup>184</sup>. In line with Article 2.a of Directive 2018/844, Croatia is planning to adopt a long-term renovation blueprint with well-defined indicators for 2030, 2040 and 2050<sup>185</sup>. Against this backdrop, the RRP outlines that the Energy Efficiency First Principle is to be applied, and projects should support holistic renovations. The multi-family homes and public buildings to be renovated using the RRP funding are expected to achieve a heat demand and projected heating energy consumption reduction of at least 50.0%. In the case of heritage buildings, the reduction requirement is lower – a minimum of 20.0%. Regular renovation projects are expected to be supported up to 60.0% through grants<sup>186</sup>.

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 CO<sub>2</sub>, 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 m<sup>2</sup> and built before 1987<sup>187</sup>. 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)<sup>188</sup>. This scheme was temporarily suspended after a public call on 1 September 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 2020<sup>189</sup>.

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 (Environmental Protection and Energy Efficiency Fund) co-financed 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. The renovations are expected to bring about 60.0% of energy savings in the buildings<sup>190</sup>.

As part of the National Development Strategy 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) 2018/1999<sup>191</sup>.

## TO 4 – Single Market

**As per the 2020 EU Single Market Scorecard, Croatia performed well in trade integration in the single market for goods and services<sup>192</sup>.**

As per the report, Croatia performed above average in Transposition of Law, European Employment Services (EURES), Your Europe (EU's single digital gateway) and SOLVIT indicators. In contrast, the country performed average in Infringements, EU-Pilot, Internal Market Information System (IMI) and e-Certis indicators<sup>193</sup>. In relation to public procurement, in 2019, Croatia's performance was slightly above average with six indicators out of 12 scoring "satisfactory", four as "average" and two as "unsatisfactory"<sup>194</sup>.

Croatia is responsible for notifying the European Commission of any draft legislation it intends to table that concerns products or services. The government already issues a low volume of notifications under the Single Market Transparency Directive<sup>195</sup>. In 2019, Croatia notified of six draft laws, that consisted of two for each sector including agriculture, fishing and foodstuffs, environment and construction<sup>196</sup>.

More than 60.0% of Croatian firms reported corruption to be widespread in public procurement managed by both national and local authorities. Companies indicated that favouritism in the decision of government officials and diversification of public funds are both very common<sup>197</sup>.

In order to improve the situation, the government adopted the **Strategy for the Development of Public Administration 2015-2020**. The strategy focused on increasing the efficiency and effectiveness of the public administration system, particularly in relation to the use of EU funds, to ensure greater transparency and accessibility of public bodies, and eradicate corruption. However, implementation of the strategy remains 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 savings<sup>198</sup>.

**As a part of its EUR 6.3 billion Recovery and Resilience Plan (RRP), Croatia has allocated EUR 739.0 million for improving its overall business environment. This includes reducing administrative burdens, lowering regulatory requirements for professional services as well as increasing funding for businesses<sup>199</sup>.**

Croatia has also allocated EUR 200.0 million for increasing the efficiency of its public sector by implementing a diverse range of initiatives. These include introducing a new wage and work models in the civil service, promoting the merger of local government administrations, developing mechanisms for integration of public policies as well as improving the governance of state assets.

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)<sup>200</sup>.

## TO 5 – International competitiveness

As per World Bank Doing Business 2020 report, Croatia ranked 1<sup>st</sup> out of 190 economies in the ease of trading across border, achieving a full score of 100<sup>201</sup>.

As per the report, in Croatia, it takes only one hour to be documentary compliant and a few minutes to be border compliant. In terms of costs, businesses do not need to spend any money to be documentary and border compliant<sup>202</sup>.

The **internationalisation 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 764.0 million in 2020, exhibiting an increase of 130.3%. Moreover, Croatia's share of exports of all construction-related products stood at 60.8% of the total production value in 2020, highest over the 2010-2020 period and well above the 2010 level of 36.2%.

Export values of all construction-related products between 2010 and 2020

 **130.3%**

The export value of architectural services declined by 97.4% between 2010 and 2019, from EUR 2.5 million to EUR 64,094.

With regards to **inward FATS (foreign affiliates statistics)**<sup>203</sup>, value added at factor cost in the narrow construction sub-sector increased by 62.7%, while it rose by 350.8% in the real estate activities sub-sector between 2010 and 2018<sup>204</sup>. Similarly,

turnover in the narrow construction and the real estate activities sub-sectors grew by 151.9% and 193.7%, respectively, over the 2010-2018 period.

In terms of **outward FATS**<sup>205</sup>, turnover in the narrow construction and the real estate activities sub-sectors increased from zero and one in 2010 to EUR 16.0 million and EUR 3.0 million in 2018<sup>206</sup>, respectively.

During the 2018-2019 period, the Croatian government implemented **Business Internationalisation of SMEs – Phase II** (*Internacionalizacija poslovanja MSP-ova - faza II/30*), aimed at strengthening 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 markets<sup>207</sup>.

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 exhibitions<sup>208</sup>.

As per Flash Eurobarometer 2020, **39.0% of Croatian SMEs exported to other EU countries, significantly above the EU average of 23%**<sup>209</sup>.



## 8

## Outlook

Over the 2020-2022 period, the Croatian economy is expected to grow, mainly driven by a strengthening domestic demand, the economic support packages backed by EU funding and a strong recovery in exports<sup>210</sup>.

Croatia's GDP is estimated to grow by 5.0% in 2021 and then grow by 6.1% in 2022, reaching HRK 393.9 billion (EUR 49.5 billion) in 2022.

In line with the general economy, the **number of enterprises** in the broad construction sector is expected to grow by 5.3% YoY in 2021, totalling 36,413 enterprises.

**Turnover** in the broad construction sector is forecasted to increase by 4.5% in 2021, amounting to EUR 12.0 billion. Similarly, the **total value added** of the broad construction sector is expected to increase by 4.9% in 2021, reaching EUR 4.1 billion.

The number of **persons employed** in the broad construction sector is also expected to increase by 4.6% to 188,607 persons in 2021. This growth is projected to come from all the sub-sectors including the real estate activities (+7.5%), the architectural and engineering activities (+7.0%), the manufacturing (+5.5%) and the narrow construction (+3.7%) sub-sectors.

Persons employed in the broad construction sector between 2020 and 2021



4.6%

The **housing market** is planned to be a key factor behind the revival of the construction sector. Under its EUR 6.3 billion 2021-2026 Recovery and Resilience Plan (RRP), Croatia has allocated EUR 763.9 million for the renovation of buildings. The government has also launched a Renovation of Buildings initiative aimed at promoting the decarbonisation of the sector while supporting the post-earthquake buildings renovation. The initiative plans achieve at least a 30.0% increase in primary energy savings compared to the pre-renovation state.

The **civil engineering** sector is expected to be driven by a robust pipeline of EU-backed projects. The government's plan is to invest EUR 3.5 billion for the modernisation of existing and construction of new railway infrastructure by 2030. Additionally, Croatia has allocated EUR 728.0 million of its RRP funding for investment in sustainable mobility. This includes upgrading railway lines, installing 1,300 electric charging stations as well as introducing zero emission vehicles and vessels. Croatia also plans to improve public transport in Zagreb by developing autonomous electric taxis under its new urban mobility ecosystem.

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 the simplification of construction procedures, will further support the development of the construction sector.



# References

Data for subsequent years unavailable.

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

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.

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

Data unavailable for subsequent years.

Data unavailable for the manufacturing and architectural and engineering activities in 2019

Data unavailable for subsequent years.

Ibidem.

Data unavailable for subsequent years.

Apparent labour productivity refers to the gross value added per person employed.

Data for subsequent years unavailable.

The gross operating rate is the ratio of Gross Operating Surplus to Turnover and is an indicator of profitability.

Data for subsequent years unavailable.

Data unavailable for 2020.

No breakdown available for input prices and labour cost.

Data unavailable for 2020.

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

Ibidem.

Data on employment by occupation is not available for real estate activities sub-sector.

Data for subsequent years unavailable.

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