



European Construction Sector Observatory

Country profile **Estonia**

November 2020



In a nutshell

Estonia's GDP amounted to EUR 24.7 billion in 2019, marking a 4.3% growth over the previous year (EUR 23.6 billion).

In 2019, GDP growth was mainly driven by strong domestic demand, with key contributions coming from a recovery in investment and from private consumption. Private consumption was supported by high employment and increased real incomes¹.

In line with this, the **number of enterprises** in the broad construction sector grew by 62.7% between 2010 and 2019, totalling 23,801. This growth was primarily driven by the increase in the number of enterprises in the architectural and engineering activities (+84.6%), the narrow construction (+69.6%), the real estate activities (+55.4%), and the manufacturing (+21.8%) sub-sectors over the same reference period.

Number of enterprises in the broad construction sector between 2010 and 2019

↑ 62.7%

Similarly, the **volume index of production** in the broad construction sector recorded an increase of 47.2% during 2015-2019, mainly driven by a 57.5% increase in the construction of buildings and a 27.3% growth in the construction of civil engineering, over the same reference period.

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

↑ 57.5%

Reflecting the increased volume index of production, **turnover** in the broad construction sector marked a strong increase between 2010 and 2018 (+123.4%), reaching EUR 10.2 billion. It

further increased to EUR 11.8 billion in 2019, marking a 158.6% rise since 2010. This overall growth in turnover was driven by significant increases in all the four sub-sectors, namely – the real estate activities (+194.5%), the narrow construction (+178.2%), architectural and engineering activities (+115.9%) and manufacturing (+104.4%) sub-sectors between 2010 and 2019.

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

↑ 194.5%

In parallel, the **gross operating rate** of the broad construction sector, which is used to assess the profitability of the sector, stood at 12.1% in 2018, 1.9 percentage points (pps) above the rate registered in 2010 (10.2%). The real estate activities sub-sector registered the largest profit margin on sales (34.6%) in 2018, followed by the architectural and engineering activities (20.5%), the manufacturing (7.7%), and the narrow construction (6.5%) sub-sectors.

In terms of employment, there were 97,360 **persons employed** in the Estonian broad construction sector, registering a 36.6% increase in comparison to the 2010 level (71,298 persons). This was mainly driven by the growth registered in the number of persons employed in the narrow construction sub-sector (+41.7%), followed by the real estate activities (+31.3%), the manufacturing (+31.1%), and the architectural and engineering activities (+26.3%), sub-sectors, over the 2010-2019 period.

Furthermore, demand for housing has increased in Estonia, mainly in urban areas. Nevertheless, the country does not seem to face housing supply

shortages, which ultimately has resulted in containing the upward pressure on house prices. Between 2015 and 2019, the house price index for existing dwellings grew by 22.8%, with moderate growth in household debt.

In order to meet the housing demand and support supply, the Estonian government offers several support schemes through KredEx.

In 2019, KredEx (a government owned foundation providing financial services) awarded home grants to 337 large families raising three or more children. There are 1,192 children growing up in these families altogether. The total sum of the grants allocated in 2019 amounted to more than EUR 3.1 million.

The **civil engineering** segment is expected to benefit from investments in transport infrastructure, which are required to implement the vision of the 'National Spatial Plan Estonia 2030+'. Furthermore, the **Rail Baltica** project plays a strategic role. The Estonian part of this expenditure amounts to EUR 1.3 billion out of a

total of EUR 4.8 billion budget. The project is expected to be completed by the second quarter of 2021.

Despite favourable economic and investment environments, the Estonian construction sector's development is experiencing difficulties. **Labour and skills shortages** are limiting production and putting a strain on profit margins, as wages are increasing. Moreover, bottleneck vacancies in construction persist, representing a barrier to the sector's growth. Estonia relies on foreign labour to close the gaps, while in parallel, making efforts to reform its educational system, in particular vocational education training (VET).

The COVID-19 outbreak is expected to have a limited impact on the ongoing projects in Estonia. Nevertheless, excess demand for housing is expected to support investment in the Estonian housing market, while large-scale infrastructure projects like Rail Baltica will further support the growth in the sector.

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Key figures

Construction market

The **number of enterprises** in the broad construction sector in Estonia totalled 23,801 in 2019² (Figure 1), representing a 62.7% increase compared to the 2010 level (14,633). This increase was mainly driven by the growth registered in the number of enterprises in the architectural and engineering activities sub-sector (+84.6%), followed by the narrow construction (+69.6%), the real estate activities (+55.4%) and the manufacturing (+21.8%) sub-sectors. The narrow construction sub-sector accounted for more than half (53.1%, i.e. 12,628) of the total enterprises in the broad construction sector in 2019. This was followed by the real estate activities (30.3%, i.e. 7,203), the architectural and engineering activities (10.6%, i.e. 2,529) and the manufacturing (6.1%, i.e. 1,440) sub-sectors.

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

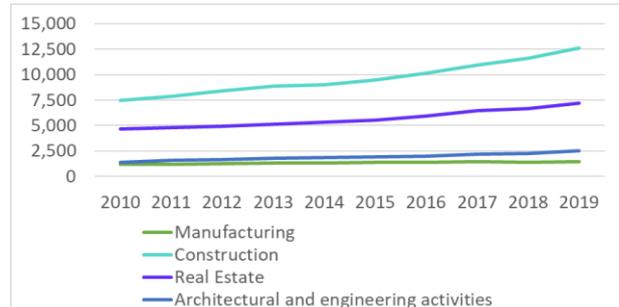
↑ 84.6%

The **volume index of production** in the broad construction sector has been growing since 2015, increasing by 47.2% over the 2015-2019 period. This was primarily driven by the growth in the volume index of production in the construction of buildings (+57.5%) and the construction of civil engineering (+27.3%) respectively, over the same period (Figure 2).

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

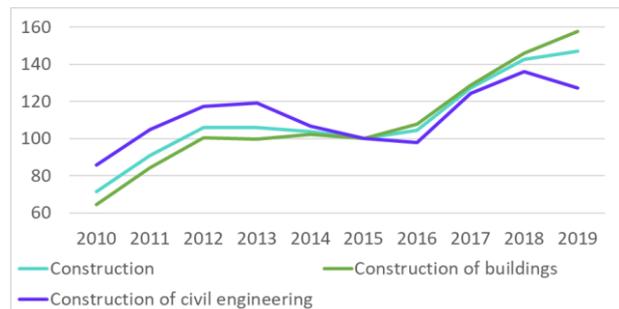
↑ 57.5%

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



Source: Eurostat, 2020.

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

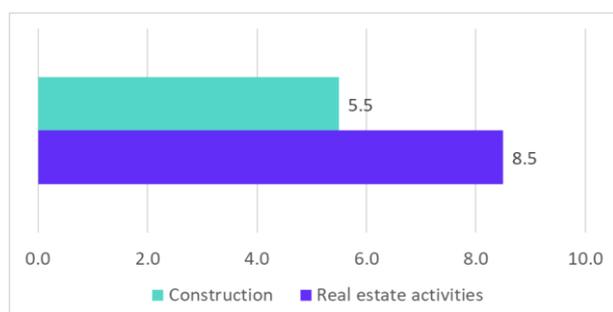


Source: Eurostat, 2020

The **total value added at factor cost** of the broad construction sector amounted to EUR 3.3 billion in 2019³, representing a substantial 166.2% increase since 2010. The narrow construction sub-sector accounted for 46.0% (EUR 1.5 billion) of the total added value in 2019, followed by the real estate activities (28.7%, i.e. EUR 936.6 million), the manufacturing (19.6%, i.e. EUR 641.4 million) and the architectural and engineering activities (5.7%, i.e. EUR 186.9 million) sub-sectors.

The **share of the gross value added⁴ (GVA)** of the broad construction sector in GDP stood at 17.9% in 2018⁵, above the 2010 level (16.4%). Further, the share of GVA of the real estate activities sub-sector in GDP stood at 8.5% (EU-27 average 9.7%) in 2019, followed by the narrow construction sub-sector (5.5%), slightly above the EU-27 average of 5.0% (Figure 3).

Figure 3: Gross value added as a share of GDP in the Estonian broad construction sub-sector in 2019⁶ (%)



Source: Eurostat 2020

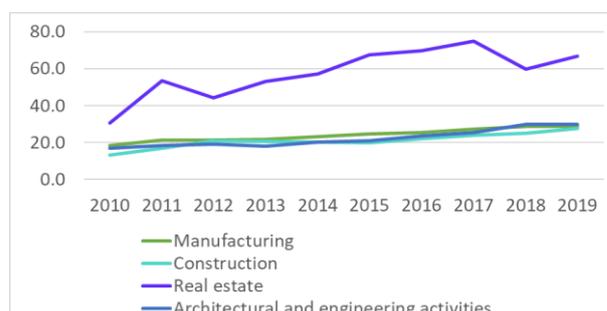
Productivity

Apparent labour productivity⁷ in the broad construction sector increased from EUR 17,219 in 2010 to EUR 31,144 in 2018⁸, representing a significant increase of 80.9% over the period. During the 2010-2019⁹ period, labour productivity in the real estate activities sub-sector reported an increase of 117.9%, the highest growth among all the sub-sectors, amounting to EUR 66,675 in 2019. This was followed by a 109.6% growth in the narrow construction sub-sector over the same period, ending at EUR 27,455. Similarly, labour productivity in the architectural and engineering activities and manufacturing sub-sectors increased by 76.2% and 57.0% in the same period, amounting to EUR 29,951 and EUR 28,719 respectively.

Apparent labour productivity in the real estate activities sub-sector between 2010 and 2019

↑ 117.9%

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



Source: Eurostat, 2020.

Turnover and profitability

The **total turnover** of the broad construction sector in 2018 amounted to EUR 10.2 billion, representing an increment of 123.4% compared to the 2010 level (EUR 4.6 billion). It further increased to EUR 11.8 billion in 2019¹⁰, marking a significant increase of 158.6% over 2010. This growth was mainly driven by significant increases in all four sub-sectors, namely – the real estate activities (+194.5%), the narrow construction (+178.2%), architectural and engineering activities (+115.9%) and manufacturing (+104.4%) sub-sectors over the same period.

In 2019, the largest share of the turnover came from the narrow construction sub-sector, which accounted for 57.2% (i.e. EUR 5.7 billion) of the total. It was followed by the manufacturing (21.2%, i.e. EUR 2.5 billion), the real estate activities (18.3%, i.e. EUR 1.8 billion), and the architectural and engineering activities (3.3%, i.e. EUR 340.2 million) sub-sectors.

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

↑ 194.5%

The **gross operating surplus** of the broad construction sector amounted to EUR 1.2 billion in 2018¹¹, a 165.1% higher than the level registered in 2010 (EUR 466.6 million). Notably, the highest growth was registered by the narrow construction sub-sector (+371.7%) during the 2010-2018 period, followed by the architectural and engineering activities (+147.5%) the real estate activities (+136.0%) and the manufacturing (+85.2%) sub-sectors, over the same reference period.

Likewise, the **gross operating rate** of the broad construction sector¹², which gives an indication of the sector's profitability, stood at 15.5% in 2017, below the EU-27 average of 16.6%. It reduced to 12.1% in 2018¹³, 1.9 pps above the rate registered in 2010 (10.2%). The real estate activities sub-sector registered the largest profit margin on sales (34.6%) in 2018, followed by the architectural and engineering activities (20.5%), the manufacturing (7.7%), and the narrow construction (6.5%) sub-sectors.

Similarly, the **construction costs** index increased by 4.6% during the period 2015-2019, mainly due to a 12.4% rise in the labour costs index in construction (following the increase in wages). This was also followed by a 1.2% increase in the input prices for materials in construction over the same reference period.



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



Source: Eurostat 2020

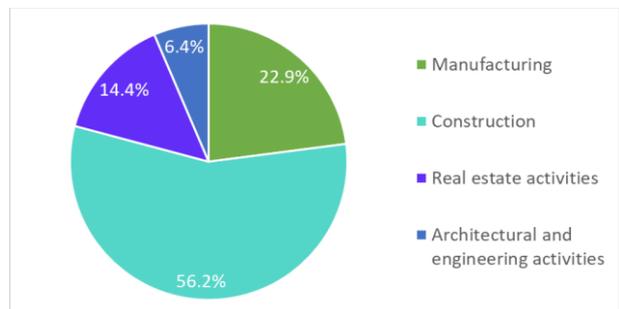
Employment

In 2019¹⁴, there were 97,361 **persons employed** in the Estonian broad construction sector, registering a 36.6% increase compared to the 2010 level (71,298 persons). In 2019, the narrow construction sub-sector employed 56.2% (54,739 persons) of the total workforce in the broad sector, marking an increment of 41.7% in terms of number of employees between 2010 and 2019. This increment was followed by the real estate activities (+31.3%), the manufacturing (+31.1%) and the architectural and engineering activities (+26.3%) sub-sectors over the same period. These employed 14,047, 22,334 and 6,240 persons respectively in 2019 (Figure 6).

In 2018¹⁵, **SMEs** in the broad construction sector employed almost 77.0% of the total number of persons employed in the sector. This is below the 2010 level of 79.2%.



Figure 6: Percentage of persons employed per construction sub-sectors in Estonia in 2019



Source: Eurostat, 2020.

Regarding **employment by specific occupations**, the manufacturing sub-sector has overall witnessed increases in the demand for workers. In the sub-sector, the demand for professionals rose by 84.2% during the 2010-2019 period, followed by technicians and associate professionals (+71.4%), clerical support workers (+67.6%), elementary occupations (+12.0%) and craft and related trades workers (+11.7%).

On the contrary, the demand for managers declined by 19.5% while plant and machine operators recorded a slight downfall of 1.8% over the same period. In the narrow construction sub-sector, the demand for technicians and associate professionals registered a significant increase of 160.7% while the demand for plant and machine operators and elementary occupations both witnessed decline of 19.6% and 19.4% respectively between 2010 and 2019. Further, in the real estate activities sub-sector¹⁶, the demand for elementary occupations and technicians and associate professionals rose by 31.0% and 14.3% respectively while a decline of 17.7% was witnessed in the demand for professionals over the same time period.

Demand for technicians and associate professionals in the narrow construction sub-sector during 2010-2019

 **160.7%**

Additionally, the number of **self-employed workers** in the narrow construction sub-sector represented 15.9% of total self-employed persons in the general economy in 2019. This is well above the EU-27 average of 11.9% and the 2010 level of 12.9%. In the real estate activities sub-sector, the share of self-employed workers fell to 3.1% in 2019 from 4.0% in 2010, standing comfortably above the EU-27 average of 1.4%.

In parallel, **full-time employment** in the narrow construction and the real estate activities sub-sectors increased by 21.4% and 25.9% respectively between 2010 and 2019.

Furthermore, **part-time employment** in the narrow construction sub-sector grew by 39.3% during 2010-2019, while it remained at the same level in the real estate activities sub-sector and.

Part-time employment in the narrow construction sub-sector between 2010 and 2019

 **39.3%**

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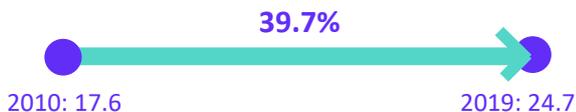
Macroeconomic indicators

Economic development

In 2019, Estonia's economic growth was comparatively strong, mainly driven by robust domestic demand and an increase in investments¹⁷.

Over the 2010-2019 period, Estonian GDP experienced a substantial growth of 39.7%, amounting to EUR 24.7 billion with an annual growth rate of 4.3% in 2019. The potential GDP in 2019 stood at EUR 23.6 billion, resulting in a positive output gap of 4.3%.

Estonian GDP over 2010-2019 (EUR billion)

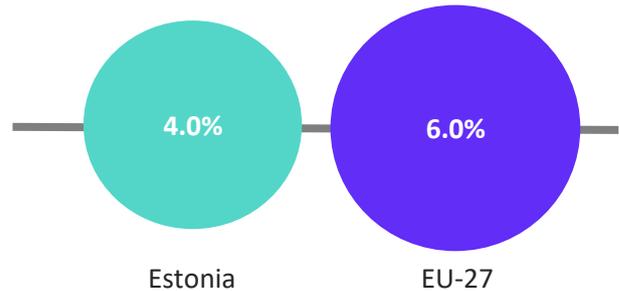


The **inflation rate** went on declining from 2010 (2.7%) to 2015 (0.1%), before picking up again in 2016 and reaching 2.3% in 2019. This is mainly due to lower global energy prices and changes in consumption taxes¹⁸.

Demography and employment

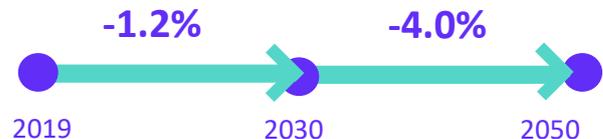
In 2019, the average **unemployment rate** (between 25-64 years) in Estonia stood at 4.0%, a significant 11.3 pps below the 2010 level and also below the EU-27 average of 6.0%. Unemployment decreased continuously since the height of the crisis in 2010 when it reached 15.3%. Similarly, the **youth unemployment rate** (below age of 25) reached 11.1% in 2019, well below the 2010 level of 32.9% and the EU-27 average of 15.1%.

Unemployment rates in Estonia and the EU-27 in 2019



The **total population** in Estonia totalled 1.3 million people in 2019, decreasing marginally by 0.3% over the 2010-2019 period. It is projected to further decline by 1.2% by 2030 and 4.0% by 2050, reaching 1,256,223 inhabitants. While net migration has traditionally been negative, it turned positive in 2015 for the first time in a decade, reflecting in part the improved economic situation in the country and income growth. In 2019, net migration stood at 5,458 representing a 22.8% decline compared to 7,071 in 2018. Migration and labour mobility also helped address labour and skill shortages.

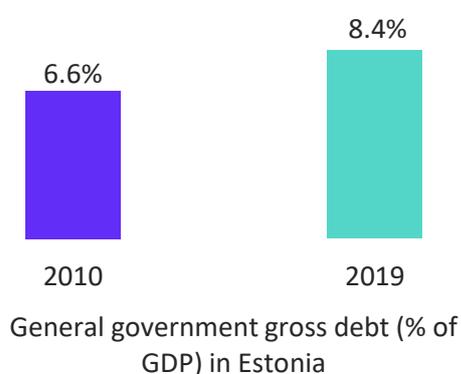
Projected population evolution in Estonia



At the same time, the **working age population** in Estonia made up 63.8% of the total population in 2019, slightly below the EU-27 average of 64.6%. By 2050, the share of the working age population is expected to reduce to 57.5%, while people aged 65 or above will make up 28.3% of the overall population. This shift in terms of population may imply an increasing need for adequate care buildings and infrastructures. This in turn may generate more opportunities for the Estonian construction sector.

Public finance

In 2019, general **government expenditure** represented 39.0% of GDP, below the EU-27 average, situated at 46.7%. **General government gross debt** amounted to 8.4% of GDP, higher than in 2010 (6.6%) but significantly below the EU-27 average of 77.8%. At the same time the **general government deficit** stood at -0.3% of GDP, (against -0.2% in 2010), higher than the EU-27 average of -0.6% in 2019. Further, the Estonian Central Bank (*Eesti Pank*) made a downwards adjustment to its official interest rate, from 2.6% in 2010 to 1.9% in 2019, in efforts to spur private consumption.



Entrepreneurship and access to finance

According to the **Global Competitiveness Report 2019** by the World Economic Forum, Estonia ranks **39th out of 141 economies, in terms of financing of SMEs¹⁹**.

As per the report, the country is ranked 30th in the context of venture capital availability and 46th in terms of domestic credit to the private sector. It is ranked 52nd with regards to the financial system.

In terms of entrepreneurship, Estonia is ranked 15th and 17th respectively in terms of growth of innovative companies and entrepreneurial culture.

In the context companies embracing disruptive ideas, the country is ranked 31st²⁰.

Estonia ranks 18th out of 190 economies in the World Bank 2020 Doing Business Report. The country performs especially well on parameters such as 'Trade across Borders' and 'Starting a Business'²¹.

According to the Small Business Act (SBA) Fact Sheet 2019, Estonia performs well above the EU-28²² average when it comes to entrepreneurship, ranking among the best performing countries in the EU. As per the report, Estonia performs specially well in areas such as 'Early stage entrepreneurial activities, even for female population', 'Entrepreneurial education at basic schools, 'Entrepreneurial Intentions', etc²³.

Estonia has made great efforts to promote entrepreneurship. Measures such as start-up accelerators, business plan competitions, mentoring and training programmes etc. have played a very crucial role in enhancing the entrepreneurial environment of the country. '**Startup Estonia**' is yet another government initiative to boost the Estonian start-up ecosystem²⁴.

In the context of access to finance, the country has also made efforts to create a favourable legal environment for alternative sources of finance e.g. crowd funding and venture capital. In this regard, the '**EstFund**' and '**SuperAngel**' funds were created in 2016 and 2018 respectively, co-financed by the government and European Structural and Investments Funds. Recently, Technology Loans (*Tööstuslaen*), which is funded under the KredEx programme, was implemented. It focuses on increasing the self-financing of businesses by providing additional access to leasing or bank loans, with export-oriented businesses being the target group²⁵.

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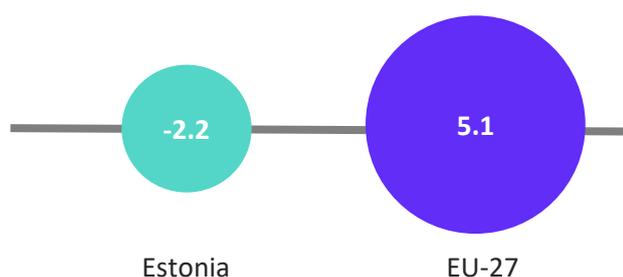
Key economic drivers of the construction sector

Business confidence

Despite the fact that all the three business confidence indicators still remain in negative territory, consumer confidence and construction confidence indicators have shown signs of improvement since 2010.

The **consumer confidence** indicator improved from -13.5 in 2010 to -0.3 in 2019, well above the EU-27 average of -6.2. Similarly, the **construction confidence** indicator improved from -26.3 to -2.2 over the 2010-2019 period. This is lower than the EU-27 average of 5.1 in 2019. On the contrary, the **industry confidence** indicator declined significantly to -6.2 in 2019 as compared to 0.5 in 2010. This also is below the EU-27 average of -4.8 in 2019.

Confidence index in the construction sector in 2019



Mirroring this increased confidence, the **investment ratio** improved from 19.7% in 2010 to 26.8% in 2019.

In parallel, **investment per worker** increased in 2018²⁶, reaching EUR 25,381, as compared to EUR 12,521 in 2010, representing a growth of 102.7% over the period. In terms of sub-sectors, investment per worker in the real estate activities

and narrow construction sub-sectors registered significant increases of 252.2% and 20.7% during 2010-2018, reaching EUR 72,200 and EUR 3,500 in 2018²⁷, respectively. Conversely, investment per worker in the architectural and engineering activities sub-sector decreased by 62.8% from EUR 5,100 in 2010 to EUR 1,900 in 2018²⁸.

Investment per worker in the real estate activities sub-sector between 2010 and 2018

↑ 252.2%

Domestic sales

The ranking of the five **most domestically sold** construction products in Estonia has seen some fluctuations in recent years. Out of the top five ranked products, three product groups showed significant increment in their sales value over the 2010 – 2019 period, namely, ‘Windows, French windows and their frames’ (+209.8%), ‘Prefabricated Structural components’ (+263.3%), ‘Doors, windows and their frames’ (+218.2). Notably, the largest increase in sales was recorded for the product category ‘Prefabricated buildings of metal’ rising by 900.2% between 2010 and 2019, though it only accounted for EUR 49.5 million. However, this product group doesn’t belong to the top five most domestically sold construction products. The top five most domestically sold construction products, accounting for 56.2% of the total of construction products sold domestically in 2019, are presented in the table below, including a comparison with the most sold products in the EU-27 region.

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

Estonia				EU-27
	Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
1	Windows, French windows and their frames (group 162311)	116.0	12.2	Other structures and parts of structures (group 251123)
2	Builders' joinery and carpentry (group 162319)	113.2	11.9	Doors, windows and their frames (group 251210)
3	Other structures and parts of structures (group 251123)	112.1	11.7	Ready-mixed concrete (group 236310)
4	Prefabricated structural components (group 236112)	104.1	10.9	Prefabricated buildings of metal (group 251110)
5	Doors, windows and their frames (group 251210)	90.7	9.5	Prefabricated structural components (group 236112)

Source: PRODCOM, 2020.

Export of construction-related products and services

The ranking of the **most exported products** experienced some fluctuations since 2010. However, there has been no change in the ranking of the top five most exported construction products since 2018. Most of the products strongly increased in terms of sales value of exports between 2010 and 2019. Indeed, robust exports have been a driving factor in the country's economic upswing. The largest increase in export value was in the categories "Articles of cement" (+424.2%), "Tiles, flagstones, bricks and similar articles" (+356.1%) and "Other worked ornamental or building stone" (+309.7%). All three of these products, however, represent only 4.0% of the total construction products exports and also were not in the top five list. The top five most exported construction products from Estonia and the EU-27 are summarised in Table 2. Together, these made up 69.0% of all construction products exports in 2019.

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

Estonia				EU-27
	Product	Value (EUR m)	Share in construction product export sales (%)	Product
1	Prefabricated wooden buildings (group 162320)	426.9	29.2	Ceramic tiles and flags (group 23110)
2	Windows, French windows and their frames, etc. (group 162311)	167.1	11.4	Other structures and parts of structures, etc. (group 251123)
3	Pellets and briquettes, of pressed and agglomerated wood (group 162915)	166.4	11.4	Fibreboard of wood etc. (group 162115)
4	Builders' joinery and carpentry, etc. (group 162319)	144.5	9.9	Doors, windows and their frames (group 251210)
5	Other plywood, veneered panels (group 162118)	105.8	7.2	Marble, travertine, alabaster etc. (group 237011)

Source: PRODCOM, 2020.

In terms of the **cross-border provision of construction services**²⁹, Estonia exported EUR 447.5 million worldwide in 2018³⁰, a substantial increase of 177.3% compared to the 2010 level (EUR 161.4 million). In particular, 76.5% of total exports (EUR 342.3 million) came from the EU-27 countries in 2018, compared to 83.9% (EUR 135.4 million) in 2010. In parallel, Estonia imported EUR 158.5 million worth of construction services in 2018, marking an increase of 93.8% over the 2010 level (EUR 81.8 million). 62.2% of total imports (EUR 98.6 million) came from the EU-28³¹ countries in 2018³², compared to 89.9% (EUR 73.5 million) in 2010. Estonia thus generated a **trade surplus** of EUR 289.0 million in 2018³³.

Estonia's export of construction services worldwide between 2010 and 2018



177.3%

Access to finance in the construction sector

In Estonia, **access to finance** remains the most important concern for 9.0% of SMEs above the EU-28³⁴ average of 7.0%, as per the Survey on the Access to Finance of Enterprises (SAFE) 2019 report³⁵. According to the report, between the period of April to September 2019, 24.0% of Estonian SMEs applied for a bank loan, while 14.0% did not, because of fear of rejection³⁶.

The EIB Investment Survey (EIBIS) for 2019 shows that most firms in Estonia are satisfied with the type, amount, cost, and maturity of the funding received. The survey also suggests that 5.0% of all Estonian firms are financially constrained, which is in line with the EU-28³⁷ average. However, this share is 10.0% for the firms in the construction sector and 2.0% in the services sector³⁸.



As per EIBIS 2019, only 8.0% of firms in the construction sector are dissatisfied with the cost of finance and collateral requirements and 2.0% with the amount of financing³⁹.

According to the SBA Fact Sheet 2019, most of the SBA recommendations on access to finance have been put in place. These include inter alia subsidised interest rate loan creation, reduced collateral requirements, etc. Venture Capital funds co-financed by the government and the European Structural and Investment Funds, such as 'EstFund' in 2016 and 'SuperAngel' in 2018 were created to combine business acceleration services with early stage capital investments⁴⁰.

The European Investment Fund (EIF) supports SMEs, and the construction sector, through its activities. Specifically, the **BaltCap Private Equity Fund III**, a venture capital investment fund in the Baltics, aims to generate long-term capital gains from equity and quasi-equity investments in SMEs, mainly in Estonia, Latvia, and Lithuania⁴¹.

Further, in October 2019, LHV Asset Management (LHV), a fund management company in Estonia, on behalf of its pension funds, invested EUR 126.0 million in the BaltCap Private Equity Fund III (BPEF III), along with SEB pension funds in Estonia, Latvia and Lithuania⁴².

Access to housing

The **number of households** in Estonia has increased steadily, reaching 619,500 in 2019 from 549,600 in 2010 (+12.7%). At the same time, the share of **people living in cities** increased from 41.8% in 2010 to 44.2% in 2018⁴³. While 45.7% of the population lived in densely populated areas in 2010, it went up to 61.0% in 2019. In parallel, the share of the population living in intermediate urbanised areas increased to 8.7% in 2019 from 3.4% in 2010.

Number of households between 2010 and 2019

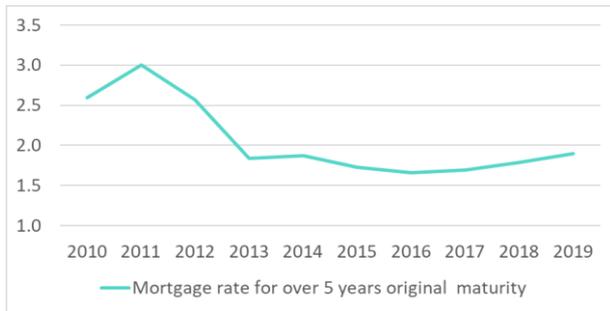
↑ 12.7%

Furthermore, the **mean equivalised net income** has grown by 88.4% over the period 2010-2019, reaching EUR 12,780.0. In 2018, it amounted to EUR 11,746.0, below the EU-27 average of 19,078.0.



Moreover, total **outstanding residential loans to households** increased by 27.3% from EUR 5,973 million in 2010 to EUR 7,603 million in 2018⁴⁴. This is supported by declining **interest rates on mortgages** (for loans over 5 years of original maturity), currently standing at 1.9% in 2019 as compared to 2.6% in 2010 (Figure 7). However, it should be noted that this is slightly above the previous year's rates (1.8%).

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

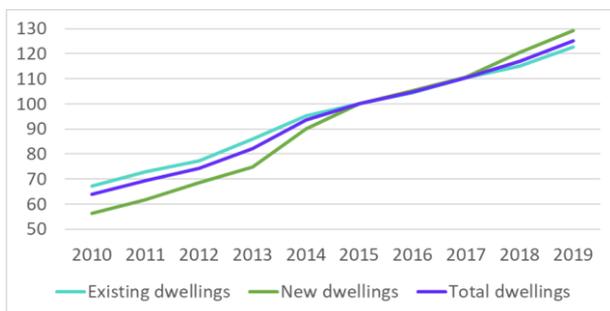


Source: Eurostat, 2020.

In parallel, the **house prices index** for existing dwellings grew by 22.8% between 2015 and 2019. Despite experiencing a surge in demand for housing, so far Estonia does not seem to face housing supply shortages, which ultimately has resulted in containing the upward pressure on house prices⁴⁵.

House prices index between 2015 and 2019 ↑ **22.8%**

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



Source: Eurostat, 2020.

Regarding the **building permits** index for residential dwellings, Estonia witnessed a substantial increase of 43.6% between 2015 and 2019. Notably, there was an 18.5 index points (ip) increase between 2018 and 2019 itself. Similarly, building permits for one-dwelling buildings rose by 36.7% over the same reference period. Further, the biggest increment was seen in the building permits for two and more dwelling buildings, rising by 45.9% between 2015 and 2019.

Building permits index for residential dwellings between 2015 and 2019 ↑ **43.6%**

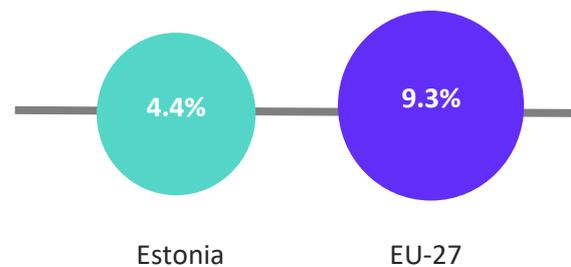
The majority of Estonian **building stock** is owner-occupied, with 81.7% owners and 18.3% tenants

occupying buildings in 2019. This can be partly attributed to policies that favour home ownership, as well as the country’s culture of home ownership. Nevertheless, there has been a change in this trend over the last decade and the shift has gone towards housing rental, as the share of tenants increased by 3.8 pps between 2010 and 2019.

Moreover, the distribution of owners and tenants seems to be influenced by the income level. The population earning above 60.0% of **median equivalised income** is more likely to own its own dwelling (84.5% on average), against 71.5% for the population earning below 60.0% of median equalised income. This trend has remained stable since 2010.

In 2019, the **overcrowding rate**⁴⁶ stood at 13.9%⁴⁷ in Estonia, below the EU-27 average of 17.1%. Similarly, the **severe housing deprivation rate**⁴⁸ stood at 2.9%⁴⁹, lower than the EU-27 average of 3.8%. Last, the **housing cost overburden rate**⁵⁰ has been falling since 2014 (8.3%), standing at 4.4% in 2019, below the EU-27 average of 9.3%. This decline indicates that housing affordability is not yet a concern in Estonia, despite of rising house prices⁵¹.

Housing cost overburden rate in 2019



Infrastructure

According to the **2019 Global Competitiveness Report**⁵², Estonia ranks 45th out of 141 economies in terms of infrastructure.

In particular, it ranks 8th with respect to the efficiency of seaport services and 20th in terms of train services. It also performs moderately well in terms of road connectivity (35th), railroad density (38th) and quality of road infrastructure (42nd). In contrast, efficiency of air transport services and airport connectivity lag behind, ranking 69th and 92nd, respectively⁵³.

Estonia's ranking in transport infrastructure can mainly be attributed to the development of the maritime and rail infrastructures. Estonia has not made any significant progress so far in completing the TEN-T core network and ranks low when it comes to rail and road networks. Due to insufficient funding, road works in Estonia's state road management plan are running later than anticipated. In fact, development works worth EUR 689.0 million have not been carried out in 2020 and this backlog is expected to rise to EUR 2.2 billion by 2030. The Estonian Road Administration also warned that, with the current level of investments, it is not possible to maintain the country's roads at an acceptable level⁵⁴. The full development of *Rail Baltica*, planned for 2026,

remains a priority for Estonia to tackle the challenges of congestion and connectivity with the rest of the internal market⁵⁵. However, the Supreme Audit Institutions of Estonia, Latvia and Lithuania have raised concerns on the implementation of this project in relation to cost and schedule⁵⁶.

By 2019, the building and modernisation of 201 kilometres of roads was completed. The EU Connecting Europe Facility allocated EUR 221.8 million to specific projects on strategic transport networks. Further, with a view to alleviate congestion at the border between the two member states, the third interconnection between Estonia and Latvia is planned to be commissioned in 2020⁵⁷.

4

Key issues and barriers in the construction sector

Company failure

Over the period of 2010 to 2017⁵⁸, **business demography** in the broad construction sector changed considerably. The number of company births in the narrow construction sub-sector increased by 90.5%, from 771 to 1,469, whereas in the real estate activities sub-sector it went up by 80.7%, from 352 to 636. The situation for the architectural and engineering activities sub-sector also improved, with the number of births growing by 65.0%, from 137 to 226. The number of **company deaths** decreased by 8.8% in the narrow construction sub-sector from 1,165 in 2010 to 1,062 in 2017. Conversely, the number of deaths in the real estate activities sub-sector increased by 45.0%, from 433 to 628, and the architectural and engineering activities sub-sector also experienced an increase of 15.9%, growing from 138 to 160.

According to the Euler Hermes' Insolvency Estimates, the number of companies that became bankrupt in Estonia reduced to 148 in 2019 from 273 in 2018. However, owing to the impact of Covid-19, it is forecasted that this number will rise to 330 by the end of 2021⁵⁹.

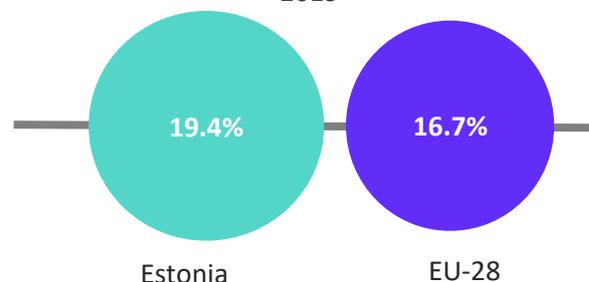
Estonia is planning to establish an insolvency service to make bankruptcy proceedings more effective. Currently, on average, 40.0% of claims are satisfied in bankruptcy proceedings in Estonia. This insolvency service, made up of four employees, would run special audits to chart the ways by which companies are emptied of assets⁶⁰.

Trade credit

According to the SAFE 2019 report, trade credit constitutes a relevant source of financing for 28.0% of Estonian SMEs, slightly below the EU-28⁶¹ average of 31.0% in 2019⁶².

As per the report, leasing remains a relevant source of financing for 67.8% of the SMEs (compared to 47.1% at the EU-28 level). Only 19.4% of SMEs have obtained trade credit from their business partners in the last six months. Further, 41.5% of SMEs have applied for trade credit in the last six months, above the EU-28⁶³ average of 31.7%. Out of 41.5% of SMEs who applied for trade credit in the last six months, 61.0% SMEs received everything they applied for (below the EU-28⁶⁴ average of 73.5%). In addition, 66.6% of the SME respondents consider that the availability of trade credit remained unchanged over the past six months and 50.7% of SMEs expect trade credit financing to remain unchanged in the coming six months from the survey⁶⁵.

Share of companies using the trade credit in 2019



Late payment



According to the European Payments Report 2019, late payment does not seem to be a major concern in Estonia⁶⁶.

As per the report, Estonia offers the lowest number of days in terms of extending payment terms to B2B customers as compared to other European countries. On average, a business-to-business (B2B) customer in Estonia is allowed 16 days to pay dues, as compared to the EU-28⁶⁷ average of 34 days. In practice, Estonian B2B customers took an average of 17 days to pay dues in 2019, significantly below the EU-28 average of 40 days. As per the report, 23.0% of Estonian companies consider that late payments lead to loss of income and prohibit growth potential, with 43% of companies believing that the financial difficulties of debtors are the main cause of the problem.

With the onset of the COVID-19 pandemic, the situation has become difficult. According to the European Payment Report 2020, 54.0% of the SME respondents expect late payments to have a high impact on liquidity squeeze. This is higher than the EU-28⁶⁸ average of 45.0%⁶⁹.

According to the European Payment Report 2020, 73.0% of total SME respondents from the real estate and the narrow construction sub-sectors have agreed to accept longer payment terms in order to avoid damaging client relationships. Country-wise, 63.0% of the SME respondents from Estonia have agreed to accept longer payment terms, lower than the EU-28 average of 69.0%⁷⁰.

Time and cost of obtaining building permits and licenses

As per the 2020 World Bank's Doing Business Report⁷¹, Estonia ranked 19th out of 190 economies in terms of 'dealing with construction permits', a decline from 14th place in 2019⁷².

As per the report, it requires ten procedures and 103 days in total to complete the formalities to build a warehouse⁷³. This is lower than the OECD high-income average (12.7 procedures and 152.3 days) (Table 3). In addition, the cost of obtaining a

building permit for a warehouse represents 0.2% of the value of the warehouse, below the OECD high-income average of 1.5%⁷⁴.

Table 3: Construction procedures timing and costs in Estonia

Procedure	Time to complete	Associated costs
Obtain project clearance from Fire Department	30 days	no charge
Obtain project clearance from Environment Department	29 days	no charge
Obtain project clearance from Health Care Department	28 days	no charge
Obtain project clearance from Labour Inspections Department	27 days	no charge
Obtain building permit	25 days	EUR 585
Receive on-site inspection by Municipality	1 day	no charge
Receive on-site inspection by Estonian Technical Surveillance Authority	1 day	no charge
Apply for permit of use and request final inspection from Municipality	1 day	EUR 64
Receive final inspection from Municipality and obtain permit of use	25 days	no charge
Obtain water and sewerage connection	20 days	EUR 1,131

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

Skills shortage



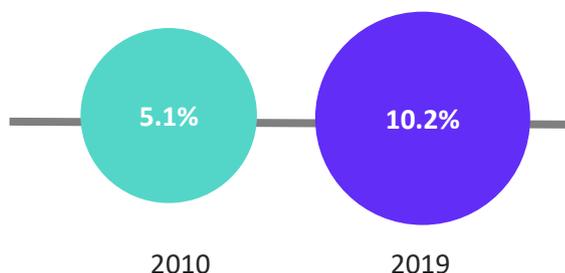
The number of job vacancies in the narrow construction sub-sector experienced a significant increase of 153.4% from 264 in 2010 to 670 in 2019.

The **job vacancy rate** was about 1.5% in the narrow construction sub-sector and 0.4% in the real estate activities sub-sector in 2019. Moreover, the number of **tertiary students** in engineering, manufacturing and construction experienced a 9.1% increase between 2010 and 2018⁷⁵, reaching 1,338 from 1,226.

Furthermore, **adult participation** in education and training in the narrow construction sub-sector increased from 5.1% in 2010 to 10.2% in 2019, while for the real estate activities sub-sector⁷⁶ the participation rate stood at 14.6% in 2019. Estonia's performance in **tertiary educational attainment** (47.2%) is above the EU-28⁷⁷ average of 40.7%, but high dropout rates from higher education and declining enrolment rates may worsen the

situation in the longer terms, would these trends persist⁷⁸.

Adult participation in education and training
in the narrow construction sub-sector



Estonia's Vocational Education and Training (VET) system has witnessed extensive reforms and developments in recent years. As a result, about 25.0% of students at the upper secondary level are enrolled in a vocational programme, which is delivered by 30 different VET providers⁷⁹.

The **employment rate of recent graduates** by educational attainment stood at 81.7% in 2018, in line with the EU-28⁸⁰ average of 81.6%. A performance-based funding was introduced in 2017 by the government to promote innovation and enhanced cooperation between schools and companies. However, compared to the EUR 12.0 million initially expected, only EUR 0.5 million were allocated for this purpose in 2019⁸¹. This highlights the difficulties of coordinating public and private sector actors, as well as their needs and interests, when it comes to skills development.

In Estonia, skills shortages have emerged mainly due to the rapidly changing labour market trends and technological advancements, putting pressure on firms' cost competitiveness⁸².

To address these challenges, inter-alia, the New Education Strategy 2021-2035 has been formulated, which will come into force from 2021⁸³. Moreover, the Estonian government has also implemented a talent policy to attract top specialists to the Estonian labour market. The increase in foreign short-term workers has eased the labour shortage in sectors like construction, agriculture, and manufacturing in particular⁸⁴.

Sector and sub-sector specific issues

Material efficiency and waste management

Owing to rise in economic activity, **waste generated by the construction sector** has increased over recent years. In the European Union, construction and demolition waste (CDW) constitutes one of the most important waste streams, accounting for approximately 25% - 30% of all waste generated in the EU. CDW mainly consists of several materials, including concrete, bricks, gypsum, wood, glass, metals, plastic, solvents, asbestos and excavated soil, many of which can be recycled⁸⁵.

In 2018⁸⁶, mineral waste from construction and demolition activities in Estonia totalled at 1,205,051 tonnes, a considerable increase of 316.9% over the 2010 level (1,205,051 tonnes).

Mineral waste from
construction and
demolition in Estonia
between 2010 and 2018

↑ 316.9%

The central piece of legislation in Estonia for waste treatment is the Waste Act (RT I 2004, 9, 52)⁸⁷, adopted in 2004, and subsequent amendments therein. The Waste Act, which transposes the EU Waste Framework Directive into national law, sets the rules for all waste streams and treatment operations.

Furthermore, a National Waste Management Plan (WMP) for the period 2014-2020 was adopted, focusing on promoting financial support to waste management companies to enhance their performance and treatment capacity. This WMP aims at a 75.0% recovery of total CDW by 2020. Considering the fact that Estonia had already reached the recycling target of the Waste Framework Directive (WFD) (2008/98/EC)⁸⁸ as early as 2011, when it attained recovery rate of 72.0%, it is most likely that this 2020 target will be achieved. This again gets reflected in the Estonian Environmental Strategy 2030, which sets out that by 2030 waste disposed to landfills will have decreased by 30.0% and the harmfulness of waste generated will have been reduced significantly⁸⁹.

Climate and energy

Emissions of greenhouse gases (carbon monoxide and dioxide, methane and nitrous oxides) from the narrow construction sub-sector and real estate activities sub-sector in Estonia amounted to a total of 118,915.6 tonnes and 67,031.8 tonnes, respectively, in 2018⁹⁰. Emissions in the narrow construction sub-sector decreased slightly by 1.8%

between 2010 and 2018, whereas emissions in the real estate activities sub-sector decreased by 33.1% in the same period.

Emissions in the real estate activities sub sector between 2010 and 2018



33.1%

5

Innovation in the construction sector

Innovation performance

According to the European Innovation Scoreboard 2020⁹¹, Estonia is classified as a strong innovator. Its overall score in 2019 stood at 108, above the EU-28 average of 99⁹².

As per the report, the strongest innovation dimensions for Estonia are linkages, intellectual assets and human resources. It scores high in terms of innovative SMEs collaborating with others, trademark applications, lifelong learning and non-research and development (R&D) innovation expenditures. Conversely, innovation dimensions in which Estonia's performance was relatively weak include employment impacts, sales impacts and innovation-friendly environment. The country also scored low on indicators such as SMEs with marketing or organisational innovations, R&D expenditures in the business sector, employment in fast-growing enterprises of innovative sectors and medium and high-tech product exports⁹³.

Business enterprise R&D (BERD) expenditure for professional, scientific and technical activities sub-sector declined from EUR 3.5 million in 2010 to EUR 1.4 million in 2017⁹⁴ – a significant decline of 60.1%. Furthermore, there was no BERD investment recorded in the real estate activities sub-sector over the 2010-2017 period. Last, BERD in the narrow construction sub-sector stood at EUR 1.2 million in 2017⁹⁵ – a substantial 240.9% increment compared to 2011⁹⁶ (EUR 0.4 million) (Figure 9).

BERD in the narrow construction sub-sector between 2011 and 2017

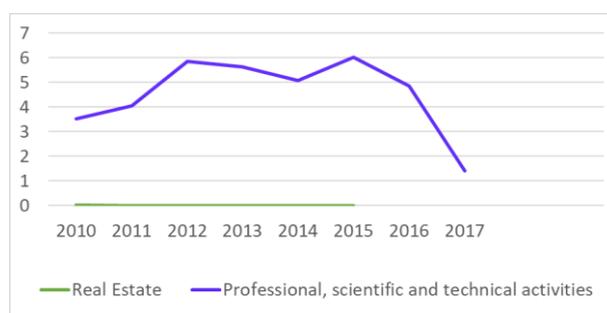
↑ 240.9%

In parallel, **total R&D personnel** (full-time equivalents – FTE⁹⁷) in the professional, scientific and technical activities (except scientific research and development) experienced a decline of 66.7%, from 114 personnel in 2010 to 38 personnel in

2017⁹⁸, after reaching 141 in 2015. There were only eight R&D FTE personnel in the narrow construction sub-sector in 2017.

Likewise, the number of researchers (FTE) also witnessed a decline of 69.8% in the professional, scientific and technical activities sub-sector (except scientific research and development), going from 96 in 2010 to 29 in 2017. This number stood at 4 in the narrow construction sub-sector for the year 2017. For the real estate activities sub-sector both these numbers (R&D FTE and researchers FTE) were negligible, in line with its BERD expenditure.

Figure 9: Business enterprise R&D expenditure (BERD) per construction sub-sector in Estonia between 2010 and 2017⁹⁹ (EUR m)



Source: Eurostat, 2020.

During the period 2010-2019, a total of 23 **construction-related patent applications** were registered in Estonia, with only one such application recorded for 2019 (against three patent applications in 2010). Further, no Estonian construction & materials firms rank within the top 1,000 EU companies by R&D (industrial sector ICB-3D), according to the 2019 EU R&D Scoreboard¹⁰⁰.

Well targeted investments in research & innovation (R&I) would strengthen Estonia's long-term potential. In this regard, Estonia has taken several measures to further strengthen its R&D system over the past years. Coordination between research and innovation policies has also improved recently owing to more decisive role assumed by

the Prime Minister's Research and Development Council. A significant step towards achieving better coordination was the process of writing a single strategy - **TAIES** – merging the national entrepreneurship strategy and the research and development strategy¹⁰¹.

Eco-innovation and digitalisation

According to the 2019 Eco-Innovation Scoreboard (Eco-IS), Estonia scored 73, in comparison to the EU-28¹⁰² average of 100 and was classified in 'Countries catching up with Eco-IS performers'¹⁰³.

As per the report, Estonia's score was below EU-28¹⁰⁴ average on three out of five indicators, namely, eco-innovation activities, eco-innovation outputs and resource efficiency outcomes, with the latter being the worst performer. However, it outperformed the EU average on the eco-innovation inputs and the socio-economic outcomes fronts.

In the **European Commission Digital Economy and Society Index (DESI) 2020**, Estonia is ranked seventh out of the 28 EU member states with an overall score of 61.1, compared to the EU-28¹⁰⁵ average score of 52.6. Estonia outperformed the EU-28 average on four out of five indicators, namely; digital public services, human capital, use of internet services and connectivity, with digital public services being the best performance area. On the contrary, the country scored marginally below the EU-28¹⁰⁶ average in terms of integration of digital economy¹⁰⁷.

For the purposes of improving the digitisation of SEMs, Estonia implemented the **Digital Diagnostics** measure towards the end of 2018 to facilitate companies in getting access to ICT experts. The aim was to help them exploit opportunities for improving productivity and growth through the uptake of digital technologies. Also, for the purpose of reaping the full benefits of smart specialisation, Cohesion Policy programmes for Estonia have been allocated EU funding of EUR 1.0 billion¹⁰⁸.

Further, to boost innovation in the Estonian construction sector and bring about the scaling-up of innovation from the company level to the market level, several initiatives have been launched. For instance, the Estonian research, development & innovation (R&D&I) strategy

"Knowledge Based Estonia 2014-2020"¹⁰⁹ aims to create favourable conditions for an increase in productivity and development in the country. This strategy is based in four major pillars: (1) ensuring a high level and diversity of research, (2) increasing the economic and social benefits of R&D&I, (3) making the structure of the economy more knowledge-intensive through smart specialisations and (4) increasing the visibility of Estonia in international R&D&I cooperation. In addition, this strategy outlines the importance of innovative construction, i.e. the development of smart houses¹¹⁰.

In addition to these general innovation programmes, other initiatives have been launched on specific topics, such as the integration of new technologies in the day-to-day projects management. The Mobi3Con system enables users to access real-time information about building designs and features, which was not accessible before. Mobi3Con is based on the BIM (Building Information Model) and aims to see it put to practical use, particularly during the construction phase of projects. This is special importance as the experience of Estonian construction companies with such technology remains limited¹¹¹.

The Mobi3Con¹¹² project, conducted by the Estonian Innovation Institute, provides end-user communities with a low-cost mobile system for data management at construction sites¹¹³.

BIM is gaining the attention of Estonian construction practitioners. Nevertheless, there are many challenges which affect BIM adoption in Estonia such as the lack of training, education, and the lack of government support¹¹⁴.

The Estonian Digital Construction Cluster is a volunteer-based, non-profit organisation. It creates information and communication technologies for the construction sector, including virtual design, construction and management products and an e-construction portal¹¹⁵.

The objective of the cluster is to support the adoption of smart construction solutions, to digitalise and automate processes in the sector. It has a total investment budget of EUR 863,505 and benefits from additional funding from the EU's European Regional Development Fund (ERDF) of EUR 303,000 through the "Cohesion Policy

Funding” Operational Programme for the 2014-2020 programming period¹¹⁶.

The Estonian Digital Construction Cluster has conducted research into BIM resulting in its further development, most notably in the creation of an Estonia specific tool for use with Revit, an

engineering design and modelling software. The tool was launched by the cluster partner, AruCAD Süsteemid to help architects and engineers adapt BIM methods and work more efficiently with constructors¹¹⁷.

6

National and regional regulatory framework

Policy schemes

Housing policy in Estonia is under the responsibility of the construction and housing sector of the Ministry of Economic Affairs and Communications. The main objectives of the Estonian housing policy are to support housing supply; housing quality and the sustainability of housing stock, as well as the diversity and sustainability of residential areas.

The ministry offers several support schemes, focusing on the renewal of residential heating systems, demolition of unused buildings and reconstruction of apartment buildings¹¹⁸.

The support measure for the renewal of heating systems targets small residential housing. It aims at replacing old heating systems using liquid fuels, with others that rely on renewable energy. During 2018, **KredEx** (a financing institution, founded by the Estonian government in 2001 to offer financial solutions) issued two types of grants for small residential buildings. One of them was designed for updating oil-powered heating systems and the other for renovating housing. However, KredEx discontinued the grants for replacing oil burning boilers with a more energy-efficient heating device in 2018¹¹⁹.

The scheme **Housing Support for Families with Multiple Children** (*Kodutoetus lasterikastele peredele*) provides a grant to families for the modernisation and improvement of their dwelling. Eligible activities covered by the grant include the construction, renovation or expansion of a dwelling, the replacement of utility systems, the purchase of housing, and the repayment of mortgage instalments. The maximum amount of the subsidy is EUR 7,000, which can be doubled to EUR 14,000 if a household has eight or more

children¹²⁰. The scheme is open to households whose monthly income does not exceed EUR 355.0¹²¹.



In 2019, KredEx awarded home grants to 337 large families raising three or more children. There are 1,192 children growing up in these families altogether. The total sum of the grants allocated in 2019 was more than EUR 3.1 million¹²².

Similarly, KredEx offers a **Housing Loan Guarantee** scheme (*Eluasemelaenu käendus*), which contributes to the repayments of housing loans of beneficiaries who wish to borrow to purchase a new dwelling or renovate an existing one. The scheme is open to a variety of applicants, including young families with at least one child up to 15 years of age, young professionals (up to 35 years) and veterans of the Estonian Defence Forces. Applicants must provide a down payment equal to 10.0% of the value of the property and take out a loan repayable over 30 years¹²³.

KredEx offers a loan guarantee of up to 24.0% of the value of the loan collateral, but not more than EUR 20,000. This amount increases to EUR 50,000 in the case of the acquisition of an energy efficient property or the energy efficient renovation of the existing one¹²⁴.

Schemes tailored specifically to apartment associations or cooperatives also exist, offering both guarantees on loans and grants. For instance, the **Apartment Building Loan Guarantee** (*Korterelamulaenu käendus*) is designed for associations wishing to take out a loan for the reconstruction/renovation of the apartment building where the associated risk is deemed to be

higher than the average (e.g. in case the building is located in a low market value area, or if the cost of the works per m² is higher than the average). The value of these guarantees can reach up to 75.0% of the amount of the bank loan¹²⁵.

Similarly, the **Reconstruction Grant** (*Rekonstrueerimise toetus*) is available to associations and cooperatives wishing to reconstruct their apartment buildings. The grant can cover 30.0%, 40.0% or 50.0% of the total cost of the construction works, depending on the location of the apartment. The grant covers a different percentage of the costs in different urban and rural areas: it goes up to 30.0% and cannot exceed EUR 30,000 in Tallin. In the other main cities, the grant can cover up to 40% and cannot exceed EUR 40,000. Last, the grant goes up to 50% and cannot exceed EUR 50,000 in the remaining part of the country¹²⁶. This can include the insulation of the building envelope, replacement of windows, front doors, heating systems and ventilation systems, the installation of renewable energy systems and design/project management costs^{127,128}. The total budget available amounts to EUR 102.0 million, which will enable interventions on about 1,000 apartment buildings¹²⁹. The maximum amount of support is EUR 1.0 million per project¹³⁰.



To alleviate the consequences of the COVID-19 pandemic, the Estonian government allocated an additional EUR 71.0 million for the reconstruction of apartments in May 2020¹³¹.

Finally, the **Support Measure for the Demolition of Unused Buildings** (*Lammutustoetus kohalikele omava*) focuses on helping local authorities demolish buildings that have fallen out of use, become unaesthetic, dangerous (e.g. likely to collapse or catch fire) and whose renovation is not feasible. The recovered plot of land could then be used by the local government for agricultural purposes or turned into public space. The grant scheme covers up to 70.0% of the demolition costs, up to a maximum of EUR 60,000 per applicant, requiring the applicant to self-finance at least 30.0% of the works¹³². The total budget available for the programme is EUR 700,000¹³³.

Building regulations

Construction activities in Estonia are governed by two main pieces of legislation, namely the new **Building Code** and the Planning Act, revised and adopted in 2015 into the **new Building Code**.

The revised Building Code entered into force in 2015, unifying regulation previously divided across different laws. It consists of a general and a special part. The general part of the code sets out the basic guidelines and requirements for buildings, thus simplifying the regulative burden by collecting all relevant rulings in one document. The special part is dedicated to buildings with special status that have different requirements. The code provides the simplification and a speeding up of procedures related to the issuing of building permits and design of construction projects. Under it, the construction of buildings may simply require the filing of a notice regarding the start of the works¹³⁴, as opposed to applying for a building permit, depending on the size of the building (e.g. construction/renovation/extension of a dwelling between 20-60 m² only requires the notice). Some smaller buildings do not require notification at all, thus further simplifying building procedures¹³⁵. Moreover, filing the notice is without fee, which minimises the workload for administrations, and the response time for authorities to decide whether to issue the permit has been shortened to ten days. Finally, under the code, design specifications are only required for construction activities requiring a building permit, such as the construction or the expansion of a building¹³⁶.

Moreover, the **Planning Act** (*Planeerimisseadus*) sets out the principles and requirements for planning, to achieve long-term sustainable and balanced spatial development, land use, and built environment. Namely, planning principles are defined at the national, regional and local government levels¹³⁷.

Insurance and liability related regulations

In Estonia, as stipulated by the Building Act, **liability insurance** is mandatory for certification/inspection bodies which carry out conformity assessments on construction products. The minimum amount insured is set at EUR 31,955, which covers damages caused to third parties

during the inspections. As for contractors, they commonly take out Contractor All Risk (CAR) insurance, which covers third party liability and damage to the construction works during the construction phase. Moreover, professionals such as designers, constructors, consultants and supervisors are required by the client to be covered by a **professional civil liability insurance**¹³⁸.

The **construction contract** details the requirements of the final construction, and in the case of non-compliance with such requirements, is governed by contractual liability. The limitation period in this case is five years (and up to 10 years if the obligations under the contract were wilfully

breached). Otherwise, if the requirements are not specified in the contract, the Building Act stipulates that the work completed must preserve its safety and quality for a statutory warranty period of at least two years starting from the date of completion. During this time the contractor is required to repair the defects that became apparent. Furthermore, the Building Act also explains liability under delict, which applies when the plaintiff is not contractually bound to the defendant or if the damage incurred is not included in the contractual obligations of the defendant. In this case, the duration of liability amounts to three years¹³⁹.

7

Current status and national strategies to meet Construction 2020 objectives

TO 1 – Investment conditions and volumes

Total investments by the narrow construction sub-sector¹⁴⁰ fluctuated throughout the period 2010-2018¹⁴¹, witnessing an overall increase of 110.2%, from EUR 46.0 million in 2010 to EUR 96.7 million in 2018. Similarly, the real estate activities sub-sector experienced a larger growth, with investments rising by 151.5% over the same period, from EUR 525.1 million to EUR 1.3 billion.

Investment by the real estate activities sub-sector between 2010 and 2018

↑ 151.5%

Investment by the narrow construction sub-sector between 2010 and 2018

↑ 110.2%

In parallel, investments in machinery and intellectual property in the narrow construction sub-sector amounted to EUR 22.0 million and EUR 3.7 million, respectively, in 2018. This is 16.4% and 105.6% higher than in 2010. Also, investments in machinery and intellectual property in the real estate activities sub-sector stood at EUR 11.3 million (+46.8% over 2010) and EUR 1.7 million (+142.9% over 2010), respectively. These developments are in line with business confidence in the construction sector and Estonia's strong economic performance.

Figure 10: Investment by the Estonian broad construction sector between 2010 and 2019 (EUR million)



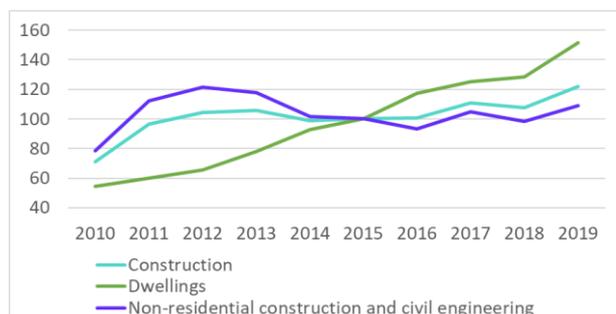
Source: Eurostat, 2020.

The investment index in the broad construction sector¹⁴² increased by 21.9% over the 2015-2019 period (Figure 11). This growth was primarily driven by investments in dwellings by the whole economy, as well as non-residential construction and civil engineering, which experienced growth of 51.5% and 8.9% respectively over the same period. In absolute terms, investments in the broad construction sector totalled EUR 3.2 billion in 2017¹⁴³, out of which EUR 1.1 billion were invested in dwellings and EUR 2.1 billion were devoted to non-residential and civil engineering¹⁴⁴.

Investments in dwellings by the whole economy between 2015 and 2019

↑ 51.5%

Figure 11: Investment index in the Estonian construction sector between 2010 and 2019 (2015=100)



Source: AMECO, 2020.

Total **inland infrastructure investment**¹⁴⁵ as a share of GDP stood at 0.9% in 2018¹⁴⁶, below the 2010 level of 1.2%. This was mainly due to significant declines in investments in sea infrastructure (-84.6%), followed by rail infrastructure (-22.9%) between 2010 and 2018. Investment in sea infrastructure declined from EUR 39.0 million in 2010 to EUR 6.0 million in 2018. Similarly, investment in rail infrastructure decreased to EUR 27.0 million in 2018 from EUR 35.0 million in 2010. On the other hand, investment in air transport grew substantially from EUR 3.0 million in 2010 to EUR 11.0 million in 2018, up by 266.7%. Road infrastructure also grew from EUR 137.0 million in 2010 to EUR 219.0 million in 2018, representing a 59.9% growth.

Air infrastructure investment between 2010 and 2018

↑ 266.7%

In parallel, **household renovation spending** in Estonia increased by 54.6% over 2010-2018, rising from EUR 16.3 in 2010 to EUR 25.2 million in 2018¹⁴⁷. Moreover, **renovation spending as a share of disposable income** remained constant and stood at 0.2% throughout the period of 2010-2018¹⁴⁸, below the EU-27 average of 0.9% in 2018.

Estonia defines its vision for transport in the '**National Spatial Plan Estonia 2030+**', whereby the backbone of the transport network will be railroads¹⁴⁹. Furthermore, railway infrastructure is key to connect Estonia to the European rail network. In this regard, the **Rail Baltica** project plays a strategic role. It includes five EU countries, and in total, the railway will run over 700 km, with 200 km on Estonian territory. The actual

development of the Rail Baltica project remains a priority as it will help improve congestion, sustainability and connectivity with the internal market. However, the Supreme Audit Institutions have raised concerns in relation to the cost and schedule of the project in their January 2020 report. With the design work already underway on the Tallinn-Rapla and Rapla-Tootsi sections, the construction of actual railway in Estonia, as part of the Rail Baltica project, is now expected to begin in 2022 or late 2021¹⁵⁰.

Investment needs in the transport sector until 2030 are increasing with total estimated investment need of EUR 2.0 billion for the corridor network, EUR 1.6 billion for Rail Baltica and further funds for the upgradation of major roads¹⁵¹.

Overall, Estonia's transport investment depends heavily on EU funds. EU funding of EUR 1.1 billion has been allocated for sustainable growth and sustainable transport by the Cohesion Policy programmes for Estonia¹⁵².

The European Investment Bank (EIB) has made available EUR 95.0 million for the modernisation and upgrade of the Estonian railway network, including upgrade of tracks, signalling and traffic control systems¹⁵³.

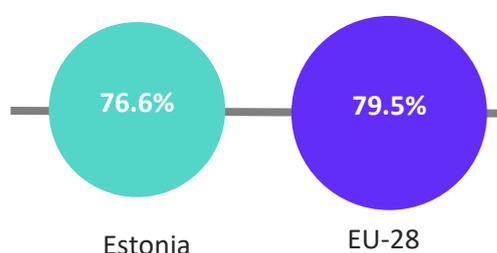
All interventions are located on the TEN-T, including on the North Sea – Baltic Corridor. The above loan agreement was signed with the Estonian national railway company Eesti Raudtee in June 2020. Being a beneficiary of EU programmes such as the **Connecting Europe Facility**, Estonia was allocated EU funding of EUR 221.8 million to specific projects on strategic transport networks¹⁵⁴.

Further, to counter the impact of the COVID-19 emergency, the Estonian government, in May 2020, approved a decree allocating EUR 71.0 million to the construction sector for the reconstruction of apartment buildings. This came as part of the EUR 100.0 million support allocated by the government to support the renovation of apartment buildings, of which EUR 28.5 million was announced previously. This will certainly help the construction sector in increasing job opportunities, despite the crisis, and make homes more energy efficient and safer¹⁵⁵.

TO 2 – Skills

In 2017¹⁵⁶, 40.7% of Estonian students attended vocational education programmes (VET), below the EU-28¹⁵⁷ average of 47.8%. Furthermore, though the **share of VET students enrolled in programmes with workplace-based learning experience** has doubled, but standing at 5.0%, it was still very limited. There was a notable decline in the **employability level of recent VET graduates**, dropping to 76.6% in 2018 as compared to 86.2% in 2017, with EU-28¹⁵⁸ average standing a bit above at 79.5%¹⁵⁹.

Employment rate of recent VET graduates, 2018



In 2018, **early leavers from education and training** stood at 11.3% compared to the EU-28¹⁶⁰ average of 10.6%. This leads to an insufficient number of tertiary graduates, whose competencies are furthermore insufficiently aligned with the labour market needs. Notably, the **participation of adults in learning** continued to increase. In 2018, 19.7% of adults (aged between 25-64) had learning experience. This was almost double compared to the EU-28¹⁶¹ average of 11.1%¹⁶².

Estonia needs to reform its schooling system considering the demographic trends of a rapidly decreasing and ageing population and adapt the VET system to technological developments. Currently, there are 32 vocational educational institutions and six professional higher institutions in Estonia that offer a variety of 160 specialities¹⁶³.

Tallinn Construction School (TCS), founded in 1947, is the state financed vocational study institution, which administered by the Estonian Ministry of Education and Research. It offers sustainable vocational training in the fields of construction, electrical and processing of woodworking in Estonia¹⁶⁴.

Addressing the challenges around lifelong learning, the Estonian government has formulated the Lifelong Learning Strategy 2020 (LLL2020). The goal is to provide all people in Estonia with learning opportunities that are customised to their needs and capabilities throughout their whole lifespan^{165,166}.

In its efforts to improve its skills governance system, Estonia developed a comprehensive system to anticipate labour market needs and skills, with support from the European Social Fund. In this regard, CEDEFOP (European Centre for the Development of Vocational Training) has been providing technical advice since 2017 with the aim of improving the management and coordination of skills anticipation. This is expected to be developed further with the support of EU funding¹⁶⁷.

The government started developing an education strategy for 2021-2035, which is expected to benefit from EU funding between 2021 and 2027. Coming into force from 2021, its primary objective is to bring changes to the present system, such as revising the curriculum and introducing a new approach to learning¹⁶⁸.

The strategy seeks to foster more flexible transitions and more permeability between educational levels by improving cooperation between educational institutions through the 'Consortium' approach.

TO 3 – Resource efficiency / Sustainable construction

Estonia's energy efficiency is improving, driven by Cohesion Policy investments in energy efficiency for public and residential infrastructures. The allocation for these objectives over the programming period 2014-2020 amounts to EUR 247.0 million¹⁶⁹. The Estonian energy saving policy is defined through the Estonian Energy Sector Development Plan until 2030 (*Energiamajanduse arengukava aastani 2030*). The objective of the plan is to achieve the use of renewable energy for 50% of domestic electricity consumption and 80% of domestic heat generation by 2030¹⁷⁰.

It also includes the national final energy consumption targets, which should not exceed 2,818 ktoe by 2020, with renewable energy accounting for 25.0% of this total also by 2020

(10.0% in the final energy consumption in the transport sector)¹⁷¹. The plan also highlights the importance of energy efficiency in the housing sector specifically since it accounts for about 33.0% of the national energy consumption.

In Estonia, the first energy efficiency requirements for buildings, based on primary energy use, were introduced in 2008. In 2013, the requirements became stricter and, from 2019-2020, NZEB¹⁷² (nearly zero-energy buildings) requirements were established, which became applicable to public buildings in 2019 and then residential properties in 2020¹⁷³.

A recent study conducted by an international group of building scientists concluded that Estonia is among the countries with the most energy-efficient buildings in Europe¹⁷⁴.

KredEx, through its loan guarantees, enables the purchase of a home with a smaller deposit and ensures the preservation and energy efficiency of residential buildings. KredEx established the **KredEx Revolving Fund** in 2009 to boost the energy efficient renovation of residential properties¹⁷⁵.

In 2018, KredEx provided eight types of measures to improve energy efficiency or develop the housing sector. Grants for the reconstruction of apartment buildings were in high demand. Because of this, KredEx had to close the receipt of applications in September 2017 as the budget (totalling EUR 37.0 million in 2018) was exhausted¹⁷⁶.

The Estonian Ministry of Economic Affairs and Communications (MoEAC) and KredEx are currently preparing a pilot project, which aims to enable apartment buildings to be renovated under the KredEx-sponsored arrangement using prefabricated elements¹⁷⁷.

Established in 2015, grants for the **Renovation of Electrical Installations** (*Elektripaigaldiste renoveerimise toetus*) provide support to apartment associations and non-profit organisations for the replacement of old voltage systems (3x220 V) with the new system (3x230/400 V) in the city of Tallinn. During 2018, applications were submitted for the renovation of the electrical installations of 179 buildings totalling EUR 466,000. In the coming years, KredEx will continue to issue this grant¹⁷⁸.

In 2018, the Ministry of Economy and Communications announced further changes. From 2020 onwards, building permits will only be issued for nearly Zero-Energy Buildings (nZEB), in keeping with the EU Energy Efficiency Directive (2010/31/EU)¹⁷⁹.

However, this requirement may contribute to making construction more expensive. To address this, the European Union recommended its Member States to consider the local situation when implementing the energy efficiency requirements¹⁸⁰.

TO 4 – Single Market

Estonia performed well with respect to the 2020 EU Single Market Scoreboard metrics, particularly in terms of Internal Market Information Systems, Point of Single Contact and Trade Integration in the Single Market for goods and services¹⁸¹.

With a transposition deficit of 0.5%, Estonia has achieved its proposed target with regards to the transposition of EU directives into national law. The average delay now stands at 8.4 months, which is below the EU-28¹⁸² average of 11.5 months. However, overdue directives have now increased from three to five and the conformity deficit has also increased to 1.4% compared to EU-28¹⁸³ average of 1.2%. In terms of infringements, Estonia reported 12 pending cases as compared to EU average of 29 cases. The average case duration has also reduced significantly to 16.1 months (EU average 34.8 months) from 25.6 months previously reported.

Furthermore, Estonia's performed very well in terms of Internal Market Information Systems, with all five indicators standing above the EEA average. It also shows a high level of trade integration in the single market for goods and services, both being well above the EU-28¹⁸⁴ average.

In addition, its performance in Public Procurement is satisfactory, especially in terms of the publication rate, and cooperative procurement. It also has a satisfactory performance with respect to decision speed, SME contractors and SME bids¹⁸⁵. In terms of increasing transparency in the public procurement process, the Public Procurement State Register provides online procurement services such as company registration and a

procurement portal. Companies are also recommended to use a specialised public procurement due diligence tool in order to mitigate the corruption risk associated to public procurement in Estonia. Facilitation payments are also criminal offence in Estonia¹⁸⁶.

However, around one-third of the companies in Estonia perceive corruption as common practice in the public procurement process and believe that corruption has prevented them from winning a contract. In this regard, the Estonian government approved the Anti-Corruption Strategy 2013-2020, which provides training courses to all council and parliament members to help them identify any potential conflicts of interest¹⁸⁷.

Further, the standard for the design of buildings and the organisation of public procurement of construction works was renewed in June 2020.

The standard consists of two separate parts – the first part deals with public procurement of design and the second part with public procurement of construction works. This revision was made with the purposes of avoiding the mistakes that have become inherent in public procurement and to provide recommendations and guidelines for organising procurements in accordance with good practices. Training on the introduction of the standard is underway¹⁸⁸.

Estonia ranks high in ease of access to markets for new and growing firms. Various key support services and structures are put in place in this regard such as a single point of contact, a **SOLVIT** centre (a service provided by the national administrators in each EU Member State that helps people and businesses who encounter difficulties in another member state when public authorities do not apply EU legislation correctly) and an internal market information system. SMEs in Estonia are assisted in adhering to European standards by the Estonian Centre for Standardisation. However, awareness as to the existence of these services is not high in the business community and efforts are warranted to ensure more active use of these resources¹⁸⁹.

As for the regulatory environment governing housing planning and construction, it is not considered to be particularly restrictive and therefore does not necessarily constitute a barrier to the sector¹⁹⁰. The revision of **the Building Code**

also contributed to reducing the administrative burden related to building permits and planning.

TO 5 – International competitiveness

Estonia ranks 31st out of 141 economies in the 2019 Global Competitiveness Index¹⁹¹, an improvement compared to last year (32nd out of 140 economies).

In terms of trade openness, Estonia ranks 37th out of 141 economies with improvements in associated indicators like trade tariffs (7th compared to 26th in 2018) and prevalence of non-tariff barriers (12th compared to 13th in 2018). Border clearance efficiency remained the same at 28th in both 2019 and 2018, while complexity of tariffs declined in ranking (113th compared to 112th in 2018)^{192,193}.

The **internationalisation of construction products** in the Estonian construction sector has shown signs of growth for the past few years. **The export values of all construction-related products** increased from EUR 0.7 billion in 2010 to EUR 1.5 billion in 2019 marking an increase of 122.4%. Moreover, Estonia's share of exports of all construction-related products stood at 76.9% of the total production value in 2018, slightly above the 2010 level of 76.2% and well above the EU-27 average of 11.4%. This further improved to 78.0% in 2019.

Export value of all construction-related products between 2010 and 2019  **122.4%**

Conversely, the export value of architectural services decreased to EUR 7.6 million in 2019, as compared to EUR 60.6 million in 2010. This represents a decline of 87.5% during the period.

Export value of all architectural service between 2010 and 2019  **87.5%**

In the context of **inward FATS (foreign affiliates statistics)**¹⁹⁴, value added at factor cost and turnover in the manufacturing sub-sector increased by 47.5% and 45.4% between 2010 and 2017¹⁹⁵, reaching EUR 1.3 billion and EUR 5.8 billion respectively. Similarly, in terms of the

number of persons employed, it experienced an increase of 15.7%, reaching 39,327 in 2017 from 33,997 in 2010.

According to the SBA Fact Sheet report 2019, the Estonian government has taken three new measures in recent times with regards to internationalisation. Firstly, a digital platform, **visiidid.ee**, was developed in 2018 within the framework of the Estonian business diplomacy strategy. Its objective was to improve the coordinated development of Estonian foreign trade which would lead to a wider export of Estonian enterprises and increase foreign investments, presenting Estonia as a reliable export partner¹⁹⁶.

The second measure includes the provision of grants for participating in foreign fairs (**Messitoetus**) which is targeted at SMEs in the manufacturing sector. It is managed by Enterprise Estonia and funded from the EU Structural Funds with a total allocation of EUR 3.0 million. The limit

of the grant is EUR 50,000 and at least 20.0% of the project must be self-financed¹⁹⁷.

The third measure was the 'Business diplomacy strategy of Estonia' (**Eesti äridiplomaatia strateegia**)¹⁹⁸. The strategy's objective is to increase foreign direct investments in the country and establish targeted and coordinated government support for Estonian companies' exports. The strategy mainly outlines a framework for government institutions to coordinate activities in foreign markets, for example, business delegations to foreign markets and different information channels. The success of the strategy will be measured by a set of achievement-oriented indicators¹⁹⁹.

Financial support to exporters is also provided by KredEx, which offers export loans, credit insurance, investment insurance and production risk insurance. In 2019, KredEx concluded one loan agreement for financing export transactions in the sum of EUR 300,000²⁰⁰.

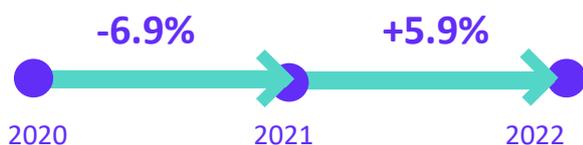
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Outlook

Estonian GDP is expected to decline in 2020 due to the COVID-19 pandemic, which resulted in the lockdown – undermining the realisation of economic activities. Nevertheless, the economy is expected to rise again in 2021.

Estonia's GDP is expected to decline by 6.9% in 2020 and then grow by 5.9% in 2021, reaching EUR 24.3 billion in 2021.

Expected GDP growth between 2020-2022



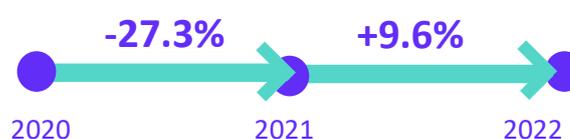
In parallel, the **volume index of production** in the broad construction sector is expected to decline by 3.8 ip annually in 2020, mainly due to a 5.0 ip and 3.0 ip decline in the construction of buildings and the construction of civil engineering in 2020, respectively. The volume index of production in the broad construction sector is also expected to continue declining by 1.6 ip annually in 2021.

In turn, **turnover** in the broad construction sector is forecast to decline by 27.4% in 2020 and then increase by 10.7% in 2021, reaching a value of EUR 9.5 billion. Similarly, the **total value added** of the broad construction sector is expected to decrease by 25.3% in 2020 and then grow by 10.9% in 2021, reaching EUR 2.7 billion in 2021.

Following the same trend, the number of **persons employed** in the broad construction sector is also expected to decrease by 27.3% to 70,764 in 2020 and then increase by 9.6% to 77,530 in 2021. This decline is projected to come from the all sub-sectors including the narrow construction (-32.3%), the manufacturing (-26.5%), the real

estate activities (-15.3%) and the architectural and engineering activities (-13.7%) sub-sectors in 2020.

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



The main driver of the broad construction sector will continue to be the **housing market**, mainly due to growing demand for housing. To alleviate the consequences of the COVID 19 pandemic, the Estonian government allocated an additional EUR 71.0 million for the reconstruction of apartments in May 2020.

The **civil engineering** sector is expected to be driven by the government's focus on the development of transport infrastructure, particularly railway, with the EU's support. The development of the **Rail Baltica** project remains a priority. When completed, the project will improve congestion, sustainability, and connectivity with the internal market. It will also fuel growth rates in Estonia's broad construction sector in the coming few years.

In conclusion, the outlook for the Estonian construction sector is positive in the mid to long-term, particularly due to long-term infrastructure projects and investment in housing. However, uncertainties persist in the sector due COVID-19 related measures such as lockdown and social distancing.

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- 3 Please note that this 2019 data is a nowcast - please refer to the methodology notes for further details.
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