



European Construction Sector Observatory

Country profile **Lithuania**

December 2021



In a nutshell

Over the 2010-2020 period, Lithuania's GDP grew by 39.9%, totalling EUR 43.4 billion in 2020. However, the GDP declined by 0.1% in 2020 over the previous year. In 2021, Lithuania's GDP and inflation is expected to grow by 5.0% and 3.8%, respectively, as compared to the 2020 level¹.

In 2020, the country's economic growth contracted mainly due to the COVID-19 pandemic and subsequent lockdown measures undertaken by the government in the second half of the year.

The **number of enterprises** in the broad construction sector in Lithuania increased by 172.2% over the 2010-2020 period, totalling 66,728 in 2020². This was mainly due to growth in the number of enterprises in the narrow construction (+203.0%), the real estate activities (+192.6%), the architectural and engineering activities (+125.8%) and manufacturing (+42.1%) sub-sectors over the same period.

Number of enterprises in the narrow construction sub-sector between 2010 and 2020  **203.0%**

Similarly, the **volume index of production** in the broad construction sector recorded an increase of 19.7% during 2015-2020, mainly driven by a 16.4% increment in the construction of buildings, and a 23.7% growth in the construction of civil engineering. Conversely, this represented a 1.9% decline in volume index of production in the broad construction sector as compared to 2019 levels, primarily due to a 6.6% decrease in the construction of buildings offsetting a 3.9% increase in the construction of civil engineering.

Correspondingly, **total turnover** of the broad construction sector increased by 119.2% between 2010 and 2018, reaching EUR 10.2 billion. It further increased to EUR 11.1 billion in 2020, representing a 139.1% increase during 2010-2020. The growth in the sector was mainly driven by the manufacturing and narrow construction sub sectors which registered an increase in turnover of 142.7% and 142.4%, respectively, between 2010 and 2020.

Turnover in narrow construction sub sector between 2010 and 2020  **142.4%**

Similarly, the **gross operating rate** in the broad construction sector, used to determine the sector's profitability, stood at 16.3% in 2018, 5.9 percentage points (pps) higher than the 2010 level (10.4%) and below the EU-27 average (16.7%). As for the individual sub-sectors in 2018, the real estate activities sub-sector remained the most profitable (with a 46.1% gross operating rate), followed by the architectural and engineering activities (16.2%), the narrow construction (8.8%) and the manufacturing (8.7%) sub-sectors.

In 2020, there were 195,047 **persons employed** in the Lithuanian broad construction sector, marking a 49.6% growth from the 2010 level (130,379 persons). This was driven by growth in the real estate activities sub-sector (+66.7%) over the same period. The narrow construction sub-sector came next with an increase of 50.3%, followed by the manufacturing (+39.6%) and architectural and engineering activities (+34.5%) sub-sectors over the 2010-2020 period.

Persons employed in the broad construction sector between 2010 and 2020

 **49.6%**

With regards to market developments, the Lithuanian **housing market** is an important pillar for the broad construction sector.

Under its Long-Term Renovation Strategy, Lithuania has set a target of renovating 74.0% of its buildings stock (nearly 440,000 buildings) by 2050, aiming to generate its primary energy without using fossil fuels³.

In addition, Lithuania has made it mandatory for companies to reuse, recycle and recover at least 70.0% (by weight) of the non-hazardous construction and demolition waste generated on the construction sites. Moreover, all new constructions need to comply with all the EU legislation requirements of ensuring no harm to climate change mitigation. Furthermore, all new constructions need to meet the requirements of Near Zero Energy Buildings (NZEB).

With regards to the Lithuanian **non-residential construction and civil engineering activities**, the country is primarily focused on upgrading its road and rail connectivity. With regards to railways, completion of the cross border Rail Baltica project in cooperation with Poland and other Baltic countries remains paramount. In September 2020, the Lithuanian Ministry of Transport together with LTG Infra, and Ardanuy Ingenieria signed a EUR 1.1 million contract for developing the Kaunas rail node infrastructure plans as part of the EUR 5.8 billion Rail Baltica project. Project design and

construction is expected to be completed by the end of 2026. In relation to roadways, the Via Baltica highway, running from Warsaw to Tallinn and connecting Prague to Helsinki, is currently being upgraded. Another notable project is the A14 Highway Improvement project.

As per its National Recovery and Resilience Plan (NRRP), Lithuania has allocated EUR 341.0 million for phasing out the polluting road transport vehicles (private, public and commercial) and increasing the share of renewable energy sources in the transport sector, thereby reducing greenhouse gases emissions⁴.

Despite these positive developments, the Lithuanian construction sector faces two major challenges. Firstly, the **shortage of skilled workers** in the Lithuanian construction sector continues to be a major concern. This is mainly due to emigration and an ageing workforce. Secondly, the construction sector continues to suffer from **late payment** issues. As per the European Payment report 2021, nearly 42.0% of Lithuanian businesses believe the widening gap between payment terms and duration of payment generates risks for the sustainable growth of businesses.

Overall, the Lithuanian construction sector has a positive outlook. Non-residential and civil engineering market are expected to be the primary growth drivers. Investment in public sector infrastructure, digitalisation as well as a circular economy, backed by EU funding, is expected to lead the future growth of the sector.

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Key figures

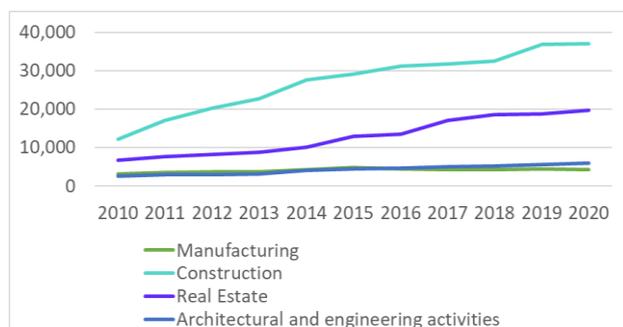
Construction market

The **number of enterprises** in the broad construction sector in Lithuania totalled 66,728 in 2020⁵ (Figure 1), representing an increase of 172.2% since 2010. In terms of sub-sectors, the narrow construction sub-sector reported the highest growth (203.0%) in the number of enterprises over the 2010-2020 period. It was followed by the real estate activities, the architectural and engineering activities and the manufacturing sub-sectors, which reported growth of 192.6%, 125.8% and 42.1% over the same period respectively.

In 2020, the narrow construction sub-sector accounted for the highest number of enterprises in the broad construction sector at 55.4% (36,972 enterprises). It was followed by the real estate activities (29.4% i.e. 19,622 enterprises), the architectural and engineering activities (8.7% i.e. 5,828 enterprises) and the manufacturing sub-sectors (6.5% i.e. 4,305 enterprises).

Number of enterprises
in the broad
construction sector
between 2010 and
2020  **172.2%**

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

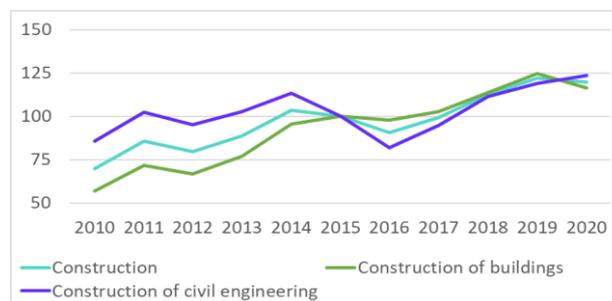


Source: Eurostat, 2021.

The **volume index of production** in the broad construction sector increased by 19.7% over the 2015-2020 period. This increase was driven by a 16.4% increase in the volume index of production in the construction of buildings, and a 23.7% increase in the construction of civil engineering over the same period.

Volume index of
production in the broad
construction sector
between 2015 and 2020  **19.7%**

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

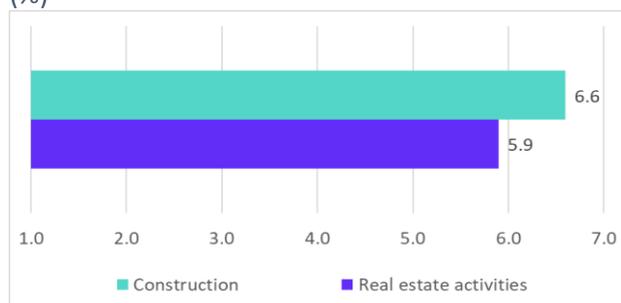


Source: Eurostat, 2021.

The total **value added at factor cost**⁶ of the broad construction sector amounted to EUR 3.8 billion in 2020⁷, with the narrow construction sub-sector accounting for 51.8% of the total (i.e. EUR 2.0 billion). The real estate activities sub-sector contributed 29.9% (i.e. EUR 1.1 billion), followed by the manufacturing (12.3%, i.e. EUR 469.2 million) and architectural and engineering activities (6.0%, i.e. EUR 229.3 million) sub-sectors.

The **share of gross value added of the broad construction sector** stood at 14.6% in 2018⁸, below the EU-27 average of 16.5%. In 2020, the share of gross value added of the narrow construction and real estate activities sub-sectors stood at 6.6% (EU-27 average 5.1%) and 5.9% (EU-27 average 10.3%), respectively.

Figure 3: Gross value added as a share of GDP in the Lithuanian broad construction sector in 2020 (%)



Source: Eurostat, 2021.

There are two statistical NUTS 2 regions in Lithuania, namely Central and Western Lithuania (*Vidurio ir vakaru Lietuvos*) and the Capital region (*Sostines*). The Central and Western Lithuania region has the largest share of gross value added, both in the narrow construction (EUR 1.8 billion in 2018) and real estate sub-sectors (EUR 1.7 billion in 2018). The Capital region's gross value added from the narrow construction and real estate activities sub-sectors amounted to EUR 1.07 billion and EUR 1.08 billion respectively in 2018⁹.

Productivity

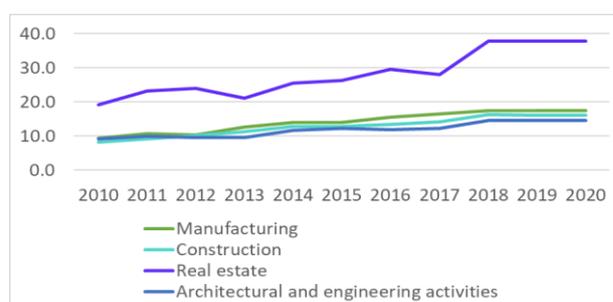
Apparent labour productivity¹⁰ in the broad construction sector increased from EUR 9,940.3 in 2010 to EUR 19,727.5 in 2018, representing a growth of 98.5% (Figure 4). This is below the EU-27 average of EUR 51,960.1. This trend is reflected in all sub-sectors. The real estate activities sub-sector reported the highest increase of 98.4%, growing from EUR 19,100.0 in 2010 to EUR 37,900.0 in 2018. Next comes the narrow construction sub-sector, which increased by 97.6%, from EUR 8,200.0 in 2010 to EUR 16,200.0 in 2018. Similarly, the manufacturing sub-sector registered growth of 87.8%, from EUR 9,324.2 in 2010 to EUR 17,506.5 in 2018. The architectural and engineering activities sub-sector registered the lowest growth of 59.3%, from EUR 9,100 in 2010 to EUR 14,500.0 in 2018.

Between 2018 and 2020, the productivity levels remained stable among all the sub-sectors with a slight decline observed in the narrow construction sub-sector recording a decline of 0.3% reaching EUR 16,151.3 in 2020. It was followed by the architectural and engineering activities, the real estate activities and the manufacturing sub-sectors which declined by 0.13%, 0.10% and 0.04%

respectively over the same period. On the other hand, the real estate activities sub-sector recorded the highest increase of 98.2%, growing from EUR 19,100.0 in 2010 to EUR 37,863.0 in 2020. It was followed by the narrow construction (+97.0%), manufacturing (+87.7%) and the architectural and engineering activities (+59.1%) sub-sectors over the same period.



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



Source: Eurostat, 2021.

Turnover and profitability

Total turnover of the broad construction sector in 2018 stood at EUR 10.2 billion, a 119.2% increase compared to 2010 (EUR 4.6 billion). In 2020, it further increased to EUR 11.1 billion, representing a 139.1% increase during 2010-2020. The growth in the sector was mainly driven by the manufacturing and narrow construction sub-sectors which registered an increase in turnover of 142.7% and 142.4% respectively between 2010 and 2020. Similarly, the real estate activities and architectural and engineering activities sub-sectors recorded increases of 140.2% and 88.1% respectively over the same period.

Over the 2018-2020 period, the architectural and engineering activities sub-sector registered the highest growth of 13.7%, ending at EUR 460.6 million. It was followed by the narrow construction and real estate activities sub-sectors which increased by 11.6% and 5.9%, totalling EUR 6.9 billion and EUR 2.1 billion, respectively over the same reference period. Similarly, the

manufacturing sub-sector increased over the same period by 2.3%, reaching EUR 1.6 billion.

Turnover of the broad construction sector between 2010 and 2020  **139.1%**

Consequently, the **gross operating surplus** of the broad construction sector increased significantly by 244.6% from EUR 481.2 million to EUR 1.7 billion between 2010 and 2018¹¹. This growth is explained by a significant increase in the gross operating surplus in the narrow construction (+298.6%), the real estate activities (+261.4%), the architectural and engineering activities (+133.0%) and the manufacturing (114.7%) sub-sectors over the same period.

In parallel, the **gross operating rate**¹² of the Lithuanian broad construction sector, which gives an indication of the sector’s profitability, stood at 16.3% in 2018¹³, below the EU-27 average (16.7%). This also represents an increment of 5.9 ip since 2010. In the same year, the real estate activities sub-sector enjoyed a gross operating rate of 46.1%, followed by the architectural and engineering activities (16.2%), narrow construction (8.8%) and the manufacturing (8.7%) sub-sectors.

Gross operating rate of the broad construction sector between 2010 and 2018  **16.3%**

Construction costs have a significant influence on the profitability of the sector. The **construction cost index** in Lithuania increased by 17.9% over the 2015-2020 period (Figure 5). This was driven by an increase in the labour cost index (+37.2%) – linked to the labour shortage experience by the sector, and the input prices for materials index (+3.8%) in the same period.

Figure 5: Construction cost index between 2010 and 2020 (2015=100)

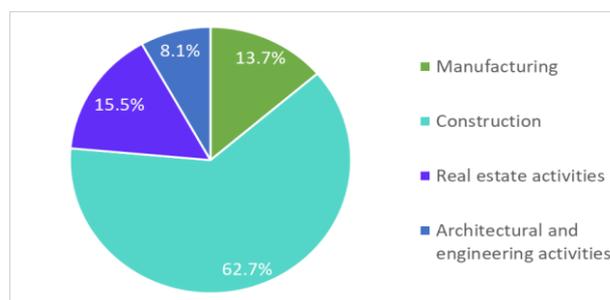


Source: Eurostat, 2021.

Employment

In 2020, there were 195,047 **persons employed** in the broad construction sector, marking a 49.6% increase from the 2010 level (130,379). The narrow construction sub-sector employed 62.7% of the total workforce (i.e. 122,242 persons), followed by the real estate activities (15.5% i.e. 30,161 persons), manufacturing (13.7% i.e. 26,810 persons) and architectural and engineering activities (8.1% i.e. 15,835 persons) sub-sectors.

Figure 6: Percentage of persons employed per construction sub-sectors in Lithuania in 2020



Source: Eurostat, 2021.

All sub-sectors experienced an increase in terms of the number of persons employed over the 2010-2020 period. In particular, the real estate activities sub-sector witnessed growth of 66.7%, being the highest among the sub-sectors. It was followed by the narrow construction (+50.3%), the manufacturing (+39.6%) and the architectural and engineering activities (+34.5%) sub-sectors.

Number of persons employed in the narrow construction sub-sector between 2010 and 2020  **50.3%**

As for **employment by specific occupation**, the manufacturing sub-sector experienced a sharp decrease in demand for clerical support workers

(-37.5%) and managers (-16.2%) over the 2010-2020 period. Conversely, the demand for professionals and elementary occupations increased by 57.0% and 38.4%, over the same period, respectively. In the narrow construction sub-sector, the demand for plant and machine operators and assemblers decreased by 1.0% over the same period. On the other hand, a significant increase was observed in the demand for craft and related trades workers (+26.9%) and technicians and associate professionals (+17.4%) over the same period.

In terms of **regional employment**, the number of persons employed in the narrow construction sub-sector in the Central and Western Lithuania region stood at 67,700 in 2018¹⁴, representing an increase of 9.9% since 2010. In the Capital region, it stood at 35,800 in 2018 representing a growth of 40.9% since 2010. As for the real estate activities sub-sector, the number of persons employed in Capital region stood at 7,500 in 2018, thereby, increasing by 38.9% since 2010. In the Central and Western Lithuania region, it stood at 7,700 in 2018, increasing by 5.5% since 2010.

The number of **self-employed workers** in the narrow construction sub-sector increased significantly by 187.3% over the 2010-2020 period.

In 2020, the number of self-employed workers in the narrow construction sub-sector comprised 14.2% of the self-employed workers in the general economy, higher than the EU-27 average (11.7%). Likewise, the number of self-employed workers in the real estate activities sub-sector increased by 56.3% over the 2014¹⁵-2020 period. In 2020, the number of self-employed workers in the real estate activities sub-sector comprised 1.7% of the self-employed workers in the general economy, slightly higher than the EU-27 average (1.6%).



Over the 2010-2020 period, **full-time employment** in the real estate activities and manufacturing sub-sectors increased by 18.7% and 3.5% respectively. Conversely, for the narrow construction sub-sector, it decreased by 10.3% for the same period. Over the 2010-2020 period, **part-time employment** in the real estate activities, manufacturing and narrow construction sub-sectors increased by 29.7%, 12.3% and 3.5% respectively.

2

Macroeconomic indicators

Economic development

The economy of Lithuania witnessed a slight contraction in 2020 due to the COVID-19 pandemic and subsequent lockdown measures undertaken by the government in the second half of the year. This was the first contraction since the 2009 global financial crisis.

The country's **GDP** reached EUR 43.4 billion in 2020, which represents a 0.1% decline compared to 2019, but a 39.9% growth compared to 2010. This is expected to increase by 5.0% in 2021 as compared to 2020 level¹⁶. **Potential GDP** was above actual GDP, reaching EUR 43.9 billion in 2020, translating into a negative output gap of 1.2%.

Additionally, while **inflation** fluctuated in recent years, it decreased to 1.1% in 2020 from 3.7% in 2017. It is expected to increase further to 3.8% in 2021 as the economy recovers from the COVID-19 pandemic¹⁷.

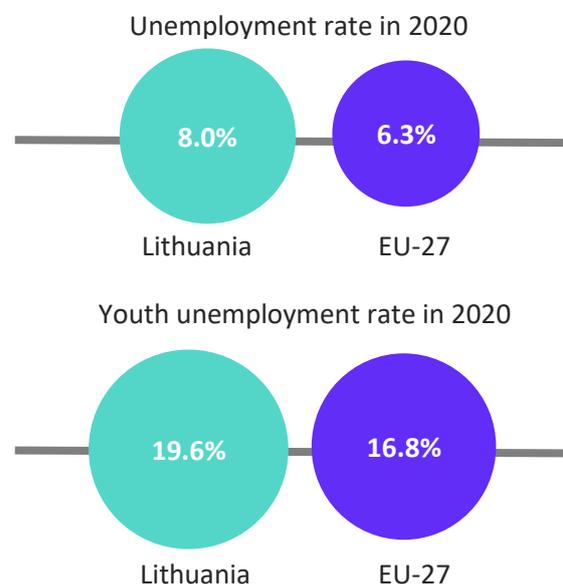
Demography and employment

The **total population** of Lithuania amounted to 2.8 million in 2020. It is projected to decrease by 23.5% in 2050, reaching 2.1 million. In parallel, **net migration** turned from negative in 2010 (-77,944) to positive in 2020 (19,993). That said, the total number of immigrants has also increased eight-fold from 5,213 in 2010 to 40,067 in 2019¹⁸. Immigration of migrant workers from non-EU countries increased in 2019, filling low and medium-skilled vacancies in various economic sectors including construction¹⁹.

In 2020, the **working age population** made up 64.9% of Lithuania's total population, slightly above the EU-27 average of 64.3%. By 2050, this share is expected to decrease by 9.2 pps to 55.7%. In parallel, the share of people over 65 years of age is expected to increase from 19.9% of the total population in 2020 to 31.5% by 2050.

Lithuania's **unemployment** rate (between 25 and 64 years) in 2020 stood at 8.0%, above the EU-27 average (6.3%) and below the 2010 level of 8.7%. Likewise, **youth unemployment** (below the age of 25) stood at 19.6% in 2020, above the EU-27 average of 16.8%, and much below the 2010 level of 35.7%. This steady decline in the unemployment rate is driven by a decreasing number of long-term unemployed and improved labour market situation for young people not in education, employment or training (NEET)²⁰.

According to data provided by Employment Service, 239,500 people were registered as unemployed in Lithuania in June 2021. This represents a drop by 6,800 persons from May 2021 but up by 35,800 persons from June 2020²¹.



Public finance

In 2020, Lithuania's **general government expenditure** as a share of its GDP stood at 43.5%, lower than the EU-27 average of 53.4% and higher than the 2010 level (42.4%). The **general government deficit** as a share of GDP amounted to -7.4% in 2020, higher than both the EU-27 average (-6.9%) and the 2010 level (-6.9%). The

government deficit, although having dropped in 2020, has constantly increased after the lowest point (-8.9%) reached in 2011. Last, **general government gross debt** amounted to 47.3% in 2020, above the 2010 level of 36.2%, but significantly lower than the EU-27 average of 90.7%.

Entrepreneurship and access to finance



According to the World Bank Doing Business 2020 report, Lithuania ranked 34th out of 190 countries in ease of starting a business in 2019. This is a decline in comparison with previous year's ranking (31st)^{22,23}.

As per the report, starting a business in Lithuania requires four procedures, taking 5.5 days and costing 0.5% of income per capita²⁴. In terms of entrepreneurship, 31.7% of the Lithuanian adult population perceive that there are good opportunities in starting a firm in the country, and 19.7% of the adult population, currently not involved in entrepreneurial activities intended to start a business in the coming three years^{25,26}.

Lithuania's start-up ecosystem has been developing rapidly and ranks high in the start-up world. **StartupBlink**, a start-up platform and research centre, ranked Lithuania's start-up ecosystem 15th out of 100 countries in its 2020 report²⁷. The number of operating SMEs rose to 84,510 at the beginning of 2019, and 2018 alone witnessed the establishment of 10,457 new SMEs. This highlights a strong **entrepreneurial** ecosystem in the country. This has been backed by numerous supporting measures introduced by the Lithuanian government in recent years²⁸.

In 2020, the measures undertaken by the government to tackle the COVID-19 pandemic led to a moderate contraction in the SME value added and employment in Lithuania. As a result, SME value added and employment are projected exceed their 2019 levels and reach 7.7% and 2.5%, respectively in 2021²⁹.

In March 2020, to help SMEs experiencing liquidity issues because of COVID-19 outbreak an interest compensation for deferred loans or finance lease payments was implemented. SMEs can apply to INVEGA for the same. In case of the deferment of the payment of the loan or financial lease, the borrowers will be reimbursed 100% of interest to be paid during the deferral period. The overall budget under the measure was EUR 23.0 million³⁰.

In April 2020, in order to help SMEs affected by the COVID-19 pandemic with liquidity needs, loans were provided through Lithuanian national promotional institution- Investment and Business Guarantees (INVEGA). An SME qualifies for support if its turnover has dropped by 30.0%. SMEs can apply for loans up to EUR 1.0 million with fixed interest rate starting from 0.1%. A total of 3,462 SMEs received loans and the amount disbursed was around EUR 200.0 million³¹.

Further, in September 2021, INVEGA entered into a guarantee agreement with the European Investment Fund (EIF). The guarantee will support a portfolio of new SME financing of up to EUR 57.0 million. It is expected to support more than 500 SMEs in Lithuania³².

As per the World Bank Doing Business 2020 report, in terms of access to finance Lithuania ranked 48th out of 190 countries for the ease of getting credit³³.

With regards to **loans to non-financial corporations** in the general economy, Lithuania reached EUR 7,462.0 million in 2020, representing a marginal decline of 11.5% from 2010 level (EUR 8,427.0 million).

In addition to the COVID-19 related measures, the Lithuanian government implemented several key measures to improve access to finance. In February 2019, an **Accelerator Fund** was set up, financed under the European Regional Development Fund (ERDF).

It was aimed at promoting the growth of SMEs, boosting entrepreneurship, and creating a suitable environment for risk capital investments. This will be achieved by providing seed capital and investing in the fast development of SMEs, as well as providing them with mentoring, training, and consultancy services³⁴. The Fund also built on the Entrepreneurship Promotion Funds I and II, provide loans and subsidies for starting a business.

Additionally, in April 2020, financial instrument 'Alternative'- an alternative to traditional debt finance was introduced. It allows SMEs to obtain the necessary financing for their business through alternative financing providers. Loans may be granted to finance the SME's investments and/or to supplement the working capital shortage. The total financing under this measure is EUR 50.0 million³⁵.

3

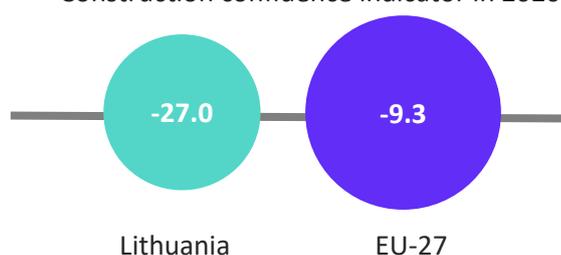
Key economic drivers of the construction sector

Business confidence

In 2020, consumer confidence and industry confidence indicators have worsened as compared to the previous year. In addition, the construction confidence indicator continues to lie in negative territory.

The **consumer confidence** indicator decreased to -3.4 in 2020 from 5.1 in 2019, remaining above the 2010 level of -25.7 and the EU-27 average of -14.6. The **industry confidence** indicator reached -9.4 in 2020. While this is above the 2010 level (-13.1) and EU-27 average (-14.4), it remains below the 2019 level (-3.5). Similarly, the **construction confidence** indicator declined from -14.2 in 2018 to -27.0 in 2020. Though this is well above the 2010 level (-41.7), it is below the EU-27 average of -9.3.

Construction confidence indicator in 2020



While the COVID-19 pandemic impacted confidence indicators, Statistics Lithuania reported that the economic indicators improved in November 2021 as compared to November 2020. The industry confidence indicator increased by 10.0pps while the consumer confidence indicator increased by 2pps. Similarly, the construction confidence indicator increased by 7 pps from -32.0% in November 2020 to -25.0% in November 2021³⁶.

Regarding the **investment ratio**, Lithuania has witnessed a continuous rise since 2013. It reached 22.4% in 2020 from 16.7% in 2010. Additionally, **investment per worker** in 2019³⁷ reached EUR 17,170, surpassing the 2010 level (EUR 8,914) by 92.6%.

Domestic sales

The ranking of the five **most domestically sold product** groups in 2020 has changed since 2010. 'Portland cement, aluminous cement' (group 235112), ranked first in 2010, has been replaced by 'Particle board' (group 162112). Similarly, 'Particle board' (group 162112), 'Ready-mixed concrete' (group 236310), 'Tiles, flagstones, bricks' (group 236111) and 'Doors, windows and their frames' (group 251210) ranking second, third, fourth and fifth, respectively, in 2010 were replaced by 'Prefabricated structural components' (group 236112), 'Prefabricated buildings of metal' (group 251110), 'Ready-mixed concrete' (group 236310) and 'Fibreboard of wood' (group 162115) in 2020.

Among the top 5 most domestically sold construction products, the largest increment over the 2010-2020 period was witnessed in the product category ‘Prefabricated buildings of metal’ (+405.9%), followed by “Prefabricated structural components” (+207.5%) and Ready-mixed concrete (+182.2%). Lithuania’s top 5 most domestically sold product groups in 2020 forms 43.2% of all construction product domestic sales in 2020.

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

Lithuania				EU-27
	Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
1	Particle board (group 162112)	111.3	10.7	Other structures and parts of structures, etc. (group 251123)
2	Prefabricated structural components (group 236112)	94.8	9.1	Ready-mixed concrete (group 236310)
3	Prefabricated buildings of metal (group 251110)	83.7	8.1	Doors, windows and their frames (group 251210)
4	Ready-mixed concrete (group 236310)	79.0	7.6	Prefabricated buildings of metal (group 251110)
5	Fibreboard of wood (group 162115)	78.7	7.6	Prefabricated structural components (group 236112)

Source: PRODCOM, 2021.

Export of construction-related products and services

The ranking of the top 5 most exported construction products has changed between 2010 and 2020. The ‘Pallets, box pallets’ (group 162411) ranking first in 2010 has been replaced by ‘Other structures and parts of structures’ (group 251123). However, ‘Prefabricated wooden buildings’ (group 162320) and ‘Assembled parquet panels’ (group 162210) and ‘Windows, French windows and their frames’ (group 162311) retained their second, third and fourth ranks respectively in 2010 and 2020. ‘Builders joinery and carpentry, of wood’ (group 162319) ranking fifth in 2010 was replaced by ‘Pellets and briquettes, of pressed and

agglomerated wood’ (group 162915) in 2020. Most of the product categories registered a high growth rate over the 2010-2020 period with the largest increment being recorded in ‘Prefabricated wooden building’ (+205.0%), followed by ‘Assembled parquet panels’ (+151.8%) and ‘Windows, French windows and their frames’ (+125.0%). Lithuania’s top 5 most exported construction products in 2020 accounted for 64.0% of total exported construction products in 2020.

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

Lithuania				EU-27
	Product	Value (EUR m)	Share in construction product export sales (%)	Product
1	Other structures and parts of structures, etc. (group 251123)	223.4	19.5	Ceramic tiles and flags (group 233110)
2	Prefabricated wooden buildings (group 162320)	166.3	14.5	Other structures and parts of structures, etc. (group 251123)
3	Assembled parquet panels (group 162210)	128.5	11.2	Fibreboard of wood or other ligneous materials (group 162115)
4	Windows, French windows and their frames (group 162311)	109.7	9.6	Doors, windows and their frames (group 251210)
5	Pellets and briquettes, etc. (group 162915)	104.7	9.1	Builders joinery and carpentry, of wood, n.e.c (group 162319)

Source: PRODCOM, 2021.

In terms of the **cross-border provision of construction services**³⁸, Lithuania exported EUR 382.2 million worldwide in 2020, representing an increase of 691.3% compared to 2010 (EUR 48.3 million). Exports to the EU-27 stood at EUR 326.6 million in the same year, accounting for 85.5% of the total construction-related services’ exports. In parallel, Lithuania imported EUR 68.9 million worth of construction services from across the world in the same year, a considerable increase of 206.2% compared to 2010 (EUR 22.5 million). Imports from the EU-27 member states reached EUR 61.7

million, accounting for 89.6% of the total construction-related services' imports in 2020. As a result, Lithuania generated a **trade surplus** of EUR 313.3 million in 2020.

Lithuanian exports of construction services between 2010 and 2020



691.3%

Access to finance in the construction sector

According to the Survey on the Access to Finance of Enterprises (SAFE) 2020 results, on average, 13.4% of the Lithuanian respondent SMEs considered 'access to finance' as the most important issue, above the EU-27 average of 9.9%³⁹.

According to the report, bank loans remain relevant as a means of external financing for 31.4% of SMEs in Lithuania, whereas the EU-27 average stands at 47.6%.

Around 4.8% of Lithuanian SMEs did not apply because of fear of rejection, which was also higher than the EU-27 average (3.9%). Out of those who applied for a bank loan, 47.9% received everything, which is well below the EU-27 average of 69.7%⁴⁰.



As per the EIB Investment Survey (EIBIS) 2020 report, around 62.0% of firms in the Lithuanian construction sector cited availability of finance as a long-term barrier to investment⁴¹.

Moreover, around 10.0% and 4.0% of firms in the Lithuanian construction sector are optimistic about the availability of external and internal finance within the economy in the coming months. The survey also suggests that 14.0% of all Lithuanian firms are financially constrained, which is above the EU-27 average of 6.0%. Regarding the cost of finance, around 2.0% of the construction firms expressed dissatisfaction in 2020⁴².

Credit extended to the narrow construction sector in Lithuania has been significantly decreasing since 2011⁴³. In 2020, it stood at EUR 367.9 million. This represents a 63.3% decline since 2011.

In April 2020, the Nordic Investment Bank provided EUR 400.0 million to the Republic of Lithuania to finance the additional funding needed to support the measures taken to mitigate the effects of the COVID-19 pandemic. The loan shall provide countercyclical funding to support the Economic and Financial Action Plan of the Lithuanian Government⁴⁴.

The European Investment Fund (EIF) and financial intermediary Finora Capital entered a new transaction in April 2021 wherein EIF will provide loans of EUR 2.0 million to support at least 100 micro borrowers in Estonia and Lithuania. The long-term working capital loans offered by Finora will be essential in providing liquidity to companies during the post-COVID-19 economic recovery⁴⁵.

In order to support SMEs in Lithuania, who are under strain from the COVID-19 pandemic, Lithuanian financial intermediary PayRay Bank signed two guarantee agreements with the European Investment Fund. The two guarantees were made available under the European Guarantee Fund (EGF). In total, the operation will guarantee a portfolio of new SME financing by PayRay Bank for a maximum of EUR 50.0 million⁴⁶.

In October 2021, EIF signed a EUR 6.0 million guarantee deal with fintech company Faktoro to support over 300 micro enterprises. The financing will provide working capital loans of up to EUR 25,000 to micro enterprises in Lithuania⁴⁷.

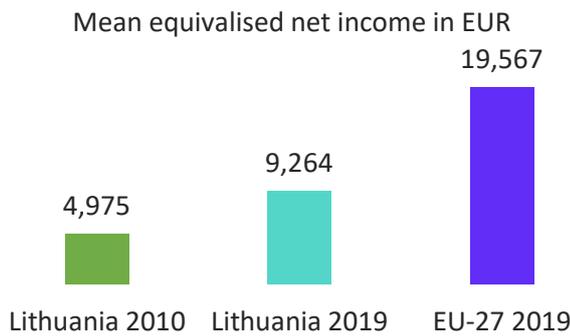
Access to housing

The total number of households in Lithuania reduced from 1,348,900 in 2010 to 1,347,900 in 2020, marking a 0.1% drop.

The **urbanisation rate** increased over the 2010-2019 period. While in 2010, 41.8% of the population lived in densely populated areas, this share increased to 43.2% in 2019. Similarly, the share of the population living in intermediate urbanised areas increased to 2.1% in 2019 from nil in 2010. The trend reflects that preferences are inclined towards living in bigger cities in Lithuania.

In parallel, the **mean equivalised net income** in Lithuania reached EUR 9,264.0, representing an increase of 86.2% over the 2010-2019⁴⁸ period. It is

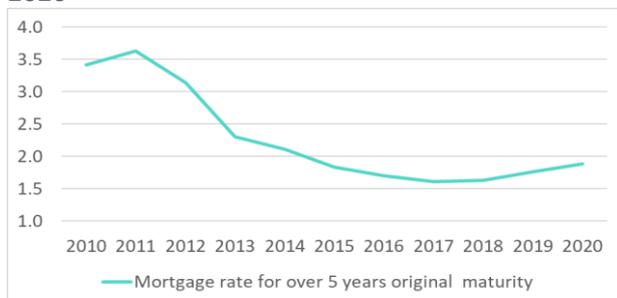
also significantly below the EU-27 average of EUR 19,567.0 in 2019.



Partly as a result of increasing incomes and declining interest rates, housing loans increased by 40.6%, from EUR 6.0 billion in 2010 to EUR 8.4 billion in 2019⁴⁹. The **interest rates** on mortgages (for over five years' original maturity) have been consistently declining from 3.4% in 2010 to 1.8% in 2019. However, they increased again in 2020 reaching 1.9% (Figure 7).

According to the Bank of Lithuania, between January and September 2021, banks issued 50.0% more housing loans as compared to the same period in 2019⁵⁰.

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

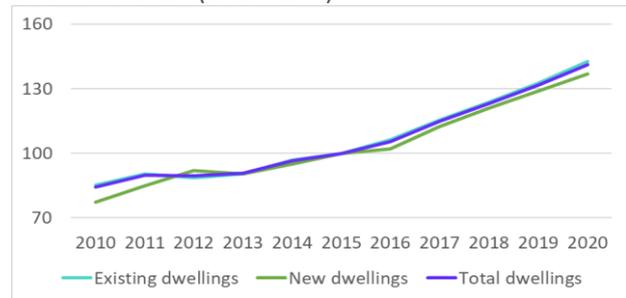


Source: ECB MFI Interest Rate Statistics, 2021.

Between 2015 and 2020, the **house prices index** for total dwellings increased by 41.2%, driven by a 42.7% and a 37.0% increase in existing dwelling units and new dwelling units over the same reference period, respectively (Figure 8). Similarly, Lithuania's rental property market has stayed positive over the 2010-2020 period as rents continued to rise. The indexed values of actual rentals for housing increased by 29.4% over the 2015-2020 period.

House price index between 2015 and 2020 **41.2%**

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



Source: Eurostat, 2021.

Amid the increasing house prices, demand slowed in 2020 due to COVID-19 pandemic-related restrictions. The number of residential property transactions in Lithuania reached 32,966 units in 2020, representing a fall of 8.5% over the previous year⁵¹.

In the third quarter of 2020, the Lithuanian housing market started an upward move in terms of sales, as a result of the relaxation of restrictions implemented. Purchases and sales transactions of apartments and houses experienced a 51.0% and 52.0% increase, respectively, in the third quarter of 2020, as compared to the second quarter of 2020. This helped mitigate the losses experienced in the second quarter of the year⁵².



The housing market in Lithuania remained robust despite the COVID-19 pandemic. During 2020, house prices rose by 4.1%. Further, house price index increased by 5.3% between January and February 2021⁵³.

In parallel, **building permits** issued in Lithuania have increased since 2015. The residential buildings permit index increased by 12.1% over the 2015-2020 period. Similarly, building permits for one-dwelling buildings rose by 28.0% over the same reference period. Conversely, the building permits for two and more dwelling buildings, slightly decreased by 0.8 index points (ip) between 2015 and 2020. However, put in absolute numbers, the total number of building permits in 2020 stood at 15,155 units as per Statistics Lithuania.

Further the total number of completed dwellings rose by 10.6% from 2019 to reach 13,903 units in 2020⁵⁴.

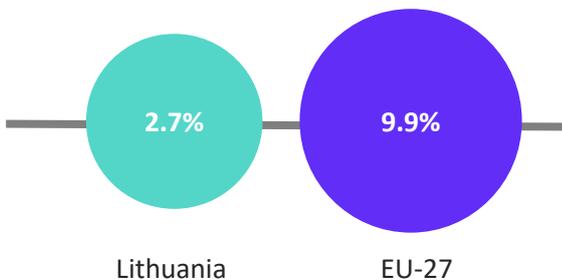
The number of **new constructions building permits** issued for **residential buildings** increased by 28.8%, from 5,876 in 2010 to 7,568 in 2020. In the case of non-residential construction, the number of new buildings permits issued decreased by 43.9%, from 1,993 in 2010 to 1,118 in 2020⁵⁵.



Much of the **building stock** in Lithuania is owner-occupied. In 2020, around 88.6% of the population were **owners**, slightly below the 2010 level (93.6%). The remaining 11.4% of the population comprised **tenants** in 2020, well above the 2010 level (6.4%). Additionally, the home ownership rates for the population earning **above 60.0% of the median equivalised income**⁵⁶ in Lithuania has decreased over the 2010-2020 period, from 95.1% to 90.7%. Similarly, for the population earning **below 60.0% of the median equivalised income**, the home ownership rate declined from 87.9% in 2010 to 80.3% in 2020.

The **overcrowding rate**⁵⁷ in Lithuania stood at 31.5% in 2020, well above the EU-27 average of 27.4%. It also lies above the 2010 level of 28.8%⁵⁸. The **severe housing deprivation rate**⁵⁹ stood at 7.8% in 2019, above the EU-27 average of 4.0%. In 2020, it decreased to 5.4%⁶⁰. Lastly, the **housing cost overburden rate**⁶¹ stood at 2.7% in 2020 as compared to the EU-27 average of 9.9%⁶².

Housing cost overburden rate in 2020



Infrastructure



As per the World Economic Forum Global Competitiveness Index 2019, Lithuania ranked 39th out of 141 countries in terms of its overall infrastructure quality⁶³.

Lithuania performs best in terms of efficiency of train services (22nd), road connectivity (24th) and railroad density (29th). It also performed well in efficiency of seaport services (38th) and road infrastructure (39th). However, the quality of Lithuania’s infrastructure in airport connectivity, liner shipping connectivity and efficiency of air transport services were relatively poor, ranking 87th, 65th and 57th, respectively⁶⁴. Lithuania’s road density in 2019⁶⁵ stood at 6.0 km/m² representing a 20.0% increase from 2010. However, **rail density** in 2019 stood at 29.0 km/m², representing a 3.6% increase from 2010 (28.0 km/m²).

Lithuania continues to focus on the enhancement of road connectivity and efficiency of train services. As a step towards modernising and developing rail connectivity at national and regional level, the country is prioritising the development of the **Rail Baltica project**. Upon its completion in 2025, the project is expected to generate 2.0 million jobs and contribute EUR 715.0 billion to national GDP by 2030. In terms of road connectivity, the **Via Baltica road transport project** also continued being implemented.

In fact, the north-south road connection upgrade was completed in 2019. Preparations are underway for the next stage of the project. This is expected to enhance road safety in Lithuania and increase road transport capacity of the North Sea-Baltic Corridor^{66,67}.

The Recovery and Resilience Plan of Lithuania includes measures for the improvement of the transport infrastructure. The plan foresees an investment of EUR 6.0 million for the installation of recharging points for public transport and EUR 46.0 million for the installation of recharging points for private electric vehicles⁶⁸.

4

Key issues and barriers in the construction sector

Company failure

Business demography in Lithuania's broad construction sector has changed considerably over the 2010-2019 period. Specifically, in 2019⁶⁹, company deaths were generally higher than company births.

The number of **company births** in the narrow construction sub-sector reached 8,204 in 2019, representing a growth of 108.6% over the 2010-2019⁷⁰ period. The real estate activities sub-sector witnessed 242.5% growth in company births over the same period, with numbers reaching up to 4,583 in 2019. Lastly, the number of company births in the architectural and engineering activities sub-sector reached 674 in 2019, marking an increment of 72.8% since 2010.

The number of **company deaths** in the narrow construction sub-sector reached 8,227 in 2019, increasing by 146.1% over the 2010-2019⁷¹ period. The real estate activities sub-sector witnessed a 327.8% growth in company deaths over the same period, with numbers reaching up to 4,868 in 2019. The number of company deaths in the architectural and engineering activities sub-sector also increased to 1,154 in 2019, representing a growth of 274.7% since 2010.

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

 **327.8%**

In 2019, the number of bankruptcy processes instituted in the Lithuanian broad construction sector reached 282, representing a 7.2% decline from the 2015 level of 339. Consequently, the

number of bankruptcy processes completed during 2019 in the Lithuanian broad construction sector amounted to 375, which represents an increase of 9.3% from 343 in 2015⁷².

Due to COVID-19 and the imposition of containment measures and restrictions, the Lithuanian economy was disrupted to a considerable extent. As a result of the nationwide lockdown from March 2020 to June 2020, a total of 205 businesses in Lithuania went bankrupt⁷³.

This is almost half the number in the same period last year. This is due to the fact that bankruptcies had been put on hold, so as to allow the business owners to wait for economic situation to normalise in the second half of the year. A survey of businesses declaring bankruptcy in 2020 also discovered that most of them had problems back as early as 2018⁷⁴.

According to Statistics Lithuania, the total number of bankruptcies in the first quarter of 2021 reached to 154 companies, a decline of 6.7% from 165 companies in the fourth quarter of 2020⁷⁵.

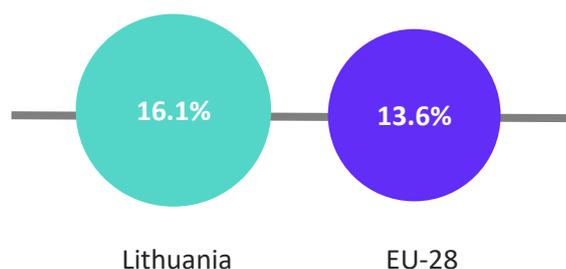
Trade credit

According to the Survey on the Access to Finance of Enterprises (SAFE) report 2020, the use of trade credit remains limited in Lithuania, as only 21.5% of companies consider it a relevant source of finance. This is well below the EU-27 average of 27.7%⁷⁶.

As per the report, around 16.1% of companies reported using it between April and September 2020. This is above the EU-27 average of 13.6%. In addition, 45.2% of total SMEs in Lithuania applied for trade credit in the last six months, well above

the EU-27 average of 31.4%. Around 1.4% of the SMEs did not apply because of sufficient internal funds, and 6.0% of SMEs did not apply fearing rejection. Moreover, 14.0% of SMEs believed that trade credit conditions improved during April to September 2020 (13.5% in the EU-27), whereas 21.1% believed that they deteriorated (14.7% in the EU-27)⁷⁷.

Share of SMEs using trade credit in 2020



Late payment



According to the SAFE report 2021, around 14.1% of SMEs in Lithuania reported facing late payments issues on a regular basis, slightly higher than the EU-27 average of 13.2%⁷⁸.

As per the report, around 56.5% of SMEs reported that the issue of late payments hinders their payment to suppliers, and 20.9% reported that it undermined investments or new hiring. Additionally, 28.4% also reported that late payments affect their production or operations, while for others (24.9%), it further delays the repayments of loans, compelling them to use additional financing sources⁷⁹.

As per the European Payment report 2021, nearly 42.0% of Lithuanian businesses believe the widening gap between payment terms and duration of pay imposes risks to the sustainable growth of business⁸⁰.

As per the report, on average, a business-to-business (B2B) customer in Lithuania is allowed 44 days to pay dues, above the EU-28⁸¹ average of 41 days. In practice, Lithuanian B2B customers took an average of 56 days to pay dues in 2021, above the EU-28⁸² average of 52 days⁸³.

Further, 35.0% of Lithuanian companies consider that late payments lead to loss of income and prohibit growth potential, with 38.0% of

companies believing that the financial difficulties of debtors are the main cause of the problem. Amid the global COVID-19 pandemic ongoing, 49.0% of the respondents expect debtors' liquidity challenge due to the impact of COVID-19 affecting late payments. This is slightly higher than the EU-28⁸⁴ average of 48.0%⁸⁵.

Additionally, around 44.0% of firms felt that the risk of a pan-European recession is the main challenge to customers paying on time and in full over the next twelve months. This is above the EU-28⁸⁶ average of 40.0%. At the same time, 64.0% respondents are more concerned than ever before about the debtors' ability to pay on time, above the EU-28⁸⁷ average of 62.0%. To solve this persisting issue, 60.0% of Lithuanian businesses would like to have new legislation introduced⁸⁸.

Time and cost of obtaining building permits and licences

Lithuania ranks 10th in terms of "dealing with construction permits", according to the World Bank's Doing Business report 2020. This is a decline by three positions compared to the previous year⁸⁹.

The number of procedures required to obtain a building permit is 13, close to the OECD high-income average (12.7). Still, merely 74 days are needed, on average, to complete the formalities to build a warehouse⁹⁰, significantly below the average for the OECD high-income countries (152.3 days). In addition, most of these procedures are either free of charge or economically reasonable, and therefore the cost of obtaining these construction permits is five times lower than the average for the OECD (0.3% of the warehouse value compared to 1.5%).

Table 3: Procedures for obtaining building permits and related time and costs in Lithuania

Procedure	Time to complete	Associated costs
Request and obtain certificate of ownership of the land plot	0.5 day	EUR 3.0
Obtain topographic survey of land plot	21 days	EUR 175.0
Request and obtain special architectural requirements for construction works	14 days	No charge

Procedure	Time to complete	Associated costs
Request and obtain design requirements for water and sewage connection	14 days	No charge
Request and obtain approval of the design documentation and obtain the building permit ⁹¹	14 days	EUR 93.0
Request and obtain water and sewerage connection approval and sign contract	7 days	EUR 348.0
Request and obtain deeds of inspection and testing of engineering networks for water and sewerage connection	5 days	No charge
Connect to water services	5 days	No charge
Hire private cadastre company and obtain cadastral measurement of the structure	5 days	EUR 579.0
Request certificate of completion of construction	0.5 day	EUR 20.0
Receive final inspection	1 day	No charge
Obtain the certificate of completion of construction	14 days	No charge
Register with the Land and Real Property Registry	1 day	EUR 898.0

Source: Doing Business overview for Lithuania, World Bank, 2020⁹².

Skills shortage

One of the most important challenges of the Lithuanian construction sector is to meet the demand for skilled labour. The number of **job vacancies** in the narrow construction sub-sector increased by 151.1%, from 429 in 2010 to 1,076 in 2020. Conversely, in the real estate activities sub-sector it declined by 55.6%, from 72 in 2010 to 32 in 2020. The **job vacancy rate** for the narrow construction sub-sector increased from 0.6% in 2010 to 1.1% in 2020, same as its 2019 level (1.1%). On the other hand, in the real estate activities sub-sector, it declined from 0.5% in 2010 to 0.2% in 2020.

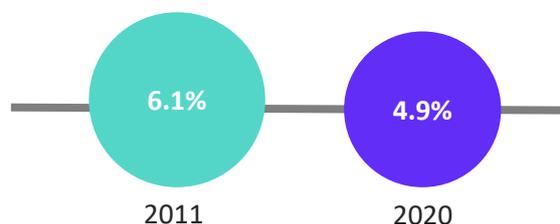
Number of job vacancies in the narrow construction sub-sector between 2010 and 2020

↑ 151.1%

The labour and skills shortage issue in the country has been further exacerbated by the decreasing share of **adult participation in education and training and number of students in engineering, manufacturing and construction**. In the narrow

construction sub-sector, it had decreased to 4.9% in 2020, as compared to 6.1% in 2011⁹³ and slightly increased from 4.7% in 2019.

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



At the same time, the **number of tertiary students** in engineering, manufacturing and construction, decreased by 34.2%, from 7,291 in 2010 to 4,796 in 2019⁹⁴. This decline was primarily due to a decrease in the number of students in architecture and building by 57.0%, over the 2010-2019 period, reaching 1,077. Similarly, the number of students in manufacturing and processing and engineering decreased by 28.0% over the same period (reaching 456) and 21.4% (reaching 3,263), respectively.

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

↓ 34.2%

As per the EIB Investment Survey 2020 report, around 74.0% of the firms in the construction sector consider availability of skilled staff as a long-term barrier to investment⁹⁵.

A decrease in the total workforce available in Lithuania's labour market is also a core reason for the skills shortage. This trend is partly explained by emigration, and the increasingly ageing construction workforce. Although net migration turned positive in 2020 (see Chapter 2 – Demography and Employment), the outflow of skilled labour continued, limiting the potential for mitigating the labour and skills shortage in the country⁹⁶. By the first half of 2019, 13 occupations in three sectors were regarded as being in short supply. In the construction sector specifically, a shortage of concrete workers, electricians, welders and another jobs related to the construction and decoration of homes were identified⁹⁷.

To meet these labour shortages, the Lithuanian government simplified the work permit and visa

issuance procedures. As a result, the employment service issued 8,400 work permits to foreigners between January 2019 and November 2019, a 70.0% increase from previous year. The number of foreign workers is expected to continue to increase in 2020 amid the shortage of a qualified labour force⁹⁸.

As the country relied heavily on foreign workers (mostly Ukrainian) to fill the labour shortage, the nationwide lockdown and travel restrictions put in place as a result of the COVID-19 pandemic, have further increased the labour shortage.

In September 2020, to address the issue of skills shortage, the Lithuanian employment service broadened its list of key professions that are entitled to benefit from the simplified entry requirements for foreign workers. The list now also includes bricklayers, scaffolders, plasterers and welders with respect to the Lithuanian construction sector⁹⁹.

Sector- and sub-sector-specific issues

Material efficiency and waste management

In 2018¹⁰⁰, mineral waste from construction and demolition activities in Lithuania totalled at 505,336 tonnes, a considerable increase of 122.3% over the 2010 level (227,330 tonnes)¹⁰¹.

Moreover, in 2018, the share of hazardous waste generated by Lithuania stood at 0.2% of total waste, lower than the EU-27 (3.6%). A national target of municipal waste recycling and preparation for reuse of 50.0% by 2020 was set up by the country¹⁰².

Presently, waste management in Lithuania, including Construction & Demolition Waste (CDW), is administered by the Law on Waste Management¹⁰³. It sets down general requirements for waste prevention, accounting, collection, storage, transportation, utilisation and disposal. Presently, there are numerous construction waste management sites managed by “Ekobazė¹⁰⁴” that were built in 2015 in the district of Vilnius, where CDW is being transported. Small amounts of CDW delivered by private individuals is treated free of charge¹⁰⁵.

Under its 2021-2026 National Recovery and

Resilience Plan (NRRP), Lithuania has made it mandatory for companies to reuse, recycle and recover at least 70.0% (by weight) of the non-hazardous construction and demolition waste generated on the construction sites. This requirement is however part of the Waste Framework Directive of 2010, which Lithuania is now embedding in its legislation. Moreover, all new constructions need to comply with all the EU legislation requirements of ensuring no harm to climate change mitigation¹⁰⁶.

Climate and energy

According to its national energy and climate plan, Lithuania aims to limit the emissions of greenhouse gases by up to 15.0% by 2020, and to further reduce emissions by 9.0% by 2030 compared to 2005 levels. The country was able to achieve its 2020 target¹⁰⁷, but the 2030 target is riskier to achieve¹⁰⁸.

Presently, the transport sector in Lithuania represents almost 40.0% of all greenhouse gas emissions. On the contrary, the construction sector has the lowest greenhouse gas emissions¹⁰⁹.

Emissions of **greenhouse gases** (carbon monoxide, methane and nitrous oxides) from activities related to narrow construction and real estate activities sub-sectors in Lithuania in 2019¹¹⁰ totalled 126,077.9 and 17,320.1 tonne respectively. Emissions in the narrow construction sub-sector increased by 51.9% during the 2010-2019 period, while those in the real estate activities sub-sector experienced a 23.1% increase.

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

 **51.9%**

The Recovery and Resilience Plan of Lithuania includes measures that contribute to achieving the climate neutrality and the 2030 energy and climate targets set out in the National Energy and Climate Plans (NECP). It includes EUR 8.7 million investment for the installation of second-generation biofuel production capacity and EUR 22.2 million for the establishment of biomethane gas production capacity¹¹¹.

5

Innovation in the construction sector

Innovation performance

According to the European Innovation Scoreboard 2021, Lithuania is classified as a 'Moderate Innovator', with a continuous increase in performance since 2014¹¹².

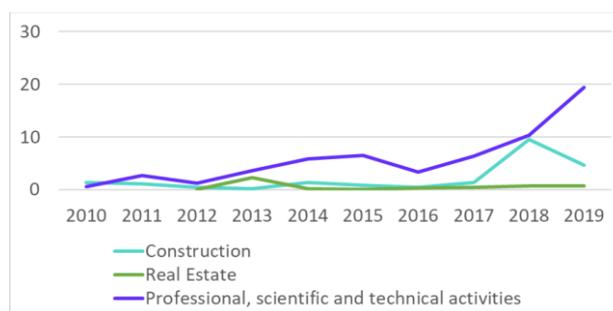
As per the report, Linkages, Digitalisation and Innovators are the strongest innovation dimensions of Lithuania. The country scores high on three indicators including Population with tertiary education, Environment-related technologies, and Job-to-job mobility of HRST (Human Resources in Science and Technology). Between 2020 and 2021, the country's performance did not change, with improved performance in both Use of information technologies indicators being offset with reduced performance in the indicators using innovation survey expenditure data¹¹³.

Business enterprise R&D (BERD) expenditure has been fluctuating since 2010 (Figure 9). In the narrow construction sub-sector, BERD stood at EUR 4.7 million in 2019¹¹⁴, as compared to EUR 1.4 million in 2010, marking an increase of 237.6%. This is also well below the previous year level of EUR 1.4 million. Similarly, the BERD in professional, scientific and technical activities increased from EUR 0.5 million in 2010 to EUR 19.4 million in 2019¹¹⁵, representing a significant increase of 3,623.8% over the 2010. In contrast, BERD in the real estate activities sub-sector declined from EUR 0.8 million in 2010 to EUR 0.6 million in 2019¹¹⁶, marking a decline of 17.5% during the period.

BERD in the narrow construction sub-sector between 2010 and 2019

↑ 237.6%

Figure 9: Business enterprise R&D expenditure (BERD) per construction sub-sector in Lithuania between 2010 and 2019¹¹⁷ (EUR m)



Source: Eurostat, 2021.

In parallel, **total R&D personnel** (full-time equivalents – FTE¹¹⁸) in the broad construction sector experienced a generally increasing trend between 2010 and 2018¹¹⁹. This was largely driven by the narrow construction sub-sector, which sharply increased its total R&D FTEs from 21 in 2010 to 260 in 2018¹²⁰ (+1138.1%). This was followed by the professional, scientific and technical activities sub-sector, which also experienced an increase from 43 in 2010 to 275 in 2018¹²¹ (+539.5%). Lastly, in the real estate activities sub-sector, it increased from 6 in 2010 to 20 in 2018¹²² (+233.3%).

At the same time, the average number of **construction-related patent applications** in recent years has also fluctuated. While only one patent application was registered in 2010, it increased to four patents in 2014. However, it reduced to two applications in 2019, after having registered zero and one applications, respectively, in 2017 and 2018. It again decreased to one patent in 2020. In addition, no Lithuanian construction-related firm ranks within the top 1,000 EU companies by R&D (industrial sector ICB-3D), according to the 2020 EU R&D Scoreboard¹²³.

Lithuania's innovation performance has improved but remains weak and fragmented. Innovation funds are poorly targeted and are not available at all development stages of a company. Although the planned Innovation Support Fund ensures additional stability in terms of innovation for the future, the country's public funding remains heavily dependent on EU funds. Innovation in the country is also hindered by the high level of emigration of university graduates¹²⁴.

The Lithuanian government is making efforts to improve the design and funding of the innovation ecosystem by reducing the fragmentation of programmes, funding mechanisms and support services for research and innovation. The government is also aiming to increase innovative and pre-commercial procurement to 20.0% of total procurement expenditure by 2027¹²⁵. Recently, the government introduced a subsidy for firms investing in new, high-impact technologies, to make the latest technologies more affordable for SMEs¹²⁶.

Moreover, the **Inostart** (*Inostartas*) scheme, in operation since April 2018, supports the development of ideas/concepts related to products/services, and the employment of researchers in SMEs. It subsidises¹²⁷:

- early-stage product development, from product concept to prototype;
- development from final prototype to test production batch of the final product and;
- hiring a scientist to help in creating prototypes or products¹²⁸.

In its EUR 2.2 billion Recovery and Resilience Plan (RRP), Lithuania has allocated round EUR 117.0 million in developing innovative tools, including tailored for the Lithuanian language. This would allow universal access to digital resources and enabling scientific and business communities to develop innovative technologies, services and products¹²⁹.

Eco-innovation and digitalisation

According to the 2021 Eco-Innovation Scoreboard (Eco-IS), Lithuania scored 88, in comparison to the EU-27 average of 121. Lithuania was categorised under 'Countries catching up with Eco-I'¹³⁰.

As per the report, Lithuania's score was below EU-27 average on four out of the five indicators, namely, **eco-innovation inputs**, **eco-innovation outputs**, and **resource efficiency outcomes**, with **eco-innovation activities** being the worst scorer. However, it scored well above EU-27 average in socio-economic outcomes¹³¹.

According to the European Commission Digital Economy and Society Index (DESI) 2021, Lithuania ranked 14th (score: 51.8), out of the EU-27 member states (average score: 50.7)¹³².

As per the report, Lithuania's performance in connectivity ranked 25th in 2021, worsening from 19th in 2020. It ranked 12th in 2021 in the context of digital public services, well below 6th in 2020. Conversely, under human capital, it ranked 17th in 2021, representing an improvement from 18th in 2020¹³³.

As per the DESI 2021, Lithuania ranked 12th in the EU on the integration of digital technology in 2021 (10th in 2020). It performs above the EU-27 average in the take-up of Artificial Intelligence (AI), ICT for environmental sustainability, SMEs selling online and electronic information sharing. Nonetheless, the adoption of e-Invoices is reducing and is lower than the EU-27 average, despite higher than the EU-27 average e-commerce turnover¹³⁴.

To address these weaknesses and prepare for digitalisation, Lithuania has launched several programmes and schemes. The **2020-2030 industry digitisation roadmap** explains the guidelines for the integration of digital technologies. These include increasing the private and public sector' take-up of digital technology, strengthening research and innovation, adapting standards, and actively participating in international value chains¹³⁵.

Furthermore, there are 18 **Lithuanian Digital Innovation Hubs** of varying levels of maturity supporting the digitalisation of business and registered in the EU S3 catalogue, operating in biotechnology, manufacturing, maritime, construction, transport and public administration¹³⁶.

According to EIBIS 2020 report, only 27.0% of companies in the Lithuanian construction sector are likely to have partially implemented digital technologies. However, no construction firms had implemented digital technologies fully¹³⁷.

In terms of implementation of digital activities such as 3-D printing, virtual reality and Internet of Things (IoT) by the construction sector, Lithuania remains behind the EU-27 average. Around 6.0% of firms in Lithuania have used 3D printing, lower than the EU-27 average (10.0%), and in the region only 4.0% of firms have used augmented or virtual reality, lower than the EU-27 average (11.0%). Similarly, only 13.0% of firms have used IoT, less than the EU-27 average (22.0%). In contrast, around 22.0% of firms in the country have used drones, more than the EU-27 average (19.0%)¹³⁸.

In order to keep the construction sector informed of its progress in digitalisation and the changes this brings, the Ministry of Environment of the Republic of Lithuania, which is responsible for the formation of policy in construction sector progress, organization, coordination and controlling of its implementation in Lithuania, launched a website 'www.statyba40.lt (www.construction40.lt)¹³⁹. This website publishes all the digitalisation initiatives implemented by state institutions, as well as all relevant (adopted and draft) documents. It also provides information on news and events, answers frequently asked questions and other useful information¹⁴⁰.

In May 2020, the Government of the Republic of Lithuania approved mandatory application of Building Information Modelling (BIM) methods in the design and construction of public buildings from the following year. It was a decision which has established a direction for digitalization of construction sector and the need for legal basis.

In April 2021 the Parliament of the Republic of Lithuania amended the country's Law on Public Procurement of the Republic of Lithuania¹⁴¹ and Law on Procurement in the Field of Water Management, Energy, Transport or Postal Services of the Republic of Lithuania¹⁴² requiring for the clients to establish requirements and (or) criteria in the procurement documents for the application of BIM methods in cases and in accordance with the procedures established by the Government or its authorized institution.

On 8th December 2021, the Government of the Republic of Lithuania approved the mandatory application of Building Information Modelling (BIM) methods. The Government approved the Regulation¹⁴³, prepared by the Ministry of Environment of the Republic of Lithuania, defining the cases in which public contracting authorities will have to specify in the procurement documents the requirements and criteria for the application of mandatory BIM methods. The Government has also determined that the detailed procedures for applying the requirements and criteria for BIM methods will be approved by the Ministry of Environment of the Republic of Lithuania¹⁴⁴.

The Ministry of Environment of the Republic of Lithuania has also launched a project named, '**Creation of Measures for Increasing the Efficiency of Life Cycle Processes of Public Sector Buildings by Applying Building Information Modelling (BIM-LT project)**¹⁴⁵. The partners include Vilnius Gediminas Technical University and Kaunas University of Technology (two leading technical universities in Lithuania). The project aims at increasing the efficiency of the use of resources allocated for the planning, design, construction, operation and management of the public sector buildings by applying BIM methods. . The activities of BIM-LT project include preparation of free state-level digitalisation measures: BIM normative documents, Lithuanian national construction information classification system (also known as NSIK), BIM methodological documents for public procurement, the methodology for evaluation and monitoring of BIM benefits and training related to the application of the BIM normative documents, NSIK, BIM methodological documents for public procurement, the methodology for evaluation and monitoring of BIM benefits. The project has an implementation period from January 2019 to August 2023¹⁴⁶.

On 24th February 2022 Ministry of Environment of the Republic of Lithuania approved Employer Information Requirements¹⁴⁷. The client (employer) will define his requirements for the project information in Employer Information Requirements (EIR) document. The supplier (designer or contractor) will fill in the form of BIM project implementation plan.

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Additionally, there are also private sector initiatives concerning BIM, associations of design and construction firms have launched an initiative named, '**Skaitmeninė statyba**', meaning Digital

Construction. It is a collaboration between business and science to develop documents for the development of digital construction models in Lithuania.

6

National and regional regulatory framework

Policy schemes

The Ministry of Environment in Lithuania is responsible for matters associated with housing and construction, with housing policy being defined by the Lithuanian Housing Strategy (*Lietuvos būsto strategija*)¹⁴⁸. The strategy, initially approved by the government in 2004, had set the long-term national policy objectives and priorities for the improvement of housing up until 2020. This comprised the design and implementation of housing development, renovation, and modernisation, as well as financial and social support programmes and measures. The strategy identified the necessity to supply additional affordable housing opportunities to middle and low-income households, specifically by strengthening the rental market. The strategy aimed at increasing the proportion of rental properties to 18.0% of the total housing stock by 2020, with social housing growing to account for about 4.0% to 5.0% of this stock¹⁴⁹ (i.e. reaching a total of 25,000 to 30,000 apartments¹⁵⁰).

In addition, the strategy aimed at increasing the annual volume of residential construction, reaching 12,000 to 15,000 new dwellings by 2020. Eventually, the strategy focused on increasing the annual investment in new residential construction and modernisation/renovation of the dwelling stock by 2020¹⁵¹.

In line with the strategy, the Ministry of Social Security and Labour approved the **Municipal Social Housing Development Action Plan 2015-2020** (*Savivaldybių socialinio būsto fondo plėtros 2015-2020 metais veiksmų planas*). As per the plan, the European Regional Development Fund (ERDF) funded the programme for meeting the growing demand for affordable dwellings. This was done

through financing projects such as the construction of new social housing, the reconstruction or maintenance of existing ones (residential dwellings, foster homes, shelters, etc.) and the conversion of non-residential buildings into social housing. The action plan also supported households in buying social dwellings with a minimum energy class of C¹⁵².

The action plan is part of the National Progress Programme for Lithuania, which aimed to increase the accessibility of housing to vulnerable groups, and the Lithuanian Housing Strategy, setting the long-term national policy objectives and priorities to improve housing in Lithuania¹⁵³. The goal of the action plan was to provide 1,150 housing units by 2020 and to accommodate more than 12,000 individuals. However, insufficient planning at central and local government level prior to implementation has resulted in a three-year extension of the expected implementation end date to 2023. On a broader aspect, there is concern that even the target number of social housing developments will be insufficient to satisfy the growing demand for affordable housing in Lithuania¹⁵⁴.

The Lithuanian government has also adopted a **Law for Young Families Acquiring First Housing**, which became effective in 2018. It allows granting part of the credit amount without the requirement to conduct the household's income appraisal¹⁵⁵. In 2019, the authorities planned to expand this programme. This would allow municipal authorities, and private businesses, to contribute and cover up to 50.0% of a home's value. The government has set aside EUR 10.0 million for the programme¹⁵⁶.

Following the COVID 19 outbreak, the Lithuanian government extended its support to the non-residential rental segment, with the support of the European Commission. In March 2020, a rent compensation scheme of EUR 101.5 million was approved, supporting non-residential tenants operating in different sectors affected by the pandemic¹⁵⁷.

As mentioned in its 2021-2026 National Recovery and Resilience Plan (NRRP), Lithuania plans to start a renovation wave with a target of renovating 1,000 multi-apartment buildings per year. The NRRP anticipates an action plan to be prepared by 2023 for transitioning the country to a circular economy by 2035¹⁵⁸.

The NRRP has also made it mandatory for companies to reuse, recycle and recover at least 70.0% (by weight) of the non-hazardous construction and demolition waste generated on the construction sites. Moreover, all new constructions need to comply with all the EU legislation requirements of ensuring no harm to climate change mitigation. Furthermore, effective from 1st January 2021, all new building constructions need to meet the requirements of Near Zero Energy Buildings (NZEB)¹⁵⁹ (more details in Chapter 7 - TO 3).

Building regulations

The Law on Construction is the main legislation governing building works in Lithuania. It establishes all the essential requirements for construction works built, reconstructed and repaired within national territory. It includes comprehensive procedures for research, design, construction, reconstruction, repair, commissioning, usage and demolition of such works, along with the relationship between the parties involved in the construction activity. It also includes the minimum requirements for energy performance of buildings¹⁶⁰.

The construction processes in Lithuania is regulated by a variety of **technical construction regulations**, such as the classification of buildings (STR 1:01:03:2017), structure design (STR 1:05:06:2010), inspection of the project (STR 1:06:03:2002), building maintenance (STR 1:09:05:2002), project supervision procedure (STR 1:09:04:2007), accident investigation

(STR 1.10.01:2002) and completion of construction (STR 1.11.0: 2010), among others¹⁶¹.

Since January 2018, the **Law on Construction** has been implemented under which construction or reconstruction of a special building had been allocated a period of 20 working days to be checked after its completion, while for other structures and buildings a period of 10 working days had been allocated¹⁶².

Lithuania's binding **Technical Regulation of Construction** is a performance-based code that necessitates an energy frame (reference building) calculation to establish the maximum allowable energy consumption of new residential and non-residential buildings. The regulation also sets energy frames for existing buildings undergoing renovation. The regulation also addresses thermal envelope requirements and energy-using systems within the calculation, including, HVAC, hot water, lighting and bioclimatic design initiatives¹⁶³.

Insurance and liability related regulations

In Lithuania, Article 37 (1) of the **Law on Construction** (*Statybos įstatymas*) stipulates that designers of construction works and building contractors must carry compulsory civil liability insurance. For designers, this mandatory insurance covers damages caused to third parties resulting from faulty design. For building contractors, it covers damages inflicted to third parties as a result of defective construction works¹⁶⁴. The revised version of the law also covers the obligation to technical supervisors of construction works. The regulatory principles and basic provisions in this respect are to be considered when drawing up contracts on compulsory civil liability insurance¹⁶⁵. Voluntary insurance is also available, including professional indemnity insurance for professional consultants and Contractor's All Risk (CAR) insurance which covers damage to construction works during the building phase¹⁶⁶.

In 2018, the compulsory contractor's civil liability insurance was replaced by the construction work insurance. Under this, the insurer indemnifies the damage caused to the builder and third parties, which includes damages made to the structures and buildings, personal health or damage caused by the outflow of property or damage to third

parties caused to the insured person¹⁶⁷. According to the Ministry of Environment, the insurance or bank guarantee must be given a three-year warranty in the case of occurrence of a defect in construction, even if the company is declared bankrupt¹⁶⁸.

Liability principles in the construction sector are defined by the **Civil Code**. It specifies that liability can originate from non-performance or under-performance of a duty established by law or by a contract (e.g. failure to build the structure within the specified time in the contract or failure to build according to the specifications detailed by the client). Moreover, it can originate from prohibited actions or from negligence. In all these cases, it may become mandatory for the contractor to repair the defects or pay the compensation costs of the client. The duration of liability totals 10 years for structural defects and up to 20 years in case of knowingly concealed defects¹⁶⁹.

As per a new amendment to the Labour Code of the Republic of Lithuania, effective from 1st November 2021, contractors operating in the construction sector are obligated to pay wages to the sub-contractor's employees if the hired sub-contractor fails to do so¹⁷⁰.

In this case, the subsidiary liability of the contractor shall be limited to the sub-contractor employees' right to remuneration, including increased pay for overtime, night work and work on holidays, for executing the construction contract between the contractor and the sub-contractor. This amendment is expected to provide greater protection to construction employees while creating additional responsibilities for the contractor. As such, contracts will be inclined to thoroughly check the sub-contractor's financial situation before awarding any contracts¹⁷¹.

7

Current status and national strategies to meet Construction 2020 objectives

TO 1 – Investment conditions and volumes

Total **investment by the broad construction sector**¹⁷² has recorded an increase over the past years (Figure 10). Specifically, investment by the narrow construction sub-sector went from EUR 83.3 million in 2010 to EUR 312.2 million in 2020, representing an increase of 274.8% over the period. Similarly, investment by the real estate activities sub-sector went from EUR 0.8 billion in 2010 to EUR 1.7 billion in 2020, representing an increase of 121.9% over the same reference period.

Total investment by the narrow construction sub-sector between 2010 and 2020

↑ 274.8%

Total investment by the real estate activities sub-sector between 2010 and 2020

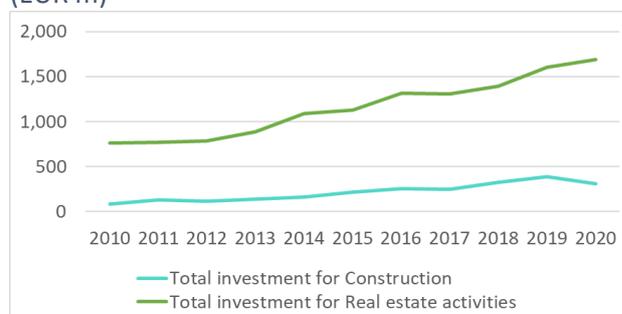
↑ 121.9%

In parallel, **investment in intellectual property products** by the narrow construction sub-sector increased by 145.4%, from EUR 13.0 million in 2010 to EUR 31.9 million in 2020. Likewise, investment by the real estate activities sub-sector for this category increased by 216.2%, reaching EUR 11.7 million in 2020 as compared to EUR 3.7 million in 2010.

Additionally, **investment in machinery**, by the narrow construction sub-sector increased by 199.6%, from EUR 23.5 million in 2010 to EUR 70.4 million in 2020. Similarly, investment by the real estate activities sub-sector for this category

increased by 172.4%, reaching EUR 34.6 million in 2020 as compared to EUR 12.7 million in 2010.

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



Source: Eurostat, 2021.

The **investment index in broad construction sector**¹⁷³ has experienced a moderate growth since 2015, rising by 23.9% over 2015-2020 (Figure 11), mainly driven by investment in non-residential construction and civil engineering and dwellings by the whole economy which increased by 24.7% and 21.8%, respectively, between 2015 and 2020. In absolute terms, **investment in the broad construction sector** totalled EUR 5.0 billion in 2018¹⁷⁴, out of which EUR 3.7 billion was invested in non-residential and civil engineering and EUR 1.2 billion was devoted to dwellings¹⁷⁵.

Total investment in broad construction sector between 2015 and 2020

↑ 23.9%

Figure 11: Investment index in the Lithuanian construction sector between 2010 and 2020 (2015=100)



Source: AMECO, 2021.

The final consumption expenditure of Lithuanian households on maintenance and repair of dwellings has increased significantly over the past decade. Specifically, it increased from EUR 240.0 million in 2010 to EUR 685.8 million in 2020, representing an increase of 185.8% over the same period. The country's **renovation spending** as a percentage of total household disposable income has also increased from 1.2% in 2010 to 2.1% in 2020.

The share of **total inland**¹⁷⁶ **infrastructure investment** in the GDP reached 0.9% in 2019¹⁷⁷ as compared to 1.9% in 2010. Particularly, investment in road and rail infrastructure dropped by 16.6% and 19.6% over the 2010-2019 period, totalling EUR 352.0 million and EUR 86.0 million, respectively. In contrast, investment in air and sea transport infrastructure increased by 162.5% and 271.4%, reaching EUR 21.0 million and EUR 78.0 million, respectively, over the same period. Additionally, the **investments in the maintenance** of rail, inland waterways and air transport infrastructure increased by 13.3%, 100.0% and 200.0%, respectively, over the 2010-2019¹⁷⁸ period. Conversely, investments in the maintenance of road and sea transport infrastructure decreased by 8.1% and 28.6%, over the same period, respectively.

Investment in air transport infrastructure between 2010 and 2019

↑ 162.5%

In 2020, the EIB Group invested close to EUR 403.0 million in infrastructure in Lithuania¹⁷⁹.

Lithuania benefits from EU support when it comes of infrastructure development. In particular, it

benefits from investments from the **European Fund for Strategic Investments (EFSI)**. As of January 2021, financing under EFSI amounted to EUR 434.0 million and is set to trigger additional investments of EUR 1.9 billion. Under the infrastructure and innovation window, 12 projects have been financed by the European Investment Bank (EIB) with EFSI backing. These projects amount to EUR 413.0 million and are set to trigger EUR 1.5 billion in total investments. Additionally, under the SMEs window, 9 agreements have been approved, involving a total financing of EUR 21.0 million, and are set to trigger investments of up to EUR 389.0 million, benefitting about 7,430 SMEs and mid-cap companies from improved access to finance¹⁸⁰.

With regards to railways, completion of the cross-border Rail Baltica project in cooperation with Poland and other Baltic countries remains paramount. The North Sea-Baltic Corridor extends from North Sea ports in Belgium and the Netherlands across Baltic ports to Tallinn and then on to Finland. In September 2020, the Lithuanian Ministry of Transport together with LTG Infra, and Ardanuy Ingenieria signed a EUR 1.1 million contract for developing Kaunas rail node infrastructure plans as part of the EUR 5.8 billion Rail Baltica project. Expected to be approved by September 2022, the completed plan should outline the development and reconstruction solutions for the transport infrastructure, the buildings, the intermodal terminal, passenger and engineering infrastructure. Additionally, design and construction is expected to be completed by end-2026¹⁸¹.

In parallel, in April 2020, the Nordic Investment Bank (NIB) signed a EUR 68.0 million credit facility agreement with the *Klaipėda* State Seaport Authority for the refurbishment of its port. Moreover, in September 2020, the NIB also signed an agreement with State Enterprise Lithuanian Airports approving a EUR 70.0 million loan for the modernisation of three airports in Lithuania - Vilnius, Kaunas and Palanga, valued at EUR 700.0 million¹⁸².

As per its National Recovery and Resilience Plan (NRRP), Lithuania has allocated EUR 341.0 million for phasing out the polluting road transport vehicles (private, public and commercial) and increasing the share of renewable energy sources

in the transport sector, thereby also reducing greenhouse gases emissions¹⁸³.

With regards to port infrastructure, Sventoji Seaport Expansion is another upcoming important project currently under consideration by the Lithuanian Ministry of Transport and Communications. In relation to roadways, the Via Baltica highway, running from Warsaw to Tallinn and linking Prague and Helsinki, is currently being upgraded. Another notable project is the A14 Highway Improvement project. Started in 2016, the project is operated on a design-build-finance-maintain basis over a 13-year timeframe. It involves the reconstruction of 58.1km of the Vilnius-Utena highway, a key traffic line forming part of the EU supported TEN-T network of trans-European highways and is valued at EUR 89.0 million¹⁸⁴.

TO 2 – Skills

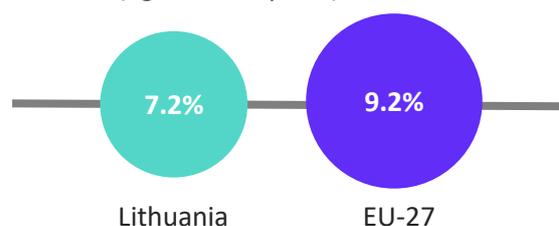
In 2020, the share of **adult participation in learning** (aged 25-64 years) stood at 7.2%, marginally above as compared to 7.0% in 2019. This is still below the EU-27 average of 9.2% for the same period. This was primarily driven by adult educators adapting to the COVID-19 pandemic rather well, notably during the second lockdown (from November 2020). This, together with various other projects being implemented, helped in improving the general, special and professional skills while motivating adults to enrol in training¹⁸⁵.

Under its 2021-2026 National Recovery and Resilience Plan (NRRP), Lithuania has allocated EUR 312.0 million for providing high quality accessible lifelong education for the general public. This includes consolidating available learning resources while improving pre-school, primary and secondary education, vocational education and training (VET) and adult learning. The country has also allocated EUR 200.0 million for changing the higher education funding model and making research and innovation support policies more efficient by consolidating existing agencies¹⁸⁶.

The NRRP plan involves setting up a central IT system for programmes that meet applicable quality standards. This system will include a mechanism to identify programmes for acquiring high-value-added competences. Additionally, the one-stop-shop online platform for life-long learning

is expected to be operable by 2023, thereby consolidating the currently fragmented framework for adult skills development. As such, the system will provide access to career guidance as well as converge information on competences acquired during training and on ways to recognise competences. About 21,600 people are expected to benefit from the system and improve their digital skills by 2026¹⁸⁷.

Share of adult participation in learning (aged 25-64 years) in 2020



Vocational education and training (VET) in Lithuania is governed by the Ministry of Education and Science. It is the main body responsible for shaping and implementing VET policy in the country. Over the last three years, the participation rates in VET had decreased due to negative population growth and emigration. Lithuania continues to modernise its VET system by expanding the modularisation of VET programmes. This plans to allow for more flexible and diverse forms of learning. VET programmes are being reformed and will be based on qualification standards currently being developed in specific sectors of the economy. Lithuania is also consolidating its VET providers. The number of public VET providers is planned to decrease from 61 in 2019 to 56 in 2020^{188,189}.

Between 2013 and 2019, the number of initial VET learners in lower- and upper-secondary education as a percentage of the total student population stood at 29.0%. Since September 2020, students in general education were also able to apply for vocational modules, making VET more accessible¹⁹⁰.

Lithuania's 2021-2026 National Recovery and Resilience Plan (NRRP) aims to support at least 4,900 students in completing vocational modules focused at developing skills to support the green and digital transitions by 2026. Additionally, apprenticeships and work-based learning support scheme are also expected to be established by 2022, thereby facilitating the acquisition of practical skills enterprises by students in SMEs¹⁹¹.

Additionally, vocational programmes are planned to be updated in consultation with social partners in order to better match VET programmes with the needs of the labour market. In fact, a national IT platform is also scheduled to be set up for the Progress of VET that brings together social partners, authorities, VET providers and other stakeholders, thereby ensuring a long-term sustainable vocational training model in each region. Moreover, the country has also approved a new procedure in 2020 to assess competences acquired through apprenticeships, work experience or other types of learning¹⁹².

Similarly, in 2019, the authorities approved a new regulation which detailed the procedure for organising VET in the form of an apprenticeship. This regulation is expected to attract more learners to acquire new skills and a professional qualification¹⁹³.

Lithuania's digital strategy also seeks to reduce the shortage of ICT specialists by encouraging more young people to choose it as a career, by attracting more women and by improving vocational training for ICT specialists. In addition, the **Akademija.IT** project encourages vocational training, instructs trainers and retrains people with educational backgrounds¹⁹⁴.

TO 3 – Resource efficiency / Sustainable construction

With regards to the 2030 energy efficiency targets, Lithuania modestly aims to ensure that its primary and final energy intensity will be 1.5 times lower in 2030 (5.5 Mtoe and 4.5 Mtoe, respectively) than it was in 2017. In order to achieve its objective of an energy-efficient and decarbonised building stock by 2050, Lithuania needs to increase its scale of renovations in order to renovate more than 30,000 multi-apartment buildings.

The buildings sector accounts for a significant share of final energy consumption. Therefore, Lithuania is making considerable efforts to improve the energy performance of buildings. Around 5,000 multi-apartment buildings, or 750,000 square metres of building area, are expected to be refurbished by 2030, saving about 5.5 TWh energy. Efforts will also be diverted towards the renovation of public buildings. The obligation imposed by Article 5 of the Energy Efficiency Directive to renovate 3.0% of central government buildings annually by 2030 would amount to about 510 000 square metres¹⁹⁵.

Under its Long-Term Renovation Strategy, Lithuania has set a target of renovating 74.0% of its buildings stock (nearly 440,000 buildings) by 2050, so that no primary energy is generated by using fossil fuels¹⁹⁶.

According to a recent study on the building energy renovation potential across the EU, the renovation of 79.0% of Lithuanian existing building stock by 2050 could potentially result in primary energy savings of 5.2TWh for the country, in addition to generating 202,000 FTE jobs¹⁹⁷.

As per its Recovery and Resilience Plan (RRP), Lithuania plans to renovate 1,000 multi-apartment buildings per year¹⁹⁸.

The Lithuanian RRP prominently stresses on renovation of the country's building stocks. In fact, it is a major actionable area under the "Accelerating renovation of buildings and a sustainable urban environment" (EUR 217.8 million) of Green transition component, "Improving the quality and accessibility of services and promoting innovation" (EUR 89.5 million) of the Health component and "Modern pre-primary and general education" of Education component of the RRP. Additionally, under its plan, Lithuanian has set a requirement of using at least 70.0% (by weight) of the non-hazardous construction and demolition waste generated on the construction sites through reuse, recycling and other material recovery. Furthermore, in order to ensure that investment under the measure "Faster renovation of buildings and a sustainable urban environment" does not damage biodiversity, the RRP also ensured that raw materials should be sourced from sustainable forests and not from protected natural areas.

In its RRP, Lithuania allocated EUR 218 million for accelerating renovations of buildings by supporting the production of modular elements for renovations from organic materials as well as providing financing assistance in actual renovations. Lithuania expects to achieve primary energy savings amounting to 215 GWh by 2026 under its accelerated buildings renovation programme^{199,200}.

With regards to the main energy efficiency policy measures applied, the **EE2 – renovation of multi-apartment buildings** measure has been implemented from 2014 until 2020 and is expected to be continued in the longer term. This measure is aimed at renovating 500 multi-apartment buildings each year. The expected heat savings from integrated renovation will amount to about 70 kWh per square metre. Similarly, the **EE3 – renovation of public buildings** was a measure implemented in 2014. However, this shall continue till 2030. This measure is expected to result in 20.0 GWh energy savings per year and to renovate about 960,000 square metres of public building area. Total energy savings will be around 1.1 TWh. The comprehensive renovation of public buildings is expected to deliver heat savings of 80.0 kWh per square metre.

Lithuania is implementing the development of renewable energy sources (RES) on the basis of the National Energy Independence Strategy (NEIS), which sets long-term energy targets. This strategy has set a target for the share of RES in gross final consumption of energy by 2050, under which the transport sector's share is 50.0% and electricity sector's share is 100.0%²⁰¹. The main objective of the NEIS in terms of energy efficiency is to ensure that by 2030, primary and final energy intensity stands at 1.5 times, and by 2050 about 2.4 times, below the 2017 level²⁰².

To achieve these targets, Lithuania aims to promote the integrated renovation of multi-apartment and public buildings (prioritising the renovation of residential neighbourhoods) and save 5.0-6.0 TWh of energy by 2030. It also aims to rapidly develop energy-efficient industries and deploy and purchase state-of-the-art and environmentally friendly technologies and equipment. The country has also calculated a binding target of 7.3 TWh for 2030 in line with the

requirements of Article 7 of the Energy Efficiency Directive (EU) 2018/844²⁰³.

Amid the COVID-19 pandemic, Lithuania has adopted several policies and measures on climate change and environmental protection as a recovery from the economic disruptions. These policies and measures generally fall under the building and household sector, sustainable transportation, waste management and the circular economy. Some of these measures are²⁰⁴:

- **Renovation of multi-apartment buildings:** This is a compensation mechanism under the government's multi-apartment building renovation programme. It aims to reduce thermal energy consumption, encourage rational use of energy resources, ensure efficient use of housing, and improve the living environment and quality of life for the population. It is planned to reduce heating consumption in multi-apartment and public buildings. This measure is categorised under the building sector.
- **Renovation (modernisation) of public and industrial buildings of private legal entities:** This is a subsidy of about 30.0% from the 'Programme for Climate Change' when achieving at least the energy efficiency class of building B and reducing the calculated thermal energy consumption costs by at least 40.0% compared to the calculated thermal energy costs before the implementation of the renovation (modernisation). This measure is categorised under the household sector.

Industrial reorientation through the introduction of digital technologies and the development of the circular economy: This is a measure to allocate EUR 50.0 million to implement modern or digital technologies which reduce the impact on environment, promote the circular economy and create a number of high and higher value-added jobs. This measure is categorised under the waste management and circular economy sector²⁰⁵.

TO 4 – Single Market

As per the EU Single Market Scorecard 2020, Lithuania performed well in trade integration in the single market for goods and services in 2019. Regarding public procurement, the performance in 2019 was satisfactory²⁰⁶.

As per the report, Lithuania scored above average in five metrics while average in three out of total eight metrics. Lithuania's performance in transposition deficit improved reaching 0.2% in 2019 from 0.6% in the last report. This is a decrease by 0.4 pp and best result yet for Lithuania. The EU-28²⁰⁷ average for the same category in 2019 stood at 0.6%. The country's overdue directives also numbered two from six in the last report. However, the average delay rose by up to 16.1 months in 2019, from 11.0 months in the previous report. This is also higher than the EU-28 average in 2019 (11.5 months)²⁰⁸.

The country's performance under infringements also improved. Notably, pending cases stood at 12 in 2019, compared to the EU-28²⁰⁹ average of 29. The average case duration was 36.7 months in 2019, slightly higher than the EU-28 average (34.8 months)²¹⁰. Lithuania's average response time complies with the 70-day limit in the EU Pilot²¹¹. Its performance in Internal Market Information System continues to be good. It performed above the European Economic Area (EEA) average in four out of five indicators²¹².

With regards to **public procurement**, Lithuania scored satisfactory in eight while unsatisfactory in four out of the twelve indicators. For businesses operating in Lithuania, public procurement carries a moderate to high corruption risk. Businesses have experienced the presence of corruption in the procurement process and sometimes there is lack of transparency in information²¹³.

However, public procurement has improved in comparison with previous years. Such improvements notably include the increased use of cooperative procurement (central purchasing and joint procurement) at central and local levels and by small contracting authorities. Moreover, authorities also adopted a plan to improve public procurement professionalisation in March 2019. This plan entails measures such as a training scheme for public procurement specialists, as well

as guidance and support for such specialists. However, the plan faces the challenge of encouraging the contracting authorities to use the price-quality related award criteria²¹⁴.

As per World Bank's 2020 Doing Business Report, in terms of business regulations, Lithuania ranked 11th out of 190 countries in 2020²¹⁵.

Finally, regarding the implementation of **Eurocodes**, all Eurocode Parts are published as National Standards and translated in Lithuanian. Moreover, National Annexes are published on 58 Eurocode Parts, except for EN 1997-2, with most of them being available in English (except for EN 1990-A1, EN 1991-1-3, EN 1991-1-4, EN 1991-1-7, EN 1991-2, EN 1992-1-1, EN 1997-1). The use of Eurocodes is voluntary in Lithuania, and national regulations can be used in parallel for structural design. Their use in public procurement is prescribed by the Law on Public Procurement²¹⁶.

TO 5 – International competitiveness

As per World Bank Doing Business 2020 report, Lithuania was ranked 19th out of 190 economies in the ease of trading across border, achieving score of 97.3²¹⁷.

As per the report, in Lithuania it takes only three hours to be documentary compliant while seven hours to be border compliant. In terms of costs, businesses do not need to spend any amount to be border and documentary compliant²¹⁸.

The **internalisation of construction products** in the Lithuanian construction sector has shown signs of growth for the past few years. **The export values of all construction-related products** increased by 134.6% over the 2010-2020 period, reaching EUR 1.1 billion. In 2019, it also stood at EUR 1.1 billion, well below as compared to the EU-27 average of EUR 25.0 billion. Nonetheless, Lithuania's share of exports of all construction-related products stood at 79.9% of the total production value in 2020, slightly below as compared to its 2010 level of 83.8%.

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

 **134.6%**

Conversely, the export value of architectural services declined by 63.0% over the 2010-2020 period, reaching EUR 144,170.

Exports value of all architectural services between 2010 and 2020

 **63.0%**

With regards to **inward FATS** (foreign affiliates statistics)²¹⁹, value added at factor cost in the manufacturing, the narrow construction and the real estate activities sub-sectors grew by 85.6%, 304.5% and 329.0%, respectively, between 2010 and 2018²²⁰. Similarly, turnover in the manufacturing, the narrow construction and the real estate activities sub-sectors grew by 41.8%, 147.3% and 202.4% respectively over the 2010-2018²²¹ period. In terms of **outward FATS**²²², turnover in the manufacturing, the narrow construction and the real estate activities sub-sectors grew by 16.4%, 327.1% and 330.2%, respectively, over the 2010-2018²²³ period.

According to the Digital Economy and Society Index 2020, the country's SMEs are proficient in sharing information electronically (48.0% vs. EU-27224 average 34.0%), selling online – domestically (24.0% vs. EU-27225 average 18.0%) and to other EU countries (13.0% vs. EU-27226 average 8.0%)²²⁷.

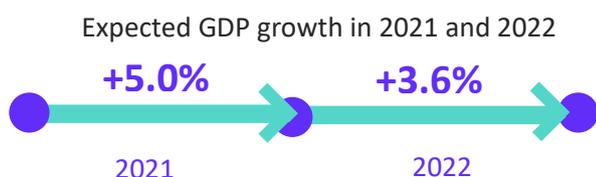
Since 2018, the Lithuanian government introduced various measures to promote internationalisation. For instance, the **Internationalisation LT agency (Tarptautiškumas LT)**, established in 2018, identified six prospective sectors, out of which three of them are traditional industries and three are high-tech sectors. It will be developing entry strategies for two target markets in each sector. Based on this, the companies will prepare their own individual market-entry strategies and plans. The pilot export promotion measures in the selected markets will then be implemented over three years²²⁸. Another measure introduced by INVEGA (a state-incorporated financial entity) in 2018 was the **Export Credit Guarantees, (Eksporto kredity garantijos)**. INVEGA commits to sharing risks with exporters by covering up to 90.0% of actual losses when a buyer fails to pay in line with the contract or goes bankrupt. This allows exporters to protect themselves against default by a foreign buyer²²⁹.

8

Outlook

After registering a decline of 0.9% in 2020 due to the COVID-19 pandemic, the Lithuanian economy is expected to revive and register growth driven by significant developments in private consumption and investments.

As a result, Lithuania's GDP is projected to grow by 5.0% in 2021 and then by 3.6% in 2022, reaching EUR 45.5 billion and EUR 47.2 billion in 2021 and 2022 respectively.



In parallel, the **volume index of production** in the broad construction sector is expected to increase by 5.1 ip in 2021, mainly driven by 6.3 ip and 2.3 ip increases in the construction of civil engineering and construction of buildings in 2021, respectively.

Similarly, **turnover** in the broad construction sector is forecast to grow by 5.7% in 2021, amounting to EUR 11.7 billion. The **total value added** of the broad construction sector is also expected to increase by 5.7% in 2021, reaching EUR 4.0 billion.

Following the similar trend, the number of **persons employed** in the broad construction sector is also expected to increase by 6.0% to 206,779 persons in 2021. Most of this growth is expected to come from the architectural and

engineering activities (+10.3%), manufacturing (+7.4%), narrow construction (+5.5%), and the real estate activities (+4.7%) sub-sectors.

With regards to the **housing market**, Lithuania has set a target of renovating 74.0% of its buildings stock (nearly 440,000 buildings) by 2050, so that no primary energy is generated by using fossil fuels. The country has made it mandatory for companies to reuse, recycle and recover at least 70.0% (by weight) of the non-hazardous construction and demolition waste generated on the construction sites. Moreover, all new constructions need to meet the requirements of Near Zero Energy Buildings (NZEB).

Lithuania's **non-residential construction and civil engineering sector** is expected to be driven by a strong pipeline of ongoing and upcoming infrastructure projects. Specifically, the EUR 5.8 billion Rail Baltica project's design and construction is expected to be completed by end-2026. In relation to roadways, the Via Baltica highway, running from Warsaw to Tallinn and linking Prague and Helsinki, is currently being upgraded. Another notable project is the A14 Highway Improvement project.

Overall, the Lithuanian construction sector is expected to recover from 2021 onwards, driven by large scale digitalisation, infrastructural and circular economy projects backed by EU funding. Output in civil engineering will be the leading investment driver for the economy.

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