European Commission

European Construction Sector Observatory

Country profile **Lithuania**

December 2020

In a nutshell

In 2019, Lithuanian GDP increased by 3.9% over the previous year and by 38.6% since 2010. This growth is mostly due to high domestic demand and rising public expenditure, as well as stronger exports.

The **number of enterprises** in the broad construction sector increased by 172.8% over the 2010-2019 period, totalling 66,885. This was mainly due to growth in the number of enterprises in the narrow construction (+209.2%), the real estate activities (+196.7%), the architectural and engineering activities (+106.0%) and manufacturing (+30.3%) sub-sectors over the same period.

Number of enterprises in the narrow construction sub-sector between 2010 and 2019 ↑ **209.2%**

Similarly, the **volume index of production** in the broad construction sector recorded an increase of 21.8% during 2015-2019, mainly driven by a 23.9% increment in the construction of buildings, and a 19.4% growth 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 10.8 billion in 2019, representing a 133.4% rise above the 2010 level. This positive development was mainly driven by turnover growth in the real estate activities (+143.6%), the narrow construction (+137.1%), the manufacturing (+127.0%) and the architectural and engineering activities (+71.5%) sub-sectors over the 2010-2019 period.

Turnover in the real estate activities sub-sector between 2010 and 2019 ↑ **143.6%**

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%). 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 2019, there were 190,027 **persons employed** in the Lithuanian broad construction sector, marking a 45.7% growth from the 2010 level (130,379 persons). This was driven by growth in the real estate activities sub-sector (+69.0%) over the same period. The narrow construction sub-sector came next with an increase of 47.6%, followed by the manufacturing (+30.3%) and architectural and engineering activities (+22.7%) sub-sectors over the 2010-2019 period.

Despite these positive developments, 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[1]. To tackle the issue, the authorities are currently planning to simplify the entry procedures for cross-border construction workers, and other employees in the industrial and construction sectors.

With regards to market developments, the Lithuanian **housing market** is an important pillar for the broad construction sector. Household incomes grew at a faster rate than property prices, thus improving the affordability of housing in the country. As a result, property sales also increased by 7.0% from the previous year. This increasing trend continued in the first two months of 2020.

In parallel, in 2019, Lithuania's **non-residential construction and civil engineering activities** remained at a level similar to 2018's. The focus of civil engineering activities is placed on the upgrade of road and rail connectivity. With regards to rail connectivity, the country prioritised the development of the Rail Baltica project, due for completion by 2025. As for road connectivity, the Via Baltica road transport project also continued being implemented. In fact, part of the upgrade of the north-south road connection was completed in 2019. Investments from EU funds also supported the improvement of 493.0 kilometres of roads in Lithuania, in connection with the Trans European Transport Network (TEN-T).

The ongoing global COVID-19 pandemic has impacted the Lithuanian construction sector significantly. Specifically, the housing market faced major blows as sales and consumer confidence plummeted from March 2020. This follows a decrease in domestic and foreign housing demand. In addition, the Lithuanian construction sector suffered from a greater labour shortage following the imposition of travel bans as a COVID-19 containment measure.

However, a robust domestic demand for housing in the third quarter of 2020, following the relaxation of restrictions, is expected to compensate some of the losses experienced during the nationwide lockdown. The market is therefore expected to improve, driven by strong domestic demand. Moreover, the infrastructure projects lined up for 2021, some of which supported by EU Cohesion Policy funds, will also support the recovery of the sector in the mid and long-term.

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Key figures

Construction market

The **number of enterprises** in the broad construction sector in Lithuania totalled 66,885 in 2019[2] (Figure 1), representing an increase of 172.8% since 2010. In terms of sub-sectors, the narrow construction sub-sector reported the highest growth (209.2%) in the number of enterprises over the 2010-2019 period. It was followed by the real estate activities, the architectural and engineering activities and the manufacturing sub-sectors, which reported growth of 196.7%, 106.0% and 30.3% over the same period respectively.

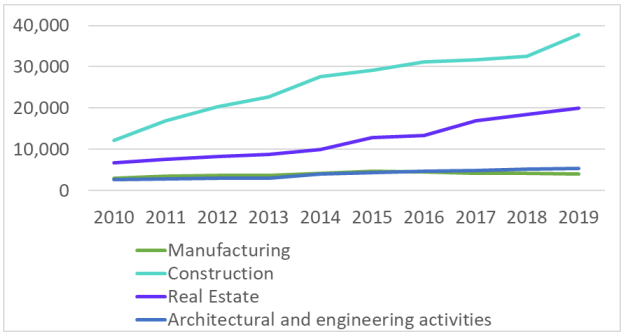
In 2019, the narrow construction sub-sector accounted for the highest number of enterprises in the broad construction sector at 56.4% (37,723 enterprises). It was followed by the real estate activities (29.7% i.e. 19,896 enterprises), the architectural and engineering activities (7.9% i.e. 5,317 enterprises) and the manufacturing sub-sectors (5.9% i.e. 3,949 enterprises).

Number of enterprises in the broad construction sector between 2010 and 2019 ↑ **172.8%**

The **volume index of production** in the broad construction sector increased by 21.8% over the 2015-2019 period. This increase was driven by a 23.9% increase in the volume index of production in the construction of buildings, and a 19.4% increase in the construction of civil engineering over the same period.

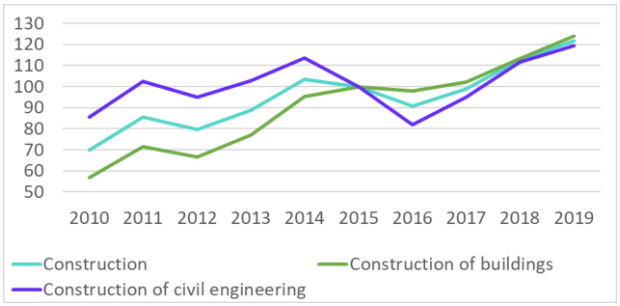
Volume index of production in the broad construction sector between 2015 and 2019 ↑ **21.8%**

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



Source: Eurostat, 2020.

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

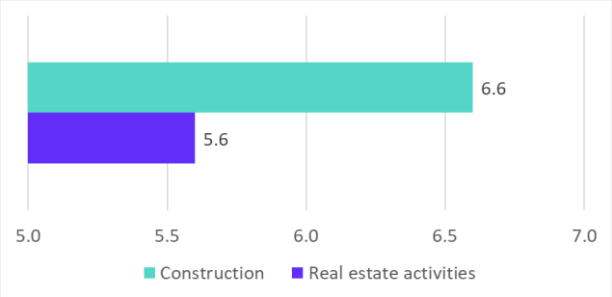


Source: Eurostat, 2020.

The total **value added at factor cost**[3] of the broad construction sector amounted to EUR 3.7 billion in 2019[4], with the narrow construction sub-sector accounting for 51.7% of the total (i.e. EUR 1.9 billion). The real estate activities sub-sector contributed 31.0% (i.e. EUR 1.2 billion), followed by the manufacturing (11.7%, i.e. EUR 439.0 million) and architectural and engineering activities (5.6%, i.e. EUR 209.2 million) sub-sectors.

The **share of gross value added of the broad construction sector** stood at 14.3% in 2018[5], below the EU-27 average of 16.4%. In 2019, the share of gross value added of the narrow construction and real estate activities sub-sectors stood at 6.6% (EU-27 average 5.0%) and 5.6% (EU-27 average 9.7%), respectively.

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



Source: Eurostat, 2020.

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 1.6 billion in 2017) and real estate sub-sectors (EUR 1.5 billion in 2017). The Capital region's gross value added from the narrow construction and real estate activities sub-sectors amounted to EUR 927.8 million and EUR 1.0 billion respectively in 2017[6].

Productivity

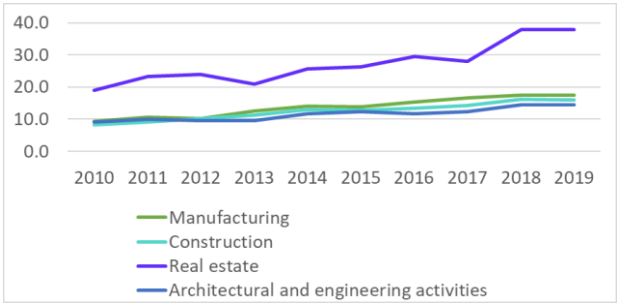
Productivity in Lithuania is generally increasing as a result of capital accumulation, catching up with the EU-28[7] average. In order to stimulate productivity, the efficiency of public investment has been identified as an area of improvement[8].

Apparent labour productivity[9] 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 50,078.7. 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 98.1%, from EUR 8,179.1 in 2010 to EUR 16,201.6 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 2019, the manufacturing sub-sector posted a growth of 0.2% in apparent labour productivity, reaching EUR 17,540.6 in 2019. All other sub-sectors reported a decline. Specifically, the narrow construction, real estate activities and architectural and engineering activities sub-sectors sub-sector declined by 0.6%, 0.1% and 0.1% respectively over the same period.

Labour productivity in the narrow construction sub-sector between 2010 and 2019 ↑ **96.3%**

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



Source: Eurostat, 2020

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 2019, it further increased to EUR 10.8 billion, representing a 133.4% increase during 2010-2019. The growth in the sector was mainly driven by the manufacturing and real estate activities sub-sectors which registered an increase in turnover of 137.2% and 126.8% respectively between 2010 and 2018. Similarly, the narrow construction and architectural and engineering activities sub-sectors recorded increases of 117.3% and 65.3% respectively over the same period.

Over the 2018-2019 period, the narrow construction sub-sector registered the highest growth of 9.1%, ending at EUR 6.8 billion. The real estate activities and architectural and engineering activities sub-sectors increased by 7.4% and 3.8%, totalling EUR 2.1 billion and EUR 420.1 million, respectively over the same reference period. Conversely, the manufacturing sub-sector declined over the same period by 4.3%, reaching EUR 1.5 billion.

Turnover of the broad construction sector between 2010 and 2019 ↑ **133.4%**

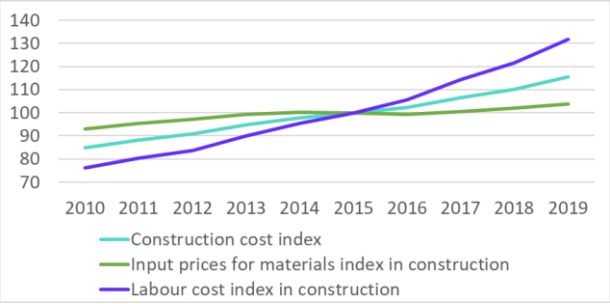
Consequently, the **gross operating surplus** of the broad construction sector increased significantly by 244.6% from EUR 481.2 million to EUR 1.7 billion between 2010 and 2018[10]. This growth is explained by a significant increase in the gross operating surplus in the narrow construction (+298.6%), 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**[11] of the Lithuanian broad construction sector, which gives an indication of the sector's profitability, stood at 14.1% in 2017, below the EU-27 average (16.6%). This also represents an increment of 3.7 ip since 2010. In 2018, the gross operating rate further increased to 16.3%, marking 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 15.6% over the 2015-2019 period (Figure 5). This was driven by an increase in the labour cost index (+31.8%) – linked to the labour shortage experience by the sector, and the input prices for materials index (+3.9%) in the same period.

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

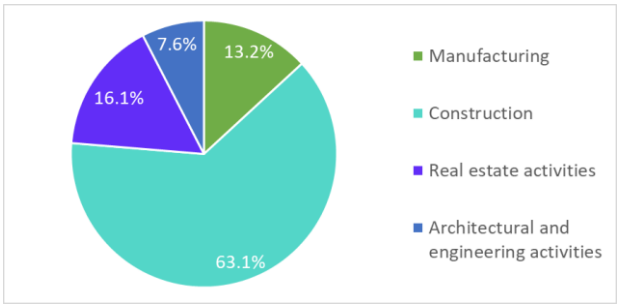


Source: Eurostat, 2020.

Employment

In 2019, there were 190,027 **persons employed** in the broad construction sector, marking a 45.7% increase from the 2010 level (130,379). The narrow construction sub-sector employed 63.1% of the total workforce (i.e. 119,972 persons), followed by the real estate activities (16.1% i.e. 30,581 persons), manufacturing (13.2% i.e. 25,028 persons) and architectural and engineering activities (7.6% i.e. 14,444 persons) sub-sectors. All sub-sectors experienced an increase in terms of the number of persons employed over the 2010-2019 period. In particular, the real estate activities sub-sector witnessed growth of 69.0%, being the highest among the sub-sectors. It was followed by the narrow construction (+47.6%), the manufacturing (+30.3%) and the architectural and engineering activities (+22.7%) sub-sectors.

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



Source: Eurostat, 2020.

Number of persons employed in the real estate activities sub-sector between 2010 and 2019 ↑ **69.0%**

As for **employment by specific occupation**, the manufacturing sub-sector experienced a sharp decrease in demand for managers (-20.8%) and clerical support workers (-10.7%) over the 2010-2019 period. Conversely, the demand for professionals and plant and machine operators and assemblers increased by 43.7% and 36.8%, over the same period, respectively. In the narrow construction sub-sector, the demand for elementary occupations and plant and machine operators and assemblers decreased by 9.5% and 6.8%, over the same period, respectively. On the other hand, a significant increase was observed in the demand for craft and related trades workers

(+33.6%) and managers (+18.4%) 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 73,300 in 2017[12], representing an increase of 17.7% since 2010. In the Capital region, it stood at 27,000 in 2017 representing a growth of 9.3% since 2010. As for the real estate activities sub-sector, the number of persons employed in Capital region stood at 6,700 in 2017, thereby, increasing by 28.8% since 2010. In the Central and Western Lithuania region, it stood at 7,900 in 2017, increasing by 5.3% since 2010.

The number of **self-employed workers** in the narrow construction sub-sector increased significantly by 222.5% over the 2010-2019 period. In 2019, the number of self-employed workers in the narrow construction sub-sector comprised 15.8% of the self-employed workers in the general economy, higher than the EU-27 average (11.9%).

Likewise, the number of self-employed workers in the real estate activities sub-sector increased by 50.0% over the 2014[13]-2019 period. In 2019, 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 (1.4%).

Number of self-employed workers in the narrow construction sub-sector between 2010 and 2019

↑ **222.5%**

Over the 2010-2019 period, **full-time employment** in the narrow construction, manufacturing and real estate activities sub-sectors increased by 21.5%, 16.9% and 7.2% respectively. Over the 2013[14]-2019 period, **part-time employment** in the narrow construction and real estate activities sub-sectors increased by 45.8% and 5.6% respectively. As for the manufacturing sub-sector, it decreased by 40.9% over the 2010-2019 period.

2

Macroeconomic indicators

Economic development

Lithuania's economic growth remained strong amid weakening growth in the EU as a whole. This was driven by higher domestic demand due to private consumption, increased public expenditure and strong exports[15].

The country's **GDP** reached EUR 43.0 billion in 2019, a 3.9% and a 38.6% growth compared to 2018 and 2010, respectively. **Potential GDP** was slightly below actual GDP, reaching EUR 41.1 billion in 2019, translating into a positive output gap of 4.6%.

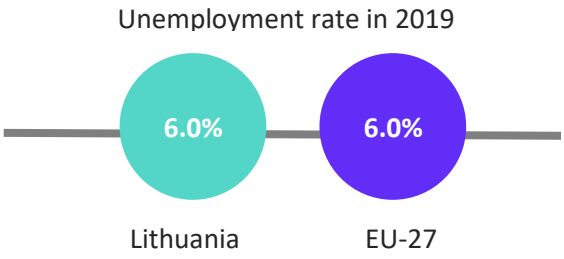
Additionally, while **inflation** fluctuated in recent years, it decreased to 2.2% in 2019 from 3.7% in 2017. It is expected to decrease further, on the back of a projected fall in oil prices[16].

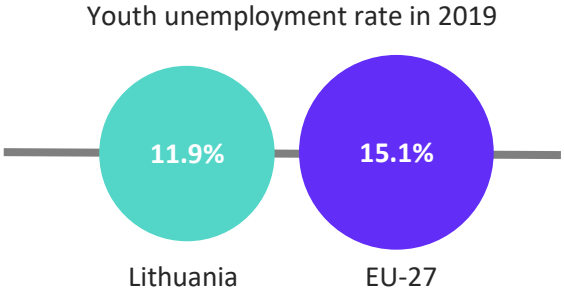
Demography and employment

The **total population** of Lithuania amounted to 2.8 million in 2019. 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 2019 (10,794). The total number of immigrants has also increased six-fold from 5,213 in 2010 to 28,914 in 2018[17]. Immigration of migrant workers from non-EU countries increased in 2019, filling low and medium-skilled vacancies in various economic sectors including construction[18].

In 2019, the **working age population** made up 65.1% of Lithuania's total population, slightly above the EU-27 average of 64.6%. By 2050, this share is expected to decrease by 9.4 pps to 55.7%. In parallel, the share of people over 65 years of age is expected to increase from 19.8% of the total population in 2019 to 31.5% by 2050.

Lithuania's **unemployment** rate (between 25 and 64 years) in 2019 stood at 6.0%, in line with the EU-27 average (6.0%) and well below the 2010 level of 17.8%. Likewise, **youth unemployment** (below the age of 25) stood at 11.9% in 2019, below the EU-27 average of 15.1%, 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)[19].





Public finance

In 2019, Lithuania's **general government expenditure** as a share of its GDP stood at 34.9%, lower than both the EU-27 average of 46.7% and the 2010 level (42.5%). The **general government deficit** as a share of GDP amounted to -0.3% in 2019, lower than both the EU-27 average (-0.6%) and the 2010 level (-6.9%). The government deficit, although having dropped slightly in 2019, has constantly increased after the peak of 2011 (-9.0%). Last, **general government gross debt** amounted to 36.3% in 2019, the same level as in 2010, but significantly lower than the EU-27 average of 77.8%[20].

Entrepreneurship and access to finance

According to the Doing Business 2020 report, in 2019 Lithuania ranked 34th out of 190 countries in terms of starting a business. This is a decline from the previous year (31st in 2018)[21].

The number of operating SMEs in Lithuania 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 years[22].

In May 2018, a measure was introduced named the '**Law on the Development of Social Business (*Socialinio verslo plėtros įstatymas*)**'. It identifies areas of social impact (integration of those with disabilities, retirees, unemployed, etc.) and areas of activity (such as the provision of social services on the Ministry of Social Security and Labour list, environmental protection, etc.), and lays down procedures for granting and removing 'social business entity' status. It specifies forms of state support and sets out principles for measuring social impact, thereby encouraging entrepreneurship[23].

In terms of **access to finance**, Lithuania performs below EU-28[24] average, as per the SBA (Small Business Act) Fact Sheet 2019. Its performance in access to finance has also deteriorated from the previous year. Generally, Lithuanian SMEs struggle obtaining loans due to the risk adverse behaviour of banks. SMEs also started perceiving a deterioration in access to public financial support, including guarantees. Furthermore, Lithuania has one of the lowest rates of venture capital investment[25].

According to the Global Competitiveness Report 2019, Lithuania ranked 75th out of 141 economies, in terms of its financial system, 83rd in terms of domestic credit to the private sector, 84th in the financing of SMEs and 96th in market capitalisation. It performed slightly better in venture capital availability and insurance premiums[26], where it ranked 63rd and 72nd respectively[27].

With regards to **loans to non-financial corporations** in the general economy, Lithuania has been on a fluctuating trend since 2010. It reached EUR 8,458.0 million in 2019, representing a marginal growth of 0.4% from 2010 level (EUR 8,427.0 million).

The Lithuanian government implemented several key measures in order to improve access to finance. In February 2019, new rules for investment funds came into force[28]. The measure updated the investment and diversification limits for pension funds investing in venture capital, private equity, and other asset classes. This has helped in increasing the ability to participate in venture and private equity market[29].

Additionally, 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 services[30]. The Accelerator Fund also built on the Entrepreneurship Promotion Funds I and II, financed by the European Social Fund (ESF), was established in 2009 and 2015, respectively, and provide loans and subsidies for starting a business.

3

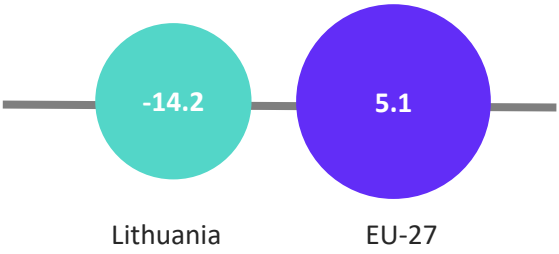
Key economic drivers of the construction sector

Business confidence

All confidence indicators have generally improved in 2019, compared to 2010. However, only the consumer confidence has improved since 2018, whereas the other two indicators, industry confidence and construction confidence, have declined.

The **consumer confidence** indicator increased to 5.1 in 2019 from 0.3 in 2018, remaining above the 2010 level of -25.7 and the EU-27 average of -6.2. The **industry confidence** indicator reached -3.5 in 2019. While this is above the 2010 level (-13.1) and EU-27 average (-4.8), it remains below the 2018 level (-1.7). Similarly, the **construction confidence** indicator declined from -11.5 in 2018 to -14.2 in 2019. Though this is well above the 2010 level (-41.7), it is below the EU-27 average of 5.1.

Construction confidence indicator in 2019



While the COVID-19 pandemic impacted consumer and industry confidence, Statistics Lithuania recorded a 16.0 points[31] increase in the country's consumer confidence indicator between April and September 2020[32].

Regarding the **investment ratio**, Lithuania has witnessed a continuous rise since 2013. It reached 22.2% in 2019 from 18.7% in 2013[33]. Additionally, **investment per worker** in 2018[34] reached EUR 14,409.6, surpassing the 2010 level (EUR 8,913.6) by 61.7%.

Domestic sales

The ranking of the five **most domestically sold product** groups in 2019 has changed since 2010. 'Portland cement, aluminous cement' (group 235112), ranked first in 2010, has been replaced by 'Particle board' (group 162112). Similarly, 'Prefabricated structural components' (group 236112), '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 buildings of metal' (group 251110), 'Prefabricated structural components' (group 236112), 'Ready-mixed concrete' (group 236310) and 'Fibreboard of wood' (group 162115) in 2019. Lithuania's top 5 most domestically sold product groups in 2019 forms 45.1% of all construction product domestic sales in 2019.

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

	Lithuania			EU-27
	Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
1	Particle board (group 162112)	116.1	11.0	Other structures and parts of structures, etc. (group 251123)
2	Prefabricated buildings of metal (group 251110)	106.2	10.0	Doors, windows and their frames (group 251210)
3	Prefabricated structural components (group 236112)	103.0	9.7	Ready-mixed concrete (group 236310)
4	Ready-mixed concrete (group 236310)	76.6	7.2	Prefabricated buildings of metal (group 251110)
5	Fibreboard of wood (group 162115)	76.2	7.2	Prefabricated structural components (group 236112)

Source: PRODCOM, 2020.

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

	Lithuania			EU-27
	Product	Value (EUR m)	Share in construction product export sales (%)	Product
1	Other structures and parts of structures, etc. (group 251123)	165.8	14.8	Ceramic tiles and flags (group 233110)
2	Prefabricated wooden buildings (group 162320)	150.8	14.3	Other structures and parts of structures, etc. (group 251123)
3	Assembled parquet panels (group 162210)	134.7	12.1	Fibreboard of wood or other ligneous materials (group 162115)
4	Pellets and briquettes (group 162915)	112.7	10.1	Doors, windows and their frames (group 251210)
5	Pellets and briquettes, etc. (group 162915)	88.7	8.2	Marble, travertine, alabaster (group 237011)

Source: PRODCOM, 2020.

Export of construction-related products and services

The ranking of the top 5 most exported construction products has changed between 2010 and 2019. 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), retained their second and third ranks respectively in 2010 and 2019. The 'Windows, French windows and their frames' (group 162311), raking fourth in 2010, moved to fifth position in 2019. Lithuania's top 5 most exported construction products in 2019 accounted for 59.7% of total exported construction products in 2019.

In terms of the **cross-border provision of construction services**[35], Lithuania exported EUR 305.1 million worldwide in 2018[36], representing an increase of 531.7% compared to 2010 (EUR 4.8 million). Exports to the EU-27 stood at EUR 236.7 million in the same year, accounting for 77.6% of the total construction-related services' exports. In parallel, Lithuania imported EUR 83.0 million worth of construction services from across the world in the same year, a considerable increase of 268.9% compared to 2010 (EUR 22.5 million). Imports from the EU-28[37] member states reached EUR 80.5 million, accounting for 97.0% of the total construction-related services' imports in 2018. As a result, Lithuania generated a **trade surplus** of EUR 222.1 million in 2018 (a significant increase of 33.2% since 2017).

Lithuanian exports of construction services between 2010 and 2018 ↑ **531.7%**

Access to finance in the construction sector

Access to finance is the most important concern for 13.0% of SMEs in Lithuania, much higher than the EU-28[38] average (7.0%). Bank loans remain relevant as a means of external financing for 32.0% of SMEs in Lithuania, whereas the EU-28 average stands at 45.0%. This is reflected by the share of SMEs applying for bank loans in Lithuania, which stood at 30.0%, higher than the EU-28 average (24.0%). Around 8.0% of Lithuanian SMEs did not apply because of fear of rejection, which was also higher than the EU-28 average (4.0%)[39].

As per the EIB Investment Survey (EIBIS) 2019 report, around 21.0% of firms in the Lithuanian construction sector are financially constrained[40], having reported access to finance as a key concern[41].

Moreover, around 20.0% and 21.0% of firms in the Lithuanian construction sector are optimistic about the availability of external and internal finance within the economy in the coming months. A large proportion of construction firms in the country rely on internal financing sources rather than external sources. Regarding the cost of finance, around 20.0% of the construction firms expressed dissatisfaction, and with regards to collateral requirements, 33.0% were dissatisfied in 2019[42].

Credit extended to the narrow construction sector in Lithuania has been significantly decreasing since 2011[43]. In 2019, it stood at EUR 412.4 million. This represents a 58.9% decline since 2011.

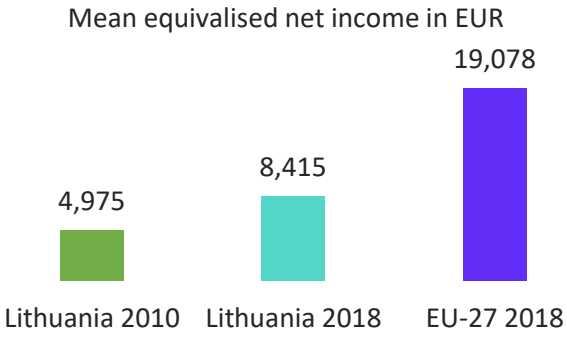
The Lithuanian government is increasingly focusing on measures to support alternative ways to finance SMEs. These include the promotion of business angel, venture capital investment and crowdfunding[44].

Access to housing

The total number of households in Lithuania reduced from 1,348,900 in 2010 to 1,308,300 in 2019, marking a 3.0% drop.

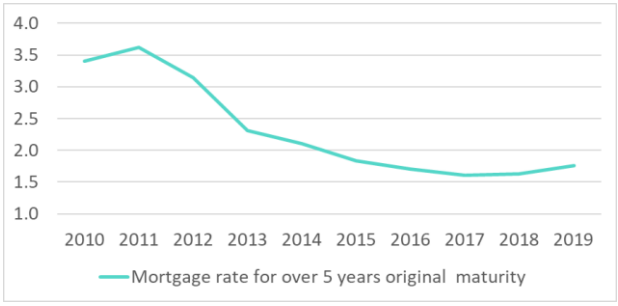
The **urbanisation rate** increased over the 2010-2019 period. While in 2010, 41.8% of the population lived in densely populated areas, this share increased to 43.2% in 2019. Likewise, the share of population living in cities and greater cities also increased from 42.1% in 2011 to 43.6% in 2018[45]. 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 2010-2019 period. In 2018, it stood at EUR 8,415.0, significantly below the EU-27 average of EUR 19,078.0.



Partly as a result of increasing incomes and declining interest rates, housing loans increased by 29.7%, from EUR 6.0 billion in 2010 to EUR 7.8 billion in 2018[46]. The **interest rates** on mortgages (for over five years' original maturity) have been consistently declining from 3.4% in 2010 to 1.6% in 2018. However, they increased again in 2019 reaching 1.8% (Figure 7).

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



Source: ECB MFI Interest Rate Statistics, 2020.

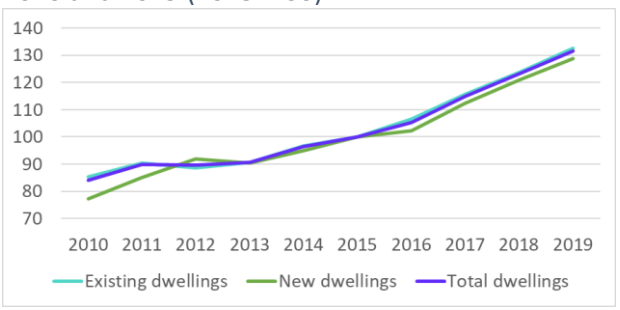
Between 2015 and 2019, the **house prices index** for total dwellings increased by 31.6%, driven by a 32.5% and a 28.8% increase in existing dwelling units and new dwelling units over the same reference period, respectively (Figure 8). Similarly, Lithuania's rental property market has stayed positive over the 2010-2019 period as rents continued to rise. The indexed values of actual

rentals for housing increased by 26.1% over the 2015-2019 period.

Household incomes in Lithuania witnessed faster growth than property prices in 2019. As a result house prices increased by 4.6% till the second quarter of 2020[47,48].

House price index between 2015 and 2019 ↑ **31.6%**

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



Source: Eurostat, 2020.

Amid the increasing house prices, sales in the Lithuanian housing market also increased significantly. The number of real estate transactions, including sales of houses, reached 135,000 by 2019-end, representing an increment of 7.0% over the previous year[49,50].

The trend of increasing real estate transactions continued till the first two months of 2020. However, due to COVID-19 and the imposition of quarantine and travel restrictions from March onwards, sales for apartments and houses plunged by 26.0% and 27.0% respectively[51].

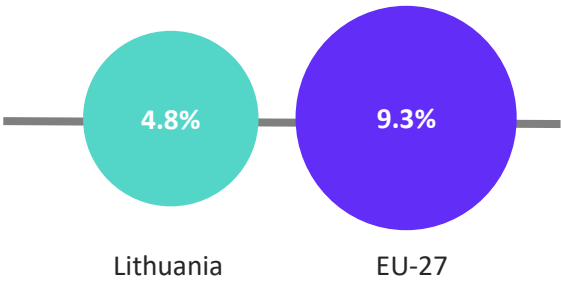
Nonetheless, in the third quarter of 2020, the Lithuanian housing market started an upward move in terms of sales, as a result of the relaxation of restrictions implemented. Purchases and sales transactions of apartments and houses experienced a 51.0% and 52.0% increase, respectively, in the third quarter of 2020, as compared to the second quarter of 2020. This helped mitigate the losses experienced in the second quarter of the year[52].

In parallel, **building permits** issued in Lithuania have increased since 2015. The residential buildings permit index increased by 14.0% over the 2015-2019 period. However, put in absolute numbers, the total number of building permits in 2019 stood at 6,107, marking an annual decrease of 7.7%[53].

Much of the **building stock** in Lithuania is owner-occupied. In 2019, around 90.3% of the population were **owners**, below the 2010 level (93.6%). The remaining 9.7% of the population comprised **tenants** in 2019, above the 2010 level (6.4%). Additionally, the home ownership rates for the population earning **above 60.0% of the median equivalised income**[54] in Lithuania has decreased over the 2010-2019 period, from 95.1% to 91.7%. In 2018, it stood at 92.4%, remaining above the EU-27 average of 74.0%. Similarly, for the population earning **below 60.0% of the median equivalised income**, the home ownership rate declined from 87.9% in 2010 to 85.0% in 2019. In 2018, it stood at 85.0%, remaining significantly above the EU-27 average of 49.8%.

The **overcrowding rate**[55] in Lithuania stood at 22.9% in 2019, well above the EU-27 average of 17.1%. However, it lies below the 2010 level of 45.5%[56]. The **severe housing deprivation rate**[57] stood at 7.8% in 2019, above the EU-27 average of 4.0%. This is also well below 2010 (13.5%)[58]. Lastly, the **housing cost overburden rate**[59] stood at 4.8% in 2019 as compared to the EU-27 average of 9.3%. This is also below the 2010 level (10.6%)[60].

Housing cost overburden rate in 2019



Infrastructure

According to the World Economic Forum Global Competitiveness Index 2019, Lithuania ranked 39th out of 141 countries in terms of its overall infrastructure quality[61].

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, respectively[62]. Lithuania's road density remained unchanged at 5.0 km/m^2 throughout the 2010-2018[63] period. However, **rail density** in 2018 stood at 31.0 km/m^2, representing a 10.7% increase from 2010 (28.0 km/m^2).

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[64,65].

4

Key issues and barriers in the construction sector

Company failure

Business demography has changed considerably in Lithuania's broad construction sector over the 2010-2018 period. Specifically, in 2018[66], company deaths were generally higher than company births.

The number of **company births** in the narrow construction sub-sector reached 8,055 in 2018, representing a growth of 104.8% over the 2010-2018[67] period. The real estate activities sub-sector witnessed 181.6% growth in company births over the same period, with numbers reaching up to 3,768 in 2018. Lastly, the number of company births in the architectural and engineering activities sub-sector reached 692 in 2018, marking an increment of 77.4% since 2010.

The number of **company deaths** in the narrow construction sub-sector reached 9,386 in 2018, increasing by 180.8% over the 2010-2018[68] period. The real estate activities sub-sector witnessed a 284.4% growth in company deaths over the same period, with numbers reaching up to 4,374 in 2018. The number of company deaths in the architectural and engineering activities sub-sector also increased to 1,222 in 2018, representing a growth of 296.8% since 2010.

Company deaths in architectural and engineering activities sub-sector between 2010 and 2018 ↑ **296.8%**

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 37, which represents a decline of 90.9% from 343 in 2015[69].

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 bankrupt[70].

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 2018[71].

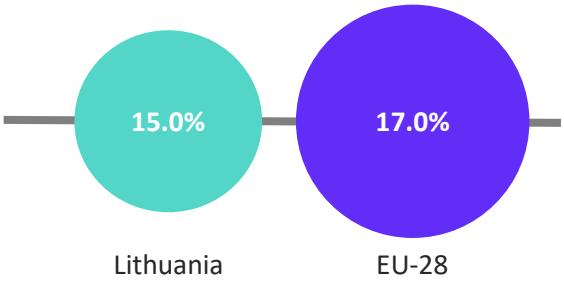
Trade credit

According to the Survey on the Access to Finance of Enterprises (SAFE) report 2019, the use of **trade credit** remains limited in Lithuania, as only 21.0% of companies consider it a relevant source of finance. This is well below the EU-28[72] average of 31.0%. Around 15.0% of companies reported using it between April and September 2019. This is slightly lower than the EU-28 average of 17.0%[73].

In addition, 31.0% of total SMEs in Lithuania applied for trade credit in the last six months, almost in line with the EU-28[74] average of 32.0%. Around 4.0% of the SMEs did not apply because of sufficient internal funds, and an insignificant percentage of SMEs did not apply fearing rejection. Moreover, 14.0% of SMEs believed that trade credit conditions improved during April to September 2019 (15.0% in the EU-28), whereas

19.0% believed that they deteriorated (6.0% in the EU-28). Around 57.0% of SMEs also believed that conditions remained unchanged during the same period (71.0% in the EU-28)[75].

Share of SMEs using trade credit in 2019



Late payment

According to the SAFE report 2019, around 55.0% of SMEs in Lithuania experienced late payments, much higher than the EU-28[76] average of 47.0%[77].

Furthermore, around 19.0% of SMEs in Lithuania reported facing late payment issues regularly in 2019, which is also higher than the EU-28[78] average of 15.0%. As a result, around 17.0% of SMEs reported that the issue of late payments hinder their payment to suppliers, and 10.0% reported that it undermined investments or new hiring. A smaller share of SMEs (9.0%) also reported that late payments affect their production or operations, while for others (8.0%), it further delays the repayments of loans, compelling them to use additional financing sources[79].

According to the CRIBIS Dun and Bradstreet Payment Study 2020, around 66.3% of very small companies and 6.2% of large-scale companies in the Lithuanian construction sector made their payments on time in 2019[80].

Amid the global COVID-19 pandemic, the Lithuanian economy has felt significant impact. Around 35.0% 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 (June 2020 to May 2021). Around 53.0% of businesses believe that late payments have a high impact on liquidity squeeze[81]. Following the reopening of the economy after the COVID-19 pandemic, around 59.0% of companies accepted longer payment terms than desired in order to maintain healthy client relationships. To solve this persisting issue, 57.0% of Lithuanian businesses would like to have new legislation introduced[82].

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 year[83].

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 warehouse[84], 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
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	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 sewage connection	5 days	No charge
Connect to water services	5 days	No charge

Procedure	Time to complete	Associated costs
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, Word Bank, 2019.

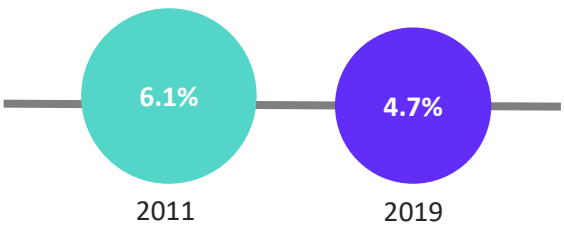
Skills shortage

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 151.9%, from 429 in 2010 to 1,080 in 2019. Similarly, in the real estate activities sub-sector it grew by 91.0%, from 72 in 2010 to 138 in 2019. The **job vacancy rate** for the narrow construction sub-sector increased from 0.6% in 2010 to 1.1% in 2019, below its 2018 level (1.3%). Similarly, in the real estate activities sub-sector, it grew from 0.5% in 2010 to 0.8% in 2019.

Number of job vacancies in the narrow construction sub-sector between 2010 and 2019 ↑ 151.9%

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 4.7% in 2019, as compared to 6.1% in 2011[85] and 5.6% in 2018.

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 29.9%, from 7,291 in 2010 to 5,109 in 2018[86]. This decline was primarily due to a decrease in the number of students in architecture and building by 52.3%, over the 2010-2018 period, reaching 1,197. Similarly, the number of students in engineering and manufacturing and processing decreased by 18.8% over the same period (reaching 3,371) and 14.5% (reaching 541), respectively.

Number of tertiary students in engineering, manufacturing and construction between 2010 and 2018 ↓ 29.9%

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 2019 (see Chapter 2 – Demography and Employment), the outflow of skilled labour continued, limiting the potential for mitigating the labour shortage in the country[87]. 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 identified[88].

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 to 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 force[89].

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.

To address the issue of skills shortage, in September 2020, 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 sector[90].

Sector- and sub-sector-specific issues

Material efficiency and waste management

In 2018[91], a total of 2,527 kg per capita of waste was generated in Lithuania. Construction and demolition waste (CDW) comprised of 8.8% of the total waste generated, much lower than the EU-27 (36.0%)[92].

Moreover, in 2018, the share of hazardous waste generated by Lithuania stood at 2.7% of total waste, lower than the EU-27 (4.4%). Out of the total hazardous waste generated in 2018, around 73.1 thousand tonnes had been recycled[93]. A national target of municipal waste recycling and preparation for reuse of 50.0% by 2020 was set up and the country is on track to achieve this[94].

Presently, waste management in Lithuania, including CDW, is administered by the Law on Waste Management[95]. 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 "Ekobazė[96]" 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 charge[97].

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. From the present levels of emissions, it can be estimated that the country may achieve the 2020 target, but the 2030 target is riskier to achieve[98].

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 emissions[99].

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 2018[100] totalled 72,161.0 and 12,256.5 tonnes respectively. Emissions in the narrow construction sub-sector decreased by 8.0% during the 2010-2018 period, while those in the real estate activities sub-sector experienced an 11.4% decrease.

Emissions of greenhouse gases in the narrow construction sub-sector between 2010 and 2018 ↓ **8.0%**

5

Innovation in the construction sector

Innovation performance

According to the European Innovation Scoreboard 2020, Lithuania is classified as a 'Moderate Innovator', with a continuous increase in performance since 2012[101].

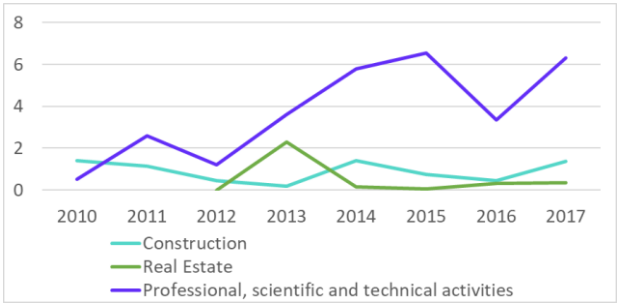
As per the report, innovators, innovation-friendly environment, linkages and human resources are the strongest innovation dimensions of Lithuania. The country scores high on indicators such as SMEs innovating in-house, broadband penetration, innovative SMEs collaborating with others and population with tertiary education. On the other hand, employment impacts, intellectual assets, sales impact and attractive research systems are the country's weakest innovation dimensions. The areas of employment in knowledge-intensive activities, design applications, knowledge-intensive services exports and foreign doctorate students are amongst the lowest-scoring indicators[102].

Business enterprise R&D (BERD) expenditure has been fluctuating since 2010 (Figure 9). In the narrow construction sub-sector, BERD fluctuated between 2010-2017. It stood at EUR 1.4 million in 2017[103], the same level as in 2010. BERD in the real estate activities sub-sector also fluctuated between 2010 and 2017, reaching EUR 0.4 million in 2017, from EUR 0.8 million in 2010[104], representing 51.1% drop. Lastly, the BERD in professional, scientific and technical activities increased from EUR 0.5 million in 2010 to EUR 6.3 million in 2017[105], representing a significant increase of 1,111.9% over the 2010-2017 period.

BERD in professional, scientific and technical activities sub-sector between 2010 and 2017

↑ 1,111.9%

Figure 9: Business enterprise R&D expenditure (BERD) per construction sub-sector in Lithuania between 2010 and 2017[106] (EUR m)



Source: Eurostat, 2020.

In parallel, **total R&D personnel** (full-time equivalents – FTE[107]) in the broad construction sector experienced a generally increasing trend between 2010 and 2017[108]. This was largely driven by the professional, scientific and technical activities sub-sector, which sharply increased its total R&D FTEs from 43 in 2010 to 279 in 2017 (+548.8%). This was followed by the real estate activities sub-sector, which also experienced an increase from 6 total R&D FTEs in 2010 to 18 in 2017 (+200.0%). Lastly, in the narrow construction sub-sector, it increased from 21 in 2010 to 44 in 2017 (+109.5%).

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. 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 2019 EU R&D Scoreboard[109].

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[110].

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 graduates[111].

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 2027[112]. Recently, the government introduced a subsidy for firms investing in new, high-impact technologies, to make the latest technologies more affordable for SMEs[113].

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 subsidises[114]:

- 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 products[115].

Eco-innovation and digitalisation

According to the 2019 Eco-Innovation Scoreboard (Eco-IS), Lithuania scored 82, in comparison to the EU-28[116] average of 100. Lithuania was categorised under 'Countries catching up with Eco-I'[117].

As per the report, Lithuania's score was below EU-28[118] average on four out of the five indicators, namely eco-innovation inputs, eco-innovation activities, eco-innovation outputs and resource efficiency outcomes, with eco-innovation outputs being the worst scorer. However, it scored well above EU-28 average in socio-economic outcomes[119].

According to the European Commission Digital Economy and Society Index (DESI) 2020, Lithuania ranked 14th (score: 53.9), out of the EU-28[120] member states (average score: 52.6)[121].

Lithuania's performance in connectivity ranked 19th in 2020, worsening from 15th in 2019. Conversely, under human capital, it ranked 18th in 2020, representing an improvement from 19th in 2019. In terms of the use of internet services, the country's performance deteriorated from 11th in 2019 to 13th in 2020. Similarly, the integration of digital technology dropped to 10th in 2020 from 9th in 2019. Lastly, the country's performance in digital public services improved in ranking from the previous year. It ranked 6th in 2020, up from 7th in 2019[122].

To address these weaknesses and prepare for digitalisation, Lithuania has launched several programmes and schemes. These include the establishment of the Lithuanian Innovation Development Programme 2014-2020, the Digital Agenda for the Republic of Lithuania 2014-2020 and the Next Generation Internet Access Development Plan for 2014-2020. All these programmes aim at strengthening the Lithuanian economy through promoting business innovation and motivating citizens to use ICT. The **Pramonė (Industry) 4.0** scheme launched in 2017, aims at increasing and strengthening the competitiveness and productivity of Lithuanian industry and promoting the integration of digital solutions and new technologies[123].

The authorities have launched the **Lithuanian Industry Digitisation Roadmap for 2019-2030**. The plan will serve as a guidance for industry digitisation efforts following the Industry 4.0 initiatives across Europe to make the local manufacturing more proficient and competitive. The roadmap aims to assist in steering the Lithuanian manufacturing industry development towards global advancement[124]. The authorities are also working on a new inter-institutional plan, laying out a digitalised industry vision by 2030[125]. The implementation of the roadmap is expected to have a significant impact on the competitiveness and productivity of industry[126].

According to EIBIS 2019 report, only 21.0% of companies in the Lithuanian construction sector have undertaken innovation activities. This is the lowest level when compared to other sectors[127].

In terms of implementation of digital activities such as drones and Internet of Things (IoT) by the construction sector, Lithuania remains behind the EU-28[128] average. Around 15.0% of firms in Lithuania have used drones, less than the EU-28 average (21.0%), and only 13.0% of firms have used IoT, less than the EU-28 average (26.0%). On the other hand, around 13.0% of firms in Lithuania have used 3D printing, higher than the EU-28 average (11.0%), and in the region of 23.0% of firms have used augmented or virtual reality, much higher than the EU-28 average (12.0%)[129].

In order to keep the construction sector informed of its progress in digitalisation and the changes this brings, the Ministry of Environment launched a website 'www.statyba40.lt'[130]. 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 information[131].

In May 2020, the Lithuanian Ministry of Environment announced its intention to gradually apply Building Information Modelling (BIM) technology in the construction of public buildings from the following year. The application of BIM methods will be mandatory in the design, construction and installation of public sector buildings and mobile facilities (electricity networks, gas pipelines, communication lines, cables and their duct systems). The first phase of digitisation will start from January 2021[132].

The Lithuanian Ministry of Environment has also launched a project named, '**Development of Measures for Increasing the Efficiency of Life Cycle Processes of Public Sector Buildings by Applying Building Information Modelling (BIM-LT project)**'[133]. The project aims at increasing the efficiency of the use of resources allocated for the planning, design, construction, operation and management of the construction of public sector buildings by applying BIM. The project has an implementation period of three years – January 2019 to January 2022[134].

Additionally, the Lithuanian government has launched an initiative named, '**Skaitmeninė statyba**', meaning Digital Construction. It is a collaboration between business and science to develop a single infrastructure for the development of digital construction models in Lithuania. These models will be integrated in real-time projects[135]. Following this, unified requirements for BIM will be created. A single construction information classification system will be continuously developed, and BIM-related standards will be implemented. This shall follow preparations of public procurement specifications and other digital construction-related activities will be coordinated and organised. Businesses will also be encouraged to digitise and automate various construction processes bound together, thereby optimising operations and lastly, the competitiveness of the construction sector will be increased and promoted internationally from Lithuania[136].

In July 2020, the project for a viaduct over a railway in Mažeikiai won the transport infrastructure prize in the competition "Lithuanian BIM Projects" as it was judged the best BIM transport infrastructure project[137].

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*)[138].

The strategy, initially approved by the government in 2004, sets the long-term national policy objectives and priorities for the improvement of housing up until 2020. This comprises the design and implementation of housing development, renovation, and modernisation, as well as financial and social support programmes and measures. The strategy identifies the necessity to supply additional affordable housing opportunities to middle and low-income households, specifically by strengthening the rental market. Thus, by 2020, the strategy aims at increasing the proportion of rental properties to 18.0% of the total housing stock, with social housing growing to account for about 4.0% to 5.0% of this stock[139] (i.e. reaching a total of 25,000 to 30,000 apartments[140]).

In addition, the strategy aims at increasing the annual volume of residential construction, reaching 12,000 to 15,000 new dwellings by 2020. Eventually, the strategy focuses on increasing the annual investment in new residential construction and modernisation/renovation of the dwelling stock by 2020[141].

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*). According to the plan, implementation of funding from the European Regional Development Fund (ERDF) has been stated. It aims to meet the growing demand for affordable dwellings. This will be done by financing projects such as the construction of new social housing, the reconstruction or maintenance of existing ones (residential dwellings, as well as dormitories, foster homes, shelters, etc.) and the conversion of non-residential buildings into social housing. The action plan also seeks to promote energy efficiency by supporting households in buying a social dwelling with a minimum energy class of C[142].

The action plan is part of the National Progress Programme for Lithuania, which aims to increase the accessibility of housing to vulnerable groups, and the Lithuanian Housing Strategy, which sets the long-term national policy objectives and priorities to improve housing in Lithuania[143].

The goal of the action plan is to provide 1,150 housing units by 2020 and to accommodate more than 12,000 individuals. By the end of 2018, a total of 439 apartments were delivered across different municipalities in the country. The plan has proved to be partially successful thus far, although progress varies considerably from one municipality to another. 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. A primary concern regarding the plan is whether the measure will deliver the target number of social housing units by 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 Lithuania[144].

In November 2015, the Ministry of Environment approved the **Lithuanian construction sector**

development guidelines for the 2015-2020 period (*Lietuvos statybų sektoriaus plėtros ir vystymo 2015–2020 metais gaires*). The guidelines laid down strategic objectives for the sector by 2020, as well as the targets to be achieved. These aimed at addressing the drawbacks associated with qualifications, energy and environmental protection requirements, market access, information technology application and deployment areas[145].

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 appraisal[146]. 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. Till 2019, around 246 families had used the subsidies to purchase first homes in the regions. The government has set aside EUR 10.0 million for the programme[147].

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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 pandemic[149].

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 buildings[150].

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 1.11.01: 2010), among others[151].

From January 2018, the **Law on Construction** came into force. According to the new provisions, construction or reconstruction of a special building will be 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 allocated[152].

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 initiatives[153].

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 works[154]. 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 insurance[155]. 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 phase[156].

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 person[157]. 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 bankrupt[158].

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 defects[159].

7

Current status and national strategies to meet Construction 2020 objectives

TO 1 – Investment conditions and volumes

Total **investment by the broad construction sector**[160] 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 268.9 million in 2018[161], representing an increase of 222.8% over the period. Similarly, investment by the real estate activities sub-sector went from EUR 0.8 billion in 2010 to EUR 1.4 billion in 2018, representing an increase of 82.5% over the same period.

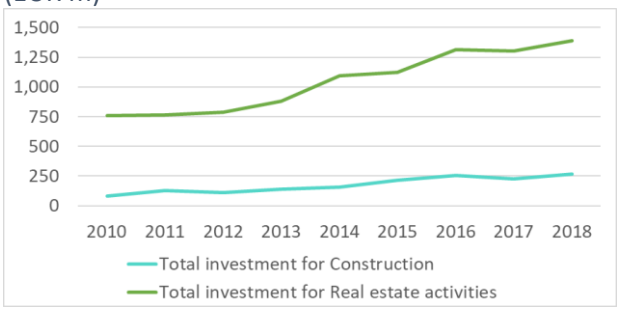
Total investment by the narrow construction sub-sector between 2010 and 2018 ↑ **222.8%**

Total investment by the real estate activities sub-sector between 2010 and 2018 ↑ **82.5%**

In parallel, **investment in intellectual property products** by the narrow construction sub-sector increased by 94.6%, from EUR 13.0 million in 2010 to EUR 25.3 million in 2018[162]. Likewise, investment by the real estate activities sub-sector for this category increased by 264.9%, reaching EUR 13.5 million in 2018[163] compared to EUR 3.7 million in 2010.

Additionally, **investment in machinery,** by the narrow construction sub-sector increased by 166.8%, from EUR 23.5 million in 2010 to EUR 62.7 million in 2018[164]. Similarly, investment by the real estate activities sub-sector for this category increased by 155.9%, reaching EUR 32.5 million in 2018 from EUR 12.7 million in 2010.

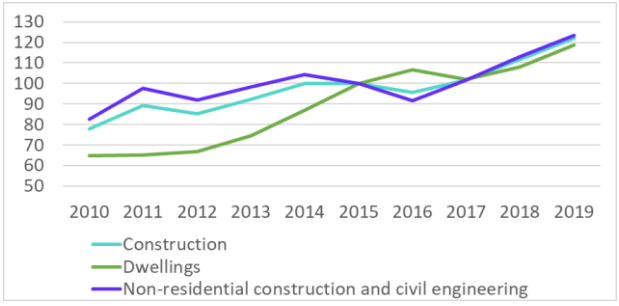
Figure 10: Investment by the Lithuanian broad construction sector between 2010 and 2018 (EUR m)



Source: Eurostat, 2020.

The **investment index in broad construction sector**[165] has experienced a moderate growth since 2015, rising by 22.1% over 2015-2018[166] (Figure 11). This growth was mainly driven by investment in non-residential construction and civil engineering and dwellings by the whole economy, which increased by 23.4% and 18.8% respectively, between 2015 and 2019. In absolute terms, **investment in the broad construction** sector totalled EUR 4.3 billion in 2017[167], out of which EUR 3.2 billion was invested in non-residential and civil engineering and EUR 1.3 billion was devoted to dwellings[168].

Figure 11: Investment index in the Lithuanian construction sector between 2010 and 2019 (2015[100])



Source: AMECO, 2019.

Total investment in broad construction sector between 2015 and 2018 ↑ **22.1%**

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 607.0 million in 2018[169], representing an increase of 153.0%. The country's **renovation spending** as a percentage of total household disposable income has also increased from 1.2% in 2010 to 2.2% in 2018.

The share of **total inland[170] infrastructure investment** in the GDP reached 0.9% in 2018[171] compared to 1.9% in 2010. Particularly, investment in rail, air and road infrastructure dropped by 39.3%, 25.0% and 23.0% over the 2010-2018 period, totalling EUR 65.0 million, EUR 6.0 million and EUR 325.0 million, respectively. In contrast, investment in sea infrastructure increased by 71.4% over the same period, reaching EUR 36.0 million. Additionally, the **investments in the maintenance** of air, inland waterways and rail infrastructure increased by 300.0%, 100.0% and 9.1% over the 2010-2018[172] period, respectively. Conversely, investments in the maintenance of sea and road infrastructure decreased by 57.1% and 10.0%, over the same period, respectively.

Investment in sea infrastructure between 2010 and 2018 ↑ **71.4%**

Investment in maintenance of air transport infrastructure between 2010 and 2018 ↑ **300.0%**

Lithuania is benefit 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 September 2020, financing under EFSI amounted to EUR 461.0 million and is set to trigger additional investments of EUR 1.8 billion. Under the infrastructure and innovation window, 13 projects have been financed by the European Investment Bank (EIB) with EFSI backing. These projects amount to EUR 440.0 million and are set to trigger EUR 1.6 billion in total investments. Under the SMEs window, 8 agreements have been approved, involving a total financing of EUR 21.0 million, and are set to trigger investments of up to EUR 440.0 million[173].

In 2019, the EIB Group invested almost EUR 16.0 million in infrastructure in Lithuania[174].

The financial allocation from EU Cohesion Policy funds for Lithuania amounts to EUR 7.9 billion in the current Multiannual Financial Framework[175]. This is equivalent to around 2.6% of the GDP every year. By the end of 2019, around EUR 7.1 billion (91.0% of the total amount planned) had already been allocated to specific projects, while EUR 3.6 billion was reported as having been spent by other selected projects. In addition, around EUR 1.4 billion has been allocated for smart growth, EUR 3.0 billion for sustainable growth and sustainable transport, and EUR 2.1 billion for inclusive growth[176].

Specific to infrastructure, by 2019, investments driven by EU funds led to the building or modernisation of 493.0 kilometres of roads in Lithuania, both regionally and in connection with the Trans-European Transport Network (TEN-T)[177].

In November 2019, authorities had planned to rebuild and upgrade a 40.0 km stretch of the E67 Via Baltica highway connecting Lithuania with Poland. With an estimated cost of around EUR 300.0 million, the work is expected to commence in 2021 and the stretch should be complete by 2025. The work is being planned by the Lithuanian Road Administration (LAKD) on behalf of the Ministry of Transport[178].

Further, in June 2020, a call for tender for the project **Rail Baltica** was launched by the Lithuanian railway infrastructure valued at EUR 475.0 million. Construction will begin on the Kaunas-Panevėžys railway and engineering buildings on the line. This project entails the construction of longest railway bridge in the Baltic States spanning the Neris river near Jonava, for which the estimated cost is EUR 67.0 million. The EU will finance 85.0% of the total value, while the rest will be from Lithuania's national budget[179].

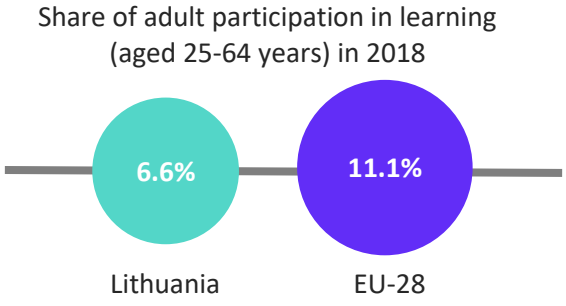
In May 2020, the Lithuanian government announced cutting EU funding for various infrastructure projects in Vilnius by EUR 41.0 million[180].

In addition, there is the chance that further cuts will be declared in the future. As a result, the Interior Ministry's programme projects for renovating public spaces and the Transport Ministry's sustainable mobility programme is being affected. Though no specific reason for the funding cuts were given, it is apparent that the government intends to channel funds into road maintenance[181].

TO 2 – Skills

In 2018, the share of **early leavers from education and training** in Lithuania dropped to 4.6% from 8.7% in 2009[182]. This is also lower than the EU-28[183] average of 10.6% for the same year. The share of **tertiary educational attainment** also improved in 2018, reaching 57.6% (the highest in the EU), as compared to 2009 level (40.4%). This is also higher than the EU-28 average in 2018 (40.7%). This denotes the rising awareness of the role of education in the country in comparison with other EU Member States[184].

The share of **adult participation in learning** (aged 25-64 years) stood at 6.6% in 2018 which, despite having improved from 2009 level (4.6%), remains below the EU-28 average of 11.1% for the same period. However this not enough to respond to challenges, such as the ageing population and skill shifts related to innovation[185]. The low participation in adult learning restrains the workforce's ability to adapt to changes in the labour market and fill the skills gap[186]. Participation in life-long learning in Lithuania is also low (6.6% in 2018) and is lower than most other EU countries. The national goal is to increase it to 12.0% by 2022[187].



The **public expenditure on education** as a percentage of Lithuania's GDP declined to 4.9% in 2018 from 7.2% in 2009. However, it remained slightly above the EU-28 average of 4.6%. The **employment rate of recent graduates** has also improved, from 73.0% in 2009 to 84.7% in 2018, also above the EU-28 average (81.6%). Recent tertiary graduates in Lithuania also have a high employment rate (90.4% in 2018), in comparison with the EU-28 average (85.5%)[188].

Despite the high employment rates, skills mismatch and over-qualification are widespread among tertiary graduates in Lithuania. At the beginning of their careers, graduates tend to work in less qualified jobs because they lack job-relevant skills[189].

In 2017[190], the share of the **number of students participating in upper secondary vocational education and training (VET)** stood at 27.4%, being among the lowest in the EU member states. This marks a marginal improvement from the last year but still significantly below the EU-28[191] average of 47.8%. This also highlights a significant underutilisation of the potential of VET. Regarding the rate of **employment of VET graduates,** 2018 saw a significant improvement from the previous year. In 2018, it stood at 79.2%, up from 71.5% in 2017. This is in line with the EU-28 average of 79.5% in 2018[192,193].

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 will 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[194,195].

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 qualification[196].

Recently, in September 2020, the Ministry of Education, Science and Sports introduced vocational modules in the last four years of

secondary (general) education. This aims at bridging the two learning paths and promoting the attractiveness and flexibility of VET[197].

In parallel, the **2016-2023 non-formal adult education and continuous VET development programme** has been launched to create a coherent adult education system and matching life-long learning to meet the needs of society and the economy[198].

To improve the qualification of workers in Lithuania's construction sector, several initiatives have been launched by the government. These include the promotion of professional qualifications following market needs, as well as the use of EU programmes such as Build Up skills and Erasmus+ for developing effective trainings[199].

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 backgrounds[200].

TO 3 – Resource efficiency / Sustainable construction

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. According to 2018 data, Lithuanian central government authorities owned about 2.3 million square metres of buildings. The central government buildings sector is being reformed and the volume of renovation of public buildings is also increasing. The total area of central government buildings is anticipated to decrease to 1.8 million square metres by 2021. 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 metres[201].

Lithuania is presently developing a long-term national strategy for the renovation of the public and private residential and non-residential building sectors. This encompasses an overview of the existing building stock, identifying the technical, economic and physical measures and methods, and implementing the plan of converting all public and private residential and non-residential buildings to near zero-energy buildings (NZEB) by 2050[202].

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's Housing Energy Efficiency Agency, established on February 2013, is planning to coordinate a programme for Energy Efficiency Improvements in Public Buildings. It is also implementing the project "**Promotion of the Renovation of Multi-apartment Buildings, Stage II**. The purpose of this project is to encourage the owners of apartments and other premises in multi-apartment buildings to participate in the Multi-apartment Building Renovation (modernisation) Programme[203].

In August 2017, Lithuania's State Territorial Planning and Construction Inspectorate (VTPSI) implemented the European Regional Development Fund (ERDF) funded project entitled '**Maintenance and Control of the Quality of Construction of Modernised Buildings'**. The project aimed at ensuring higher standard renovations of apartment and public buildings across the Baltic republic. Around 2,500 inspections had been planned to span over the next three years, representing an annual review of 800[204].

The final energy consumption projected for 2040, under the existing energy efficiency policy, measures and programmes (EPM) in Lithuania amounts to 5,240 ktoe, out of which 1,360 ktoe is projected to come from the household sector. As per this EPM scenario model, final energy consumption is expected to be 30.9% lower in 2040 compared with 2018[205].

The country had committed to achieve 23.0% renewable energy sources (RES) in final energy consumption by 2020. However, this target was met back in 2014. The country is implementing the development of 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%[206]. 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 level. Specific to the household sector, the primary and final energy consumption projections for 2020 stood at 1,469 ktoe and for 2030, it is 1,308 ktoe[207].

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 Terawatt-hour (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) 2018/844[208].

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. Their purpose is to address concerns that have directly emerged from the COVID-19 pandemic with the aim of building back a better economy. Some of these measures are[209]:

- **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 by 30.0 - 40.0% by 2020 and compared to 2011, save 2.0-3.0 TWh heat per year. 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 sector[210].

TO 4 – Single Market

According to 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 satisfactory[211].

As per the report, 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-28[212] 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). Lastly, the conformity deficit reached 0.8%, higher than in the previous report (0.1%), but lower than EU-28 average (1.2%)[213].

The country's performance under infringements also improved. Notably, pending cases stood at 12 in 2019, compared to the EU-28[214] average of 29. The average case duration was 36.7 months in 2019, slightly higher than the EU-28 average (34.8 months)[215].

Lithuania's average response time complies with the 70-day limit in the EU Pilot[216]. 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 indicators[217].

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 information. Payments are irregular and businesses also witness bribes in the public procurement processes. Moreover, some businesses have reported of losing tender due to corrupt practices and favouritism in the decision-making of public officials[218].

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 criteria[219].

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 Procurement[220].

TO 5 – International competitiveness

According to the Global Competitiveness Index 2019, Lithuania ranked 39th out of 141 economies, one place above its 2018 [221].

As per the report, Lithuania ranked 9th in trade tariffs, 10th in services trade openness, 59th in prevalence of non-tariff barriers and 112th in complexity of tariffs[222].

Lithuania performs above the EU-28[223] average in terms of **internationalisation**. In fact, it scored considerably high in information availability, involvement of trade community, advance rulings, formalities, automation of formalities and procedures, border agency cooperation and others. This is mostly due to the government's proactive policies directed towards export promotion and their effective implementation since 2008[224].

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 121.0% over the period 2010-2018, reaching EUR 1079.1 million. This is much below the EU-27 average level of EUR 25.2 billion in 2018. In 2019, it further increased to EUR 1117.6 million, representing an increase of 128.9% since 2010. However, Lithuania's share of exports of all construction-related products stood at 83.8% of the total production value in 2019, same as the 2010 level but considerably above the EU-27 average of 11.4%. In 2019, this share slightly reduced to 77.4%.

Export values of all construction-related products between 2010 and 2019 ↑ **128.9%**

Conversely, the export value of architectural services declined by 93.8% over the period 2010-2019, reaching EUR 24,020 million. This is below the EU-27 average of EUR 57.9 million. Lithuania's share of exports value as share of turnover in architectural services in 2018 stood at 0.6%.

Exports value of all architectural services between 2010 and 2019 ↓ **93.8%**

With regards to **inward FATS** (foreign affiliates statistics)[225], value added at factor cost in the narrow construction, real estate activities and manufacturing sub-sectors grew by 310.6%, 109.6% and 69.7%, respectively, between 2010 and 2017[226]. Similarly, turnover in the narrow construction, real estate activities and manufacturing sub-sectors grew by 144.4%, 75.2% and 25.8% respectively over the 2010-2017[227] period. In terms of **outward FATS**[228], turnover in the real estate activities, narrow construction and manufacturing sub-sectors grew by 248.8%, 237.6% and 4.3% respectively over the 2010-2017[229] period. The number of persons employed in the real estate activities, narrow construction and manufacturing sub-sectors also grew by 307.4%, 71.4% and 6.9% respectively over the same period.

As per the SBA Fact Sheet 2019, the Lithuanian government has developed merely two measures during the period 2018 and the first quarter of 2019 to promote internationalisation. In January 2018, the **Internationalisation LT agency (*Tarptautiškumas LT*)** was established. It had 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 years. This measure seeks to strike a balance between supporting the fast-growing, high value-added but small high-tech sectors and traditional sectors that are less profitable but larger in size[230].

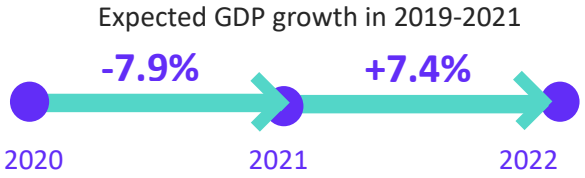
Another measure introduced by INVEGA (a state-incorporated financial entity) in February 2018 was the **Export Credit Guarantees,** (***Eksporto kreditų garantijos***). INVEGA commits to sharing risks with exporters by covering up to 90.0% of actual losses when a buyer fails to pay in line with the contract or goes bankrupt. This allows exporters to protect themselves against default by a foreign buyer[231].

8

Outlook

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

As a result, Lithuania's GDP is estimated to decline by 7.9% in 2020 and then grow by 7.4% in 2021, reaching EUR 42.5 billion in 2021.



In line with the general economy, the **number of enterprises** in the broad construction sector is expected to decline annually by 17.0% in 2020, and then increase by 20.0% in 2021, totalling 66,603 enterprises.

Similarly, **turnover** in the broad construction sector is forecast to decline by 16.8% in 2020 and then increase by 14.6% in 2021, amounting to EUR 10.3 billion. The **total value added** of the broad construction sector is also expected to decrease by 16.2% in 2020 and then grow by 14.1% in 2021, reaching EUR 3.6 billion.

However, the **volume index of production** in the broad construction sector is expected to increase annually by 4.8 ip in 2020 and 5.1 ip in 2021. This is expected to be driven by the annual growth in the volume index of construction in civil engineering in 2020 (+6.0 ip) and 2021 (+6.2 ip). The volume index of construction of buildings is also expected to increase in 2020 (+1.2 ip) and 2021 (+1.3 ip).

In parallel, the number of **persons employed** in the broad construction sector is also expected to decrease by 17.0% to 157,662 persons in 2020 and then increase by 15.0% to 181,340 persons in 2021. This decline is projected to come from all the sub-sectors including the manufacturing (-19.9%), the architectural and engineering activities (-19.9%), the narrow construction (-17.4%) and the real estate activities (-11.9%) sub-sectors in 2020.

The **housing market** in Lithuania suffered from a decreased demand and transactions in the first half of 2020 on account of disruptions caused by the COVID-19 pandemic and associated restrictions. With the easing restrictions in the economy by the end of first half of 2020, the housing market bounced back with increased demand and prices indicating a market recovery. However, the ongoing virus threat and stricter measures to control it is expected to impact the market in future[232].

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 Rail Baltica project, upon its completion in 2025, is expected to generate 2.0 million jobs contributing EUR 715.0 billion to the national GDP by 2030. Moreover, the financial assistance provided by the EIB and EFSI in the country's upcoming infrastructure projects paves a promising way ahead for Lithuania's non-residential construction and civil engineering sectors.

Overall, the economic outlook for the Lithuanian broad construction sector looks positive, despite having suffered from short-term disruptions due to the COVID-19 pandemic. The resilience demonstrated by the housing market after relaxation of restrictions, coupled with a solid pipeline of infrastructural projects makes the sector's outlook optimistic in the years to come.

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