



# European Construction Sector Observatory

Country profile **Poland**

September 2020



## In a nutshell

In 2019, Poland's GDP amounted to PLN 2,136.2 billion (EUR 470.0 billion), representing a 4.1% growth compared to 2018. The growth was primarily driven by the robust domestic demand and relatively favourable export performance as compared to several other EU economies.

Mirroring the overall economy, the broad construction sector in Poland also gained momentum. The sector, mostly comprised of small companies and few large players, totalled 487,174 firms in 2019 (a slight increase of 2.7% over 2018). This represents an increase of 42.5% between 2010 and 2019.

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

↑ 42.5%

Partly driven by the inflow of EU funds and private investment, the **volume index of production** in the broad construction sector grew significantly.



The volume index production in broad construction sector recorded a growth of 21.7% over the 2015-2019 period, after recording a drop of 14.1% in 2016 over 2015.

In parallel the construction of buildings and construction of civil engineering also experienced significant growth of 33.5% and 11.8% respectively between 2015 and 2019.

Similarly, the total **turnover** of the broad construction sector amounted to EUR 89.1 billion in 2017, 14.4% above the 2010 levels. It further

reached EUR 121.0 billion in 2019, representing an increase of 25.1% during the 2010-2019 period.

Turnover in the broad construction sector between 2010 and 2019

↑ 25.1%

At the same time, the **gross operating surplus** of the broad construction sector only recorded a slight increase of 2.8% between 2010 and 2017, reaching EUR 14.7 billion. This was mainly driven by declines in the real estate activities sub-sector (-26.1%), and the architectural and engineering activities sub-sector (-13.9%). These declines were partly compensated by the gross operating surplus increase of the manufacturing (+19.5%) and the narrow construction (+15.2%) sub-sectors, over the same period.

In contrast, the **gross operating rate** of the broad construction sector, which gives an indication of the sector's profitability, declined from 14.7% in 2010 to 13.2% in 2017. This is below the EU-27 average of 16.6%.

In terms of employment, there were 1,686,851 persons **employed** in the broad construction sector in 2019, which represents an 18.1% increase since 2010. This was mainly driven by the increase in terms of people employed in the sub-sectors including architectural and engineering activities (+24.7%), followed by the narrow construction (+20.1%), manufacturing (+15.2%) and real estate activities (+6.7%) sub-sectors in the same period.

**The Housing for the Young scheme programme (*Mieszkanie dla Młodych, MdM*), which drove the demand for flats in Poland, ended in 2018, as government subsidies ran out. The program has been replaced by the “National Housing Program”.**

Declining mortgage interested rates has also fuelled the **housing** demand in Poland. Interest rates on mortgages (for over 5 years of original maturity) fell from 6.0% in 2010 to 3.7% in 2019.

During the period 2015-2019, the **house price index** for dwellings in Poland increased by 16.0%. The increase in home prices was mainly driven by the housing demand and growing construction costs, which relate to a strong construction demand in the entire economy.

House price index  
between 2015 and 2019

↑ 16.0%

The **investment index** in the broad construction sector experienced a steady growth since 2015, rising by 4.4% over 2015-2019. This trend was mainly driven by investment in non-residential construction and civil engineering which increased by 5.3% between 2015 and 2019.

Investment index in the  
broad construction sector  
between 2015 and 2019

↑ 4.4%

In April 2020, the Polish government announced its plans to invest PLN 30.0 billion (EUR 6.6 billion) in roads and railway infrastructure in 2020. The investment would include contracts worth PLN 11.0 billion (EUR 2.4 billion) in railway developments and PLN 19.0 billion (EUR 4.2 billion) for highway construction.



**In October 2019, the EU introduced plans to invest more than EUR 880 million (EUR 193.6 million) in two projects to improve the rail network in Poland.**

In terms of **BIM adoption**, Poland is still at an early stage, with only 12% of construction firms using BIM in their daily work. The sector tends to use BIM mainly for visualisation, 3D models, and to a lesser extent for collision detection and use of schedules or optimisation. Nevertheless, the Polish government is planning to introduce standards or an obligation to use BIM in public procurement.

The ongoing COVID-19 pandemic is expected to have short-term and long-term impact on the construction sector. For instance, some Polish construction companies have shut down, and some construction projects were put on hold. Nevertheless, the sector is not expected to experience a significant decline, primarily driven by the measures taken by the government.

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## 1

## Key figures

## Construction market

The **number of enterprises** in the broad construction sector in Poland totalled 487,174 in 2019<sup>1</sup> (Figure 1), with the narrow construction sub-sector accounting for 69.6% of the total firms. Overall, the number of enterprises in the broad construction sector increased by 42.5% during the period 2010-2019, mostly led by a 45.6% and 43.3% increase in the narrow construction and architectural and engineering activities sub-sectors, respectively. Likewise, the number of companies in real estate and in manufacturing sub-sectors grew by 34.6% and 23.6% respectively, during the 2010-2019 period. Beyond reflecting the overall growth of the broad construction sector itself, this increase of companies' number is also driven by formerly bankrupt construction entrepreneurs starting again a new company in the sector.

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

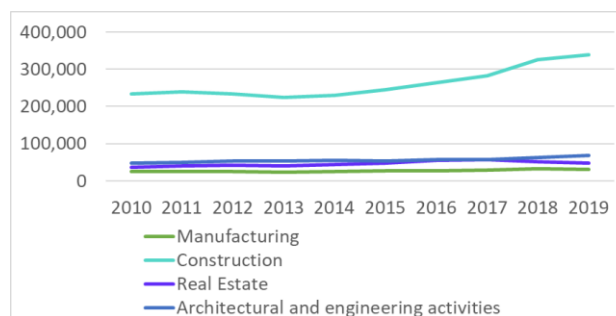
↑ 42.5%

Partly driven by private investment, the **volume index of production** in the broad construction sector recorded a growth of 21.7% over the 2015-2019 period, after recording a drop of 14.1% in 2016 over 2015, (Figure 2). In parallel, the volume index of production in the construction of buildings registered the highest growth of 33.5%, driven by growing investment in the non-residential segment<sup>2</sup>. Last, the volume index of production of construction of civil engineering grew by 11.8% during the 2015-2019 period, notably supported by the inflow of EU funds.

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

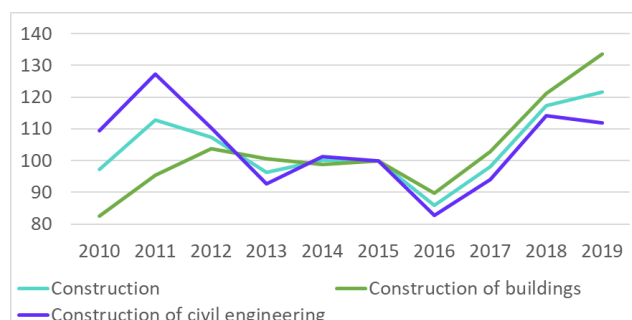
↑ 33.5%

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



Source: Eurostat, 2020.

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



Source: Eurostat, 2020.

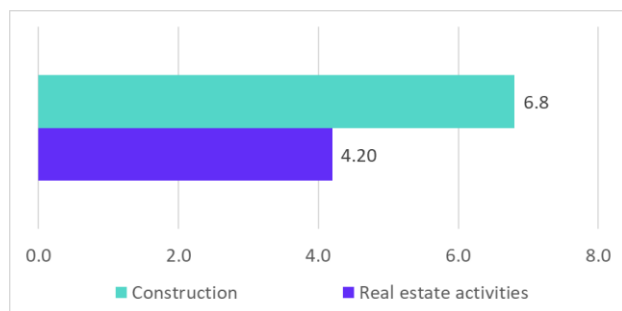
The total **added value** of the broad construction sector amounted to EUR 31.4 billion in 2019<sup>3</sup>, with the narrow construction sub-sector contributing to 59.0% of the total<sup>4</sup>, followed by the manufacturing (20.0%, i.e. EUR 6.3 billion), real estate activities (13.4%, i.e. EUR 4.2 billion), and architectural and engineering activities (7.7%, i.e. EUR 2.4 billion) sub-sectors. In 2019, the **share of gross value added** of the narrow construction sub-sector in the GDP reached 6.8%, below its 2010 level (7.5%) but above the EU-27 average of 5.0%. Similarly, for the real estate activities sub-sector, it stood at 4.2% of GDP in 2019 (against 4.7% in 2010), below the EU-27 average of 9.7%) (Figure 3).

Poland consists of 17 administrative subdivisions (*Voivodeships*). The gross value added is not



equally split over these subdivisions. *Warszawski stoleczny*, *Slaskie (Katowice)* and *Malopolskie (Krakow)* account for 38.1% of the gross value added of the narrow construction sub-sector, and 34.3% of the real estate activities sub-sector.

Figure 3: Gross value added as a share of GDP in the Polish broad construction sector in 2019<sup>5</sup> (%)



Source: Eurostat, 2020.

## Productivity

**Apparent labour productivity<sup>6</sup> in the broad construction sector reached EUR 18,439 in 2017, an increase of 3.8% during the 2010-2017 period. However, this is well below the EU-27 average of EUR 50,079.**

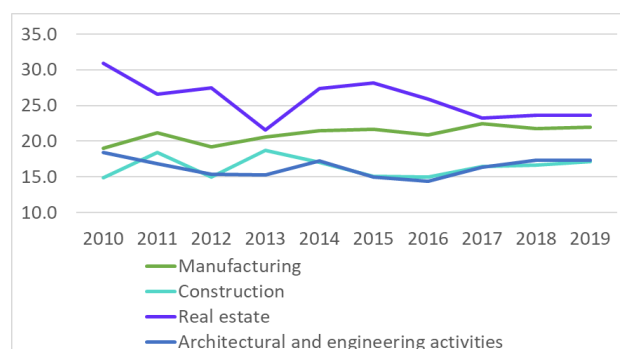
Apparent labour productivity within the manufacturing and narrow construction sub-sectors displayed similar trends between 2010 and 2019. Labour productivity in the manufacturing sub-sector experienced a moderate increase in absolute terms, from EUR 18,975 in 2010 to EUR 21,949 in 2019, marking an increase of 15.7% during the period. It was followed by the narrow construction sub-sector which grew by 14.8% during the period, from EUR 14,900 in 2010 to EUR 17,104 in 2019.

At the same time, the real estate sub-sector experienced a sharp decline in absolute terms, from EUR 30,900 in 2010 to EUR 23,647 in 2019, marking a 23.5% decrease during the period. It was followed by the architectural and engineer sub-sector (-6.0%) which decreased from EUR 18,400 to EUR 17,304. However, it is worth noting that both these sectors have experienced slight increases in apparent labour productivity since 2017.

**Poland has one of the largest productivity gaps between large and small construction firms in the EU. The gap is mainly due to the relatively high share of small firms in the sector, which has contributed to relatively low productivity levels, as in several other EU member states. Hence, in addition to capital investment needs, productivity gains can be attained by unleashing small firms' potential to grow<sup>8</sup>.**

As the output gap is positive, indicating that resources are already being overworked (working at more than full capacity – see section 2 on Macroeconomic indicators); an increase in productivity is not very likely in the short term. The construction sector will need to address the issue of workforce shortage to shift the current trend. More importantly, the limited development in terms of digitalisation, new technology, automation (also reflected in the section 5 on Innovation in the construction sector) especially in the MSME segment represent additional barriers preventing the productivity (and competitiveness) of the sector to grow substantially.

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



Source: Eurostat, 2020.

## Turnover and profitability

The **turnover** of the broad construction sector amounted to EUR 110.7 billion in 2017, 14.4% above the 2010 level. It further increased to EUR 121.0 billion in 2019<sup>9</sup>, marking an acceleration of 25.1% during the period 2010-2019. The growth was mainly due to the growth registered by the construction sub-sectors in 2019. The narrow construction sub-sector registered the largest share of turnover within the sector, accounting for 60.7%. This follows a 21.5% growth between 2010 and 2019. This sub-sector is followed by the

manufacturing (19.4%), real estate activities (15.8%), and architectural and engineering activities (4.1%) sub-sectors.

Turnover in the broad construction sector between 2010 and 2019

↑ 25.1%

The **gross operating surplus** of the broad construction sector recorded a slight increase of 2.8% between 2010 and 2017<sup>10</sup>, reaching EUR 14.7 billion. The largest increases in gross operating surplus were registered for the manufacturing sub-sector (19.5%), followed by the narrow construction sub-sector (15.2%), over the same period. In contrast, the gross operating surplus in the real estate activities and the architectural and engineering activities sub-sectors declined by 26.1% and 13.9% respectively.

Gross operating surplus in real estate activities sub-sector between 2010 and 2017

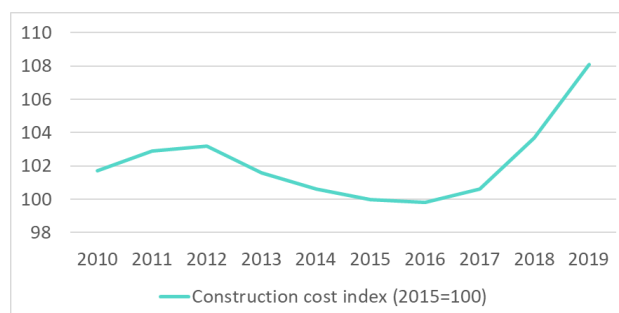
↓ 26.1%

The **gross operating rate** of the broad construction sector<sup>11</sup>, which gives an indication of the sector's profitability, decreased from 14.7% in 2010 to 13.2% in 2017<sup>12</sup>, being below the EU-27 average of 16.6%. In the case of the real estate activities sub-sector, it decreased from 24.8% in 2010 to 14.6% in 2017. The architectural and engineering activities sub-sector and manufacturing sub-sector decreased to 22.3% (against 24.2% in 2010) and 13.3% (against 15.3% in 2010), respectively. Nevertheless, the narrow construction sub-sector experienced a slight increment in 2017, reaching 12.1%, as compared to 11.2% in 2010. As explained by the Polish Federation of Construction Employers (PZPB), this decrease is partly due to the significant increase in the construction costs, coupled with the limited profitability of EU funded projects (see more details below).

The **construction costs index** has increased by 8.1% in 2019 as compared to 2015, after declining between 2012 and 2016. This reflects the growth of the Polish construction sector and subsequent higher demand for construction materials. This situation is similar to the one in 2010-2011 where large investments in infrastructures took place, leading to a significant increase in construction costs<sup>13</sup>.

**Infrastructure development in Poland is relatively dynamic, especially in the railway and road sub-sectors. Planned expenditures for road construction in 2020 amount to PLN 23.5 billion (EUR 5.5 billion). Nevertheless, for 2015 and 2016, the prices offered by companies for infrastructure tenders were significantly below the final costs (because of the increase of construction materials – mainly asphalt and concrete and labour/sub-contractors, which adjusting their prices to changing conditions). Thus, those long-term contracts had a negative impact on the results of general contractors in 2018 and 2019<sup>14</sup>.**

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



Source: Eurostat, 2020.

## Employment

In 2019<sup>15</sup>, there were 1,686,851 persons **employed** in the broad construction sector in Poland, an increase of 18.1% since 2010 (1,428,900 people). Employment by the broad construction sector represents 9.9% of employment in the total economy in 2018<sup>16</sup>. In 2019, 64.2% (1,083,513 people) of persons employed were working in the narrow construction sub-sector. The number of persons employed in the narrow construction and architectural and engineering activities sub-sectors also increased by 20.1% and 24.6% during 2010-2019, reaching 138,936 and 1,083,513 respectively, in 2019<sup>17</sup>. Similarly, a growth was also recorded in the number of persons employed in the manufacturing (+15.2%) and real estate activities (+6.9%) sub-sectors, reaching 286,694 and 177,708 people in 2019, respectively, over the same period. SMEs in the broad construction sector employed a large portion of workers with an 87.3% share in 2017<sup>18</sup>.

In 2017<sup>19</sup>, the regions of *Malopolskie (Krakow)*, *Slaskie (Katowice)* and *Wielkopolskie* accounted for 36.9% of the total employment in the narrow

construction sub-sector, and 36.6% in the real estate activities sub-sector. Other regions, such as *Dolnoslaskie*, *Pomorskie*, and *Lódzkie* accounted for 9.6%, 9.0%, and 6.3%, respectively, of the total employment in the narrow construction sub-sector in 2017. Similarly, these regions accounted for 9.5%, 7.7% and 8.9%, respectively, of the employment in the real estate activities sub-sector.

Regarding **employment by the specific professions**, the manufacturing sub-sector has mostly experienced increases in the number of workers. During the 2010-2019 period, the demand for professionals rose by 75.7%, followed by an increase in technicians and associate professionals (+70.7%); service and sales workers (+47.7%); clerical support workers (+13.2%); managers (+7.0%); and craft and related trades workers (+1.1%). On the other hand, there was a decrease in the demand for elementary occupations (-25.7%) and plant and machine operators and assemblers (-0.6%) over the same period. The narrow construction sub-sector recorded an increased demand for professionals (+72.9%), followed by technicians and associate professionals (+42.1%), and plant and machine operators and assemblers (+11.6%). Similarly, in the real estate activities sub-sector, demand for professionals, technicians and associate professionals; and managers grew by 65.1%, 23.9%, and 16.1%, respectively, over the same period.



According to PZPB, labour force shortage affects all types of specific occupations in the construction sector.

On 15 March 2020, the Polish government closed its border due to COVID-19 pandemic. As a result, many migrant workers in the construction sector and others, rushed home, fearing unemployment and running out of money to live in Poland. According to border service data reported by Business Insider, in the two months after the border closure, a total of 235,188 Ukrainian citizens left Poland, while 86,714 entered. Nevertheless, some of them would transit to Germany, the net movement across Poland's border with Ukraine amounted to a decline of

150,000<sup>20</sup>. This COVID-19 crisis thus had a major impact on the issue of labour shortage in Poland.

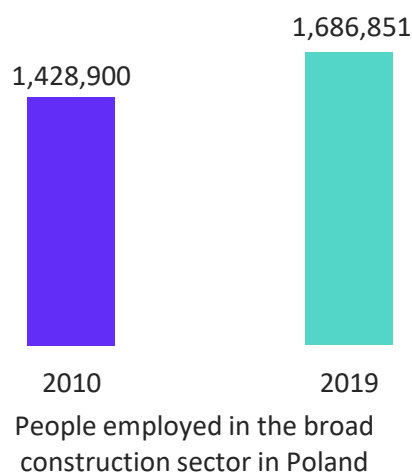
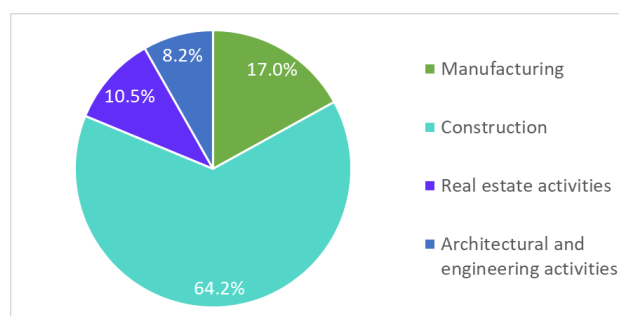


Figure 6: Percentage of people employed per construction sub-sectors in Poland in 2019



Source: Eurostat, 2020.

The number of **self-employed workers** in the narrow construction sub-sector increased from 278,600 in 2010 to 328,900 in 2019, registering a growth of 18.1% during the period. In the real estate sub-sector, self-employment reached 31,100 persons, an increase of 50.2% in 2019 as compared to 2010. Self-employed workers in the narrow construction sub-sector accounted for 11.7% of all the self-employed in the general economy in 2019, compared to 9.8% in 2010 and to 11.9% of the EU-27 average in 2019. At the same time, the real estate sub-sector represented 1.1% of all self-employed in the general economy, compared to 1.4% of EU-27 average in 2019. In parallel, **full-time employment** in the narrow construction sub-sector increased by 3.9% between 2010 and 2019,. In contrast, a slight decline of 0.9% was recorded in the real estate sub-sector during the same period.



## 2

## Macroeconomic indicators

### Economic development



In 2019, Poland's GDP amounted to PLN 2,136.2 billion (EUR 470.0 billion), representing a 4.1% growth compared to 2018.

The same year, the country's potential GDP stood at PLN 2,053.8 billion (EUR 451.8 billion). The growth was primarily driven by the robust domestic demand and relatively favourable export performance. Nonetheless, weakening global trade affected the performance of Polish exports.

In 2019, private consumption in Poland expanded by an estimated 4.0%, after rising by 4.2% in 2018. Several factors contributed to this continuous growth, including favourable labour market, growth in disposable incomes led by tax and benefit measures; and an increase in consumer confidence<sup>21</sup>.

The **output gap** (4.0%) further increased in 2019 showing that the Polish economy is overworking its resources, with actual outputs exceeding full capacity output. Such a positive output gap may in turn spurs inflation in an economy because both labour costs and the prices of goods increase in response to the increased demand.

In fact, the **inflation rate**, which stood at 1.6% in 2017, decreased in 2018 reaching 1.2%, prompting the Central Bank to keep borrowing costs stable as price pressures remain subdued<sup>22,23</sup>. Nevertheless, inflation increased in 2019 and stood at 2.1%, driven by temporary factors beyond the control of monetary policy which include supply-side induced food price hikes<sup>24</sup>.

As per the National Bank of Poland's (Narodowy Bank Polski - NBP) projections (November 2019), the inflation is to reach 3.5% in early 2020. It is expected to fall to 2.5% by mid-2020 and stay around this level until the end of 2021<sup>25</sup>.

At the same time, Polish currency, the zloty, did not experience any substantial change in 2019. The currency, after weakening slightly in August and September 2019 (in particular against Swiss franc), returned to the levels seen in the first half of the year<sup>26</sup>.

### Demography and employment



The overall unemployment rate in Poland stood at 2.9% in 2019, well below the EU-27 average of 6.0%<sup>27</sup>.

Youth unemployment in Poland has decreased from 23.7% in 2010 to 9.9% in 2019 and is now below the EU-27 average of 15.1%.

In terms of the **total population**, Poland's population amounted to 38.0 million people in 2019, an increase of 3,875 people compared to 2018. It is projected to stabilise in 2030 and decrease by 10.2% in 2050, reaching to 34.1 million. In parallel, in 2019, the **working age population** (aged 15-64) accounted for 67.0% of the total population of Poland, higher than the EU-27 average of 64.6% in 2019.

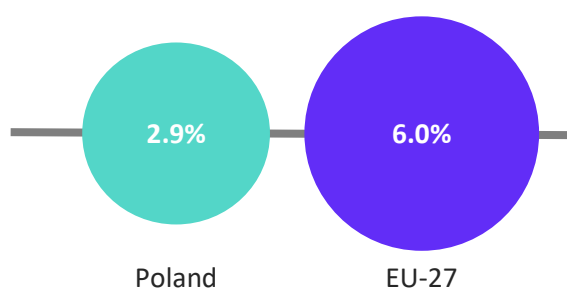
It is expected that the working age population will continue declining in the next decade. Therefore, future growth potential will partly depend upon the successful integration of foreign workers (including their skills and competences), who already play an important role<sup>28</sup>.

By 2030, the share of working age population is expected to decline to 63.8%. Nevertheless, the

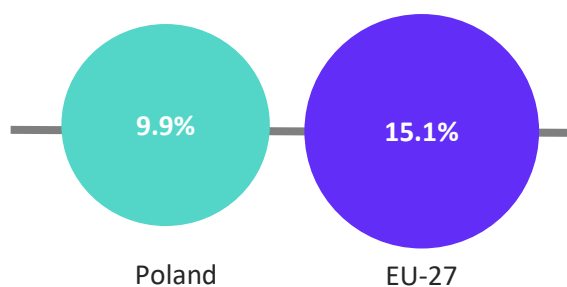
share of the working age population is projected to increase again, reaching 74.6% by 2050. In parallel, the elderly population (65 years or over) stood at 17.7%, below the EU-27 average of 20.3%<sup>29</sup>, and is forecasted to reach 20.0% by 2050.

Poland is hence aging at a very high pace<sup>30</sup>, risking 'getting old before getting rich'. In other words, the aging population will likely be a key limitation for economic growth in Poland<sup>31</sup>. On the other hand, demand for elderly infrastructures (hospitals, care home, access infrastructure), will keep on gradually rising in the medium and long-term, providing potential opportunities for the construction sector.

Unemployment rate in 2019



Youth unemployment rate in 2019

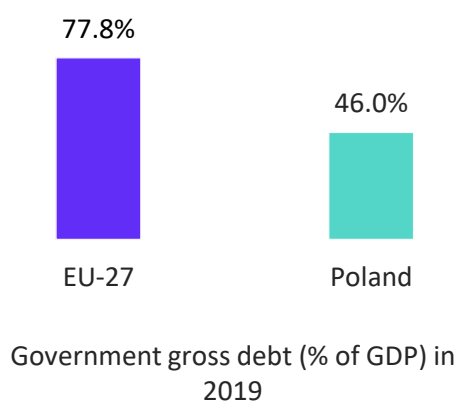


## Public finance

In 2019, general **government expenditure** accounted for 42.0% of GDP, slightly more than the previous year (41.5%), being well below the EU-27 average of 46.7%. The **government deficit** accounted for 0.7% of the GDP, below the 3% threshold of the EU's Stability and Growth Pact (SGP) and EU-27 average of 0.6%. The same year, **general government gross debt** accounted for 46.0% of the country's GDP, representing a decrease compared to 2018 (48.8%), and

remaining below the EU-27 average of 77.8%. The decrease in general government debt-to-GDP ratio was mainly driven by the fast nominal economic growth and the low headline deficit. The government gross debt is estimated to decline further, reaching around 44% of GDP by the end of 2021<sup>32</sup>.

In April 2020, the Polish government announced its intention to increase its public debt to bolster its coronavirus-hit economy<sup>33</sup>.



## Entrepreneurship and access to finance



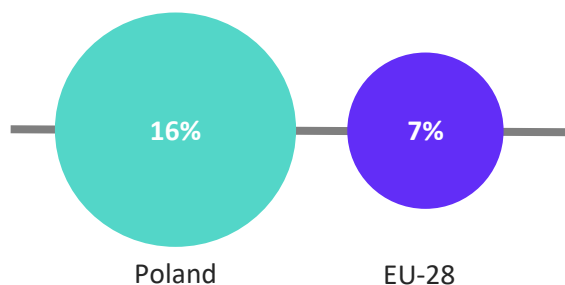
According to the 2019 Global Competitiveness Report of the World Economic Forum<sup>34</sup>, Poland ranks 69<sup>th</sup> out of 141 countries in terms of financing of SMEs.

Poland scores relatively moderate in most of the metrics of the financial system, notably domestic credit to private sector (66<sup>th</sup>) and venture capital availability (90<sup>th</sup>). In terms of financial stability, it is ranked 57<sup>th</sup> in soundness of banks, 66<sup>th</sup> in non-performing loans and 74<sup>th</sup> in banks' regulatory capital ratio. It is ranked the best in terms of credit gap (1<sup>st</sup>)<sup>35</sup>.

According to the Survey on the access to finance of enterprises (SAFE Report) 2019<sup>36</sup>, access to finance is the most important concern for 6% of Polish SMEs, slightly below the EU-28<sup>37</sup> average of 7%. The survey further indicates that there was 16% of rejections reported from SMEs who applied for a loan (compared to a 7% EU-28 average). In addition to this, 7% of companies who successfully

applied received less than they applied for (EU-28: 10%).

Share of SMEs experiencing loan's application rejection in 2019



Furthermore, around 5% of Polish firms did not apply for loans in the past six months of 2019 due to fear of rejections, as compared to 4% of EU-28<sup>38</sup> average<sup>39</sup>. In terms of access to finance, it is worth noting that lending to non-financial corporations has picked up in recent years. Loans to non-financial corporations increased over 2010-2019, growing from PLN 219.5 billion (EUR 48.3 billion) to PLN 383.2 billion (EUR 84.3 billion) (+74.6%).

Loans to non-financial corporations between 2010 and 2019



74.6%

Poland has taken several measures to improve the access to finance for SMEs. In 2019, it formulated a new strategy (**Capital Markets Development**

**Strategy**), which aims to develop the Polish capital market. The objective of this strategy is to improve access to finance for companies (especially SMEs) by increasing the attractiveness of the Polish capital market. To achieve this objective, the strategy is focused on overcoming about 20 barriers preventing access to finance to firms and to further develop a competitive infrastructure that allows for a more agile market development and innovation<sup>40</sup>.

**The Capital Markets Development Strategy (*Strategia Rozwoju Rynku Kapitałowego*) covers the period 2019-2023 and was adopted following a process of public consultation<sup>41</sup>.**

Furthermore, under the government programme 'Supporting Entrepreneurship through BGK Sureties and Guarantees', the Polish state investment bank (*Bank Gospodarstwa Krajowego - BGK*) provides safeties and guarantees to entrepreneurs wishing to take out loans for infrastructure projects or for other projects related to the development of the SME sector. Safeties and guarantees cover up to 80% of the value of the loans and can amount to a minimum of PLN 3.5 million (EUR 833,262) and a maximum of PLN 10.0 million (EUR 2.4 million)<sup>42</sup>. Additionally, in order to incentivise the creation of new businesses, Poland introduced a new simple public limited liability company with a minimum capital of PLN 1 (circa EUR 0.2)<sup>43</sup>.

## 3

# Key economic drivers of the construction sector

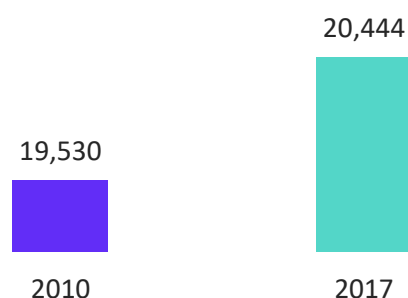
## Business confidence

Confidence in the sector increased over the past years. Over the 2010-2019 period, business confidence improved significantly in particular for the consumers and construction confidence indicators.

The **consumers and construction confidence indicators** recorded 4.2 and -10.0 in 2019 in comparison to -8.4, and -30.4 in 2010. The consumer confidence indicator is well above the EU-27 average of -6.2 in 2019, whereas the construction confidence indicator is below the EU-27 average of 5.1. The improvement in consumer confidence was mainly driven by favourable labour market conditions and changes in personal income tax. In contrast, the **industry confidence indicator** slightly worsened in 2019 (-4.8), as compared to 2010 (-4.1), standing at par with the EU-27 average (-4.8) which signals that the industry still faces a number of challenges.

In April 2020, Consumer Confidence Index (CCI) stood at -36.4 due to adverse effect of COVID-19. Nonetheless, it slightly improved to -30.1 in May 2020 and -19.4 in June 2020<sup>44</sup>.

In 2019, the **investment ratio** stood at the same level (18.9%) as compared to 2010. It slightly improved as compared to 2018 (18.4%). In contrast, **investment per worker** slightly grew by 4.7% from EUR 19,530 in 2010 to EUR 20,444 in 2017<sup>45</sup>.



Investment per worker in Poland in EUR

## Domestic sales

The ranking of the most domestically sold construction products in Poland has experienced two changes in 2018 as compared to 2010. The changes include “Windows, French windows and their frames” was replaced by “Other structures and parts of structures”, and “Mortars” was replaced by “Particle board” in 2018. The top 5 most domestically sold construction products are presented in Table 1, including a comparison with the top sellers in the EU-27. These top five products represented 45.6% of total domestic construction product sales in 2018.

Table 1: Five most domestically sold construction products in Poland and in the EU-27 2018<sup>46</sup>

Poland				EU-27
	Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
1	Ready-mixed concrete (group 236310)	1,253.9	11.0	Other structures and parts of structures, plates, rods, angles,

Poland				EU-27
	Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
				shapes (group 251123)
2	Other structures and parts of structures, plates, rods, angles, shapes (group 251123)	1,068.3	9.3	Doors, windows, etc. (group 251210)
3	Tiles, flagstones, bricks and similar articles, of cement, concrete etc. (group 236111)	1,059.2	9.3	Ready-mixed concrete (group 236310)
4	Portland cement, aluminous cement, slag cement and similar hydraulic cements (group 235112)	941.3	8.2	Prefabricated buildings of metal (group 251110)
5	Particle board (group 162112)	894.7	7.8	Prefabricated structural components etc. (group 236112)

Source: PRODCOM, 2020.

## Export of construction-related products and services

Table 2 presents the **top five most exported construction products** both in Poland and in the EU in 2018. Poland is a major exporter of wooden products and windows. The ranking of the most exported products has changed since 2010. "Assembled parquet panels", "Builders' joinery and carpentry" and "Doors, windows etc." were replaced by "Other structures and parts", "Fibreboard of wood" and "Wooden frames for paintings", respectively. The top five most exported products represent 54.0% of total export value.

Table 2: Five most exported construction products in Poland and EU-27 in 2018<sup>47</sup>

Poland				EU-27
	Product	Value (EUR m)	Share in construction product export sales (%)	Product
1	Windows and other (group 162311)	755.1	13.2	Ceramic tiles and flags (group 233110)
2	Other structures and parts of structures, plates, rods, etc. (group 251123)	724.8	12.7	Other structures and parts of structures, plates, rods, etc. (group 251123)
3	Fibreboard of wood or other ligneous materials (group 162115)	581.8	10.2%	Fibreboard of wood or other ligneous materials (group 162115)
4	Wooden frames for paintings etc. (group 162914)	532.8	9.3%	Doors, windows and their frames, etc. (group 251210)
5	Pallets, box pallets, etc. (group 162411)	487.2	8.5	Marble, travertine, alabaster etc. (group 237011)

Source: PRODCOM, 2020.

**In terms of cross-border provision of construction services<sup>48</sup>, Poland exported for a total amount of EUR 1.9 billion worldwide in 2018<sup>49</sup>, an increase of 91.9% as compared to the 2010 value (EUR 998 million). EUR 1.5 billion of these exports went to the EU-27 countries.**

Mainly medium sized companies exploit construction services exports related opportunities, as micro and small companies do not have the necessary financial capacities. At the same time, multinational companies (who are mainly foreign) are only interested in the Polish market. Export capacity of companies is limited by their financial situation.

At the same time, Poland imported EUR 434.0 million of construction services from the world, where EUR 306 million came from the EU-27,



underlining the importance of the EU single market. All in all, the cross-border provision of construction services experienced a **trade surplus** of EUR 1.5 billion.

## Access to finance in the construction sector

The Polish construction companies finance themselves mostly through banks, trade credit and informal sources (e.g. family members, friends, moneylenders). Nevertheless, compared to other industries, the construction sector faces greater difficulties in accessing finance, according to the Polish Federation of Construction Employers (PZPB). Banks perceive construction companies as too risky, and in turn are more reluctant to lend to the construction sector.

As per the report, bank loans account for the highest share of external finance (37%) for firms, followed by other bank finance (23%), leasing and hire purchase (19%) and grants (17%). Also, 63% respondents believe that “availability of finance” is a long-term barrier for the Polish construction sector.



The EIB Investment Survey for 2019 shows that 10% Polish firms are dissatisfied with collateral requirements<sup>50</sup>.

Overall, the construction sector has long been indicated as the one with most bankruptcy related risks, burdened with payment bottlenecks, problems with profitability and a drop in sales revenues. According to Atradius report “Market Monitor Construction Poland 2020”, insolvencies in construction sector are expected to increase in line with the ongoing slowdown of Polish economic growth (Polish business insolvencies are expected to increase 3% year-on-year in 2020)<sup>51</sup>. This also helps explain the risk-averse behaviour of banks vis-a-vis the construction sector.

## Access to housing

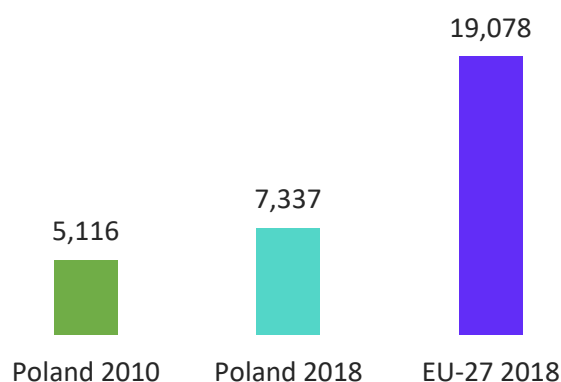
There were 14.9 million **households** in Poland in 2019, which represents an 11.9% increase compared to the 2010 level. At the same time, the country has a high **urbanisation rate**, with 35.0% of the population living in densely populated areas.

Number of households between 2010 and 2019

↑ 11.9%

Parallel to this trend, the **mean equivalised net income** increased by 56.8% between 2010 and 2019, from EUR 5,116 to EUR 8,022, reflecting rising wages, which translates into higher purchasing power. In 2018, it stood at EUR 7,337, well below the EU-27 average of EUR 19,078.

Mean equivalised net income in EUR




The housing market in Poland has experienced a significant boom in the last few years. Since 2013, the developer apartments segment has registered a virtually uninterrupted growth. Poland had experienced one of the biggest housing boom before 2008, primarily driven by the rapid economic growth<sup>52</sup>. The residential construction in Poland is also growing despite the end of **Apartment for the Young scheme (Mieszkanie dla Młodych, MdM)**. This scheme boosted the demand for cheap flats; although, it has now been over as funds for government subsidies have run out.

During 2019, 33.5% of newly completed dwellings were built by private investors, while developers built the remaining 63%<sup>53</sup>. In addition, Poland still has a very high home ownership rate due to privatisation following the end of Cold War. However, a large part of housing stock in the country is of low quality as compared to the Western European average (see more details below)<sup>54</sup>.

Furthermore, the **building stock distribution** of residential dwellings between owners and tenants has steadily increased from 2010 to 2019, from

81.3% of owners in 2010 up to 84.2% in 2019 (among which 12.2% have a mortgage or a loan). Similarly, the population earning above 60% of median equivalised income experienced a slight improvement in terms of dwelling owned – 85.1% in 2019, from 82.7% in 2010. Likewise, the population earning below 60% of median equivalised income shows a sharp growth in ownership. It increased from 74.9% in 2010 to 79.3% in 2019.

In parallel with the residential construction, the number of **building permits index** for dwellings increased by 44.5% between 2015 and 2019. In case of one dwelling buildings, and two and more dwelling buildings, it recorded increases of 43.4% and 45.2%, respectively, over the same period.

Building permits index for dwellings between 2015 and 2019  **44.5%**

Similarly, the **house price index** for total dwellings in Poland increased by 16.0% during the 2015-2019 period. The increase in home prices was mainly driven by the housing demand and growing construction costs, which was due to a strong construction demand in the entire economy.

According to NBP, Warsaw reported to have Poland’s most expensive housing, with an average transaction price for existing homes of PLN 9,301 (EUR 2,052) per square metre (sq. m.), in 2019. Lodz has the cheapest houses among the seven biggest cities in Poland, with an average price of PLN 4,870 (EUR 1,074) per sq. m<sup>55</sup>.

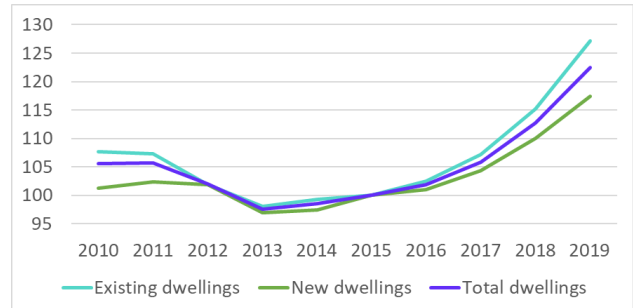
Nevertheless, despite the rise in house price, demand for the new-build housing marking is growing. In 2019, the total number of new flats sold in the six major cities of Poland grew slightly by 0.8% to 65,400 units. This is mainly due to the negative real interest rate on deposits in Poland<sup>56</sup>.

House price index between 2015 and 2019  **16.0%**

According to the Polish Association of Developers, access to housing has increased as people favoured investing their savings in real estate in the hope of a higher return, rather than other traditional alternatives such as deposit. Further, spending on maintenance and repair of their dwellings (i.e. **renovation spending**) increased by 6.1% during the period 2010-2018. The renovation

spending accounted for 3.9% of total household disposable income in 2018, well above the EU-27 average of 0.9%.

Figure 7: House price index in Poland between 2010 and 2019 (2015=100)

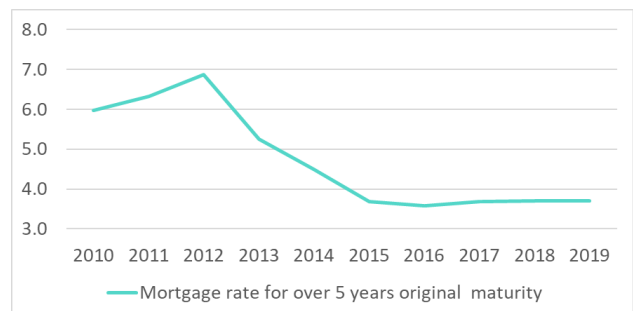


Source: Eurostat, 2020.

Similarly, the demand for housing was also supported by the decrease in mortgage rate. **Interest rates on mortgages (for over 5 years of original maturity)** fell from 6.0% in 2010 to 3.7% in 2019.

**In March 2020, the Central Bank of Poland cut its key rate by 50 basis points to a record low of 1%, to strengthen the economy amidst the COVID-19 pandemic. The rediscount rate was cut to 1.05% from 1.75%<sup>57</sup>.**

Figure 8: Mortgage rates for loans for over 5 years original maturity (%) between 2010 and 2019



Source: ECB MFI Interest Rate Statistics, 2020.

Fostered by low interest rates and rising incomes, housing loans to households have been growing steadily over the past years. The total **outstanding residential loans** increased by 49.0%, from EUR 67.5 billion in 2010 to EUR 100.6 billion in 2019.

Total outstanding residential loans in Poland between 2010 and 2019

↑ 49.0%

The mortgage market in Poland has grown from 1.3% of GDP in 2000 to 9.9% of GDP in 2007, to almost 20.4% of GDP in 2019<sup>58</sup>.

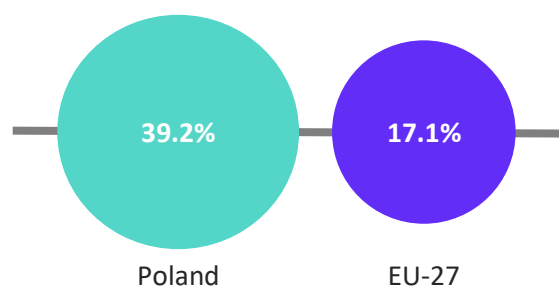
Furthermore, **actuals rentals for housing** in Poland showed a modest growth of 13.6% during 2015-2019 period. The movement of people from other cities to the capital, particularly students or young people looking for work, also push the demand for renting<sup>59</sup>.

According to government estimates, around 40% of people in Poland cannot afford to rent an apartment<sup>60</sup>.

In addition, housing quality remains below the EU-27 average. The **overcrowding rate**<sup>61</sup> stood at 39.2% in 2018, well above the EU-27<sup>62</sup> average of 17.1%. In 2019, the rate decreased to 37.6%<sup>63</sup>. These relatively high numbers are partly explained by the high proportion (58.9% in 2019) of 18-34 years old Polish, who live with their parents, and the fact that flats have been traditionally small<sup>64</sup>.

Furthermore, the **severe housing deprivation rate**<sup>65</sup> stood at 8.6% in 2018, considerably above the EU-27<sup>66</sup> average of 4.3%. It declined further to 7.9% in 2019<sup>67</sup>. On the contrary, in 2018, the **housing cost overburden rate**<sup>68</sup> was at 6.2%, lower than the EU-27<sup>69</sup> average of 9.6%. The rate slightly decreased to 6.0% in 2019<sup>70</sup>, reflecting the overall positive increase in terms of mean equivalised net income.

Overcrowding rate in 2018



## Infrastructure

Poland ranks 25<sup>th</sup> out of 141 in terms of its **infrastructure**, according to the 2019 Global Competitiveness Report published by the World Economic Forum<sup>71</sup>. Overall, following investments of Poland in the transport sector, the quality of its transport infrastructure is getting closer to the EU-27 average. In terms of completion of **Trans-European Transport Network (TEN-T)**, Poland is ranked 21<sup>st</sup> with 4.83 score in 2018, as compared to EU-28<sup>72</sup> average score of 5.19<sup>73</sup>.

Since the EU accession, the road infrastructure in Poland has improved significantly. This has improved the connectivity of many areas with centres of economic activity and assisted their development. At the same time, there are still poorly connected peripheral areas, in particular at the regional and national borders. This is due to the fact that road investment does not focus on regions that are not accessible by road. Additionally, the connections of the newly developed motorways and expressways with the secondary road network are not always sufficient thus excluding peripheral areas<sup>74</sup>.

Under the current EU funding scheme, for 2014 to 2023, the Polish government is planning to invest around EUR 15.4 billion in railway infrastructure and EUR 32.2 billion in road infrastructure<sup>75</sup>.

## 4

# Key issues and barriers in the construction sector

## Company failure

**Company births** in the narrow construction sub-sector increased by 3.5%, from 48,605 in 2010 to 50,301, whereas the **company deaths** increased by 18.8%, from 38,531 in 2010 to 45,787 in 2016<sup>76</sup>.

Similarly, the real estate activities sub-sector experienced an increase of 38.4% in company birth (from 4,085 in 2010 to 5,654 in 2016) and 76.5% increment in company deaths (from 2,642 in 2010 to 4,663 in 2016<sup>77</sup>). Similarly, company deaths in the architectural and engineering activities sub-sector increased by 66.1% (from 2,908 in 2020 to 4,831 in 2016<sup>78</sup>). In contrast, company birth in the same sub-sector slightly decreased by 0.8% (from 5,551 in 2010 to 5,507 in 2016).

Company births in the real estate activities sub-sector over 2010-2016

↑ 38.4%

Company deaths in the real estate activities sub-sector over 2010-2016

↑ 76.5%

To address the bankruptcy issue, a bankruptcy framework was introduced in January 2016, providing debtors with additional modalities to restructure company and limit their obligations towards creditors, allowing an easier cessation and creation of firms<sup>79</sup>. In the first quarter of 2020, 20 construction companies became bankrupt in Poland, due to the COVID-19 outbreak<sup>80</sup>. This number is likely to increase in the remaining part of the year, considering the COVID-19 situation after the first quarter of 2020.

## Trade credit

According to Payment Practices Barometer Poland 2019, trade credit risk in Poland has deteriorated in the construction and ICT (Information and communications technology)/ electronics sectors, where 32% of the total value of invoices remained unpaid at the due date<sup>81</sup>.

As per the report, in 2019, Polish firms offered trade credit more often than the year before, and with longer time to settle invoices. Most Polish respondents (88%) granted payment terms averaging 38 days from invoicing in 2019 (up from 30 days in 2018). These are the second longest average payment terms in Eastern Europe, after Romania (40 days), and compare to a regional average of 37 days.

According to SAFE Report 2019, 43% of respondents have obtained trade credit in Poland, whereas 35% of SMEs considered trade credit as a relevant source of financing<sup>82</sup>.

## Late payment

Late payment is a key issue in the Polish construction sector. With many companies having limited financial liquidity, late payment is one of the main causes of bankruptcy.

According to Atradius report "Market Monitor Construction Poland 2020", payments in the Polish construction sector takes 75 days on average. The number of non-payment notifications is expected to increase by about 10% in 2020, mainly due to lower output growth and higher input prices<sup>83</sup>.

Poland performs slightly above average in terms of its payment morale according to the European Payment Report 2019. Nevertheless, **late payments** have a negative impact for 44% of Polish companies, a percentage higher than the one of the EU-28<sup>84</sup> (30%)<sup>85</sup>. Additionally, late payments affect businesses negatively for 43% of companies in Poland, as compared to the EU-28 average of 27%.

The Coface's survey 2020 reveals that 98% of corporates surveyed continue to face payment delays. Only one out of 100 companies surveyed reports receiving payments on time<sup>86</sup>. According to the survey, Polish companies experience average payment delays of 57.2 days, almost 3 days less as compared to the 2018 survey. In 2019, the construction and transports companies reported the longest payment delays, nearly 104 days and 122 days respectively.

According to BIK Credit Information Bureau estimates, the arrears in construction in the second quarter of 2019 was PLN 4.9 billion. In the beginning of 2019, over 60% of construction companies had problems due to payment gridlocks<sup>87</sup>. Moreover, according to the European Construction Industry Federation (FIEC), an estimated amount of PLN 10.0 billion (EUR 2.5 billion) of completed road works is under negotiations or litigation, with accepted invoices not being paid in due time by the administration.

Poland has taken several measures to combat the payment delays. In January 2020, the late payments regulation entered into force, which consist of legally binding deadlines for payments, which will help address arrears and support firms' financial liquidity<sup>88</sup>. The new regulation prohibits "excessive delays" in payments. Excessive delays are understood to be a situation where the total sum of overdue payments, as well as payments settled with a delay, exceeds PLN 2.0 million (approx. EUR 450,000) in total for three (3) consecutive months (PLN 5 million (approx. EUR 1,150,000) in 2020/21)<sup>89</sup>.

Previously, in 2013, Poland implemented the **Late Payment Directive** (2011/7/EU) via the Law on Payment Deadlines in Commercial Transactions. Regarding the payment to Subcontractors for roads contracts implemented by GDDKiA, PZPB estimates that only 10% of the payments made to construction companies are based on the

legislation. This is due to smaller companies being unwilling to take action against their larger counterparts (effectively using late payment as a costless source of credit) for fear of losing contracts.

## Time and cost of obtaining building permits and licenses

Poland ranked 39<sup>th</sup> (out of 190) in "Dealing with Construction Permits", according to *Doing Business 2020*, one place higher than a year before (40<sup>th</sup>)<sup>90</sup>.

In 2019, completing the formalities to build a warehouse<sup>91</sup> took on average 137 days, below the OECD average of 152.3, and involved 12 administrative procedures, an improvement since the 16 procedures needed in 2015 (Table 3). Poland streamlined the process for obtaining a building permit, thus reducing the number of procedures and the overall time for obtaining a building permit. In addition, the cost of completing the formalities to build a warehouse represents 0.3% of the value of the warehouse, well below the OECD high-income average of 1.5%.

Furthermore, the amendments to the Construction Law (*Prawo Budowlane*) in 2015 abolished the requirement for a building permit to build a house<sup>92</sup>, reducing red tape. Moreover, SME owners (except retail objects) no longer need an occupancy permit of retail space, thus facilitating the running of the business.

Construction (particularly infrastructural projects) requires a number of administrative permits. All projects require:

- planning basis in the form of a local master plan or individual decision, setting the conditions of development;
- building permit, except for certain categories of objects, such as the majority of single-family residential houses, which only require a formal notification to the construction authority.

Depending on local conditions, additional permits may be required, such as water law permit, permit of the monument protection office, permit for cutting down trees. In the case of public infrastructural developments (highways, railway,



airports, etc.) simplified procedures are available for public developers, where the planning basis, expropriation and division of properties as well as the building permit are included in a joint decision.

Table 3: Construction procedures timing and costs in Poland in 2020

Procedure	Time to complete	Associated costs
Receive an approval from the Project Documentation Coordination Unit (ZUDP) about the lack of conflicts among utility connections	30 days	No charge
Obtain current geodesic map	21 days	PLN 2,000 / EUR 440
Request and obtain consent from licensed sanitary expert	7 days	PLN 750 / EUR 165
Request and obtain consent from licensed fire safety expert	3 days	PLN 1,000 / EUR 220
Request and obtain building permit	65 days	PLN 588 / EUR 129.4
Conclude agreement with utility provider: water and sewage	5 days	PLN 250 / EUR 55
Notify municipal authority about the beginning of construction and register the building diary	1 day	no charge
Receive inspection from Local Water Company and obtain water and sewage connections	1 day	no charge
Receive inspection from the National Sanitary Inspectorate and obtain approval	14 days	no charge
Receive inspection from the State Fire Service and obtain approval	14 days	PLN 50 / EUR 11
Obtain geodetic post-executive inventory	3 days	PLN 2,000 / EUR 440
Request and receive occupancy permit	21 days	PLN 135 / EUR 29.7

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

## Skills shortage

In 2019, number of **job vacancies** in the narrow construction sub-sector reached 25,164 (against 11,004 in 2010) and 1,732 in the real estate activities sub-sector (against 755 in 2010), an increase of 128.7% and 129.5% during the period, respectively. In 2013, the job vacancy rate had decreased with the slowdown of the sector in the aftermath of the economic crisis, but has recently gone up again, becoming a pressing issue.

According to the Business and Consumer Surveys of the European Commission, almost half of the firms in the Polish industry and construction sectors reported labour shortages as a factor limiting production in 2019, among the highest shares in the EU<sup>93</sup>.

Job vacancies in narrow construction sub-sector between 2010 and 2019

↑ 128.7%

Job vacancies in real estate activities sub-sector between 2010 and 2019

↑ 129.5%

According to the Occupational Barometer 2019 report (“*Barometr zawodów*”), the most in-demand professions of the construction sector are concrete placers, concrete finishers and related workers, pavers, construction joiners and carpenters, roofers and sheet metal workers in building trades, construction installation assemblers, bricklayers and plasterers, earthmoving plant operators and mechanics, finishing work technologists in building trades and construction workers<sup>94</sup>.



Over the last five years, many young Polish construction workers have migrated to Western EU countries, such as the UK, the Netherlands and Germany, mainly driven by better working conditions including better wages<sup>95</sup>.

According to estimates (July 2019), nearly two million people have left Poland for other EU countries since the country joined the bloc in 2004<sup>96</sup>.

This, in turn, contributes to the shortage of workers and skills in the sector<sup>97</sup>. As a result, construction sector companies are incentivised to hire foreign construction workers (as indicated in the positive migration rate in 2018), coming largely from non-EU countries such as Ukraine. However, administrative procedures – e.g. obtaining work permits undermine such a process<sup>98</sup>, represents a major barrier for hiring migrant workers and hence poses a threat to the growth of the sector. In 2018<sup>99</sup>, number of **net migration** in Poland reached

to 22,147 as compared to 5,027 in 2010, representing a significant growth of 340.6% during the period.

Number of net migration between 2010 and 2018

 **340.6%**

In addition, in order to curb the migration of skilled labours, Poland introduced a new law in the country in July 2019. The law aims at scrapping income tax for nearly 2 million young workers and came into effect in August 2019. Polish people under the age of 26 earning less than PLN 85,528 (EUR 19,671.4) a year were exempted from the country's 18% income tax starting August 01, 2019<sup>100</sup>.

Poland has quality university education in engineering, which is gathering traction among students. The number of **tertiary students** in engineering, manufacturing and construction has grown to 68,370 in 2018 from 55,655 in 2010, representing an increase of 22.9% during the period. In parallel, life-long learning is still undeveloped, with **adult participation in education and training** standing only at 3.4% in narrow construction sub-sector and 7.3% in real estate activities sub-sector in 2019.

In terms of digital skills, Poland still scores below the EU-28<sup>101</sup> average. Nearly half of the adult population (aged 16-74) does not have the basic digital skills. Polish firms show low investments with regards to up-skilling the workforce. In 2018, only 13% provided training to their personnel to develop their ICT skills (compared to an EU-28 average of 23%).

In order to address these issues, the Ministry of Digital Affairs is working on the **Digital Competence Development Program 2030**, with sets of actions and targets for further enhancing and developing digital skills<sup>102</sup>.

**During March-April 2020, Poland introduced several measures to prevent and combat COVID-19 in the areas of education. It has changed the provision of education and introduced new forms of teaching and learning<sup>103</sup>.**

In March 2020, the Minister for National Education issued regulations which addressed VET. Teachers have been advised to modify VET curricula to teach

parts which could not be implemented through distance learning in subsequent years. The regulation of the Minister for National Education of 10 April 2020 has implemented the apprenticeships in VET schools until the end of the 2019/20 school year or during holidays, or during classes in the next school year<sup>104</sup>.

## Sector and sub-sector specific issues

### Material efficiency and waste management

Poland reported a total amount of 2,471,974 tonnes of construction and demolition waste (CDW) in 2016<sup>105</sup> as compared to 2,764,206 tonnes in 2010, recording a decrease of 10.6% during the period<sup>106</sup>. Nonetheless, statistics on CDW may not be completely reliable due to the difficulty in tracking and reporting data to the authorities. Although, the amount of CDW is growing due to increasing number of new construction works, especially in residential area<sup>107</sup>.

Construction and demolition waste between 2010 and 2016

 **10.6%**

The Act on Waste stipulates that National Waste Management Plans have to be developed at national and regional level to meet the objectives of environmental policy. With respect to CDW, the current National Waste Management Plan 2014 analyses CDW management system, forecasts changes, as well as sets objectives for waste management and prevention<sup>108</sup>. Currently all CDW is managed individually by Municipalities and City Councils.

### Climate and energy

**Emissions** of greenhouse gases (carbon monoxide and dioxide, methane and nitrous oxides) from narrow construction and real estate activities sub-sectors in Poland amounted to a total of 1,088,299 and 1,007,918 tonnes in 2018<sup>109</sup>, respectively. Emissions in the narrow construction sub-sector have declined by 11.2% during the period 2010-2018, while it increased by 14.3% for the real estate activities sub-sector during the same period.

The Polish government, in June 2018, announced a plan to allocate PLN 103.0 billion (over EUR 22.7 billion) to finance thermo-modernization. The

program, called “**Clean Air**”, will end in 2029. The Program will target individual homeowners. The majority (around two-thirds) of the funds will be disbursed as grants and the rest - as loans. According to the plan, the government will renovate four million homes and buildings over the next 10 years with better insulation and more efficient heating systems<sup>110</sup>.

**The objective of the “Clean Air” program is to improve air quality and to reduce greenhouse gas emissions by replacing sources of heat and improving energy efficiency of single-family residential buildings<sup>111</sup>.**

Further to combat air pollution, the Polish government launched the ‘**Stop Smog**’ Programme in October 2018. The programme provides a mechanism to fund the replacement of out-of-date and high-emission sources of heating and the thermal upgrading of single-family residential buildings occupied by the energy-poor (low-carbon projects). The programme, with a budget of PLN 1.2 billion, will be implemented during 2019-2024 period<sup>112</sup>.

## 5

# Innovation in the construction sector

## Innovation performance

According to the 2020 European Innovation Scoreboard, Poland is a Moderate Innovator<sup>113</sup>.

Poland scores high on opportunity driven entrepreneurship, employment in fast-growing enterprises of innovative sectors, population with tertiary education, and design applications. It scores low on SMEs with marketing or organizational innovations, foreign doctorate students, new doctorate graduates, and SMEs innovating in-house. As per the report, its weakest innovation dimensions include innovators, attractive research systems and linkages<sup>114</sup>.

Poland has increased its expenditure for R&D from 0.4% of the GDP in 2007 to 1.2% of GDP in 2018. However, this remains below the EU-27 average of 2.1% and the 1.7% 2020 national target.

Business expenditure on R&D has increased significantly in the past few years, even though it remains below the EU-27 average. In 2017<sup>115</sup>, the **Business Enterprise R&D Expenditure (BERD)** in the Professional, scientific and technical activities sub-sector amounted to EUR 145.4 million, followed by the narrow construction sub-sector (EUR 26.3 million) and the real estate activities sub-sector (EUR 2.0 million). Over the 2012-2017 period<sup>116</sup>, BERD increased by 176.9% in the professional, scientific and technical activities sub-sector, followed by the narrow construction sub-sector (+101.8%). In contrast, BERD declined by 83.7% in the real estate activities sub-sector (Figure 9) during the same period.

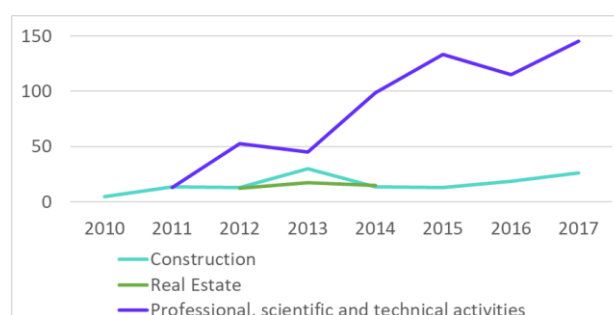
BERD in the narrow construction sub-sector between 2012 and 2017

↑ 101.8%

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

↓ 83.7%

Figure 9: Business enterprise R&D expenditure (BERD) per construction sub-sector in Poland between 2010-2017 (EUR m)<sup>117</sup>



Source: Eurostat, 2020.

Furthermore, the total number of **R&D employees** (full-time equivalents – FTE<sup>118</sup>) has been increasing across the sub-sectors. R&D employees in the professional, scientific and technical activities sub-sector experienced the highest increase (+2967.1%) among all the sub-sectors, growing from 85 in 2010 to 2,607 in 2017<sup>119</sup>. It was followed by the narrow construction sub-sector (+409.5%) which grew from 116 in 2010 to 591 in 2017. In the real estate activities sub-sector, the number of FTEs stood at 59 in 2017, as compared to 14 in 2012<sup>120</sup> (+321.4%).

These trends are reflected (to a lesser extent) in the increase in the patenting activity and in the share of high-tech exports in recent years. In 2019, the number of **construction-related patent applications** increased to 29 as compared to 15 in 2010, representing an increase of 93.3% during the period.

Poland has taken several measures to support innovative SMEs. In 2019, it introduced the **'Innovation Box'** which allows for a preferential 5% tax rate of the income generated by intellectual

property rights. Poland also offers tax relief for industrial automation, which affect mainly the smallest enterprises (*Ulga na robotyzację*). In addition, the Polish Agency for Enterprise Development as an SME Development Centre (*Centrum Rozwoju MŚP*) offers several programmes to provide financial and advisory support for innovative enterprises at different stages of development (part of “Start in Poland”)<sup>121</sup>.

**The Polish Construction Technology Platform (PPTB), established in 2004, brings together 56 construction stakeholders, such as manufacturers, contractors, builders, architects with the goal to exchange technical and scientific information<sup>122</sup>.**

The main objectives of this platform are to support activities aimed to strengthen the role of R&D in construction sector by increasing the quantity and quality of research, as well as effective implementation of its results<sup>123</sup>.

Additionally, the development of venture capital markets will remain imperative to drive the growth of innovative firms in Poland. Measures taken to develop the economy’s innovative capacity would lead to further progress towards SDG 9 (Sustainable Development Goal 9: industry, innovation and infrastructure)<sup>124</sup>.

## Eco-innovation and digitalisation



**Poland had the third lowest score (59) - after Bulgaria and Cyprus - in comparison to the EU-28<sup>125</sup> average of 100, in the 2018 Eco-Innovation Scoreboard (Eco-IS)<sup>126</sup>.**

In the **European Commission Digital Economy and Society Index (DESI) 2020**, Poland is ranked 23<sup>rd</sup> out of EU-28 countries. With a 45.0 score, Poland stands below the EU-28 average score of 52.6<sup>127</sup>.

Poland has the highest mobile broadband take-up in the EU. It scores high in fixed capacity network and 4G coverage which has improved its overall score in connectivity (51.3, EU-28 average 50.1). Nonetheless, it ranks relatively low in integration of digital technology (25<sup>th</sup>) and use of internet services (23<sup>rd</sup>), which remain the most challenging

areas. In particular, 15% of people in Poland are not yet online and nearly half of them still lack basic digital skills<sup>128</sup>.

Polish firms are in the process of using new technologies, which is reflected in the increasing use of social media, electronic information sharing, and online selling. Nevertheless, according to the Digital Intensity Index, 60% of companies have a very low **level of digitisation** (EU-28: 39%), and only 11% are highly digitised (EU-28: 26%).

In order to boost innovation in the construction sector and bring about the scaling-up of innovations from the company level to the market, several initiatives have been launched. For example, a partnership between scientists, business and institutions supporting innovative solutions matching the concept of sustainable construction has been established under the **Building Research Institute**. The partnership creates modern projects based on eco-innovation and are implemented by Polish business<sup>129</sup>.

In terms of **BIM adoption**, Poland is still at an early stage. The Polish government has introduced policies and instruments to support BIM implementation in the construction sector. The government invested in the development of curricula relating to BIM. The process of education is not confined to the private sector or labour, but also to public sector officials, who are required to understand BIM definition, rationale and benefits<sup>130</sup>. The Polish government is also planning to introduce standards or an obligation to use BIM in public procurement<sup>131</sup>.

**The low adoption rate of BIM in Poland is mainly due to lack of knowledge, the absence of (systematic) BIM requirements in public procurement law, and the high cost of BIM initial implementation<sup>132</sup>.**

The rate of BIM adoption is very low, with only 12% of construction firms are using BIM in their daily work. They use this technology mainly for visualisation, 3D models, and to a lesser extent for collision detection and use of schedules or optimisation<sup>133</sup>.



## 6

# National and regional regulatory framework

## Policy schemes

The Ministry of Infrastructure and Construction implements the **National Housing Program** and shapes the legal framework for the planning and spatial planning system<sup>134</sup>. The residential construction sector in Poland is influenced by policy measures aiming to reverse the demographic decline by supporting families and comply with the EU environmental legislation.

The **Apartment for Young People (*Mieszkanie dla Młodych, MdM*)**, introduced in 2014, was a scheme of co-financing a mortgage for a first apartment by young couples or single individuals below the age of 35. The scheme drove the demand for cheap flats in Poland. The scheme was ended in January 2018 with the final subsidies' approval of PLN 381.0 million (EUR 88.88 million) for the program<sup>135</sup>.

The Law and Justice Party (PiS)-led government replaced the MdM scheme by the **National Housing Programme** by the end of 2016. The program's objectives are to construct affordable housing units for rent and give renters a purchase option. It is also aimed at redirecting public funds toward social groups with significantly lower incomes, and away from middle-income groups that were previously supported by other housing programs. The construction of new apartment buildings under the programme started in 2018. The rent for the apartments is expected to be around PLN 10 (EUR 2.3) to PLN 20 (EUR 4.7) per square metre<sup>136</sup>.

**PROSUMENT** is a grant programme co-financing loans for the purchase and installation of small devices producing energy from renewable energy

sources offered by the National Fund of Environmental Protection and Water Management. The programme benefits from a budget of PLN 800.0 million (EUR 186 million) for the period from 2014-2022<sup>137</sup>.

**The Home Plus+ (*Mieszkanie Plus*) programme was primarily launched to fight against discrimination in the access to accommodation in Poland.**

Under the Home Plus+ (*Mieszkanie Plus*) programme, launched in 2016, tenants get an opportunity to acquire ownership of low-cost apartments after a certain number of years if they meet specific conditions. The program includes an option for beneficiaries to pay back building costs over a period of 25 years and hence turn their homes into private property eventually<sup>138</sup>. It allows tenants to lease the new housing at PLN 10-20 (EUR 2-4) per square meter and at PLN 12-24 (EUR 3-5) per square meter for the rent-to-own options. While families with children and low-income groups will be given priority, the program will be open to all citizens<sup>139</sup>.

The **Emergency Housing Programme** offers support to very low income people. The programme provides co-financing in the range from 30-50% to local authorities for the construction, purchase or refurbishment of rental housing. NGOs are eligible for the funding, too, if they provide night shelters to homeless people<sup>140</sup>.

In the Polish legal system, in accordance with the Social Welfare Act of 2004, "**Sheltered housing**" ("*Mieszkanie chronione*") is a form of social assistance that prepares, under the supervision of specialists, to lead an independent life of

individuals. This type of housing has a very wide group of recipients who are in a difficult life situation, including old, sick, with disabilities, in particular with mental disorders, minors, refugees and foreigners, who obtained subsidiary protection in Poland<sup>141</sup>. In addition, a support programme “**For Life**” (“*Za życiem*”) came into force in July 2017. It provides disabled people, their families and women during difficult pregnancy with help to integrate in the society. The program ensures the improvement of the quality of life, accessibility of healthcare services and availability of housing for families bringing up disabled children<sup>142</sup>.

The **Fund of Apartments to Rent** (“*Fundusz Mieszkan na Wynajem*”) is run by the BGK and aims to create an alternative to mortgage, making affordable and good quality lodging accessible to a wide group of people. The Fund operates on a commercial basis<sup>143</sup>.

The **non-residential sector** is mainly impacted by policies restricting the possibility to develop retail properties with sales areas exceeding 2,000 m<sup>2</sup>. Such properties can only be developed if they are included in the general municipal zoning documents (zoning study and local master plan). The procedures to adjust a zoning study and adopt a local master plan typically take a couple of years.

## Building regulations

In Poland, the following legal acts govern or regulate the construction process:

- the **Building Law** (*Prawo budowlane*) was amended in mid-2015 simplifying administrative obligations related to all stages of construction, including building permits, notification of construction works and changes in construction projects. From January 2017, the Building Law is amended to improve the legal situation for entrepreneurs and administrative procedures related to construction works and permits<sup>144</sup>;
- the law on planning and area development, so called **Spatial Development Law** (*Planowanie i zagospodarowanie przestrzenne*);
- the **Environmental Impact Law** (*Udostępnianie informacji o środowisku i jego ochronie, udziale społeczeństwa w*

*ochronie środowiska oraz o ocenach oddziaływania na środowisko*);

- the **Water Law** (*Prawo wodne*); and
- a **New building regulations** for provisions of the Urban and Construction Code. The new regulations came into force in stages in January 2018. The first stage relates to regulating issues concerning ordinary citizens, simplifications and investment facilitations, where more than 140 acts are subject to change from January onwards. Among the main objectives, the Code is to restore and ensure effective space management, the so-called spatial order, public space available to all citizens, and stimulate public participation in spatial planning<sup>145</sup>.

With regards to the Building Law, construction work in Poland may only be started after receiving a decision including the building permit. A certain number of less important construction works (such as construction and repair of telecommunication networks, electric power networks, water supply, sewage) do not require a building permit, although, the competent authorities must be notified of them<sup>146</sup>.

Construction of infrastructural projects is governed by other acts relevant to a given investment (motorway, railway or harbour). PZPB believes that the Polish legal environment governing infrastructural projects is too fragmented. A solution may be a single body of law in lieu of the existing separate “branch” laws, which could create room for integrated administrative decisions.

With a purpose of simplifying building process regarding constructions developed for counteracting COVID-19, the Polish government exempted the following building laws:

- Act of 7 July 1994 - Building Law;
- Act of 27 March 2003 on Spatial Planning and Development;
- Act of 23 July 2003 on Protection and Care of Monuments as it refers to planning acts<sup>147</sup>.

**In February 2020, significant changes to the construction process were introduced, bringing amendments to the Construction Law and Certain Other Acts<sup>148</sup>.**

The main objective of the act is to streamline and expedite investment and construction processes to make sure greater stability of decisions made within such processes. These include removing excessive responsibilities on the part of the investor and clarifying rules for better understanding. The amendments also decrease the number of documents required for building permit. It also extends the list of construction projects for which the construction permit is not required, thus removing barriers for potential investors.

**In November 2019, the Act of 16 October 2019 became effective, bringing amendments to the Environment Protection Law and Certain Other Acts<sup>149</sup>.**

The amendments introduced changes, effective from 1 January 2020, by adding a legal provision under which it is mandatory to include a designer's statement with a building permit. The objective of the amendment is to introduce the obligation to confirm (already at the stage of designing a building) whether such building may be connected to the existing heat network and, if such possibility exists, to design it in a manner taking into account such connection.

### Insurance and liability related regulations

**According to the General Conditions for Building Contracts (YSE 1998), the responsibility of the building contractor is based on "fitness for purpose" principle. This means that the building must be constructed according to the construction contract and to the rules of the relevant technical knowledge<sup>150</sup>.**

Therefore, the contractors are responsible for ensuring the appropriate quality of the materials, and liable for poor work execution and any building defects<sup>151</sup>.

Liability of the residential property developer towards the final client is defined under a **developer's agreement** with the client, and is not specifically covered by the Civil Code. Certain measures protecting residential developers' clients are imposed by the **"Developer's Act"**, including among others obligatory escrow account for

clients' payments, as well as wide scope of information obligations.

In Poland, architects, site managers and the investor's supervision representative are required to be members of professional bodies in order to have professional liability coverage. People who carry out independent technical functions bear professional liability (Building Law Art 95). In terms of insurance requirements, designers and site managers must possess liability insurance. Contractors must carry two types of insurance products (civil liability and insurance of material damage/loss). Under the Civil Code, there are liability arrangements in place in relation to latent defects (with a 5-year duration). Nevertheless, there are no mandatory insurance requirements in this regard<sup>152</sup>.

From June 2017, new rules of joint liability of the investor and the contractor towards subcontractors for the performed construction works came into effect. It introduced the elimination of payment bottlenecks (Act of 7 April 2017 on amending certain acts to facilitate the recovery of claims)<sup>153</sup>.

Professional indemnity insurance is mandatory for all construction contractors, and has a statutory minimum guarantee limit of EUR 50,000<sup>154</sup>. Also, there are various voluntary construction insurance policies, such as Contractor's All Risk (CAR) policies and Third Party Liability insurance.

Industry players shared concerns on the public procurement practice applied by GDDKiA, based on the lowest price as the main criterion to select tenderers. This, together with the tight deadlines to prepare the tender, resulted in low quality project documentation. Additionally, the liberalisation of the procurement process led to many unexperienced companies entering the construction market, proposing low prices without taking into account implementation risks. In these circumstances, other tender participants had to reduce their price as well, affecting risks mitigation measures.

Moreover, the construction sector, notably road infrastructure, is suffering from inadequate contract risk distribution between the contractor and GDDKiA. Thus, the contractor is responsible for the majority of the project risks which, nonetheless, are often not taken into account in

the budget to maintain low prices. These issues have led to structural difficulties for Polish construction companies, high competition from other countries (e.g. China) and high amount of legal disputes and litigation cases over contract payments, which take years to be resolved.

Therefore, the sector would expect to see the public side assuming investors risks, in accordance with the FIDIC Standard Form Contracts, as this is only partially done for roadwork contracts. Moreover, there are suggestions of setting up quasi-judiciary organs resolving construction disputes in order not to burden the already heavily burdened judicial system<sup>155</sup>.

In some cases, insurance of large investment projects is tied to a specific contractor or

developer. Thus, in the event of a dispute and/or contractor change, the insurance is no longer applicable to the construction project. In some cases of insurance by the contractor, the developer may be also named as the entity insured. These situations show the importance of investors taking the actual insurance on the project. Insurers can also act as **guarantors**, giving warranties to robust construction companies. Presenting such a warranty to an investor enables a contractor to be fully paid prior to finishing the contract. The usual practice in the case of investment projects is that part of the payment is withheld until the end of the project, so that the investor can deduct any fees for repair and errors from it.

# Current status and national strategies to meet Construction 2020 objectives

## TO 1 – Investment conditions and volumes



The total investment by the narrow construction sub-sector reached EUR 3.7 billion in 2018.

Overall, total investment by the broad construction sector<sup>156</sup> grew, driven by a significant increase in the narrow construction sub-sector (+30.7%) between 2010 and 2018<sup>157</sup>. In contrast, the investment by the real estate activities sub-sector decreased by 8.3%<sup>158</sup> in the same period. It declined from EUR 12.4 billion in 2010 to EUR 11.3 billion in 2018.

In terms of investment in intellectual property products by the narrow construction sub-sector, it increased by 85.8% over 2010-2018<sup>159</sup> period, reaching EUR 56.3 million. Investment by the real estate activities in this category also increased significantly (+121.4% over the same period), reaching EUR 15.5 million.

Investment in intellectual property products by the narrow construction sub-sector between 2010 and 2018

↑ 85.8%

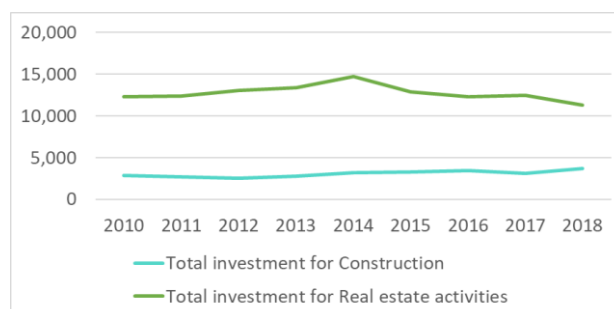
In contrast, investment in machinery and equipment by the real estate activities sub-sector decreased by 42.6% between 2010 and 2018<sup>160</sup>, reaching EUR 141.7 million. Conversely, investment by the narrow construction sub-sector in this category increased to EUR 1.2 billion in

2018, recording an increase 21.0% in the same period.

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

↓ 42.6%

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



Source: Eurostat, 2020.

The investment index in the broad construction sector<sup>161</sup> has experienced a steady growth since 2015, rising by 4.4% over 2015-2019 (Figure 11).

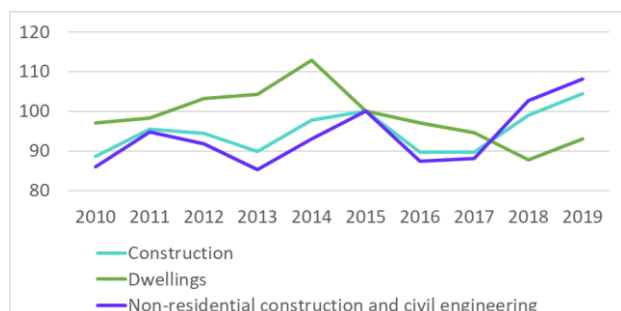
This trend was mainly driven by investment in non-residential construction and civil engineering which increased by 5.3% between 2015 and 2019. In contrast, investment in dwellings declined by 7.0% in the same period. In real terms, investment in the broad construction sector totalled EUR 39.9 billion in 2017, out of which EUR 10.3 billion was invested in dwellings and EUR 29.6 billion in non-residential and civil engineering<sup>162</sup>.

Investment index in the broad construction sector between 2015 and 2019

↑ 4.4%



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



Source: Eurostat, 2020.

Investment in infrastructure dropped considerably from 2011 to 2017. The share of total **inland infrastructure**<sup>163</sup> investment in the GDP peaked at 2.4% in 2011 but dropped to 0.8% in 2017<sup>164</sup>. Similarly, investment in air and road infrastructure went down by 66.7% and 50.7% reaching EUR 43.9 million and EUR 3.2 billion respectively, during the 2010-2017 period. Investment in rail infrastructure decreased by 26.1%, reaching EUR 510.0 million over the same period. Further, road maintenance and air maintenance also decreased heavily by 80.4% and 57.8%, respectively, over the same time period. In contrast, investment in rail maintenance registered a significant growth of 274.6%, increasing from EUR 212.8 million in 2010 to EUR 796.9 million in 2017.

**Currently, the 'National Railway Programme' is at its halfway. The Programme includes 220 projects valued at EUR 13.9 billion (PLN 60 billion) which includes the modernisation of 9,000 kilometre of tracks. By February 2019, Poland completed the 60% of the Programme**<sup>165</sup>.

The inflow of **EU structural funds** continues to be an important driver of infrastructural development, particularly considering that Poland is the one of largest beneficiaries of European Structural and Investment Funds (ESIF).

**By June 2020, total financing under the European Fund for Strategic Investments (EFSI) in Poland stood at EUR 4.4 billion. It is projected to trigger EUR 22.3 billion in additional investments**<sup>166</sup>.

In April 2020, the Polish government announced its plans to invest PLN 30.0 billion (EUR 6.6 billion) in roads and railway infrastructure in 2020. The investment would include contracts worth PLN

11.0 billion (EUR 2.4 billion) in railway developments and PLN 19.0 billion (EUR 4.2 billion) for highway construction<sup>167</sup>.

**In October 2019, the European Union (EU) introduced plans to invest more than EUR 880 million in two projects to improve the rail network in Poland**<sup>168</sup>.

As part of the project, the EU granted a total of EUR 838 million to overhaul the 214.5 km-long southern section of the railway line No 131, which links Chorzów Batory station with *Zduńska Wola Karsznice* station. The remaining EUR 43.0 million will be utilised to buy 930 platform wagons to transport containers through railway<sup>169</sup>.

**In September 2019, the European Commission adopted three major Cohesion Policy projects, worth EUR 676 million, which include modernising the Polish rail and road network and improving travel safety while reducing costs and travel time**<sup>170</sup>.

As part of the projects, the EU will contribute EUR 487.0 million to modernise the Polish railway communication system. More than EUR 117.0 million will be provided to upgrade Silesia's railway services and around EUR 72.0 million for the ease of traffic congestion in *Warmińsko-Mazurskie*.

The EU Cohesion policy funding contributes to major transformations of the Polish economy. The European Regional Development Fund, the Cohesion Fund and the European Social Fund are driving growth and employment in the country through investments. By the end of 2018, 482 km of roads belonging to the Trans-European Transport Networks (TEN-T) were constructed.<sup>171</sup>.

**By the end of 2020, all EU financial instruments will operate under the roof of the new InvestEU programme. InvestEU will focus on areas relevant to Poland such as sustainable infrastructure, research and innovation, digitalisation, social investment and skills**<sup>172</sup>.

Polish motorways ensure the integration of a European network of highways within the TEN-T framework. Poland is part of two of the nine core network corridors:

- the North Sea-Baltic Corridor connecting the ports of the Eastern shore of the Baltic Sea with the ports of the North Sea;
- the Baltic-Adriatic Corridor is one of the most important trans-European road and railway axes, connecting the Baltic Sea to the Adriatic Sea.

In absolute terms, Poland is benefitting from the EU support. As part of financial allocation from the EU Cohesion Policy funds, Poland receives EUR 90.6 billion (around 2.7% of the GDP annually) in the current **Multiannual Financial Framework**. By the end of 2019, Poland already allocated around EUR 84 billion (around 93% of the total EU funds) to specific projects. In addition, EUR 37 billion was reported by beneficiaries as spent, which shows a level of project implementation in line with the EU average<sup>173</sup>.

**Renovation spending by households** increased. In 2010, households were investing annually EUR 10.8 billion in maintenance and repair of dwellings. This increased to EUR 11.4 billion in 2018 (6.1%).

## TO 2 – Skills

**In 2018<sup>174</sup>, the employment rate of VET graduates in Poland increased from 75.2% in 2017 to 78.4%, (slightly below the EU-28<sup>175</sup> average of 79.5%), mainly due to a favourable labour market situation<sup>176</sup>.**

In 2017<sup>177</sup>, around 178,000 new students participated in VET Programmes, a decrease of 0.7% over the previous year, continuing the declining trend since 2013, mainly due to demographic decline<sup>178</sup>.

Since September 2017, the education system in Poland has been going through substantial restructuring. It is expected to be finalised in the 2022-2023 school year<sup>179</sup>. The major factors of the reform include:

- restructuring the current six- year primary education into eight years, divided into two four year programmes (basic and lower secondary level);
- phasing out the lower secondary school (*gimnazjum*) and extending the general upper secondary school (four instead of three years); and

- the technical upper secondary school (five instead of four); and introducing a two-level 'sectoral vocational school.

In Poland, the provision of VET is done at upper secondary and post-secondary levels that are mainly school-based. Upper secondary programmes combine general and vocational education.

Furthermore, the Polish government has taken a number of initiatives which have been introduced to reduce the skills mismatch between employers and vocational training institutions, the absence of flexible learning and guidance and counselling<sup>180</sup>.

**Adult participation in learning** remains low in Poland. In 2019, adult participation (18 to 64 age group) in education and training in the narrow construction sub-sector stood at 3.4%, well below the EU-28 average of 8.7%. For real estate activities sub-sector, the participation in education and training was 7.2%, well below the EU-28 average of 16.4%.

Adult learning improvements face a number of challenges, including a lack of coherent adult learning policy; clear leadership at national level; and the close involvement of stakeholders. Nevertheless, the PZPB (*Polski Związek Pracodawców Budownictwa*) is active in supporting a number of EU co-funded projects aimed at enhancing the skill level of the sector, covering safety at work, green and energy efficiency skills, digital construction, as well as facilitating apprenticeships in SMEs<sup>181</sup>.

Furthermore, the Ministry of Science and higher Education supports university studies within the *Program Rozwoju Kompetencji (Programme for the Development of Competence 2014-2020)*. The programme focuses on improving practical skills of students through training and internships<sup>182</sup>. In addition, Erbud group, one of the largest construction groups in Poland, offers **STERBUD construction internships** programmes for recent graduates who wish to pursue their career in one of the largest construction companies in Poland<sup>183</sup>.

The Ministry of Education introduced a project called "**Chance – new opportunities for adults,**" financed by the European Social Fund. The objective is to support adults with a low level of skills, knowledge and competencies who are not

eligible for support under the Youth Guarantee. The project, with a budget of approximately PLN 30.0 million (EUR 7.2 million), is implemented by the Foundation for the Development of the Education System in cooperation with the Educational Research Institute<sup>184</sup>. The first phase of the project has recently been completed. The project will be implemented until the end of 2021<sup>185</sup>.

### TO 3 – Resource efficiency / Sustainable construction

The main national strategy documents on energy efficiency in Poland are the **Energy Policy of Poland until 2030 (EPP 2030)** and the 2017 **Fourth National Energy Efficiency Action Plan (NEEAP)**.

These policies are supported by legal acts, like the Law on support to thermal upgrade and refurbishment<sup>186</sup>. Moreover, many Polish legal acts relevant to resource efficiency and sustainable construction are EU-driven, such as the **Bill amending the Energy Efficiency Law (*Ustawa efektywności energetycznej*)**, which implements the **Energy Efficiency Directive (2012/27/EU)** and the Law on Energy Performance of Buildings, which transposes the **Energy Performance of Buildings Directive (EPBD, directive 2010/31/UE)**.

In addition to the legal framework, energy efficiency in buildings is supported by a significant number of instruments and measures. The following ones are some of the main schemes implemented to achieve better energy efficiency. For instance, the **Thermal Upgrade and Refurbishment Fund (*Fundusz Termomodernizacji i Remontów*)** managed by the BGK, awards premiums helping pay back up to **20%** of the loan for thermal upgrade or refurbishment of residential buildings. In the period 1999-2015, around 38,000 thermo-modernization incentives were awarded. This helped to save approximately **PLN 900.0 million** on energy costs by the end of 2015<sup>187</sup>.

In June 2018, the government of Poland announced the allocation of PLN 103 billion (EUR 22.7 billion) to finance thermo-modernization. The program, called **“Clean Air”**, implemented in September 2018 and will end in 2029. The Program will target individual homeowners. The two thirds

of funds will be provided as grants and the rest as loans<sup>188</sup>.

**“Energy efficient construction industry- Reduction of energy consumption in the construction industry”** programme, with a budget of PLN 1.13 billion, is scheduled to be implemented between 2016 and 2022. The fund can also be granted for the thermal upgrade of museums, historic monuments, sacral buildings, hospitals, long-term care facilities, residential care facilities, hospices, students’ houses, centres for culture, religious worship, teaching, care, pedagogy and research.

**Other schemes include programmes managed by the National Fund for Environmental Protection and Water Management (NFOŚiGW) and the Regional Funds for Environmental Protection and Water Management (WFOŚiGW) such as Air protection, RYS, and Kawka<sup>189</sup>.**

The objective of **Air protection** programme is to reduce CO2 emissions in public, residential and industrial buildings. It is an ongoing programme which is administered by the regional environmental funds WFOŚiGW. It supports investments contributing to reduction of CO2 emission. It offers different forms of support depending on the region, including grants, subsidies or soft loans. The approximate annual budget of all Regional Funds together amounts to EUR 148 million<sup>190</sup>.

The **KAWKA** programme is mainly focused on local government units and can support thermal renovation of multi-family buildings as well as educational campaigns. It was started in 2014 and will end in 2020. The programme is administered by the WFOŚiGW with a budget of EUR 190 million.

The **RYS (“Lynx”)** programme run by the National Fund for Environmental Protection and Water Management (NFOŚiGW) provides grants and loans for energy evaluation of buildings as well for renovation works, covering thermo-renovation of single-family housing. The grant can cover up to 40% of renovation costs. The programme has a budget of EUR 95.2 million for 2015-2020. The programme will end by 2023<sup>191</sup>.

The Operational Programme **Infrastructure and Environment Poland 2014-2020, OPI&E** (Supporting energy efficiency, intelligent energy management and the use of renewable energy

sources in public infrastructure, including public buildings and housing) provides grants and soft loans for energy efficient refurbishment of multiple family housing, including use of renewables. The programme will be implemented throughout the 2014-2023 period. Funding under the programme requires the preparation of energy audits, thus ensuring to verify energy savings. In terms of budget, the programme allocates EUR 165.9 million to public buildings and EUR 225.6 million to residential buildings (contributions from the EU Cohesion Fund)<sup>192</sup>.

**Started in 2015, the Regional Operational Programmes provides support for investment projects engaged into deep comprehensive energy modernisation of multi-apartment residential and public buildings<sup>193</sup>.**

The programme provides support for investment projects engaged into deep energy modernisation of multi-apartment residential and public buildings. Administered by the WFOŚiGW, the programme will end in 2022. The allocated budget for the programme is EUR 986 million for public building renovation and EUR 481 million for residential building renovation<sup>194</sup>.

**The National Fund of Environmental Protection and Water Management** (*Narodowy Fundusz Ochrony Środowiska i Gospodarki Wodnej*), established in 1989, offers financial aid for environment-friendly investments. These include co-financing to bank loans for energetically efficient housing, a programme endowed with EUR 75 million. The amount of subsidies or the financial aid mainly depends on the building's energy standard<sup>195</sup>.

**Currently, there are already 772 certified buildings in Poland. Out of 772 buildings, 591 are certified with BREEAM and 166 are LEED. Over the past twelve months, the number of certificates grew by more than 154 new buildings. The pace of growth reflects that BREEAM is getting more popular, with 70% of current's green building bidding for these certificates<sup>196</sup>.**

## TO 4 – Single Market

Poland reports average performance below the EU-28 average<sup>197</sup> with respect to a few metrics of the **EU Single Market Scoreboard**. Poland's

performance regarding the transposition of EU directives such as transportation deficit (0.8%; EU-28 average 0.6%), average delay (13.9 months; EU-28 average 11.5 months), and conformity deficit (1.8%; EU-28 average 1.2%) has worsened in 2019 as compared to the previous year. Also, the number of infringement procedures is above the EU-28 average, which is partly explained by the limited use of the EU Pilot tool. Currently, Poland has the 5<sup>th</sup> highest number of Single Market-related cases. In terms of Internal Market Information System, Poland performed well. Its performance was below the EU-28 average in 3 out of 5 indicators<sup>198</sup>.

Furthermore, its performance in public procurement was average in 2019. The public procurement of large construction works in Poland has often been based on the lowest price criterion. According to the industry<sup>199</sup>, this resulted in lower quality project documentation (notably design), thus potentially putting at risk the entire construction project. Since 2012, when the tendering procedures were liberalised, many small companies have been entering the construction market (particularly road infrastructure) by securing tenders at the lowest prices. The Polish government has also announced that a new act on public procurement is needed to make the procedures simpler, nevertheless it has not published any drafts yet in this regard<sup>200</sup>.

For Polish exports, EU Members States are a major destination. Nevertheless, the development of SMEs in Poland on the single market is still behind as compared to the other EU countries. This is due to several socio-economic factors such as a less diverse offer of innovative goods and services, a less established brand of Polish industry or developing internal market. Poland has taken several measures over the years to improve the condition in this regard<sup>201</sup>.



**The Polish Agency for Enterprise Development (*Polska Agencja Rozwoju Przedsiębiorczości, PARP*), established in 2000, provides support to entrepreneurs in the implementation of competitive and innovative projects. Its aim is to develop the sector of small and medium-sized enterprises in Poland. PARP uses the funds from the State budget and European Funds to support entrepreneurs<sup>202</sup>.**

The Polish Investment & Trade Agency promotes sectoral export and economic marketing programmes. It also provides support to develop Foreign Trade Offices. These programmes support the export to EU countries, as well as non-EU countries<sup>203</sup>.

Product-wise, Polish authorities established a Single Product Contact Point at the General Office for Construction Supervision, in charge to inform about legal obligations in force concerning construction products, and thus facilitating intra-EU trade.

Despite the reform on building permits aimed to improve the regulatory and business environment, the administrative burden for obtaining construction permits is still high. Investors are required to carry out extensive legal and administrative paperwork, often without the possibility to file for requests electronically. In particular, infrastructure projects take very long requiring additional procedural steps. Even more cumbersome, spatial planning at local level is often not covered local spatial plans ('zoning') and thus subject to overregulation and contradictory provisions. Poland regulates the professions of architects and civil engineers. In the case of civil engineers, the profession includes a number of sub-categories related to civil engineering that are regulated separately. The activities of designing and construction are performed by two different types of engineers or by the same engineer provided he holds all the necessary qualifications. Such fragmentation of the profession, may however harm cross-border mobility, as civil engineers from a country with a unitary system (i.e. where the civil engineer can perform all types of activities) may not be qualified to perform all activities under the Polish system<sup>204</sup>.

Finally, according to GAN anti-corruption report, corruption is a major problem for businesses

operating in Poland. Political corruption is still a problem in public services and public procurement which makes it difficult to ensure fair business<sup>205</sup>.

**The Polish public procurement sector mainly suffers from custom-made specifications for particular companies, unclear selection or evaluation criteria, collusive bidding, and conflicts of interest<sup>206</sup>.**

The Polish Government has adopted the general rules pertaining to the Law on electronic invoicing in public procurement as a transposition of **Directive 2014/55/EU** on electronic invoicing in public procurement. From November 2018, all public administrations started accepting (structured) electronic invoices. The objective is to reduce both the amount of paper used as well as the costs associated with the process<sup>207</sup>.

With regards to the implementation of **Eurocodes**, all Eurocodes are published as National Standards and translated in Polish, with the exception of the EN 1998 series. While, the use of Eurocodes is non-compulsory they are practically the sole basis for structural design in Poland. Other National Standards are used in parallel to most Eurocodes Parts. Exceptions to this are the series EN 1991-1-2, EN 1991-1-7, EN 1992-1-2, EN 1993-1-2, EN 1993-4-3, EN 1993-5, EN 1994-1-2, EN 1995-1-2, EN 1996-1-2, EN 1996-3, EN 1998, and EN 1999-1-2, which mostly deal with fire design. Not least, the Public Procurement Law enforces the implementation of Eurocodes in procurement and over 80% and national annexes were published to all Eurocodes Parts (except the EN 1998 series)<sup>208</sup>.

## TO 5 – International competitiveness



**Poland ranks 37<sup>th</sup> out of 141 economies in the 2019 Global Competitiveness Report<sup>209</sup>.**

In terms of **internationalisation**, Poland performs below the EU-28<sup>210</sup> average. According to SBA (Small Business Act for Europe) Fact Sheet 2019, Poland's score in the area of involvement of trade communities was 1.4, lower than the EU-28 average (1.65). In terms of information availability, it scored 1.7, slightly below the EU-28 average of



1.8. The country's extra-EU SME exports score stood at 1.8, well below the EU-28 average of 5.0. In terms of border agency cooperation, Poland's score (1.5) was slightly below the EU-28 average (1.4) in 2017. Nonetheless, Poland's advance rulings were ranked (1.9), above the EU-28 average (1.8)<sup>211</sup>.

The overall economic growth in Poland has largely been dependent on the international development of Polish SMEs. Since 2008, central and regional public administration in Poland has introduced several programmes to facilitate such an expansion, providing both financial and advisory support. During 2018, Poland expanded its Foreign Trade Offices network. This helped in addressing gaps in Polish foreign economic policy, as assessed by some of the stakeholders<sup>212</sup>.

There is an ongoing **Scale-up** programme implemented under **"Start in Poland"** by the Ministry of Development supports start-ups. This programme is funded by the Polish Development fund, which provides a number of initiatives to stimulate and increase the incubation, acceleration and development of start-ups<sup>213</sup>.

**Around EUR 6.7 billion from the European Regional Development Fund (ERDF) has been allocated to strengthen the competitiveness of Polish SMEs. So far, more than 4,000 Polish firms have benefitted from the available ERDF funding. This includes over 200 innovative start-ups<sup>214</sup>.**

In terms of internationalisation of Polish construction companies, a significant improvement can be seen during the 2010-2018 period. In 2018, exports value of all construction-related products in Poland stood at EUR 5.7 billion in 2018, as compared to EUR 3.6 billion on 2010. This represents an increase of 58.6% during the period. Also, share of exports value of all construction-

related products stood at 38.4% of total value of production in 2018, as compared to 31.1% in 2010.



Similarly, value added at factor cost in the narrow construction sub-sector, in the context of **inward FATS<sup>215</sup>** (Foreign affiliates statistics), declined by 2.0% between 2010 and 2017<sup>216</sup>. In contrast, turnover in the sub-sector grew by 12.9% in the same period. Whereas, in terms of employment, it slightly grew by 5.8% during the period 2010-2017.

In the same line, turnover in the narrow construction sub-sector, in terms of **outward FATS<sup>217</sup>** grew by 24.5% between 2010 and 2017. In contrast, the number of people employed in the sub-sector decline by 13.7% during the same period.

To further deepening cooperation among construction companies and exploiting opportunities deriving from internationalisation, Polish construction companies launched the Polish Cluster of Construction Exporters in 2015<sup>218</sup>.

In terms of specific initiatives taken to foster internationalisation of Polish construction companies, the **Polish Agency for Enterprise Development (PARP)** organises the **"Go to Brand promotion"** programme dedicated among others to companies active in construction and finishing of buildings<sup>219</sup>.

**Moreover, measures taken to facilitate innovation and technical development in Polish firms are also expected to improve the competitiveness of Polish SMEs on international markets<sup>220</sup>.**

## 8

## Outlook

The Polish economy has been growing steadily since 2014. In 2019, Poland's GDP amounted to PLN 2,136.2 billion (EUR 470.0 billion), representing a 4.1% growth compared to 2018.

**The economic growth is projected to slow down in the coming years, notably because of the COVID-19 related impact (low private consumption), which is expected to lead to a 4.3% annual GDP decline in 2020.**

However, the GDP growth is expected to rebound in 2021 (+4.1%), driven by a rise in the private consumption, though at gradually slower rates, led by the higher consumer confidence. Changes in personal income tax will also drive this growth<sup>221</sup>.

In line with this overall economic trend, the outlook for the Polish broad construction sector is moderate. The **volume index of production** of the narrow construction sub-sector, construction of buildings and construction of civil engineering are projected to decline by 5.9 index point (ip), 7.5 ip and 5.5 ip, respectively, in 2020. Nonetheless, it is expected to increase by 3.1 ip, 3.3 ip and 3.3 ip (YoY) in 2021 for the sub-sectors. This indicates that the growth in the sector will primarily be picked up in 2021.

Following these trends, the **turnover** is also projected to decline by 26.4% in 2020, compared to 2019. In contrast, it is expected to grow by 12.0% in 2021 over 2020.

The **number of workers** employed in the broad construction sector is projected to decrease by 27.0% in 2020, and grow by 10.3% in 2021, reaching 1,359,099 people in 2021. Similarly, the **total value added** of the broad construction sector

is expected to reach EUR 23.3 billion in 2020, declining by 26.0% over 2019. Nevertheless, it is expected to recover in 2021 and grow by 12.0%, reaching EUR 26.1 billion.

Forecasted number of workers employed in the broad constructions sector between 2019 and 2021



The Polish civil engineering and infrastructure sector is forecasted to have a positive outlook because of the rising investments in infrastructure, particularly rail and roads; housing and R&D in the coming years.

However, the broad construction sector continues to face several challenges. These include increase in construction costs, i.e. construction materials and labour wages significantly increased, making profitability more challenging for businesses. The sector also faces a growing number of business bankruptcies. Also, the ongoing COVID-19 pandemic has impacted the constructions sector adversely.

In addition, the shortage of labour proves to be a key impediment to the sectors' growth, which was felt even more in times of COVID-19. Therefore, more efforts need to be addressed to ensure the growth of the sector.

**The outlook for the Polish construction sector is hence moderate, with infrastructure and civil engineering driving its growth in the coming years. Nevertheless, the sector is not expected to experience a significant decline, primarily driven by the measures being taken by the government.**

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