European Construction Sector Observatory

Country profile **Italy**

September 2021

In a nutshell

In 2020, Italy's GDP reached EUR 1.6 trillion, representing a decline of 8.9% and 8.2% as compared to the 2019 and 2010 levels.

The **number of enterprises** in the broad construction sector decreased by 18.5%, from 1,125,499 in 2010 to 916,808 in 2020. This decrease was largely driven by the manufacturing as well as the narrow construction sub-sectors, registering the biggest decline in the number of enterprises (-28.3% and -24.7%) over the 2010-2020 period, respectively.

Number of enterprises in the narrow construction sub-sector between 2010 and 2020	↓ **24.7%**

Similarly, the **volume index of production** in the broad construction sector decreased by 3.3% between 2015 and 2020. The **total turnover** of the broad construction sector reached EUR 248.8 billion in 2020, registering a decline of 24.1% compared to 2010 levels (EUR 327.6 billion). With regards to sub-sectors, the manufacturing sub-sector declined by 29.2%, followed by the narrow construction (-27.6%) and the architectural and engineering activities (-20.0%) sub-sectors, partially offsetting slight growth in the real estate activities (+2.6%) over the 2010-2020 period.

Turnover in the narrow construction sub-sector between 2010 and 2020	↓ **27.6%**

At the same time, the **gross operating rate** of the broad construction sector[1], an indicator of the sector's profitability, stood at 18.5% in 2018, being a 0.9 percentage point above the 2010 level (17.6%).

With regards to employment, in 2020, there were 2,039,046 **persons employed** in the broad construction sector in Italy. This represented a 29.8% drop in the number of persons employed from the 2010 levels (2,905,356 persons). This was largely driven by a similar decline in the number of persons employed in the manufacturing sub-sector (-35.0%), followed by the narrow construction (-33.2%) sub-sectors over the 2010-2020 period. The architectural and engineering activities and the real estate activities sub-sectors also experienced a drop of 18.4%% and 14.7%, respectively, over the same period.

The Italian government also announced several initiatives to promote the **residential / housing market**. Under its 2021 Budget Law, Italy has extended the timeline for *Superbonus 110%* deduction up to 30th June 2022. The Italian Government is now considering extending the measure until 2023. The country has allotted EUR 2.8 billion and EUR 18.5 billion for promoting social housing and for investment in energy efficiency housing. The timeline for renovation building bonus has also been extended through 2021.

Under 'European Green Deal', the EU and its Member States, including Italy, have set an ambitious target of achieving climate neutrality by 2050. In order to achieve this, the Italian government has allocated EUR 69.8 billion under the 2021 Budget Law. Out of this, EUR 29.6 billion is set aside for energy efficiency and renovation of buildings[2].

With regards to **non-residential** and **infrastructure** construction, under its Budget Law 2021, Italy allocated EUR 32.0 billion for infrastructural investment including EUR 28.3 billion in high-speed railways and road maintenance 4.0 as well as EUR 3.7 billion in intermodal transport and integrated logistics. Italy also intends to implement an advanced digital road monitoring system to improve infrastructure's safety, digitise its road network as well as adapt it to climate change[3].

In June 2021, the European Union approved an EUR 191.5 billion COVID-19 pandemic Recovery and Resilience Facility for Italy, consisting of EUR 68.9 billion in grants and EUR 122.6 billion in loans[4].

As per ANCE estimates, a significant share of the investments and policy measures will be dedicated to, or affecting the construction sector[5]. The bulk of the interventions that will impact the construction sector are described in Italy's Recovery and Resilience Plan (RRP), and particularly under the missions "Green Revolution and Ecological Transition" and "Infrastructure for sustainable mobility ".

Italy has allocated EUR 32.0 billion towards infrastructure for sustainable mobility. This includes EUR 28.3 billion for investment in high speed network and road maintenance 4.0 as well as EUR 3.7 billion for investment in inter-modality and integrated logistics[6].

With regards to railway works, the programme includes continuation of the construction of various lines such as the Naples-Bari and the Brescia-Verona-Padua railway and the Tortona-Genoa high-speed railway (also known as third pass of Genoa). Additionally, the infrastructure works planned under the DEF 2020 (*ItaliaVeloce Plan*) are still in the preliminary design and project review phase and will require longer time to start. In relation to road transport, under the RRP, Italy has allocated EUR 1.6 billion towards road maintenance. The country also allocated EUR 46.3 billion towards the development and promotion of digitisation, innovation and competitiveness within the country. Moreover, Italy has allocated EUR 29.6 billion towards projects related to increasing energy efficiency and redevelopment of buildings, envisaging a series of energy efficiency interventions on public and private buildings aimed at saving at least 0.98 $MtCO_2$ by 2026[7].

Presently, the Italian construction sector faces a number of issues including a steep decline in company birth rate and at the same time a rise in company death rate for both the narrow construction as well as real estate activities sub-sectors. Secondly, the country is also facing a shortage of skilled labour workforce. There is a significant gap between demand from businesses and supply of training in Italy. Lastly, the Italian construction sector is also hindered by rise in cases of late payment. As per 2020 Atradius Payment Practice Barometer, the total value of outstanding B2B invoices in Italy increased from 31.0% in 2019 to 55.0% in 2020, well above the Western Europe average of 47.0%. Almost 40.0% of the Italian firms concluded that in 2020 payments were delayed by more than one month on average, compared to 2019.

The outbreak of COVID-19 pandemic and its subsequent mutations have further negatively impacted the economic scenario of the country.

Overall, the Italian construction sector has a positive outlook in the medium and long term. Going forward, public sector construction, infrastructure and transport system upgrade are expected to be the primary growth drivers, further supported by EU-backed funding.

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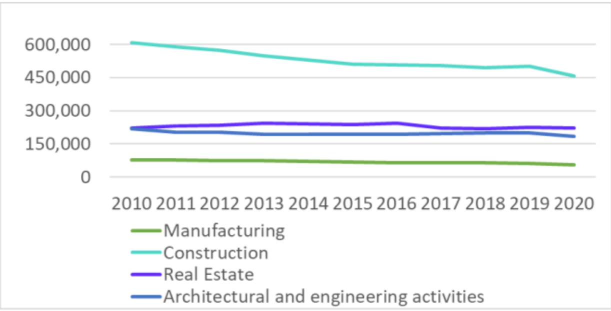
Key figures

Construction market

The **number of enterprises in the broad construction sector** in Italy totalled 916,808[8] in 2020. The narrow construction sub-sector[9] accounted for 49.9% of the total number of enterprises in the broad construction sector, followed by the real estate activities (24.0%), the architectural and engineering activities (20.0%) and the manufacturing (6.0%) sub-sectors. The number of enterprises in the broad construction sector in 2020 was 18.5% below the 2010 level (Figure 1). The broad construction sector witnessed a continuous decline from 2010 to 2015 with some fluctuations from 2016 onwards, mainly due to a decrease in the number of enterprises in the architectural and engineering activities, the narrow construction, and the manufacturing sub-sectors by 19.0%, 16.7% and 16.2% respectively over the 2010-2020 period.

Figure 1: Number of enterprises in the broad construction sector in Italy between 2010 and 2021

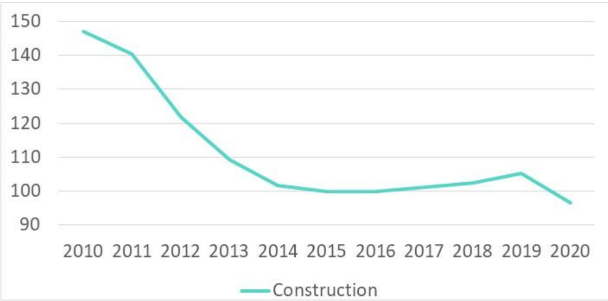


Source: Eurostat, 2021.

The **volume index of production** in the broad construction sector[10] experienced a slight decline of 3.3% between 2015 and 2020. (Figure 2).

Volume index of production in the broad construction sector between 2015 and 2020 ↓ **3.3%**

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

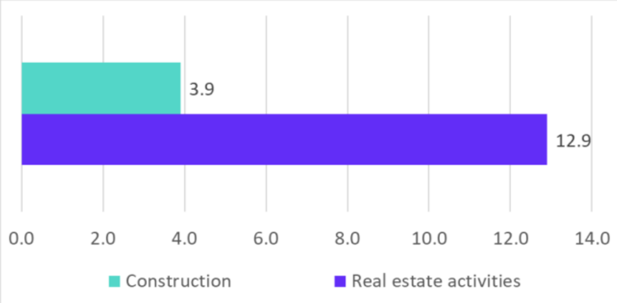


Source: Eurostat, 2021.

In 2020[11], the **total value added of the broad construction sector** amounted to EUR 87.3 billion, representing a 19.3% decline over the 2010-2020 period. This decline was due to a decrease in value added by the narrow construction (-23.6%), the architectural and engineering activities (-21.9%), the manufacturing (-21.5%) and the real estate activities (-1.6%) sub-sectors.

In 2020, the narrow construction sub-sector accounted for 53.0% to the total value added of the broad construction sector. It was followed by the real estate activities (20.8%), the manufacturing (15.6%) and the architectural and engineering activities (10.6%) sub-sectors. The share of gross value added of the narrow construction sub-sector in 2020 stood at 3.9%, representing a decline of 0.1 percentage point (pp) as compared to 2019. Similarly, share of gross value added of the real estate activities sub-sector in 2020 was 12.9%, declining by 0.8 pp as compared to 2019 (Figure 3).

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



Source: Eurostat, 2021.

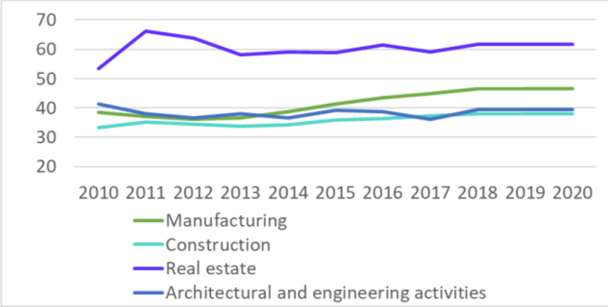
There are 21 statistical NUTS-2 regions in Italy. In 2018[12], the *Lombardia* region accounted for the highest share in gross value added in the country in both the narrow construction sub-sector (20.3%) as well as in the real estate activities sub-sector (20.7%). This was followed by the *Veneto* region with 10.0% in the narrow construction sub-sector and the *Lazio* region with 11.3% in the real estate activities sub-sector. Over the 2010-2018 period, the *Val d'Aosta* region reported the largest decline of 32.4% in gross value added in the narrow construction. Conversely, all the regions recorded a positive growth in the real estate activities sub-sector with the *Provincia Autonoma di Bolzano* region registering the largest increment of 24.1% over the same reference period.

Productivity

The **apparent labour productivity**[13] in the broad construction sector has been experiencing an increasing trend, from EUR 37,223 in 2010 to EUR 42,592 in 2018 (+14.4%), below the EU-27 average of EUR 51,960 for the same year.

Amongst the sub-sectors, apparent labour productivity in the manufacturing sub-sector experienced the strongest increase (+20.8%), going from EUR 38,494 in 2010 to EUR 46,502 in 2020. This was followed by the real estate activities sub-sector, which increased from EUR 53,400 in 2010 to EUR 61,614 in 2020 (+15.4%). The narrow construction sub-sector increased from EUR 33,200 in 2010 to EUR 38,004 in 2020 (+14.5%). On the contrary, the architectural and engineering activities sub-sector exhibited a decline from EUR 41,300 in 2010 to EUR 39,498 in 2020 (-4.4%).

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



Source: Eurostat, 2021.

Turnover and profitability

The **turnover** of the broad construction sector in 2020 experienced a 24.1% drop, from EUR 327.6 billion in 2010 to EUR 248.8 billion in 2020[14]. This was particularly pronounced in the manufacturing (-29.2%), the narrow construction (-27.6%) and the architectural and engineering activities (-20.0%) sub-sectors, offsetting a 2.6% increase in the real estate activities sub-sector over the 2010-2020 period.

Turnover of the broad construction sector between 2010 and 2020 ↓ **24.1%**

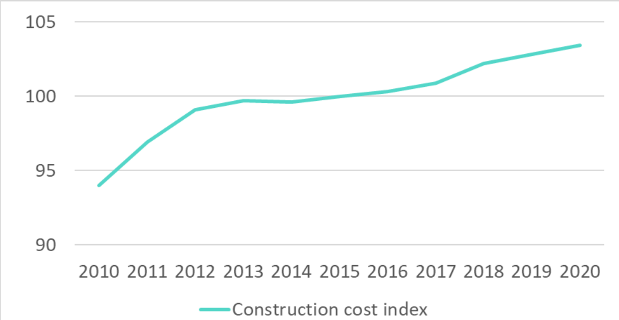
Similarly, the **gross operating surplus** dropped by 13.9% between 2010 and 2018[15], from EUR 57.6 billion to EUR 49.6 billion, respectively.

At the same time, the **gross operating rate** of the broad construction sector[16], which gives an indication of the sector's profitability, stood at 18.5% in 2018[17], slightly above the EU-27 average (+16.7%). Among the sub-sectors, the real estate activities sub-sector was the most profitable, with the gross operating rate reaching 43.0% in 2018. This was followed by the architectural and engineering activities (+39.2%), the narrow construction (+12.7%) and the manufacturing (+11.5%) sub-sectors.

Similarly, the **construction cost index** increased by 3.4% between 2015 and 2020[18].

Construction cost index in construction between 2015 and 2020 ↑ **3.4%**

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



Source: Eurostat, 2021.

Employment

In 2020[19], there were 2,039,046 **persons employed** in the broad construction sector, registering a decline of 29.8% as compared to 2010 (2,905,356 persons). Among the sub-sectors, the narrow construction sub-sector employed 1,216,667 people representing 59.7% of the total workforce in the broad construction sector in 2020. This was followed by the real estate activities sub-sector, which employed 295,132 persons (14.5% of the total workforce), the manufacturing sub-sector having employed 292,101 persons (14.3% of the total workforce) and the architectural and engineering activities sub-sector with 235,146 persons (11.5% of the total workforce) (Figure 6). The decline in the broad construction sector workforce between 2010 and 2020 was largely due to by the decline in persons employed in the manufacturing (-35.0%), the narrow construction sub-sector (-33.2%) as well as in the architectural and engineering activities (-18.4%) and the real estate activities (-14.7%) sub-sectors.

Number of persons employed in the narrow construction sub- sector between 2010 and 2020 **↓ 33.2%**

Region wise, in 2018[20], the *Lombardia* region had the highest number of persons employed in the narrow construction and real estate activities sub-sectors, followed by the *Lazio* and *Veneto* regions.

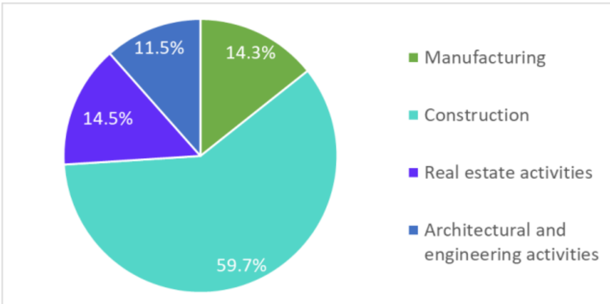
Provincia Autonoma di Bolzano / Bolzen **recorded the largest increase in employment in the narrow construction sub-sector (+11.6%) over the 2010-2018 period. In the real estate activities, the largest increment in employment was recorded for *Calabria* region (+23.1%).**

As for **employment by specific occupation**, except 'clerical support workers' (+7.3%), all other categories of workers in the narrow construction sub-sector experienced a steep decline over the 2010-2020 period. The category of 'elementary occupations' experienced the largest decline (-49.6%) followed by 'managers' (-45.8%) and 'plant and machine operators and assemblers' (-30.2%) over the same period.

In case of the real estate activities sub-sector, 'elementary occupations' recorded the largest growth (+121.7%) followed by 'professionals' (+103.7%) over the 2010-2020 period. Similarly, in the manufacturing sub-sector, the largest increment was registered by 'professionals' (+82.7%) followed by 'elementary occupations' (+39.7%) over the same reference period.

Number of elementary occupations workers in the narrow construction sub-sector between 2010 and 2020 **↓ 49.6%**

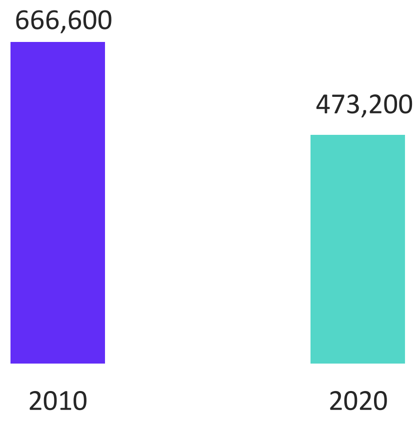
Figure 6: Percentage of people employed per construction sub-sectors in Italy in 2020



Source: Eurostat, 2021.

The number of **self-employed workers** in the narrow construction sub-sector decreased by 29.0% over the 2010-2020 period. Their share in the total self-employed persons in the general economy hence declined from 13.2% in 2010 to 10.5% in 2020. Conversely, the number of persons self-employed in the real estate activities sub-sector slightly increased by 3.3% in 2020 as compared to 2010, accounting for 1.6% of the self-employed in the general economy in 2020.

Over the 2010-2020 period, **full-time employment** in the narrow construction sub-sector decreased by 29.9%. Whereas in the real estate activities sub-sector, it marginally increased by 1.1% over the same reference period. Contrarily, the **part-time employment** in both the narrow construction as well as the real estate activities sub-sectors increased by 1.0% and 17.3%, over the 2010-2020 period, respectively.



Self employed persons in the narrow construction sub-sector in Italy

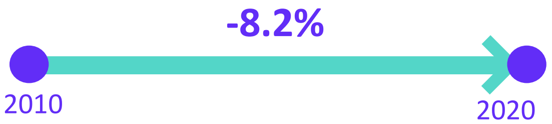
2

Macroeconomic indicators

Economic development

In 2020, the country's GDP decreased by 8.2%, from EUR 1.7 trillion in 2010 to EUR 1.6 trillion in 2020. This is partly explained by the GDP decline experienced in 2019 (-8.9%), resulting from the COVID-19 pandemic impact on the economy. The **potential GDP** in 2020 was EUR 1.7 trillion, resulting in a negative **output gap** of 8.6%, which indicates that the economic output is well below the economy's full capacity for output.

Italy's GDP growth between 2010-2020



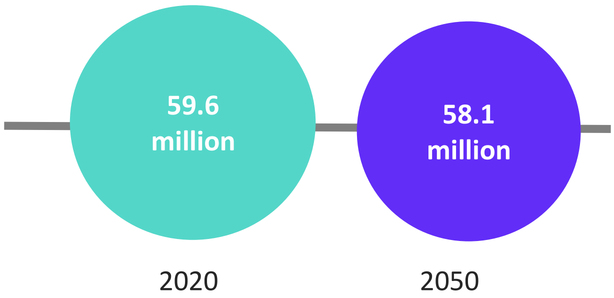
The annual **inflation rate** in Italy stood at -0.1% in 2020 as compared to a 0.6% growth in 2019.

Demography and employment

In 2020, the **total population** in Italy stood at 59.6 million people. It is projected[21] to increase to 59.9 million people by 2030 (+0.5%), and then decrease to 58.1 million people by 2050 (-2.5%). In parallel, the **net migration rate** significantly decreased from 200,091 in 2010 to 39,148 in 2019[22] (-80.4%). The total number of immigrants also decreased from 458,856 in 2010 to 332,778 in 2019 (-27.5%).

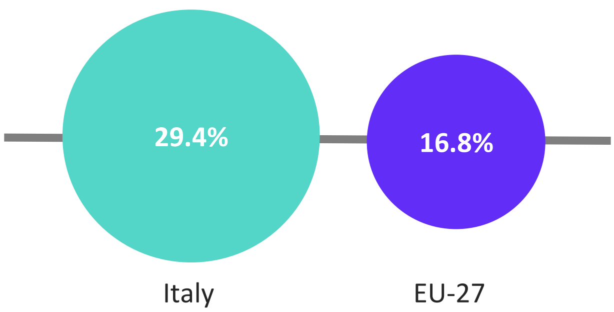
In 2020, the **working age population** (from 15 to 64 years old) accounted for 63.8% of the total population, and is expected to decrease in coming years, reaching 61.6% in 2030 and 54.8% in 2050. Moreover, the share of the **ageing population** (65+ years) stood at for 23.2% of the total population in 2020. It is expected to increase to 27.0% of the total population in 2030 and 33.7% of the total population in 2050. In turn, this could result in a rise in demand for hospitals and elderly care infrastructure. This also puts further pressures on the labour supply in the construction sector (see Chapter 4 on Skills shortage).

Total population in Italy



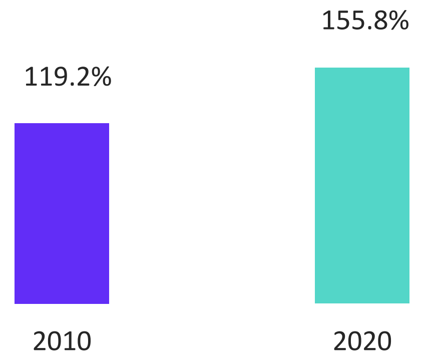
The **unemployment rate** (25-64 years) in Italy stood at 8.2% in 2020, slightly above the 2010 level (7.0%) and the EU-27 average (6.3%). Similarly, the **youth unemployment rate** (below 25 years) stood at 29.4% in 2020, slightly above the 2010 level of 27.9% and well above the EU-27 average of 16.8%.

Youth unemployment rate in 2020



Public finance

In 2020, the general **government expenditure** as a share of GDP in Italy stood at 57.3%, slightly above the EU-27 average of 53.4%[23]. The general **government deficit** as a share of GDP amounted to -9.5% in 2020, above the EU-27 average (-6.9%)[24]. Furthermore, the general **government gross debt** amounted to 155.8% of GDP in 2020, significantly above the EU-27 average of 90.7% and considerably higher than in 2010 (119.2%)[25].



Government gross debt (% of GDP) in 2020

Entrepreneurship and access to finance

> **As per World Bank Doing Business 2020 report, Italy ranked 98th out of 190 countries in terms of ease of starting a business. This represented a decline as compared to 2019 (67th)[26,27].**

According to the report, starting a business in Italy requires 7 procedures, taking 11 days and costs 13.8% of per capita income. This is considerably high when compared to OCED high-income average requiring 4.9 procedures, taking 9.2 days and costing 3.0% of per capita income. However, the paid-in minimum capital required (i.e. the amount that the entrepreneur needs to deposit in a bank or with a notary before registration and up to three months following incorporation) is 0.0%, compared to the OECD high-income average (7.6% of income per capita)[28].

According to the **Global Entrepreneurship Monitor 2020**, perceived opportunities (representing adult population aged 18 to 64 years) as well as entrepreneurial intentions (representing adult population not involved in entrepreneurial activities) for Italy stood at 62.2% and 4.5%, respectively[29].

Italy has been one of the poorest performers in the EU for 'responsive administration'. The cost of starting a new business in Italy is unchanged since 2013 and is the highest in the EU. It is also one of the three poorest performers in the EU with respect to the burden of government regulation on business. Around 87% of firms, still believe that frequent changes in the legislation and policies are posing threat in doing business. This rate stands as the second highest rate in the EU[30].

> **As per Small and Medium-sized Enterprises (SME) Fact Sheet 2020, Italy's performance was well below the EU-27 average as evident by the fact that only 6.2% of the country's population intended to start a business in next three years as compared to EU-27 average of 15.6%[31].**

In comparison to the EU-27 average, Italy scores poorly in both general and female entrepreneurship with the gap being significantly widened over the 2015-2019 period. There are various factors hindering the SME growth in the country including low market capitalization, limited access to finance, difficult administrative procedures as well as frequent changes in regulatory and tax framework[32].

There has been a slight improvement in terms of access to finance, as witnessed by the declining rejection rate for bank loan applications, which went from 9.0% in 2009 to 4.0% in 2020, supported by improved credit conditions and lower interest rates[33,34] .

However, according to the **Survey on the Access to Finance of Enterprises (SAFE)** Report 2020, 14.4% of SME's respondents held that **access to finance** is the most important problem they faced, well above the EU-27 average of 9.9%[35]. Overall, Italy's loans to non-financial corporations declined by 23.4% over 2010-2020 period.

Loans to non-financial corporations between 2010 and 2020 **23.4%**

At the same time, Italy also witnessed a higher demand for credit lines, trade credits along with rising leasing[36].

Facilitation of SMEs' access to finance is being addressed through several national programmes (sometimes EU-supported). These measures include allowances for corporate equity, mini-bonds and the central guarantee fund for SMEs[37]. By January 2021, the European Fund for Strategic Investments (EFSI) had financed EUR 13.3 billion in investment initiatives and is further anticipated to generate additional investments of EUR 77.7 billion in Italy[38]. As part of EFSI, Italy has secured SMEs financing from European Investment Fund (EIF) amounting to EUR 4.4 billion with additional investments of EUR 38.4 billion expected to generate by 2020-end, providing improved access to finance for around 409,845 SMEs and mid-cap companies[39].

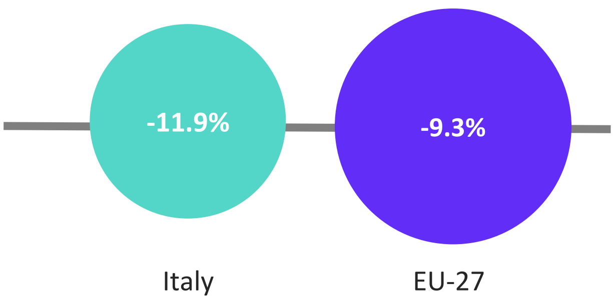
3

Key economic drivers of the construction sector

Business confidence

The **consumer confidence** indicator has remained almost constant from -16.4 in 2010 to -16.3 in 2020, after reaching its lowest point in 2012 at -28.0. This however remains slightly below the EU-27 average of -14.6. The **industry confidence** had further deteriorated from -4.3 in 2010 to -15.6 in 2020, still mostly in line with the EU-27 average of -14.4. The **construction confidence** indicator recorded the worst performance in 2010 at -34.3 and has since then improved reaching -11.9 in 2020. This is still slightly below the EU-27 average of -9.3.

Construction confidence in 2020



In parallel, the **investment ratio** declined from 19.8% in 2010 to 16.8% in 2014, before increasing again and reaching 18.1% in 2020. Likewise, the **investment per worker** has also increased from EUR 93,157 in 2010 to EUR 95,177 in 2018[40], representing an increase of 2.2% over the same reference period.

Domestic sales

Over the 2010-2019 period, the ranking of the **most domestically sold construction products** by value has remained almost constant in Italy. Although most of the top domestically sold products remain the same during the last nine years, the volumes of their trade have changed considerably. Among the top five domestically sold construction products, 'Articles of cement, etc.' (group 236919) recorded the largest increase (74.6%), followed by 'Prefabricated buildings of metal' (group 251110) increasing slightly by 4.7% over the 2010-2019 period. Contrarily, 'Windows, French windows, etc.' (group 162311), 'Doors, windows, etc.' (group 251210) and 'Ready-mixed concrete' (group 236310) decreased by 19.6%, 37.6% and 39.6%, respectively over the same reference period. Table 1 presents the top five most domestically sold construction products, both in Italy and the EU-28[41], which made up 44.3% of all Italian construction product sales in 2019.

Table 1: Five most domestically sold construction products in Italy and in the EU in 2019[42]

	Italy			EU-27
	Product	**Value (EUR m)**	**Share in construction product domestic sales (%)**	**Product**
1	Prefabricated buildings of metal (group 251110)	5,228.1	15.5	Other structures (group 251123)
2	Doors, windows, etc. (group 251210)	2,345.0	8.6	Doors, windows, etc. (group 251210)
3	Ready-mixed concrete (group 236310)	2,135.6	7.8	Ready-mixed concrete (group 236310)
4	Windows, French windows,	1,842.2	6.8	Prefabricated buildings of metal

Italy				EU-27
	Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
	etc. (group 162311)			(group 251110)
5	Articles of cement, etc. (group 236919)	1,531.4	5.6	Prefabricated structural components, etc. (group 236112)

Source: PRODCOM, 2021.

Export of construction-related products and services

The ranking of the **most exported construction products** has remained constant with the same products in the top five categories since 2010. Nevertheless, the value of the country exports varied significantly over the years. The largest value increment between 2010 and 2019 was recorded in 'Plaster products for construction purposes' (group 236210) and 'Prefabricated wooden buildings' (group 162320) products with a 241.1% and 122.3% rise, respectively. On the other hand, 'Other worked ornamental or building stone and articles thereof etc.' (group 237012) and 'Portland / aluminous / similar hydraulic cements' (group 235112) experienced the largest decline of 13.5% and 9.1% in their export values, respectively. The five most exported construction products from Italy and the EU-27 are summarised in Table 2. Together, these made up 70.5% of all construction product exports in 2019.

Table 2: Five most exported construction products in Italy and in the EU in 2019[43]

Italy				EU-27
	Product	Value (EUR m)	Share in construction product exports (%)	Product
1	Ceramic tiles and flags (group 233110)	3,913.8	43.5	Ceramic tiles and flags (group 233110)
2	Marble, travertine, alabaster, etc. (group 237011)	803.8	8.9	Other structures and parts, etc. (group 251123)
3	Other structures and parts, etc. (group 251123)	672.3	7.5	Fibreboard of wood, etc. (group 162115)
4	Other worked ornamental or building stone, etc. (group 237012)	561.1	6.2	Doors, windows, etc. (group 251210)
5	Doors, windows, etc. (group 251210)	398.2	4.4	Marble, travertine, alabaster, etc. (group 237011)

Source: PRODCOM, 2021.

In terms of **cross-border provision of construction services**[44], Italy exported EUR 278.0 million worldwide in 2020, an increase of 197.6% as compared to EUR 93.4 million in 2010, but 58.7% lower than its 2019 value of EUR 673.7 million. Out of this, 52.9% of exports (EUR 147.0 million) were made to countries outside of the EU-27, slightly lower as compared to 57.7% (EUR 53.9 million) in 2010.

> **Export value of construction-related services to countries within the EU-27 stood at EUR 131.0 million in 2020, comprising 47.1% of Italy's total exports.**

In parallel, Italy imported a total of EUR 47.0 million in construction services in 2020, a decline of 35.0% and 71.3% as compared to 2010 and 2019, respectively. In 2020, EUR 35.0 million (76.1% of total) of construction services imports came from EU-27 Member States while the rest (23.9% of the total) came from outside the EU-27. Italy therefore achieved a **trade surplus** of EUR 231.0 million in 2020.

Access to finance in the construction sector

The Italian construction sector has a high dependency on banks for financing. The overall indebtedness of the sector is also high, and banks are reluctant to provide further credit to the sector[45]. Owing to the poor financing conditions and lack of liquidity, several insolvencies of major players were recorded in the construction sector – causing themselves the insolvencies along the value chains with several subcontractors declaring bankruptcy over the last six months. Outstanding receivables and lack of credit led to many insolvencies of small and medium-sized businesses[46].

Lack of financial support contributed to the pronounced increase in construction costs for residential buildings. Financial difficulties are affecting the top-players as well as small and medium-sized companies along the value chain. The slower or non-implementation of larger projects stand as a big issue[47].

According to the National Construction Sector Association – ANCE (*Associazione Nazionale Costruttori Edili*), Italian construction companies are not sufficiently aware of their rating in terms of creditworthiness and of the criteria used by banks to assess them. ANCE thus believes that greater transparency and exchange of information between banks and companies could contribute to improving their relationship and facilitate access to finance for creditworthy businesses. To this end, an agreement between ANCE and the Italian Banking Association (*Associazione Bancaria Italiana, ABI*) was introduced in 2018. The memorandum of understanding provides, among other things, for the establishment of a permanent ABI - ANCE dialogue group to support the economic and financial development strategies of the construction sector, as well as the sharing of initiatives that can increase knowledge and dialogue between banks and construction companies[48].

According to the **2020 Survey on the Access to Finance of Enterprises (SAFE)** report, around 62.0% of small and medium enterprises (SMEs) in Italy reported of bank loans being relevant, well above the EU-27 average (44.4%). Around 24.6% of the SMEs reported of using bank loans recently, below the EU-27 average (17.9%). During the same period, 49.5% of SMEs in Italy applied for a bank loan, well above the EU-27 average of 34.6%. Around 3.2% of SMEs did not apply for bank loans fearing rejection, almost in line with the EU-27 average of 3.7%. Around 20.7% of SMEs did not apply for bank loans because of sufficient internal funds, well below the EU-27 average of 35.1%[49,50].

Moreover, the availability of bank loans for Italian SMEs has also changed. Around 26.9% of SMEs opined that the availability of bank loans has improved for the period, well above the EU-27 average (18.6%). On the contrary, around 11.9% of SMEs mentioned that it has deteriorated, in line with the EU-27 average of 14.2%. However, around 58.4% of SMEs believed that the condition of availability of bank loans remains unchanged, almost in line with the EU-27 average of 57.6%[51].

Credit extended to the Italian construction sector has reached EUR 728.5 billion in 2020, representing a substantial increase of 327.1% as compared to 2010 level (EUR 170.6 billion).

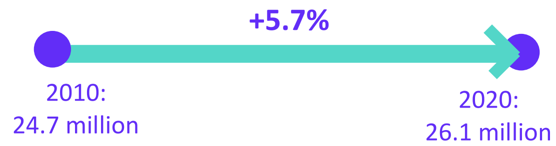
As per the **European Investment Bank (EIB) Investment Survey 2020**, 84.0% of the Italian construction firms consider availability of finance as a long-term barrier for the sector. Bank loans continue to make up the highest share of external finance (55.0%) in construction sector in Italy, followed by leasing (20.0%). About 17.0% of the Italian firms in the construction sector rely on internal sources of finance for investment purposes, in comparison with external sources. This is also driven by the fact that 70.0% of the Italian construction firms reported making a profit, slightly below the EU-27 average of 80.0%. Nonetheless, the share of 'financially constrained'[52] firms in the construction sector (8.0%) is slightly higher than the firms operating in the services (6.0%) and manufacturing sectors (5.0%) in Italy[53].

The impact of COVID-19 on investment strategies has also been quite negative with almost 41.0% of Italian construction firms investing less in 2020, slightly lower than EU-27 average of 45.0%[54]. However, almost 80.0% of construction firms believed their investment over the last three years was about the right amount, in line with EU-27 average[55].

Access to housing

The **number of households** has been steadily growing since 2010, reaching 26.1 million in 2020 (+5.7%). The mean equivalised net income following an irregular trend since 2010, reached EUR 19,528 in 2019[56], representing a growth of 7.2% over the 2010-2019 period. This increase can be partly attributable to the high urbanisation rate, as people continue to migrate to urban places in search of better lifestyle and increased income. Urbanisation rate has remained almost constant from 40.0% in 2010 to 39.8% in 2019, indicating that a large proportion of the population (especially the youth) prefer living in cities and greater cities.

Number of households in Italy



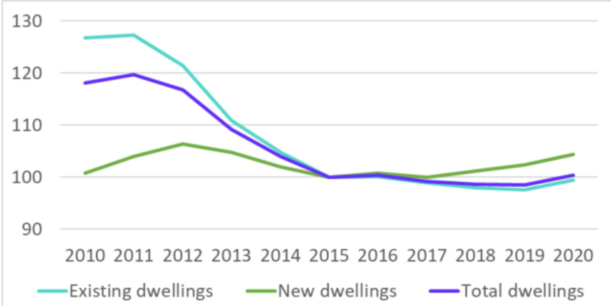
The indexed values of **building permits** in number of dwellings rose up to 28.4% over the period 2015-2019 period. The indexed values of building permits as square meters of useful floor area for residential and non-residential buildings increased by 30.9% and 55.3% over the same reference period, respectively. Nonetheless, in case of new residential buildings, the number of dwellings in Italy declined to 13,267 in the third quarter of 2020 (-3.9%) as compared to the same quarter of the previous year (13,308 dwellings in 2019)[57].

Indexed value of building permits in number of dwellings between 2015 and 2019 **28.4%**

The **housing price index** for total dwellings and new dwellings increased by 0.4% and 4.4% while for existing dwellings reduced by 0.6% over the 2015-2020 period, respectively. According to the National Statistics Office – *Istituto Nazionale di Statistica (ISTAT)* – despite the COVID-19 induced recession, there was a slight increase in the nationwide house prices by 1.1% in 2020[58]. The **mortgage rates** (over five years original maturity) has been on a decreasing trend since 2010. In 2020, it reached 1.8% down from 3.6% in 2010. The total outstanding **residential loans** in 2018 stood at EUR 382.6 billion, representing a 8.7% increase from 2010 and 0.9% increase from 2019.

House price index for new dwellings between 2015 and 2020 **4.4%**

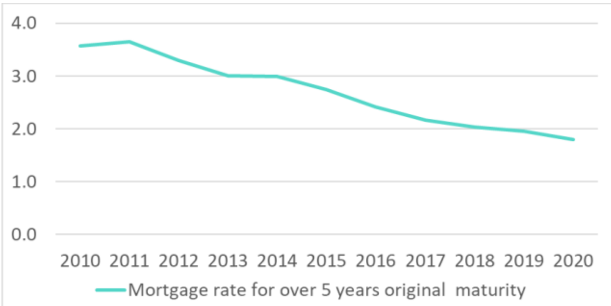
Figure 7: House price index in Italy between 2010 and 2020 (2015=100)



Source: Eurostat, 2021.

The country's housing market had been steady in 2020. Though there was less residential construction, the demand had experienced a strong increase. Venice and Milan being the most expensive cities in Italy, saw an average house price increment of EUR 4,467 and EUR 3,994 during 2020, respectively. Similarly, house price in Rome and Bologna also increased by EUR 2,848 and EUR 3,060 during 2020, respectively[59].

Figure 8: Mortgage rates for loans for over five years original maturity (%) between 2010 and 2020



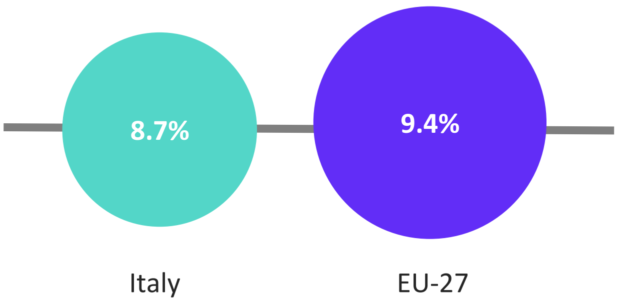
Source: Eurostat, 2021.

Notwithstanding the lower mortgage interest rates, Italian house buyers show reluctance towards use of mortgage facilities as evident by Italy's outstanding mortgage market being less than 25.0% of its GDP in 2020. The mortgage acceptance rose sharply when interest rates on new house purchases fell to historical lows of 2.7% in 2015. However, the demand for new house loans has decreased sharply since then despite Italy having lower interest rates[60].

As per ANCE, in 2020, investments worth EUR 43.3 billion were made in the Italian housing redevelopment sector[61].

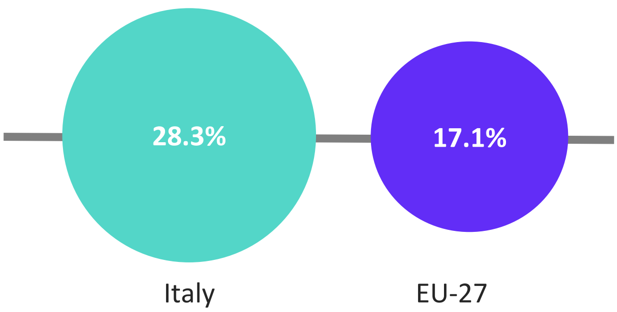
Due to the ease of accessing mortgage loans, government tax breaks and other advantages, **homeownership** in Italy has been traditionally high, averaging 72.9% over the 2010-2019 period, peaking at 74.2% in 2012 but declining slightly to 72.4% in 2019[62]. This rate increased to 76.7% for 2019 for the population whose income is above 60.0% of the median equalised income but drops to 55.2% for those below this threshold. Moreover, the **housing cost overburden rate**[63] stood at 8.7% in 2019, marginally below the EU-27 average 9.4%, but slightly higher than its 2010 value of 7.7%[64].

Housing cost overburden rate in 2019



Nevertheless, the **overcrowding rate**[65] was at 28.3% in 2019, considerably above the EU-27 average of 17.1%, and also greater than its 2010 value of 24.3%[66]. In parallel, the **severe housing deprivation rate**[67] reached 5.0% in 2019, marginally above the EU-27 average of 4.0% while lower than its 2010 value of 7.0%[68].

Overcrowding rate in 2018



Infrastructure

Italy ranked 18th out of 141 for its infrastructure in 2018, securing three positions higher than the previous year, as per the Global Competitiveness Report 2019[69].

Italy ranked 16th for its railroad density, 11th in airport in the connectivity, 46th for the efficiency of its seaport services, 35th for the efficiency of its train services, 53rd in terms of the quality of roads infrastructure and 55th for the efficiency in air transport services[70]. In general, the investment and maintenance in Italy's infrastructure shown betterment, as demonstrated by the Transport Scoreboard of the European Commission. Although, the latter shows Italy's infrastructures ranking above the EU-28[71] average in the completion of the TEN-T core networks (road and rail), the country scores below EU-28 average when it comes to the quality of the infrastructure[72]. In addition, Italy is lagging behind on completion of the European TEN-T high-speed rail networks[73].

Under Italy's RRP's infrastructures for sustainable mobility mission, it has allocated EUR 32.0 billion for infrastructural investment including EUR 28.3 billion in high-speed railways and road maintenance 4.0 as well as EUR 3.7 billion in intermodal transport and integrated logistics[74].

Italy is also planning to complete the upgrading of main passenger and commercial lines along the North-South and East-West axes and increasing their capacity by end-2026[75]. Furthermore, in 2020, the EIB Group also invested almost EUR 2.3 billion in infrastructure in Italy[76] (more details in Chapter 7 TO 1).

Further infrastructure projects related to transport are also planned, as mentioned in the Nutshell and described in Chapter 7 - Current status and national strategies to meet Construction 2020 objectives.

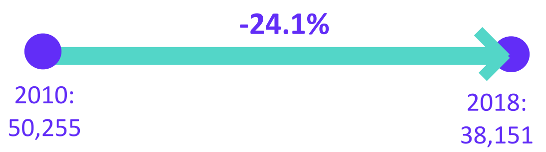
4

Key issues and barriers in the construction sector

Company failure

The business demography in the narrow construction sub-sector experienced a 24.1% decrease in the number of **company births**, from 50,255 in 2010 to 38,151 in 2018[77]. In parallel, the number of **company deaths** decreased by 16.2%, from 51,368 in 2010 to 43,037 in 2018.

Number of company births in the narrow construction sub-sector in Italy



Similarly, the real estate activities sub-sector experienced a 12.0% fall in company births (from 11,092 in 2010 to 9,762 in 2018) while a significant increment of 54.9% in company deaths (from 8,495 in 2010 to 13,157 in 2018). Conversely, company births in the architectural and engineering activities sub-sector increased by 50.7%, from 10,982 in 2010 to 16,553 in 2018. The number of company deaths also increased by 47.7%, from 12,388 in 2010 to 18,291 in 2018.

The relatively high number of bankruptcies can be explained by two major factors: (i) the introduction of new insolvency framework to simplify bankruptcy procedures and recommend pre-emptive measures to deal with corporate failures; and (ii) major construction players declared bankruptcies as well as numerous subcontractors along the value chains. As per ANCE, all these factors contributed to the consolidation of the sector in Italy.

Furthermore, the ongoing COVID-19 pandemic situation might add on to the businesses' insolvency trend in the Italy's construction sector. The stringent measures of lockdown implemented by the Government have had negative economic and fiscal consequences[78].

Trade credit

According to the 2020 SAFE Report, around 42.0% of SMEs respondents in Italy reported trade credit to be relevant, considerably above the EU-27 average of 27.7%[79,80].

Furthermore, as per the 2020 SAFE Report (September-October 2020), around 17.3% of the SMEs respondents in Italy reported using trade credit in the past six months, well above the EU-27 average of 13.6%. During the same period, around 30.6% of SMEs in Italy applied for trade credit, marginally lower than 31.4% EU-27 average. Around 3.9% of Italian SMEs did not apply due to possibility of rejection and 26.5% of SMEs did not apply because of sufficient internal funds, slightly lower than the EU-27 averages of 4.4% and 33.1%, respectively[81].

Amongst the firms which applied for trade credit in Italy, around 64.4% of SMEs received everything they applied for, slightly lower than the EU-27 average of 67.3%. About 11.8% of Italian SMEs received above 75.0% of what they applied for in trade credit, marginally above than EU-27 average of 10.8%. Around 11.4% of SMEs in Italy received below 75.0% of what they applied for, still above the EU-27 average of 10.1%. Trade credit applications of only 1.6% of Italian SMEs were rejected, still better as compared to EU-27 average of 2.9%[82].

According to 2020 Atradius Payment Practice Barometer, about 55.0% of the total **B2B sales** were made on trade credit (higher as compared to 52.9% in 2019)[83].

As per 2020 Atradius Payment Practice Barometer, majority of the respondents offered trade credit to domestic customers to stimulate credit sales. Italian businesses expect domestic trade to improve in 2021[84].

Late payment

According to 2020 Atradius Payment Practice Barometer, the total value of outstanding B2B invoices increased from 31.0% in 2019 to 55.0% in 2020, well above the Western Europe average of 47.0%[85].

As per the report, almost 40.0% of the Italian respondents concluded that in 2020 payments were delayed by more than one month on average, than in 2019. This is considerably higher than the Western Europe average of 22-days. Since the advent of COVID-19 pandemic, about 7.0% of Italy's total B2B receivables has been written-off as uncollectable, well above the 2010 value (4.0%). Moreover, 9.0% of the total B2B receivables still reported to be outstanding after 90 days, indicating that Italian businesses whose B2B receivables remained unpaid after 90 days lost nearly 80.0% of their value[86].

Due to rising cases of customer payment defaults, almost 39.0% of respondent businesses experienced cash flow issues, in line with Western Europe average of 38.0%. Moreover, 41.0% of the respondent businesses delayed payments to suppliers, well above 34.0% Western Europe average[87].

As per Intrum European Payment Report 2021, 63.0% of Italian businesses are concerned about debtor's ability to pay debt on time and 41.0% of businesses expect the widening gap between payment terms and pay duration to become a serious risk for sustainable business growth[88].

As per the report, about 44.0% of Italian businesses acknowledged that the current payment terms offered to customers are too generous and are detrimental to business. Additionally, 24.0% of businesses confirmed their plan to secure payments from customers faster, in line with EU-27 average of 22.0%. Some of the major challenges faced by companies making customers pay on time included debtor's facing liquidity challenges due to impact of COVID-19 (47.0% of businesses), debtors in financial difficulties (41.0% of businesses), risk of pan-European recession (38.0% of businesses) as well as disputes regarding goods and services delivered (35.0% of businesses)[89].

Share of the real estate and construction sector monthly profit margins affected by COVID-19 pandemic in 2020[90] **52.0%**

About 48.0% of Italian business respondents use pre-payments as a precautionary measure, followed by credit checks (33.0%), debt collection (25.0%), credit insurance (15.0%), bank guarantee (11.0%), fraud prevention (10.0%) and factoring (10.0%)[91].

In addition to late payment, public authorities often tend to delay the VAT refund process (as part of the split payment policy), which amounts to EUR 2.5 billion annually. According to ANCE, most VAT refund happen after three months, and 60% after nine months. In turn, this squeezes the liquidity of the construction sector, and may contribute further to the issue of late payment. The update on the measure of split payment, originally planned in June 2020, has been postponed to 2023.

Another issue faced by the Italian firms is the average time it takes to get paid by customers, the third longest in the EU-28[92]. Late payments and unpaid invoices have a significant impact on the construction sector. For instance, 52.0% of companies expect that they could hire more employees if payments were received faster[93]. Moreover, amid the ongoing COVID-19 pandemic, B2B supplier payment practices have been impacted in Italy. With shuttered stores and disrupted supply chains, numerous companies struggle to manage cash flow[94].

Time and cost of obtaining building permits and licenses

As per World Bank's Doing Business 2020[95], Italy ranked 97th out of 190 with reference to 'dealing with construction permits' in 2020. Completing administrative formalities to build a warehouse[96] requires 14 procedures, (slightly above the OECD high-income average of 12.7 procedures), and takes 189.5 days, considerably above the OECD high-income average of 152.3 (Table 3). Furthermore, the total cost of obtaining a permit for a warehouse represents 3.4% of the value of the warehouse, well above the OECD high-income average of 1.5%. Namely, **obtaining a building permit** takes 135 days and costs EUR 38,061, being the most expensive procedure of the all permit procedures required.

Table 3: Construction procedures timing and costs in Italy

Procedure	Time to complete	Associated costs
Obtain geo-technical study of the land	15 days	EUR 2,000
Obtain topographic survey of the land plot	15 days	EUR 1,000
Hire an independent engineer to test structure	1 day	EUR 6,000
Obtain building permit[97]	135 days	EUR 38,061
Obtain seismic authorisation	30 days	EUR 1,316
Submit notification of commencement of works	0.5 days	No charge
Report closure of structural works	1 day	EUR 137
File certified notification of starting activity ("SCIA") for fire security	0.5 days	EUR 216
Receive on-site inspection by the Fire Department	1 day	No charge
Register the building	5 days	EUR 159
Apply for water and sewerage connection	1 day	No charge
Receive on-site inspection and estimation of water and sewerage installation costs	1 day	No charge
Obtain water and sewerage connection	29 days	EUR 600
File a certified report for occupancy	0.5 days	EUR 150

Source: Doing Business overview for Italy, World Bank, 2021.

Skills shortage

Italy's adult participation rate in education and training is considerably below the EU-27 average for both the narrow construction as well as the real estate activities sub-sectors.

The **adult participation rate in education and training** in the narrow construction sub-sector increased marginally, from 2.6% in 2010 to 3.3% in 2020. This is quite low when compared to the EU-27 average of 7.4% in 2020. In the real estate activities sub-sector, adult participation in training remained almost constant from 6.4% in 2010 to 6.7% in 2020. This is still well below the EU-27 average of 13.8% in 2020.

Adult participation rate in education and training in the narrow construction sub-sector in 2020 **3.3%**

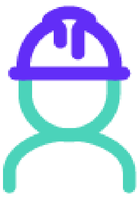
The number of **tertiary students in engineering, manufacturing and construction** has been increasing continuously since 2010. Particularly, in 2019[98], it stood at 63,532, representing a significant increase of 94.2% from the 2010 level (32,719). Out of these, the number of students in engineering and engineering trades represented the highest growth rate over the same period, going from 17,118 in 2010 to 42,702 in 2019 (+149.5%). This was followed by the number of students in architecture and building, which grew from 13,427 in 2010 to 20,097 in 2019 (+49.7%). Conversely, the number of tertiary students in manufacturing and processing dropped from 2,174 in 2010 to 733 in 2019 (-66.3%).

According to **EIB Investment Survey 2020**, in comparison with other barriers, unavailability of skilled staff (77.0% of the firms) and complex labour regulations (84.0% of the firms) are some of the biggest long-term barrier in the Italian construction sector[99].

There is a significant gap between demand from businesses and supply of training in Italy. Entering into the labour market for younger and high-skilled people continues to be a challenge. The limited vacancies prompt an increasing number of university graduates to leave Italy (41.8% up in 2019 since 2013). Thus, Italy's highly skilled people migrating outside of Italy stands greater than the proportion of skilled people coming to Italy from other countries. This widens the skill gap in the country[100].

The skills mismatch has been recognised as one of the factors impeding companies with great potential, to strive in the national economy[101]. While worker shortage affects most of the professions in the construction sector, the shortage is more pronounced for high skill occupations such as construction managers, architects and professionals that have both technical and management skills[102]. According to ANCE, this is partly explained by the fact that a lot of those highly skilled and experienced workers are getting retired, causing a potential loss in terms of skills and knowledge that can hardly be compensated. In addition, for digital skills, young workers are rarely attracted to the construction sector itself, and rather opt for a career in other economic sectors.

In 2019, with the purpose of attracting or re-attracting the labour force indirectly, including the skilled migrants, "*Decreto Crescita*" and the Fiscal Decree No. 124/2019 revamped fiscal benefits for workers moving their fiscal residence to Italy[103]. However, the current situation of the world with reference to COVID-19 outbreak, has resulted a slowdown in education and skills. Daily wage workers and migrant labourers are mostly affected as major employers like construction companies have cut operations significantly[104].



Under 2021 Budget Law, the Italian government announced review of various active labour policies ranging from relocation allowance to establishment of a national programme (Workers' Employability Guarantee – GOL) in order to create a single system responsible for both normal and transition unemployment[105].

The Italian government has also announced strengthening of their employment centres and their integration with the country's education and training system through a network of private operators. Training standards are also being revised and the vocational training system is also being enhanced by a territorial network of education, training and work services including through public-private partnerships to develop a lifelong learning system[106].

Sector and sub-sector specific issues

Material efficiency and waste management

The **construction and demolition waste (CDW)** constitute one of the most important waste streams in the entire EU region. CDW mainly consists of several materials, including concrete, bricks, gypsum, wood, glass, metals, plastic, solvents, asbestos and excavated soil, many of which can be recycled.

In Italy, CDW is classified as 'special waste', according to the Decree 152/06. The national production of construction and demolition waste, excluding soil and stones and dredging spoil (EWL 1705**), stands at approximately 52,1 million tonnes (+13,6% compared to 2018, corresponding to more than 6,2 million tonnes), while total material recovery reaches 40,7 million tonnes (+14,6% corresponding to almost 5,2 million tonnes). The percentage of recovery of demolition and construction waste is 78,1% in 2019, therefore above the 70% target set by Directive 2008/98/EC for 2020. The amount of waste used as backfilling stands at approximately 171 thousand tonnes[107].

The primary drawback related to sustainable waste management is the quality of the materials recycled, often negatively perceived by construction stakeholders[108]. Italy is at Level 2 (Developing), out of 4, in CDW management implementation[109]. These follow the Ministerial Decree of 5 April 2006 no. 186, which establishes the procedure to be followed for the transformation, treatment and recycling of construction waste products. Moreover, waste management is regulated through National Law adapting European legislation, including the Framework EU legislation on waste[110] and the EU legislation on specific waste streams[111].

The responsibility of monitoring and enforcing waste legislation is fragmented across many authorities at different administrative levels from national to regional and provincial levels[112]. This makes it challenging to monitor and assess progress in this field.

Climate and energy

Emissions of greenhouse gases (carbon monoxide and dioxide, methane, nitrous oxides and particulate matters) from activities in the narrow construction and the real estate activities sub-sectors amounted to 5,636,606 tonnes and 495,668 tonnes in 2019[113], respectively. The former experienced a 3.9% decrease since 2010 (5,864,903 tonnes), while the latter declined by 22.9% (642,680 tonnes) since 2010.

In Italy sellers or property owners need to provide an **energy performance certificate** (*Attestato di Prestazione Energetica – APE*) when selling or renting a building specifying the energy performance and energy class of the building, CO_2 emissions. An APE was introduced in October 2015, in line with Directive 2010/31/EU[114].

As per the **European Investment Bank (EIB) Investment Survey 2020**, 36.0% of the Italian construction firms consider reduction in carbon emissions over the next five years is likely to have a positive impact on their market demand[115].

To achieve the objectives set in the EU Green Deal, the Italian government has allocated EUR 69.8 billion under the 2021 Budget Law. Out of this, EUR 18.2 billion is set aside for renewable energy, hydrogen and sustainable mobility while EUR 7.0 billion is allocated for green enterprises and circular economy[116].

5

Innovation in the construction sector

Innovation performance

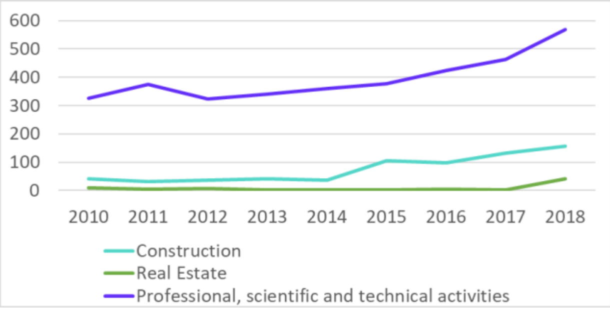
As per European Innovation Scoreboard 2021, Italy is classified as a Moderate Innovator, same as previous year[117].

The strongest innovation dimensions of the Italian innovation system include Innovators, Employment impacts and Environmental sustainability. The country also demonstrated strong performance in Resource productivity, Sales of innovative products, Design applications, In-house product innovators without market novelties, In-house business process innovators and Climate change related indicators[118].

In 2018[119], the **Business Enterprise R&D Expenditure (BERD)** in the Italian narrow construction sub-sector amounted to EUR 156.5 million, representing a 274.4% growth as compared to EUR 41.8 million in 2010. Similarly, the BERD in the real estate activities as well as the professional scientific and technical activities sub-sectors increased by 304.7% and 73.9% over the 2010-2018 period, totalling EUR 41.7 million and EUR 568.1 million in 2018, respectively.

Business enterprise R&D expenditure in the narrow construction activities sub-sector between 2010 and 2018	↑ **274.4%**

Figure 9: Business enterprise R&D expenditure (BERD) per construction sub-sector in Italy between 2010-2018[120] (EUR m)



Source: Eurostat, 2021.

The total number of **R&D personnel** (full-time equivalents – FTE[121]) has been increasing across all sub-sectors. In the narrow construction sub-sector, the total R&D personnel FTE amounted to 3,553 in 2018[122], registering a 348.0% increase as compared to 2010. Similarly, the number of FTE in the professional and technical activities sub-sector has more than doubled over the 2010-2018 period, reaching 9,329 in 2018. This was 182.0% higher than the 2010 levels of 3,308. Likewise, the total R&D personnel in the real estate activities sub-sector amounted to 803 FTEs, an 82.1% jump as compared to 441 FTEs in 2010.

R&D personnel (FTE) in narrow construction sub-sector between 2010 and 2018	↑ **348.0%**

The number of **construction-related patent applications** in the Italian broad construction sector stood at 306 in 2020, registering an increase of 13.8% as compared to the 2010 level (269).

In parallel, there has been a decrease in the number of firms ranked within the top 1,000 EU companies by R&D in the construction sector. While there were six Italian construction firms present in the 2012 ranking[123], there was just a single company left in 2018[124], and no companies in 2019 as well as in 2020[125, 126].

The real estate and construction market have witnessed growing interest and demand for advanced professional and digitised services. Digitised services in the real estate sector would profit the organisation of the asset sale process in Italy. Growing number of banks and investors are opting this kind of service, aiming at ensuring greater transparency for customers or buyers[127]. In particular, digitised services in the real estate sector are expected to peak, which is partly due to the COVID-19 impact. In response to the pandemic, measures are being taken to maintain social distancing by digitalizing procedures and transactions. Virtual agencies have been created to communicate with customers, such as video conference and video calling tools. The trainings and sessions are also imparted online. Thus, the pandemic has made the use of digital tools an integral part of working[128].

Eco-innovation and digitalisation

As per the 2021 Eco-Innovation Index, Italy ranks 10th in the EU Member States with a score of 124 as compared to the EU-27 average of 100[129].

As per the report, in 2019[130], Italy demonstrated strong performance in resource-efficiency outcomes. Its performance in eco-innovation activities, eco-innovation outputs and socio-economic outcomes were also marginally above the EU-27 average. Contrarily, the country performed worst in eco-innovation inputs indicator[131].

Most of Italy's eco-innovation developments are related to the field of eco-labelling, waste management, bioeconomy and green industry. This is further evident by the fact that Italy has one of the highest levels of eco-labels and EMAS in the EU region. Despite such achievements in eco-innovation, the country still faces several barriers to progress including lower R&D investments as well as regional disparity in legislative procedures and performances[132].

Italy's strategy for progressive adoption of BIM (Building Information Modelling) started with approval and publication of UNI 11337 and the "BIM Decree". It provides for the mandatory application of BIM methodology starting from 2019.

The BIM Decree (DM 560/2017, also referred sometimes as Baratono Decree) implements art. 23 paragraph 13 of the new Code of Public Market, drafted by the Baratono Commission[133]. Such implementation will be done in six phases. First, since 2019, all complex projects worth more than EUR 100.0 million were required to adopt the BIM methodology. By 2020, the use of BIM will become mandatory for any complex projects which value is equal to or exceed EUR 50.0 million. As of January 2021, BIM will be required for complex projects worth EUR 15.0 million or more. By 2022, the use of BIM will be required for works which amount is equal to or greater than the threshold defined in Article 35 of the Public Contract Code (EUR 5.2 million for works contract). As of January 2023, BIM will be required for works amounting to EUR 1.0 million or more. The last step, planned in 2025, is to expand BIM to all projects, complex or not, up to amounts of less than EUR 1.0 million[134].

Some of the largest infrastructure projects using BIM in Italy include:

- **Bulgari Manufacture facilities:** Construction of two buildings a total area of 15,000 m² and it is composed of two buildings with different architectural features.
- **Gulf Terminal of La Spezia:** Construction of the building with the building with a total area of 120,000 m². The project has a budget of EUR 85.0 million and scheduled to be completed by 2022[135].

The Ministry of Economic Development funded a research project named INNOVance. It aims at creating a BIM library, a Common Data Environment (CDE) of BIM projects in a contract. This would help in sharing work information, and a data exchange platform for the entire construction sector. It represents first digital platform in the construction sector with BIM methodology on a national level[136].

In 2019, the Italian government established a new Ministry for Technological Innovation and Digitisation to act as a coordinator[137]. The Italian government has also renewed the National Plan 'Enterprise 4.0' and launched 'Transition 4.0', with a deeper focus on innovation, green investment and participation of SMEs. In March 2020, government launched the National Innovation Fund with a preliminary budget of EUR 1.0 billion and operating based on Venture Capital procedures, in order to support investment in innovative enterprises[138].

With regards to digitisation, the ANCE has also initiated various policy measures. There is a proposal for **a national digital platform on the DigiPlace model**. Despite its actions, only limited progress has been made primarily due to little initiative from the government side. There is also an ongoing **green and digital push** in the country. On the green side, construction sector makes contribution through regulations and green labelling. However, on digital side, stakeholders report a lack of policy initiatives - there is no roadmap equivalent to Industry 4.0 and no strategic vision on the digitalisation of the sector.

> **Italy has allocated EUR 46.3 billion towards the development and promotion of digitisation, innovation and competitiveness within the country, as part of its RRP[139].**

This includes commitment of EUR 11.6 billion for investment in digitisation and innovation in the public administration; and investments for EUR 11.8 billion to boost the innovativeness and competitiveness in the productive sectors[140].

As per the **European Investment Bank (EIB) Investment Survey 2020**, the most frequent long-term impact of COVID-19 on Italian construction firms was their increased usage of digital technologies (+45.0%), followed by changes in their services and products portfolio (+39.0%) as well as in supply chain (+35.0). Nonetheless, only 37.0% of Italian broad sector firms are expected to have implemented digital technologies within their business, either fully or partially. Furthermore, almost 25.0% of the construction firms developed a new innovation in 2020, well above the EU-27 average of 15.0%[141]. Additionally, about 22.0% of the firms in the broad sector had implemented internet of things, followed by 20.0% in case of drones, 9.0% in case of augmented or virtual reality and 6.0% in case of 3-D printing technology[142].

> **As per the European Commission Digital Economy and Society Index (DESI) 2020, Italy ranked 25th out of EU-28[143] Member, declining from 23rd rank in 2019. The overall DESI score for Italy in 2020 stood at 43.6, being lower than the EU average score, 52.6[144].**

While its score is line with the EU-28[145] average, Italy's rank for 'Connectivity' indicator deteriorated to 17th in 2020 from 12th in 2019.score 50.1. The 'Human Capital' indicator ranked 28th, declining by 2 ranks from 2019. The score stood at 32.5, well below EU-28 score of 49.3. The 'Integration of digital technology' indicator was ranked at the 22nd position in 2020, which is an improvement from the 23rd rank in 2019. However, the score stood at 31.2, lower than the EU-28 of 41.4 in 2020[146].

However, there have been few gaps with reference to Human Capital. In comparison with EU-28[147], Italy has recorded low levels of digital skills. The number of ICT specialists and ICT graduates also lies much below the EU average. These setbacks in digital skills are mirrored in the low usage of online services. Italian businesses also lag in using technologies such as cloud and big data, as well as in the uptake of e-commerce[148]. Even before the onset of global pandemic, COVID-19, the evolution and acceptance of technology was high at a global level. Presently, measures are being taken to maintain social distancing and curb gatherings and physical interactions. In turn, this incentivises the construction sector to digitalise to abide by the distancing norms. However, Italy's shortage in digital skills and low acceptance rate of digital technologies may prevent such a process to materialise in practice.

At the regional level, Lombardy launched the **Smart Living** measure, aiming to support the revival of the industry by encouraging companies to cooperate to promote innovation and the acceptance of digital and new construction technologies. A budget of EUR 15.0 million has been devoted to the measure to support R&D projects in the field of construction, materials, interior design, smart appliances, building automation, digital manufacturing and sustainable construction[149].

Under the new EU budget for 2021-2027 Multiannual Financial Framework (MFF), Italy has been allotted EUR 99.1 billion out of which EUR 13.6 billion is to be used for research and innovation as well as for internal market and digital sectors with a centralised management at EU level [150].

6

National and regional regulatory framework

Policy schemes

The Italian government offers different housing aid initiatives and funds for urban regeneration, including:

- **National Rental Fund** (*Fondo nazionale per il sostegno all'accesso alle abitazioni in locazione*) aimed at providing support to tenants with low income for the payment of rent. For 2021 are being allocated EUR 210 million. Following the epidemiological emergency from COVID-19, an urgent procedure has been defined to facilitate the distribution among the Regions.

- **The Fund for non-guilty defaulting tenants** (*Fondo destinato agli inquilini morosi incolpevoli*) aimed at supporting families who, due to the loss or substantial reduction of the family's income, cannot pay the rent and received a/n eviction notice for arrears.

- **Home purchase and / or renovation fund (***Plafond casa***)** was allocated EUR 2.0 billion to support access to home buying loans, which focuses on energy efficient housing[151]. In the 2019 Budget Law, the government also extended the renovation / restructuring bonus allowing a 50.0% tax deduction for any construction or renovation work carried on private properties and shared areas of buildings.

- **ECO Bonus** – a tax rebate scheme for energy efficiency renovations, confirmed by the 2016, 2018 and 2019 Stability Law. Until the end of 2021, a tax deduction up to 65.0% can be claimed for renovations carried out on the common parts of residential buildings and for interventions on the building envelope, aimed to improve energy performance. The 2021 Budget Law has already confirmed the extension of the scheme until 2021[152].

- **Urban Renaissance Plan** (*Piano di Rinascita Urbana*) – The Plan, set in the 2020 Budget Law with an allocation of about EUR 1.0 billion to improve the quality of living, through various actions, such as reconstructions of buildings and support for tenant families, has become the main tool to allocate the RRP resources for the housing aid and the urban regeneration. The projects of the municipalities will so benefit of an amount 2,8 billion of Next Generation EU funds.

- ***Superbonus 110%*** - Adopted in April 2020, the *Superbonus 110%* is a fiscal measure providing a tax credit amounting to 110.0% to households for energy efficient and seismic related renovation. The *Superbonus 110%* has shown extraordinary results: 7.5 billion euros worth of work in just over a year and 46,000 new construction sites until the end of September 2021. This is an initiative which, after years of severe crisis in the construction sector (the level of activity in the sector is still 35% lower than it was in 2008) and various inconclusive attempts by the Government to revive the sector, is achieving very significant results, even exceeding the expectations of the Government and operators. The Italian Government is now considering extending the measure until 2023 in order to consolidate the benefits already achieved in terms of reducing CO2 emissions, improving health and relaunching the economy and the construction sector.

As per recent ANCE estimates, an additional expenditure of EUR 6.0 billion per year will be now linked to the *Superbonus 110%.* Furthermore, this is expected to generate a total effect of EUR 21.0 billion or +1.0% GDP for the Italian economy each year along with 64,000 new jobs in the construction sector[153].

- **Funds for social housing in earthquake areas** (*Edilizia sociale nelle zone terremotate*) - EUR 100.0 million was allocated to the regions of Abruzzo, Campania, Lazio, Marche and Umbria hit by the seismic events of 2016-2017 for the financing or co-financing of projects regarding the construction of housing to be used for permanent leasing with social rent; to lease with future sale agreement.

Moreover, regarding the renovation bonus, the **Earthquake Bonus** (*Sisma Bonus*) entails a tax deduction of 50.0% for works carried out for making an earthquake-proof dwelling. The deduction goes up to 85.0% if the interventions improve the property by two risk classes. This incentive will be in place until 2021[154]. There are also other schemes such as the Renovation Bonus, or the *Conto Termico*[155].

As per the European Council recommendation, Italy is taking steps to support the rent to facilitate access to housing for distressed households and the recovery of social housing, under the housing policy (*Piano Casa*). For 2020, the country aimed to reduce 2,200,000 people who are at risk of poverty, deprivation and social exclusion[156].

In addition, the Budget Law 2020 has also made amendments in the measure "Building renovation and eco-bonus tax deductions". It has introduced 90.0% deduction for the renovation of the exterior facades of buildings. Implementation of an extraordinary programme of real estate disposals for an estimated value of approximately EUR 1.2 billion over the 2019-2021 period has been adopted as reform action, out of which EUR 610.0 million from the revenues of the sale of buildings would be transferred by public entities to the real estate funds[157].

From 2020 onwards, a fund has been arranged by local and regional authorities for municipalities with the purpose to improve energy efficiency, sustainable territorial development and for securing infrastructure and public buildings. The tax credits for energy efficiency measures (50.0% and 65.0% within the expenditure limits already predicted for 2018) and building renovation (50.0% of expenditure incurred up to a maximum of EUR 96,000 per property unit) has been also introduces under building upgrading polity area[158].

Under the 2021 Budget Law, Italy has further allotted EUR 2.8 billion for promoting social housing. Additionally, EUR 18.5 billion has also been allocated for investment in energy efficiency and seismic-resistant housing[159]. The "*Bonus verde*" i.e., building bonus for renovation and recovery of building heritage up to a maximum limit of EUR 96,000 per real estate unit has also been extended through 2021[160]. The "Façade Bonus" i.e., deduction up to 90.0% of expenditure incurred for interventions (including mere cleaning or external painting), recovery or restoration of the external facade of the buildings has also been extended for 2021[161].

In its RRP, Italy has allocated EUR 29.6 billion towards projects related to increasing energy efficiency and redevelopment of buildings[162].

In particular, Italy has allocated, in total, EUR 48.7 billion for projects related to the construction sector, focusing on achieving energy efficiency in private buildings as well as the renovation of public assets. With regards to private construction, the RRP has provided a six-month extension of the *Superbonus 110%* scheme for energy efficiency and building safety. The above allocation includes EUR 3.6 billion for projects dealing with hydrogeological instability, EUR 2.4 billion for increasing the resilience of water infrastructures and EUR 6.0 billion for initiatives aimed at increasing the energy efficiency of the municipalities. The country has also allocated EUR 18.2 billion for developing renewable energy and sustainable mobility in the country[163].

Italy has allocated EUR 10.8 billion of its EUR 191.5 RRP for promoting social infrastructure and communities as well as EUR 4.2 billion towards developing territorial cohesion[164].

Moreover, as per Italy's **Long-Term Renovation Strategy (LTRS)**, the country has an estimated investment need of EUR 6.8 billion per year by 2030. The National RRP plays a significant role in addressing this situation. The *Superbonus* scheme represents almost 26.0% of the country's public budget for residential renovation in the National Energy and Climate Plan (NECP). Over the 2022-2023 period, Italy expects to achieve about one-third of the estimated annual energy savings set in the NECP as well as one-third of annual renovation efforts in terms of renovated areas. Italy's National RRP consolidates this scheme and tax credits as an incentive to increase energy efficiency[165].

Taking into account various national and EU funds, Italy will have around EUR 400.0 billion available for investments over the next 15 years. As per ANCE estimates, out of this investments worth more than EUR 175.0 billion (i.e., 44.0% of the total) will have an impact on the production levels of the construction sector[166].

Building regulations

The private construction sector is regulated by national and regional regulations. At the national level, the Consolidated Text for Building (Presidential Decree n. 380/2001 and its subsequent amendments and additions) represents one of the main normative references for the construction sector. Pertaining to urban planning and commonly, to the discipline of the governing rules of the territory, the containment of soil consumption and the urban regeneration, reference should be based on the several laws adopted by the distinct regions which on this matter have a parallel legislative competence with the state.

The 2020 **Budget Law** has applied registration duties accompanying mortgage and cadastral registration duties to a limited extent on the transfer of buildings to construction or building renovation companies which carry out energy upgrading measures.

Several procedural simplifications have also been implemented to standardise the requirements throughout the country and to speed up the construction procedures. In 2018, the single glossary was approved for the free construction activity (Ministerial Decree of 2 March 2018): a list of 58 works, which can be executed freely without the need to present a building permit. In 2020 Budget Law, amendments have also been made to the Single Code on Construction activity, which will rationalise the regulatory framework. This will also promote urban regeneration and procedures of reducing consumption of land[167]. Lastly, among the consultations started and concluded in 2020, Let's simplify! ("*Semplifichiamo*!") was promoted by the Minister for Public Administration. This consultation collected stories, reports of problems and simplification proposals from citizens and businesses. The aim of the consultation was to collect useful information for the preparation of a package of rapid simplification actions and for the definition of the new simplification agenda. The consultation received 130 inputs about administrative complications and proposals for solutions which formed the basis for creation of a ranking of the main complications reported by citizens and businesses.

Amongst others, one of such discretionary measures taken by general government was 'Building renovation and eco-bonus tax deductions.' The measure included:

- (i) an extension to December 31, 2020 of the deduction for building restructuring at a 50.0% rate,
- (ii) extension to 31 December 2020 of the deduction for energy efficiency,
- (iii) extension to 2020 of the deduction for the purchase of furniture and large appliances of high energy class in building being restructured, and
- (iv) introduction for 2020 of 90.0% deductions for the renovation of the exterior facades of buildings (Facades bonus)[168].

The Masterplan of Emilia Romagna, starting from 2020, will be the PUG (General Urban Plan – *Piano Urbanistico Generale*). The masterplan is composed by the PSC (Structural Plan – *Piano strutturale comunale*) which rules the strategic decisions for the city and the RUE (Building Regulation –

regolamento urbanistico edilizio) which regulates the building rules in each area[169].

Finally, it should be noted that Decree 76/2020, to support the construction sector and its restart in the context of the difficulties caused by the health emergency, provided for the extraordinary three-year extension:

- building permits issued or issued by 31 December 2020;
- certified notifications of commencement of activity (Scia) submitted by 31 December 2020;
- urban planning conventions and related implementation level urban plans as well as building permits issued within them.

With regards to building renovations, the 2021 Budget Law extended incentives for energy requalification, building renovation, low-consumption furniture, household appliances and for the 'Green Bonus' up to 31st December 2021. The maximum limit for 'furniture bonus' has been further raised from EUR 10,000 to EUR 16,000. In general, Italy will be allocating about EUR 700.0 million in 2022 and EUR 1.2 billion in 2023[170].

Additionally, the government has approved some important simplifications for qualifying building works included in the *Superbonus 110%.*

Insurance and liability related regulations

With regards to the insurance scheme and the liability of contractor operating in the sector of private works, the general rules are established in the Civil Code or in special laws concerning, in particular, the rules on security and the subsequent measures[171].

Responsibility for the stability of constructions is also dictated by the 1971 law related to buildings with metal or concrete structures (*Legge del 5 novembre 1971, n. 1086*), and the 1974 law concerning buildings located in seismic areas (*Legge del 2 febbraio 1974 n. 64*). Without prejudice to the general rules and mandatory rules in contracts between private parties, the parties are not precluded to determine the content of the liability to which the manufacturer/contractor is bound and any claim for insurance policies.

The Civil Code provides two different forms of liabilities: (i) defects in the work or for materials in relation to the design or contractual arrangements and (ii) defects and serious construction defects**,** which the contractor or the seller/manufacturer is liable for 10 years after completion of the work.

The Decree n. 122/2005 introduced special guarantees for persons purchasing a land to build (but with a permit to build) or in the course of construction (i.e., before finalisation). In such cases, contractors are obliged to deliver to the buyers, at the time of the deed, an insurance policy covering the defects and serious defects expected to occur in the 10 years following the completion.

Under the Italian Budget Law 2020, INAIL (National Institute for Insurance against Accidents at Work) premiums and insurance contributions for insurance against accidents at work and occupational diseases were revised to reduce labour cost[172].

7

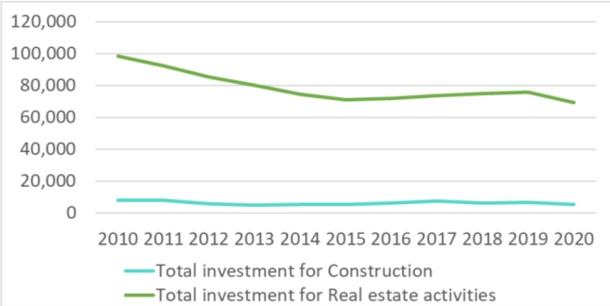
Current status and national strategies to meet Construction 2020 objectives

TO 1 – Investment conditions and volumes

Total **investment by the broad construction sector**[173] has declined since 2010 (Figure 10). In particular, total investment by real estate activities sub-sector fell by 29.5% between 2010 and 2020, from EUR 98.2 billion to EUR 69.2 billion. Similarly, total investment by the narrow construction sub-sector also declined by 34.4%, from EUR 8.1 billion in 2010 to EUR 5.3 billion in 2020. Additionally, the investment in machinery by the narrow construction and the real estate activities sub-sectors decreased by 33.2% and 8.3% over the 2010-2019[174] period, respectively. Investment in intellectual property products by the real estate activities sub-sector also declined by 81.6%, from EUR 224.8 million in 2010 to EUR 41.3 million in 2018. Contrarily, investment in the intellectual property by the narrow construction sub-sector increased by 65.6%, from EUR 300.7 million in 2010 to EUR 497.9 million in 2019.

Total investment by the narrow construction sub-sector between 2010 and 2020 ↓ **34.4%**

Figure 10: Investments by the Italian broad construction industry between 2010 and 2020 (EUR m)

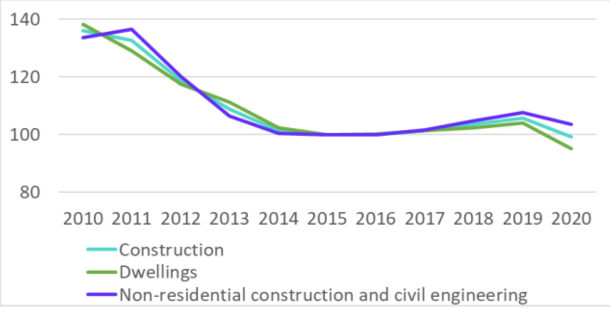


Source: Eurostat, 2021.

Total **investment in the broad construction sector**[175] in 2020 decreased by 0.8% since 2015 (Figure 11). In particular, investment in dwellings by the whole economy decreased continuously by 38.3% over 2010-2015 before started recovering over the 2016-2019 period and declining by 4.7% in 2020 as compared to 2015 levels. Conversely, investment in non-residential construction and civil engineering increased by 3.6% in 2020 as compared to 2015 levels. In absolute terms, investment in the broad construction sector totalled EUR 144.3 billion in 2019, out of which EUR 75.2 billion was invested in dwellings and EUR 69.1 billion was devoted to other buildings and structures[176].

Total investment in the broad construction sector between 2015 and 2019 ↓ **0.8%**

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



Source: AMECO, 2021.

The share of **total inland**[177] **infrastructure investment** in the GDP stood at 0.5% in 2018[178], same as the 2010 level. Investment in road and inland waterways infrastructure increased by 93.4% and 485.7% over the 2010-2018[179] period, totalling EUR 6.6 billion and EUR 246.0 million in 2018, respectively. In contrast, investment in rail, sea and air infrastructure decreased by 40.2%, 51.1% and 94.2% over the 2010-2018 period, totalling EUR 2.9 billion, EUR 658.0 million and EUR 37.0 million in 2018, respectively.

Road infrastructure investment between 2010 and 2018 ↑ **93.4%**

In parallel, the investment in rail infrastructure **maintenance** declined by 46.5% between 2010 and 2018[180], from EUR 7.8 billion to EUR 4.2 billion. On the other hand, the country experienced a 14.2%, 37.0%, 41.8% and 72.5% increase in its road, inland waterways, sea and air infrastructure maintenance over the 2010-2018 period amounting to EUR 7.4 billion, EUR 111.0 million, EUR 1.6 billion and EUR 176 million, respectively.

Italy's inter-ministerial Committee for Economic Planning (CIPE) approved a EUR 28.0 billion infrastructure funding for *Ferrovie dello Stato Italiane*. The 2017-2021 programme was updated for Rete Ferroviaria Italiana (RFI), providing an additional EUR 15.4 billion funding[181].

According to ANCE, in 2020, investments in public non-residential construction amounted to EUR 22.7 billion, registering a decline of 2.5% as compared to 2019 levels[182].

In connection with the investment in state railways, the 2019 Budget Law provided EUR 9.7 billion to be invested during the period 2019-2021, with investments worth EUR 1.2 billion for 2019 only. The Budget Law also included a framework for the EUR 2.4 billion refinancing of Development and Cohesion Fund in 2019-2021 (i.e., EUR 800 million for each of the three years)[183].

With regards to public investments, additional EUR 9.0 billion have been set aside in the 2020-2022 period to support two new investment funds which are managed by the state and by local authorities. The concept behind these funds is to leverage public funds to attract private sector[184].

Under its 2021 Budget Law, Italy announced a EUR 299.0 billion package to kickstart its pandemic-hit economy including a EUR 32.0 billion to be spent on upgrading its transport infrastructure[185].

In fact, in August 2020, a consortium consisting of the Japanese engineering company Hitachi and Italian contractors Webuild and Astaldi were awarded a EUR 2.5bn contract to start the work on the first section of the EUR 4.8 billion Verona-Padua high-speed railway project in Italy. The project is expected to support the recovery of the Italian infrastructure sector and is scheduled to be completed by end-2027[186].

Alongside, the **Local Authorities Fund**, with a EUR 35.1 billion budget for next 15 years, is aimed at reviving investment of local authorities and has already allocated EUR 4.0 billion for hospital construction, EUR 3.7 billion for construction of provincial schools and road maintenance, EUR 20.5 billion meeting public finance needs of local authorities and EUR 5.0 billion towards regional grants[187].

Under Italy's infrastructures for sustainable mobility mission, it has allocated EUR 32.0 billion for infrastructural investment including EUR 28.3 billion in high-speed railways and road maintenance 4.0 as well as EUR 3.7 billion in intermodal transport and integrated logistics[188].

Italy expects to achieve its objectives by end-2026. These include speeding up the upgrading of main passenger and commercial lines along the North-South and East-West axes and increasing their capacity. In particular, railway lines under focus include the Milan-Venice, Verona-Brenner and Liguria-Alps railway lines (in northern Italy); Rome-Pescara and Orte-Falconara (in central Italy) as well as the Tyrrhenian and Adriatic line (in southern Italy). The main HSL investments will be linked to Naples Bari, Salerno Reggio Calabria and Brescia-Verona-Vicenza-Padua railway lines. The mission intends to extend the high-speed lines (HSL) to the southern Italian regions through upgrading, electrifying, and building new network nodes. Furthermore, Italy also intends to implement an advanced digital road monitoring system to improve infrastructure's safety, digitise its road network as well as adapt it to climate change[189].

With regards to renovation, the **household renovation spending** has seen a decreasing trend since 2010. Indeed, it fell by 6.5%, from EUR 8.2 billion in 2010 to EUR 7.6 billion in 2019[190]. It accounted for 0.6% of household disposable income, a 0.2% decrease from 2010 levels. This is lower than the EU-27. in 2019, wherein renovation spending stood at EUR 73.7 billion and accounted for 0.9% of household disposable income. Additionally, the 2019 Budget Law confirmed the extension of personal income tax deduction of 50% up to EUR 96,000 for housing renovations, the mobile bonus connected to it and 65% deduction in case of redevelopment (please see Eco Bonus). It also extended the 36% personal income tax deduction in case of landscaping, incentivising households to further invest in renovation.

In 2020, the EIB Group invested almost EUR 2.3 billion in infrastructure[191]. Likewise, Italy also benefitted from investments from the **European Fund for Strategic Investments** (EFSI). As of January 2021, the total financing under EFSI amounted to EUR 13.3 billion and is set to trigger additional investments of EUR 77.0 billion. Under the infrastructure and innovation window, 114 projects have been approved, amounting to EUR 8.9 billion and are set to trigger EUR 38.6 billion in total investments. Under the SMEs window, 102 agreements have been approved, involving a total financing of EUR 4.4 billion, and are set to trigger investments of up to EUR 38.4 billion[192].

Italy has allocated EUR 32.0 billion towards infrastructure for sustainable mobility in its RRP. This includes EUR 28.3 billion for investment in high speed network and road maintenance 4.0 as well as EUR 3.7 billion for investment in inter-modality and integrated logistics[193].

The high-speed network project includes high speed railway works aimed at strengthening the North-South and East-West connections of the country, the European TEN-T corridors, and to raise the technological and security standards of the network and its main nodes. In case of road maintenance, the programme includes installation of safety interventions and digital monitoring of roads, viaducts and bridges[194].

With regards to railway works, the programme includes continuation of developmental work at various lines such as the Naples Bari and the Brescia-Verona-Padua railways and the Tortona–Genoa high-speed railway (known as Third Pass of Genoa). Additionally, the infrastructural works under the DEF 2020 (*ItaliaVeloce Plan*) are still in the preliminary design and project review phase and will require longer time to start. This includes projects such as high-speed Salerno-Reggio Calabria, high-speed Rome-Pescara, Orte-Falconara and Verona-Brenner upgrade works. In relation to road transport, under the RRP, Italy has allocated EUR 1.6 billion towards road maintenance. Out of this, EUR 1.2 billion is allocated for A24 and A25 motorways while EUR 450.0 million is made available for the development of road system across the country[195].

Similarly, several renovation measures have increased in Italy, in terms of transport and urban development. The **Trenitalia Rolling Stock Renewal Program** is one such project in which European Investment Bank (EIB) provides *FS Italiane Group* with support for new hybrid regional trains with lower environmental impact. The project entails acquiring up to 135 less polluting new trainsets by Trenitalia for providing regional train services in several regions in Italy. Announced in July 2020, the proposed EIB finance is EUR 450.0 million, whereas the total cost of the project is EUR 960.0 million[196].

The **Trento Infra Renewable Energy** is another project announced by EIB in July 2020. This is a project under Urban Development, comprising the framework loan for public sector entities to finance the construction of public infrastructure. It includes green / climate-change investments in Trento. It will receive EUR 335.0 million as a proposed financing from EIB. The total cost of the project is EUR 444.0 million[197].

TO 2 – Skills

Italy has one of the lowest employment rates for recent vocational education and training (VET) graduates in the EU. It stood at 58.7% in 2019[198], significantly below the EU-27 average of 80.9%[199].

The level of tertiary educational accomplishment is also low, and the evolution from academics to profession remains tough, even for highly qualified people. It is has become difficult for highly qualified people to find a suitable employment[200]. As a result, Italy's **employment rate of recent graduates** in 2019 is the lowest amongst EU-27 Member States at 58.7%. Moreover, the employment rate of Italy's male graduates in 2019 stood at 61.7%, well above as compared to the female's (55.8%)[201].

According to Eurostat statistics, more than half of the 10 least favourable EU regions for graduate employment are in Italy. In fact, amongst the regions in Italy, Southern Italy has the worst graduate employment rates in the EU. Two factors act as obstacles: there is a limited number of companies that hire graduates; and the public sector, which used to be a major source of job opportunities for skilled people, only recruits a limited number of graduates. These trends partly contributed to the emigration of Italy's working-age population[202].

As per the RRP, the country has allocated EUR 16.7 billion towards strengthening skills of its workers and promoting their right to study[203].

The RRP includes the adoption of the **National New Skills Plan**, promoted by the Ministry of Labour and Social Policies in collaboration with National Agency for Labour Policies (ANPAL) and in agreement with the Regions, with the aim of reorganising the training of transition and unemployed workers, through the strengthening of the vocational training system and the definition of essential quality levels for upskilling and reskilling activities in favour of beneficiaries of support instruments, beneficiaries of the minimum income (*Reddito di Cittadinanza* – citizenship income) and workers benefiting from extraordinary or exceptional wage supplementation instruments (CIGS, *cassa per cessazione attività in deroga*).

The RRP will also integrate other initiatives, concerning measures in favour of young people, such as addressing the problem of NEETs (youngsters who are Not in Education, Employment, or Training), as well as actions for adults' skills, starting with people with very low skills[204].

The Italian government adopted several measures to promote adoption of VET. The VET educational courses were redefined by the State-Regions Conference and is expected to improve the relevance of VET provision in labour market, particularly at local level. Additionally, Italy also revised its work-based learning pathways (*Alternanza Scuola-Lavoro*) and renamed them as 'Pathways for transversal competences and guidance'. This is primarily aimed at facilitating the acquisition of personal and profession development skills so as to develop competences through real work in an operational environment. In order to cope with COVID-19 crisis, numerous online project works and simulations were introduced to replace existing practical trainings done in laboratories and companies[205].

Italy converted its "*Rilancio*" Law Decree (19th May 2020) into Law 77 (17th July 2020) and established the "New Skills Fund". NSF focuses on active labour market policies and has a budget of EUR 730 million. NSF will also compensate companies for reduction in working time due to COVID-19 emergency provided the workers attends continuing vocational training[206].

In 2020, the Italian government announced a national strategic plan for adult competences in order to address the high rate of low-skilled people in the country. Though this plan, Italy aims to improve coordination between different market players and processes involved in lifelong learning as well as jointly establish national training strategies for 2020-2022 for labour market integration[207].

In 2019, only 41.5% of Italians had basic digital skills, significantly lower as compared to EU-27 average of 58.3%. Similarly, only 22.0% of the population had advanced digital skills, well below the EU-27 average of 33.3% for the same reference period[208].

In order to improve its existing low digital skills level, Italy adopted its first national strategy for digital skills in July 2020 under the framework of the Digital Republic Initiative[209].

The new strategy broadly covers education, the active workforce, ICT specialist skills and digital skills for active citizenship as well as democratic participation. It also includes digital learning courses and five AGORA classrooms (online lectures) authorised by the Regional School Offices of Liguria, Apulia and Sicily[210].

According to ANCE, in case of large construction companies, almost three out of every four companies hired IT experts. Additionally, 61.4% of the companies declared that they carried out specific training courses for their staff[211].

The 2019 Budget Law also extended the tax credit brought forward in 2017 for companies investing in training. The '***Percorsi di Garanzia delle Competenze***' (Skills Guarantee pathways) for low skilled adults require improved capacity building, specifically in control and validation, to grow the low-skilled adults take up. In August 2019, the State-Regions Conference took up the National Repository of Education and Training Qualifications and Professional Qualifications, covering qualifications from general education, higher education and VET qualifications[212]. As a part of priorities for 2019, an increment in the resources for universities and research centres was also announced. This will be attained by centrally funded plans for the recruitment of assistant professors and also for attracting Italians working abroad back to Italy[213].

TO 3 – Resource efficiency / Sustainable construction

In order to achieve the targets set by the EU under the 'European Green Deal', the Italian government has allocated EUR 29.6 billion for energy efficiency and requalification of buildings[214].

Under the 2021 Budget Law, the Italian government announced its plans to relaunch its construction sector in terms of its environmental sustainability as well as its seismic performance. Currently the energy consumption of buildings in Italy is more than one-third of its total annual energy consumption. This is mostly due to the 14.5 million housing stock built in prior eras with little or no regulations. Furthermore, the country is also prone to seismic risks[215].

The Italian government has announced a dual design line program: (i) a program to increase the efficiency and security of heritage of public buildings, particularly schools, public housing, municipalities, etc. and (ii) temporarily incentivising energy requalification and anti-seismic measures for private properties through a tax deduction equivalent to 110.0% of cost incurred for energy efficiency improvements. This incentive is applicable for expenditure incurred up to 30th June 2022. The scheme is expected to be extended (i) for IACPs to 30th June 2023, which can be further extended by six months wherein 60% of the improvement work has been completed and (ii) for households up to 31st December 2022[216].

To achieve the above-mentioned energy efficiency improvements, the Italian government has set aside an additional EUR 6.2 billion under its 2021 Budget Law[217].

As part of European and national initiatives supporting the green growth, the Italian construction sector is undergoing a green transition with a view to becoming more energy efficient. As for the increasing demand of efficiency in user's homes and offices, the construction sector continues to promote environment friendly substitutes such as natural stone. To support the construction companies in the Italian region of Lombardy and cater for the growing demand for sustainable building design, the *Pietra Ricomposta* project has developed an environmentally friendly composite stone material. In fact, the project successfully developed a thin, recomposed stone with a high level of resistance, through the development of an automatic industrial system capable of producing the building material in high quantities at low cost[218].

Italy has allocated EUR 29.6 billion towards projects related to increasing energy efficiency and redevelopment of buildings under the RRP. Additionally, it has also allocated EUR 18.2 billion for developing renewable energy and sustainable mobility in the country[219].

The RRP Mission "Green Revolution and Ecological Transition", covers a wide range of strategic priorities, including the circular economy, energy transition sustainable mobility, energy efficiency of buildings, water resources and pollution. Under this Mission, the resources allocated to projects of interest to the construction sector amount to EUR 48.7 billion, mainly concentrated in the third component, which includes all the energy efficiency projects and renovation of public and private buildings[220], such as:

- Energy efficiency renovations of public buildings including schools and courthouses, with a total investment of EUR 1.2 billion, linked to a reform that simplifies the administrative procedures to undergo these renovations;
- Energy efficiency renovations of private buildings, allocating EUR 13.6 billion to the already mentioned *Sisma Bonus* and *Superbonus 110%*.

The total amount allocated to the energy efficiency and renovation component of the RRP stands at EUR 15.4 billion.

Moreover, under the Component "Tourism and Culture" of Italy's RRP, several measures will have a direct or indirect impact on the construction sector. For instance, investments for EUR 300 million are planned for improving energy efficiency in cinemas, theatres and museums, and an intervention to improve the energy efficiency of buildings related to the cultural/creative sector is also foreseen. These buildings are often located in obsolete, energy inefficient structures generating high maintenance costs related to air conditioning and lighting. Consequently, part of the resources of the RRP will be allocated to finance interventions to improve the efficiency of Italian museums, cinemas and theatres (both public and private)[221].

Finally, in the RRP, Italy has also committed EUR 3.6 billion for projects dealing with hydrogeological instability, EUR 2.4 billion for increasing the resilience of water infrastructures and EUR 6.0 billion for initiatives aimed at increasing the energy efficiency of the municipalities[222].

The broad construction sector is expected to be the key to achieving energy saving targets set by Italy for 2020. Italy's National Energy Strategy (NES) intends to achieve these targets by strengthening the existing and by introducing few new measures[223]:

- strengthening the minimum energy standards for the construction of new buildings and the renovation of existing buildings, to gradually increase the number of nearly zero-energy buildings consistent with the provisions of Directive 2010/31/EU;
- consolidating the tax relief system, particularly in the civil renovations sector and it should be updated to boost its effectiveness and cost/benefit ratio;
- strengthening the incentives for renovation of government buildings;
- reinforcing the targets of the White Certificates scheme, which is primarily designed for the industrial sector but also plays a key role in raising awareness of energy efficiency issues[224].

The **Renovation bonus** (*Bonus Edilizia*) has also been revised in order to support construction sector amid COVID-19 pandemic. The Budget Law 2020 has already extended the tax deductions for renovations until 31st December 2020. The home bonus has also been confirmed for 2020. This allows an individual to benefit from 50% deduction, for the expenses incurred for renovations work until 31st December 2020, provided the property must be for residential purpose. The Relaunch Decree (*Il Decreto Rilancio*) has introduced 110% deduction of expenses incurred for interventions that increase energy efficiency level for existing buildings between 1st July 2020 and 31st December 2020[225].

TO 4 – Single Market

As per the 2020 EU Single Market Scoreboard, overall, Italy's performance was slightly below as compared to the EU-28[226] average[227].

In relation to 2020 EU Single Market Scoreboard metrices, Italy's performance was average in EURES. In parallel, Italy performed well above the EU-28[228] average in the transposition of law, e-Certis and Your Europe metrices – EU's single digital gateway aimed at providing access to information, procedures, assistance and problem-solving services. Contrarily, the country performed poorly in terms of Infringements, EU Pilot, Internal Market Information System (IMI) and SOLVIT metrices[229].

In terms of **Public Procurement**, Italy's overall performance was below average: out of 12 criteria, the country scoring unsatisfactory rating in six, satisfactory rating in two and average rating in four criteria[230]. In relation to public procurement, ANCE underlines that competition in the EU market from third countries companies can be unfair when these benefit from financial support from their government allowing them to provide offers below the 20% to 25% below the market price.

Italy's RRP deems the simplification of public procurement and concessions as an essential objective for the efficient implementation of infrastructures and the revival of construction activity, both of which are essential for the post-pandemic recovery. This simplification should cover not only the awarding phase, but also the planning, programming and design phase[231].

During 2019, 'Protection of confidential know-how and business information' (*Protezione del know-how riservato e delle informazioni commerciali riservate*) was introduced. It results from the implementation of EU Directive 2016/943, which helped Italy's Industrial Property Code to align with international standards and provide greater protection to 'trade secrets'[232].

In addition, cross-border service providers wanting to temporarily carry out their activities in Italy are subject to mandatory certification schemes. Furthermore, the Certificate of Undeclared Work (*Documento Unico di Regolarità Contributiva* - DURC) which demonstrates that construction companies have complied with their tax and social security obligations, must be submitted as part of the application for a building permit. These authorisation schemes are deemed to be stricter for temporary foreign service providers than for contractors seeking to permanently establish their operations in Italy. Since the DURC authorisation and the ISO certification schemes are valid for 90 days and three years, respectively, their limited duration means that temporary cross-border providers must restart the application procedure with all associated fees[233].

Under the new EU budget for 2021-2027 Multiannual Financial Framework (MFF), Italy has been allotted EUR 13.6 billion is to be used for research, innovation, digital sectors and internal market with a centralised management at EU level [234].

TO 5 – International competitiveness

As per World Bank Doing Business 2020 report, Italy ranked 1st out of 190 economies in the ease of trading across border, achieving a full score of 100 in trading across border dimension[235].

As per the report, in Italy it takes only one hour to be documentary compliant. Moreover, it only takes a few minutes to be border compliant. In terms of costs, businesses don't need to spend any money to be documentary and border compliant.

With regards to the **internationalisation of construction SMEs**, the export value of all construction-related projects in Italy stood at EUR 8.9 billion in 2019, representing a 23.4% increase as compared to the 2010 level of EUR 7.2 billion. Italy's share of exports of all construction-related products in 2019 stood at 28.1% of the total production value, higher than 24.6% in 2018 as well as the EU-27 average of 11.3% for the same reference period.

Export value of all construction-related products between 2010 and 2019 **23.4%**

In the context of **inward FATS (Foreign Affiliates Statistics)[236]**, value added at factor cost in the narrow construction and the real estate activities sub-sectors increased by 17.8% and 51.2% between 2010 and 2018, respectively[237]. In contrast, turnover in the narrow construction sub-sector decreased by 7.0% over the 2010-2018 period. Whereas turnover in the real estate activities sub-sector, increased by 77.8% between 2010 and 2018. In terms of **outward FATS**[238], turnover in the German narrow construction sub-sector increased by 133.9% over the 2010-2016[239] period. On the other hand, turnover in the real estate activities sub-sector decreased by 40.7% over the same reference period.

However, the international activities of the construction sector suffered from the COVID-19 pandemic, which undermined the freedom of movement of workers, thus preventing construction works to advance.

Large scale construction companies in Italy are directing their growth strategies towards developing and diversifying their overseas accounts. The strategy focuses on developing markets (like Africa and Asia) and established markets, such as USA, that need huge infrastructure investments[240].

The government of Italy established a major construction player, headed by Salini-Impregilo, which involves other larger businesses. This initiative, named 'Progetto Italia' aims at establishing a construction conglomerate, huge and robust enough to handle major public projects, being competitive in international markets. However, the project has not yet turned up[241]. As per Global Powers of Construction 2019, Italy's Salini-Impregilo has been classified in the top 100 global construction companies[242].

In line with the Internationalisation in the country, the following measures were launched for start-ups and SMEs in 2019:

- **Education to Export (E2E) programme**: This is an online, free education and information channel for SMEs. It provides an online export kit and classroom training. These courses are mainly focus on – guidance on starting an export activity, structuring the business in a better way for exporting and guidance on becoming competitive and attaining an international level growth.
- **Export UP:** This is an online tool designed specifically for helping SMEs step-by step in the process of exporting along with securing export credit insurance.
- **Global Start-Up programme:** This programme was primarily financed through the funds from the national 'Made in Italy' plan. It focuses on strengthening the technical, organisational and financial competences of Italian innovative start-ups to deal with foreign markets in a better way[243].

The Italian government has already been working on various priority policies (e.g., Special Plan for 'Made in Italy') and other incentive schemes (e.g., SACE-SIMEST under the *Cassa e Depositi umbrella*, *Nuovi Macchinari*, Temporary Export Management, etc.) to support Italian SMEs in international markets[244].

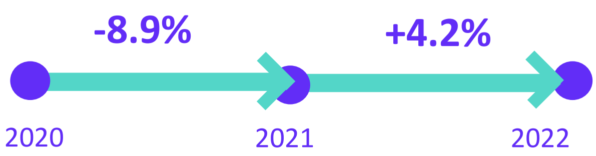
8

Outlook

Over the 2020-2023 period, Italy's GDP is forecasted to increase by 8.8%, primarily driven by post COVID-19 market recovery and massive investment undertaken by the government.

The Italian **GDP** decreased by 8.9% in 2020 and it is expected to rebound by 4.2% in 2021, totalling EUR 1.6 trillion in 2021.

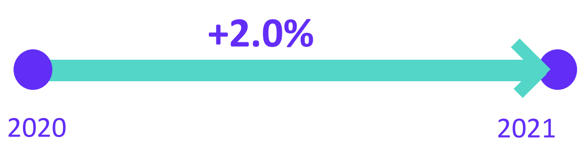
Expected GDP growth between 2020-2022



Likewise, the **volume index of production** in the broad construction sector is estimated to increase by 21.3% over the 2020-2022 period. The **total value added of the broad construction sector** is expected to increase by 2.1% in 2021. Additionally, the **turnover of the broad construction sector** is estimated to rise by 1.8% in 2021.

Correspondingly, the **number of persons employed** in the broad construction sector is also expected to increase by 2.0% to 2,078,967 in 2021. The majority of this increment is expected to come from the architecture and engineering activities (+5.1%), followed by the real estate activities (+3.6%), the manufacturing (+2.8%) and the narrow construction (+0.8%) sub-sectors.

Number of persons employed in the broad construction sector between 2020 and 2021



Similarly, the **number of enterprises** in the broad construction sector is expected to increase by 2.4% in 2021, primarily driven by the architecture and engineering activities (+5.1%), the real estate activities (+3.6%) and the manufacturing (+2.8%) sub-sectors.

The Italian government has undertaken several initiatives to promote its **residential / housing market**. Under its 2021 Budget Law, Italy has extended the timeline for *Superbonus 110%* deduction up to 30th June 2022. The country has allotted EUR 2.8 billion and EUR 18.5 billion for promoting social housing and for investment in energy efficiency housing. The timeline for renovation building bonus has also been extended through 2021.

With regards to **non-residential** and **infrastructure** construction, under its Budget Law 2021, Italy allocated EUR 32.0 billion for infrastructural investment including EUR 28.3 billion in high-speed railways and road maintenance 4.0 as well as EUR 3.7 billion in intermodal transport and integrated logistics. Additionally, in June 2021, the European Union approved a EUR 191.5 billion COVID-19 pandemic Recovery and Resilience Facility (RRF) for Italy, consisting of EUR 68.9 billion in grants and EUR 122.6 billion in loans.

Under the RRF, Italy has allocated EUR 28.3 billion for investment in high speed network and road maintenance 4.0 as well as EUR 3.7 billion for investments in inter modality and integrated logistics.

Overall, the Italian construction sector is forecasted to partially recover from 2021 onwards, driven by large infrastructure projects and the investments planned in the RRP. Output in civil engineering will be driven by investment in railways and road infrastructure, backed by EU funding.

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