FOUNDATION FOR ECONOMIC & INDUSTRIAL RESEARCH

Trends, Challenges and Prospects of Construction in Greece - 2025

June 2025

The policy judgments and proposals contained in this analysis reflect the views of the authors and do not necessarily reflect the views of IOBE members or management.

Research Group

Giorgos Maniatis, Head of Sector Studies Department IOBE

Antonis Mavropoulos, Research Associate of IOBE

Foteini Stroubakou, Research Associate of IOBE

Coordination

Nikos Vettas, Director General of IOBE and Professor, Athens University of Economics and Business

Any errors or omissions are the sole responsibility of the authors.

The study was carried out with the support of

ΤΜΕΔΕ
ΤΑΜΕΙΟ ΜΗΧΑΝΙΚΩΝ ΕΡΓΟΛΗΠΤΩΝ ΔΗΜΟΣΙΩΝ ΕΡΓΩΝ

The Foundation for Economic and Industrial Research (I.O.B.E.) is a private, public benefit, charitable, research organization. It was founded in 1975 for two purposes: to promote scientific research on the current and emerging problems of the Greek economy and make recommendations that are useful for policy formulation.

Foundation for Economic and Industrial Research (IOBE)
Tsami Karatasou 11, 117 42 Athens
Tel: (210 9211200-10), Fax: (210 9228130 & 210 9233977)
E-mail: info@iobe.gr - URL: http://www.iobe.gr

CONTENTS

List of Figures

List of Tables

EXECUTIVE SUMMARY

The restoration of stability and the progress made in the Greek economy in recent years, the securing of a significant amount of public and European funds for development projects and the recovery of private construction activity have had a particularly positive impact on Construction. The present study analyses the most recent developments in the Construction sector in Greece and assesses its prospects, taking into account the current conditions and challenges it faces.

FIGURES AND TRENDS OF THE CONSTRUCTION SECTOR IN GREECE

In 2023, approximately 74,000 enterprises were active in the Construction sector, an increase of 3,320 (+13%) compared to the previous year. In **Architects and Engineers activities, about 54,000 enterprises operated in 2023,** almost 2,500 more compared to 2022. The majority of businesses in both sectors are self-employed persons.

The output value of Construction has strengthened significantly, with a parallel improvement in operating profitability and the sector's contribution to the Greek economy. The total output value of the Construction sector is estimated to reach EUR 15.7 billion in 2024, having more than doubled since 2020. It is also estimated that around 60% of the sector's output value is related to the construction of buildings and construction works other than dwellings (EUR 9.59 billion in 2024) and the remaining 40% to residential construction (EUR 6.16 billion in 2024).

The gross value added (GVA) of the sector was set at €4.5 billion in 2024 and its contribution to the total gross value added of the Greek economy at 2.2%. The operating surplus and gross income of the Construction sector followed a steady recovery path after 2017 and amounted to €1.8 billion in 2023 (12.5% of total production value), which is significantly below the values recorded in the 2000s (average 25% of total production value).

Since 2019, **the production value in the Architectural and Engineering activities has strengthened significantly and is estimated (**at current prices) **to reach EUR 3.7 billion in 2024.** Around 50% of the production value constitutes the GVA of the Architects and Engineers sector, which is estimated at €1.8 billion in 2024, representing 0.8% of the country's GDP.

Improving profitability and the rise in construction activity have led to an increase in business investments in the sector. From 2009 to 2020, construction companies' investment in fixed assets (machinery, other equipment, etc.) did not cover capital consumption (depreciation), indicating the disinvestment and deterioration of the sector's productive capabilities during the economic crisis. From 2021 onwards, however, investments in fixed capital cover the consumption of capital, enhancing the productive capacity of the industry.

The investment "gap" by firms in the sector is one of the factors affecting labor productivity in Construction. Labor productivity in Construction in Greece (in terms of GVA per hour worked) shows a downward trend over the period 2010-2024 and lags significantly behind both the average labor productivity of the Greek economy as a whole (44% lower) and the average labor productivity in Construction in the EU-27 (56% lower). **Low productivity also has a significant impact on labor remuneration, which is at a low level compared to the rest of the EU-27.**

Employment in Construction reached 210 thousand workers in 2024, up by 8.8% compared to 2023 (+17 thousand workers), covering part of the sector's increased labor needs. In the Architecture and Engineering activities, employment reached 90,000 persons in 2024, showing a significant increase from 2020 (+21%).

According to the ELSTAT Labor Force Survey, the majority of workers in Construction are employed in specialised construction activities (106,000 persons in 2024). Building

construction employed 70,000 persons in 2024, while civil engineering projects, which mainly concern infrastructure investments, employ fewer persons.

In the first quarter of 2025, the ELSTAT Labor Force Survey estimates employment in Construction at 195.4 thousand people, representing an increase of 5.2% compared to the average employment in 2024. According to the same survey, between 2021 and 2024, employment in Construction increased by 44 thousand persons (+31%), from 142 thousand to 186 thousand persons. This increase mainly includes skilled tradespeople (+32.7 thousand persons), unskilled workers (+6.2 thousand persons) and machine operators (4.2 thousand persons). In the remaining occupations there was a small overall increase (0.9 00 persons).

Greece has the lowest rate of investment in construction as a percentage of GDP among EU countries, mainly due to the lag in investment in dwellings. Construction investment accounted for 6.0% of GDP in 2024, compared to 16.3% in 2007, while the gap for 2024 compared to the EU-27 average was 4.9 percentage points. Nevertheless, the overall footprint of the sector on the Greek economy, regional growth and the external balance remains significant.

Public investment in infrastructure and buildings amounted to EUR 4,135 million (in current prices) **in 2023**, representing 53% of total investment in other construction. **Since 2019, the size of such public investment has doubled,** surpassing in 2022 the average level of the previous decade, and is expected to increase further by 2026 due to the implementation of planned Public Investment Programme projects.

The study reveals a notable rise in private construction activity, albeit from a very low base, an increase in turnover and a strengthening of positive business expectations of construction companies. However, it also highlights a significant **increase in construction costs and property prices** and a moderate rise in housing credit amid rising relative borrowing costs.

The upward trend in the issuance of building permits was reversed in the first months of 2025 due to the uncertainty caused by the regulations of the new building regulation (N.O.K. - incentive system Law 4067/2012) that were annulled by the Council of State (CoE) and the suspension of the issuance of building permits that made use of these incentives. The decisions of the CoE and the regulations adapting the national legislation will have an impact on the construction activity (e.g. costs of changing the economic terms of contracts and possible losses of contractors, possible postponement of construction of buildings, assumption of costs of design revision, costs of environmental equivalent).

From 2018 to 2024, building permits were issued, representing a total of 191,000 dwellings. The trend in the issuance of building permits for dwellings was strongly upward, contributing to the strengthening of the supply of new dwellings. In 2024, the number of new dwellings according to issued building permits amounted to 46,900, an increase of 32% over the previous year. On the assumption that these permits represent construction activity completed and recorded in the year following their issuance, this development suggests that in 2025 it is likely that construction activity will be boosted, but this will depend on the number of permits affected by the new legislation (i.e. the number of permits that had not progressed to commencement of work and are due for review). The reduction in the issuance of planning permissions for new dwellings within 2025 will affect construction activity as *recorded* mainly in the year 2026.

The overall public works construction market has also strengthened over the last four years, with an increase in both the number of tenders and the total public works budget and a deceleration in the average discount rate, due also to the significant increase in construction costs. The average discount rate of bidders in public works tenders decreased significantly in the

following years from around 45% in 2019-2021. In 2024 it is estimated at 22.3% due to the increase in construction costs and the increase in the number of tendered projects.

The total value of signed public works contracts (regardless of budget - including non-technical projects) **increased from EUR 2.3 billion in 2018 to EUR 5.3 billion in 2024.** The highest total value of public works contracts was in 2023 (€6.2 billion, up 43% year-on-year). It then fell by 14% in 2024, but remained higher compared to the 2018-2022 period. This trend (insofar as contracts include a relatively stable proportion of public works contracts) suggests a short-term strengthening of public works construction activity, but a subsequent decline if the reduction seen in 2024 continues.

The backlog of public and private projects of the country's major construction groups is at a historically high level, as a result of the improving performance and conditions in the Greek economy, the size of European funding, but also the large investment gap during the previous decade. In particular, the backlog of the largest companies in the sector (with signed contracts) amounted to EUR 13.07 billion in 2024, up significantly by 6.6% year-on-year and about double the average for the 2018-2022 period. Including the contracts to be signed, the backlog of these construction groups amounts to EUR 17.36 billion. The timely execution of these projects is a challenge for the construction companies, as it requires, among other things, human resources adequacy, strong liquidity, access to financing resources and fast procedures on the part of public authorities.

STATE OF PLAY OF NATIONAL INFRASTRUCTURE PLANNING AND FINANCING PROGRAMMES FOR CONSTRUCTION PROJECTS

The significant amount of national and European funds that have flowed into the Greek economy and the recovery of private construction activity have created a positive environment for Construction in Greece. According to the latest data regarding the implementation of the National Development Programme - NDP 2021-2025 (April 2025), the total budget with over-commitment amounted to EUR 17.06 billion, while the budget of the included projects reached EUR 14.05 billion (82% of the total budget). The legally committed budget was €9.48 billion, i.e. 67% of the budget of the projects included. In 2025, the new law on the NDP for the programming period 2026-2030 is expected to be adopted, which will aim at simplifying and modernising procedures for the preparation, management and implementation of development interventions, establishing rules for financial commitments of projects and payment thresholds, and strengthening coordination and management bodies with a defined structure and responsibilities.

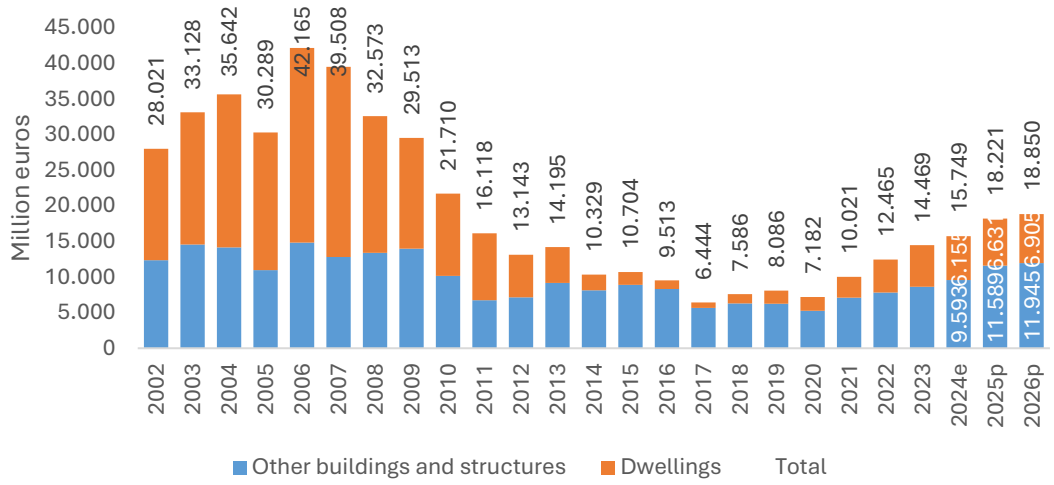
Based on the analysis of the National Recovery and Resilience Plan (NRP) actions, **it is estimated that in the 2025-2026 period, grants and loans of €6.3 billion will be directed to projects directly related to Construction, mobilising total resources of €8.7 billion.**

As regards the evolution of construction activity, the study examined two scenarios:

- In **the optimistic scenario**, an impact of 18% of new housing permits issued in 2024 (representing the share of permits for new housing in November and December) has been considered, which will affect construction activity within 2025, as well as an overall impact of -20% on dwellings construction in 2026, due to a corresponding decrease in new housing permits issued within 2025.
- The **pessimistic scenario** is differentiated only for dwellings investment in 2026, due to high uncertainty regarding the impact of regulations concerning private construction activity (N.O.C., and planning changes concerning off-plan construction), and assumes a larger decrease in residential building permits by 40% in 2025 (in terms of area); which will have a corresponding impact on building construction activity in 2026.

In **the optimistic scenario,** total investment in Construction - mainly infrastructure projects - is estimated to boost its share of GDP to 7.5% of GDP in 2026 from 6.0% in 2024. It is also estimated that the output value of infrastructure and dwellings construction projects will increase in the period 2025-2026, exceeding EUR 18 billion (from EUR 15.8 billion in 2024) (Figure 1). Output value in the dwellings construction-related construction sector is estimated to increase by 12% compared to the level recorded in 2024. Correspondingly, the annual production value in Architectural and Engineering activities is estimated to approach EUR 4.3 billion by 2026, up from EUR 3.7 billion in 2024.

Figure 1: Projection of Construction Production Value, 2025-2026



Source: Eurostat, IOBE Estimation 2025-2026.

In **the pessimistic scenario**, dwellings investment falls to 2.4% of GDP in 2026 (from 2.8% in the optimistic scenario) and total investment in Construction to 7.2% of GDP (from 7.5% in the optimistic scenario). **Output value in dwellings construction in 2026 is estimated to be lower by 12.9% compared to the optimistic scenario (**€6 billion vs. €6.9 billion) and overall for Construction by 4.7% (€17.96 billion vs. €18.85 billion). Similarly, output value in Architects and Engineers activities is estimated at €4.1 billion from €4.3 billion in the optimistic scenario.

EVOLUTION OF FINANCING IN THE CONSTRUCTION SECTOR

The financing balances (bank loans outstanding) of Construction sector from domestic monetary-financial institutions (MFIs) decreased significantly from 2016 to 2021 (EUR 3.15 billion in 2021 or -67% compared to 2016), with most of the decrease being due to the write-offs of (non-performing) loans from the balance sheets of credit institutions. In the period after 2021, loan balances to Construction stabilized, showed a slight increase until 2023, but in 2024 they declined by 11.2%, indicating larger loan repayments (or write-offs) versus new financing to the sector.

Domestic MFI financing of the Construction sector did not change significantly in 2020 and 2021, as new loans amounted to EUR 282 and 307 million respectively. A large increase occurred in 2022, when new loans amounted to EUR 604 million. However, in 2023, despite a further increase in construction activity, new construction financing fell to EUR 349 million. The significant rise in borrowing costs in 2023 was one of the factors that potentially affected funding flows. **In 2024, new loan flows in Construction increased again to EUR 555 million. In 2020-2024, SMEs in the sector received on average 69% of new loans and large firms the remaining 31%.**

The inability to access loans creates a financing gap, the size of which is a result of the gap between the supply and demand of capital by firms. The financing gap of SMEs in Greece (and

therefore of firms operating in the Construction sector) is generally larger compared to the EU average, widened in the first years of the economic crisis and gradually decreased until 2019. However, from 2020 with the health crisis and other economic disruptions (e.g. high energy costs) the financing gap for SMEs in Greece widened again. It is worth noting, however, that in 2023 the financing gap of European firms increased, surpassing Greece for the first time.

Finally, corporate borrowing costs in Greece are systematically higher than the Eurozone average, and in the most recent period they rose sharply from 2.72% in October 2022 to 6.03% in April 2024, before starting a downward trend to 4.75% by February 2025.

ANALYSIS OF FINANCING NEEDS IN THE CONSTRUCTION SECTOR

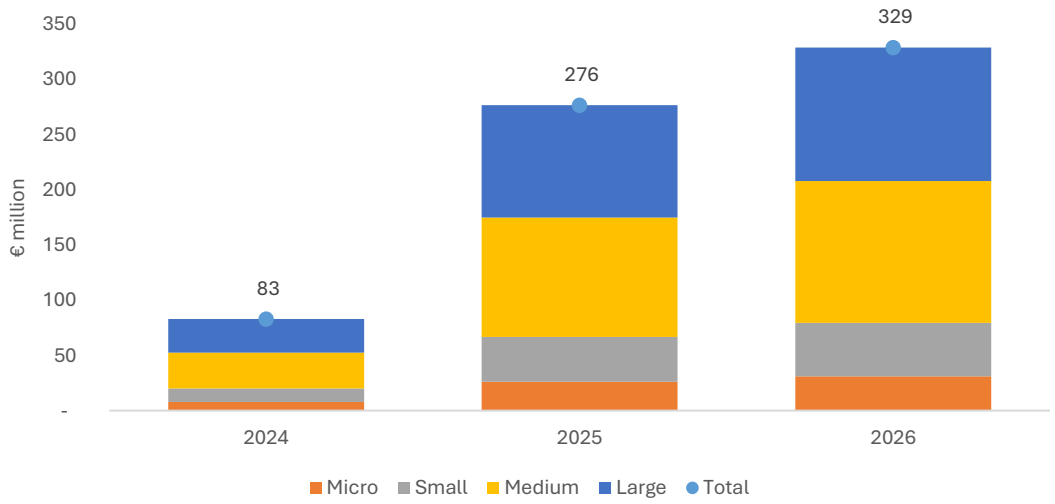
The development of public and private construction projects, participation in public projects and the modernization of the sector's productive capacity require financing resources from the financial system, both in working capital and medium and long-term debt.

The study investigates the financing needs of the Construction sector, taking into account possible different characteristics of firms, using data from the balance sheets of engineering and design firms covering the period 2016-2023.

The prospect of further growth in Construction will significantly boost the size of the sector's businesses over the period 2025-2026. Based on the distribution of the output value of the Construction sector (construction and architectural and engineering activities) by size category of enterprises and the forecasts for the output value of the sector, the amount and distribution of the turnover of enterprises by size (micro, small, medium and large enterprises) for the period 2024-2026 was estimated. Overall, the sector's turnover is estimated to be boosted, reaching EUR 23.1 billion in 2026, if all the Recovery and Resilience Facility resources (grants and loans) that have been assumed to be directed to construction projects are absorbed.

The expected increase in turnover of engineering and design firms will also fuel the increase in their bank lending. It is estimated that the total net bank lending of firms in the sector in the period 2025-2026 could increase up to EUR 329 million (Figure 2). For micro enterprises, the increase in total net bank lending is up to EUR 31 million, representing 9% of the total increase. Small enterprises account for 15%, medium-sized enterprises for 39% and large enterprises for 37% of the total increase in net bank lending.

Figure 2: Estimate of change in total bank loans by corporate category



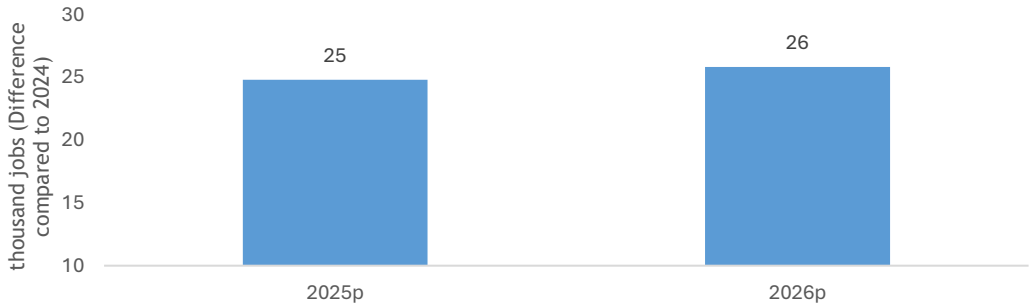
Source: IOBE.

CHALLENGES FOR THE CONSTRUCTION SECTOR

The prospects for the growth of the Construction sector and for maximising its contribution to the Greek economy are positive. However, broader challenges for the sector remain. These include, among others, issues related to human resources and financing of the sector's enterprises, the outlook for Construction after the completion of the Recovery and Resilience Facility in 2026, the institutional framework of the public works production system and the national infrastructure planning, the integration of technology and the digitalisation of Construction in order to enhance the sector's productivity, the adaptation of the sector to climate change and, finally, the adoption of ESG standards by construction companies.

In particular, **labor shortages are highlighted as the main obstacle to growth in 2024** and **financing difficulties have** also **had an impact on construction activity.** The estimated growth in domestic construction activity in the next few years will create additional labor needs of various skills. According to the study's estimates, **total construction employment could increase in the period 2025-2026 to about 236 thousand workers, a level that is 26 thousand workers higher compared to total construction employment in 2024** (210 thousand workers) (Figure 3).

Figure 3: Assessing Job Needs in Construction



Source: IOBE. e: Estimation. p: Projection.

The prospect of further growth in construction projects in the coming years creates a need for additional financing, including guarantees for participation and good execution of projects. **The need to seek additional financing and liquidity is exacerbated by the delays in payments by construction companies, especially in the public works sector.** The financing difficulties and the financing gap can be mitigated by the use of various financial instruments (e.g. guarantee funds, interest rate subsidies, microfinance, etc.), so that public and private investments in construction projects can be implemented without any problems.

The completion of the Recovery and Resilience Facility projects in 2026 may create a "gap" in domestic construction activity. There is, however, a stock of infrastructure projects of around EUR 10 billion in the road, rail, energy and telecommunications network sectors, as well as other PPP projects, which will be completed after 2026 (2027-2030 period), holding back construction activity. These projects will need to be complemented by a number of other public and private projects.

In the housing and other building sector, the gradual normalisation of the private construction market following the legislation on the abolition of building incentives could bring construction activity back to a higher level (compared to the first half of 2025). **A significant boost to construction activity related to buildings after 2026 could also be provided by renovations and energy upgrades** due to the European and national green transition policy. However, **high uncertainty as to the impact of regulations related to private construction activity (**N.O.C., and planning changes related to off-plan construction) could have a particularly negative impact

on building construction activity in 2026, possibly requiring interventions to normalise the relevant market.

In relation to the institutional framework, and based on the experience of previous years where large increases in construction costs have occurred, the need to systematically operate the mechanism for setting price revision factors that will cover the full range of individual cost elements has been highlighted, in order to limit the uncertainty for participants in public works tenders and the related problems that may arise during the implementation of projects, and to formulate project budgets that will f The development, operation and management of the Unified System of Technical Specifications and Pricing of Technical Projects and Designs and the Electronic System of Cost Determination of Production Factors for Technical Projects, which has not yet been implemented, will contribute to this.

The low digitisation rates, taking into account the changes brought about by the application of artificial intelligence, are a major challenge as they are linked to the degree of resilience and competitiveness of the sector. As the sector is mainly composed of SMEs, the scope for investment in innovative technologies is generally low and the need for financial support and other financial incentives is high. The recent announcement of the National Strategy and Roadmap for the implementation of Building Information Modelling (BIM) in Greece is a positive development.

Climate change also has an impact on Construction, as it affects both construction activity and the design, implementation and maintenance of infrastructure and buildings. More generally, it leads to a reconfiguration of the Construction sector, which will have to adapt appropriately to the new conditions, incorporating climate resilience into the basic design of projects.

The management of environmental, social and corporate governance (ESG) issues is particularly important to facilitate access to investment and financing capital for construction companies. The potential benefits of adopting sustainable practices with ESG criteria also include improving their environmental performance and avoiding any adverse economic impacts, enhancing their reputation, making it easier to adapt to the regulatory framework, integrating circular economy principles and strengthening cooperation with all stakeholders (local communities, clients, investors, staff, etc.).

Finally, the need for a National Strategic Infrastructure and Construction Plan, which will set priorities, define planned and projected investments in major economic and social infrastructure, specify funding resources for critical infrastructure projects, including their maintenance, and identify the labor and skills needs for their implementation. The National Infrastructure Plan will provide important support to the construction sector, helping informed operational planning and implementation of the required investments in skills and productivity improvements, while helping to contain implementation costs and reduce project delivery times.

1 INTRODUCTION

The restoration of stability and the steps forward made in the Greek economy in recent years, the securing of a significant amount of public and European funds for development projects and the recovery of private construction activity have had a particularly positive impact on Construction. A previous study by IOBE[1] examined the developments and assessed the challenges and prospects in the Construction sector in Greece, explored the financing needs of Construction and highlighted important challenges for the sector. The present study analyses the most recent developments in the Construction sector in Greece and assesses its prospects, taking into account the current conditions and challenges it faces.

The structure of the study is as follows. In the following **second chapter**, the definition and description of the Construction sector is carried out, its main indicators and its contribution to investment, value added and employment in the Greek economy are examined. The overall contribution of construction activity to the Greek economy, employment and the external balance is also assessed. Finally, current trends in the public and private construction sectors are examined.

The **third chapter** presents the planning for infrastructure and other construction projects to be financed by national and European funds in the coming years. An indicative identification (projection) of the relevant investment expenditure for the period 2025-2026 is also made on the basis of the available data on their financing.

The **fourth chapter** presents the evolution of financing in the Construction sector and makes comparisons with other sectors of economic activity. It also presents data on the financing gap for SMEs in Greece.

In **the fifth chapter**, in order to investigate the borrowing needs of engineering and design companies, an econometric analysis is carried out in which the relationship between the amount of short-term and long-term borrowed capital and the turnover, profitability and size of the company is estimated, based on historical data for a large sample of engineering and design companies. These estimates are then used to make projections of the Construction sector's debt capital needs by firm size category.

Chapter six examines important challenges for the Construction sector. These include issues related to human resources and financing for firms in the sector, the outlook for Construction after the completion of the Recovery and Resilience Facility in 2026, the institutional framework of the public works production system and national infrastructure planning, the integration of technology and digitisation of Construction to enhance the productivity of the sector, the adaptation of the sector to climate change and, finally, the adoption of ESG standards by construction

The study concludes with **chapter seven,** which summarizes the main findings of the analysis.

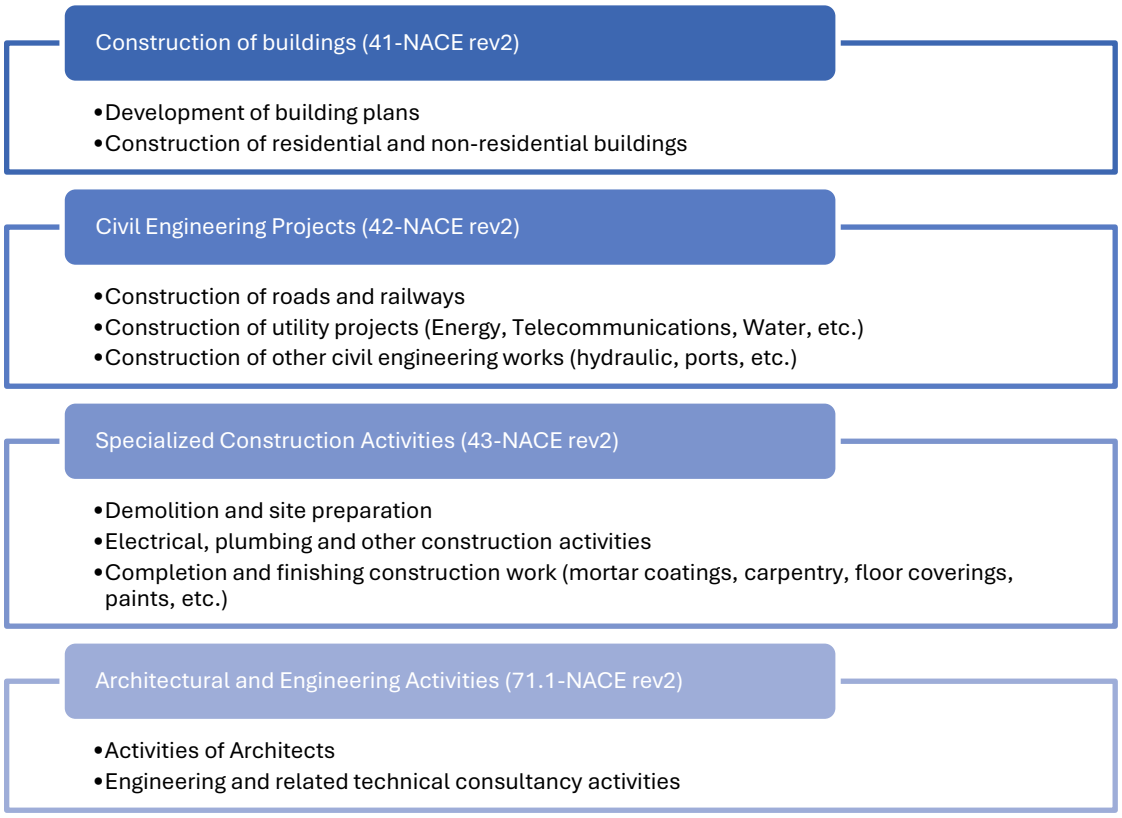
[1] IOBE (2024). Trends, challenges and prospects of Construction in Greece. March.

2 FIGURES AND TRENDS OF THE CONSTRUCTION SECTOR IN GREECE

2.1 Definition and description of the construction sector

Construction includes a wide range of productive activities, which are related to the development of building projects and the construction of buildings, the implementation of civil engineering projects (infrastructure projects), as well as other specialised construction activities such as demolition, electrical and plumbing installations and construction works for the completion of projects. Directly related to Construction are also the activities of Architects and Engineers[2] (Figure 2.1).

Figure 2.1: Activities included in the Construction sector



Source: NACE rev2.

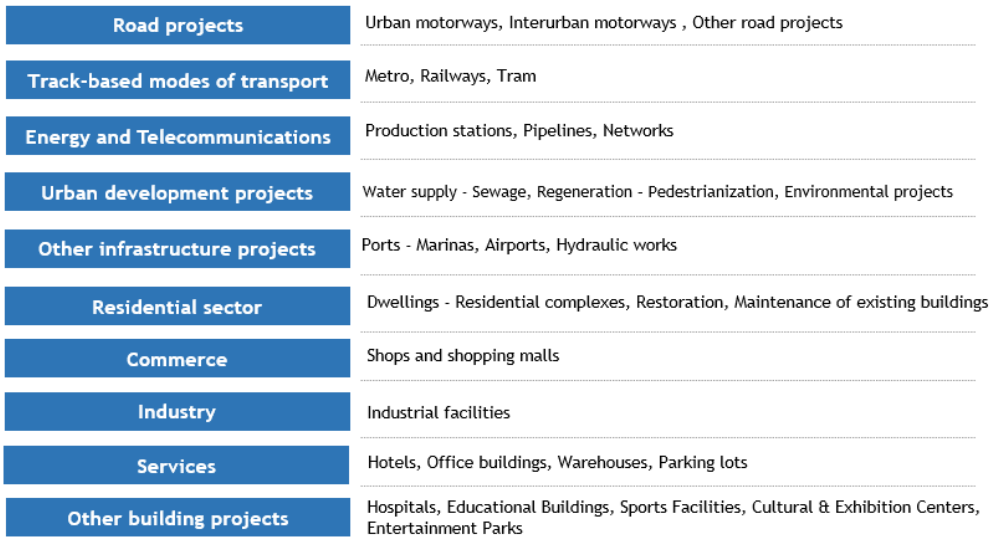
The Construction sector designs and implements a variety of projects, which are instrumental in enhancing the productivity of the economy, sustainable development and improving the quality of life of citizens. The two main categories of construction projects are **infrastructure projects** and **building/construction projects** (Figure 2.2).

The first category includes road projects, such as urban and interurban motorways and other road projects (e.g. bridges, tunnels), the construction of fixed rail infrastructure (metro, tram, railways), energy and telecommunications projects such as power stations, pipelines and networks, urban development projects such as water supply and sewerage, regeneration, pedestrianisation and environmental projects and, finally, other

[2] The broader ecosystem of Construction includes economic activities ranging from mining and quarrying and the construction materials, metals and wood industry, to trade and real estate management.

infrastructure projects such as ports and marinas, airports and hydraulic works. In Greece, these projects are usually co-financed with European Union funds, with a predetermined percentage of national participation. Public-Private Partnerships (PPPs) and, particularly for large infrastructure projects, Concession Contracts, which also involve private capital, also play an important role in financing.

Figure 2.2: Categories of infrastructure and building projects



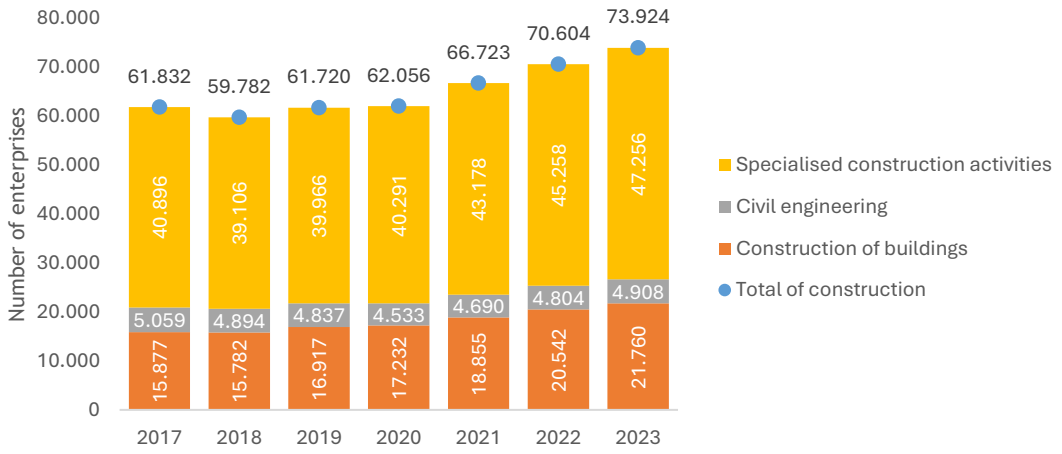
The second category includes projects in the residential sector, which includes dwellings and housing estates, as well as the renovation and maintenance of existing buildings (private construction activity) - i.e. projects that largely determine the quality of life of citizens. It also includes the construction of facilities that support economic activities in Trade, Industry, Services and the Public Sector (shops, shopping centres, industrial facilities, hotels, office buildings, warehouses, parking lots, hospitals, schools, cultural centres, sports facilities, etc.). These projects are mainly financed by the private sector, which uses the projects and assumes the associated risks, while the PPP model or co-financing with EU funds (e.g. hospitals, schools and fire stations) may be used for public sector building projects.

2.2 Number and size of enterprises in the construction sector

In the domestic Construction sector in Greece, about 74,000 companies were active in 2023 - 3,320 more compared to the previous year (Figure 2.3). Almost 2 out of 3 firms were active in *the specialised construction* sector. 29.4% of enterprises had *building construction* as their main activity. The number of enterprises carrying out *civil engineering works* was considerably lower (4 908 enterprises or 6.6% of the total). It is worth noting that between 2017 and 2023 the number of enterprises operating in the Construction sector increased by 12,092 (+ 20%), reversing the trend of decline in the

number of enterprises that occurred during the economic crisis[3](,)[4] . In this period, the largest increase in the number of enterprises occurred in building construction (+37%) and specialised construction activities (+16%). In contrast, in civil engineering projects the number of enterprises decreased by

Figure 2.3: Number of enterprises in the Construction sector by activity



Source: Eurostat, IOBE analysis.

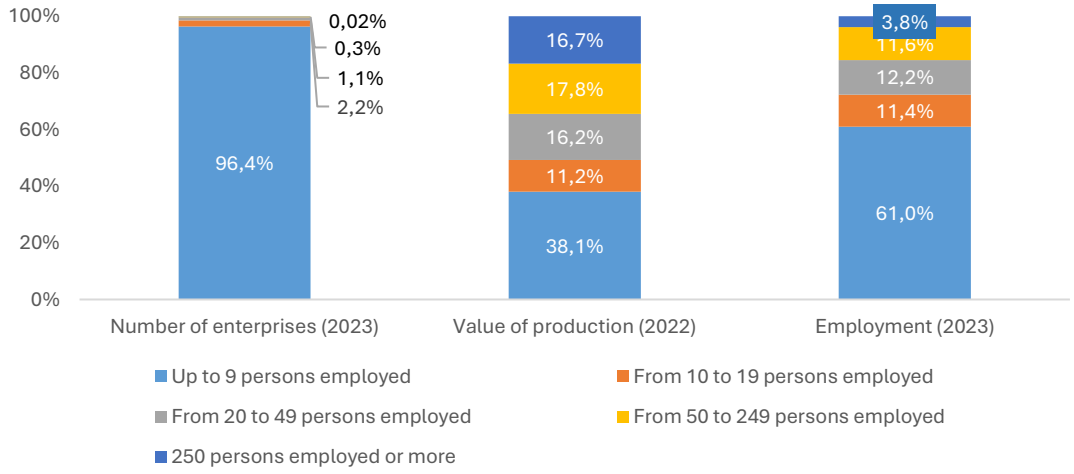
The vast majority of enterprises in the Construction sector in Greece (96.4% in 2023) are *micro* enterprises (self-employed and enterprises employing up to 9 people). However, these enterprises accounted for 38% of the production value of Construction in 2022. Only 14 *large* firms employ more than 250 workers, but account for 17% of the output value of Construction (Figure 2.4). *Small and medium-sized* enterprises (employing between 10 and 249 people) account for 3.6% of the total number and account for the remaining 45% of the production value of Construction. The picture is similar in other countries, but in which there is a larger number of enterprises employing between 10 and 49 persons, as well as enterprises with more than 50 employees (Figure 2.5).

The small size of business units may be associated with less favourable access to finance and lower levels of investment and productivity. However, it is an inherent characteristic of the construction sector, which faces the (often unpredictable) fluctuation in demand for construction of a variety of projects of varying degrees of technical requirements, in different regions of the country. In such an environment, the flexibility of firms is particularly important - the main concern of firms is to minimise fixed costs (e.g. permanent staff salaries), which is (also) achieved by subcontracting with smaller firms for specific construction tasks.

[3] Overall, from 2009 to 2017, the number of enterprises in the Construction sector decreased by 45% (or by 51,120 enterprises).

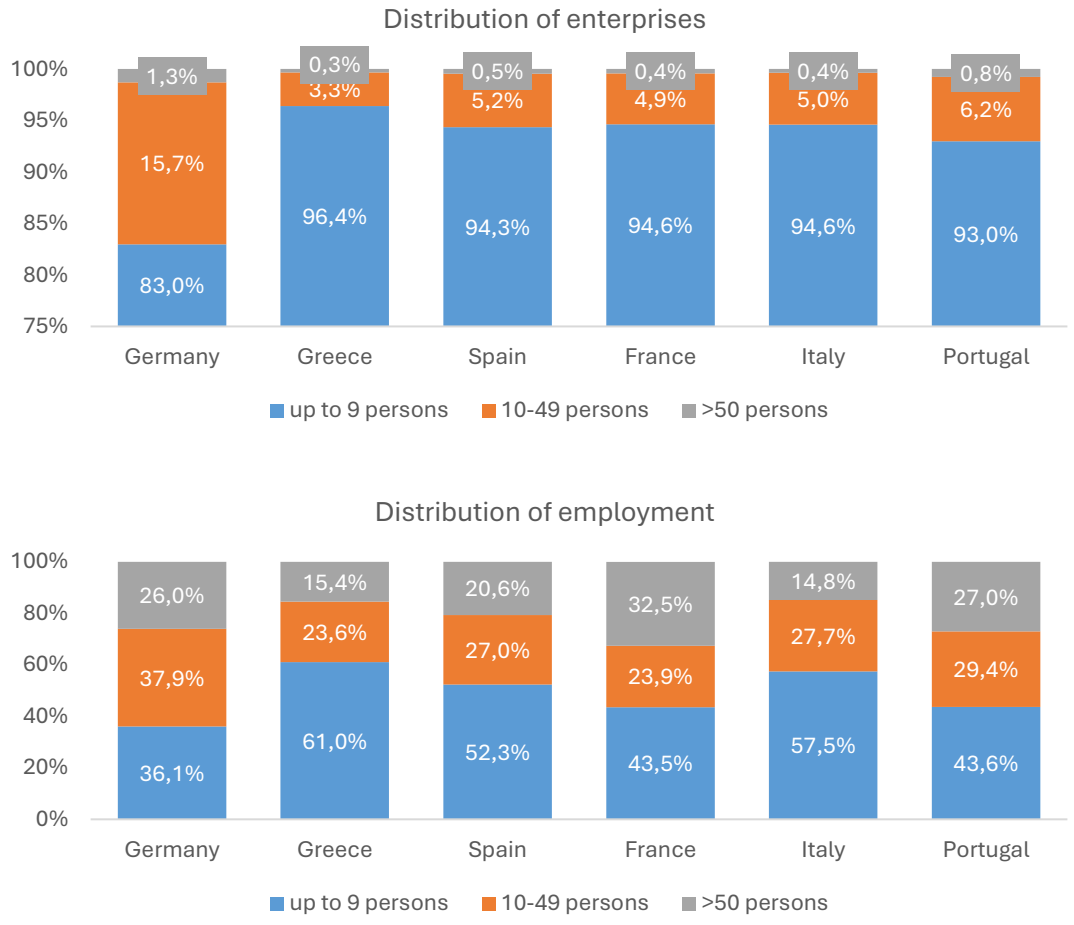
[4] This change is further broken down into an increase in the number of micro enterprises by 10,852, enterprises employing 10-49 persons by 1,134 and enterprises employing 50-249 persons by 104 enterprises.

Figure 2.4: Distribution of the number of enterprises and production value in Construction based on employment, 2023



Source: Eurostat, IOBE analysis.

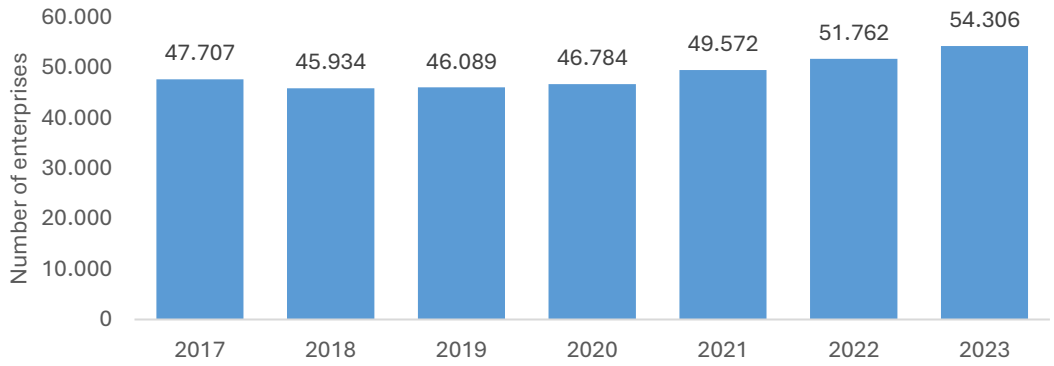
Figure 2.5: Distribution of the number of enterprises based on firm size by employment in various countries, 2023



Source: Eurostat, IOBE analysis.

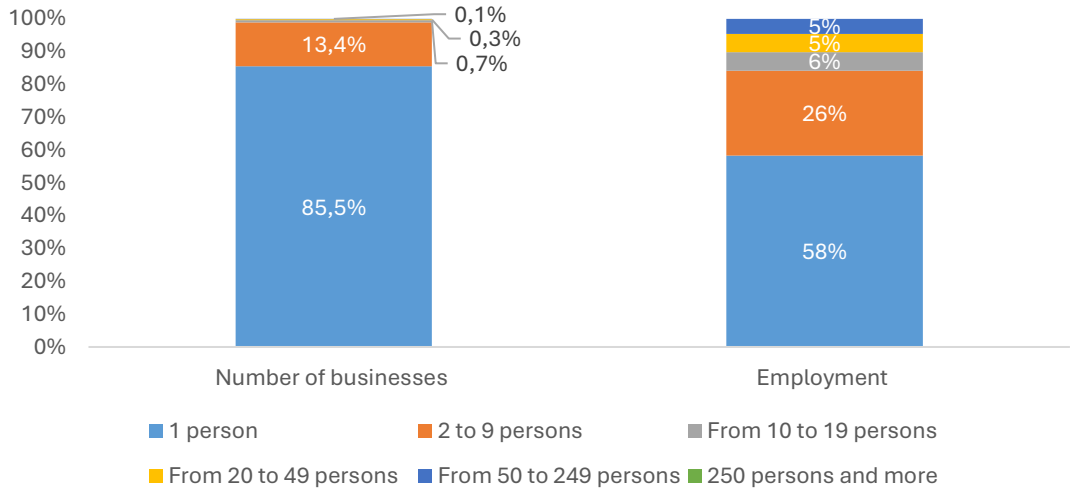
In the Architectural and Engineering activities 54,306 enterprises were operating in 2023, an increase of about 2,500 compared to 2022 (+4.9%) and 6,600 compared to 2017 (+13.8%) (Figure 2.6). 85% of the businesses are self-employed, which account for 58% of total employment in the sector. Micro enterprises (employing 2 to 9 people) account for 13% of the total number of enterprises and account for 26% of employment in the Architectural and Engineering activities, while 554 enterprises employing more than 10 people account for the remaining 16% of employment in the sector.

Figure 2.6: Number of enterprises in the Architectural and Engineering activities



Source: Eurostat, IOBE analysis.

Figure 2.7: Distribution of the number of enterprises and employment in Architectural and Engineering activities based on firm size by employment, 2023



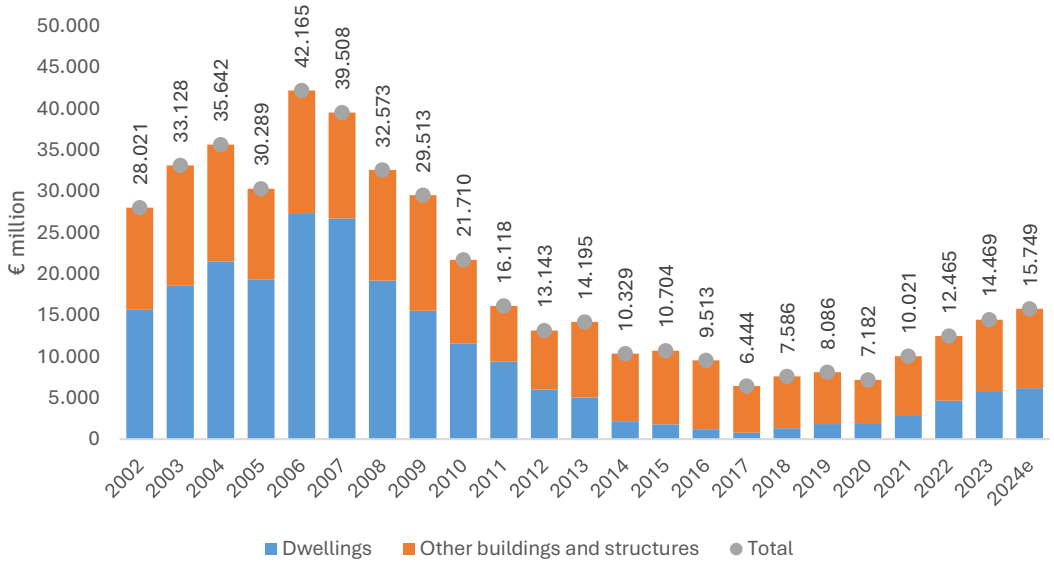
Source: Eurostat, IOBE analysis.

2.3 Production value, operating surplus, value added and investment

After a long period of contraction in construction activity, Construction has been growing steadily in recent years. The total output value of the Construction sector (at current prices) is estimated to reach €15.7 billion in 2024, having more than doubled (+119%) after 2020 (Figure 2.8). It is estimated that around 60% of the sector's output value is related to the construction of buildings and works other than dwellings (EUR 9.59 billion in 2024) and the remaining 40% to residential construction (EUR 6.16 billion in 2024).

Despite the positive development, the level of the output value of Construction is still far from the historical high recorded in 2006.

Figure 2.8: Production value of the Construction sector

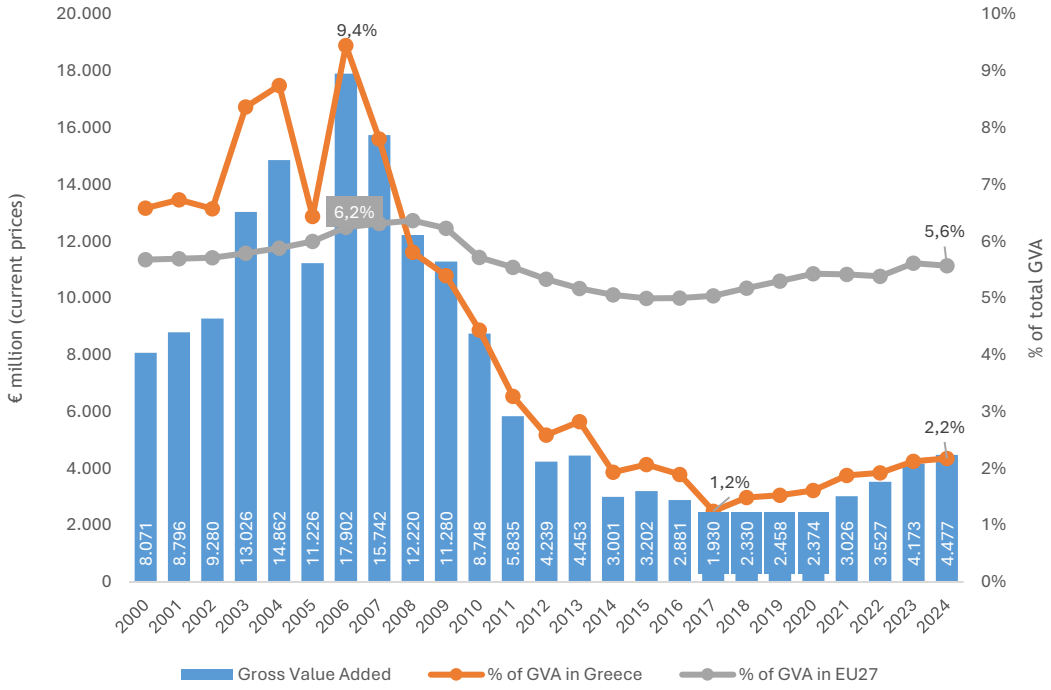


Source: Eurostat, IOBE analysis. Since 2017, there has been a discontinuity in the chronological order compared to previous years. e: Estimation.

The gross value added (GVA)[5] of the Construction sector was €4.5 billion in 2024, compared to €17.9 billion in 2006, when it recorded its highest point in 20 years (Figure 2.9). As a result, the contribution of Construction to the total gross value added of the Greek economy stands at 2.2% in 2024 (EU-27: 5.6%) from 9.4% in 2006 (EU-27: 6.2%). It is worth noting that the strengthening of construction activity after 2017 has led to a gradual increase in the GVA of Construction and an increase in its share in the total GVA of the Greek economy by one (1) percentage point.

[5] Gross value added (in factor prices) is the gross income from the operating activities of enterprises adjusted for subsidies and indirect taxes. It is calculated by adding turnover, other operating income and the change in inventories and subtracting purchases of goods and services and other taxes on products and production. Alternatively, it is calculated as the sum of gross operating surplus and labor costs.

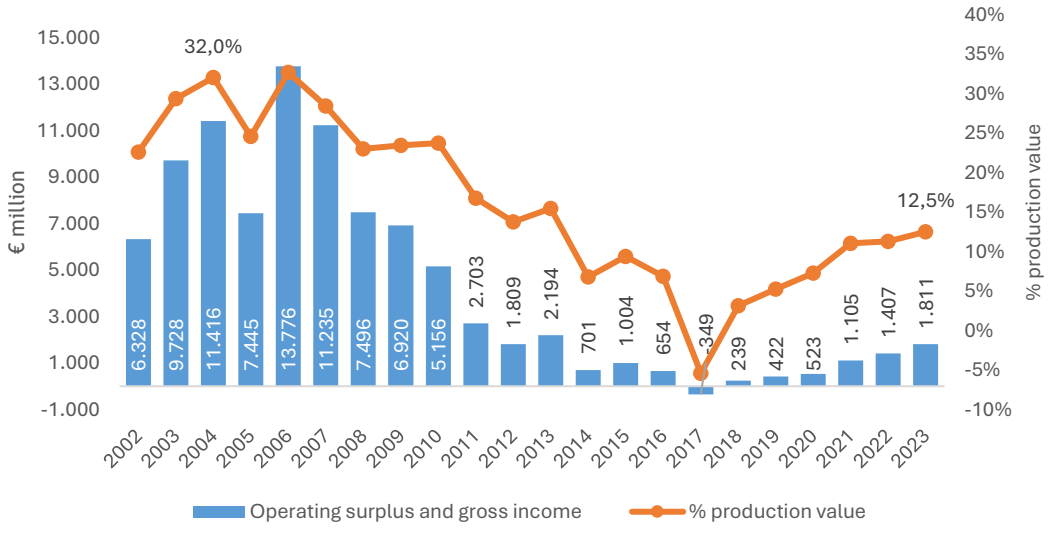
Figure 2.9: Gross Value Added of the Construction sector



Source: Eurostat, IOBE analysis.

The operating surplus and gross income of Construction has been at a historically low level in previous years, even reaching a negative value in 2017. Since then, the profitability of the sector has shown a systematic recovery trend, but remains lower compared to the period before 2010. In 2023, it amounted to EUR 1.8 billion or 12.5% of the total production value of Construction. However, this figure is still significantly below the values recorded in the 2000s (average 25%) (Figure 2.10).

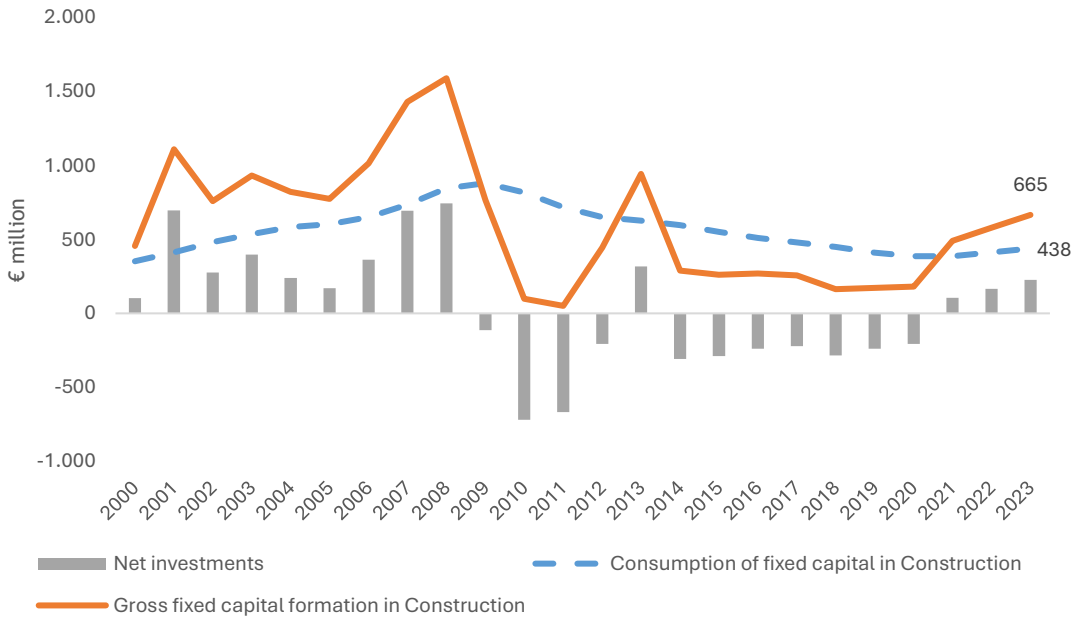
Figure 2.10: Operating surplus and gross income of the Construction sector



Source: Eurostat, IOBE analysis. Since 2017, there has been a discontinuity in the chronological order compared to previous years.

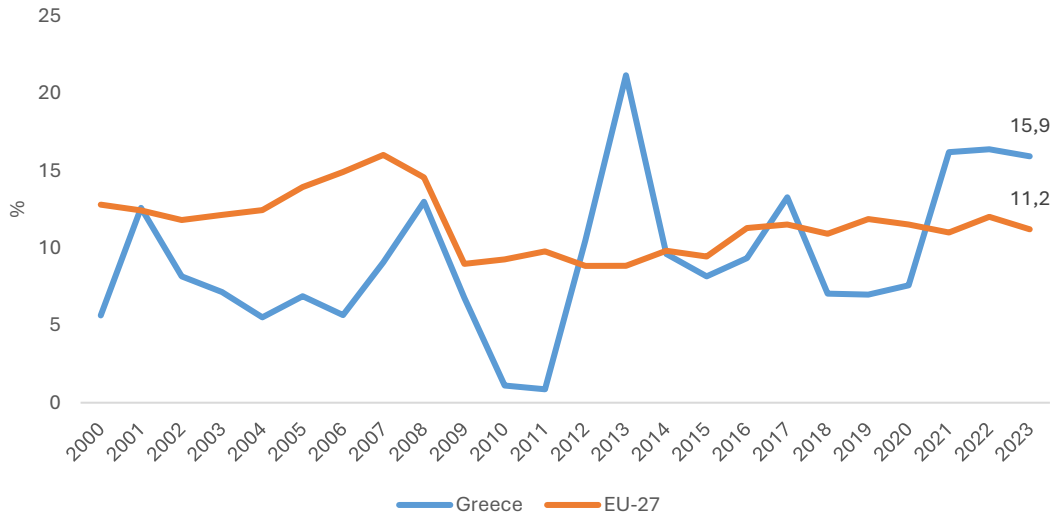
The decline in overall activity and profitability in Construction also affected the level of investment in fixed capital (machinery, other equipment, etc.) in the sector. From 2009 to 2020 the fixed capital investment of construction companies did not cover the consumption of capital (depreciation), indicating the disinvestment and deterioration of the productive potential of the sector during the economic crisis (Figure 2.11). From 2021 onwards, however, fixed capital investment covers capital consumption. It is also worth noting that the share of investment (gross fixed capital formation) in the gross value added of Construction from 2021 onwards is higher in Greece compared to the EU-27 average (15.9% compared to 11.2% respectively in 2023) (Figure 2.12). Consequently, the improvement in profitability and the rise in construction activity have led to an increase in modernisation investments in the sector. The sector's net investment has returned to positive territory, boosting its productive capacity.

Figure 2.11: Investments in fixed capital in Construction sector



Source: Eurostat, IOBE analysis.

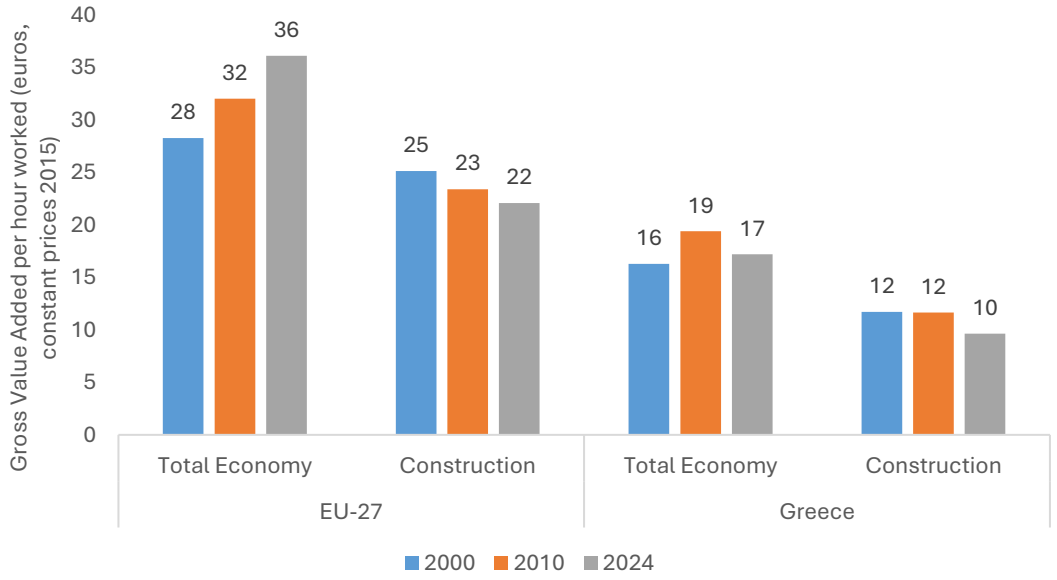
Figure 2.12: Gross fixed capital formation over GVA in Construction sector



Source: Eurostat, IOBE analysis.

The "investment gap" is one of the factors leading to low labor productivity in the Construction sector (Figure 2.13). In particular, labor productivity in Construction in Greece (in terms of GVA per hour worked) shows a downward trend over the period 2010-2024 and lags significantly behind both the average labor productivity of the Greek economy as a whole (44% lower) and the average labor productivity in Construction in the EU-27 (56% lower). It is worth noting that declining labor productivity in Construction is also observed in the EU-27, in contrast to labor productivity in the European economy as a whole, which is improving. This development suggests the existence of specific structural factors (fragmentation, low rate of adoption of new technologies, etc.) that affect labor productivity in the Construction sector.

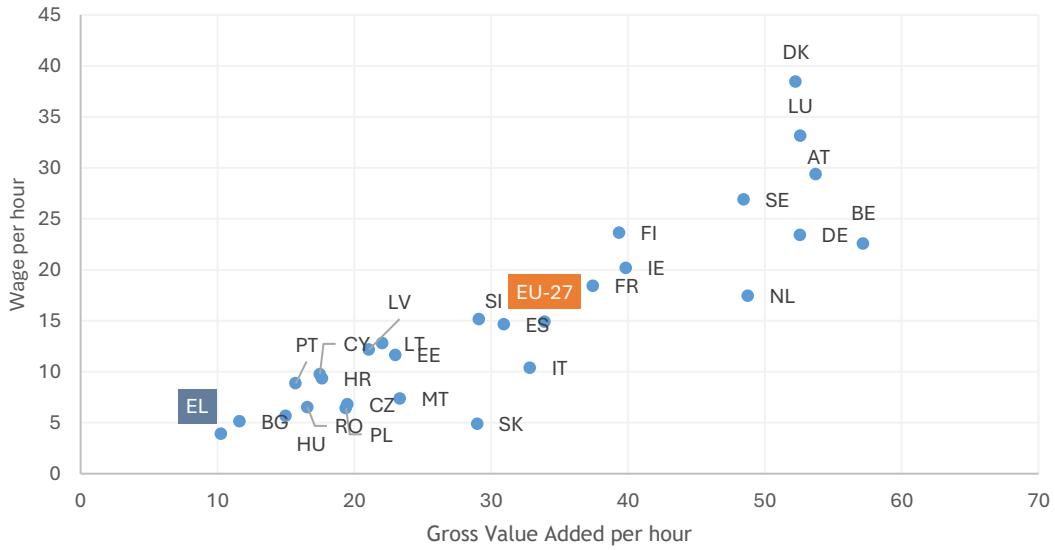
Figure 2.13: Labor productivity in Construction sector in Greece and the EU-27



Source: Eurostat, IOBE analysis.

Moreover, labor productivity in Construction in Greece is at a low level compared to the other EU Member States, which also has a significant impact on labor remuneration levels, which follow the level of productivity quite closely (Figure 2.14).

Figure 2.14: Productivity and wages in Construction sector, 2024

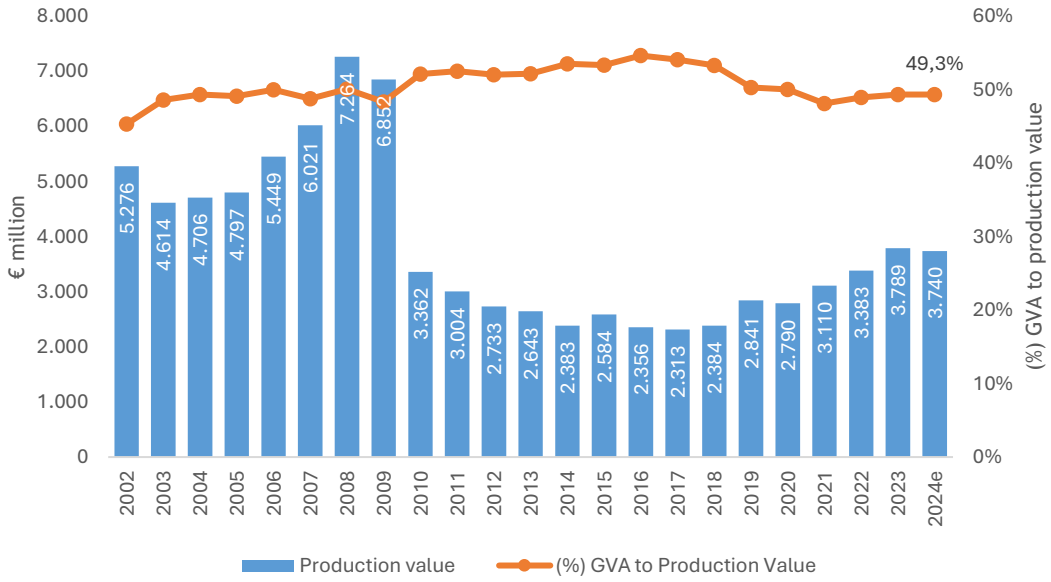


Source: Eurostat.

The economic crisis also had a significant impact on the activities of Architects and Engineers[6] , with the industry's output value falling by around half in the period 2008-2018 (Figure 2.15). However, since 2019 the output value has strengthened significantly and is estimated (at current prices) to reach €3.7 billion in 2024. About 50% of the production value is the value added of the Architecture and Engineering sector, which amounted to 1.8 billion euros in 2024, representing 0.8% of the country's GDP.

[6] Technical inspection and analysis activities are also included and are not entirely related to the Construction industry.

Figure 2.15: Production value of Architectural and Engineering activities



Source: Eurostat, IOBE analysis.

2.4 Employment

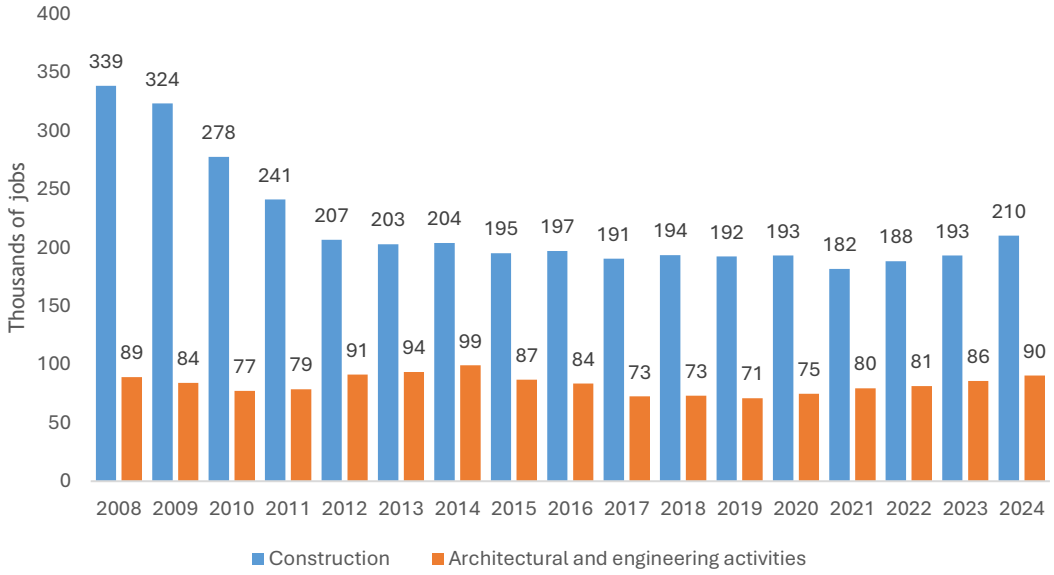
Construction employment reached 210 000 workers in 2024, up 8.8% from 2023 (+17 000 workers)[7] , covering part of the sector's increased labor needs (Figure 2.16). In the Architectural and Engineering activities, employment reached 90 00 people in 2024, showing a significant increase from 2020 (+21%).

According to the Labor Force Survey[8] of the Hellenic Statistical Office, the majority of workers in Construction are employed in specialised construction activities (106 00 people in 2024). Building construction employed 70 00 people in 2024, while civil engineering projects, which mainly concern infrastructure investments, employ less. In the first quarter of 2025, ELSTAT's Labor Force Survey estimates employment in Construction at 195.4 thousand people, representing a 5.2% increase over the average employment in 2024.

[7] It should be noted that the industry includes 46 occupational categories based on the 3-digit STOP (Statistical Classification of Occupations) classification, which incorporates hundreds of individual occupations.

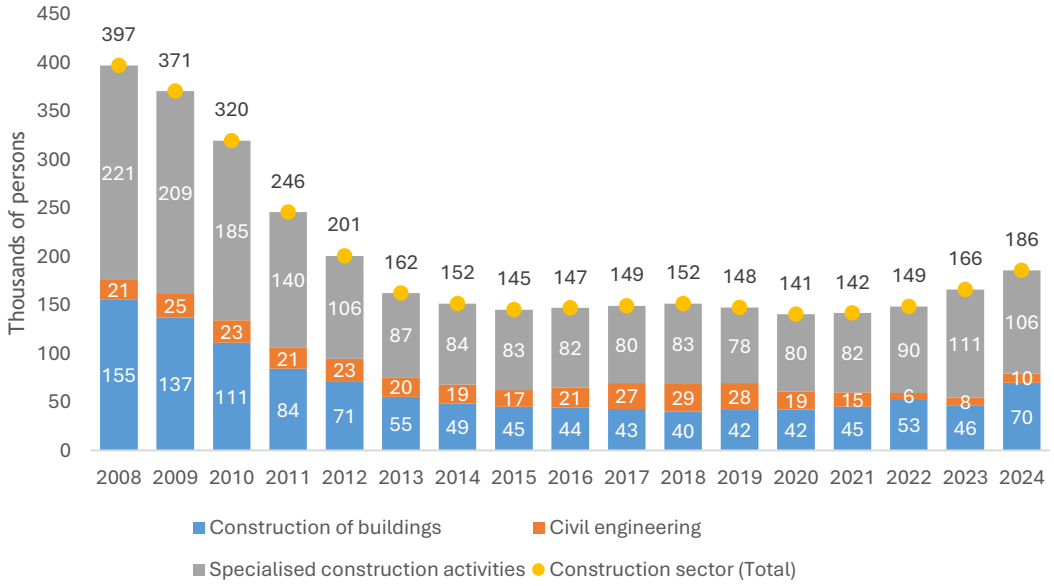
[8] Employment estimates in the National Accounts differ from the results extracted from the Labor Force Survey (LFS) due to geographical and other differences (population coverage, age thresholds). The EAA covers only resident households and therefore excludes cross-border workers, who are included in the domestic concept used in the National Accounts.

Figure 2.16: Employment in the Construction sector and Architects and Engineers activities



Source: Eurostat, National Accounts.

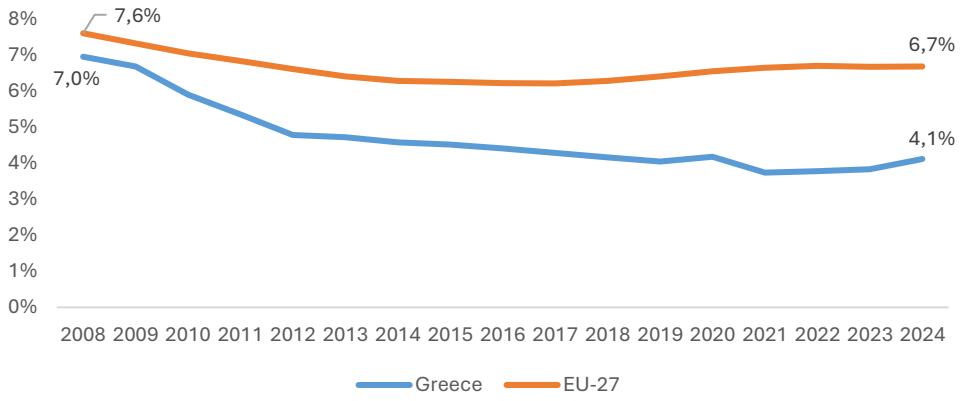
Figure 2.17: Employment in Construction by sub-sector



Source: Eurostat, IOBE analysis

The share of employment in the Construction sector of total employment in the Greek economy was boosted to 4.1% in 2024 from 3.8% in 2023 (Figure 2.18). In 2008, the contribution of the Construction sector to total employment in Greece was close to the EU-27 average, while in 2024 it fell short by 2.6 percentage points, demonstrating the particularly negative impact of the economic crisis on the Construction sector.

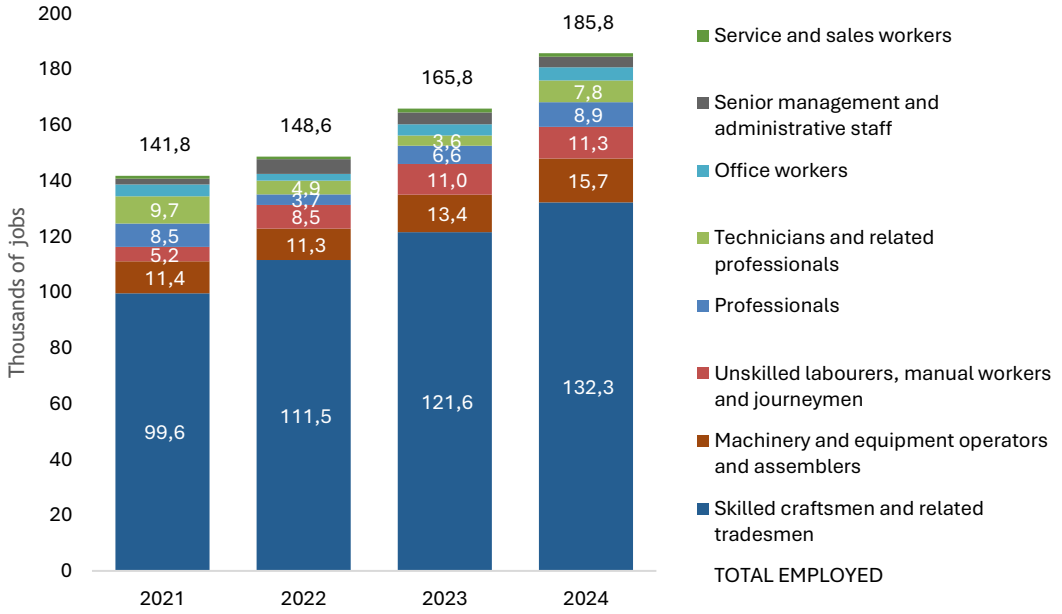
Figure 2.18: Employment in Construction sector (% of total employment)



Source: Eurostat, IOBE analysis.

'Skilled craftsmen and related professionals' is the most numerous occupational category in Construction (Figure 2.19). This category would employ 132 00 people in 2024, i.e. 71.2% of total employment in Construction according to the ELSTAT Labor Force Survey. The second occupational category in terms of the number of workers is *"Machine Operators",* which in 2024 employed around 16 thousand people (8.4% of the total), followed by "Unskilled *Workers" (11.3 thousand* workers or 6.1% of the total). The remaining occupational categories included fewer people. For example, the categories *'Clerical workers'* and 'Senior *managers and administrators'* employed 8.6 00 persons or 4.6% of the total number of workers in the sector in 2024.

Figure 2.19: Distribution of occupations of those employed in Construction

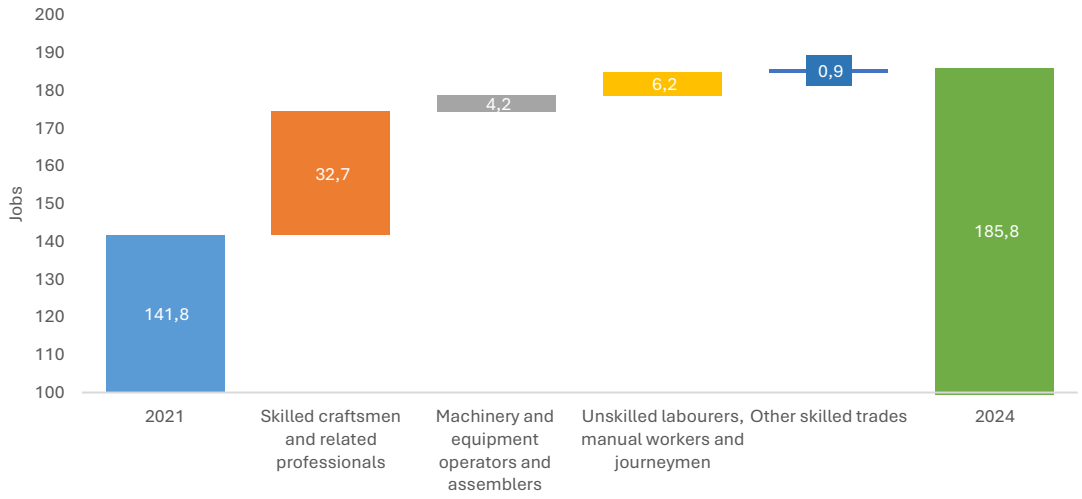


Source: ELSTAT.

Between 2021 and 2024, employment in Construction increased by 44 thousand persons (+31%), from 142 thousand persons to 186 thousand persons. This increase mainly includes skilled tradesmen (+32.7 thousand persons), unskilled workers (+6.2 thousand

persons) and machine operators (4.2 thousand persons) (Figure 2.20).In the remaining occupations there was a small overall increase (0.9 00 persons).

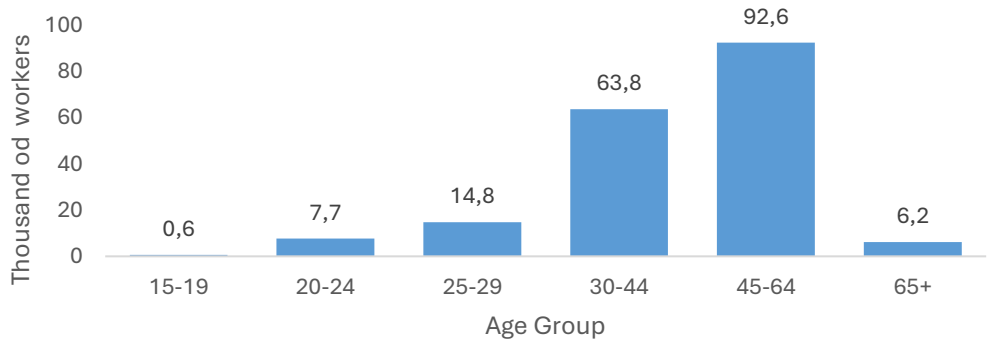
Figure 2.20: Analysis of job changes in Construction between 2021 and 2024, by main occupational categories



Source: ELSTAT, IOBE analysis.

According to ELSTAT's Labor Force Survey, only 5% of workers in Construction were women in 2024, compared to 43% in the economy as a whole. About half of the workers were in the 45-64 age group, while 35% were in the 30-44 age group (Figure 2.21). Further, 3.2% of workers were part-time, while about 10% of workers report availability to work longer hours.

Figure 2.21: Age distribution of construction workers, 2024

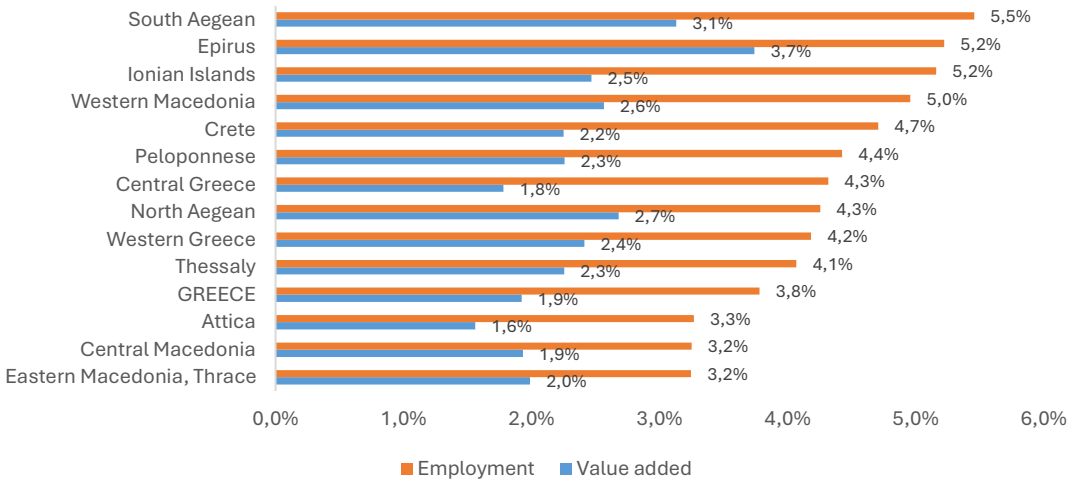


Source: ELSTAT.

Finally, it is worth noting that the participation of Construction in economic activity and employment is measurable in most regions of the country (Figure 2.22). In particular, in terms of employment in 2022 it ranged from 3.2% (Eastern Macedonia & Thrace) to 5.5% (South Aegean), with the average in the whole country being 3.8%. In terms of value added the ranking varies, which is indicative of differences in economic structure, type of construction activities and labor productivity between regions. Attica and Central

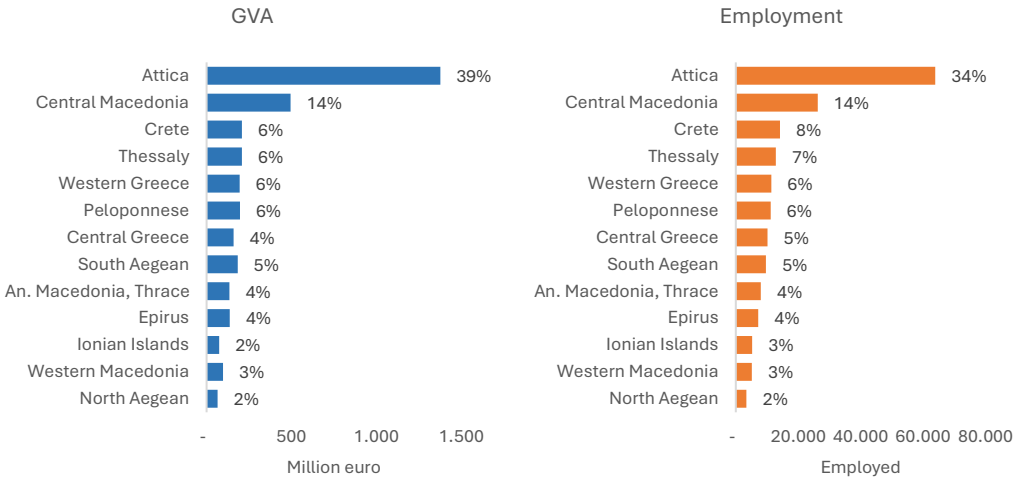
Macedonia concentrate the largest share in GVA and employment in Construction in 2022, followed by Crete and Thessaly (Figure 2.23).

Figure 2.22: Share of Construction in Gross Value Added (GVA) and employment by region, 2022



Source: ELSTAT, IOBE analysis.

Figure 2.23: Distribution of GVA and employment in Construction by region, 2022

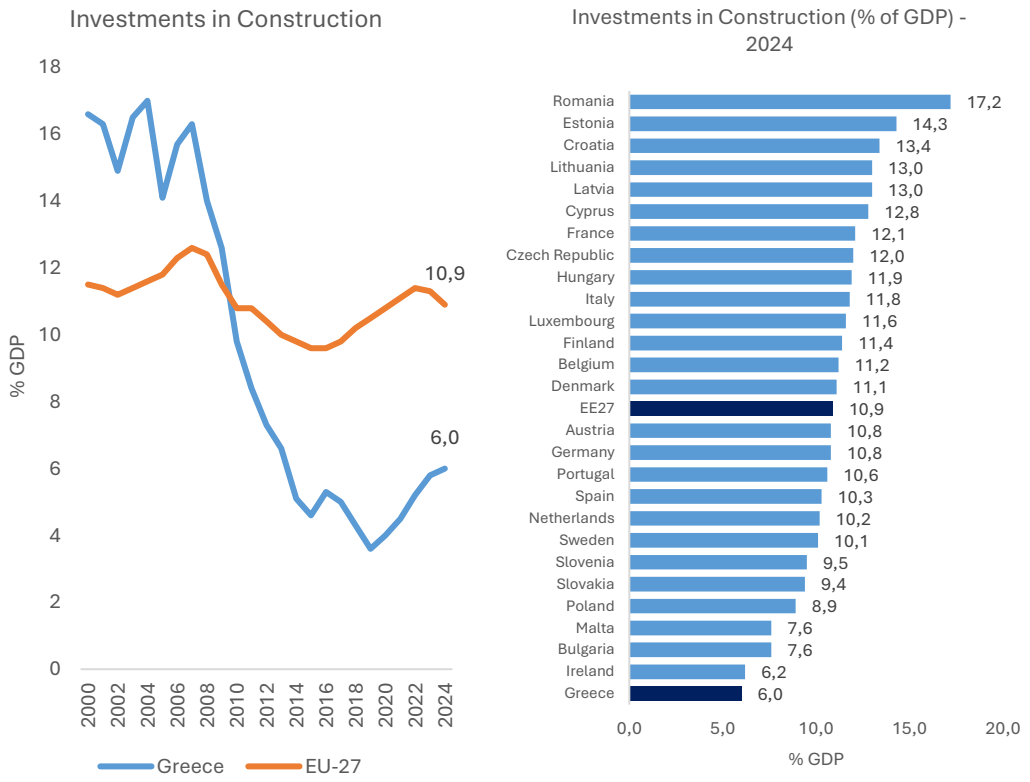


Source: ELSTAT, IOBE analysis.

2.5 Investment in dwellings and other construction

The underinvestment in Greece - compared to the EU-27 average - is generalised, i.e. not only in infrastructure and buildings, but extends to all categories of investment, such as machinery and equipment. However, a strong impact on this difference has been the drastic reduction in investment in dwellings and other construction projects during the financial crisis (Figure 2.24). By way of illustration, investment in construction accounted for 6.0% of GDP in 2024, compared to 16.3% in 2007. The deviation for 2024 compared to the EU-27 average was 4.9 percentage points, as Greece recorded the lowest share of construction investment as a percentage of GDP among EU countries.

Figure 2.24: Investments in Construction in Greece and the EU-27 (% of GDP)



Source: Eurostat, IOBE analysis.

Investment in Construction can be divided into two categories: a) Investment in dwellings by individuals and b) Investment in other construction and buildings by individuals (e.g. warehouses, industrial buildings, commercial buildings, hotels, etc.) and infrastructure by government.

Box 2.1: Categories of investment in construction

1. Investment in dwellings

The category 'residential buildings' includes buildings used exclusively or predominantly as dwellings, including any associated structures, enclosed parking, and all permanent facilities normally placed in dwellings (e.g. warehouses). Also included are the costs of site clearance and preparation (e.g. earthworks). Examples include residential buildings, single-family and multi-family buildings and other residential buildings intended for non-transient accommodation. Unfinished dwellings are included if the end-user is considered to already own them, either because the construction is for his own account or because it is documented by the existence of a sale/purchase contract. The value of investment in dwellings is recorded net of the value of the land on which the dwellings are built.

2. Investment in other construction (Construction other than dwellings & other construction)

The category 'other buildings and structures' includes buildings and structures other than dwellings and land improvements. Unfinished buildings and structures are included if the end-user is considered to own them, either because the construction is for his own account or because it is documented by the existence of a sale/purchase contract. Buildings and structures purchased for military purposes are also included. The value of other buildings and structures is recorded net of the value of the land underneath them, which is included in the 'land' category if it is classified separately.

2A. Buildings other than dwellings (commercial and public buildings)

Buildings not used for dwellings, public monuments, warehouses and industrial buildings, commercial buildings, buildings for public recreation, hotels, restaurants, educational buildings, health buildings, etc.

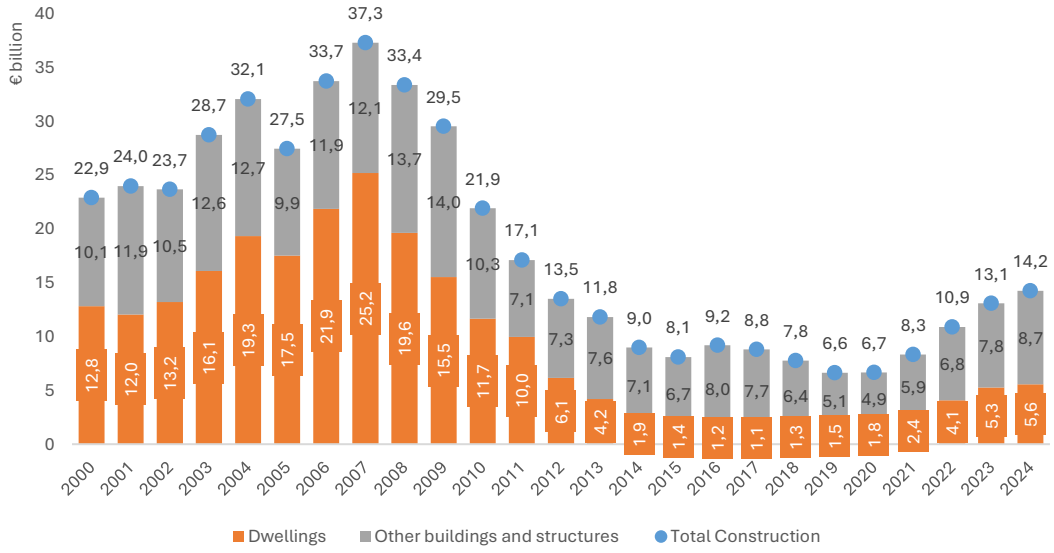
2B. Other construction (Infrastructure)

Non-residential construction, which includes the cost of roads, sewers and site clearing and preparation. Included are wells, tunnels and structures associated with the extraction of mineral and energy resources, as well as the construction of breakwaters, embankments and flood barriers designed to improve adjacent land. Examples include motorways, roads, railways and airport runways, bridges, elevated motorways, tunnels and subways; waterways and ports, dams and other hydraulic works; long-distance pipelines, communication lines and power lines; local pipelines and cables, ancillary works; structures for mining and industry; and structures for sport and recreation.

Source: European System Accounts 2010.

Total investment expenditure on construction projects - at current prices - increased by 8.8% in 2024 compared to 2023 to €14.2 billion. Investment in non-residential construction projects showed a strong increase (+11%) to EUR 8.7 billion in 2024. Investment in dwellings showed a milder increase (+5.7%), reaching EUR 5.6 billion in 2024 - but having tripled compared to its level in 2020 (Figure 2.25).

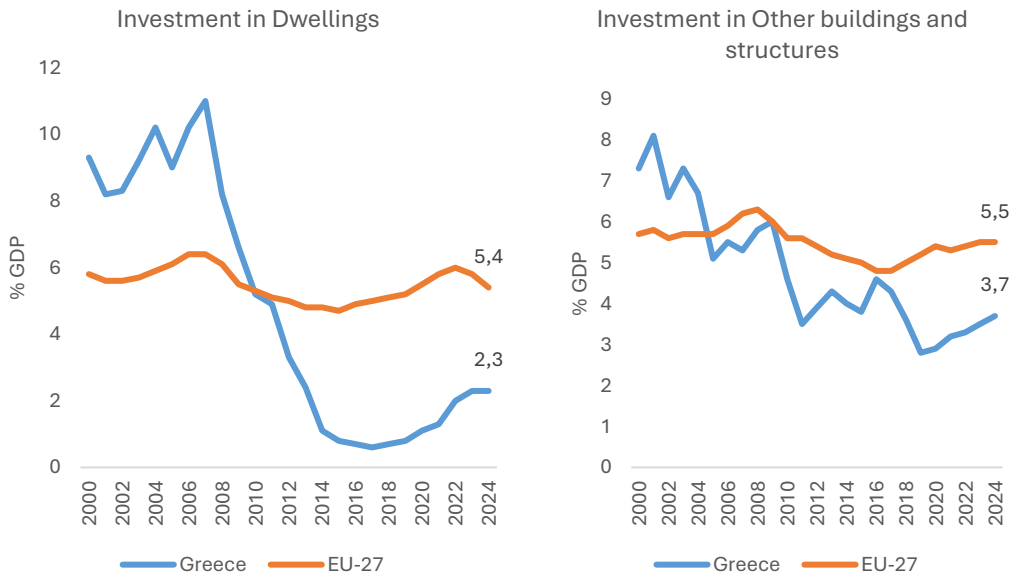
Figure 2.25 Investment expenditure for construction projects by category, 2000-2024



Source: Eurostat, National Accounts.

As a result of the above developments, investment in dwellings accounted for 2.3% of GDP in 2024 (EU27 average: 5.4%), compared to 11.0% in 2007. But investment in other construction (private and public) also lagged behind, as it stood at 3.7% of GDP in 2024 (EU27 average: 5.5%)(Figure 2.26).

Figure 2.26: Investments in dwellings and other buildings and structures in Greece and the EU27 (% of GDP)

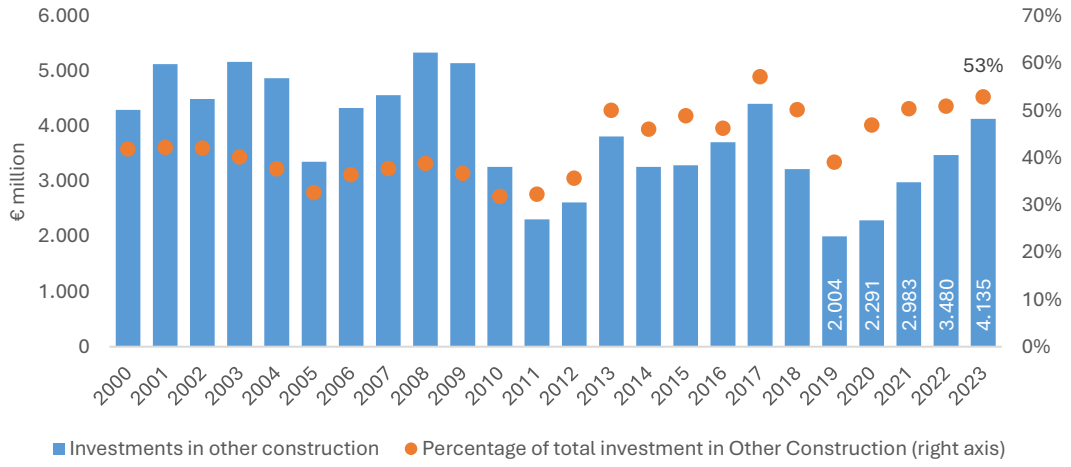


Source: Eurostat, IOBE analysis.

Based on the indicator of investment in dwellings as a percentage of GDP for 2024, Greece ranks second to last among the EU-27 Member States, while the same is true for investment in other construction (Figure 2.28). It should be noted that in other construction, the top positions are mainly occupied by the 'new' and relatively smaller EU Member States (such as Romania, Latvia, Estonia, Estonia, Lithuania, Croatia and Hungary), where there is a greater need for infrastructure investment. Conversely, developed countries such as Germany, France and Italy show a high ratio of dwellings investment to GDP, followed by Cyprus, which is in first place in 2024 with 8.6%.

Public investment in infrastructure and building projects constitutes a significant share of total investment in non-residential construction projects. In 2023 they amounted to EUR 4,135 million (at current prices), representing 53% of total investment in other construction (Figure 2.27). Since 2019, the size of these public investments has doubled, surpassing in 2022 the average level of the previous decade, and it is estimated that by 2026 it will increase further due to the implementation of the planned projects of the Public Investment Programme.

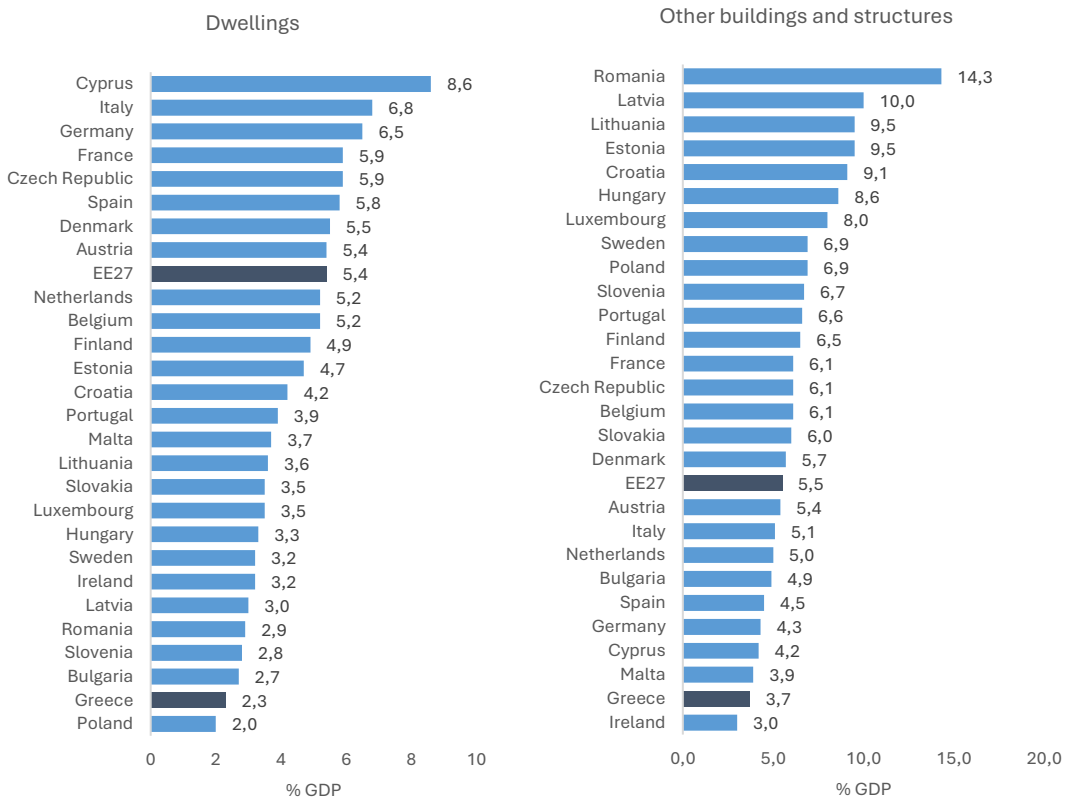
Figure 2.27: Public investment in construction projects other than dwellings



Source. Eurostat.

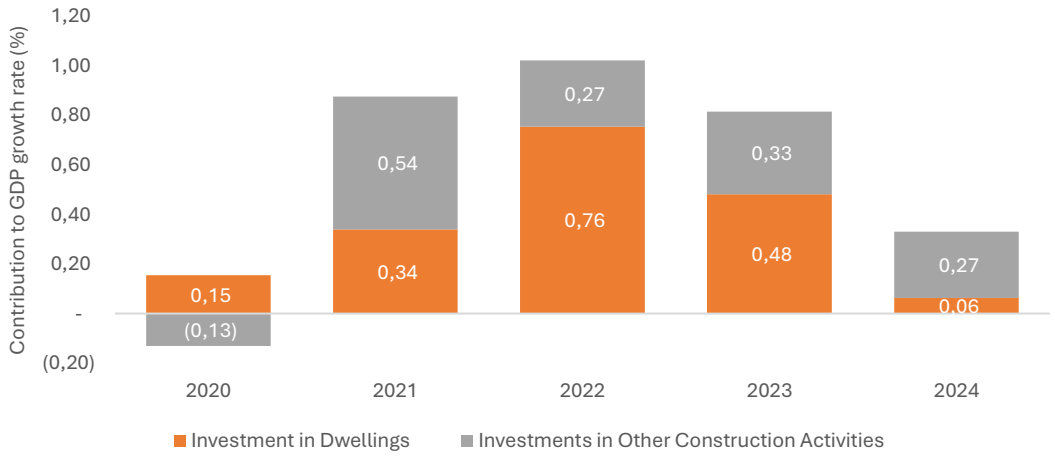
Investment in construction constitutes an important part of GDP and therefore influences the fluctuations of income generated by the Greek economy. The analysis of the impact of the GDP components on the growth rate of the Greek economy shows that construction investment has a supportive effect on GDP after 2020, boosting the growth rate of the Greek economy by about 0.6 percentage points per year on average (Figure 2.29).

Figure 2.28: Investments in dwellings and other buildings and structures by country (% of GDP), 2024



Source: Eurostat.

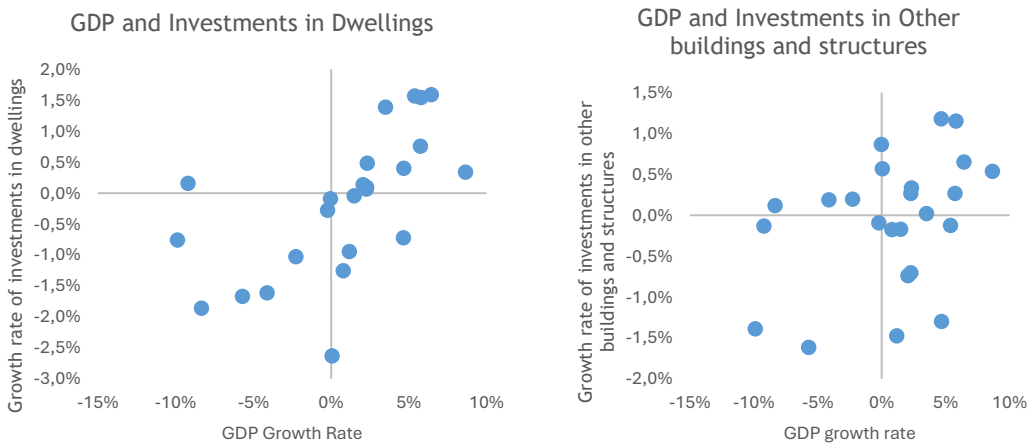
Figure 2.29: Analysis of the contribution of Investment in construction projects to GDP growth in Greece, 2020-2024



Source: Eurostat, IOBE analysis.

From the foregoing it can be argued that Construction Investment in Greece tends to contribute directly to economic growth. This finding is supported by the data presented in Figure 2.30, according to which higher growth rates of construction investment tend to be associated with higher growth rates of the Greek economy. This correlation is clearly stronger in the case of dwellings investment.

Figure 2.30: Investments in Construction and GDP growth rate

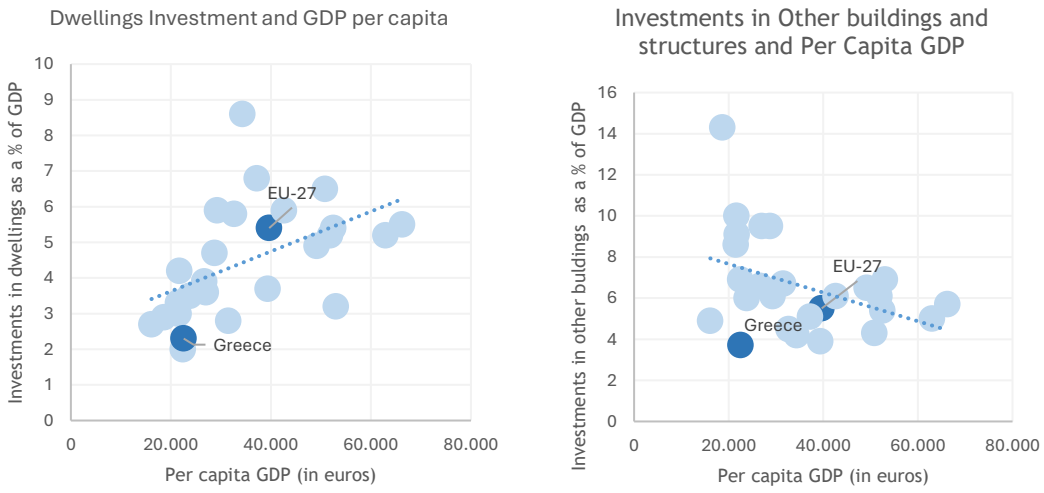


Source: Eurostat, IOBE analysis.

The participation of investment in Construction in the Greek economy is much lower compared to other EU Member States and compared to the expected one based on the country's GDP per capita (Figure 2.31).The difference is pronounced in both categories of investment (dwellings and other construction). The correlation between GDP per capita and investment in other construction appears negative among EU countries. This may be due to the better level of infrastructure in the more developed countries, while countries with lower GDP per capita are accelerating such investments as part of the convergence effort with more developed countries. On the other hand, investment in dwellings is

positively correlated with income - higher income and savings boost investment in dwellings.

Figure 2.31: Investments in Construction and GDP per capita in EU Member States, 2024



Source: Eurostat, IOBE analysis. Excluding Luxembourg and Ireland.

2.6 *Total contribution of Construction and Architectural and Engineering Services to the Greek economy*

The value added produced by a sector and the jobs it provides do not show its overall contribution to the economy, as their interactions with other sectors of economic activity are not taken into account. The aim of this section is to quantify the overall contribution of the Construction and Architectural and Engineering Services sectors to the GDP of the Greek economy, employment and government revenues, taking into account these interactions.

The estimation of the overall impact of the domestic construction and engineering activity on the economy is done using the input-output model, which takes into account the interdependencies of the sectors of an economy[9] . It is used to estimate the overall impact on an economy of an exogenous change in economic activity, such as the realisation of an investment, and to determine the overall contribution of an industry to the national economy.

2.6.1 Economic Impact of Construction and Architectural and Engineering Services 2024

The direct impact of the Construction sector in terms of GDP is estimated for 2024 at EUR 4.5 billion, while the indirect impact, i.e. the activity of domestic suppliers to the sector resulting as a result of meeting the demand for inputs to construction activity exceeded EUR 6.4 billion. The total contribution of the sector, which is calculated by including the induced effect (activity generated by the expenditure of income of workers in the

[9] The input-output model was developed in the mid-20th century by the economist Wassily Leontief, who was awarded the Nobel Prize in Economic Sciences in 1973 for its development and application to practical issues. More details on the estimation process are presented in the Appendix of the study.

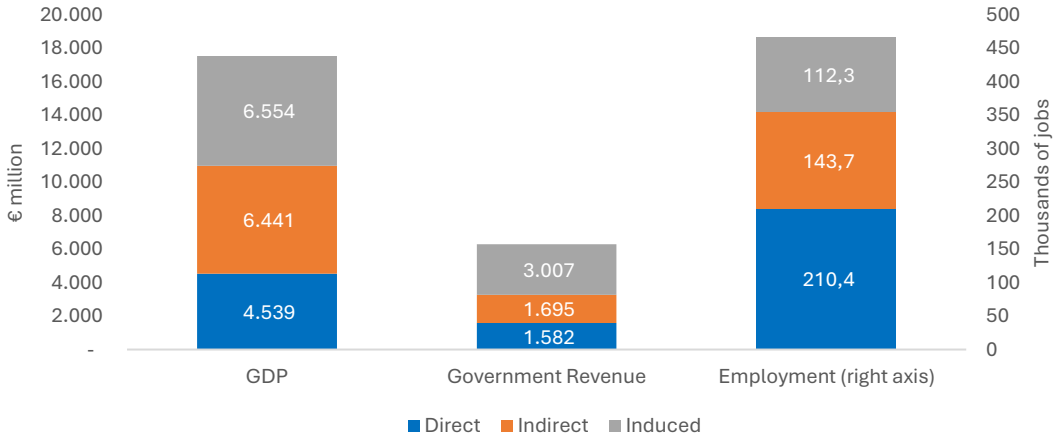
Construction value chain on the purchase of goods and services) in the previous effects, is estimated for 2024 at EUR 17.5 billion (7.4% of GDP at current prices).

The construction activity contributes significantly to government tax revenues and contributions to social security funds. In particular, government revenues from taxes and contributions directly resulting from construction activities are estimated at EUR 1,582 million, while if indirect and induced effects are included, revenues increase to EUR 6.3 billion.

In terms of employment, and taking into account multiplier effects, the total contribution of construction activity is estimated at 466 00 jobs in 2024. The ratio of total to direct employment impact means that for every job created in the Construction sector, a total of 2.2 jobs are created or supported across the economy.

It follows, therefore, that for every euro spent in the Construction sector, 1.1 euro is added to the country's GDP. Similarly, for every €1 million in value produced by Construction, 29 jobs are created in the economy.

Figure 2.32: Direct, indirect and induced impact of Construction on GDP, employment and government revenues, 2024



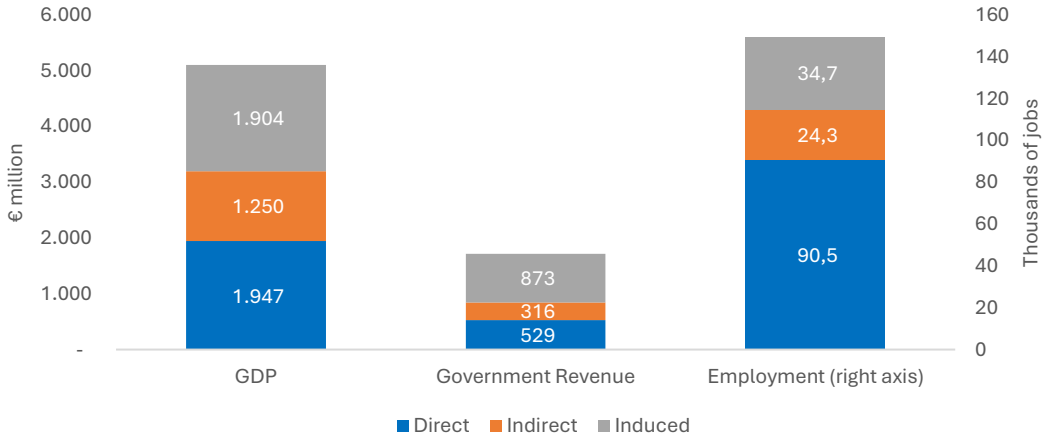
Source: IOBE analysis.

Similarly, the direct impact of the Architectural and Engineering services sector in terms of GDP is estimated for 2024 at EUR 1.9 billion, while the indirect impact, approached EUR 1.25 billion. The total contribution of the sector is estimated at 5.1 billion in 2024 (2.1% of GDP at current prices). The provision of architectural and engineering services contributes 529 million euros directly to the tax revenues of the state, while if the indirect and induced effects are included, the government revenues increase to 1,718 million euros.

In terms of employment, and taking into account the multiplier effects, the total contribution of the Architectural and Engineering services sector is estimated at 150 00 jobs in 2024. The ratio of total to direct employment impact means that for every job created in Architectural and Engineering activities, a total of 1.7 jobs are created or supported across the economy.

It follows, therefore, that for every euro spent on the provision of Architectural and Engineering services, 1.4 euro is added to the country's GDP. Similarly, for every €1 million worth of architectural and engineering services, 36 jobs are created in the economy.

Figure 2.33: Direct, indirect and induced impact of the Architectural and Construction services sector on GDP, employment and government revenues, 2024

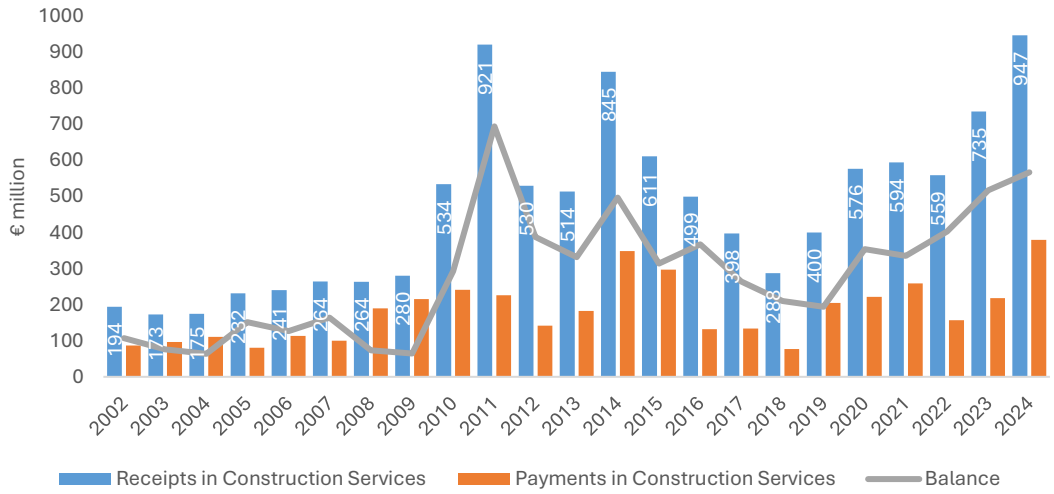


Source: IOBE analysis.

2.6.2 CONTRIBUTION OF THE CONSTRUCTION SECTOR TO THE EXTERNAL BALANCE

An additional aspect of the contribution of Construction to the Greek economy is that of openness, which, although for various reasons is not developed to the desired degree, has shown positive signs since the early 2010s. In particular, the contribution of Construction to the Current Account has been significantly enhanced since 2009, reaching or exceeding 900 million euros in 2011 and 2014 (Figure 2.34). In the following years and until 2018, receipts from construction services abroad declined, but since 2019 they have recovered and are at a high level, reaching EUR 947 million in 2024. Moreover, receipts consistently exceed payments for construction services, resulting in a positive balance over time.

Figure 2.34: Balance of Construction services



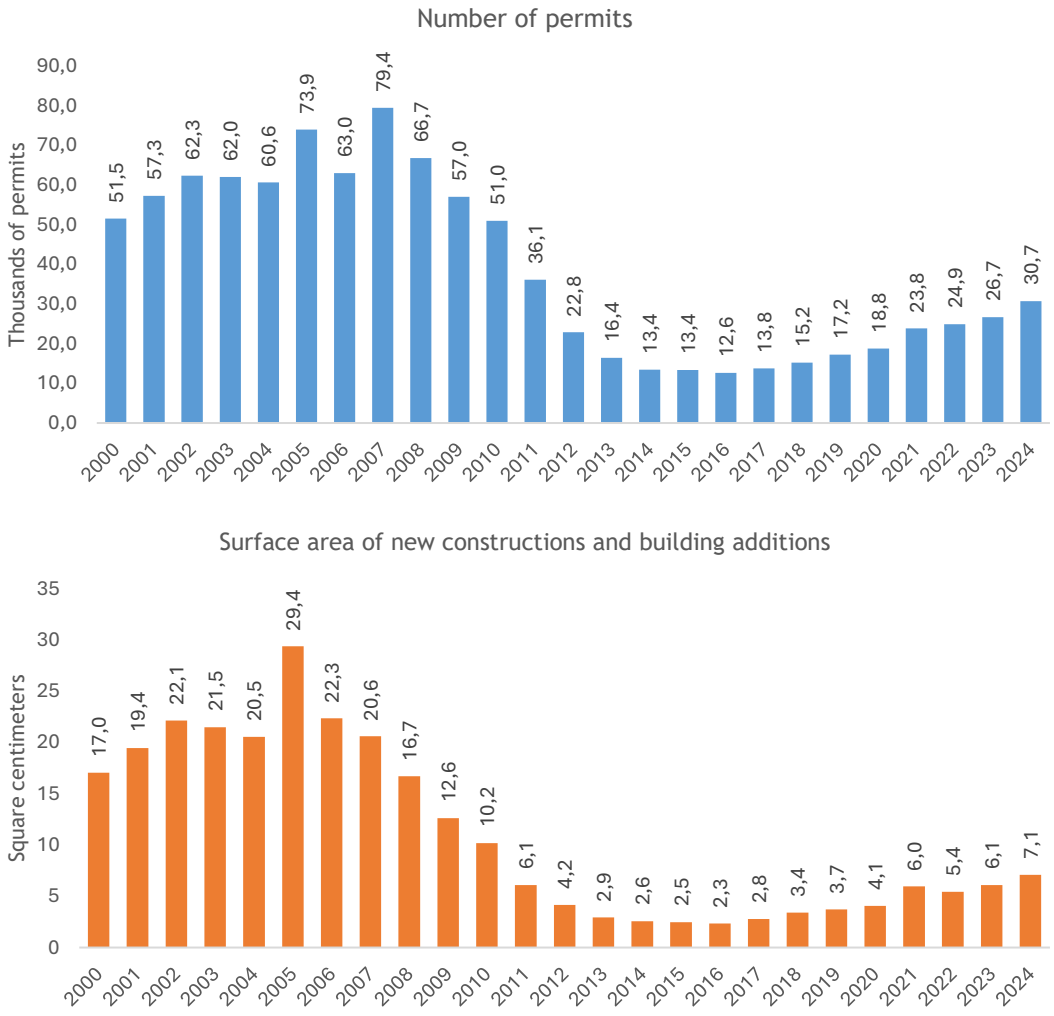
Source: Bank of Greece.

2.7 Private construction activity

After the decline in private construction activity during the 2010s, the number of new building permits has systematically recovered in recent years, after bottoming out in 2016 (12.6 00 permits for new buildings and additions, representing 2.3 million square metres). The number of permits in 2024 amounted to 30.7 00 permits, up 14.9% compared to 2023. At the same time, in terms of surface area, which is a more representative measure of the size of construction activity, new buildings and additions in 2024 amounted to 7.1 million square meters, an increase of 16.5% compared to 2023 (Figure 2.35). It is worth noting that the upward trend in the issuance of new building permits mainly concerns dwellings and accelerated after 2020, as a result of, inter alia, the suspension of VAT on new buildings and the reduction of ENFIA. The upward trend in the issuance of building permits was reversed in the first months of 2025 due to the uncertainty caused by the regulations of the new building regulation (N.O.K. - incentive system Law 4067/2012) that were annulled by the Council of State (CoE)[10] and the suspension of the issuance of building permits that made use of these incentives.

[10] By the decisions of the Plenary Session of the Council of State No. 146, 147, 148,149/2025.

Figure 2.35: Building activity in Greece, 2000-2024 (number of permits and surface area)



Source: ELSTAT.

2.7.1 Unconstitutionality of the incentives of the N.O.K. and their impact on construction activity

According to the Decisions of the Council of State, the system of the provisions of the Law (Law 4067/2012 Articles 10(1), 15(8), 19(2) and 25(1)), which provided for increases in the building factor and height as incentives for the construction of buildings, due to their urban character, cannot be implemented directly through the issuance of building permits issued pursuant to the Law, but it is the responsibility of the legislator to include them in local urban planning.

In particular, the non-inclusion in the building factor of lofts and building up to 35 sqm in the roof, as well as the assimilation of the swimming pool with a planted surface, was deemed unconstitutional. The Court held that the effects of unconstitutionality should

not affect building permits, the implementation of which (construction works) has demonstrably started up to 11.12.2024.[11]

Provisions introduced in Law 5197/2025 on the subject of adapting the planning incentives of the New Building Code to the recent decisions of the Plenary Session of the Council of State provide for the following in summary:

- The incentives and increments provided for in the New Building Code may be applied if they are incorporated into Local and Special Urban Plans, through the definition of incentive zones.
- The incentives and increments in the N.O.C. shall be maintained for cases where construction work (e.g. excavation) had commenced up to 11th of December 2024, without revision or financial burden.
- Building permits issued using the incentives and surcharges in Articles 66 and 71, up to and including 11th of December 2024, and construction work has not commenced by that date, are only implemented if they are revised to remove those incentives.
- An environmental equivalent is established to compensate for the use of incentives and increments that (a) are annulled by a court decision or challenged by a pending petition for annulment and where construction activities have commenced, on or before 11th of December 2024, and (b) have been issued on or before 11th of December 2024 and for which a request for inclusion in a programme financed by the Recovery and Resilience Facility or the Regional Development Corporation Agreement has been submitted on or before the same date, subject to approval of the request. Permits included in specific spatial development plans are exempt from the environmental equivalence because they have been preceded by specific scientific documentation. The same applies to listed buildings and monuments.
- The environmental equivalent includes. These measures may concern the creation of green areas and public spaces, the redevelopment of areas of intensive construction, urban infrastructure or upgrades (pedestrianisation, lighting, urban furniture, etc.).), the demolition of unauthorised or dangerous (dilapidated) buildings, the financing of the acquisition of listed buildings and monuments by the municipality concerned, and the restoration of publicly listed buildings and monuments, as well as environmental actions such as the cleaning and delimitation of streams, and settlement works.

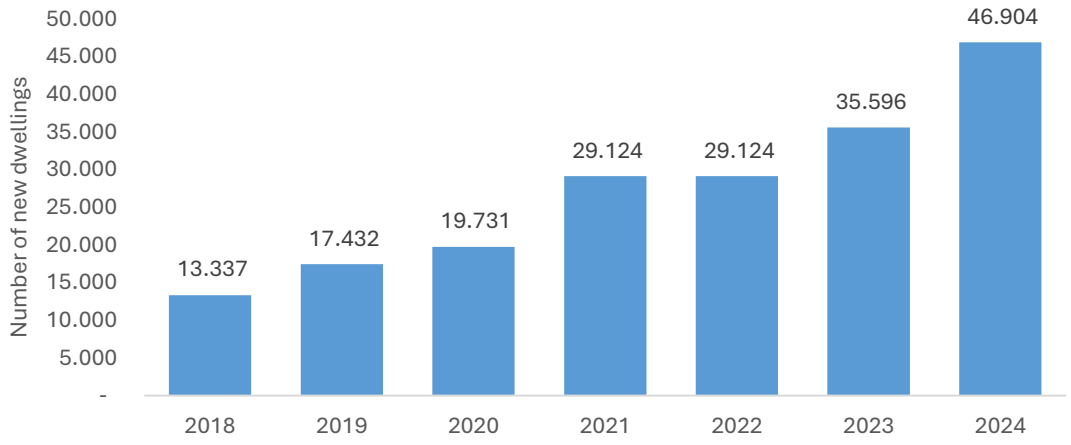
The decisions of the CoE and the regulations adapting the legislation will have an impact on the construction activity (e.g. costs of changing the economic terms of contracts and

[11] The commencement of implementation of building permits means the excavation works for the construction of the building, the time of realization of which must be proved in any appropriate way, such as, inter alia, a) by notification, in any way, of the commencement of excavation works to any administrative authority, b) by electronic submission of the Analytical Periodic Declaration (AIPD) by the employer to the database of the National Tax Insurance Fund, and so on, provided that the notification or submission of the above information is made by 11(h)December 2024.

possible damages to contractors, possible postponement of construction of buildings, assumption of costs of design revision, costs of environmental equivalent).

From 2018 to 2024, building permits were issued, representing a total of 191 00 dwellings (Figure 2.36). The trend in the issuance of building permits for dwellings has been strongly upward, contributing to a strengthening of the supply of new dwellings. In 2024, the number of new dwellings according to issued building permits amounted to 46.9 thousand, an increase of 32% over the previous year. On the assumption that these permits represent construction activity completed and recorded in the year following their issuance, this development suggests that in 2025 a boost in construction activity is likely, but the magnitude of this will depend on the number of permits affected by the new legislation (i.e. permits that had not progressed to commencement of work and are due for review).

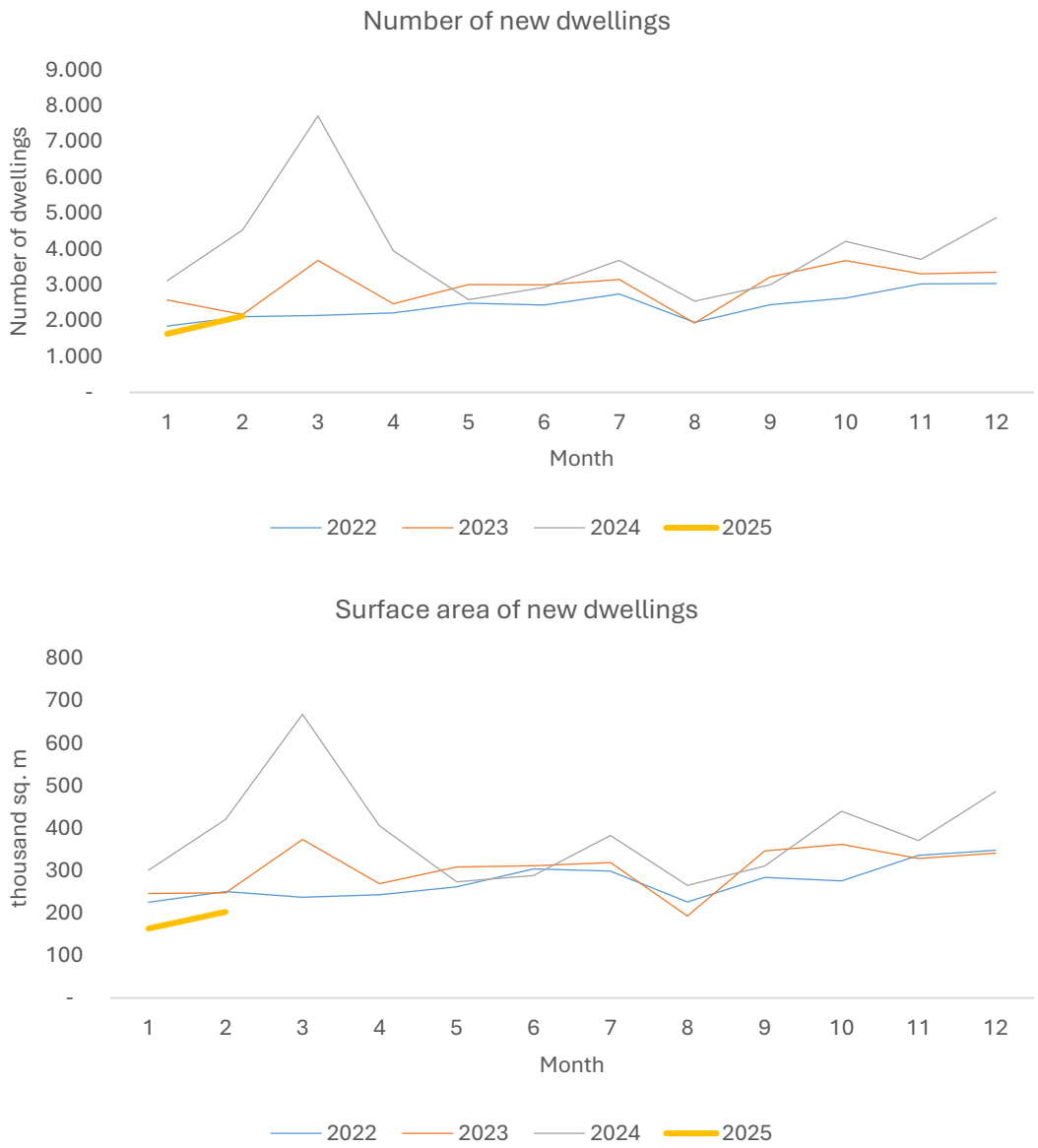
Figure 2.36: Number of new dwellings based on issued building permits



Source: ELSTAT.

In the first two months in 2025, for which data are available, there was a sharp drop in building permits for new dwellings compared to the same period of the previous year, by -51% in number and -49% in area of new dwellings (Figure 2.37).The uncertainty caused by the CoE decision and the expected adjustment of the legislation, combined with the suspension of the issuance of permits that included the incentives of the N.O.C., led to this significant decrease, which will affect the construction activity as recorded mainly in the year 2026.

Figure 2.37: Number and area of new dwellings per month, based on building permits issued

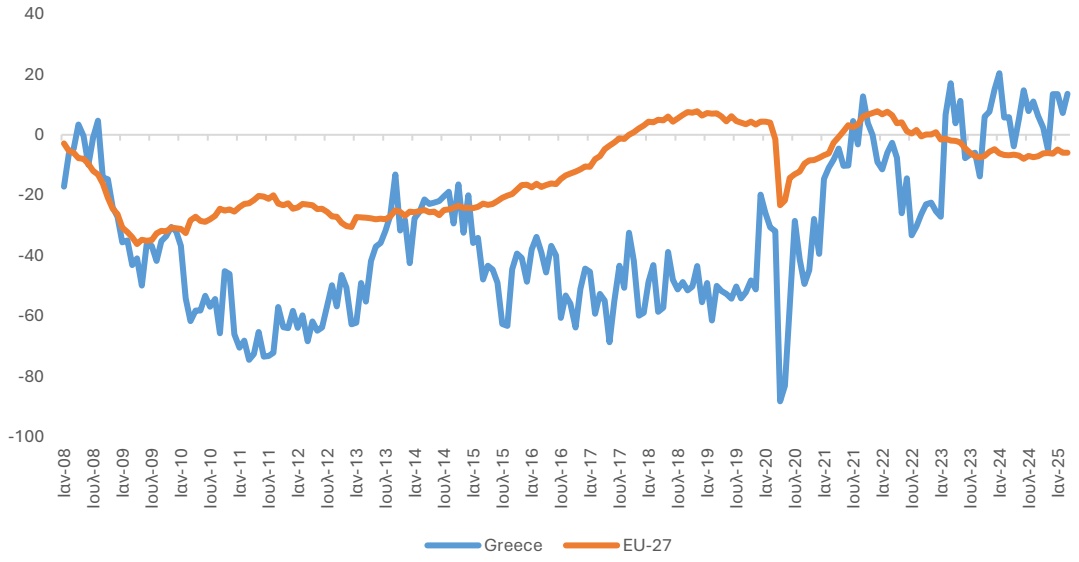


Source: ELSTAT.

2.8 Business expectations in Construction

Business expectations in Construction in Greece were for a long period negative (unfavourable expectations for the development of activity in the sector prevailed) and at a distance from the EU-27 average. The improvement in expectations since the end of 2019 was interrupted with the onset of the COVID-19 pandemic, when the Construction sector experienced a sharp decline in expectations in April 2020 (Figure 2.38). The imminent activation of the Recovery and Resilience Facility resources pushed industry expectations into positive territory in April 2021 for the first time since late 2008 and brought them in line with average expectations in Construction in the EU-27. During the intensifying energy crisis in 2022, Construction expectations fell significantly, but returned to positive territory in 2023 and 2024 and even at a higher level than in the EU-27.

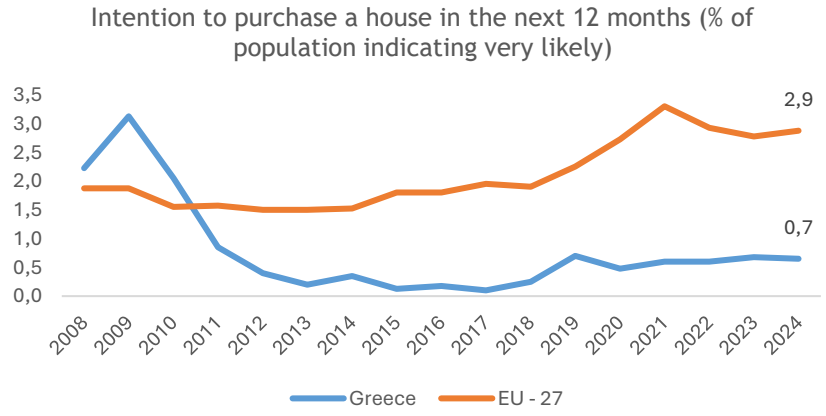
Figure 2.38: Business expectations in the Construction sector, Jan. 2008; Feb. 2025



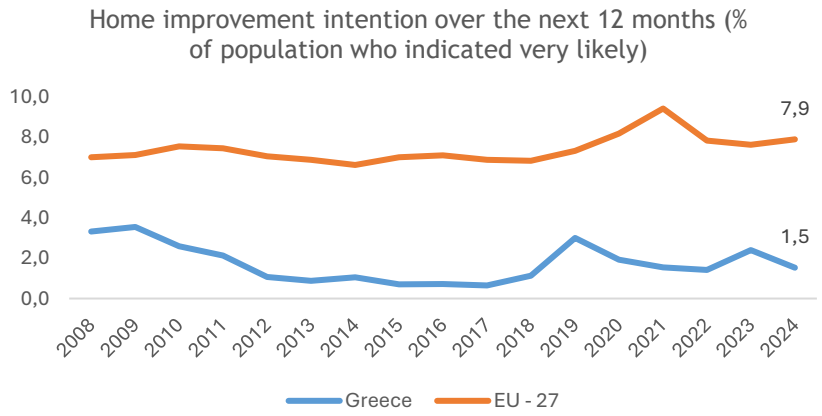
Source: IOBE and European Commission.

According to the consumer surveys conducted by IOBE, the percentage of the population indicating that they intend to buy a new dwelling in the next 12 months in Greece has consistently been one of the lowest performers in the EU[12] . The decline in disposable income and household credit constraints have contributed to the drastic decline in households' intention to purchase a new or repair their existing dwelling. However, from the beginning of 2018, trends of strengthening of the intention to buy and repair dwellings started to emerge, which with some fluctuations continued until 2024 (0.7% of the population reports as very likely to buy a dwelling and 1.5% as very likely to repair their dwelling) (Figure 2.39).

Figure 2.39: Intention to buy and repair a house within the next 12 months in Greece and the EU



[12] Population proportions with the intention to purchase or repair a dwelling close to the EU average were, however, recorded in Greece during the 2000s.

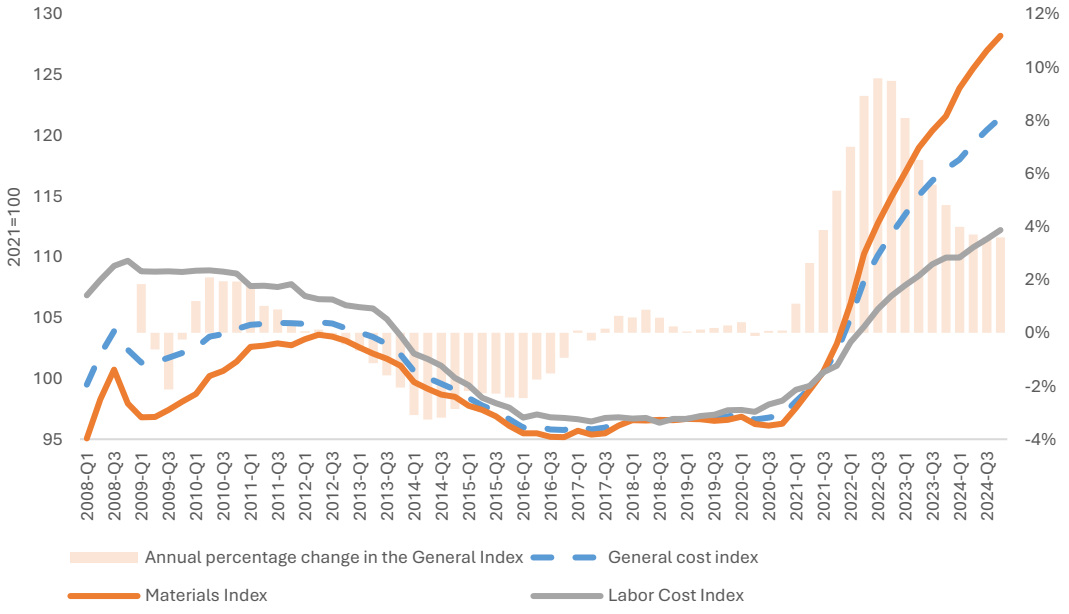


Source: IOBE and European Commission.

2.9 Cost of construction of new buildings

The supply (cost) conditions of construction projects and services, as well as the labor productivity of the industry, determine the cost efficiency with which projects are executed and provide a basis for comparison of the competitiveness of the domestic construction industry in comparison with other countries. Although it is difficult to clearly define the costs of construction, given the variety and different requirements of engineering projects and the buildings being constructed, the general index of construction costs for new dwellings provides an insight into the evolution of both material and labor costs in private construction projects (Figure 2.40).

Figure 2.40: General Cost Index for the construction of new residential buildings (2021=100)



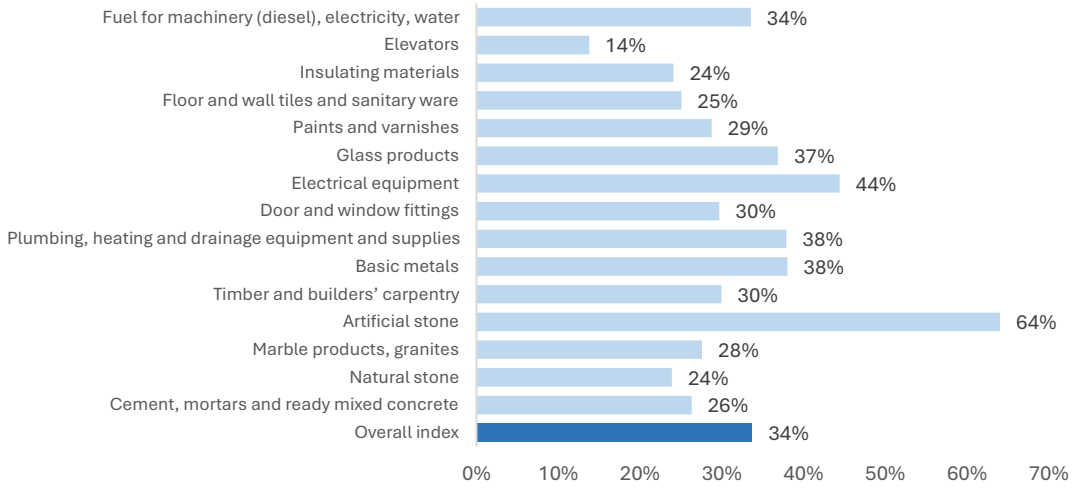
Source: ELSTAT.

After a period of deceleration in the cost of construction of new buildings due to overcapacity in the sector, general price stability and the recession in the Greek economy, since the beginning of 2020 construction costs have increased significantly.

This change is mainly due to increases in material costs, initially due to problems in international supply chains and then as a result of the energy crisis, which led to a sharp increase in the prices of several raw materials and construction products. The increase in construction costs continued in 2024, despite the easing of energy price pressures. The largest cost increases between 2020 and 2023 are for artificial stone materials (+49%), electrical materials (+64%), electrical materials (+44%), water, heating and sewerage materials (+38%) and basic metal materials (+38%) (Figure 2.41). Other material categories also show increases, while overall the general cost index increased by 34%.

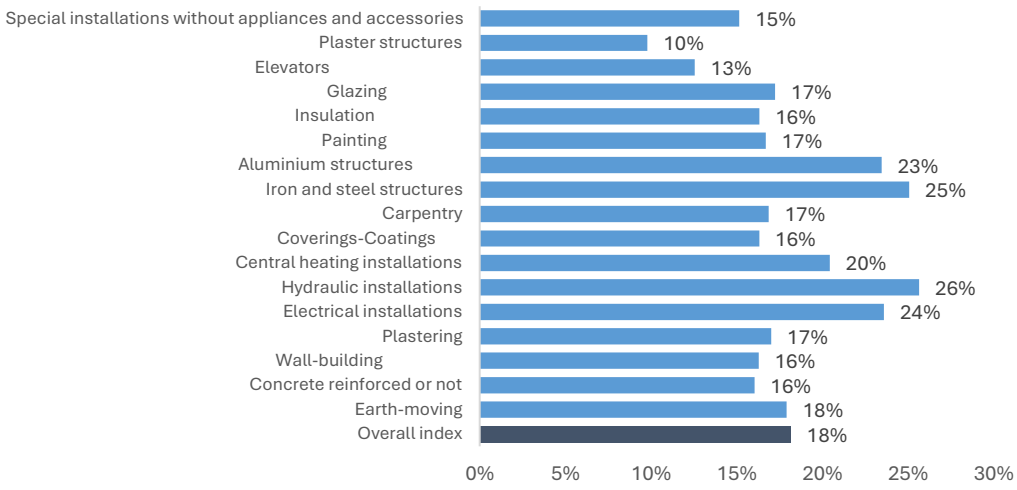
The cost of labor fees increased from 2020 to 2024 by 18%, with the largest increases in the cost of work for plumbing (+26%), ironwork (+25%) and electrical work (+24%) (Figure 2.42).

Figure 2.41: Percentage Change in Material Prices (February 2025 vs Average 2020)



Source: ELSTAT.

Figure 2.42: Percentage change in remuneration or labor costs per work stage (Q4 2024 vs Average 2020)

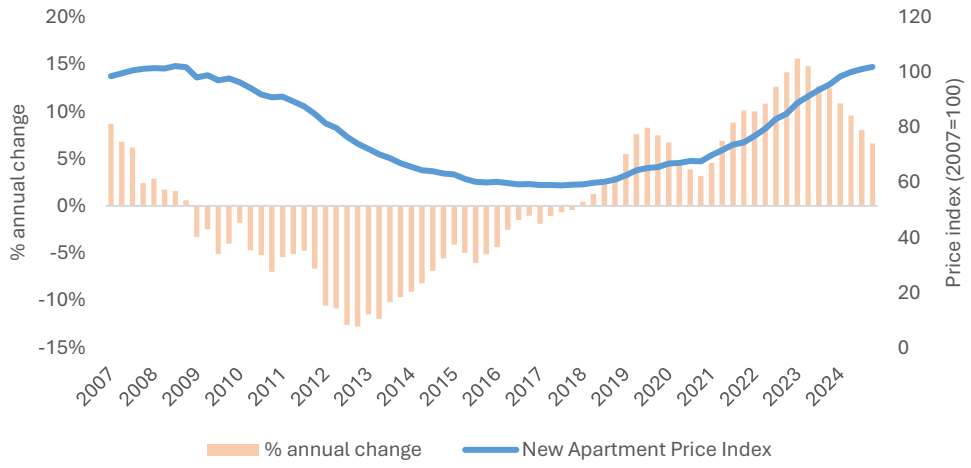


Source: ELSTAT.

2.10 Prices of new apartments and construction costs

The drastic decline in real disposable income after 2008, combined with other factors such as the increase in property taxes, led to a significant decline in transactions in the domestic real estate market, as demand for real estate was sharply reduced. As a result, new apartment prices fell by 40% between 2007 and 2017 (Figure 2.43). Since the beginning of 2018, however, there has been a continuous increase in average prices of new apartments in nominal terms, with an increase of 72% by December 2024. Property prices have not yet shown signs of a significant slowdown, supported by rising employment and real disposable income, but also by strong demand coming from abroad and short-term rentals. The supply of residential real estate, as evidenced by the increase in building permits, is partially responding, but this adjustment will take time to reduce the dwelling supply deficit.

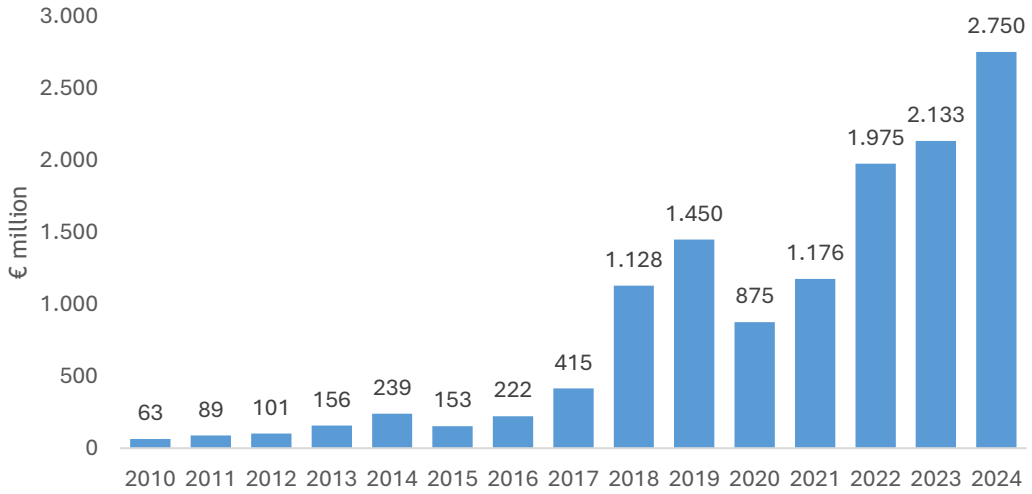
Figure 2.43: Price Index of New Apartments, (2007=100)



Source: Bank of Greece.

The net inflow of capital from abroad for the real estate market in Greece, as mentioned above, has boosted demand and is a factor that has fuelled the rise in real estate prices. Net foreign direct investment in real estate amounted to EUR 2.75 billion in 2024, an impressive increase in recent years (Figure 2.44).

Figure 2.44: Net Foreign Direct Investment in Real Estate in Greece

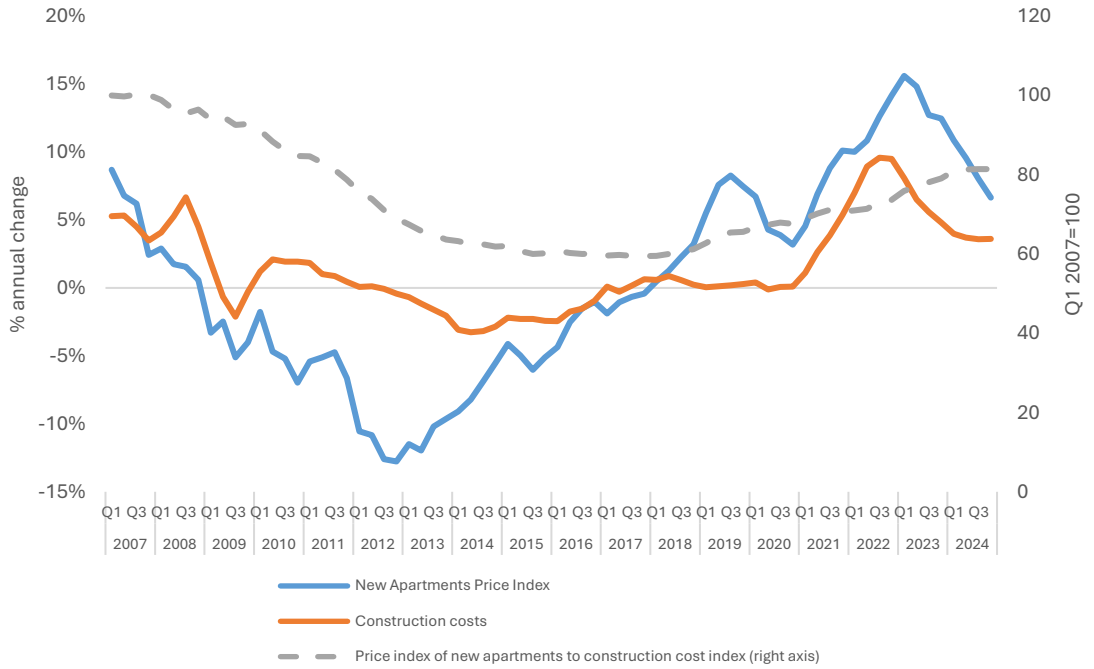


Source: Bank of Greece.

A large part of the increase in capital inflow is due to the "Golden Visa" program that started in May 2013. According to the terms of the program, any non-EU resident who made a property purchase in Greece worth more than 250 000 euros was entitled to a 5-year renewable residence permit. The scheme has undergone significant changes in terms of the minimum investment value (Law 5038/2023 and Law 5100/2024), with the aim of keeping prices in check. For example, under the new regime, for the regions of Attica, Central Macedonia, Mykonos, Santorini and islands with a population of more than 3,100 inhabitants, the minimum value is now 800,000 euros. For the remaining areas of Greece, the minimum investment value has been increased to EUR 400,000. In addition, there are restrictions on the short-term rental of properties through short-term rental platforms and on subletting. In the first quarter of 2025, net foreign capital inflows for the purchase of real estate decreased by 31.4% compared to the same period last year.

The relationship between property prices and construction costs affects the real estate market and investment in new dwellings and buildings. A generalised downward trend in real estate prices, such as the one recorded in Greece in the period 2007-2017 - given the construction costs - weakens the incentives to construct new buildings and limits construction activity. In Greece, prices have fallen faster than construction costs, making it practically unprofitable to construct buildings (Figure 2.45). The decline in dwellings construction costs between 2007-2017 was limited (0.8%), i.e. costs remained relatively stable while property prices declined, squeezing builders' profit margins. Since 2018, property prices have been rising and even faster than construction costs, improving incentives for building construction. As a result, the price-to-construction cost ratio has been moving up since the beginning of 2018, after a 10-year decline. However, a 26% increase in building construction costs between 2018 and 2024 mitigates the incentives to further expand the supply of new dwellings.

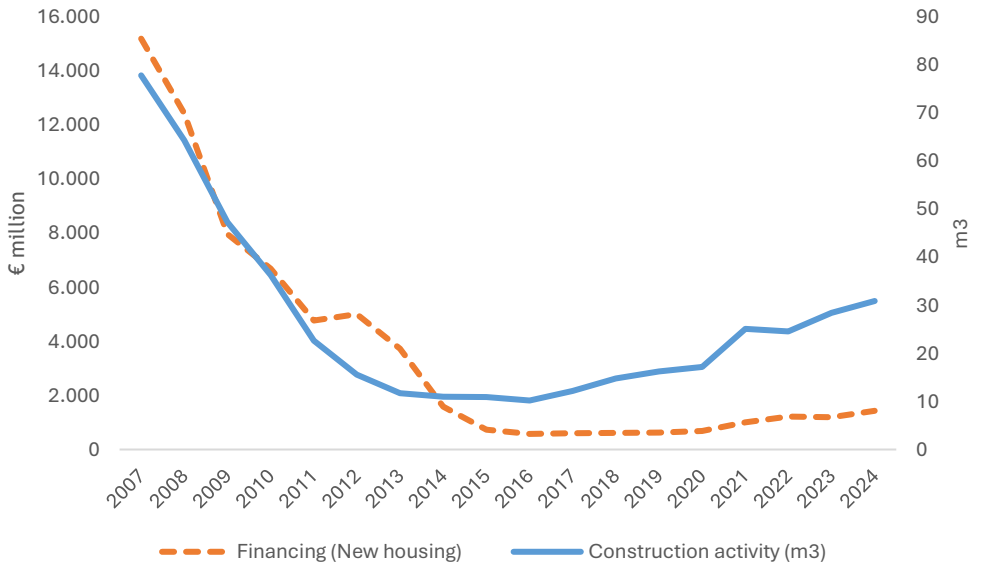
Figure 2.45: Construction costs and house prices (% year-on-year change), 2007-2024



Source: Bank of Greece, ELSTAT, IOBE Analysis.

The ease and amount of financing from the banking system also have a significant impact on the real estate market (e.g. prices and number of transactions), due to the high cost of acquiring a dwelling. Thus, it is not surprising that construction activity in Greece is in line with the level of the flow of bank financing through housing and repair loans (Figure 2.46).

Figure 2.46: Construction activity and bank financing, 2007-2024

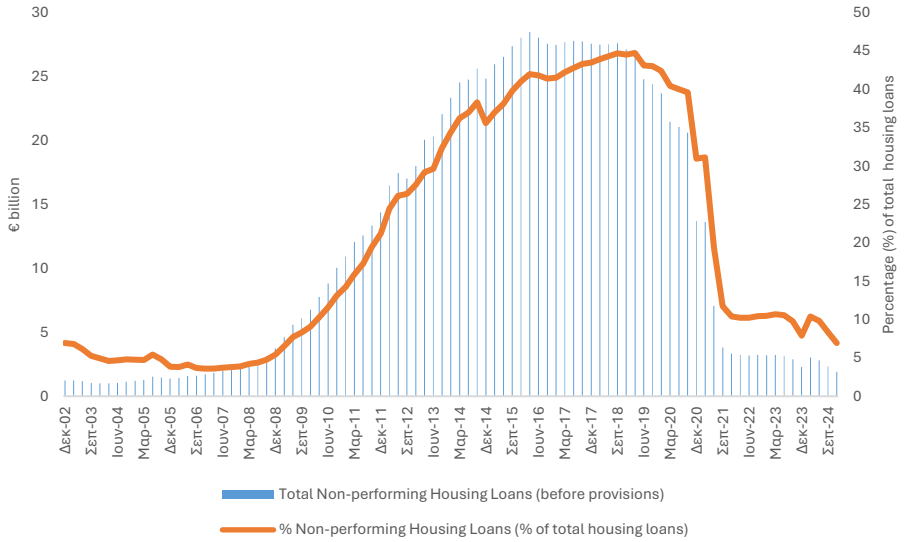


Source: Bank of Greece, ELSTAT.

During the financial crisis, a significant stock of non-performing mortgage loans built up on the balance sheets of banking institutions. These loans, after a significant downward trend since the beginning of 2019, accounted for 6.9% of the total mortgage loan balance

in December 2024 (Figure 2.47).The reduction in the volume of non-performing mortgage loans has had a positive effect on the growth of construction activity, as it improves the banking system's capacity to expand housing credit.

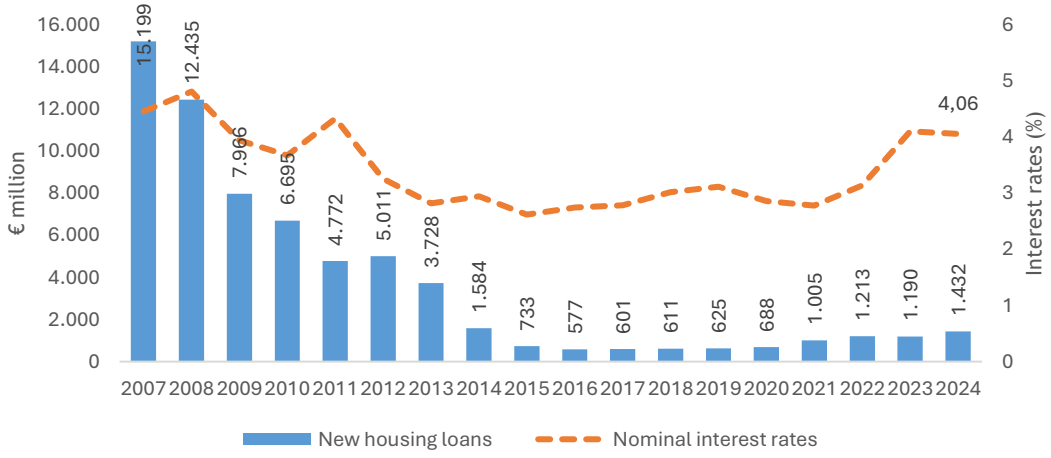
Figure 2.47: Non-performing loans, 2002-2024



Source: Bank of Greece.

The market for new mortgage loans had declined in the period 2015-2020 to close to 650 million euros per year on average, when in the past it was several times higher (15.2 billion euros in 2007 and 7.2 billion euros per year on average in the period 2007-2014) (Figure 2.48). From 2021 onwards, there is a significant increase in mortgage disbursements, albeit from a very low base, which is also linked to the rise in construction activity. New housing loans in 2024 amounted to EUR 1,432 million. Mortgage interest rates rose from 2.8% in 2021 to around 4.0% in 2023 and 2024 as a result of tightening monetary policy, limiting the growth momentum of housing credit.

Figure 2.48: New housing loans and interest rates



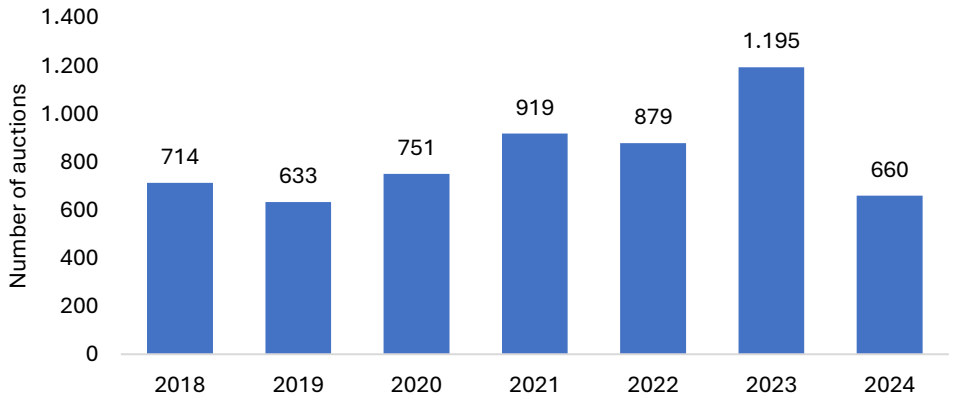
Source: Bank of Greece.

2.11 Public works infrastructure and construction

Public works constitute an important part of the construction market. Therefore, the efficiency of the public works production system shapes not only the conditions of business activity in the construction sector - and more specifically the part of the sector that deals with infrastructure development - but also the timely, cost-effective and quality construction of infrastructure, which is the ultimate goal on the part of the public sector.

The domestic public works construction market in the 2010s went through a period in which the number and budget of public works tenders had been significantly reduced (IOBE, 2021). According to data compiled by the Panhellenic Association of Technical Companies (SATE), in the three-year period 2018-2020, an average of 699 projects were estimated to have been put out to tender annually, with a budget of more than EUR 1 million (Figure 2.49). In the following years the number of tenders is estimated to have increased significantly, reaching 1,195 projects in 2023[13] . However, in 2024 the number of technical works put out to tender fell to a level below the average of the most recent years 2021-2023. It should be noted that these technical **public works include only those that were tendered through an open procedure, without necessarily having** a **final** result. [14]

Figure 2.49: Estimation of the number of public works with a budget of over 1 million euros (including VAT)



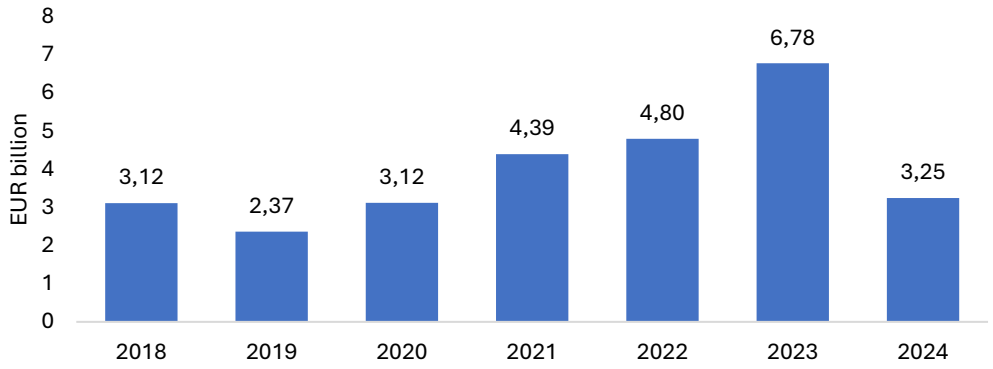
Source: Association of Greek Contracting Companies (SATE). Note: these projects include only those that were put out to tender through an open procedure, without necessarily having a final result.

The picture is similar for the total budget of projects over 1 million euro (Figure 2.50). In particular, the total budget of projects tendered by open procedure is estimated to have been significantly boosted in 2021/2022, reaching €6.78 billion in 2023, a level more than double the average level of the 2018-2020 period (€2.9 billion). In 2024, the total budget of these tendered projects decreased to €3.25 billion.

[13] This development is most likely due to the over-commitment of the PIP's credit limit, as the last projects of the NSRF 2014-2020, the first projects of the NSRF 2021-2027 and projects of the Recovery and Resilience Facility were tendered in 2023.

[14] Other categories of projects include those awarded by closed tender, competitive dialogue, direct award, negotiated procedure without prior publication, competitive procedure with negotiated procedure, restricted tender, etc.

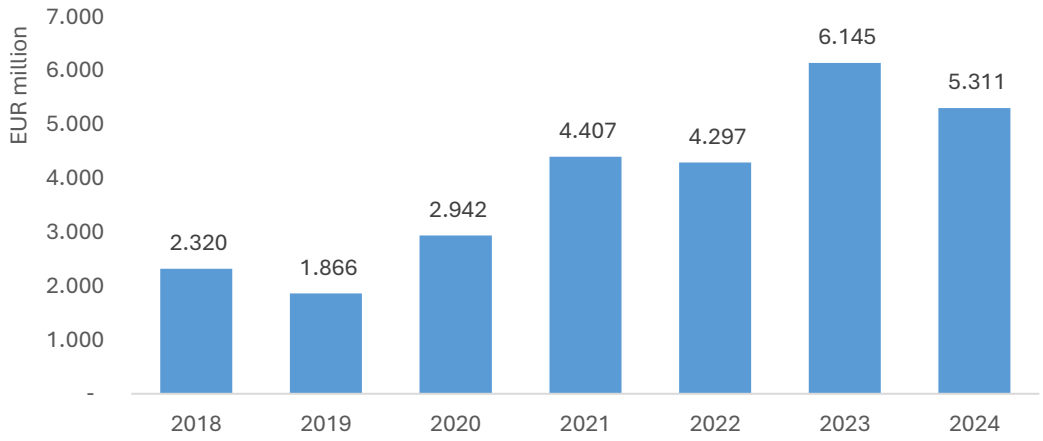
Figure 2.50: Total Public Works budget with a budget of over 1 million euros



Source: Association of Greek Contracting Companies (SATE). Note: these projects include only those that were tendered through an open procedure, without necessarily having a final result.

The total value of signed public works contracts (regardless of budget - including non-technical projects) increased from EUR 2.3 billion in 2018 to EUR 5.3 billion in 2024 (Figure 2.51Figure 2.51**Error! Reference source not found.**.[15] The highest total value of project contracts was in 2023 (EUR 6.2 billion, up 43% year-on-year). It then fell by 14% in 2024, but remained higher compared to the 2018-2022 period. This trend (insofar as the contracts include a relatively stable proportion of public works contracts) suggests a strengthening of civil engineering construction activity in the short term, but a subsequent decline if the decline seen in 2024 continues.

Figure 2.51: Total value of public works contracts signed

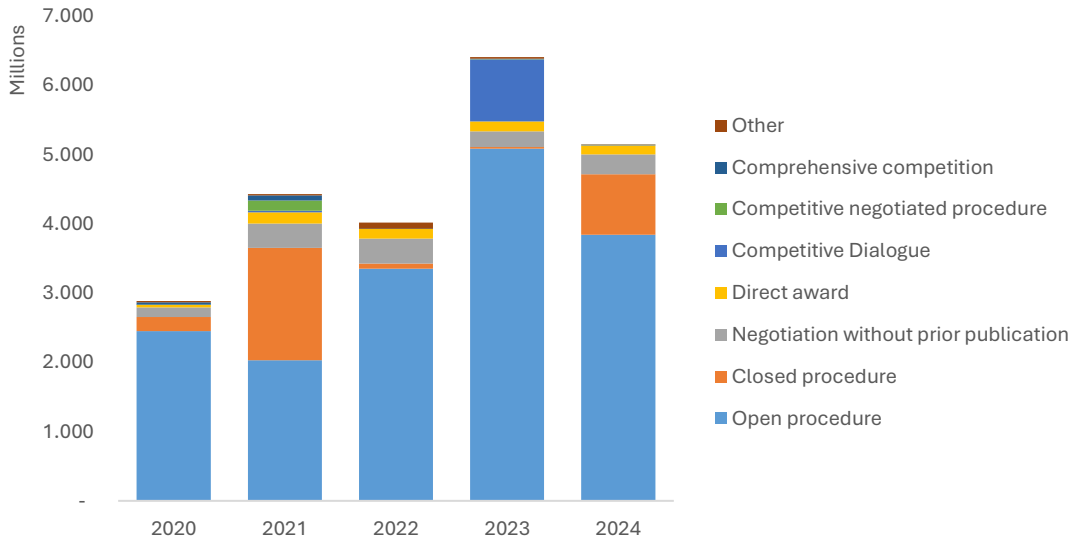


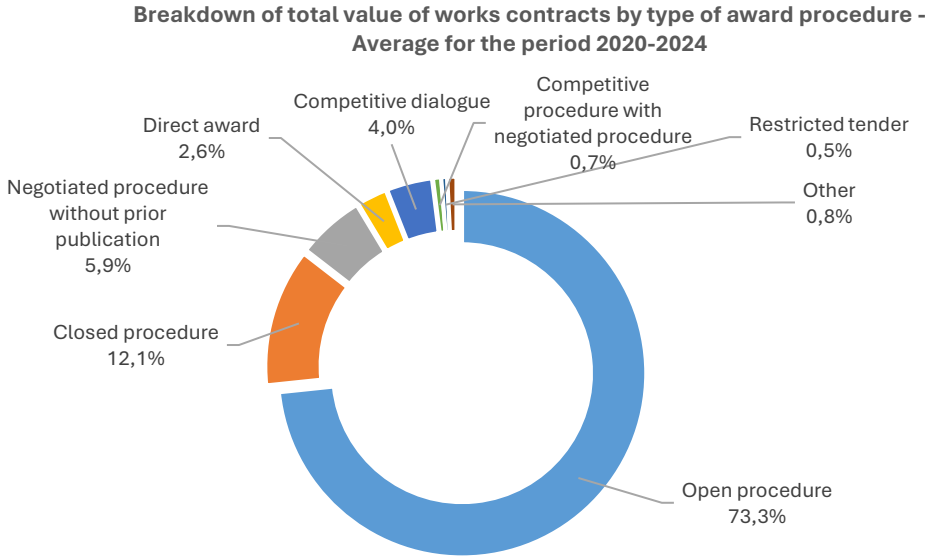
Source: KIMDES.

Public works contracts are mainly awarded through open procedures (tenders) (73% of the value of contracts in 2020-2024) (Figure 2.52). However, there are also cases of contracts awarded through restricted procedures (12% of the total contract value in 2020-2024), negotiated without prior publication (6%), competitive dialogue procedure (4%), direct award (3%) and, to a lesser extent, other procedures.

[15] It concerns all works, i.e. in addition to technical/construction works, it may also include, to a lesser extent, other types of works. The breakdown has been made on the basis of the year of signature of the contract.

Figure 2.52: Total value of works contracts by type of award procedure

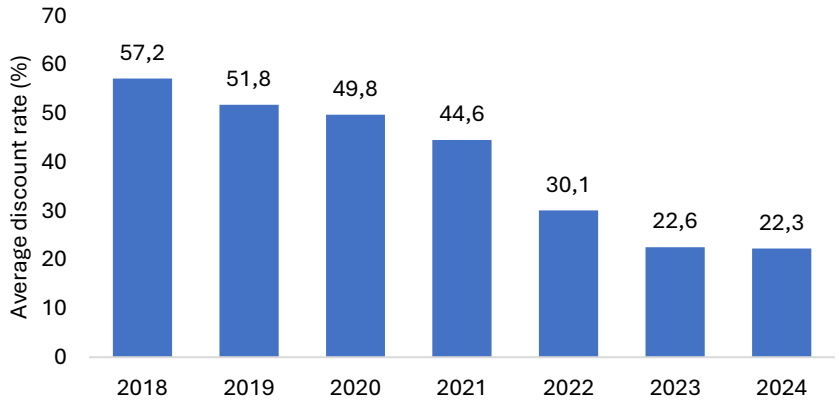




Source: KIMDES. IOBE analysis.

The significant decrease in the number of new projects in the 2010s had led to the prevalence of intense competition in project tenders and a significant increase in the rate of discounts (Figure 2.53). In 2018 the average discount rate of the final project contractor approached or exceeded 57% compared to the original budget, when for example in 2012 it was 37%. The average discount rate gradually declined in the following period 2019-2021 to around 45%, but a large decline occurred in 2022 and thereafter until 2024, when the average discount rate fell to 22.3% due to the increase in construction costs and the increase in the number and budget of the projects tendered.

Figure 2.53: Average discount rate* (%) on Public Works with a budget of over 1 million euros



Source: Association of Greek Contracting Companies (SATE). IOBE analysis. * Simple arithmetic average.

2.12 Unfulfilled balance of large construction companies.

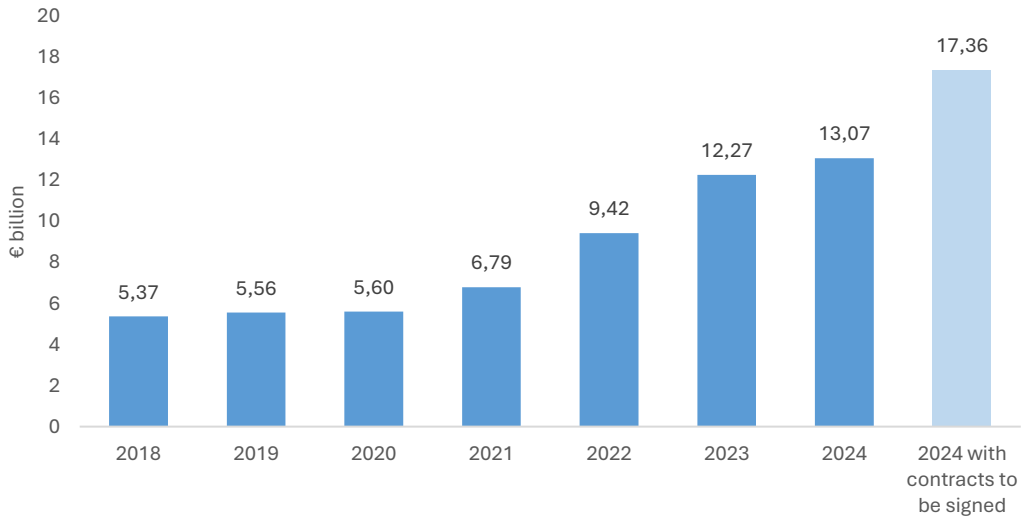
The backlog of construction companies is a reliable indicator of the construction activity that is expected to materialise in the next period of time. Relevant data are published in the periodic reports of the major listed construction groups, which relate to projects in progress as well as new public and private contracts they have signed both in Greece and abroad. As can be seen from the data presented in the Figure 2.54, the backlog of *the largest companies in the sector (*with signed contracts) amounted to EUR 13.07 billion in 2024, up significantly by 6.6% compared to the previous year and about double compared to the average for the period 2018-2022. Including the contracts *to be signed*, the backlog of these construction groups amounts to EUR 17.36 billion.

The backlog recorded in 2024 is a historically high figure for the industry. Indicatively, and since official data is not available, reports[16] indicate that in 2006 the backlog of the 10 largest construction companies in the 7th contractor class had reached €8.5 billion, while in 2009 all technical companies had a backlog of €11.5 billion (90% of which belonged to the three largest companies).

These amounts reflect the positive outlook for construction activity in the coming years, as a result of the improving performance and conditions in the Greek economy, the size of European funding, the taking up of projects abroad and the large backlog of investments during the previous decade. The timely execution of these projects is a challenge for construction companies, as they require, among other things, human resources, strong liquidity, access to funding resources and fast procedures on the part of public authorities.

[16] https://www.moneyreview.gr/business-and-finance/75790/kataskeyes-anektelesto-11-7-dis-eyro-to-ypsilotero-ton-teleytaion-dekaetion/

Figure 2.54: Backlog of projects of 5 Construction Groups Listed on CAA (signed contracts)



Source: Financial reports of companies.

3 PROGRESS OF NATIONAL INFRASTRUCTURE PLANNING AND FINANCING PROGRAMMES FOR CONSTRUCTION PROJECTS

3.1 Introduction

The significant amount of national and European funds that have flowed into the Greek economy and the recovery of private construction activity have created a positive environment for Construction in Greece. This chapter examines the main directions of the national development strategy that are relevant to the Construction sector, and estimates the national and EU financial resources that are expected to be directed to relevant projects until 2026, with the ultimate aim of determining the potential evolution of construction activity in the next two years.

3.1.1 NATIONAL DEVELOPMENT PROGRAMME 2021-2025

The National Development Programme (NDP), which was established by Law 4635/2019, is an integrated system for the planning, management, monitoring and control of interventions financed by the national resources of the Public Investment Programme (PIP). The NDP introduces medium-term targeting and the subordination of PIP interventions to strategic objectives and prioritized development priorities. For the first implementation period of the programme (2021-2025), the total budget, after modifications, amounted to €11.84 billion - with the possibility of over-commitment by 30%. The development objectives of the NDP 2021-2025 follow five axes - smart growth, green growth, social growth, infrastructure development and openness. The funded actions are included in 20 Sectoral Development Programmes (SDPs), 13 Regional Development Programmes (RDPs) and the Special Programme for Natural Disasters. The development of infrastructure and networks is an important part of the NDP 2021-2025[17] , which recognises their catalytic role for the country's economic development. In particular, the development of infrastructure and networks is highlighted as one of the five development objectives of the NDP and is specified in three specific objectives related to the development, improvement and modernisation of networks, transport and the supply chain. At the same time, the Construction sector contributes to other development objectives (e.g. infrastructure for the health system, environmental protection and other social and cultural infrastructure). The Ministry of Infrastructure and Transport, with a budget of €3.302 billion, has by far the largest share of the total budget (27.9%).

According to the latest data on the implementation progress of the NIP 2021-2025 (April 2025), the total budget with overcommitment amounted to €17.06 billion, while the budget of the included projects reached €14.05 billion (82% of the total budget. The budget of legal commitments was €9.48 billion, i.e. 67% of the budget of the integrated projects. Within 2025 the new law on the NDP for the programming period 2026-2030 is expected, which will aim at simplifying and modernising procedures for the preparation, management and implementation of development interventions, establishing rules for

[17] Approval and determination of resources for the implementation of the National Development Programme (NDP) for the 2021-2025 programming period, Government Gazette No. 174 Issue A, 10 September 2020.

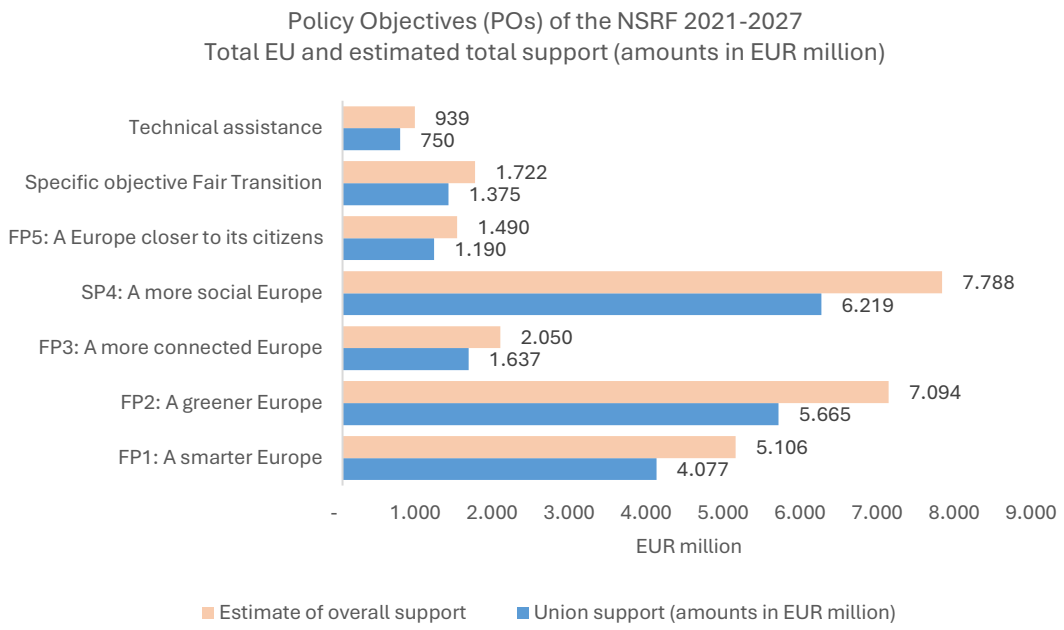
financial commitments of projects and payment thresholds and strengthening coordination and management bodies with a defined structure and responsibilities.

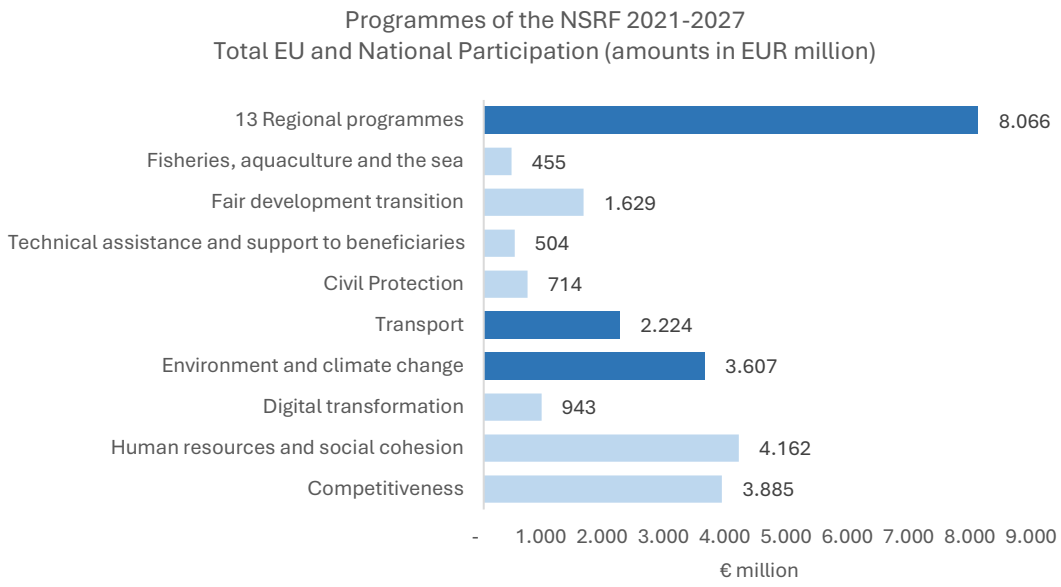
3.1.2 NSRF 2021-2027

The "Regional Development Partnership Agreement" (RDP) is the largest and best known instrument for financing investment projects in Greece. The current "NSRF 2021-2027", with a total budget of €26.2 billion, was approved by the European Commission on 29 July 2021. The support with resources from European structural funds amounts to EUR 20.9 billion and the remaining amount of EUR 5.3 billion corresponds to the national contribution to the programme through the national budget of the country.

The support priorities of the NSRF 2021-2027 include the productive potential of the economy, infrastructure, human skills and social protection. In particular, 30% of the resources are earmarked for actions aimed at the transition to a "more social" Europe. A high share of resources is also allocated to the objectives of moving towards a "greener" (27%) and "smarter" (20%) Europe (Figure 3.1).

Figure 3.1: Policy objectives and programmes of the NSRF 2021-2027





Source: https://www.espa.gr/el/Pages/espa2021-2027.aspx

The programme is implemented through 8 sectoral programmes, 13 regional programmes and the fisheries, aquaculture and marine programme. The main changes compared to the previous NSRF 2014-2020 include an increase of €2.2 billion for the 13 Regional Operational Programmes from the NSRF 2014-2020 (from €5.9 billion to €8.1 billion), the discrete programme for Environment, Climate Change and Energy with a budget of €3.6 billion (from €5.9 billion to €8.1 billion), a new programme for Environment, Climate Change and Energy with a budget of €3.6 billion (from €5.9 billion to €8.1 billion) and a new programme for the Environment, Climate Change and Energy with a budget of €3.6 billion (from €3.6 billion to €3.1 billion). The new Competitiveness Programme, with a budget of €3.9 billion and business support measures, and the Digital Transformation Discrete Programme, with increased resources (€943 million total budget) and a new Managing Authority.

The Table 3.1 presents an estimate of the NSRF 2021-2027 funding resources planned to be directed to the Environment-Climate Change (greener Europe) and Transport (more interconnected Europe) sectors, in which the construction sector is directly and heavily involved in the implementation of the relevant projects. In total, it is estimated that €9.14 billion will be allocated to infrastructure projects during the programming period of the new NSRF, providing significant support to domestic construction activity.

Table 3.1: : Estimated funding resources for infrastructure under the NSRF 2021-2027 (in EUR million)

NSRF Programme 2021-2027 (Infrastructure related projects)	EU support (amounts in million euro)	Percentage	Estimate of total support*
FP2: A greener Europe	5.665	27%	7.094
FP3: A more connected Europe	1.637	8%	2.050
SUBTOTAL (SP2+SP3)	***7.302***	***35%***	***9.144***
OVERALL TOTAL REVENUE 2021-2027	**20.913**	**100%**	**26.189**

Source: NSRF 2021-2027 * IOBE estimate.

Compared to the previous programming period of the NSRF 2014-2020, the total funding resources in these sectors do not lag behind in terms of budget, as payments (public support) in the previous period approached €9 billion (in projects with a total contracted scope of €13.8 billion) (Table 3.2). Therefore, if in the new programming period the specific funding resources of the NSRF 2021-2027 are absorbed, the impact on the activity of the Construction sector is not expected to differ significantly compared to the previous period.

Table 3.2: Budget and amount of contracts for infrastructure in the NSRF 2014-2020 (in EUR million)

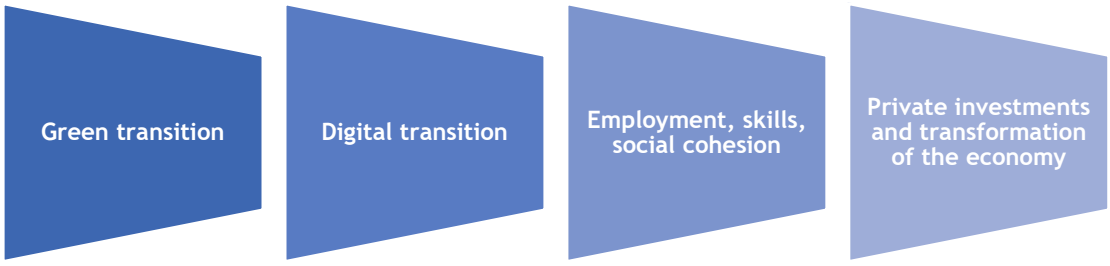
Thematic Objective	Contracts (EUR million)	Payments (million euro)
Low Emission Economy	4.160	3.124
Climate change - Prevention	560	377
Environmental protection	4.738	2.850
Sustainable Transport	4.328	2.603
Subtotal	***13.787***	***8.955***
Overall Total NSRF 2014-2020	**39.005**	**27.708**

Source: https://anaptyxi.gov.gr/el-gr/

3.1.3 National Recovery and Resilience Plan

The National Recovery and Resilience Plan (NRP) outlines the national investment and reform programmes in order for the country to benefit from the Recovery and Resilience Mechanism (Recovery and Resilience Facility - RRF). The ESDP includes a set of reforms and investments aimed at enhancing the competitiveness and openness of the Greek economy, while at the same time achieving environmental protection, further digitisation of the state, reduction of bureaucracy, drastic reduction of the informal economy, development of an investment-friendly tax system and the creation of a quality and efficient social protection network accessible to all. The ESDP "Greece 2.0" was approved on 13 July 2021 by the Economic and Financial Affairs Council of the European Union (Ecofin), with an initial budget of €30.5 billion. On 8 December 2023, its revision was approved, mainly to add new investments and reforms under REPowerEU, as well as to extend the loan programme. With the adoption of the revised Plan, the total budget of "Greece 2.0" amounts to €36 billion. The ESDP includes 103 investments and 76 reforms, spread over 4 pillars, including the new REPowerEU chapter.[18]

Figure 3.2: Pillars of the National Recovery and Resilience Plan



Source: Greece 2.0 National Recovery and Resilience Plan.

[18] A new request for revision of the Plan was submitted by the Ministry of Economy and Finance to the European Commission in May 2025. This includes strengthening the budget of actions for which there is a high demand, as well as adjusting the budget of actions or transferring actions to other financial instruments for objective technical and/or management reasons.

The first pillar of the NDP is on **green transition** and has as sub-pillars:

- The transition to a new environmentally friendly energy model.
- The energy upgrading of the country's building stock and spatial reform.
- The transition to a green and sustainable transport system.
- Sustainable use of resources, climate change resilience and biodiversity conservation.

The second pillar concerns the **digital transition** and has as sub-pillars:

- Connectivity for citizens, businesses and government.
- The digital transformation of the state.
- The digital transformation of businesses.

The third pillar concerns **employment, skills and social cohesion** and has the following sub-pillars:

- Increasing jobs and promoting labor market participation.
- Strengthening the digital capacities of education and modernising vocational education and training.
- Strengthening the accessibility, efficiency and quality of the health system.
- Increasing access to effective and inclusive social policies.

The fourth pillar of the NAPS concerns **private investment and the transformation of the economy** and has as sub-pillars:

- The development of tax instruments that are more growth-friendly and improved tax administration.
- The modernisation of public administration.
- Improving the efficiency of the justice system.
- Strengthening of the financial sector and capital markets.
- Promote research and innovation.
- Modernise and improve the resilience of the main sectors of the country's economy.
- Improve competitiveness and promote private investment and exports.

The total budget of the ESDP amounts to EUR 36.2 billion, of which EUR 18.5 billion is for direct grants for the actions under the four pillars and the REPowerEU chapter of the Plan. The remaining €17.7 billion is for loans to support private investment, providing businesses with access to finance through loans and equity support for SMEs, and through the InvestEU programme, complemented by reforms to reduce administrative burdens and improve the regulatory framework (Table 3.3).

Of the €18.5 billion, €6.1 billion (33%) is for the first pillar, €2.1 billion (10%) for the second pillar, €5.2 billion (28%) for the third pillar and €5.3 billion (29%) for the last pillar (private investment). To these amounts are added EUR 795 million from REPowerEU. At the same time, it is estimated that the total investment resources to be mobilised amount to EUR 72.6 billion (using the investment leverage ratios from the original NAPA), of which EUR 28.3 billion is for the four pillars and the remaining EUR 44.3 billion for loans. Of the total resources mobilised, it is estimated that €11.3 billion (40%) will be allocated to the green

transition, €2.1 billion (7%) to digital transformation, €5.3 billion (19%) to employment, skills and social cohesion and €9.6 billion (34%) to private investment and economic transformation.

Table 3.3: Total investment resources mobilised by the Recovery and Resilience Facility

	Recovery and Resilience Facility budget (€ million)	Total investment resources mobilised (€ million)
Green Transition	6.018	11.283
Digital transformation	1.935	2.070
Employment, Skills, Social Cohesion	5.226	5.307
Private investment and transformation of the economy	5.311	9.614
Sum of subsidies	**18.491**	**28.274***
Loans	**17.728**	**44.320***
Total investment resources	**36.219**	**72.593***

Source: Greece 2.0 National Recovery and Resilience Plan. *IOVE estimates.

Based on the analysis of the NAPA actions, it is estimated that grants of €9.9 billion will be directed to projects directly related to Construction, mobilising a total of €12.8 billion (Figure 3.3). The construction projects that will be supported with grants from the RRF mainly concern the Green Transition (€6.3 billion) and Private Investment (€2.7 billion) pillars. The main actions considered to be directly related to Construction are presented in**Error! Reference source not found.** , and detailed in the Appendix.

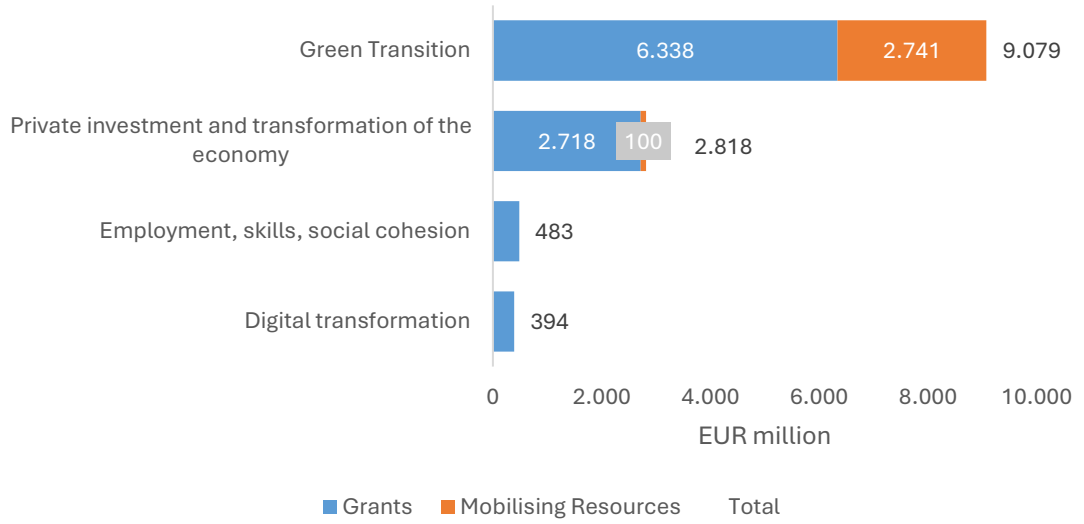
Together with the resources from the RRF loans (and the mobilised financing resources from the loans), it is estimated that a total of EUR 15.0 billion (EUR 12.8 billion from grants and EUR 2.2 billion from loans) will be mobilised for projects directly related to Construction in the period 2022-2026 It should be noted that the estimated timeline for the mobilization of resources during the 2022–2026 period follows the schedule of payment requests, assuming four additional requests (one per semester) up to the second half of 2026 (Table 3.4, Table 8.3 in appendix and Figure 3.5).

Table 3.4: Estimation of the allocation of RRF resources over time

	Per year			Cumulative		
Chronological distribution of projects	**Grants**	**Loans**	**Total**	**Grants**	**Loans**	**Total**
2021						
2022	2,88	2,14	5,02	2,88	2,14	5,02
2023	1,73	2,14	3,87	4,60	4,28	8,88
2024	2,98	3,16	6,13	7,58	7,44	15,01
2025	4,30	5,80	10,10	11,87	13,24	25,11
2026	6,35	4,49	10,84	18,22	17,73	35,95
Total	**18,22**	**17,73**	**35,95**			

Source: IOBE analysis. * The difference with the totals in Table 3.3. is due to the estimation of the amounts that will not be allocated to projects.

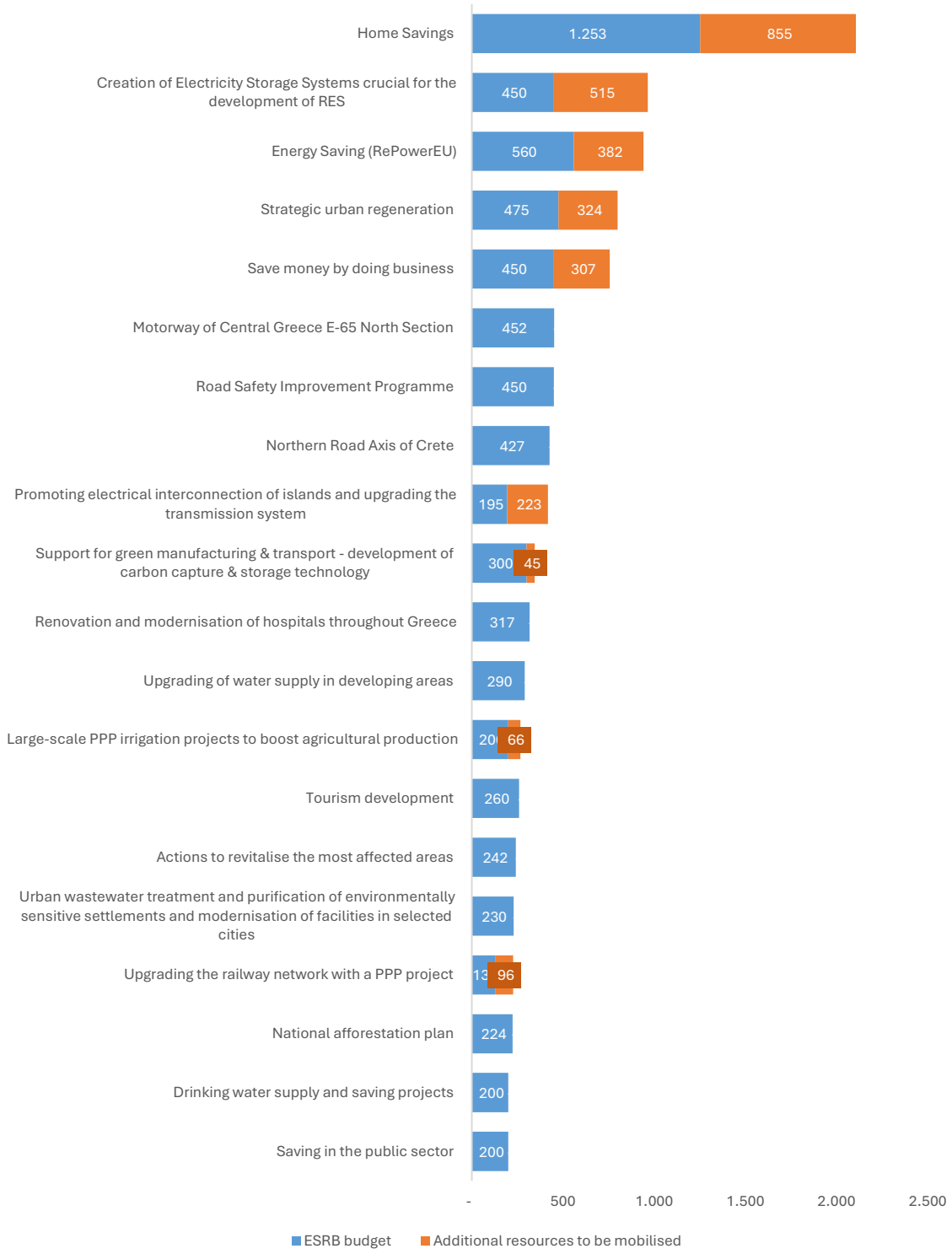
Figure 3.3: Total investment resources mobilised by grants to Recovery and Resilience Facility projects directly related to the Construction activity, by pillar (estimate)



Source: Greece 2.0 National Recovery and Resilience Plan. IOBE estimates.

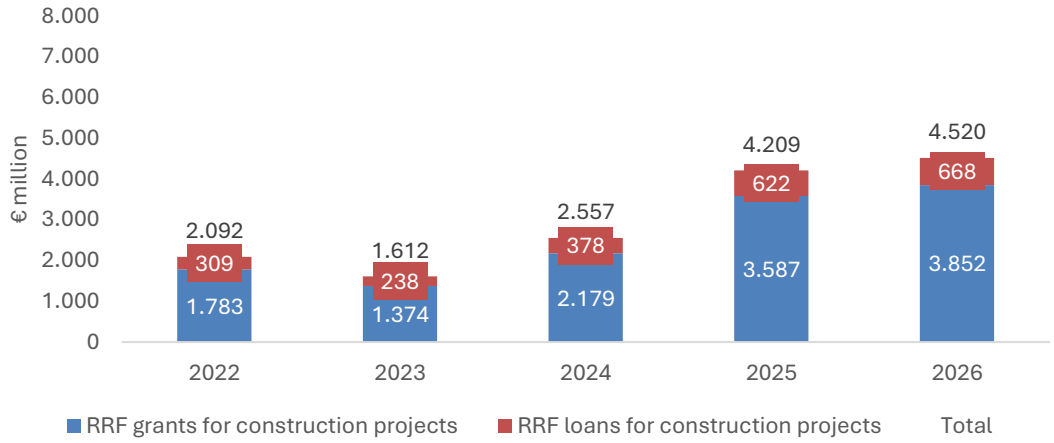
In addition, the estimate of loans to be directed to Construction projects was based on two assumptions: a) 5% share of Construction in the total investments to be financed by RRF loans and b) 40% share of RRF loans in the total mobilized resources. It should be noted that a possible different (lower or higher) absorption of loan resources in projects related to the Construction sector will influence in the same direction the results of the study regarding the growth prospects of the Construction sector and the sector's loan needs presented in the next chapter.

Figure 3.4: Grants and mobilised resources for main ESDP actions related to the Construction sector



Source: NRRP, IOBE analysis.

Figure 3.5: Total annual resources mobilised for Construction projects by NRRP (estimate)



Source: Greece 2.0 National Recovery and Resilience Plan. IOBE estimates.

3.2 Development of construction activity in the period 2025-2026

The data presented in the previous sections show that the development of infrastructure and other construction projects is one of the main priorities of the country's development policy for the coming years. The availability of additional financial resources from the EU to support the growth of the Greek economy, combined with the upward trend in private construction activity, suggests that the role and potential contribution of Construction to the implementation of the required projects is critical and significant.

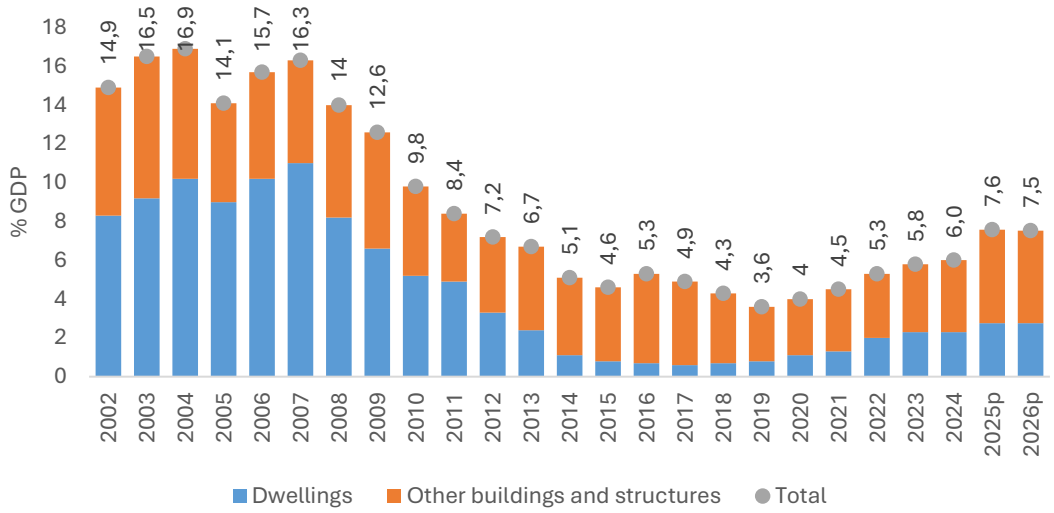
In assessing the prospects for the growth of domestic construction activity in the period 2025-2026 it has been assumed that: a) resources from the NSRF will not provide an additional boost to construction activity, as similar programmes have been implemented in previous years; b) investment in dwellings and other buildings will be affected by developments regarding the N.O.C., with the effects being considered separately in an optimistic and a pessimistic scenario**;** and c) the boost to construction activity will be provided for the most part by

Specifically, in **the optimistic scenario** we assume an impact of 18% of new housing permits issued in 2024 (representing the proportion of permits for new dwellings in November and December), which will impact construction activity within 2025, and an overall impact of -20% on residential construction in 2026, due to a corresponding decrease in new housing permits issued within 2025. The **pessimistic scenario** is differentiated only for dwellings investment in 2026, due to high uncertainty regarding the impact of regulations concerning private construction activity (N.O.C., and planning changes concerning off-plan building), and assumes a larger decrease in residential building permits by 40% in 2025 (in terms of area); which will have a corresponding impact on building construction activity in 2026.

Based on these assumptions, in the optimistic scenario it is estimated that investment in Construction - mainly in infrastructure - will further increase its share of GDP in the period 2025-2026 (Figure 3.6). In particular, *additional* investment in infrastructure and dwellings is estimated at up to 1.6% of GDP per year on average (compared to 2024) - with

the share of investment in construction projects reaching up to 7.5% of GDP in 2026 from 6.0% in 2024.

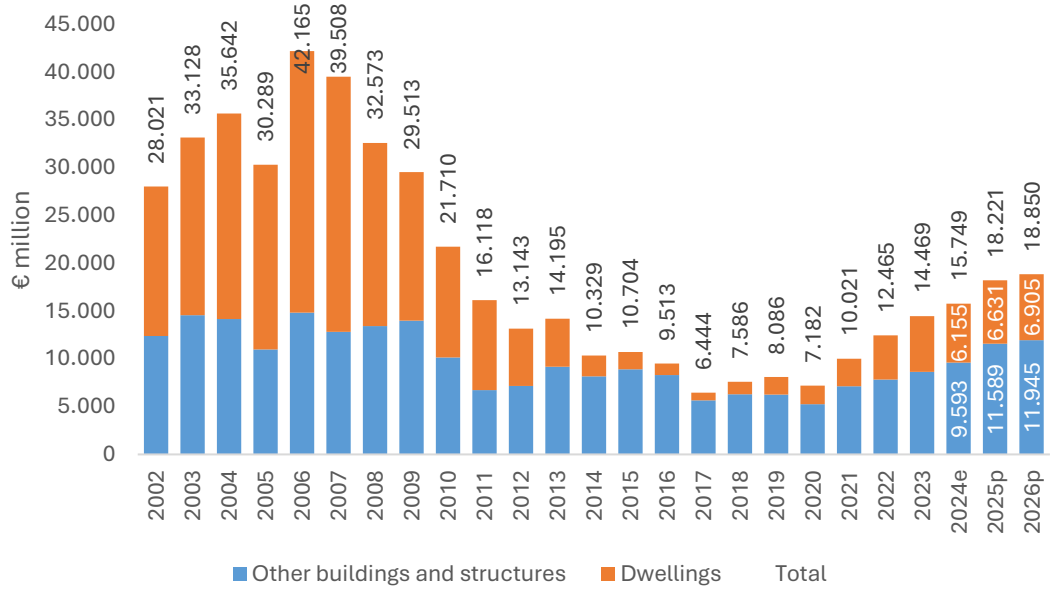
Figure 3.6: Projected investment in Construction as a percentage (%) of GDP



Source: Eurostat, IOBE Estimation 2025-2026.

The output value of Construction, based also on the time distribution assumed for the total mobilised investments of the Recovery and Resilience Facility, is estimated to follow a strong upward trend in the period 2025-2026, exceeding EUR 18 billion (from EUR 15.8 billion in 2024) (Figure 3.7). Due to the strong impact of the NESA investment, the overall boost will be driven to a greater extent by investment in infrastructure and non-residential construction projects, but private construction activity has also been assumed in the optimistic scenario to strengthen by 12% compared to 2024.

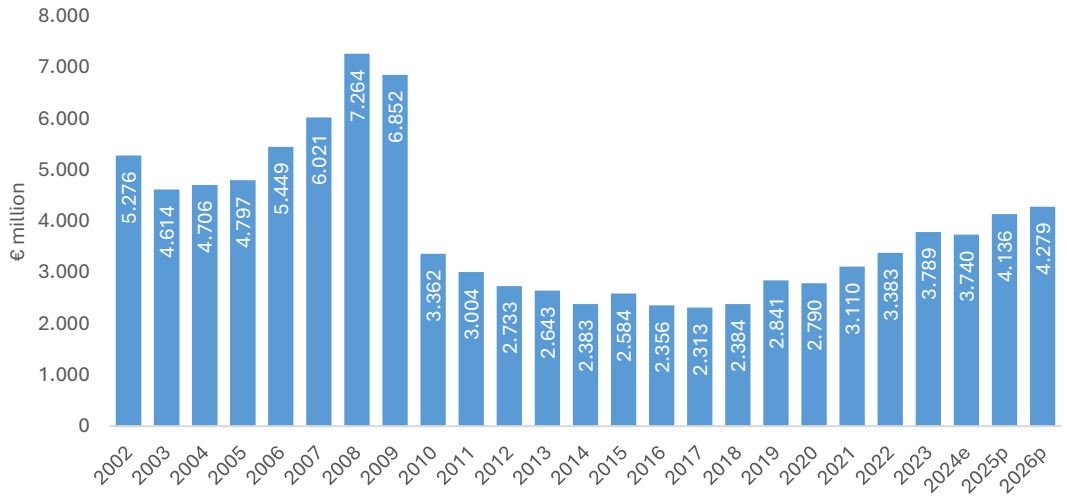
Figure 3.7: Projection of the Production Value of constructions, 2025-2026



Source: Eurostat, IOBE Estimate 2025-2026.

Correspondingly, the annual production value (turnover) in the Architectural and Engineering activities is estimated to reach EUR 4.28 billion by 2026, up from EUR 3.74 billion in 2024. The estimate is based on a statistical analysis of the relationship between the output value of the Construction sector and the Architectural and Engineering activities.

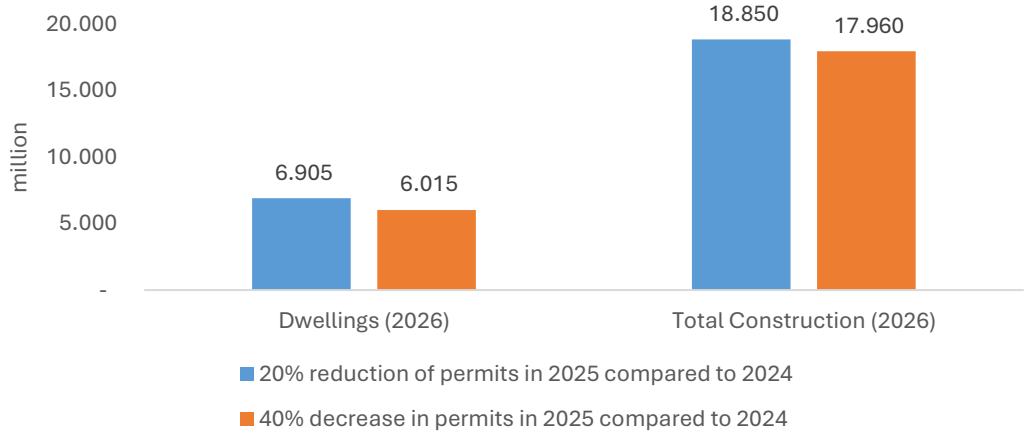
Figure 3.8: Projection of the Production Value of Architectural and Engineering activities



Source: Eurostat and IOBE Estimates. The projection for the period 2024-2026 is based on a statistical estimate of the relationship between the production value of Constructions and the activities of Architects and Engineers.

In the pessimistic scenario, investment in dwellings declines in 2026 to 2.4% of GDP (from 2.8% in the optimistic scenario) and total investment in Construction to 7.2% of GDP (from 7.5% in the optimistic scenario). The output value in dwellings construction in 2026 is estimated to be lower by 12.9% compared to the optimistic scenario (6 billion euros vs. 6.9 billion euros) and overall for Construction by 4.7% (17.96 billion euros vs. 18.85 billion euros) (Figure 3.9). Correspondingly, the output value of the architects and engineers activities is estimated at EUR 4.08 billion compared to EUR 4.28 billion in the optimistic scenario.

Figure 3.9: Sensitivity analysis for dwellings investment in 2026



Source: IOBE Estimate.

4 EVOLUTION OF FINANCING OF THE CONSTRUCTION SECTOR

4.1 Introduction

The financing received by construction and design companies is mainly directed to: a) working capital, to cover operational needs and to finance the business cycle (short-term borrowing), b) purchase of fixed equipment (mainly long-term borrowing for machinery and other equipment, purchase of real estate for professional use, project development, etc.) and c) issuance of letters of guarantee, such as participation in tenders, good workmanship, underwriting (replacement of tithes), advance

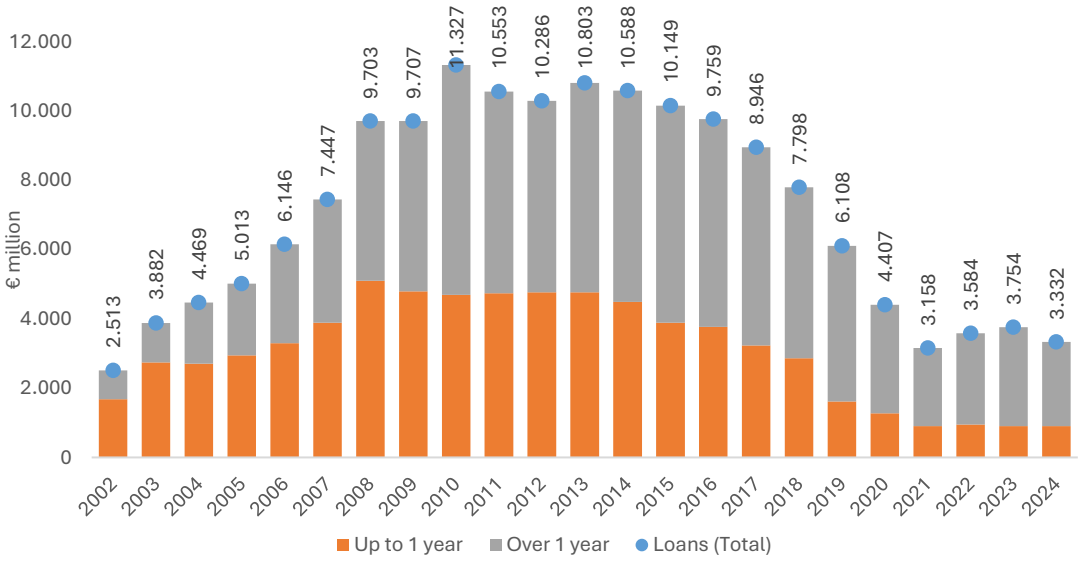
This chapter examines the evolution of financing in the sector, with a focus on the period 2019-2024, in comparison with other sectors of economic activity. As the data examined relate to financing that has already taken place based on banking criteria and the lending capacity of the financial system (and not on the basis of overall needs/demand for financing), data on the financing gap for SMEs in Greece are also presented. The financing gap arises when the demand is greater than the supply of loans and therefore part of the demand for finance remains unmet. The existence of a financing gap has, inter alia, a negative impact on the overall level of investment in the economy. There are, however, various financial instruments that can be used to reduce it, in order to limit the strong fluctuations in business activity and the level of investment accordingly.

4.2 Loan balances in the construction sector

As regards the financing of the Construction sector by domestic monetary-financial institutions (MFIs) in the period 2002-2024[19] we can distinguish four phases (Figure 4.1). The first covers the period 2002-2010, where the balance of domestic MFI loans to the Construction sector more than quadrupled, from EUR 2.51 billion in 2002 to EUR 11.33 billion in 2010, as a result of the rise in construction activity and rapid credit expansion due to the liberalisation of the banking system in the early 2000s. The second phase covers the period 2011-2015, where, although the domestic economic crisis intensified, loan balances to the sector remained at an average level of EUR 10.5 billion, but partly with a large accumulation of non-performing loans. The third phase, which starts in 2016 and extends up to 2021, is characterised by a significant reduction in financing balances (EUR 3.15 billion in 2021 or -67% compared to 2016), which suggests that loan repayments exceed new loan disbursements to the Construction sector. However, most of this decrease is due to write-offs of (non-performing) loans from the balance sheets of credit institutions and their transfer to receivables management companies. The fourth phase includes the period after 2021, when loan balances to Construction stabilized, showed a slight increase until 2023, but in 2024 they declined by 11.2%, indicating larger amounts of loan repayments (or write-offs) versus new financing to the industry.

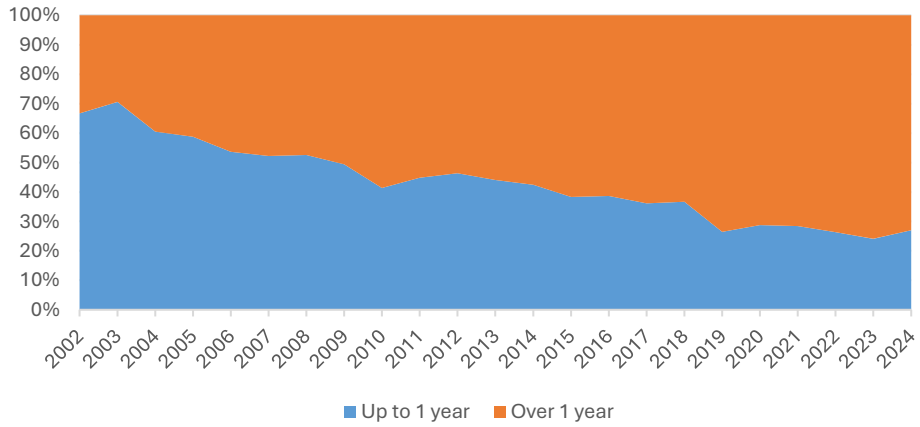
[19] It should be noted that the methodology of the Bank of Greece's survey on the financing of non-financial institutions changed in 2021 and created a discontinuity in the chronological order in 2019 compared to previous years, without however changing the general trend in the data.

Figure 4.1: Analysis of domestic MFI financing of the Construction sector, 2002-2024 (end-of-period balances)



Source: Bank of Greece.

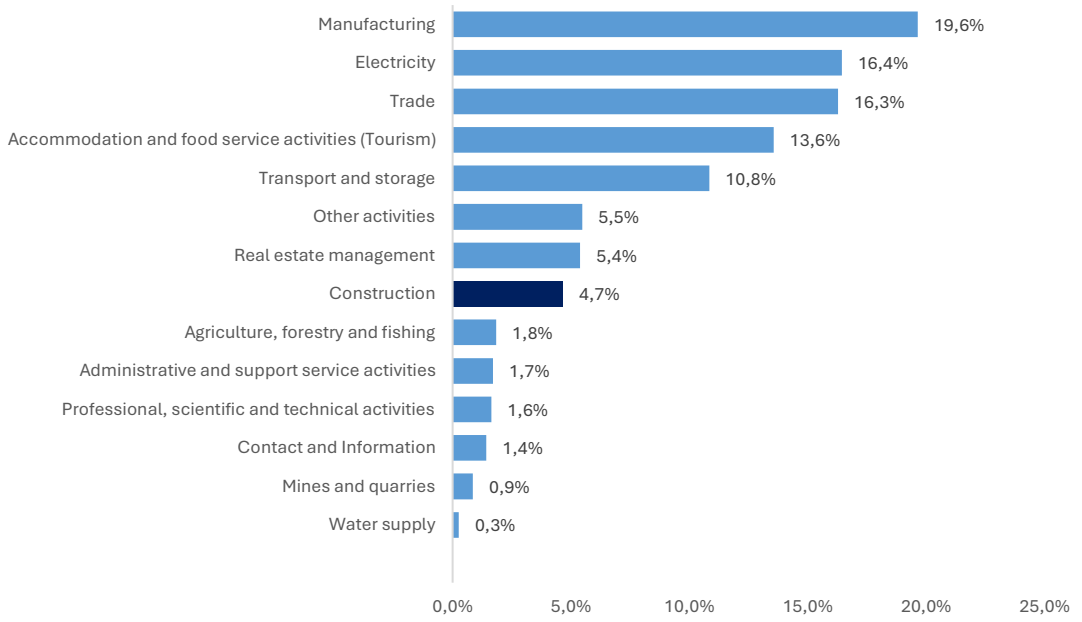
Figure 4.2: Outstanding amount of loans in Construction by maturity (2002-2024)



Source: Bank of Greece, IOBE Analysis.

In 2024, 27% of the remaining loans were short term (less than 1 year) (Figure 4.2). This category mainly includes loans used as working capital, with no specific maturity. The largest share of the total loan balance, 73%, was accounted for by loans with a maturity of more than one year. Overall, Construction (excluding non-performing loans) accounted for 4.7% of total financing balances to non-financial corporations in February 2025, with a decrease in participation compared to previous years (Figure 4.3). This is therefore one of the sectors with high financing needs in the Greek economy after Manufacturing, Energy, Trade, Tourism, Transport and Real Estate Management.

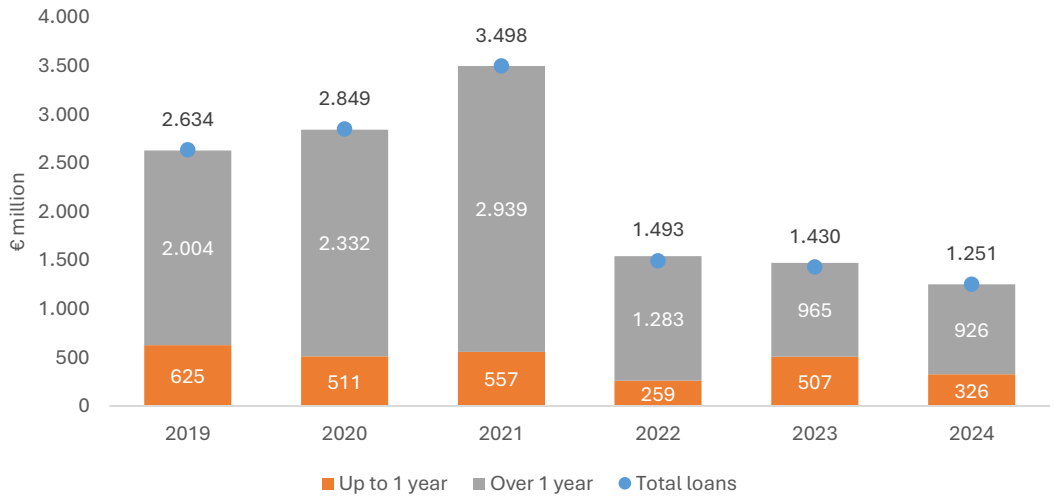
Figure 4.3: Sector shares of total financing to enterprises by domestic MFIs, February 2025



Source: Bank of Greece. IOBE analysis.

Data on total loan liabilities in the Architectural and Engineering activities are not available. However, these activities are part of the broader professional, scientific and technical activities sector for which data are available. In 2024, domestic MFI loan balances to the professional, scientific and technical activities sector fell to EUR 1.25 billion, down from EUR 1.43 billion in the previous year (Figure 4.4). They mainly concern (EUR 926 million or 74%) loans with a maturity of more than one year. The percentage change in the financing balances of this sector over the period 2019-2024 is in line with the 7% increase in total financing balances to non-financial corporations over the same period.

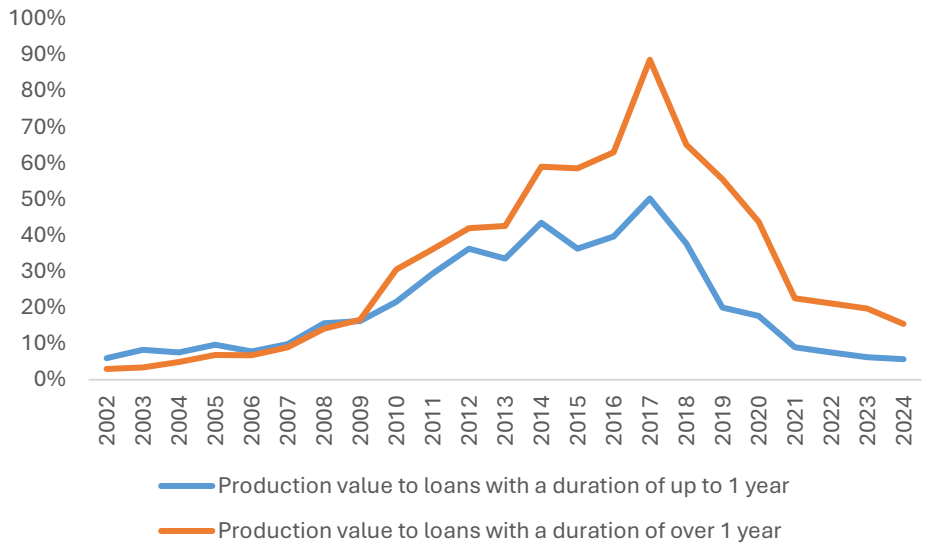
Figure 4.4: Analysis of financing of the professional, scientific and technical activities by domestic MFIs, 2019-2024 (end-of-period balances)



Source: Bank of Greece, AnaCredit.

Loan accumulation combined with the sharp decline in construction activity led to a significant increase in the ratio of short-term and long-term loans to output value in the Construction sector (Figure 4.5). After 2017, however, loan balances as a percentage of output value in Construction show a downward trend, mainly due to the sale of non-performing loans by domestic MFIs. Overall, loan balances from domestic MFIs in Construction are estimated to account for 21% of the industry's output value in 2024, with the significant decline in the ratio after 2017 being due to a deceleration in loan balances mainly due to loan write-offs.

Figure 4.5: Outstanding amount of loans to production value in the Construction sector, 2002-2024

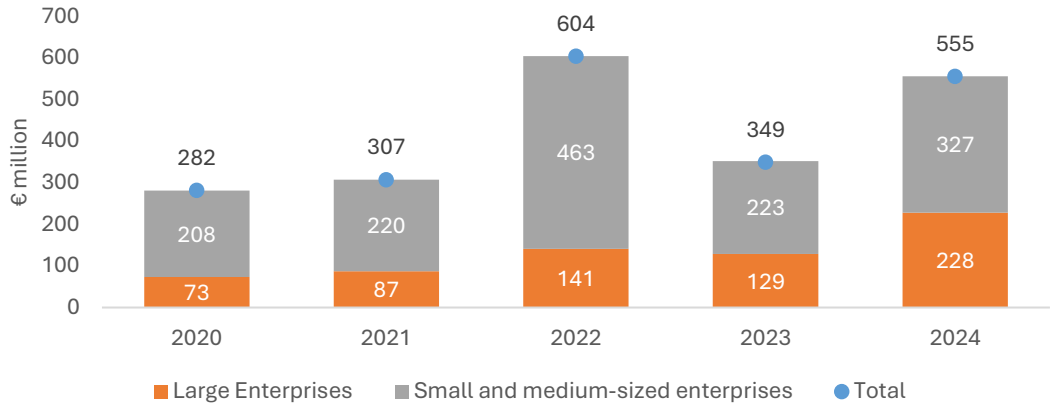


Source: IOBE estimate based on data from the BoE and Eurostat.

4.3 New loans in the construction sector

The financing of the Construction sector by domestic MFIs did not change significantly in 2020 and 2021, as new loans amounted to EUR 282 and 307 million respectively (Figure 4.6). A large increase occurred in 2022, when new loans amounted to EUR 604 million. However, in 2023, despite a further increase in construction activity, new construction financing fell to EUR 349 million. The significant rise in borrowing costs in 2023 was one of the factors that potentially affected financing flows. In 2024, new loan flows in Construction increased again to EUR 555 million. In 2020-2024, SMEs in the sector received on average 69% of new loans and large firms the remaining 31%.

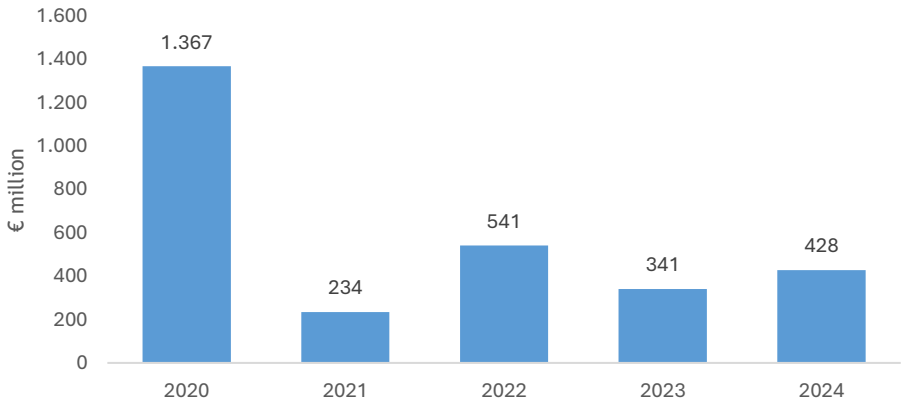
Figure 4.6: Net loan flows in Construction, 2020-2024



Source: Bank of Greece, AnaCredit.

The flow of new loans to the professional, scientific and technical activities sector was particularly high in 2020 (EUR 1.37 billion), possibly due to the COVID-19 pandemic, but in the following years it was limited to an average of EUR 386 million (Figure 4.7). In 2024 there was also an increase in funding flows in this sector compared to the previous year.

Figure 4.7: New loans for professional, scientific and technical activities, 2020-2024



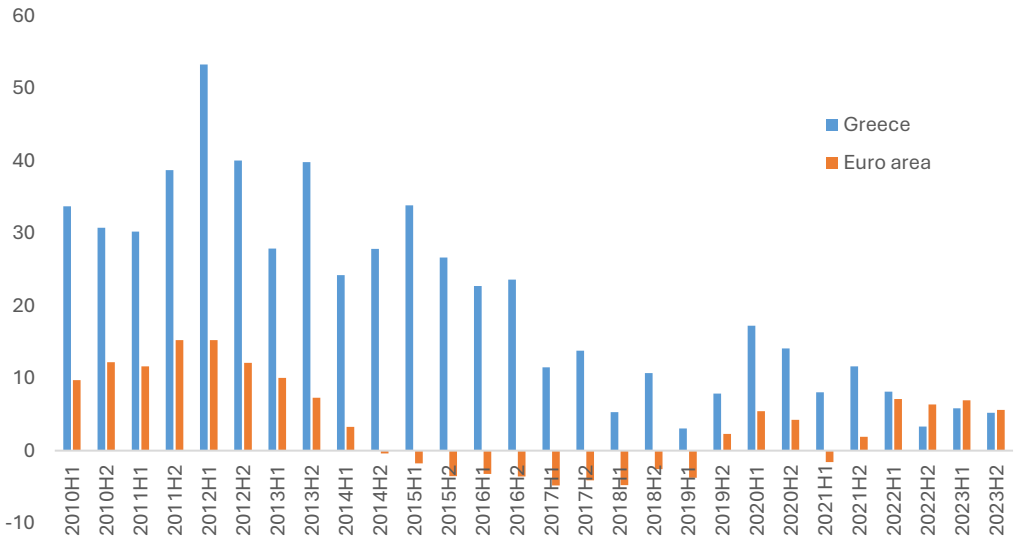
Source: Bank of Greece, AnaCredit.

4.4 Financing gap

The data presented recorded a significant decline in outstanding loan balances and relatively limited new loan flows to the Construction sector in recent years. The inability to access loan capital creates a financing gap, the size of which is a result of the disparity between the supply and demand of capital by firms. In the European Central Bank's (ECB) SAFE survey, which is conducted twice a year, the financing gap for small and medium-sized enterprises (SMEs) is defined as the difference between the change in the financing needs of SMEs minus the change in the availability of bank lending. A positive value of the indicator indicates an increase in the financing gap. Based on the data of this survey, the financing gap of SMEs in Greece (and therefore of firms operating in the Construction sector) is generally larger compared to the EU average, widened in the first years of the economic crisis and gradually decreased until 2019. However, from 2020 with the health crisis and other economic disruptions (e.g. high energy costs) the financing gap for SMEs

in Greece widened again. It is worth noting that in 2023 the financing gap of European firms increased, surpassing Greece for the first time.

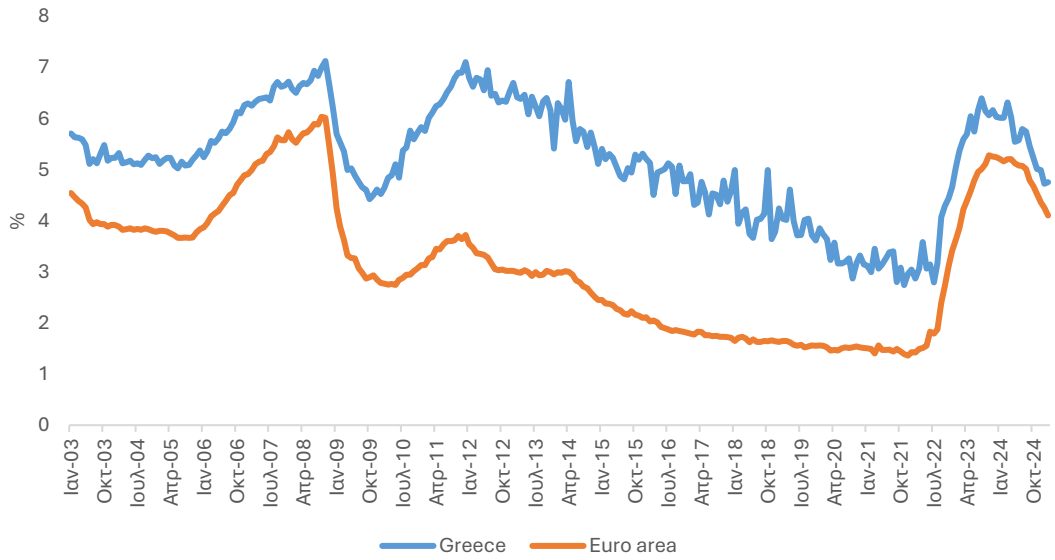
Figure 4.8: Changes in the financing gap, estimated from the perspective of small and medium-sized enterprises (net percentage of respondents) *



Source: ESF, Survey on the Access to Finance of Enterprises (SAFE). * Defined as the difference between the change in the financing needs of small and medium-sized enterprises minus the change in the availability of bank lending. **A positive value of the indicator indicates an increase in the funding gap.**

Finally, an important factor also linked to the difficulties in financing the domestic Construction sector is the cost of borrowing for firms, which in Greece is systematically higher than the Eurozone average, and in the most recent period rose sharply from 2.72% in October 2022 to 6.03% in April 2024, before starting a downward trend to 4.75% by February 2025 (Figure 4.9).

Figure 4.9: Composite index of the cost of borrowing for businesses in Greece and the Eurozone



Source: European Central Bank.

The difference in the cost of borrowing[20] of Greek firms compared to the Eurozone average has widened significantly since the beginning of 2010, peaking in June 2012, while, despite the relative improvement since then, the average cost of borrowing in Greece is still higher than in the Eurozone (4.74% compared to 4.10% respectively in February 2025). High borrowing costs affect the competitiveness of companies in the sector, which are required to channel more resources to cover their operating and investment costs.

[20] The cost of borrowing is derived from the average interest rate on new loans to non-financial corporations. It is calculated by the Eurosystem central banks with weightings of the loan balances by category (no fixed maturity, long-term regular maturity, loans up to €250 000, from €250 000 to €1 million and above €1 million). The weightings are calculated on the basis of the average of the last 12 months' participation shares rather than the current month to mitigate the effect of sharp changes in participation shares.

5 ANALYSIS OF THE FINANCING NEEDS OF THE CONSTRUCTION SECTOR

5.1 Analysis of data from a sample of enterprises in the construction and architectural and engineering services sector

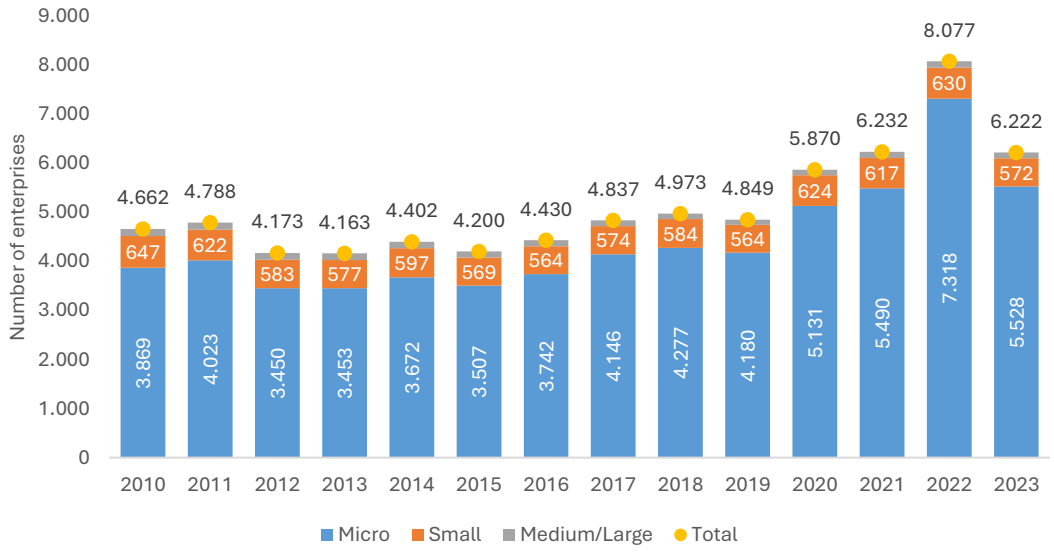
The objective of the analysis in this chapter is: a) to determine econometrically, based on historical data, the relationship between outstanding loan capital and turnover of construction and design firms (architects and engineers); and b) to use these statistical estimates to determine the borrowing needs of firms in the sector in the coming years, based on the expected level of construction and design activity. In this context, data from the balance sheets of engineering and design companies, obtained from ICAP's 'Data Prisma' database, were used. The data for the analysis cover the period 2010-2023. The ultimate objective is to statistically assess the relationship between the amount of short-term and long-term borrowing of companies, with variables such as turnover and profitability, in order to determine the borrowing needs of engineering and design companies in total and by size. Note that the analysis is conducted using data on bank loan balances (rather than net loan flows), which includes non-performing loans.

The Figure 5.1 shows the evolution of the number of firms in the sample by size category. Note that the breakdown of enterprises into size classes was based on the categorisation used by the European Commission, and is as follows:

- Micro-enterprises: 0 ≤ Turnover≤ 2,000,000 euros
- Small enterprises: 2,000,000 euros < Turnover ≤ 10,000,000 euros
- Medium and large-sized companies: Turnover > 10 000 000 euros

The number of engineering and design firms in the sample over the period is not stable. From 4.62 thousand in 2010 it was reduced in the period 2012-2016, probably as a result of the contraction of construction activity that led many firms in the sector to suspend/terminate their operations. Since then, the number of firms in the sample has been increasing and in 2022 it reached 8.08 thousand; in 2023 the number is reduced to 6.22 thousand due to partial availability of published accounting statements, but this does not significantly affect the econometric estimates presented in the next section.

Figure 5.1: Number of Construction and Engineering enterprises sample by size category (2010-2023)

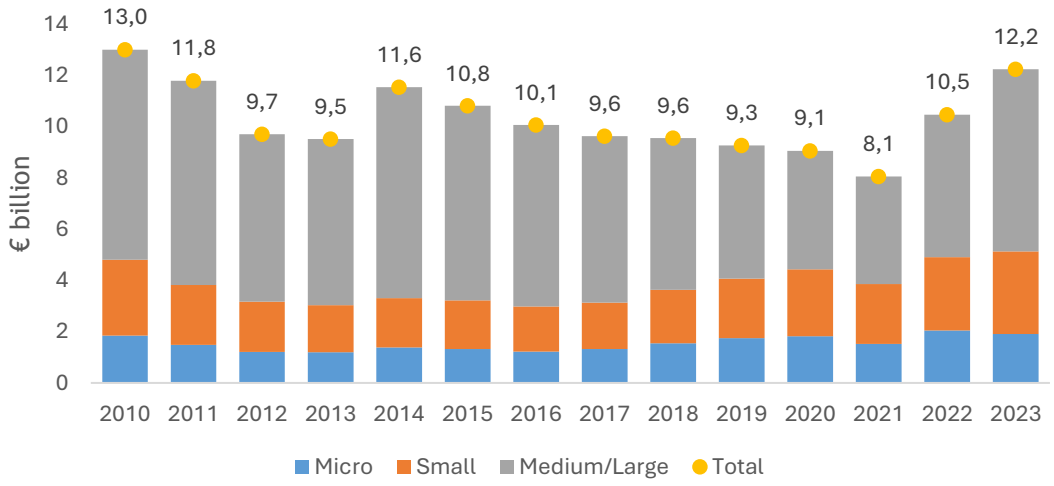


Source: ICAP "Data Prisma", IOBE analysis.

The vast majority of the sample of firms are very small in size, with their share over the period under review averaging 85.5%. This is followed by small enterprises, whose share over the period 2010-2023 ranged at the level of 12.0% on average. Finally, around 2 out of 100 enterprises (2.0%), on average over the period considered, were medium and large enterprises.

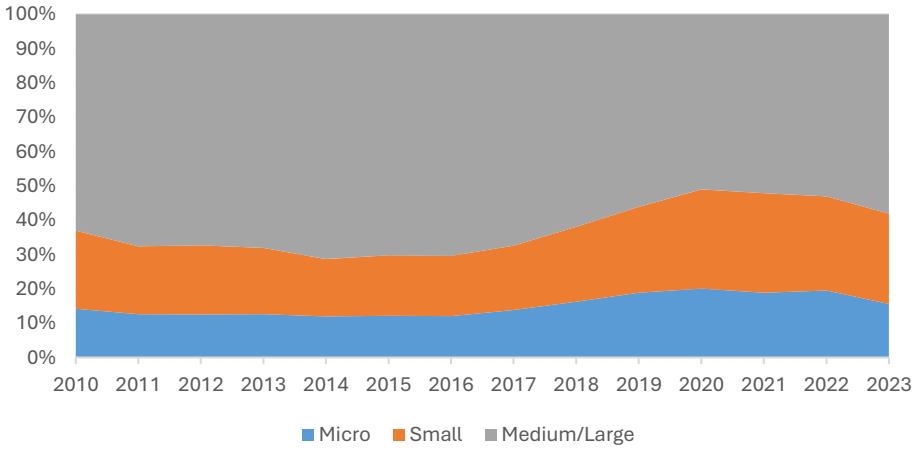
The sampled firms had a turnover of EUR 12.2 billion in 2023, with a significant boost after 2021 (Figure 5.2). Almost two thirds of the total turnover of the sector (63% on average over the period 2010-2023 and 58% in 2023) came from medium and large sized enterprises (Figure 5.3). Small and micro enterprises account on average for 22% and 15% of total turnover respectively. It should be noted that the sample covers on average 76% of the total output value of the Construction and Architectural and Engineering services sectors.

Figure 5.2: Turnover of Construction and Engineering enterprises sample by size category (2010-2023)



Source: ICAP "Data Prisma", IOBE analysis.

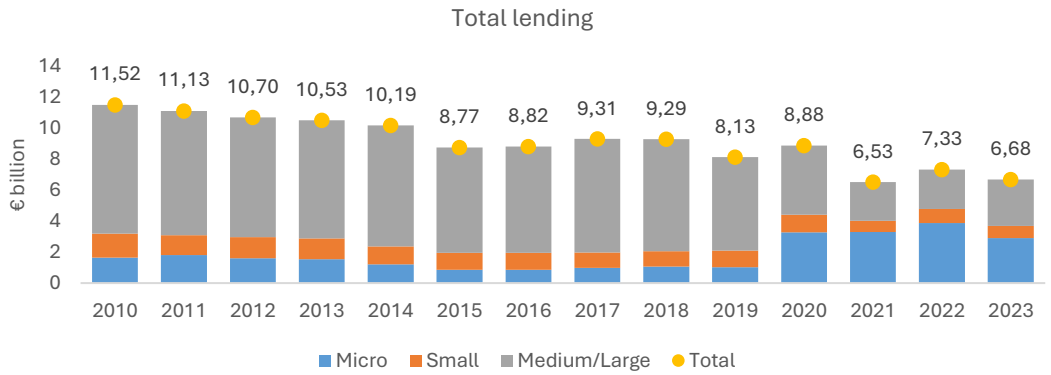
Figure 5.3: Breakdown of turnover of Construction and Engineering enterprises sample by size category (2010-2023)



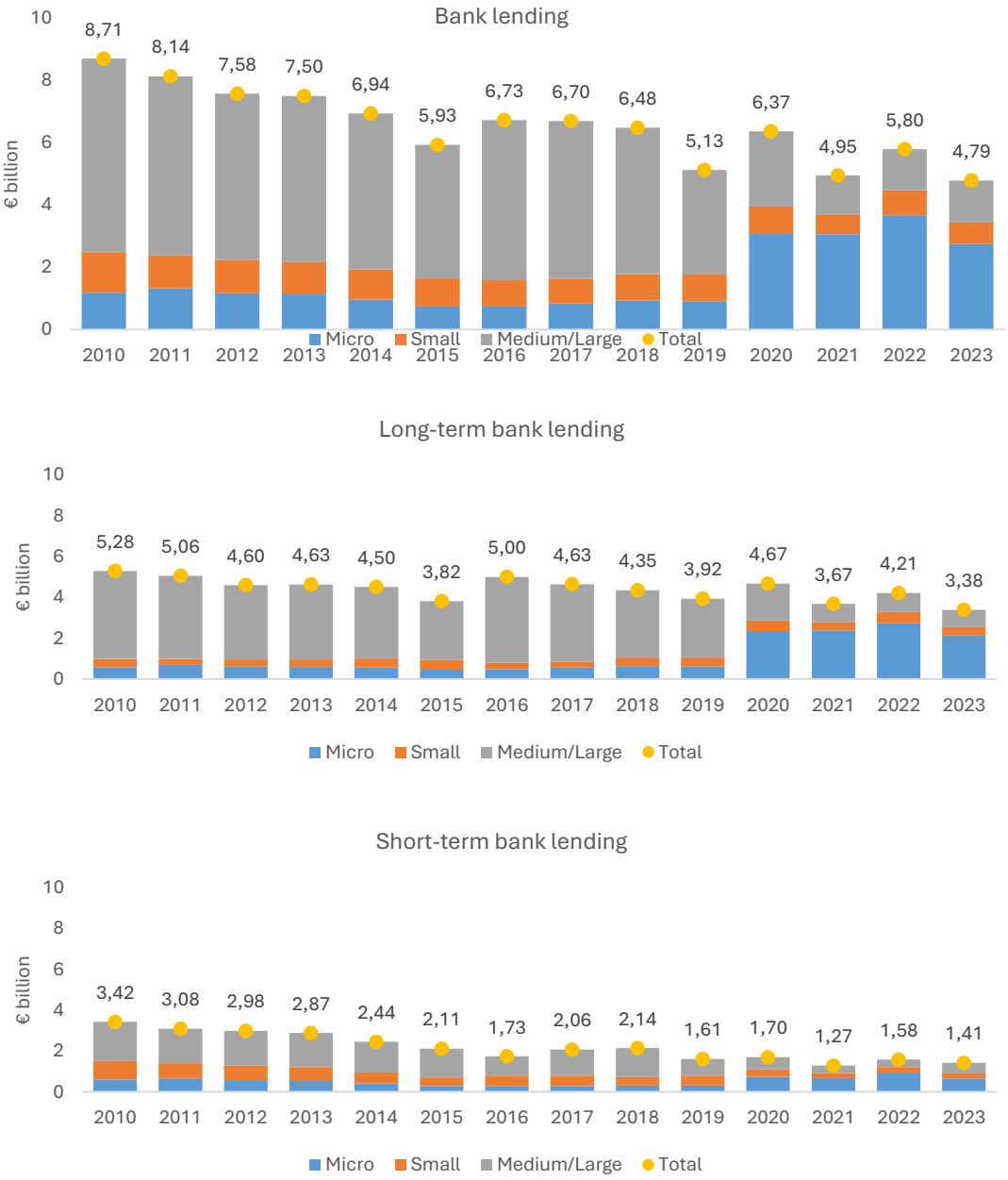
Source: ICAP "Data Prisma", IOBE analysis.

The total borrowing of the sampled companies between 2010 and 2023 shows a downward trend, falling from EUR 11.52 billion in 2010 to EUR 6.68 billion in 2023 (Figure 5.4**)**. The largest share of total borrowing comes from bank lending[21] , which follows a similar trend to total borrowing. Bank lending in the sector is mainly long-term loans, while short-term bank loans have been significantly reduced over the period 2010-2023.

Figure 5.4: Evolution of total and bank lending by category of loans and size of enterprises (2010-2023)



[21] Other borrowings mainly relate to other short-term liabilities, or long-term bond issues.



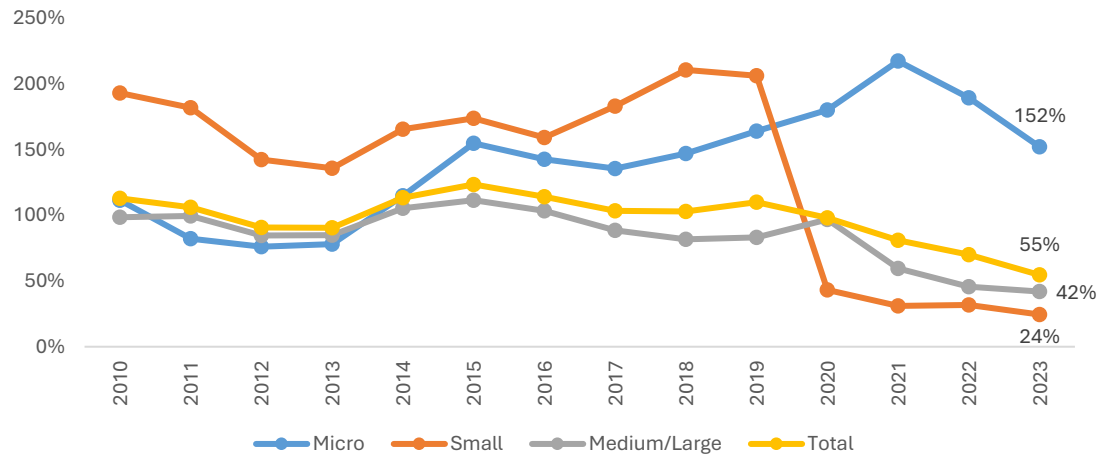
Source: ICAP "Data Prisma", IOBE analysis.

It is noted that 28% of total bank lending, on average over the period 2020-2023, was for medium and large enterprises, while the largest share (58%) was for micro enterprises. This picture is not significantly different for long-term loans, where medium and large sized firms accounted for 27%, on average, of the sector's long-term lending and micro firms for 61% (with the remaining 12% relating to small firms. In the case of short-term lending, the largest share (50% on average over the period 2020-2023) is for micro enterprises, with medium and large enterprises accounting for 31% and small enterprises for the remaining 19%.

The ratio of total borrowing to turnover of the sample firms ranged from 55% to 123% over the period 2010-2023, with the lowest value recorded in 2023, as the loan balances of the sample firms were reduced (Figure 5.5). Small firms show the lowest values of loan

burden after 2019 (24% in 2023), while medium and large firms also show lower values compared to the total sample (42% in 2023). Very high values are shown for this indicator for micro firms (152% in 2023).

Figure 5.5: Evolution of total bank lending to construction sales by enterprise size category (2010-2023)



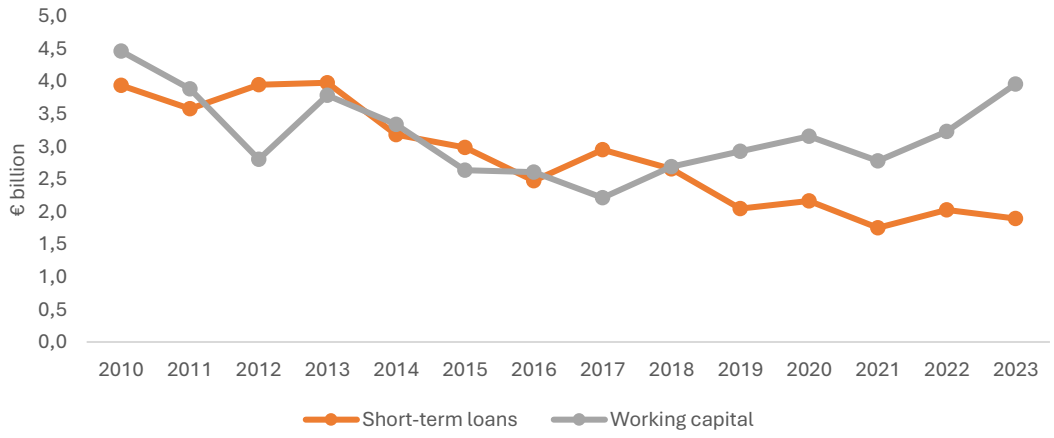
Source: ICAP "Data Prisma", IOBE analysis.

With regard to the relationship between short-term bank borrowing and working capital, it can be seen that the working capital of the sampled firms as of 2019 is higher than their short-term borrowing, indicating that firms in the sector now maintain sufficient liquidity to repay their short-term loans (Figure 5.6).

Note that in 2022, the ratio of short-term bank loans to turnover (Figure 5.7) was highest among micro firms (46%) and was followed by small (9%) and medium/large firms (7%), while for the sample as a whole the ratio was 15%.

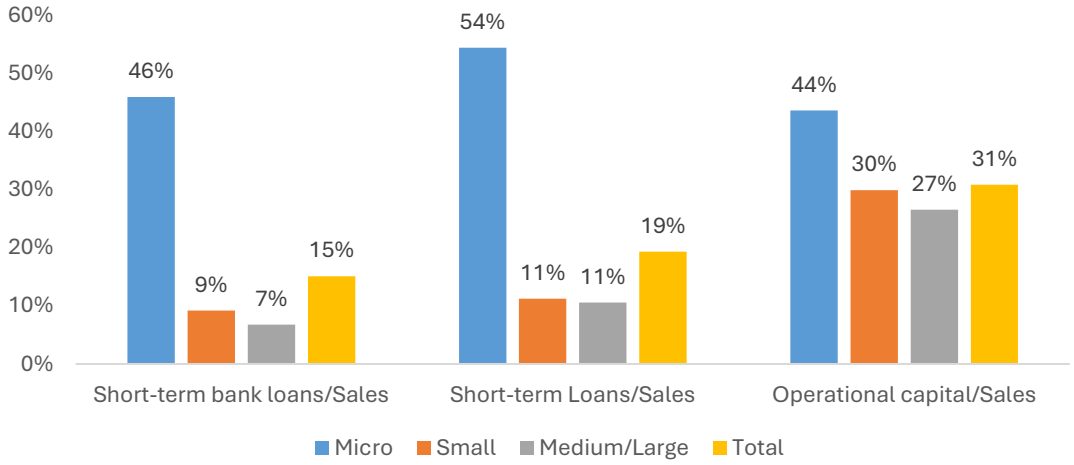
With regard to total lending, as a broader measure of bank lending, there is not much variation by firm size. Certainly, the ratios of total lending to sales are higher. For micro enterprises, total lending to sales is 54%, while for small and medium/large enterprises it is 11% respectively. For all firms, the average total loans to sales is 19%. The distribution by firm size is similar in the case of the ratio of working capital to turnover where in 2022 it was highest in micro firms (44.0%) followed by small (30%) and medium/large (27%), while in the total sample it was 31%.

Figure 5.6: Development of operational capital and short-term bank lending in the Construction sector (2010-2023)



Source: ICAP "Data Prisma", IOBE analysis. **Note:** Working Capital = Current Assets – Short-term Liabilities.

Figure 5.7: Short-term bank loans and operational capital (% of turnover), 2022



Source: ICAP "Data Prisma", IOBE analysis. **Note:** Working Capital = Current Assets – Short-term Liabilities.

5.2 *Econometric investigation of the factors influencing the level of bank lending to enterprises*

This section presents the econometric model used to estimate the factors affecting the level of bank borrowing (short and long term) of the sample of technical and design enterprises. Specifically, an within transformation (fixed and random effects) regression model for stratified data (panel data) of the form:

$$y_{it} = \alpha_i + \beta x_{it} + v_i + t_t + u_{it}$$

where:

y_{it}: the dependent variable, in this case the short-term and alternatively the long-term bank lending, in euros, of the firmi at the timet ,

α_i: the constant term,

β: the vector of the parameters of the independent variables to be estimated ,x_{it}

x_{it}: the independent variables at the firm level, in this case the firm's salesi at timet and the firm's earnings before interest, taxes, depreciation and amortisation (EBITDA)i at timet , the annual GDP at time t, both in euro, as well as a set of STAKOD codes in the form of dummy variables,

u_{it}: the standard error, which varies over time and from one production unit to another, with ,$E\{u_{it}\} = 0$

v_i: unobserved variable that varies across firms (firm specific), but remains constant over time for each firm.

t_t: a binary variable for each year, which acts as a control variable for unobserved time trends.

To estimate the above model, the literature has developed the fixed effects approach and the random effects approach.

The fixed effects approach assumes that any parameter that relates to the specific characteristics of a firm and does not change over time (e.g. management structure, culture) can affect the estimates and must be controlled in some way so that it does not affect the estimates of the effect of other factors. Therefore, this approach aims to remove the effects of all those characteristics that do not change over time in order to ascertain the true effect of the independent variables on the dependent variable. Thus, in this case the assumption of correlation between the standard error and the coefficients of the independent variables is made.

In *the random effects model*, the assumption is made that the variables that relate to the specific characteristics of a firm and affect the dependent variable causing heterogeneity are selected from a random sample and are not correlated with the other explanatory variables in the model. Thus in this case it is assumed that the standard error is not correlated with the coefficients of the independent variables.

In the context of the study, the subsamples to be estimated were as follows:

$$Shortbankloans_{it}\text{=c (1)+}\beta_1 Sales_{it} + \beta_2 EBITDA_{it} + \beta_3\, GDP + \sum_{i=1}^{I} \gamma_i\, NACE + \sum_{t=1}^{T} YD_t + \varepsilon_{it}$$

$$Longbankloans_{it}\text{=c +}\beta_1 Sales_{it} + \beta_2 EBITDA_{it} + \beta_3\, GDP + \sum_{i=1}^{I} \gamma_i\, NACE + \sum_{t=1}^{T} YD_t + \varepsilon_{it}$$

(2)

Where *shortbankloans,* the balance of short-term bank loans; *longbankloans, the* balance of long-term bank loans; sales, turnover; EBITDA, earnings *before* interest, taxes, depreciation and amortization; and GDP, annual GDP. *The* control variables NACE and YD denote the unobserved effects of the firm typology and time trends from 2016 to 2023 respectively. In the estimations carried out, the appropriateness of the two approaches to the available data was determined using the Hausman test.[22] Overall, the random

[22] The Hausman test tests the hypothesis that there are no statistically significant differences between the estimated coefficients of the random and fixed effects models. If the null hypothesis H(0) is rejected: the coefficient β of the fixed effects model is consistent but inefficient, while the coefficient β of the random effects model is consistent and efficient, then the Fixed Effects model is more appropriate.

effects model was preferred over the fixed effects model. At the same time, a test for multicollinearity was carried out using the Variance Inflation Factor test.[23]

The results of the estimations show that sales have a positive effect on the growth of both short-term and long-term bank lending for almost all the categories of firms considered (micro, small, medium and large firms (except for micro firms in the case of long-term bank lending) and this result is statistically significant at a level of statistical significance of at least 5% (Table 5.1 and Table 5.2).

The estimated coefficients show that an increase in sales of €1.0 million causes on average:

- An increase in short-term loans of €21 thousand for micro enterprises, €30 thousand for small enterprises and €66 thousand for medium and large enterprises
- There seems to be no significant effect on long-term borrowing for micro enterprises, while an increase in long-term loans of €56 00 for small enterprises and €82 00 for medium and large enterprises is estimated.

At the same time, the estimates show a negative relationship between earnings before interest, taxes, depreciation and amortisation and short-term and long-term bank borrowing for small, medium and large enterprises, while for micro enterprises this relationship is positive and statistically significant only in the case of long-term bank borrowing.

Table 5.1: Results of econometric estimations, short-term bank lending

Dependent	Short-term bank lending		
Independent	***Micro enterprises***	***Small enterprises***	***Medium and large enterprises***
Sales	0,0212**	0,0306***	0,0659***
	(0,054)	(0,007)	(0,006)
EBITDA	0,0047	-0,0730***	-0,0873**
	(0,003)	(0,017)	(0,037)
GDP	-0,0730	1,2767***	36,6566***
	(0,172)	(1,394)	(29,645)
Constant	127.279,06	1.4087e+07***	-6.61E+06
	(0,245)	(0,000)	(0,530)
Obs	39.255	4.687	941
Number of enterprises	10.868	1.061	214
STAKOD controls	Yes	Yes	Yes

***: 1% level of statistical significance; **: 5% level of statistical significance; *: 10% level of statistical significance; standard errors in brackets.

Source: IOBE estimates.

[23] The VIF test is a measure of the degree of multilinearity in a regression model. The VIF measure is equal to the ratio of the total variance of the model using a set of independent variables to the variance of the model that includes only one independent variable from the set of independent variables in the model being estimated. This ratio shall be calculated separately for each independent variable in the subsample. A high VIF score (usually above 10) indicates that the independent variable in question is highly collinear with the other independent variables in the subsample.

Table 5.2: Results of econometric estimations, long-term bank lending

Dependent	Long-term bank lending		
Independent	***Micro enterprises***	***Small enterprises***	***Medium and large enterprises***
Sales	-0,0045	0,0558***	0,0825**
	(0,0259)	(0,000)	(0,034)
EBITDA	0,0783***	-0,188***	-0,270
	(0,0164)	(0,038)	(0,156)
GDP	0,7802	-9,139***	-110,7297
	(0,833)	(0,003)	(0,458)
Constant	110891,5	1,30e+07***	1,04e+08
	(0,843)	(0,000)	(0,135)
Obs	39.255	4.687	941
Number of enterprises	10.868	1.061	214
STAKOD controls	Yes	Yes	Yes

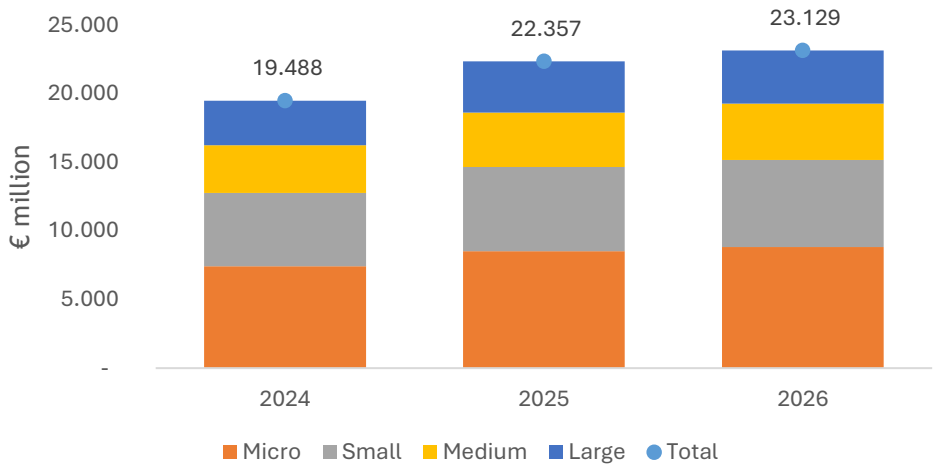
***: 1% level of statistical significance; **: 5% level of statistical significance; *: 10% level of statistical significance; standard errors in brackets.

Source: IOBE estimates.

5.3 *Projection of bank lending of technical and design enterprises by size category*

The prospect of further growth in Construction will significantly boost the sizes of firms in the sector over the period 2025-2026. Based on the distribution of the output value of the Construction sector (construction and architectural and engineering activities) by size category of enterprises for the year 2022[24] , and the projections for the output value of the sector, the amount and distribution of turnover of enterprises by size (micro, small, medium and large enterprises) for the period 2024-2026 was estimated. Overall, the turnover of the sector is estimated to be boosted, reaching EUR 23.1 billion in 2026, if all the Recovery and Resilience Facility resources (grants and loans) that have been assumed to be directed to construction projects are absorbed (Figure 5.8).

Figure 5.8: Estimate of turnover by firm size, 2024-2026

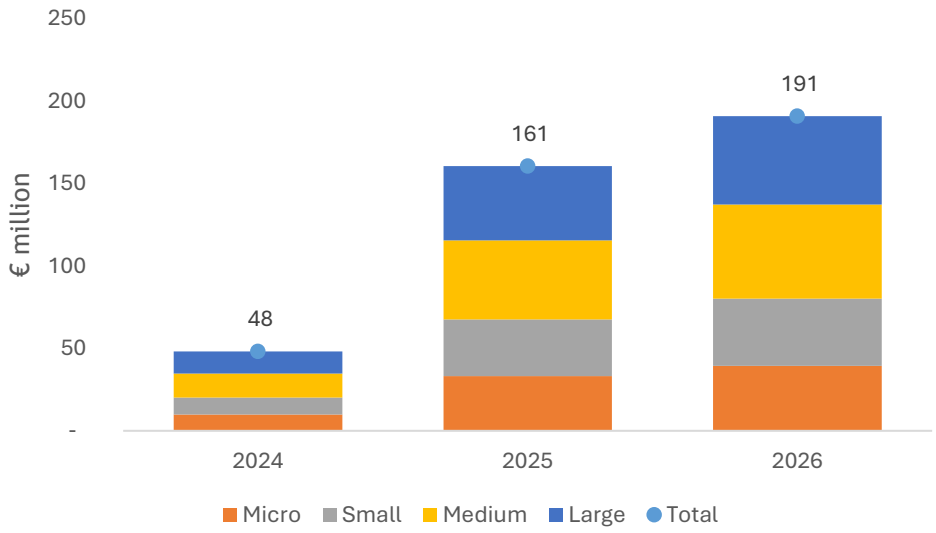


Source: IOBE.

[24] According to the relevant Eurostat data for 2022, micro enterprises account for 38% of the sector's output value, small enterprises for 27%, medium-sized enterprises for 18% and large enterprises for 17%.

The expected increase in turnover of engineering and design firms will also fuel an increase in their bank lending, according to the econometric results in this chapter. In particular, it is estimated that the total net short-term borrowing of firms in the sector in the period 2025-2026 could increase by up to EUR 191 million[25] (Figure 5.9). For micro enterprises, the increase in short-term bank loans is estimated at up to EUR 39 million, representing 21% of the total annual increase. Further, small enterprises account for 21%, medium enterprises for 30% and large enterprises for 28% of the total estimated increase in short-term bank lending.

Figure 5.9: Estimate of change in short-term bank loans by firm size

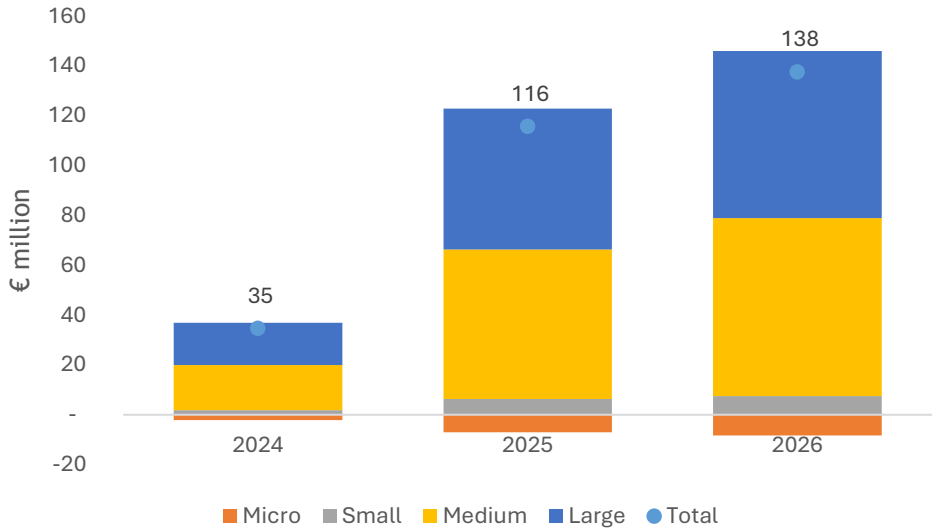


Source: IOBE.

Similarly, it is estimated that the total net long-term borrowing of companies in the sector over the period 2025-2026 could increase to €138 million (Figure 5.10). For micro enterprises, a decrease in long-term bank loans is estimated. Small firms account for 5%, medium firms for 52% and large firms for 49% of the total estimated increase in long-term bank lending.

[25] The additional financing needs have been identified compared to the level of activity in the Construction sector in 2023.

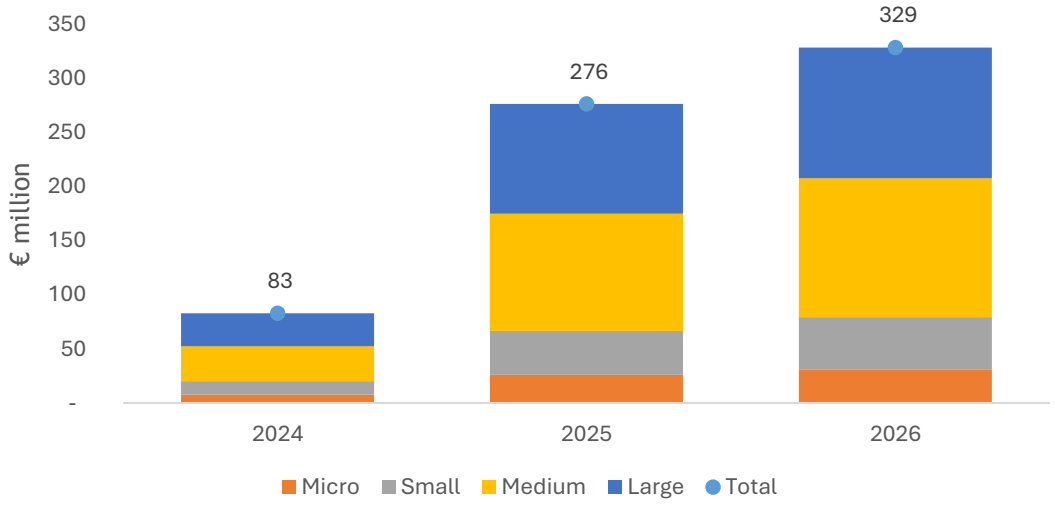
Figure 5.10: Estimate of change in long-term bank loans by firm size



Source: IOBE.

In conclusion, based on the above estimates, the total net bank lending of enterprises in the sector in the period 2025-2026 could increase by up to EUR 329 million (Figure 5.11). For micro enterprises, the increase in total net bank lending is up to EUR 31 million, representing 9% of the total increase. Small enterprises account for 15%, medium-sized enterprises for 39% and large enterprises for 37% of the total increase in net bank lending.

Figure 5.11: Estimate of change in total bank loans by firm size



Source: IOBE.

6 CHALLENGES FOR THE CONSTRUCTION SECTOR

6.1 *Introduction*

From what has been analysed in the previous chapters it is clear that the prospects for the growth of Construction and the maximisation of its contribution to the Greek economy are positive. However, there are still broader challenges for the sector. These include, among others, issues related to human resources and financing of the sector's enterprises, the outlook for Construction after the completion of the Recovery and Resilience Facility in 2026, the institutional framework of the public works production system and the national infrastructure planning, the integration of technology and the digitalisation of Construction in order to enhance the sector's productivity, the adaptation of the sector to climate change and, finally, the adoption of ESG standards by construction companies.

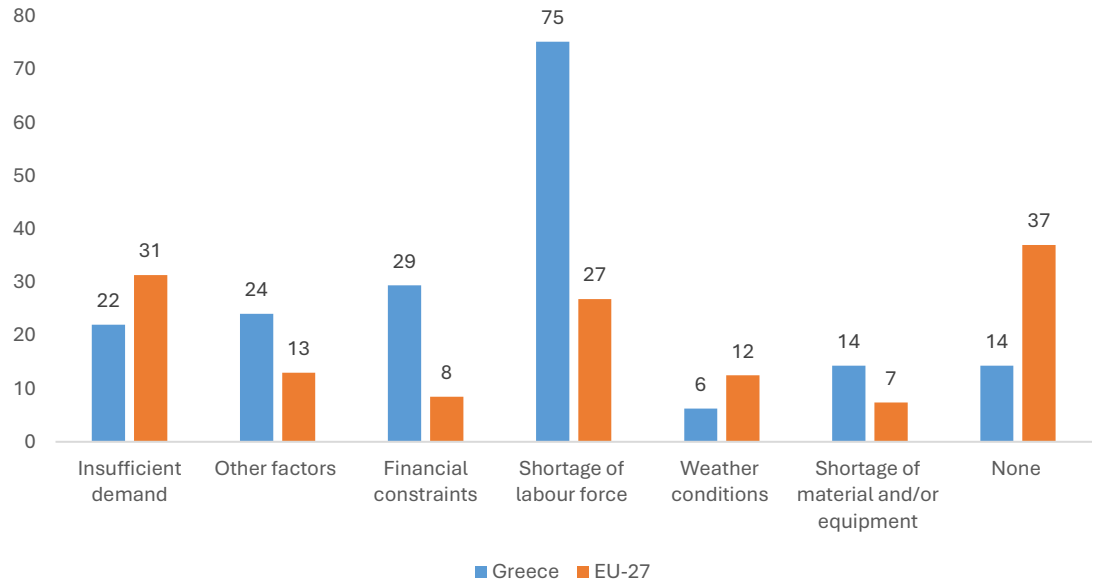
Figure 6.1: Challenges for the Construction sector

6.2 *Human resources*

The Construction industry faces a variety of barriers stemming from the economic and regulatory environment affecting construction activities. Based on the responses of construction companies to the Business and Consumer Surveys conducted monthly by IOBE on behalf of the European Commission, labor shortage is still projected as the main barrier to growth in 2024[26] , while financing difficulties and the category "other factors"[27] are also negatively assessed in terms of their impact on construction activity in Greece (Figure 6.2). The importance of insufficient demand as a factor hindering business activity in Construction is lower (but not negligible), as is the shortage of materials and machinery. Finally, climatic conditions do not create serious obstacles to domestic construction activity.

[26] Labor shortage was the most serious obstacle for the sector in 2023 as well.
[27] Factors that are not determined in advance in the IOBE's business and consumer surveys.

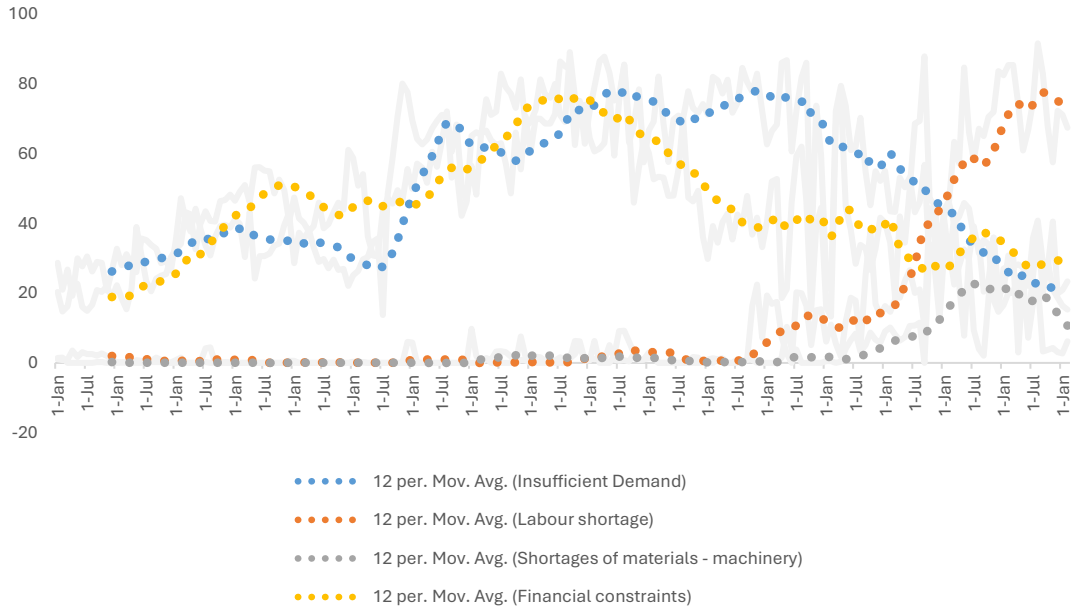
Figure 6.2: Factors limiting business activity in Construction sector, 2024



Source: DG ECFIN, *Factors not defined in advance in the economic survey

Consequently, labor shortages remain the main source of concern for domestic construction firms, indeed having experienced a sharp rise from 2022 onwards, but a weak downward trend in the second half of 2024. At EU level, the percentage of firms that consider that there is a shortage of staff is lower, but not negligible. Weaker in the EU-27 are also the pressures from financial constraints and other factors. On the contrary, the impact of insufficient demand is perceived to be stronger. Finally, the percentage of construction enterprises in the EU that state that their business activity is not hampered is considerably higher than in Greece (**Error! Reference source not found.**). It is worth noting that in Greece, insufficient demand and financial constraints have been the main obstacles for businesses in the sector in recent years, but after 2021 their impact has been reduced (Figure 6.3).

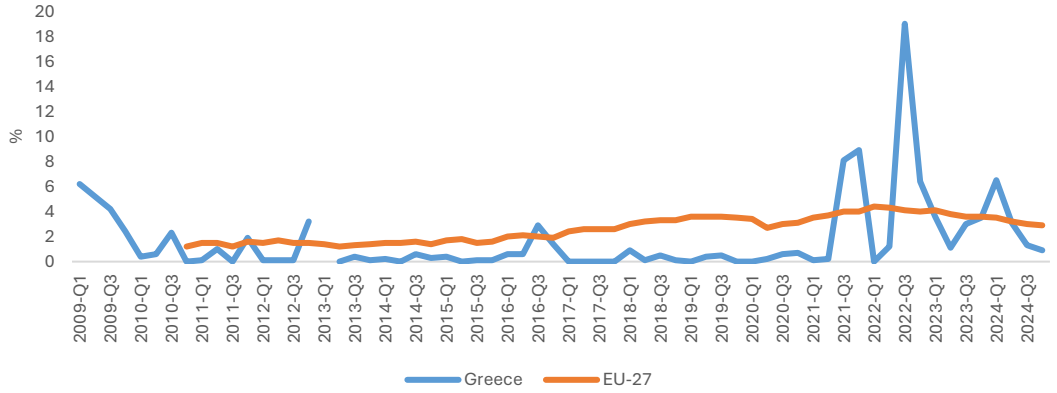
Figure 6.3: Factors limiting building activity in Construction sector in Greece (Jan 2008 - Feb 2025)



Source: DG ECFIN, *Factors not defined in advance in the economic survey

Job vacancies as a percentage of total jobs in the construction sector were minimal during the 2010s, as the sector did not create many new jobs. In 2024, vacancies in Construction averaged 3 percent of total industry jobs, with the highest rates recorded in the first quarter of the year. In the EU, it appears that after 2023 a slight downward trend in Construction job vacancies on average emerges, to an average of 3.1% of total jobs in the sector in 2024. Labor shortages imply delays that can lead to project budget increases (e.g., overtime and other labor cost items required to meet project schedules).

Figure 6.4: Job vacancy rate in the Construction sector (% of total jobs)



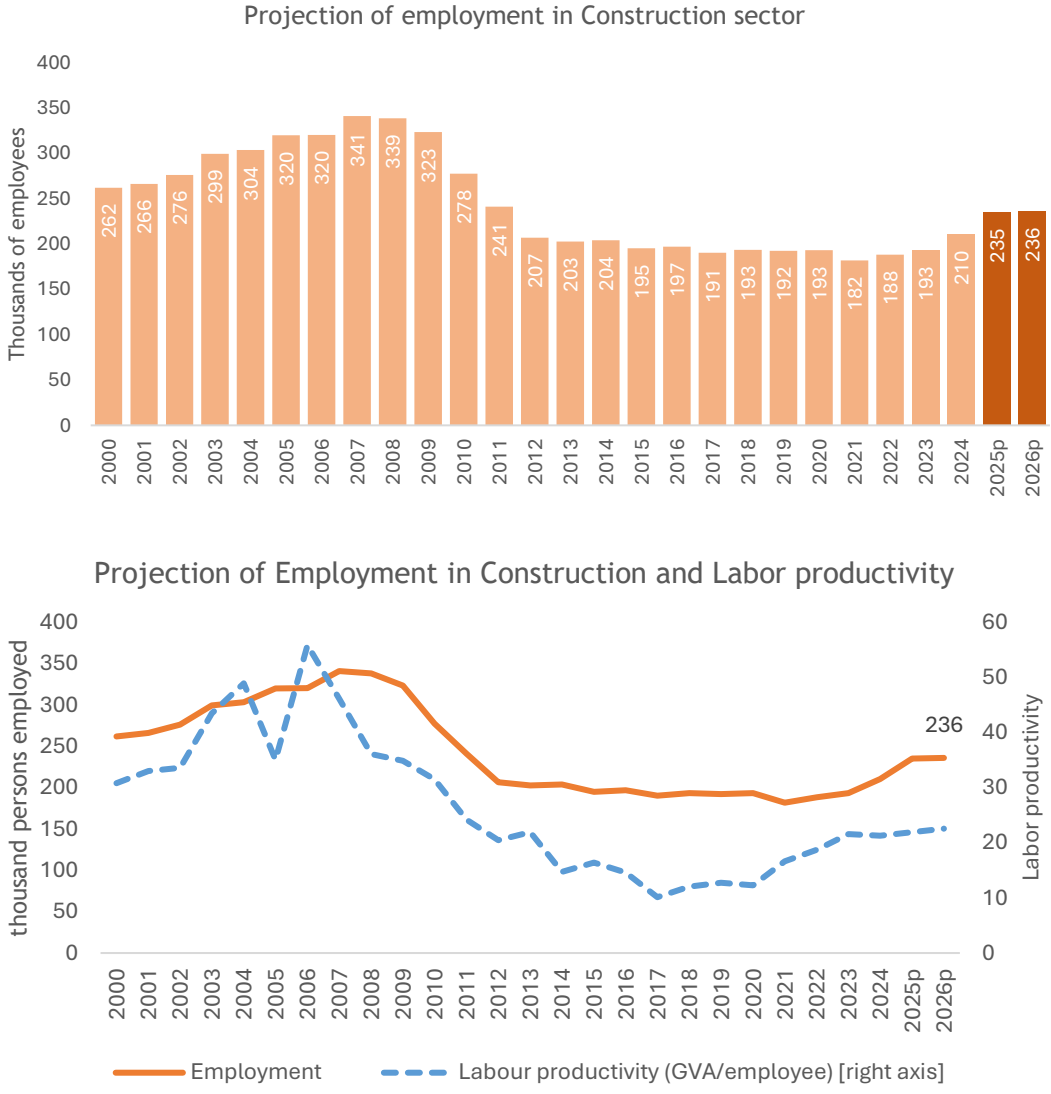
Source: Eurostat.

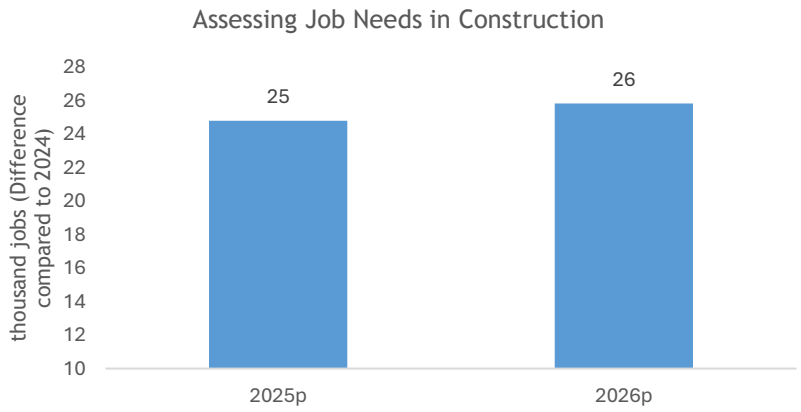
It is worth noting that the decline in domestic construction activity had exacerbated the phenomenon of 'brain drain', i.e. the movement of highly skilled people abroad for work or education, which in the current context contributes to the shortage of personnel in Greece. Moreover, as a shortage of skilled human resources (technicians and engineers) in the construction industry is also present in other countries, there is strong competition

to attract workers, with the offer of significantly higher wages that are more difficult to provide in Greece.

The prospect of growth in the domestic construction activity, as identified in a previous chapter of the study (optimistic scenario), will create additional needs for labor of various skills. According to our estimates, if this Construction growth scenario is verified, the total number of employees in Construction should increase in the period 2025-2026 to 236 thousand workers, a level that is 26 thousand workers higher compared to the total employment in Construction in 2024 (210 thousand workers) (Figure 6.5). Already, as mentioned, the first quarter of 2025 saw a 5% year-over-year increase in employment, which limits the industry's estimated additional labor needs. Employment projections to 2026 have assumed output value per worker is at the 2024 level, but with a 3% annual improvement in labor productivity to account for the possibility of underemployment that may affect labor productivity.

Figure 6.5: Projection of employment in Construction sector, labor productivity and estimation of job vacancy

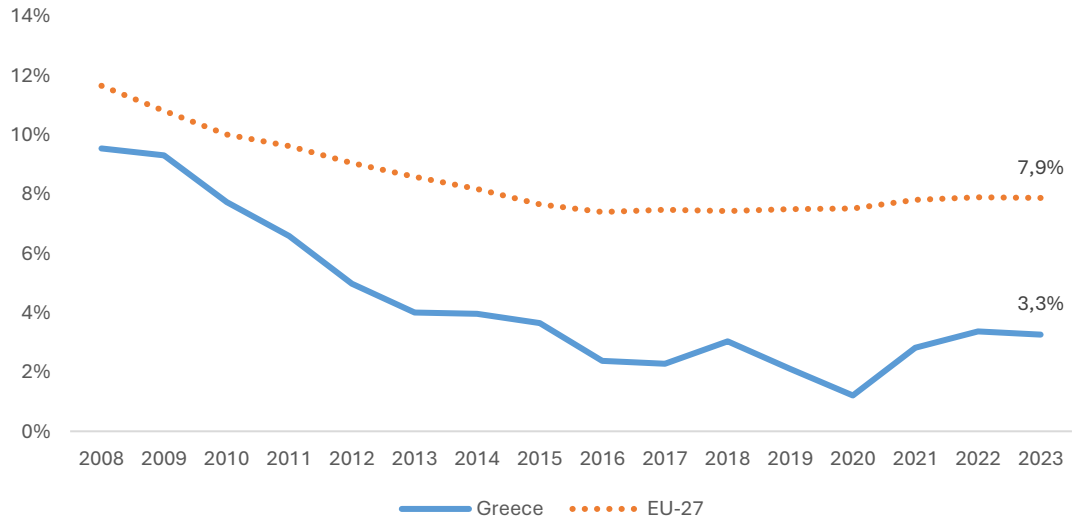




Source: Eurostat. Analysis and estimates IOBE. e: Estimation, p: Projection

However, amidst labor shortages and demographic ageing of workers in the sector, the trend of decreasing participation of young people in the labor force of the Construction sector in Greece over the last decade remains worrying (Figure 6.6). In 2023, young people aged 15-24 years old constituted only 3.3% of the sector's workforce (down from 9.5% in 2008), while in the EU-27, which is also experiencing a milder downward trend, the corresponding figure was on average 7.9%. In fact, this percentage is lower than the participation of young people aged 15-24 in all sectors of the Greek economy (4.6% in 2023). Thus, Greece ranks last among the EU-27 Member States in terms of the participation of young people in the labor force in the Construction sector (Figure 6.7). This downward trend in the number of young workers, which is also linked to the relative delay in the entry of young people into the labor market (e.g. due to studies), affects the transfer of existing knowledge and skills and undermines the current and future competitiveness of the Construction sector.

Figure 6.6: Percentage of persons aged 15-24 employed in the Construction sector in Greece and in the EU-27



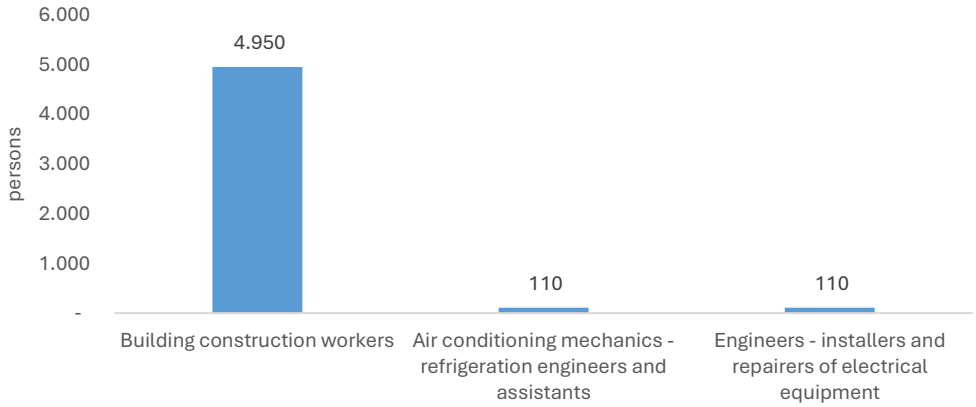
Source: Eurostat, IOBE analysis.

Figure 6.7: Percentage of persons aged 15-24 employed in the Construction sector and in the total economy in the Member States of the European Union, 2023

Source: Eurostat, IOBE analysis.

In order to cover vacancies in various sectors of the economy, a maximum number of residence permits for third-country nationals for the year 2025 was established (Government Gazette A 42, 13.3.2025). The recruitment of workers from third countries is allocated to sectors in which there is no labor supply from Greek workers. In the Construction sector (workers and craftsmen in the erection and completion of buildings), the ceiling was set at 5,170 posts, mainly for skilled construction workers. For workers from third countries, the same institutional framework that governs the employment relations of Greek/European workers (wages, minimum wage, working hours, health and safety, etc.) applies. In addition, seasonal workers should be provided with accommodation for their stay.

Figure 6.8: Maximum Number of Jobs for Third-Country Nationals in 2025 - Workers in the construction and completion of buildings



Source: Ministry of Labor and Social Security.

Factors such as the ageing/retirement of the workforce and the negative perception of young people about the job in the sector may prolong the labor shortage in the

Construction sector in the future. Therefore, construction companies should consider actions to mitigate the problem, such as re-evaluating wages and benefits, implementing training and apprenticeship programs to refresh skills and develop skilled workers, using new technologies and automation to improve productivity and reduce reliance on manual labor, improving working conditions, promoting the image/resonance of the construction industry, closer linkages with universities, etc. All of the above will improve the attractiveness of a career in the construction industry.

The demand for new skills to implement the green and digital transition is growing and could be an opportunity for the future sustainable competitiveness of Construction. The European Union supports the development of the Construction sector through funding for training and capacity building. However, as the funding available is not specific to the construction sector, it is up to national initiatives to prioritise supporting and training workers in the sector in an appropriate way.

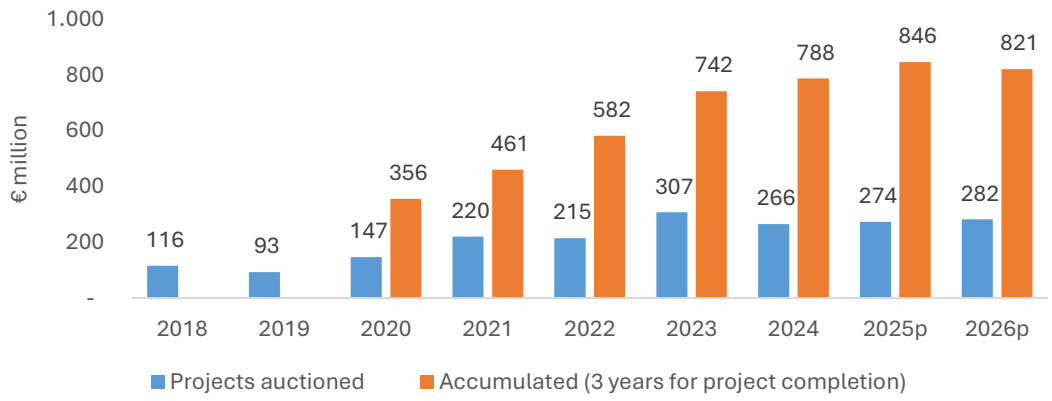
6.3 Funding for construction and design companies

It is considered that the financing of construction and design companies should be strengthened to meet the increased needs for working capital, investment, project development, issuance of letters of guarantee for participation in tenders, good workmanship, etc. This should be done in an environment of high borrowing costs and limited access to loan capital, especially for SMEs.

The issuance of letters of guarantee is taken into account in the overall lending of construction companies by financial institutions, which also impose funding limits per sector and company, as part of their risk management and the provisions of the regulatory framework[28] . By way of illustration, assuming that a project takes three years on average to complete (this can be considerably longer for large infrastructure projects), all public sector projects (including a proportion of non-technical projects) contracted in 2024 required the issuance of performance bonds of around EUR 266 million[29] (Figure 6.9). If this amount is added to the total amount of performance bonds for the projects of the previous two years that we consider not completed, this results in a total amount of EUR 788 million, which is a significant increase compared to the previous years of lower activity, and is expected to remain at a similar level in the coming years. In any case, it should be ensured that the guarantee institutions are able to cover the amounts of the letters of guarantee for participation in tenders and the good execution of the projects. A related issue is the validity period of performance bonds, which may accumulate despite the completion of projects. To this end, upon final acceptance of a project, the performance guarantee letter should be returned automatically.

[28] The total amount of each bank's letters of guarantee is determined by a decision of the Minister of Finance and cannot exceed half of its lending to the Greek economy, as indicated by the list of balances by sector and category of lending and placements in private corporate bonds published by the Bank of Greece.
[29] The performance guarantee shall amount to a maximum of 5 % of the contract value, plus VAT.

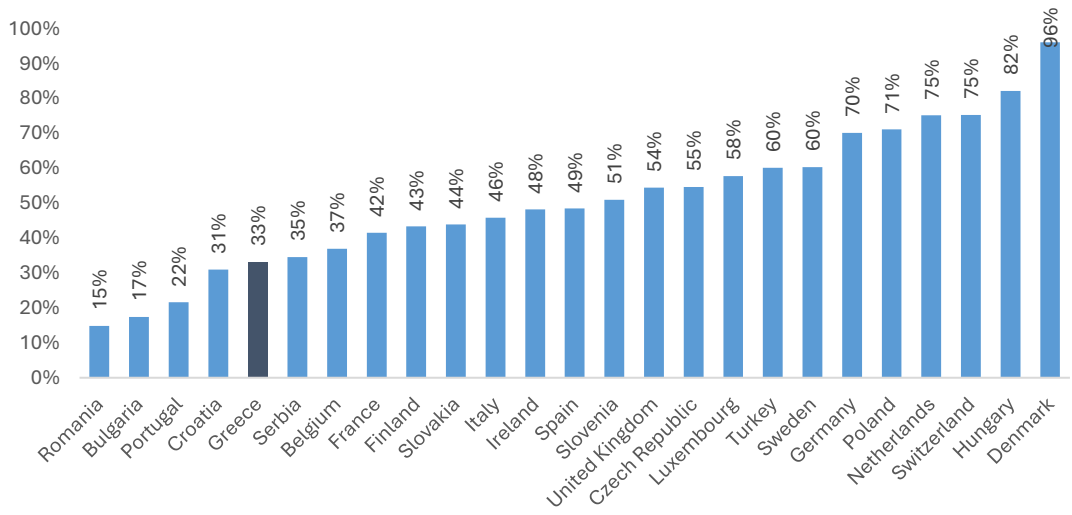
Figure 6.9: Estimation of the Amount of Guarantee Letters for Public Works Based on the Value of Signed Contracts



Source: IOBE estimates. p: projection.

The need to seek additional financing and liquidity is exacerbated by the delays in payments to construction companies, including the public works sector, which is a chronic problem in the industry. By way of illustration, based on the accounting data presented in the previous chapter, the average length of time for receivables from companies in the sector as a whole[30] is estimated to be 240 days (about 8 months) in 2023. It is also noteworthy that due to these delays the rate of timely payments in the Construction sector in Greece is among the lowest in Europe, as only one in three payments of construction companies are made on time (Figure 6.10). Measures are therefore needed to address late payments in order to smooth out the problems created in the market. Financing difficulties can be mitigated by the use of various financial instruments (e.g. guarantee funds, interest rate subsidies, microfinance, etc.) to ensure that public and private investment in construction projects is carried out smoothly.

Figure 6.10: Proportion of timely payments to Construction in different countries, Q4 2023



Source: Payment Study 2024. https://www.dnb.com/en-ch/knowledge/study/payment-study-2024-download.html

[30] Index: [Receivables / Turnover] x 365.

6.4 *Outlook for Construction after 2026*

The completion of the Recovery and Resilience Facility projects in 2026 may create a "gap" in domestic construction activity. According to information on the current planning[31] , there is a stock of infrastructure projects in the road, rail, energy and telecommunication network sectors that will be completed after 2026 (period 2027-2030) holding back construction activity.

Table 6.1: National infrastructure projects: Road, Rail, Energy and Telecommunication Networks

CATEGORY OF INFRASTRUCTURE PROJECTS	Budget (EUR million)	Estimated time of completion
A. ROAD NETWORK		
1. Completion of the Patras-Pyrgos motorway	300	4th quarter 2025
2. Northern section of the E65 Motorway of Central Greece	442	Until 2nd quarter 2026
3. Thessaloniki Eastern Internal Regional Ring Road (flyover)	463	2nd quarter 2027
4. Rehabilitation of road infrastructure damage caused by Daniel and other natural disasters	919	2029
5. BOAK: section Chania - Heraklion	1.750	2030
6. BOAK: Neapolis - Agios Nikolaos section	186	2026
7. BOAK: Section Hersonissos - Neapolis	330	2027
8. Extension of the Ionian Road in the section Ioannina - Kakavia	310	2029
9. Road axis Bralos - Amfissa	300	2028
10. Chalkida and Psakhnon bypass	210	2028
11. Road axis Kalamata - Rizomilos - Pylos - Methoni	252	2028
12. Road axis Vonitsa - Lefkada	49	4th quarter 2025
13. Yalova bypass	41	2027
14. Vertical axis of the Egnatia Highway: Section Drama-Kavala (Subsection: A/K Krinidon - I/K Stavrou)	61	2027
15. Eastern Regional Road Alexandroupolis	36	2026
Subset of road projects	***5.549***	
Subtotal of road works from 2027 onwards	***4.636***	
B. RAILWAY NETWORK		
1. Rhododaphne - Rio section	130	
2. Thessaloniki - Promahonas upgrade, Phase A	167	Tendering phase
3. New railway connection Thriasios - Sphinga	NE	1st phase of studies
4. Installation of the Electrification - Signalling - Telecommunications Telecommand ECTS L1 of the Larissa - Volos line	42	Delay due to damage Daniel
5. Re-opening of the electrification of the line S.S. Axios - S.S. Gefyra.	NE	
6. Upgrade of Alexandroupoli - Ormenio line	720	Pricing phase
7. Railway connection of the 6th Pier of the Port of Thessaloniki.	54	3rd quarter 2026
8. Railway line Nea Karvali - Toxotes	193	2029
Subset of railway works	1.305	
Subtotal of railway works from 2027 onwards	1.252	
Γ. ENERGY NETWORKS		
1. Main Network Projects		
Pipeline to North Macedonia	SE	SE
Expansion of the domestic gas network	NE	NE
2. Island Electricity Interconnections		
Cyclades	523	2026
Dodecanese	2.050	2028/2029
North Aegean	1.250	2028/2029
Subset of energy infrastructure projects	***3.823***	
Subtotal of energy infrastructure projects from 2027 onwards	***3.300***	
D. TELECOMMUNICATIONS NETWORKS		
Optical fibre network	NE	Expansion of Fiber to the Home (FTTH) connections with the aim of full coverage of the country by 2030 from ~50% in 2025
Ultra Fast Broadband (UFBB)	743	PPPs - Public funding €300 million

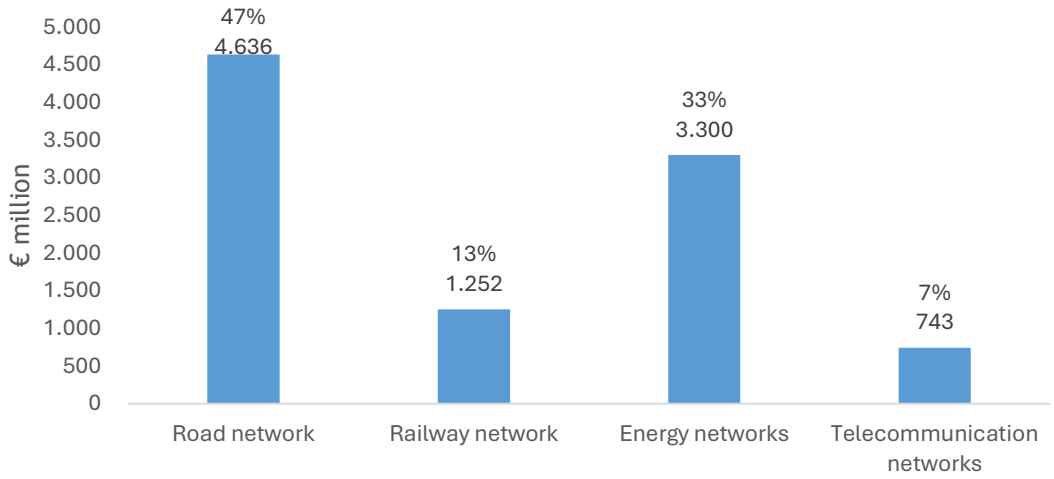
[31] See https://www.amna.gr/home/article/909673/Ethnika-erga-upodomon-Odika--Sidirodromika--Energeiaka-kai-Tilepikoinoniaka-Diktua. Retrieved 9.6.2025.

New National Broadband Plan 2026 - 2030	NE	1 Gbps (fibre everywhere), 5G SA & Slicing (everywhere), Geographical coverage (FWA, Satellite, etc.), WiFi Hotspots (public places), Undersea Fibre Optic Cables
Subset of rail projects	***743***	
Subset of rail projects from 2027 onwards	***743***	
TOTAL TOTAL	**11.520**	
OVERALL TOTAL (2027-2030)	**9.930**	

Source: Department of Infrastructure and Transport and RES (https://www.amna.gr/home/article/909673/Ethnika-erga-upodomon-Odika--Sidirodromika--Energeiaka-kai-Tilepikoinoniaka-Diktua). SE: Data not available.

According to the data presented by Table 6.1, projects with a total budget of close to €10 billion (i.e. €2.5 billion per year on average) are planned or have already been planned and launched for the period 2027-2030. Almost half (47%) of the budget of these projects is for road networks, while a third (33%) of the budget is for energy networks (**Error! Reference source not found.**Figure 6.11). The rail network will receive 12% of this budget, with the remaining 7% going to telecommunications network projects. These projects are the most important in terms of current planning and are expected to be complemented by a number of other public and private projects on a larger and smaller scale. At the same time, other PPP projects are in the process of being tendered or will be tendered in the near future, although there is a relative limitation in terms of annual availability payments through the public investment programme.[32]

Figure 6.11: Budget for national infrastructure projects for the period 2027-2030



In the housing and other building projects sector, the gradual normalisation of the private construction market following the legislative regulation on the abolition of building incentives - in the optimistic scenario - could bring construction activity back to a higher level (compared to the first half of 2025) - in line with general economic conditions, housing demand and government housing policy (e.g. new dwellings construction through PPPs and public works in high-need areas, renovation/re-use of vacant or abandoned properties), the evolution of land and construction costs and investment returns.

[32] See for example: https://ypodomes.com/i-aktinografia-ton-megalon-ergon-sdit-poioi-diagonismoi-oloklironontai-kai-poioi-einai-se-exelixi/ . Retrieved 9.6.2025.

Renovations and energy upgrades may also provide a significant boost to construction activity related to buildings after 2026 due to the European and national green transition policy. According to the National Plan for Energy and Climate and taking into account the age composition and energy efficiency of buildings in Greece, renovations of residential buildings in the period 2025-2030 should reach 68 thousand per year (a total of 408 thousand renovations or 9.5% of all occupied dwellings). Achieving this target implies an *annual* investment expenditure approaching one (1) billion euros, which includes a significant construction scope.

6.5 Institutional issues

The tendering of projects with a sound and secure system is of immense importance for the Construction sector, as well as for the national economy, considering the strategic importance of the sector for the augmentation of economic growth potential and the implementation of planned projects in the coming period.

The crisis in supply chains during the COVID-19 pandemic and subsequently the energy crisis, led to a drastic increase in energy and material prices and more generally to strong inflationary pressures and an increase in labor and equipment costs, which significantly affected the final cost of construction of public and private projects designed under different cost conditions. For public works projects, and in order to address such conditions that may ultimately result in the inability to implement projects as they greatly upset budgeted costs, the legislation[33] provides for the revision of contract prices for materials, labor and equipment rental rates, reviewed quarterly, to reflect current construction costs. Such revisions - for material prices only - were made after several years in 2021 and the first quarter of 2022.

The increased costs mainly affected projects that had already been tendered and started, as new cost conditions were incorporated into the operational planning of engineering companies in subsequent years. In any case, however, the mechanism for setting revision rates should be operated systematically, covering the full range of individual cost elements, in order to limit uncertainty for participants in public works tenders and related problems that may arise during project implementation. Furthermore, the design and budgets of projects should be based on sound cost estimates, including the inclusion of climate risks in the project specifications.

The creation of the Unified System of Technical Specifications and Pricing of Technical Projects, which will include an Electronic System of Cost Determination of Production Factors of Technical Projects (Price Observatory, Price Analysis and Cost Determination System), as well as a System of Unified Technical Specifications, which is foreseen in Law 4782/2021, but has not yet been implemented, will contribute to the above.

Other interventions to further improve the public works delivery system include extending the digitisation of public procurement procedures and enhancing interoperability between information systems, the introduction of multiple criteria for the selection of the contractor, the wide use of out-of-court dispute resolution methods such as mediation

[33] The revision of contract prices of public works contracts is governed by the provisions of article 153 of Law 4412/2016, as in force.

and expert panels and arbitration, regulatory interventions to speed up procedures and ensure continuity between contractors and contractors, and the introduction of a new system of public procurement. Registers of public and private project operators should be a tool for the effective assessment of the technical and financial competence and capacity of registered companies to undertake and implement technical projects and studies. They should also be dynamic in nature, responding directly to market developments and to upgrades in the experience of firms and professionals in the sector, as evidenced by relevant certifications.

For example, with regard to technical personnel, the Institute of the Technical Chamber of Greece and the Fund of Engineering Contractors of Public Works (TEE-TMEDE Institute)[34] provides, through written examinations, certifications of skills and professional competence for 16 professional categories of the construction sector, having obtained accreditation from the National Accreditation System (NSYD)[35] . The ultimate goal of this initiative is to enhance the transparency and credibility of technical works, as well as to ensure quality services for the environment, society and citizens.

6.6 *Technology integration and digitisation*

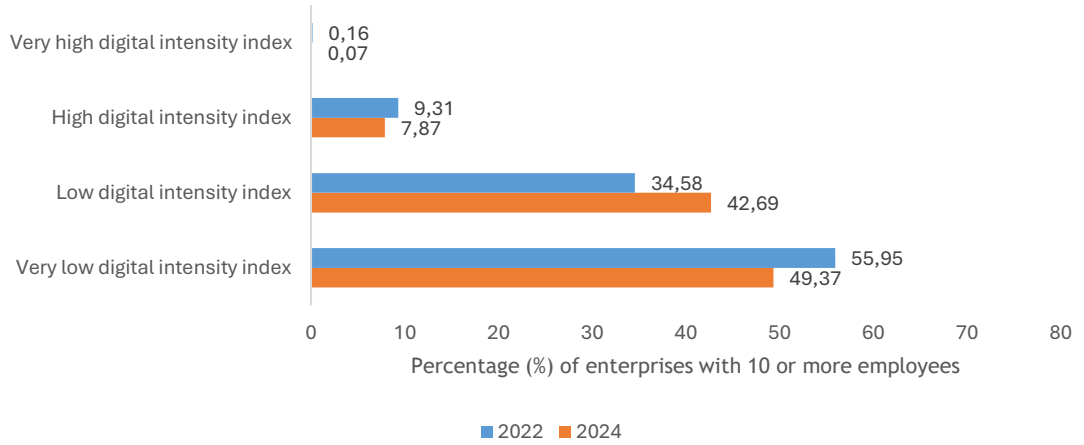
The traditionally high labor intensity and the multiple sub-stages of construction activities, which require the involvement of numerous self-employed professionals or very small enterprises of different specialities to complete a project, make digitisation and innovation in the Construction sector a challenging task. Thus, low digitisation rates and the lack of investment by construction companies are two major challenges for the resilience and competitiveness of the sector.

As the sector is mainly composed of SMEs, the scope for investment in innovative technologies is generally low and the need for financial support and other economic incentives is high. In 2024, 49.4% of construction firms in Greece employing more than 10 people had a very low digital intensity index and 42.7% had a low digital intensity index. Only 7.9% had high digital intensity and 0.16% very high digital intensity. Although the improvement from 2021 is large, mainly from the migration of businesses from very low to low digital intensity, the fact remains that there is still a long way to go for the industry in the coming years in terms of digitisation.

[34] See https://institoutoteetmede.gr/.

[35] The professional categories include "Estimators of Mechanical Installations and Mechanical Equipment (MEE)", "Real Estate Estimators", "Technicians for the construction, maintenance and repair of the operation of hydraulic installations", "Technicians for the operation of construction machinery", "Technicians for the construction, repair, maintenance and supervision of the operation of liquid and gaseous fuel combustion installations", "Technicians for the construction, repair and maintenance of mechanical industrial installations - Welding", 'Technicians for the construction, maintenance and repair of refrigeration installations', 'Technicians for the execution, maintenance, repair and operation of electrical installations', 'Technicians for the installation of reinforced concrete reinforcement', 'Technicians for masonry, plastering, moulding and pouring of concrete, scaffolding (basic and advanced level), ceramic tile laying, painting, drywall systems and related fireproofing systems'.

Figure 6.12: Digital Intensity Index in Construction sector (DII version 4)



Source: Eurostat.

The way of constructing, managing and intervening in the built environment is, however, rapidly transforming, with the development of numerous BIM (Building Information Modelling[36]) applications, IoT (Internet of Things), sensors, robots, drones, scanning tools, but also with technologies that increase efficiency, such as on-site automation, prefabrication or 3D printing of modular building elements and automation of building-related processes. Digital technologies can accurately record, assess, simulate, measure, monitor and reduce emissions throughout a building's life cycle. Therefore, further digitisation will make a significant contribution to supporting a sustainable built environment and enhancing the productivity of Construction.

The public sector can contribute to the digital transition in various ways, such as accelerating the digital issuance of building permits, digitisation of building information, etc. With the National Strategy and the Roadmap for the implementation of Building Information Modelling (BIM) in Greece, a strategic plan has been formulated that highlights the digital transformation of the country's construction sector as a priority, setting specific strategic axes, actions and interventions. The implementation of BIM can contribute to the production of sustainable and durable projects, improving the process of commissioning the design, construction and maintenance of public works. In order to incorporate the changes required by the National BIM Strategy, time is needed for the widespread development of the necessary skills to enable companies in the sector to meet the new requirements and to acquire the necessary equipment.

[36] BIM or Building Information Modeling is a modern process of creating and managing information about a building or engineering project throughout its life cycle. One of the key outputs of this process is the Building Information Model, which is a digital description of every aspect of the project, based on information that is gathered collaboratively and updated at key stages of the project. Creating a digital building information model for a building or other technical project allows those interacting with the project to optimize their actions, thus adding more value throughout the life of the project. Benefits from the implementation of the BIM include improved virtual representation of the project, increased productivity due to easy retrieval of information, integration and linking of critical project information (e.g. suppliers, location, required quantities for each material) for easy measurement and cost estimation, increased speed of project completion and delivery, reduced costs and increased profitability, reduced risks and improved project management during project operation.

Artificial Intelligence (AI) is also expected to have a significant impact on how engineering projects are designed, implemented and managed. As an example, repetitive or hazardous tasks could potentially be performed by robotic systems that have AI embedded. Also, design and digitisation can be combined with AI applications to optimise project implementation schedules, predictive maintenance of infrastructure and buildings, safety risk management, etc. The introduction of AI requires significant investments in related technologies and training of human resources in new digital skills, while leading to job losses in technical staff.

6.7 Adapting Construction to Climate Change

Climate change also impacts on Construction, as it affects both construction activity and the design, implementation and maintenance of infrastructure and buildings. For example, an increase in the frequency of extreme weather events and natural disasters such as heat waves and floods leads to increased stress on structural elements and materials and may affect the structural stability of infrastructure and buildings, which needs to be taken into account in design. Increased risks of natural phenomena such as floods require more resilient flood protection works and, more generally, new construction, land-use and urban planning standards. It also requires a change in the way buildings and infrastructure are designed, for example by promoting the construction of passive, energy-efficient and resilient buildings and the incorporation of sustainability and resilience criteria in building permits and the Energy Performance of Buildings Regulation (EPBD). The need to train engineers and technical staff in sustainable and resilient techniques, integrating digital tools in design, is also highlighted in this context.

The impacts of climate change on construction activity may also include reduced working hours due to heat stress, delays due to extreme weather events, problems in supply chains, increased insurance costs, etc. Climate change is therefore reshaping the construction sector, which will need to adapt appropriately to the new conditions by integrating climate resilience into the basic design of projects and implementing projects to prevent and protect against the consequences of climate change.

6.8 ESG criteria for the Construction sector

The transition of the Greek economy towards climate neutrality by 2050 under the European Green Deal requires large-scale investments. The financing of these investments will be facilitated by the use of additional financial criteria, which incorporate environmental, social and corporate governance dimensions (ESG criteria or principles). Financial institutions use ESG criteria in financing the required investments in new infrastructure and technologies to reduce the environmental footprint of companies, assessing climate, environmental and social risks in the financing process.

Therefore, the management of environmental, social and corporate governance issues becomes important in facilitating access to investment and financing capital for companies. The potential benefits for companies of adopting sustainable practices based on ESG criteria also include improving their environmental performance and avoiding any adverse economic impacts, enhancing their reputation, facilitating adaptation to the regulatory framework, integrating circular economy principles and

strengthening cooperation with all stakeholders (local communities, customers, investors, staff, etc.).

The growing demand for more sustainable and socially responsible projects requires the adoption of ESG principles by companies in the Construction sector. Incorporating these principles into their practices will have far-reaching effects, from reducing environmental impacts to improving employee relations and increasing transparency. The influence of ESG principles on construction companies is growing as more and more companies realize their benefits and seek to effectively adopt them. The main perceived benefits include improving reputation, gaining competitive advantage and increasing access to capital (KPMG, 2023).

For example, a construction company can manage its environmental impact during the construction process in a number of ways, such as implementing waste management plans, using energy-saving equipment and practices, using sustainable materials, implementing water-saving measures, protecting natural habitats and offsetting carbon emissions. In terms of the social sector, a construction company may consider the social impact of the projects it executes in a number of ways, such as ensuring fair and safe working practices, interacting with local communities, promoting diversity and inclusion, giving back to the community, etc. Finally, a company's approach to governance refers to the systems and processes in place to ensure ethical behaviour, transparency and effective risk management. Some examples of how a company can demonstrate a solid approach to governance in the Construction industry are clear ethical guidelines, transparency in business practices, implementation of effective risk management systems, and implementation of strong internal controls.

There are several ways in which a construction company can monitor and report on its performance on ESG issues, such as sustainability reports detailing its actions to improve these practices, third-party certification by independent third-party organizations, ESG assessments by independent organizations, and transparency of information in financial reports. The benefits of ESG practices to construction companies include improved standing/reputation with stakeholders such as customers, employees, investors and the public, increased efficiency (e.g. reduced energy consumption, waste reduction), access to new markets, improved risk management and positive impact on society.

The implementation of ESG practices by construction companies can face several challenges, such as additional costs and high capital investments that are cost-effective in the long term, lack of specialised knowledge, resistance to change, lack of clear guidance and limited resources.

Overall, because Construction has a significant impact on society and the environment, companies in the sector should include ESG principles in their business activities. Construction companies will thus be able to produce more environmentally friendly and socially responsible projects by reducing their environmental footprint, interacting with local communities affected by projects and supporting ethical and transparent business practices.

Recognizing the importance of sustainable development and the adoption of ESG practices, the largest construction companies in Greece have undertaken strategic sustainable development commitments, which are based and/or aligned with the 17 relevant UN Sustainable Development Goals (SDGs). The commitments and targets they set are reported in specific sustainability reports which they publish annually. Indicative examples of the commitments and targets/measures that have been implemented are presented in**Error! Reference source not found.**Table 6.2.

Table 6.2: Commitments and indicative targets in the implementation of ESG principles by construction companies in Greece

Topic	Commitments	Indicative targets / measurement indicators
Environment	• Reduction of greenhouse gas emissions from business activities • Responsible waste management through recycling • Responsible management of the environment at construction sites and integration of good environmental protection practices • Investing in renewable energy sources to reduce the environmental footprint	• Percentage of energy from renewable sources • Quantity of $CO_{(2)}$emissions • Scope 2 indirect emissions reduction quantity • Tonnes of waste under management • Waste diverted from disposal (quantity) • Development of procedures to identify and address climate change risks • Percentage of environmental training of staff • Minimum number of environmental inspections per project • Maintain zero incidents of non-compliance with environmental permits, standards and regulations • Maintain zero fines or other types of sanctions for non-compliance with environmental legislation and regulations
Society and employees	• Reduction of accidents and protection of the health and safety of workers • Maximising social value by supporting local suppliers • Provide environmental protection training for workers employed on the projects • Training in effective emergency management • Gender equality and less inequality • Strengthening local suppliers and infrastructure	• Number of workers • Employee benefits • Sales to eligible activities according to the Taxonomy • Conduct a survey of private customer satisfaction • Amount of investment in the local community • Number of hours of training • Percentage increase in student placements • Percentage of domestic suppliers • Zero fatalities • Minimum number of inspections for Health & Safety compliance audit per semester, per facility • Activation of e-learning platform and training of all employees • Increase training of all employees in Soft Skills modules • Training of employees in New Technologies modules • Human rights training for all employees • Participation of women at all hierarchical levels • Inclusion of new employees in the workforce • Efforts to integrate people with disabilities into the labor market
Governance	• Implementation of corporate governance commitments by enhancing transparency • Integrating Sustainable Development into the operations of the company • Business ethics and regulatory compliance	• Implementation of a Risk Management System • Maintaining zero confirmed incidents of corruption and discrimination • Implementation of human rights policy • Implement a policy against violence and harassment in the world • Develop a system for assessing risks and opportunities related to sustainable development issues • Conduct a training programme on corruption issues

Source: Sustainability reports of construction companies.

6.9 *National strategic infrastructure planning*

As has been pointed out in previous IOBE reports on the construction sector, the existing infrastructure planning in Greece has weaknesses, as it is fragmented, can only address specific sectors, and the implementation of projects depends on the responsibilities of agencies that often overlap, leading to significant delays. Overall, there is room for improvement in the processes of planning, prioritisation, implementation and evaluation of projects.

The OECD has developed a framework for Good Infrastructure Governance from the strategic planning stage to project delivery to assist policy makers in managing infrastructure policy (OECD, 2017 and IOBE, 2021). Having a predictable regulatory framework for investment and coordinating infrastructure policy across all levels of government so that investment decisions by central and local government are consistent contributes to planning efficiency. Infrastructure policy should also incorporate the necessary consultation processes early enough, as well as mechanisms for evaluating the performance of infrastructure throughout its life cycle. Finally, examining the resilience of existing infrastructure to natural and man-made risks and developing relevant guidelines for future infrastructure is an essential element of infrastructure policy, especially under the conditions of extreme climate events that are now occurring with increasing frequency.

In this context, it is appropriate to prepare a National Infrastructure Strategic Plan with priority setting and specific funding resources for critical infrastructure projects in the sectors of Transport, Energy, Communications, Flood Control, Irrigation, Water Supply, Wastewater, Dwellings, etc., following analyses of national strategic development objectives and thorough cost-benefit analyses of candidate infrastructure projects. The strategic plan will include an analysis of labor and skills needs and will be updated regularly (e.g. every five years) taking into account observations from the construction sector.

A similar policy framework is in place in the UK, where the National Infrastructure and Construction Plan sets out the planned and projected investment in major economic and social infrastructure over the next few years, identifies the workforce requirements to deliver it, and a list of tenders to be held in the next few years[37] . This supports the construction sector to make informed business planning decisions and plan the required investments in skills and productivity improvements, while containing implementation costs and reducing project delivery times .[38]

[37] https://www.gov.uk/government/publications/national-infrastructure-and-construction-pipeline-2023
[38] In an analysis of 20,000 projects in the UK, it was found that projects that had better planning at inception had 20% lower costs and were delivered up to 15% faster. In addition, a lack of long-term strategic planning for infrastructure was found to be a key cause of higher costs (https://www.gov.uk/government/news/government-ushers-in-new-era-for-uk-infrastructure-delivery).

7 CONCLUSIONS

In the present study, the most recent data and developments in the Construction sector in Greece were analysed and its prospects were evaluated. It also explored the financing needs of the Construction sector, in view of the prospect of a significant increase in investment in infrastructure and other construction projects in Greece in the coming years. The study examined the potential needs of construction and design companies, both for short-term bank loans, which are mainly used as working capital, and for long-term bank loans, which finance business modernization investments, project development and other purposes. Finally, the study highlighted some important challenges for the sector, linked to labor shortages, financing needs, potential growth drivers for the Construction sector after 2026, weaknesses in the public works production system and the need to adapt to climate change and the new environment of digitalisation and sustainable business development through the integration of ESG principles.

The analysis found that thousands of SMEs and professionals are active in the Construction sector, the number of which has been increasing in recent years. The output value of the Construction sector, after a decade of low activity and disinvestment, has also significantly strengthened, with a parallel improvement in operational profitability and the sector's contribution to the Greek economy. However, a strengthening of the sector's modernisation investments and related financing is required in order to increase the productive capacity and competitiveness of the sector. Employment in the sector has increased significantly in recent years. The analysis shows that Greece has the lowest rate of investment in construction as a percentage of GDP among EU countries, mainly due to the lag in investment in dwellings. Nevertheless, the sector's footprint on the Greek economy, regional development and the external balance remains significant.

The study reflected the strong recovery of the sector, with a notable increase in private construction activity, albeit from a very low base, an increase in turnover and a strengthening of positive business expectations of construction enterprises. However, it also highlighted a significant increase in construction costs and property prices and a modest rise in housing credit amid rising relative borrowing costs. The upward trend in the issuance of building permits was reversed in the first months of 2025 due to the uncertainty caused by the regulations of the new building regulation (N.O.K. - incentive system Law 4067/2012) that were annulled by the Council of State (CoE) and the suspension of the issuance of building permits that made use of these incentives.

In the public works construction market, after a period of significant growth in the number of tenders and the total budget of public works and a deceleration of the average discount rate, there was a decline in 2024, which indicates that the relevant construction activity will be restrained if this trend continues in the coming years.

The backlog of public and private projects of the country's major construction groups is at a historically high level, as a result of the improving performance and conditions in the Greek economy, the size of funding from European funds, and the large investment backlog during the previous decade. However, the timely execution of these projects is a

challenge for construction companies, as they require, among other things, human resource adequacy, strong liquidity and access to financing resources.

The outlook for Construction as a whole is positive for the upcoming period 2025-2026 as well. The Recovery and Resilience Facility (RRF) together with other European Funds and National resources will continue to finance infrastructure projects that will fuel the growth of Construction.

Based on the analysis of the actions of the National Recovery and Resilience Plan, it is estimated that in the 2025-2026 period grants and loans of €6.3 billion will be directed to projects directly related to Construction, mobilising total resources of €8.7 billion.

In the optimistic scenario examined in the study, investment in Construction - mainly in infrastructure - is estimated to significantly boost its share of GDP to 7.5% of GDP in 2026 from 6.0% in 2024. It is also estimated that the output value of infrastructure and dwellings construction projects will increase in the period 2025-2026, exceeding €18 billion (from €15.8 billion in 2024). Due to the strong impact of NPP investments, the overall boost will be provided to a greater extent by investments in infrastructure and construction projects other than dwellings, but private construction activity has also been assumed to be boosted by 12% compared to the level recorded in 2024. However, in the pessimistic scenario, residential investment falls to 2.4% of GDP in 2026 (from 2.8% in the optimistic scenario), while the value of output in dwellings construction in 2026 is estimated to be around 13% lower than in the optimistic scenario (€6 billion vs. €6.9 billion) and 2.3% lower than in 2024.

Construction bank financing balances decreased after 2016 with most of this decrease being due to the write-offs of (non-performing) loans from the balance sheets of credit institutions. In the period after 2021, loan balances to Construction stabilized and showed a small increase until 2023, but in 2024 they declined, while relevant surveys show the existence of a financing gap for SMEs in Greece, which widened after the energy crisis and the consequent increase in borrowing costs, but was smaller in 2023 compared to European firms.

The development of public and private construction projects, participation in public projects and the modernisation of the sector's productive capacity will require increased financing resources from the financial system, both in working capital and medium- and long-term loan capital. At the same time, the size of companies in the sector will be significantly strengthened in the coming years. It was estimated that overall sector turnover would be significantly boosted in the period 2025-2026, reaching EUR 23.1 billion in 2026, if all of the Recovery and Resilience Facility resources (grants and loans) that have been assumed to be directed to construction projects are absorbed.

The expected increase in turnover of engineering and design firms will also fuel the need for an increase in their bank lending. In particular, it is estimated that the total net bank borrowing of firms in the sector over the period 2023-2026 could increase by up to EUR 329 million. For micro enterprises, the increase in total net bank lending is up to €31 million, representing 9% of the total increase. Small businesses account for 15%,

medium enterprises for 39% and large enterprises for 37% of the total increase in net bank lending.

However, there are still broader challenges for the sector. These include, among others, issues related to human resources and financing of the industry's enterprises, the outlook for Construction after the completion of the Recovery and Resilience Facility in 2026, the institutional framework of the public works production system and national infrastructure planning, technology integration and digitisation of Construction to enhance the industry's productivity, the industry's adaptation to climate change and, finally, the adoption of ESG standards by construction companies.

Labor shortages are projected as the main barrier to growth also in 2024, while financing difficulties are also assessed negatively in terms of their impact on construction activity.

The estimated growth in domestic construction activity in the coming years will create additional labor needs in various skills. According to the study's estimates, the total number of employees in Construction should increase in the period 2025-2026 to about 236 thousand workers, a level that is 26 thousand workers higher compared to the total employment in Construction in 2024 (210 thousand workers).

The prospect of further growth in construction projects in the coming years creates a need for additional funding, including guarantees for participation and good execution of projects. The need to seek additional financing and liquidity is exacerbated by the late payments of construction companies, especially in the public works sector. The financing difficulties and the financing gap can be mitigated by the use of various financial instruments (e.g. guarantee funds, interest rate subsidies, microfinance, etc.), so that public and private investment in construction projects can be implemented smoothly.

The completion of the Recovery and Resilience Facility projects in 2026 may create a "gap" in domestic construction activity. There is, however, a stock of infrastructure projects of around EUR 10 billion in the road, rail, energy and telecommunications network sectors, which will be completed after 2026 (period 2027-2030), holding back construction activity.

In the residential and other building sector, a normalisation of the private construction market is required following the legislative regulation on the abolition of building incentives, to restore construction activity to a higher level (compared to the first half of 2025). Renovations and energy upgrades may also provide a significant boost to construction activity related to buildings after 2026 due to the European and national green transition policy. However, high uncertainty as to the impact of regulations related to private construction activity (N.O.C., and planning changes related to off-plan construction) could have a particularly negative impact on building construction activity in 2026, possibly requiring interventions to normalise the relevant market.

In relation to the institutional framework, and based on the experience of previous years where large increases in construction costs have occurred, the need for a systematic operation of the mechanism for setting price revision factors covering the full range of individual cost elements has been highlighted, in order to reduce uncertainty for participants in public works tenders and the related problems that may arise during the

implementation of projects, and to formulate project budgets based on The development, operation and management of the Unified System of Technical Specifications and Pricing of Technical Projects and Designs and the Electronic System for the Determination of Production Costs of Technical Projects, which has not yet been implemented, will contribute to this.

In addition, the Registers of production factors of public and private works should be a tool for an effective assessment of the technical and financial competence and capacity of registered companies to undertake and implement technical works and studies. They should also be dynamic in nature, responding directly to market developments and to upgrades in the experience of firms and professionals in the sector, as evidenced by relevant certifications.

Low digitisation rates, taking into account the changes brought about by the application of artificial intelligence, are a major challenge as they affect the resilience and competitiveness of the sector. As the sector is mainly composed of SMEs, the scope for investment in innovative technologies is generally low and the need for financial support and other financial incentives is high. The recent announcement of the National Strategy and roadmap for the implementation of Building Information Modelling (BIM) in Greece is a positive development.

Climate change also has an impact on Construction, as it affects both construction activity and the design, implementation and maintenance of infrastructure and buildings. More generally, it leads to a reconfiguration of the Construction sector, which will have to adapt appropriately to the new conditions, incorporating climate resilience into the basic design of projects.

The management of environmental, social and corporate governance (ESG) issues is particularly important to facilitate access to investment and financing capital for construction companies. The potential benefits of adopting sustainable practices with ESG criteria also include improving their environmental performance and avoiding any adverse economic impacts, enhancing their reputation, making it easier to adapt to the regulatory framework, integrating circular economy principles and strengthening cooperation with all stakeholders (local communities, clients, investors, staff, etc.).

Finally, the need for a National Strategic Infrastructure and Construction Plan was highlighted, which will set priorities, define planned and projected investments in major economic and social infrastructure, specify funding resources for critical infrastructure projects, including their maintenance, and identify the labor and skills needs for their implementation. The National Infrastructure Plan will provide important support to the construction sector, helping informed operational planning and implementation of the required investments in skills and productivity improvements, while helping to contain implementation costs and reduce project delivery times.

8 APPENDIX

8.1 Input-Output model

Based on the input-output model, the total contribution of an industry is equivalent to the impact on the economy compared to a hypothetical scenario where the intermediate and final demand met by the industry is entirely satisfied by imports. In this hypothetical scenario, not only the value added and jobs created by the industry when satisfying intermediate and final demand for its products are 'lost', but also the value added and jobs of all other industries to the extent that they participate in the supply chain of the industry under consideration.

The model is based on tables, known as input-output tables, which describe the interactions of production and demand of industries and sectors of the economy. Each industry uses goods and services from other industries as an input to its production process. On the output side, the output of each industry is directed as intermediate consumption to other sectors of the domestic economy, to final consumption of households and government, as an input to investment activities or exported.

The difference between the total value of output and the value of an industry's inputs constitutes the industry's Gross Value Added (GVA), which corresponds to the resources available to the industry's enterprises to pay wages, employer contributions, depreciation, direct taxes and dividends to their shareholders, as well as to create a profit reserve.

Adding indirect taxes, such as VAT, NICs, etc., to the GFCF of all sectors results in the country's Gross Domestic Product, which is also calculated from the demand side as the sum of final consumption (households and public sector), investment (private and public sector) and net exports (exports minus imports).

The analysis in this study is based on an adjustment for 2023 of the input-output tables of the Greek economy from the Eurostat database, which cover 64 sectors of the economy.

According to the model, the total economic impact of the industry has three components: direct, indirect and induced impact.

- The **direct effect** refers to the economic effect resulting from the productive activity of the industry, without taking into account its links with other sectors of economic activity.
- The **indirect effect** is obtained by taking into account the production links and the financial flows between sectors of the economy. The activity of an industry affects the industries with which it is linked and with which it trades, as it requires inputs of goods and services from the industries that supply it. The expenditure on the supply of goods and services constitutes income for the suppliers of the industry, which would not have been generated without the initial demand of the industry under consideration. In addition, the suppliers of the industry in question will have to source inputs from their own suppliers, spending money for this purpose which is income for their

suppliers and so on. The final indirect effect on the economy is the overall effect which arises through this whole chain of economic linkages.

- The **induced effect** refers to the effect caused by the change in consumption expenditure (private consumption) of workers in the sectors directly or indirectly affected by the change in final demand under consideration. Workers are paid and subsequently spend their wages on the purchase of goods and services, thereby generating income for the industries and enterprises providing these goods and services. Increased demand for the products of the sectors of the economy involved in the supply chain of consumer goods causes an increase in economic activity and employment in these sectors.

8.2 Data and assumptions on the resources of the RRF

Table 8.1: Total investment resources mobilised by the RRF

Pillars & Axes	Budget of the Fund Recovery	Investment resources Mobilized
1. Green Transition	**(in € million)**	**(in € million)**
1.1 Transition to a new environmentally friendly energy model	1.126	2.202
1.2 Energy upgrading of the country's building stock and spatial reform	2.662	5.130
1.3 Transition to a green and sustainable transport system	520	1.305
1.4 Sustainable use of resources, climate change resilience and biodiversity conservation	1.711	2.646
Total Resources Pillar 1	**6.018**	**11.283**
2. Digital Switchover	**(in € million)**	**(in € million)**
2.1 Connectivity for citizens, businesses, government	331,6	369,7
2.2 Digital transformation of the state	1.241	1.241
2.3 Digital transformation of enterprises	362,1	458,7
Total Pillar 2 resources	**1.935**	**2.070**
3. Employment, Skills, Social Cohesion	**(in € million)**	**(in € million)**
3.1 Increasing employment and promoting labor market participation	776,3	776,3
3.2 Strengthening the digital potential of education and modernising vocational education and training	2.227	2.308
3.3 Strengthening the accessibility, efficiency and quality of the health system	1.486	1.486
3.4 Increasing access to effective and inclusive social policies	737,2	737,2
Total Resources Pillar 3	**5.226**	**5.307**
4. Private investment and transformation of the economy	**(in € million)**	**(in € million)**
4.1 More growth-friendly tax instruments and improved tax administration	185,2	213,0
4.2 Modernising public administration	188,8	188,8
4.3 Improving the efficiency of the justice system	242,8	448,9
4.4 Strengthening the financial sector and capital markets	19,86	19,9
4.5 Promoting research and innovation	447,5	616,8
4.6 Modernising and improving the resilience of the country's main economic sectors	4.182	8.081
4.7 Improving competitiveness and promoting private investment and exports	5	5
Technical support	40	40
Total Resources Pillar 4	**5.311**	**9.614**
Total Sum	**18.491**	**28.274***
Loans	**17.728**	**44.320***
Total Investment Resources	**36.219**	**72.593***

Source: https://greece20.gov.gr/.* IOBE estimates.

Table 8.2: Investment resources mobilised by grants to Recovery and Resilience Facility projects directly related to the Construction activity

Title of action	Budget ESRD	Total resources mobilised for Construction (in € million) (Estimate)
Promotion of electrical interconnection of islands and upgrading of the transmission system	195	417
Actions to revitalise the most affected areas	242	242
Increasing the capacity of electricity distribution substations to facilitate the connection of new RES	12	26
Upgrading of the electricity distribution network in forest areas to prevent fires	40	86
Undergrounding and upgrading of the electricity distribution network in urban areas to protect them against extreme weather events	60	129
Creation of Electricity Storage Systems crucial for the development of RES	450	965
Home savings	1.253	2.108
Strategic urban regeneration	475	799
I save by doing business	450	757
Redevelopment of the former royal estates of Tatoi	40	40
Saving in the public sector	200	200
OAKA renovation	43	43
Support for green manufacturing & transport - development of carbon capture & storage technology	300	345
Electrification of public transport	220	152
Construction of 13 regional civil protection centres	19	19
Major PPP irrigation project programme to boost agricultural production	200	266
Urban wastewater treatment and purification of environmentally sensitive settlements and modernisation of facilities in selected cities	230	230
National afforestation plan	224	224
Drinking water supply and saving projects	200	200
Biodiversity protection actions	100	100
Flood protection works	110	110
Upgrading water supply in developing areas	290	290
Projects for the development of strategic risk management planning for civil protection	74	37
Strengthening fire & flood protection	115	115
Optical fibre infrastructure in buildings	131	131
Fifth generation wireless networks (5G) on the national motorway network	160	160
Submarine cables on the Greek islands	30	30
Smart cities	73	73
New infrastructure for laboratories at the General Hospital Papanikolaou in Thessaloniki	7	7
Hospital renovations and modernisation throughout Greece	317	317
Upgrading of justice infrastructure	118	118
Modernisation & redefinition of the role of the local Employment Promotion Centres of the OAED	41	41
Culture as a driver of development	168	118
Protection of iconic sites and cultural heritage monuments from climate change (ID: 16433	20	20
Additional works for the promotion and preservation of the Acropolis	9	9
Creation of cultural routes	28	28
Creation of a museum of maritime antiquities in Piraeus	54	54
Motorway of Central Greece E-65 North Section	452	452
Northern Road Axis of Crete	427	427
Road safety improvement programme	450	450
Development of business parks	100	100
Infrastructures for the contribution of culture to the "silver economy" & the use of art to improve mental health	38	26
Upgrading interventions at regional airports	107	107
Suburban railway in West Attica	81	81
Tourism development	260	260
Smart bridges	81	81
Electronic tolls	90	157
Upgrading of the railway network with a PPP project	130	226
Smart environmental and cultural infrastructure (smart infrastructure)	174	174
Cultural & natural routes	30	30
Interventions to upgrade regional ports	20	20
SUBPILLAR A	**9.138**	**11.597**
Energy savings	560	942
Hydrogen	75	38
Energy storage	85	71
CCS	75	126
SUBSUBPENSION RePowerEU	**795**	**1.177**
TOTAL TOTAL	**9.933**	**12.774**

Source: ESAA, IOBE analysis.

Table 8.3: Assumptions on the temporal distribution of grants and loans from the RRF

		Annual			Cumulative			
Date of approval	**Payment requests**	**Grants**	**Loans**	**Total**	**Grants**	**Loans**	**Total**	**Absorption**
28/2/2022	1st request	1,72	1,85	3,56	*4,03*	*3,50*	*7,53*	*21%*
25/11/2022	2nd request	1,72	1,85	3,56	*5,75*	*5,35*	*11,09*	*31%*
22/11/2023	3rd request	1,72	1,85	3,56	*7,46*	*7,19*	*14,65*	*41%*
16/10/2024	4th request	1,1	2,4	3,4	8,52	9,55	18,07	50%
2/5/2025	**5th request**	**1,4**	**1,8**	**3,1**	**9,87**	**11,34**	**21,21**	**59%**
Jun-25	6th request	2,0	1,9	3,9	11,87	13,24	25,11	70%
H1 2026	7th request	3,2	2,2	5,4	15,05	15,48	30,53	85%
H2 2026	8th request	3,2	2,2	5,4	18,22	17,73	35,95	100%

Source: ESAA, IOBE Estimate.

SOURCES

- European Commission (2023). Transition pathway for Construction.
- KPMG (2023) Familiar challenges - new approaches. 2023 Global Construction Survey.
- OECD (2017), Getting Infrastructure Right: A framework for better governance, OECD Publishing.
- Sacks et al. (2018). bim handbook, 3(rd) edition, Wiley.
- Hellenic Bankers Association. The ESG opportunity for business and the Greek economy.
- IOBE (2024). Trends, challenges and prospects of Construction in Greece. March.
- IOBE (2022). Growth prospects and financing needs of the Construction sector. July.
- IOBE (2019). Growth prospects for the Construction sector in Greece, June.
- IOBE (2021). The role of the Infrastructure and Construction Industry in the next day of the Greek economy. July.
- Ministry of Infrastructure and Transport (2024). National Strategy and Roadmap for the implementation of Building Information Modelling (BIM), Draft in consultation.