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The Business Case for Countryside Property Development in
Greece: ROI-Driven Strategic Models in Greek regional units.

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Patras, Greece, September 2026

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Abstract

This study examines the dynamics of countryside property development in Greece through a quantitative analysis that integrates regional construction data, macroeconomic indicators, and European investment frameworks. The research is motivated by the need to understand whether recent recovery trends in the Greek real estate market translate into balanced regional development or reinforce existing spatial inequalities. Drawing on secondary data from the Hellenic Statistical Authority, the Bank of Greece, the World Bank, and the European Commission, the study adopts a cross-sectional design at the NUTS2 regional level. However, this study does not estimate financial returns (ROI) empirically but focuses on construction activity as a proxy indicator of regional property development.

Empirical analysis is based on descriptive statistics, Pearson correlation, and regression analysis to investigate the relationship between the construction activity, structural indicators and the intensity of European investment. The results show that there are marked geographic differences in construction activity, with the regions with a high level of tourism development showing comparatively high construction development compared to the structurally less developed regions of the mainland. As it was initially thought, there is no significant correlation and regression between the intensity of investments in Europe and construction performance. Conversely, it is found that the construction activity is closely related to internal structural indicators such as the volume of construction and the rate of new building construction, indicating that the construction indicators are strongly intercorrelated, suggesting that they capture related dimensions of regional construction activity.

The findings suggest that despite the significant policy interventions that have been undertaken as part of EU Cohesion Policy, construction development is still uneven in Greece and mainly driven by the endogenous economic determinants. The study adds to the literature by providing a more complex understanding of the relationship between public investment and the real estate market, by linking the macro-level policy analysis to regionally disaggregated empirical evidence.

Keywords: countryside property development, regional disparities, construction activity, EU Cohesion Policy, Greece, real estate market, investment dynamics

Περίληψη

Η παρούσα μελέτη εξετάζει τη δυναμική της ανάπτυξης της αγοράς ακινήτων στην ελληνική ύπαιθρο, όπου με χρήση ποσοτικής ανάλυσης που ενσωματώνει περιφερειακά δεδομένα οικοδομικής δραστηριότητας, μακροοικονομικούς δείκτες και το πλαίσιο των Ευρωπαϊκών επενδύσεων. Η μελέτη έχει ως έναυσμα την ανάγκη ερμηνείας της νεότερας τάσης στην ελληνική αγορά ακινήτων ως ομαλή και ισορροπημένη περιφερειακή ανάπτυξη είτε ως ενίσχυση των υφισταμένων χωρικών ανισοτήτων. Αντλώντας δευτερογενή δεδομένα από την Ελληνική Στατιστική Αρχή, την Τράπεζα της Ελλάδος, την Παγκόσμια Τράπεζα και την Ευρωπαϊκή Επιτροπή, η μελέτη υιοθετεί σε περιφερειακό επίπεδο NUTS2 ένα διαστρωματικό σχεδιασμό. Ωστόσο, η παρούσα μελέτη δεν προχωράει σε εμπειρική εκτίμηση της χρηματοοικονομικής απόδοσης (ROI), αλλά εστιάζει στην οικοδομική δραστηριότητα ως ενδεικτικό υποκατάστατο της ανάπτυξης ακινήτων περιφερειακά.

Η εμπειρική ανάλυση στηρίζεται σε περιγραφική στατιστική, συσχέτιση Pearson και ανάλυση παλινδρόμησης προκειμένου να ερευνηθεί η σχέση μεταξύ της οικοδομικής δραστηριότητας, των διαρθρωτικών δεικτών και της έντασης των ευρωπαϊκών επενδύσεων. Τα αποτελέσματα φανερώνουν έντονες γεωγραφικές διαφοροποιήσεις στην οικοδομική δραστηριότητα, με τις τουριστικώς ανεπτυγμένες περιοχές να εμφανίζουν συγκριτικά υψηλή κατασκευαστική δραστηριότητα σε σχέση με τις λιγότερο κατασκευαστικά ανεπτυγμένες περιοχές της ενδοχώρας. Όπως αρχικά είχε τεθεί, δεν παρουσιάζεται στατιστικά σημαντική συσχέτιση και παλινδρόμηση μεταξύ της έντασης των ευρωπαϊκών επενδύσεων και της οικοδομικής δραστηριότητας. Αντιθέτως, διαπιστώνεται ότι η οικοδομική δραστηριότητα είναι στενά συνδεδεμένη με εσωτερικούς διαρθρωτικούς δείκτες, όπως ο όγκος κατασκευών και ο ρυθμός ανοικοδόμησης, την ισχυρή αλληλεξάρτηση των επιμέρους δεικτών του κατασκευαστικού τομέα, αποτυπώνοντας τις συναφείς διαστάσεις της περιφερειακής κατασκευαστικής δραστηριότητας.

Τα ευρήματα φανερώνουν ότι παρά τις σημαντικές παρεμβάσεις που έχουν υλοποιηθεί από το πλαίσιο Πολιτικής Συνοχής της Ε.Ε., η οικοδομική δραστηριότητα παρουσιάζει ανισότητες στην Ελλάδα και κατευθύνεται κυρίως από ενδογενείς οικονομικούς παράγοντες. Η μελέτη συνεισφέρει στη βιβλιογραφία προσφέροντας

μια πιο σύνθετη κατανόηση της σχέσης μεταξύ δημοσίων επενδύσεων και της αγοράς ακινήτων, συνδέοντας την ανάλυση της μακροοικονομικής πολιτικής με εμπειρικά δεδομένα σε περιφερειακό επίπεδο.

Λέξεις – Κλειδιά: ανάπτυξη ακινήτων στην ύπαιθρο, περιφερειακές ανισότητες, οικοδομική δραστηριότητα, Πολιτική Συνοχής της Ε.Ε., Ελλάδα, αγορά ακινήτων, δυναμική των επενδύσεων

Contents

Abstract.....	4
Περίληψη	6
Chapter 1. Introduction.....	11
1.1 Background and Rationale of the Study	11
1.2 Problem Statement.....	12
1.3 Research Aim and Objectives	14
1.4 Research Questions.....	15
1.5 Significance of the Study	15
Chapter 2. Literature Review	17
2.1 Theoretical Perspectives on Property Development and Regional Growth.....	17
2.2 Economic Indicators and Real Estate Dynamics.....	20
2.3 European Policy Framework for Regional Development.....	22
2.4 Empirical Studies Using ELSTAT, World Bank, and EU Data.....	26
Chapter 3. Data and Methodology	32
3.1 Research Design and Analytical Approach	32
3.2 Data Sources and Variables	33
3.2.1 ELSTAT – Construction and Housing Activity	33
3.2.2 Bank of Greece	35
3.2.3 Population Data (ELSTAT).....	36
3.2.4 European Commission (Cohesion Policy Dataset, 2021–2027).....	38
3.3 Data Cleaning and Integration Procedures.....	39
3.4 Research Hypotheses	41
3.5 Analytical Techniques	42
3.6 Limitations and Data Constraints	43
Chapter 4. Data Analysis and Results	45

4.1 Evolution of Property and Construction Activity and Regional Disparities in Greece	45
4.2 Relationship between European Investment Intensity and Regional Construction Activity	48
4.3 The Effect of European Investment Intensity on Regional Construction Performance: A Linear Regression Analysis.....	50
4.4 Robustness Analysis Using Alternative Construction Indicators.....	51
Chapter 5. Discussion.....	54
Chapter 6. Conclusions.....	57
References.....	59
Appendix – Final Data Set	63

List of Tables

Table 1: Descriptive Statistics of Construction Activity Indicators.....	45
Table 2: Shapiro–Wilk test of normality for construction and investment indicators.	48
Table 3: Pearson correlation matrix among European investment intensity and construction activity indicators.	50
Table 4: Simple linear regression results with EU Investment per 1000 residents predicting Construction Intensity.....	51
Table 5: Simple linear regression results with EU Investment per 1000 residents predicting Volume per Capita.	52
Table 6: Simple linear regression results with EU Investment per 1000 residents predicting New Buildings per 1000 residents.....	52

List of Diagrams

Diagram 1: Mean construction intensity by region.....	46
Diagram 2: Mean construction volume per capita (m ³) by region.....	46
Diagram 3: Mean number of new buildings per 1,000 residents by region.	47
Diagram 4: Mean construction intensity by urban classification.....	47

Chapter 1. Introduction

1.1 Background and Rationale of the Study

The subject of countryside property development in Greece merits serious scholarly attention, grounded in both market-driven imperatives and strategic regional considerations. In recent years the Greek real estate market has demonstrated meaningful upward momentum: the house price index reached 100.4 in 2024, slightly beyond the pre-crisis benchmark of 2007, according to data from Bank of Greece (Stratopoulou, 2025). Moreover, foreign direct investment into Greek real estate rose to approximately €2.1 billion in 2023, with commercial property investments alone expanding by 45% to €1.85 billion, per the latest investor factsheet (Enterprise Greece, 2024). Within this broader expansion, development of non-urban and rural segments offers nuanced returns and distinct strategic appeal: real-estate commentators suggest net rental yields in lesser-populated areas can reach 8–10% (Residency & Citizenship by Investment, 2024).

The real-estate market in Greece is in the process of major restructuring after a period of economic recession between 2009 and 2019 in which property prices declined by nearly forty percent in the country (Bank of Greece, 2023). The recovery has progressively spread to the secondary cities and urbanized areas following the initial period of recovery that was centralized in metropolitan markets like Athens and Thessaloniki (European Commission, 2024). According to recent results of the Hellenic Statistical Authority (ELSTAT, 2025), building activity, in terms of new permits and the total constructed area, is steadily increasing since 2018 and especially in the regions with a tourism oriented economy including Crete, the Ionian Islands, and Peloponnese. These spatial trends indicate the emergence of decentralisation of investment with rural and semi-rural markets emerging as the center of domestic and foreign investment in the next decade.

The regional inequalities are also portrayed by the spatial distribution of investment. The World Bank (2024) states that Greece has a GDP per capita level that is about 32 percent lower than the EU average, however, the difference between its metropolitan and rural areas is more than 50. These differences underscore the two-fold role of real

estate development, as both a personal investment option and a mechanism of equal region development and local job creation. This two-sidedness makes the countryside property market a convergence point between economic opportunities and territorial integrity, especially when the Greek government and EU institutions are diverting resources to sustainable spatial regeneration.

According to the European Structural and Investment Funds (ESIF) and the Cohesion Policy 2021-2027, providing more than 21 billion to Greece, about 12 billion is to be spent on A Greener Europe and A Europe Closer to Citizens under the European Regional Development Fund (ERDF), the Cohesion Fund (CF), and the Just Transition Fund (JTF) (European Commission, 2025). Some of these thematic areas, such as infrastructure renewal, sustainable tourism, energy efficient housing, all contribute to the rural and island property development directly. In this policy framework, countryside investment does not merely exist as a commercial phenomenon, but is a tool of socio-spatial integration, which is consistent with the long-term climate and territorial strategies of EU.

The presence of national and global datasets, including building activity reports provided by ELSTAT to macroeconomic indicators offered by the World Bank, and cohesion data created by the EU, present a unique chance to assess the property development in the prism of multilevel analysis. The quantitative evidence will allow determining the joint impact of the construction activity, macroeconomic performance, and government funding on the rural real-estate trends. This combined strategy considers the economic motivations (ROI and returns on investment) as well as the strategic motivations (regional sustainability and policy coherence) and creates a solid empirical base to the development of inclusive growth in post-crisis Greece through property development.

1.2 Problem Statement

Despite recent signs of recovery and renewed investor interest, the landscape of property development in Greece remains marked by structural challenges, persistent regional disparities, and deep-seated institutional limitations. The consequences of the prolonged economic crisis (2009–2017) continue to reverberate across demographic,

social, and spatial dimensions: real GDP contracted significantly, unemployment soared, and internal migration accentuated disparities between metropolitan cores and periphery regions (Gourinchas et al., 2016; The Bank Of Greece, 2014; Alogoskoufis & Featherstone, 2021).

One central problem lies in the entrenched regional inequalities. While metropolitan areas such as the Attica basin and major urban centres have historically absorbed the bulk of investment and development, many rural, island, and inland prefectures remain under-served, under-invested, and economically fragile. Recent analyses document a widening rural–urban divide in income levels, public infrastructure, and access to services—factors that markedly influence land and property values but also limit the attractiveness of countryside investments (Kalogeresis, 2024).

Moreover, the rebound in real estate demand and prices has not uniformly translated into widespread countryside development. As observed in the national housing market, there persists a disconnect between asking prices and actual transaction values; many properties advertised in non-urban regions remain unsold for prolonged periods, reflecting structural mismatches in supply, demand, and financing capacity (DEAL, 2024; Ertnews, 2025). This asymmetry raises serious questions about the sustainability of ROI for investors in rural areas, particularly in the absence of robust economic activity, infrastructure, and institutional support.

Policy-driven attempts to reverse these imbalances—via national reforms or European structural funds—face considerable administrative, institutional and socio-economic obstacles. The absorption capacity of many regions remains weak; public spending constraints, bureaucratic inertia, and persistent socioeconomic inequalities limit the transformative potential of cohesion funding or infrastructural interventions (Alogoskoufis & Featherstone, 2021).

Finally, the demographic and social context introduces further complexity. The long recession, combined with austerity measures, led to population outflows from rural to urban areas or abroad, deepening the problem of depopulation and aging in many localities (Alogoskoufis & Featherstone, 2021; Psycharis et al., 2014). In such a context, investments in countryside real-estate risk being speculative, dependent on external demand (e.g., tourism, foreigners) rather than sustainable endogenous

growth. This undermines the long-term viability of property-driven regional revitalization.

Therefore, the critical problem is twofold: on one hand, there is a structural tension between renewed macroeconomic interest and persistent regional underdevelopment; on the other, a methodological gap in empirical evidence linking macro-trends to region-specific outcomes (construction activity and demographic change). Without detailed, regionally disaggregated data and rigorous analysis, any optimistic narrative about countryside property development risks remaining speculative.

This problem statement thus underscores the need for a systematic, data-driven, regionally sensitive investigation — one that assesses to what extent economic recovery, public funding, and market dynamics converge to produce viable rural property development, and under what conditions such development is sustainable. The present study aims precisely to fill this gap.

1.3 Research Aim and Objectives

The central aim of this study is to analyze the dynamics, determinants, and regional patterns of countryside property development in Greece through a data-driven assessment that integrates national statistics, international financial indicators, and European investment frameworks. By examining the interplay between construction activity, macroeconomic performance, and EU-funded regional programmes, the study seeks to provide a comprehensive understanding of how market forces and policy interventions shape real-estate growth beyond metropolitan centers.

Specifically, the research pursues the following objectives:

- (1) To evaluate long-term trends in property and construction activity using ELSTAT regional data, identifying spatial disparities between urban and non-urban areas.
- (2) To investigate the influence of macroeconomic and financial variables—such as GDP growth, FDI inflows, and capital formation—on regional construction activity indicators using World Bank indicators.
- (3) To assess the scale and thematic orientation of European Commission funding (ERDF, CF, and JTF) allocated to sustainable housing, infrastructure, and rural revitalization.

(4) To explore the correlation between public investment intensity and regional real-estate performance, emphasizing the countryside as a site of both opportunity and structural constraint.

1.4 Research Questions

Building on the study's aim and objectives, the following research questions are formulated to guide the empirical and analytical investigation. These questions are designed to connect macroeconomic trends, spatial development patterns, and policy frameworks with the performance of property investments in Greece's countryside.

1. How has property and construction activity evolved in Greece over the past decade, and what regional disparities exist between urban and non-urban areas according to ELSTAT data?
2. To what extent are regional variations in construction activity linked to differences in European investment intensity and structural building indicators across Greek regions?
3. To what degree does European investment intensity contribute to explaining regional differences in construction performance in Greece?
4. To what extent can regional construction performance be explained by the combined influence of European investment intensity and key structural construction indicators across Greek regions?

1.5 Significance of the Study

The importance of countryside property development therefore arises on three inter-linked fronts. First, from an investment attractiveness perspective, rural localities present comparatively lower entry costs and favorable yield dynamics—opening potential for investors seeking diversification beyond saturated urban markets. Second, from a regional development vantage point, the transformation of rural land use and property markets in Greece reflects broader structural shifts in land tenure, registries and institutional frameworks—including the comprehensive land administration reform studied by Balla et al. (2022). Third, the topic resonates with

sustainability and policy frameworks: under the Rural Development Program 2014-2022 Greece targeted over 20 % of farmland for biodiversity contracts, soil-erosion mitigation, and water-management investments, signaling the public sector's alignment with territory revitalization.

Yet this emerging landscape cannot be fully understood without situating it within the quantitative evidence now available through major institutional datasets. According to ELSTAT, construction activity in regions outside Athens and Thessaloniki—measured by new-building surface and volume—has shown renewed acceleration since 2018, reversing a decade-long contraction and revealing early signs of decentralized investment momentum. Parallel macroeconomic indicators from the World Bank highlight a consistent recovery in gross capital formation, which rose from 10.4 percent of GDP in 2015 to 15.9 percent in 2023, coupled with stable inflation and declining lending rates—conditions favourable to both domestic and foreign property investors. At the supranational level, the European Commission's Cohesion Policy allocations for 2021–2027 designate more than €12 billion in funds under the European Regional Development Fund, the Cohesion Fund, and the Just Transition Fund toward Greece's objectives of creating “A Greener Europe” and “A Europe Closer to Citizens.” These programs explicitly include energy-efficient housing, sustainable infrastructure, and rural-area revitalization, positioning countryside property development within the EU's broader strategy for balanced territorial growth.

Chapter 2. Literature Review

2.1 Theoretical Perspectives on Property Development and Regional Growth

The theoretical perspectives that explain the relationship between property development and regional growth form a rich and evolving field, spanning economic, spatial, and sustainability frameworks. Scholars increasingly view property investment not simply as a financial mechanism, but as a strategic instrument that shapes the trajectory of regional economies. In essence, property markets do not operate in isolation; they both reflect and reinforce broader economic structures, influencing employment, infrastructure, and the spatial distribution of wealth. This interdependence has led to a growing effort to reconcile classical growth theories with more integrative frameworks that link real estate dynamics to sustainable territorial development.

A central premise in growth-oriented real estate theory is that investment decisions are driven by expectations of future economic returns. The belief that property investment can be a catalyst for regional economic revitalization is one starting point in this theoretical conversation. Oshomegie et al. (2025) presents a conceptualization of real estate led development based on a mixed-use urban model that features planning, stakeholder engagement, and financial sustainability. They have developed a framework that identifies property development as a comprehensive process, and when it is aligned with local planning needs, and institutional capacity, can positively drive regional growth. Oshomegie et al., however, stress the coherence of planning and participatory governance, and their model is still mostly urban oriented. When this happens to non-urban or peripheral areas, institutional infrastructure is not as strong and private capital may not be willing to get involved, creating a point of tension. Therefore, their model is only of interest to the Greek context if it's modified to reflect the differences in governance and access to finance at the regional level.

The developmental potential of real-estate investment is also emphasized by Zhang and Zhang (2012), but their definition takes a macroeconomic viewpoint. They believe property investment is a major driver of regional economic development since

it generates jobs, has multiplier effects and it boosts consumption. However, their quantitative results show a positive longtime relationship between growth in real-estate investment and economic growth in GDP, but they also make an implicit assumption of stable financial climate and balanced spatial growth. Based on the same lines of argument, Shen (2021) showed an equilibrium relationship between real-estate investment and long-term economic growth in Hubei Province. The findings indicate a sort of two-way causality, with real-estate growth leading economic performance and, in turn, robust economic growth fueling more real-estate investment, Shen said. All the above studies make the Keynesian assumption that development of the property can be used as an accelerator of aggregate demand when considered as a group. However, they continue to underestimate the dangers of speculative bubbles, environmental degradation and spatial inequities that develop in connection to the fast growth of the real estate market.

More recently, attempts have emerged to balance growth-oriented perspectives with concerns about sustainability. To incorporate economic growth, infrastructure provision, and green financing into property development, Milala and Ariffin (2025) present a model with a sustainability focus. They claim that real estate benefits in the long run are driven by investment quality and environmental compliance, as opposed to the models of growth that came before them. While Zhang and Zhang's growth-centric model emphasizes the need for sustainable resource use and transparency in institutions to reap regional benefits from property investment, their view is more nuanced and complex. In this regard, both systems are complementary but have a different time focus; the former is short to medium term in terms of economic acceleration, the latter is long term in terms of ecological and financial resilience, Milala and Ariffin. Combining the above concepts leads to the conclusion that sustainable development and profit are essential to real regional development, a point particularly relevant for Greece where cultural preservation and environmental protection requirements must accompany the recovery of the real-estate sector.

Another key element in this discussion is the spatial equilibrium theory, which analyzes geographic distribution of economic activity as a function of wage differentials, mobility and resource availability. Building on this, Tsynalievskaya (2022) combines the neoclassical and new regional growth theories, suggesting that the

sustainable spatial equilibrium can be achieved solely including environmental constraints and social equity into regional planning. Unlike growth-oriented models, here investment is not always perceived as a good thing and the emphasis is placed on balanced development in space. In the context of property development, spatial equilibrium theory suggests that uncontrolled investment in core areas, like Athens and Thessaloniki, together with no investment in the periphery, widens regional gaps and harms regional cohesion. In the Greek context, this insight carries significant weight in a market that's still highly polarized between the growth of metropolitan areas and the lack of such growth in rural areas.

Debates that are running alongside in the field of sustainability theory reinforce this argument by focusing on how environmental and social aspects can be incorporated into growth driven by properties. The authors argue that urbanization challenges, from traffic jams to infrastructure issues, demand an all-encompassing and all-inclusive approach that prioritizes the welfare and quality of life of communities (Sukanya and Tantia, 2023). They say that property development policies need to cover not only financial profit, but also the quality of life and health of the ecosystems as well. This is also the view of Hromada et al. (2025), who emphasize the importance of ethical investment and sustainable urban planning in order to avoid socio-economic exclusion. In both studies, there is a rejection of the previous implicit premise, made by Zhang and Shen, that investing in real estate is always a positive externality. Rather, they view the development of property as a possible source of inequality if not part of strong environmental and social governance systems.

In a similar vein, Gao and al. (2022) suggest a synergy between sustainable urbanization and urban innovation in regional development. They say that property development, with innovative design, material and technology, can increase productivity and reduce environmental costs. Their model dovetails into Milala's and Ariffin's focus on green financing, indicating that the future of property development will be marked by a blend of technological innovation and sustainability metrics. These perspectives represent a paradigm shift from seeing property development as a short-term economic stimulant to recognizing its long-term strategic role to support sustainable regional transformation.

Critically reflecting on these frameworks, one can discern an evolution from economic determinism to integrative sustainability. Early growth-oriented models highlight the catalytic function of real estate but risk overlooking structural inequalities and environmental degradation. Newer approaches—rooted in spatial equilibrium and sustainability theory—acknowledge that property development contributes to regional growth only when it aligns with social inclusion, environmental stewardship, and institutional coherence. For Greece, a country emerging from prolonged crisis and facing regional imbalances, this theoretical convergence holds particular relevance. Property development must therefore be conceived not merely as an investment in physical assets, but as a multidimensional process that balances profitability with spatial justice and ecological integrity.

2.2 Economic Indicators and Real Estate Dynamics

The interrelationship between macroeconomic performance and real estate dynamics is one of mutual causality rather than unidirectional dependence. Economic indicators such as GDP growth, inflation, and foreign direct investment (FDI) not only influence property values and construction activity but are themselves affected by fluctuations within real estate markets. This reciprocal relationship forms a key pillar of contemporary macro-financial analysis, where real estate is recognized as both a driver and a reflection of economic vitality.

Stundžienė et al. (2021) demonstrate that housing prices in Lithuania exhibit strong correlations with GDP growth and consumer spending, suggesting that real-estate markets respond sensitively to shifts in aggregate demand. While their findings confirm a pro-cyclical relationship, where economic growth stimulates housing price increases, Duca et al. (2021) take the argument further by framing real estate as an active participant in the business cycle rather than a passive indicator. They contend that the housing market amplifies macroeconomic fluctuations: booming property prices stimulate credit expansion and household wealth, whereas downturns contract liquidity and consumer confidence. The implication of this duality is that real-estate cycles are both products and propagators of economic instability. Thus, while Stundžienė et al. highlight correlation, Duca et al. emphasize causality, deepening our understanding of the bidirectional feedback loop between property and GDP growth.

Filotto et al. (2018) add detail to this, showing that quantities of residential loans are highly correlated with GDP and inflation. The financial mediation mechanism is highlighted in their work: robust economic growth leads to better balance sheets among banks and thus larger credit supply, which then leads to more investment in real estate. However, this mechanism brings vulnerabilities. Easy credit can cause asset mispricing in overheated markets, which can lead to systemic risk. On this line of reasoning, Paul et al. (2021) link FDI inflows to macroeconomic and construction activity, claiming that foreign investment is a signal of economic stability as well as a catalyst for the growth of a sector. Their results also suggest potential dependency, however: Economies that heavily depend on foreign capital may be vulnerable to turbulence if global interest rates rise or fall—or if investor confidence wanes.

There is no doubt that macro-financial stability is key in this ecosystem. Qu and Kassim (2023) find that, economic policy uncertainty is a major factor in reducing corporate real-estate investment, revealing that investors' confidence in the economy depends on the predictability of fiscal and monetary policy. They are in line with Braun (2023), who points to the Countercyclical Capital Buffer (CCyB) as a stabilizing policy that can curb excessive credit cycles and dampen housing market volatility. Both authors agree that good calibrated macroprudential regulation can help maintain stable growth of house prices, by limiting the extreme swings that occur in the cycle. Qu and Kassim, however, emphasize the credibility of policies, whereas Braun is more interested in institutional design, which brings to light multiple levels of the same stability structure.

The concept of stability as precondition to innovation is clearly brought in to Wainwright and Manville (2016) analysis of financialization. They explain how, in a stable macro-financial environment, housing associations and institutional investors use capital-market instruments to finance their development. This transition from bank lending to financing from the capital market reflects the changing financial landscape in real estate. It echoes Vasilopoulos and Tayler (2021) who conclude that macroeconomic stability boosts liquidity and lowers transaction costs, which allows for smoother movement between residential and commercial sub-markets. But the same financialization that secures funding can also act as a double-edged sword as

demonstrated in both studies: a local property market may be exposed to foreign turbulence if it is financed by globalization.

Taken together, these perspectives suggest an important conclusion: the real-estate environment is integral to the macro-economic environment. Although strong GDP growth and controlled inflation and good regulatory policy set the conditions for the expansion of property, the expansion itself adds to the economy, affecting consumption, investment and financial intermediation. Nonetheless, consensus among scholars is accompanied by latent tension. Some emphasize the stimulative role of real estate in growth (Duca et al., 2021; Paul et al., 2021), while others caution against over-reliance on property cycles as engines of prosperity (Filotto et al., 2018; Braun, 2023). The synthesis of these positions suggests that the health of the real-estate sector depends not solely on macroeconomic strength, but on the quality, transparency, and sustainability of financial governance underpinning it.

In the Greek context, where real-estate recovery remains uneven and highly sensitive to fiscal and monetary policy shifts, these theoretical tensions acquire practical relevance. Understanding how economic indicators shape—and are shaped by—property dynamics is essential for constructing a resilient investment landscape that supports long-term regional development rather than short-term speculative gains.

2.3 European Policy Framework for Regional Development

The European Policy Framework for Regional Development constitutes one of the most sophisticated attempts globally to address spatial inequality through coordinated economic governance. At its core lies the principle of economic, social, and territorial cohesion, enshrined in Article 174 of the Treaty on the Functioning of the European Union (Oxford University Press, 2024). This framework is not merely redistributive; it seeks to enhance competitiveness and resilience across regions by integrating economic modernization with sustainability and digital transformation. Yet, as several scholars note, the coherence between cohesion objectives and growth-oriented policies remains a matter of ongoing debate, reflecting tensions between the EU's equity and efficiency imperatives.

The European Regional Development Fund (ERDF) is a good example of this duality. Abdelhamid et al. (2025) emphasizes the ERDF's increasing focus on research and innovation and support for small and medium-sized enterprises, which boosts the innovation ecosystem in Europe and promote balanced regional development. Likewise, Aversa (2016) sees the ERDF as an instrument for capacity building of lagging areas in the field of technology and entrepreneurship. Both authors stress the modernizing function of the fund, but their optimism makes the assumption of a homogeneous capacity of the regions in absorbing investment in the field of innovation. However, Kersan-Škabić and Vukašina (2023) have highlighted that the ERDF's focus on digital transformation during the COVID-19 era has the potential to exacerbate the gap between technologically advanced and less advanced regions. This perspective also gives room to raise the issue of unintended consequences of cohesion funding, i.e. the paradox of creating a digital divide that can only be closed by reinforcing it, which highlights the challenges in balancing regional equity and competitiveness in EU policy design.

The Cohesion Fund (CF) is based on a more conventional redistributive logic. It is designed to finance environmental and transport infrastructure projects in member states with a gross national income less than 90 percent of EU average, as highlighted by Oxford University Press (2024). However, although such investments in infrastructure are likely to have productivity growth effects that will endure over time, they also have the potential to create path dependency without the appropriate innovation policies. Bachtler and Begg (2017) state that the physical infrastructure is not enough to guarantee sustainable regional convergence and that institutional quality and governance capacity are the key to effective implementation of EU funds for actual economic modernization. This claim has a special resonance in the southern member states, such as Greece, where the lack of coordination and administrative inefficiency have so far restricted the use of EU funds.

The European Green Deal's Just Transition Fund (JTF), which brings together cohesion policy with environmental justice, is an attempt to go beyond these boundaries. The Just Transition Fund (JTF) included in the European Green Deal is one such attempt to go beyond these boundaries by connecting environmental justice with cohesion policy. Huba-Varga et al. (2025) introduce the JTF as a climate and

social tool to help the most vulnerable areas of the shift to a low carbon economy. This in principle combines the EU's green and social agendas. However, the success of the JTF will depend on the ability of local economies to create other job opportunities and the green investment. In this, differences in the interpretation of scholars become apparent: while Huba-Varga et al. emphasize the transformative potential of the fund, Bachtler and Méndez (2020) are more circumspect, emphasising that decarbonization, if handled without measures to protect and empower the social groups involved, can create new forms of regional exclusion. The debate between ecological modernization and social equity is part of a wider dilemma of EU cohesion policy, which is how to achieve sustainability without exacerbating socio-spatial disparities.

The process of linking national strategies with European Cohesion Policy has been a necessity and a process of learning in the Greek context. Santos (2022) and Nishimura et al. (2021) note that Greece's post-crisis recovery strategy is dependent on European Structural and Investment Funds (ESIF), which are a source of funding for the renewable energy, education and healthcare sectors. These investments represent the EU's "smart, sustainable and inclusive growth" agenda and tackle Greece's weaknesses. As Saracu and Trif (2019) explain, though, cohesion policy's success is more about quality of multilevel governance than the amount of funding provided. Their focus on cooperation between national, regional and local level reflects one of the constant problems in Greek public administration: low level of strategic coordination and outcome assessment. EU-funded programs will fail to be transformative interventions if not effectively implemented locally.

Bachtler and Begg (2017) add to this debate by challenging the effectiveness of cohesion policy to actually lower the gap between regions rather than simply reducing its impact. They believe that although the ERDF and CF have helped to enhance infrastructure and administrative capacity, they have not changed the underlying structural inequalities between core and peripheral economies. This criticism is pertinent in Greece: Areas with a high tourism and urban development potential like Attica or Crete are more favored than the mountainous and island areas. Yet, Bachtler and Méndez (2020) argue that the thematic focus on funds (climate, innovation and digitalization) could lead to more coherent policy and longer-term benefits if

accompanied by capacity building efforts. The challenge is thus to achieve the short-term convergence of the two while simultaneously promoting the long-term structural transformation.

This question has been revived by the COVID-19 crisis and the policy measures that have been taken in response. The EU's digital and green transition agendas were reinforced by the pandemic and this has meant that cohesion policy has had to catch up to the fast-moving transition more quickly than during previous programming cycles, Kersan-Škabić and Vukašina (2023) write. These aims have been translated into Greece's Partnership Agreement 2021-2027, reflecting progress towards policy alignment, although challenges remain on implementation, especially on reaching less accessible and rural areas. As Abdelhamid et al. (2025) propose, this is a chance for Greece to reconsider its regional model based on the concept of innovation clusters and sustainable infrastructures, whilst other scholars warn of the importance of ensuring that strategies are socially inclusive, otherwise risking internal polarization.

Critically, the literature converges on one essential point: cohesion policy's success depends on the interaction between European frameworks and national institutions. The EU can design sophisticated financial instruments, but local governance determines their real-world impact. For Greece, this means that effective absorption of ERDF, CF, and JTF resources requires transparent management, cross-sectoral coordination, and continuous monitoring of spatial outcomes. The theoretical consensus thus moves beyond financial transfers to emphasize institutional learning and governance quality as the decisive factors in achieving regional cohesion.

In conclusion, the European Policy Framework for Regional Development is not a static mechanism but a dynamic, contested space where competing objectives—economic growth, territorial equity, and environmental sustainability—intersect. The interplay of these goals defines both the potential and the limitations of EU regional policy. For Greece, this framework provides not merely funding but a strategic blueprint for transforming its regional landscape—provided that the country can convert European principles into effective local action.

2.4 Empirical Studies Using ELSTAT, World Bank, and EU Data

In recent years, the convergence of multi-source quantitative data has transformed macro-regional analysis within the European research landscape. The simultaneous use of datasets from institutions such as the World Bank, Eurostat, and the European Commission allows scholars to transcend national statistics and capture the interdependence of economic, social, and environmental systems across the European Union (EU). Yet, this methodological convergence has also exposed epistemological tensions regarding the interpretation of aggregated data, the comparability of indicators, and the relationship between economic growth and sustainability.

Basaglia et al. (2024) exemplify this integrative approach through their cross-country panel analysis of 25 EU member states, combining World Bank GDP data with Eurostat indicators on renewable electricity production. Their objective was to assess how the EU Emissions Trading System (EU ETS) influences both environmental outcomes and economic performance. They concluded that countries with stronger renewable energy expansion benefited most from the EU ETS, achieving reductions in carbon intensity without sacrificing GDP growth. This finding supports the hypothesis that environmental regulation and economic performance can be mutually reinforcing—a position consistent with the “green growth” paradigm. However, their reliance on aggregated indicators leaves limited room for understanding intra-regional disparities or the institutional mechanisms behind national performance. In this sense, Basaglia and colleagues provide macro-level confirmation of policy efficacy but do not interrogate how local governance structures mediate these outcomes.

Balu et al. (2025) further focus on an institutional perspective, analyzing quantitative Eurostat data and qualitative documentary analysis of reports of the European Commission. They believe that sustainable growth of the EU is more of a matter of policy coherence and multi-level coordination than of financial transfers. They share the position of Basaglia et al. that integrated databases could reveal the inter-sectoral connections, but they are less optimistic about finding the latter; they caution that there can be significant structural differences between the main and periphery economies even if the data converges statistically across countries. Their understanding of the value of integrated data is not so much in deriving aggregate

indicators, but in facilitating comparative governance analysis. Balu's methodological pluralism therefore extends the scope of applicability of macro-datasets beyond descriptive measurement to policy interpretation.

In this multi-source approach, Přívara and Čaplánová (2025) go beyond the EU and compare digital investment and productivity growth among European and Southeast Asian economies, based on data from both the World Bank and Eurostat. They find that investments in digital infrastructure have a positive impact on productivity at the macro-regional level, and that while there is some variation in the contribution of digitalization to growth, the impact is generally greater in the U.S. than in other macro-regions. Unlike the works of Basaglia et al., that are geared towards the environment and environmental policy, the works of Přívara and Čaplánová are focused on technological capability as the key to development outcomes. They therefore question the underlying assumption that the same indicators of development (e.g. digital investment per capita) have the same meaning in different institutional settings. Their cross-regional comparison brings up a methodological question that has emerged: Does harmonized data at the international level allow for the reflection of regional economic differences or does it risk oversimplifying the complex relationship between technology, governance, and productivity?

Hysesani (2025), by contrast, uses a mixed-methods longitudinal approach to the Albanian accession process to EU membership, by combining governance indicators based on World Bank assessments with reports on the progress made by the European Commission. The study provides a snapshot of institutional quality over 15 years, which highlights the fact that quantitative progress in institutional quality is not necessarily accompanied by political and social perceptions of institutional reform. Hysesani agrees with Balu et al. that data triangulation is necessary, but warns against relying solely on numbers, which could make the qualitative aspects of regional integration – public trust, administrative culture, civic engagement, etc. – "unseen". Her work adds to the conversation around data integration: while macro-datasets are essential for helping to identify trends, they need to be complemented by a qualitative reading to bring insights into policy decision making into context.

However, Ziolo and Luty (2023) narrow their research to the innovation gap between EU countries, based on data from the multivariate datasets provided by Eurostat. Even though some structural features have converged, there are significant differences in innovation capacity between member states, their analysis reveals. The high-innovation economies (Germany and the Netherlands) show high synergies between R&D investment and regional productivity, whereas peripheral economies show a lower level of synergy, despite the fact that they invest in a similar level of public R&D funding. They do not share Basaglia's optimism that EU policy coherence will validate the success of cohesion policy, but instead they show its unequal effects. They believe the issue is innovation gaps have persisted as a sign that there is a need for differentiated regional policies, which takes into account absorptive capacities at the regional level.

The literature reveals both convergence and contestation. While there is no universal consensus on the quality and relevance of datasets drawn from institutes like the World Bank, Eurostat or the EU Directorates, scholars generally agree that they should be integrated to gain a richer, cross-sectoral understanding of regional dynamics. They do not, however, agree on epistemological implications of such integration. Basaglia et al. (2024) argue that the combination of similar data across countries may illustrate a successful policy outcome, Balu et al. (2025) and Hysesani (2025) argue that it can mask local policy shortcomings and cover up local differences, as Přívara and Čaplánová (2025) argue that it can make the comparison of development processes across different institutional types challenging. Nevertheless, Ziolo and Luty (2023) have shown that statistical convergence is not necessarily followed by economic convergence even within a single supranational entity, such as within the EU.

In this study, Panagiotidis & Printzis, 2016 investigates the factors affecting the Greek housing market by applying the Vector Error-Correction Model (VECM) methodology. The authors test long-run equilibrium relationships and short-term dynamics by using the national house-price index along with macroeconomic time-series data (mortgage loans, retail trade, etc.). Their long run findings point to the fact that the most important determinant of housing prices is mortgage lending, and that the most important determinant of retail sector activity is a shock to that sector, in

both the short and long run. In terms of methodology, this approach—time-series econometrics of the relationship between macroeconomic variables and performance in the housing market—is methodologically similar in spirit to the current study, but the current study seeks to add a dimension of variation of the empirical analysis to the regional level (prefectures, urban versus rural). Finally, the result that the level of credit provision and the demand for consumption are significant determinants of the evolution of housing prices further indicates the relevance of macroeconomic and financial conditions for real estate returns, which further supports the macroeconomic and financial variables being included in the ROI regression model.

An asymmetric ARDL cointegration model (NARDL) for the housing market of Greece during 1999–2011 provides another methodological improvement, as suggested by Katrakilidis & Trachanas (2012). Their emphasis is on uncovering the non-linear and asymmetric reaction of house prices to macroeconomic fundamentals, that is, whether positive and negative shocks in the explanatory variables (interest rates, inflation, economic fundamentals) have symmetrical effects. Their empirical results indicate that ignoring these asymmetries can be problematic for making inferences: house prices are sensitive to the direction of price movement (up or down) and time frame (short vs. long run). This methodological subtlety is particularly applicable to the empirical study performed here and is important to highlight since it can lead to the failure of a linear regression to reflect the non-linearity of the relationship between ROI and explanatory variables. Their study cautions against the idiosyncratic, asymmetric way that property markets may operate — a factor that should be considered when comparing ROI for various property markets, particularly in the context of Greek prefectures where there is significant structural variation.

The first two studies operate at the national level using aggregate data, whereas in the master's thesis, Selemidis (2022), a micro-empirical approach is illustrated using real-estate transaction data and multiple regression analysis. The study aims to calculate the determinants of property value using a dataset of recent housing sale prices over 20 years (2001–2021) and regression methods (including structural variables like size, age, floor, location). The methodology, however, was only limited to an urban area with a focus on price but was directly analogous to what was proposed in the present study at a regional scale: secondary data collection, statistical correlation/regression

analysis, testing structural and locational covariates. The thesis demonstrates the possibility and the problems of using real-estate data in Greece, especially those related to data concentration, data availability and data heterogeneity. These lessons are helpful, particularly for creating a larger dataset from various prefectures.

While the vast empirical literature discussed in this review is quite broad, there is still a gap in method and concept between macroeconomic analysis, spatial heterogeneity, and the performance of property investments, which is what this study focuses on. Basaglia et al. (2024), Balu et al. (2025) and Přívara & Čaplánová (2025) provide examples of a multi-source empirical research based on the integration of data from the World Bank, Eurostat and European Commission that is well suited for studying large-scale economic and environmental relationships. However, these works demonstrate the importance of data at a macro-regional level but have not taken spatial differences within the country into account and only compare aggregated information or between countries. Similarly, Hysesani (2025) and Ziolo & Luty (2023) highlight governance and innovation asymmetries as important, but their analysis is limited by the same issue: the failure to address economic mechanisms and investment patterns at a local level within individual countries. By contrast, the Greek studies by Panagiotidis & Printzis (2016) and Katrakilidis & Trachanas (2012) are able to model national housing-market determinants using time-series econometrics (VECM and asymmetric ARDL), respectively, and the results indicate a strong effect on the price dynamics of the macro-financial factors, such as credit expansion, interest rates, and inflation. Their national level, however, does not take into account spatial variation, such as urban and rural differences, and does not address issues of return on investment or regional development outcomes, but instead of price formation. On the other side of the spectrum, Selemidis (2022) offers a micro-level application based on regression analysis of property transactions in the eastern part of Thessaloniki, but his study only covers a single urban area and excludes any macro-economic or policy variables.

Combined, these studies show that there are two recurring gaps in literature. There is a scalar disconnect between macro-level models that explain the pattern of nations or continents and do not take into account the heterogeneity at the local level, and the micro-level approaches that explain property dynamics without considering the

broader economic and institutional environment. Second, there is a conceptual absence of return-oriented analysis (ROI) linking property investment performance to regional economic and policy environments. No existing research integrates multi-source quantitative data—combining national statistics (ELSTAT construction and building activity), macroeconomic indicators (World Bank), and European funding frameworks (European Commission datasets)—to explain the determinants of real-estate investment performance across urban and non-urban regions in Greece. The present study seeks to bridge this divide by constructing a regionally disaggregated, data-driven model that incorporates both market and institutional variables. In doing so, it not only contributes an original empirical framework for evaluating countryside property development but also aligns with the emerging European research trend toward multi-scale, multi-source integration. Ultimately, this study addresses the critical gap between descriptive macroeconomic analysis and localized real-estate research, providing a comprehensive understanding of how structural economic, spatial, and governance factors jointly shape investment outcomes in Greece’s regional property markets.

Chapter 3. Data and Methodology

3.1 Research Design and Analytical Approach

The present study adopts a quantitative research design grounded in the analysis of secondary data derived from multiple institutional sources. This approach is particularly appropriate given the macro-regional scope of the research and the objective of examining structural patterns in countryside property development across Greek regions. Quantitative designs based on secondary datasets are widely recognized as suitable for capturing large-scale economic and spatial phenomena, particularly when the aim is to analyze regional disparities and structural trends (Creswell, 2014; Bryman, 2016). Rather than relying on primary data collection, the study integrates existing datasets from national and international organizations, thereby enabling a comprehensive and empirically robust investigation of the relationship between construction activity, macroeconomic conditions, and policy-driven investment allocation.

The use of secondary data not only enhances the reliability and comparability of the findings but also aligns with established practices in regional economic and real-estate research, where large-scale institutional datasets are frequently employed to capture spatial and temporal dynamics (Johnston, 2017; Munawar et al., 2020). Moreover, the integration of multiple data sources is considered a methodologically robust strategy, as it allows for the triangulation of evidence and the examination of complex relationships across different analytical levels (Saunders et al., 2023).

More specifically, the analytical framework is based on the integration of three complementary data sources: the Hellenic Statistical Authority (ELSTAT), which provides detailed indicators on construction and housing activity at the regional level; the World Bank, which offers macroeconomic variables reflecting the broader economic environment; and the European Commission, which supplies data on Cohesion Policy allocations for the 2021–2027 programming period. The combination of these datasets allows for a multi-level analysis that bridges national, macroeconomic, and supranational dimensions. In methodological terms, this integrative approach facilitates the examination of how local construction activity

relates not only to domestic economic conditions but also to the strategic allocation of European development resources. At the same time, it acknowledges that each dataset captures a different aspect of the phenomenon under study—namely, market activity, economic context, and policy orientation—thereby enabling a more nuanced interpretation of regional development patterns.

The unit of analysis in this study is the NUTS2 regional level, which constitutes the standard territorial classification for the implementation and evaluation of European regional policy. The analysis is cross-sectional and focuses on the most recent available period, using 2025 as the reference year for construction activity indicators. In this context, the dependent variable—Construction Intensity, measured as square meters of new construction per 1,000 inhabitants—is employed as a proxy indicator of regional construction activity and market activation, rather than as a direct measure of investment performance or return on investment.

In terms of analytical techniques, the study employs a combination of descriptive, comparative, and correlation-based statistical methods. Descriptive statistics are used to summarize the distribution and central tendencies of the key variables, providing an initial overview of regional disparities in construction activity, economic conditions, and investment allocation. Comparative analysis is subsequently applied to examine differences across regions, particularly between metropolitan and non-metropolitan areas, as well as between regions with varying levels of European funding intensity. Finally, correlation analysis is conducted to explore the degree of association between construction activity and explanatory variables such as EU investment allocation and selected macroeconomic indicators. These techniques are selected for their suitability in handling cross-sectional data and for their ability to reveal underlying patterns without imposing strong causal assumptions.

3.2 Data Sources and Variables

3.2.1 ELSTAT – Construction and Housing Activity

The empirical analysis of construction and housing activity in Greece is primarily based on data obtained from the Hellenic Statistical Authority (ELSTAT), which constitutes the official national source for building activity indicators. ELSTAT

provides detailed and systematically collected information on new construction permits and completed buildings, offering a reliable foundation for examining spatial and structural patterns of property development. The dataset utilized in this study includes key variables such as the number of new buildings, the total constructed surface (in square meters), and the total construction volume (in cubic meters), disaggregated at the regional level (NUTS2 and, where available, NUTS3). These indicators are widely used in the literature as proxies for measuring construction intensity and development activity, as they capture both the quantitative and physical dimensions of new real-estate supply.

The temporal coverage of the ELSTAT dataset spans a long period, from 1993 to 2019, thereby allowing the identification of long-term trends in the Greek construction sector. This extended time series is particularly valuable for contextualizing the evolution of building activity before, during, and after the economic crisis period (2009–2017), which had a profound impact on the real estate market. By examining changes in the number of new buildings, as well as in construction surface and volume, the analysis can capture both the contraction phase of the market and the subsequent recovery, especially in the post-2018 period. Although the econometric component of the present study focuses on a cross-sectional snapshot for the most recent available year, the historical ELSTAT data are used to provide descriptive and comparative context, enhancing the interpretive depth of the findings.

In operational terms, the variables derived from ELSTAT are transformed to ensure comparability across regions of different population sizes. In particular, the study constructs a standardized indicator of construction activity—Construction Intensity—defined as the total constructed surface (in square meters) per 1,000 inhabitants. This normalization is essential in order to avoid biases associated with the absolute size of regions and to allow for meaningful comparison between metropolitan and non-metropolitan areas. Additional indicators, such as construction volume per capita and the number of new buildings per 1,000 inhabitants, are also calculated and employed in supplementary analyses, serving as alternative operationalizations of construction activity and enabling robustness checks of the main empirical results.

From an analytical perspective, the ELSTAT data serve a dual function within the research design. First, they provide the primary dependent variable used in the empirical model, capturing the intensity of construction activity across Greek regions. Second, they are used to construct a national time-series overview of domestic property development, which supports the descriptive and contextual analysis presented in Chapter 4. Through this dual role, the ELSTAT dataset enables the study to link short-term cross-sectional variation with long-term structural trends, thereby offering a more comprehensive understanding of the dynamics of countryside property development in Greece.

3.2.2 Bank of Greece

The analysis of macroeconomic conditions and property market dynamics in Greece is complemented by data obtained from the Bank of Greece, which provides official and systematically compiled indicators on housing prices and broader real-estate trends. In particular, the study utilizes the Index of Prices of Dwellings (historical series), which constitutes one of the most widely used measures for assessing developments in the residential property market. This index captures changes in housing prices over time and reflects fluctuations in demand, investment activity, and overall market confidence. As such, it serves as a critical contextual variable for interpreting construction activity and understanding the broader investment climate within which property development occurs.

The dataset spans a long temporal horizon, covering the period from 1993 to 2024, and includes quarterly observations as well as annual averages and percentage changes. This extensive time coverage enables the identification of long-term trends in the Greek housing market, including periods of expansion, stagnation, and contraction. Of particular importance is the sharp decline observed during the economic crisis (2009–2017), followed by a gradual recovery phase in subsequent years. The availability of recent data up to 2024 allows the study to capture the most current dynamics of the housing market, including the resurgence of property prices and renewed investor interest. These temporal patterns are essential for situating the cross-sectional analysis of construction activity within a broader macro-financial context.

In operational terms, the housing price index is treated as a macroeconomic and market-based indicator rather than as a direct explanatory variable in the core cross-sectional model. Given that the main empirical analysis is conducted at the regional (NUTS2) level for a single reference year, and considering that the Bank of Greece data are primarily available at the national or aggregated urban level, their role is primarily interpretive and contextual. Specifically, the index is used to illustrate how fluctuations in property prices correspond to phases of increased or decreased construction activity, thereby providing an additional layer of explanation for observed regional patterns. This approach is consistent with the broader methodological framework of the study, which combines cross-sectional analysis with longitudinal contextualization.

Furthermore, the housing price index offers insight into the interaction between supply and demand in the real-estate market. Rising property prices are often associated with increased investment incentives and construction activity, while declining prices may signal reduced demand and constrained development. However, it is important to note that the present study does not attempt to establish a causal relationship between price dynamics and construction intensity. Instead, the index is used to support a descriptive and comparative interpretation of the Greek property market, acknowledging that both construction activity and housing prices are jointly influenced by broader macroeconomic conditions, financial factors, and policy frameworks.

3.2.3 Population Data (ELSTAT)

The present study incorporates population data as a fundamental variable for the normalization and comparative analysis of regional indicators. Population figures were obtained from the Hellenic Statistical Authority, which constitutes the official national body responsible for the collection, processing, and dissemination of statistical information in Greece. The use of ELSTAT ensures a high level of data reliability, consistency, and methodological transparency, as its datasets adhere to the standards of the European Statistical System and Eurostat guidelines.

The population data refer to the resident population at the level of the thirteen administrative regions of Greece, corresponding to the NUTS 2 classification. This

level of aggregation was selected in order to ensure compatibility with the rest of the dataset, particularly with variables related to construction activity and European investment flows, which are also structured at the regional (NUTS 2) level. The selection of a consistent spatial unit is essential in regional analysis, as it allows for meaningful comparisons and avoids distortions arising from differences in territorial scale.

In methodological terms, population data were not used as a standalone variable but primarily as a normalization factor for the construction of per capita indicators. Specifically, variables such as EU_Investment_per_1000_Residents, Volume_per_Capita, and New_Buildings_per_1000 inhabitants were derived by dividing absolute values (e.g., total investment, construction volume, number of buildings) by the corresponding regional population. This approach allows the study to control for size effects, thereby enabling the comparison of regions with substantially different population magnitudes, such as Attica and less densely populated regions like the North Aegean or Epirus.

The preprocessing of the population dataset involved several steps to ensure compatibility with the main analytical framework. Initially, the raw data extracted from ELSTAT were cleaned to retain only the relevant regional observations, excluding lower-level administrative units or aggregated national totals. Subsequently, region names were standardized in English to match the naming conventions used in the main dataset, ensuring accurate merging through lookup functions (e.g., VLOOKUP/XLOOKUP). Particular attention was given to consistency in spelling and formatting, as discrepancies at this stage could lead to missing values or incorrect data matching.

Furthermore, the population data were examined for completeness and internal consistency. All thirteen regions were verified to have valid population values, with no missing or anomalous entries. A logical validation was also performed, confirming that the distribution of population across regions aligns with known demographic patterns, such as the significantly higher population of Attica compared to other regions. This step is crucial in preventing propagation of errors in subsequent calculations of derived indicators.

It is important to note that the population figures represent a snapshot of a specific reference year, which was selected to align as closely as possible with the temporal coverage of the other variables in the dataset. Although minor temporal mismatches may exist due to data availability constraints, the use of population as a relatively stable structural variable minimizes potential bias in the analysis.

3.2.4 European Commission (Cohesion Policy Dataset, 2021–2027)

The third core dataset employed in this study is derived from the European Commission's Cohesion Policy database for the programming period 2021–2027. This dataset provides detailed information on planned financial allocations across European Union member states, including Greece, and constitutes a key source for understanding the spatial distribution and strategic orientation of public investment. Unlike national statistical data that capture realized economic activity, the Cohesion Policy dataset reflects the planned allocation of resources across regions, sectors, and policy objectives, thereby offering insight into the intended development priorities of both the European Union and national authorities.

The dataset includes a wide range of variables related to funding programs, such as the type of financial instrument (e.g., European Regional Development Fund – ERDF, Cohesion Fund – CF, Just Transition Fund – JTF), program identifiers, thematic priorities, and total allocated financial amounts. These allocations are categorized according to specific policy objectives, including smart growth (PO1), green transition (PO2), and territorial cohesion (PO5), among others. Additionally, the dataset provides information on program status and implementation frameworks, enabling the identification of officially adopted and operational funding schemes. Through these variables, the dataset captures not only the magnitude of investment but also its qualitative orientation in terms of development strategy.

In the context of the present study, the European Commission data are operationalized to construct an indicator of EU investment intensity at the regional level. This involves aggregating planned financial allocations relevant to Greece and, where possible, allocating them to corresponding territorial units (NUTS2 regions). Given that the raw dataset is organized at the program level rather than strictly at the regional level, a process of filtering and categorization is required to extract those

programs directly associated with regional development, infrastructure, housing, and sustainability. The resulting variable reflects the relative intensity of planned investment allocation across regions, typically expressed either in total financial terms or normalized per capita to ensure comparability.

It is important to emphasize that this variable does not represent actual disbursed expenditure but rather planned or approved funding allocations. As such, it is interpreted as an indicator of policy allocation intensity or development orientation, rather than a direct measure of realized investment. This distinction is methodologically significant, as it implies that any observed relationship between EU funding and construction activity should be understood as correlational rather than causal. In other words, higher levels of planned funding may be associated with increased construction activity, but they do not necessarily imply direct or immediate effects, given potential delays in implementation, variations in absorption capacity, and the influence of additional contextual factors.

Analytically, the European Commission dataset serves as the primary explanatory variable in the empirical model, enabling the examination of how variations in planned public investment across regions are associated with differences in construction intensity. By incorporating this dataset, the study bridges the gap between market-driven indicators of property development and policy-driven frameworks of regional growth. This integration allows for a more comprehensive assessment of countryside property development in Greece, situating local construction dynamics within the broader context of European strategic investment and territorial cohesion objectives.

3.3 Data Cleaning and Integration Procedures

The reliability and validity of the empirical analysis depend critically on the systematic preparation and harmonization of the datasets employed. Given that the present study integrates data from multiple institutional sources—namely ELSTAT, the Bank of Greece, the World Bank, and the European Commission—it is essential to ensure that all variables are comparable in terms of measurement units, spatial classification, and temporal reference. The data cleaning and integration process

therefore constitutes a fundamental stage of the research design, aimed at minimizing inconsistencies and enhancing the analytical coherence of the dataset.

The initial step involves filtering the raw data to retain only those variables and observations that are directly relevant to the research objectives. For the ELSTAT dataset, this includes selecting indicators related to new construction activity, such as the number of new buildings, total surface area, and construction volume, and aggregating them at the regional (NUTS2) level where necessary. In the case of the European Commission dataset, filtering focuses on identifying programs and financial allocations that pertain specifically to Greece and are relevant to regional development, infrastructure, housing, and sustainability. This step requires careful exclusion of non-relevant programs, cross-border initiatives not directly linked to national territorial units, and administrative entries that do not correspond to measurable financial allocations.

Following the filtering process, the data are standardized to ensure consistency across datasets. This includes the conversion of financial variables into a common currency unit (Euro) and, where applicable, the adjustment of values to constant prices to account for inflation effects. Although the primary analysis is cross-sectional and focuses on a single reference period, the use of constant prices (e.g., 2015 base year) is considered where time-series comparisons are involved, particularly in the contextual analysis of macroeconomic indicators. In addition, variables related to construction activity are normalized on a per capita basis (e.g., square meters per 1,000 inhabitants, volume per capita), thereby allowing meaningful comparison across regions of different population sizes and avoiding scale-related distortions.

A further critical component of the data preparation process is the alignment of datasets across a common geographical framework. All variables are harmonized at the NUTS2 regional level, which serves as the unit of analysis in the study and corresponds to the standard territorial classification used in European regional policy. This requires the aggregation or disaggregation of data where necessary, particularly in cases where source datasets are available at different spatial levels (e.g., NUTS3 or national level). The alignment process ensures that each observation in the final

dataset corresponds to a single region, with all relevant variables consistently assigned.

Finally, the cleaned and standardized datasets are integrated into a unified analytical file suitable for statistical analysis. This involves merging data from the different sources using common identifiers, such as region codes or names, and verifying the completeness and accuracy of the resulting dataset. Any missing values or inconsistencies are carefully examined and addressed, either through exclusion of incomplete observations or through appropriate imputation strategies, depending on the extent and nature of the missing data. The final dataset thus represents a coherent and internally consistent structure, enabling the application of descriptive, comparative, and correlation-based analytical techniques in the subsequent stage of the research.

3.4 Research Hypotheses

The formulation of research hypotheses constitutes a critical step in linking the theoretical framework of the study with its empirical investigation. Given the quantitative and cross-sectional nature of the analysis, the hypotheses are designed to examine associations between regional construction activity and the allocation of development-oriented resources, without implying causal relationships. In line with this approach, the study adopts a correlation-based perspective, emphasizing patterns of co-variation rather than causation.

The primary hypothesis of the study focuses on the relationship between planned investment intensity and construction activity across Greek regions. Specifically, it is expected that regions characterized by higher levels of allocated investment per 1000 residents will tend to exhibit higher levels of construction intensity, as measured by new building surface per 1000 inhabitants. This assumption reflects the broader notion that policy-driven allocation of financial resources is associated with regional development dynamics and infrastructural expansion.

To ensure the robustness of the findings, the study also introduces alternative dependent variables that capture different dimensions of construction activity. Accordingly, a second hypothesis examines whether higher investment allocation per

1000 residents is associated with increased construction volume per capita, while a third hypothesis explores the relationship between investment intensity and the number of new buildings per 1,000 inhabitants. These complementary hypotheses aim to verify that the observed relationships are not dependent on a single measurement of construction activity.

Finally, a fourth hypothesis considers potential spatial differentiation by examining whether the Attica region, as the primary urban center, presents distinct patterns of construction activity compared to other regions. This is explored through the inclusion of a binary urban indicator, allowing for a comparative assessment within the broader analytical framework.

3.5 Analytical Techniques

The empirical analysis of the present study employs a structured set of statistical techniques designed to examine patterns, associations, and explanatory relationships among the variables of interest within a cross-sectional framework. The analytical process is implemented in sequential stages, beginning with descriptive statistics, followed by normality testing, correlation analysis, and regression modeling. This multi-step approach ensures both the robustness and interpretability of the findings.

Initially, descriptive statistics, including means and standard deviations, are calculated to provide an overview of the distribution and variability of key indicators such as construction intensity, construction volume per capita, new buildings per 1,000 inhabitants, and EU investment per 1,000 inhabitants. These measures offer preliminary insights into regional disparities and form the basis for subsequent inferential analysis.

To assess the suitability of parametric statistical methods, the normality of the variables is examined using the Shapiro–Wilk test, which is appropriate for small sample sizes. Given that the dataset includes thirteen regions, this step is essential in determining whether the assumptions underlying Pearson correlation and linear regression are reasonably satisfied. Minor deviations from normality are considered acceptable due to the robustness of parametric techniques in small samples.

Subsequently, Pearson correlation analysis is conducted to evaluate the strength and direction of linear relationships between construction activity indicators and EU investment intensity. This method allows for the identification of interdependencies among structural variables and provides an initial assessment of potential associations.

Finally, regression analysis is applied to explore explanatory relationships between EU investment intensity and selected construction activity indicators. The main model estimates a simple linear regression in which construction intensity is treated as the dependent variable and EU investment per 1,000 inhabitants as the independent variable. In order to test the robustness of the findings, additional separate simple linear regressions are then conducted, using alternative construction-related indicators as dependent variables, namely construction volume per capita and new buildings per 1,000 inhabitants. This approach does not aim to estimate the combined effect of multiple predictors within a single model, but rather to examine whether the relationship between EU investment intensity and construction activity remains consistent across different operationalization of regional construction dynamics. Therefore, the regression analysis is interpreted as evidence of statistical association rather than strict causality.

3.6 Limitations and Data Constraints

Despite the systematic integration of institutional datasets, the present study is subject to certain methodological and data-related limitations that should be acknowledged. First, the empirical analysis is based on the thirteen NUTS2 regions of Greece, resulting in a relatively small sample size ($N = 13$). Although this spatial level is appropriate for regional comparison and is consistent with the structure of European Cohesion Policy data, the small number of observations limits the statistical power of the analysis and restricts the generalizability of the findings. For this reason, the results should be interpreted cautiously, particularly with regard to correlation and regression outcomes.

Second, the research design is cross-sectional, focusing on a single reference period rather than a longitudinal panel. Consequently, the analysis captures associations

between regional construction activity and investment intensity at a specific point in time, but it cannot examine dynamic effects, delayed impacts, or long-term causal relationships. This is especially important in the case of public investment, where the effect of funding allocations on construction activity may appear only after significant implementation lags.

Third, the European Commission data refer to planned or approved Cohesion Policy allocations for the 2021–2027 programming period, rather than realized expenditure or fully absorbed funds. Therefore, the EU investment variable should be understood as an indicator of policy allocation intensity and strategic development orientation, not as a measure of actual investment implementation. Differences in regional absorption capacity, administrative efficiency, and project maturity may therefore weaken any direct association between planned funding and observed construction activity.

Finally, the study does not use direct ROI data, as regionally disaggregated return-on-investment indicators for countryside property development are not systematically available in official datasets. Instead, Construction Intensity, measured as new construction surface per 1,000 inhabitants, is employed as a proxy outcome for regional construction and market activation. While this indicator captures an important dimension of property development, it does not measure profitability, rental yield, transaction values, or investor returns directly. As a result, the findings should be interpreted as evidence concerning regional construction performance rather than as direct evidence of investment profitability.

Chapter 4. Data Analysis and Results

4.1 Evolution of Property and Construction Activity and Regional Disparities in Greece

Table 1 presents the national mean values and standard deviations for the three core indicators of construction activity. The average construction intensity across regions is 47.4 (SD = 28.05), indicating substantial variability in regional building activity. Volume per capita averages 0.20 m³ (SD = 0.11), while the mean number of new buildings per 1,000 residents is 0.14 (SD = 0.11). The relatively large standard deviations across all variables confirm the presence of considerable regional heterogeneity, suggesting that construction activity is unevenly distributed rather than spatially balanced.

Table 1: Descriptive Statistics of Construction Activity Indicators

Quantity	Mean
Construction Intensity	47.4±28.05
Volume per Capita (m3)	0.20±0.11
New Buildings per 1000 residents	0.14±0.11

Figure 1 illustrates marked regional disparities in construction intensity. The Ionian Islands and the South Aegean exhibit the highest levels of activity, clearly exceeding the national average. In contrast, Western Macedonia and the North Aegean record significantly lower values. The magnitude of difference between leading and lagging regions reflects a geographically uneven recovery pattern, with tourism-oriented and island regions demonstrating stronger construction momentum compared to structurally weaker mainland areas.

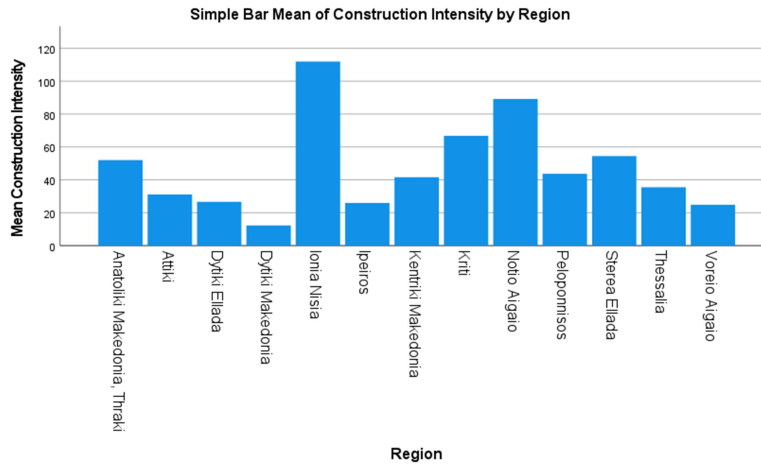


Diagram 1: Mean construction intensity by region.

The distribution of construction volume per capita largely mirrors the pattern observed for construction intensity. The Ionian Islands and the South Aegean again rank highest, followed by regions such as Crete and Central Macedonia. Lower levels are observed in Western Macedonia and the North Aegean. This reinforces the conclusion that building activity is concentrated in regions characterized by tourism expansion and investment in residential and hospitality infrastructure.

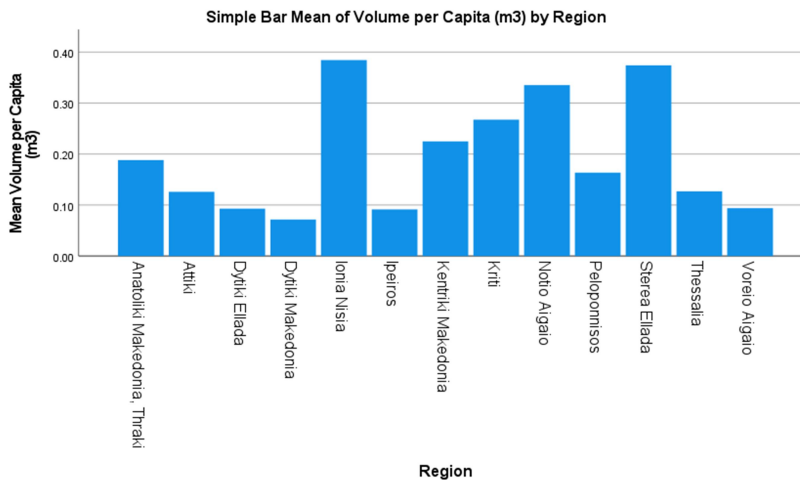


Diagram 2: Mean construction volume per capita (m³) by region.

The regional distribution of new building activity confirms the persistence of spatial inequalities. The Ionian Islands display the highest per capita rate of new construction, followed by the South Aegean and Crete. Metropolitan and industrial regions, including Attica, present comparatively moderate values, while certain

peripheral regions remain below the national mean. The data indicate that new construction growth is disproportionately concentrated in specific high-demand territories.

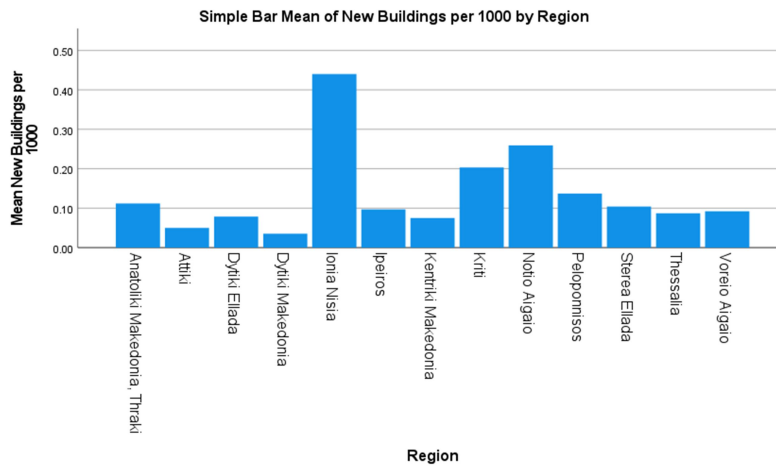


Diagram 3: Mean number of new buildings per 1,000 residents by region.

The comparison between urban and non-urban areas reveals a clear divergence. Non-urban regions record a higher average construction intensity compared to urban regions. This finding suggests that recent construction expansion is more pronounced outside metropolitan centers. The pattern indicates a shift in spatial development dynamics, with countryside and peripheral regions experiencing relatively stronger growth.

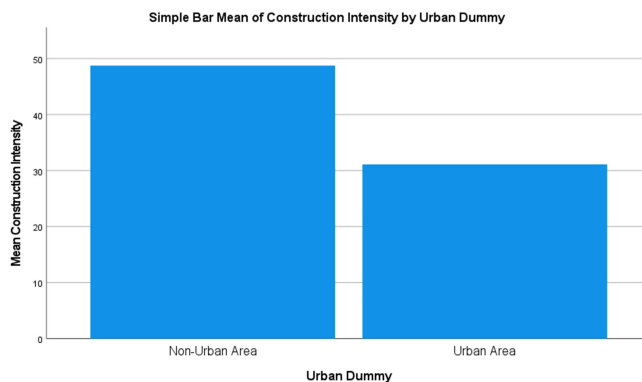


Diagram 4: Mean construction intensity by urban classification.

4.2 Relationship between European Investment Intensity and Regional Construction Activity

To address the second Research Question (*To what extent are regional variations in construction activity linked to differences in European investment intensity and structural building indicators across Greek regions?*) research question, the analysis proceeded in two stages. First, the assumption of normality was examined to determine the appropriateness of parametric techniques. Second, Pearson correlation analysis was conducted to assess the strength and direction of linear associations among the variables.

The Shapiro–Wilk test was employed due to the small sample size ($N = 13$ regions). Construction Intensity ($W = 0.899$, $p = 0.128$), EU Investment per 1000 residents ($W = 0.967$, $p = 0.853$), and Volume per Capita ($W = 0.878$, $p = 0.067$) did not significantly deviate from normality ($p > .05$). Although New Buildings per 1,000 residents showed a statistically significant deviation ($W = 0.759$, $p = 0.002$), the overall distributional pattern supported the use of Pearson correlations, given the robustness of the method to minor deviations in small samples.

Table 2: Shapiro–Wilk test of normality for construction and investment indicators.

	Shapiro-Wilk Statistic	Sig.
Construction Intensity	0.899	0.128
EU Investment per 1000 residents (euro)	0.967	0.853
Volume per Capita (m3)	0.878	0.067
New Buildings per 1000	0.759	0.002

The correlation analysis reveals a differentiated pattern of associations across regions. EU Investment per 1000 residents demonstrates weak and non-significant correlations with Construction Intensity ($r = -0.180$), Volume per Capita ($r = -0.259$), and New Buildings per 1,000 residents ($r = 0.058$). These findings indicate that European investment intensity does not exhibit a systematic linear relationship with regional construction performance indicators. In contrast, strong and statistically significant positive correlations are observed among the structural construction indicators. Construction Intensity is highly correlated with Volume per Capita ($r = 0.889$) and New Buildings per 1,000 residents ($r = 0.938$), while Volume per Capita is also strongly associated with New Buildings per 1,000 residents ($r = 0.735$). These results suggest that the three structural indicators capture closely related dimensions of regional building activity.

Overall, the findings indicate that regional variations in construction activity are strongly interconnected across structural measures but are not directly associated with differences in European investment intensity. This suggests that construction performance across Greek regions is more closely linked to internal market dynamics and structural development patterns than to the distribution of EU investment per 1000 residents.

Table 3: Pearson correlation matrix among European investment intensity and construction activity indicators.

	EU Investment per 1000 residents (euro)	Construction Intensity	Volume per Capita (m³)	New Buildings per 1000
EU Investment per 1000 residents (euro)	1.000	-0.180	-0.259	0.058
Construction Intensity	-0.180	1.000	0.889	0.938
Volume per Capita (m³)	-0.259	0.889	1.000	0.735
New Buildings per 1000	0.058	0.938	0.735	1.000

4.3 The Effect of European Investment Intensity on Regional Construction Performance: A Linear Regression Analysis

To examine the independent contribution of European investment intensity to regional construction performance, a simple linear regression model was estimated with Construction Intensity as the dependent variable and EU Investment per 1000 residents as the sole predictor.

Table 4: Simple linear regression results with EU Investment per 1000 residents predicting Construction Intensity.

	B	t	Sig	F	Sig
Constant	58.61	2.911	0.014	0.368	0.556
EU Investment per 1000 residents (euro)	$-3.07 \cdot 10^{-6}$	-0.607	0.556		

The regression results indicate that EU Investment per 1000 residents does not significantly predict Construction Intensity across Greek regions. The coefficient for EU Investment per 1000 residents is negative ($B = -3.07 \times 10^{-6}$), but statistically non-significant ($t = -0.607$, $p = 0.556$). Furthermore, the overall model is not statistically significant ($F = 0.368$, $p = 0.556$), indicating that variation in European investment intensity does not explain a meaningful proportion of regional differences in construction activity. These findings suggest that, when considered independently, European investment per 1000 residents does not exert a measurable direct influence on regional construction performance. Regional disparities in construction intensity therefore cannot be attributed solely to differences in the allocation of EU funds.

4.4 Robustness Analysis Using Alternative Construction Indicators

In order to address concerns regarding potential conceptual overlap among construction indicators and to avoid multicollinearity issues arising from the simultaneous inclusion of highly correlated structural variables, an additional robustness analysis was conducted. Instead of estimating a multiple regression model including Volume per Capita and New Buildings per 1,000 residents as concurrent predictors of Construction Intensity, each indicator was treated as an alternative dependent variable in separate simple linear regression models. This approach allows for the examination of whether European investment intensity has a consistent influence across different variables of regional construction activity.

Table 5: Simple linear regression results with EU Investment per 1000 residents predicting Volume per Capita.

	B	t	Sig	F	Sig
Constant	0.26	3.290	0.007	0.792	0.393
EU Investment per 1000 residents (euro)	$-1.77 \cdot 10^{-8}$	-0.890	0.393		

The first robustness model examined whether EU Investment per 1,000 residents predicts regional Construction Volume per Capita (Table 5). The results indicate that the model is not statistically significant ($F = 0.792$, $p = 0.393$). The coefficient for EU Investment per 1,000 residents is negative ($B = -1.77 \times 10^{-8}$) but statistically non-significant ($t = -0.890$, $p = 0.393$). These findings suggest that variations in European investment intensity do not explain regional differences in construction volume. The direction of the coefficient remains weak and inconsistent with a systematic developmental effect.

Table 6: Simple linear regression results with EU Investment per 1000 residents predicting New Buildings per 1000 residents.

	B	t	Sig	F	Sig
Constant	0.122	1.530	0.154	0.037	0.850
EU Investment per 1000 residents (euro)	$3.87 \cdot 10^{-9}$	0.193	0.850		

The second robustness model assessed whether EU Investment per 1,000 residents predicts the number of New Buildings per 1,000 residents (Table 6). Again, the regression model is not statistically significant ($F = 0.037$, $p = 0.850$). The estimated coefficient for EU Investment per 1,000 residents is positive ($B = 3.87 \times 10^{-9}$) but clearly non-significant ($t = 0.193$, $p = 0.850$). The extremely small magnitude of the coefficient further indicates the absence of any meaningful linear association between European funding intensity and this alternative construction indicator.

Taking these results together, the robustness analysis confirms that the European investment intensity does not exhibit a statistically significant direct relationship with regional construction performance, regardless of how construction activity is measured. The consistency of the null results across multiple dependent variables strengthens the validity of the main bivariate conclusion and eliminates the interpretative complications that arose in the previously estimated multivariate specification.

Chapter 5. Discussion

With regard to the first research question, the findings clearly confirm the existence of substantial regional disparities in construction activity across Greece. The descriptive statistics and regional comparisons demonstrate that construction intensity, volume, and new building activity are unevenly distributed, with tourism-oriented regions such as the Ionian Islands and the South Aegean significantly outperforming mainland and structurally weaker regions. This result supports the broader hypothesis that spatial inequality characterizes the Greek property market and aligns strongly with prior research emphasizing regional imbalances in Greece (Kalogeresis, 2024; World Bank, 2024). Moreover, the observed concentration of construction activity in high-demand regions is consistent with studies highlighting the role of economic geography and demand-driven development patterns (Psycharis et al., 2014; Stratopoulou, 2025). The finding that non-urban regions exhibit higher construction intensity compared to metropolitan areas reflects a partial shift in development dynamics, likely driven by tourism expansion and investment diversification, thus supporting arguments that real estate can act as a catalyst for regional growth under specific economic conditions (Oshomegie et al., 2025). However, this pattern also confirms the persistence of uneven development rather than balanced spatial convergence, in line with spatial equilibrium theory (Tsyalievskaya, 2022).

Turning to the second research question and its corresponding hypotheses, the results indicate that European investment intensity does not exhibit a statistically significant relationship with construction activity indicators. The weak and non-significant correlations between EU investment per 1000 residents and construction intensity, volume, and new building activity lead to the rejection of the initial hypothesis that higher public investment is associated with stronger regional construction performance. This finding diverges from theoretical expectations within cohesion policy literature, which assumes that financial allocations contribute to regional development and infrastructure expansion (Aversa, 2016; Abdelhamid et al., 2025). However, it is strongly consistent with more critical perspectives emphasizing the importance of institutional capacity and governance quality in determining the effectiveness of EU funding (Bachtler & Begg, 2017; Nishimura et al., 2021). In this

context, the absence of correlation suggests that planned investment alone is insufficient to drive measurable construction outcomes, particularly in regions with limited absorption capacity or structural constraints. This interpretation is further supported by studies highlighting the discrepancy between policy design and actual regional impact (Saracu & Trif, 2019; Balu et al., 2025).

The regression results further support this interpretation, as EU investment per 1,000 residents does not emerge as a statistically significant predictor of construction intensity in the present cross-sectional specification. Although the estimated coefficient is negative, this result should not be interpreted as evidence of a redistributive effect or as an indication that EU investment reduces construction activity. Since the relationship is not statistically significant, the appropriate interpretation is that no reliable linear association can be established between EU investment intensity and construction performance based on the present regional dataset.

This finding does not support simplistic growth-based models that assume a direct and automatic relationship between public investment inflows and real estate or construction expansion (Zhang & Zhang, 2012; Shen, 2021). Instead, it suggests that, within this empirical specification, European funding does not appear to have a statistically measurable direct association with construction activity. This does not necessarily imply that cohesion policy is ineffective, but rather that its potential effects may not be captured through a simple cross-sectional relationship at the NUTS2 regional level. Such effects may depend on time lags, project absorption, institutional capacity, local implementation mechanisms, and broader regional development conditions.

From a broader theoretical perspective, these results contribute to an ongoing debate within the literature. While some studies advocate the effectiveness of cohesion policy in promoting balanced regional growth (Abdelhamid et al., 2025; Santos, 2022), others highlight persistent structural inequalities and uneven policy impact at the regional level (Zioło & Luty, 2023; Hysesani, 2025). The findings of the present study suggest a more cautious position. European investment intensity does not demonstrate a statistically significant direct linear association with regional construction

performance in the present cross-sectional analysis. Therefore, the results should be interpreted as evidence of non-significant association rather than as proof of either a positive development effect or a redistributive allocation mechanism.

Rather than contradicting cohesion policy effectiveness outright, the results indicate that European funding operates within pre-existing regional structures and may reflect redistributive allocation mechanisms toward lagging areas. This interpretation is consistent with research emphasizing that the impact of cohesion policy depends on absorptive capacity, institutional quality, and local economic structures (Crescenzi & Giua, 2020; Becker et al., 2018). Therefore, real estate development in Greece appears to be primarily driven by endogenous market forces, while European funding does not exhibit a statistically measurable direct influence on construction activity in the present empirical specification, and any potential impact appears to be indirect or mediated by structural regional conditions.

Chapter 6. Conclusions

The main aim of the present study was to analyze the dynamics of the countryside property development in terms of quantitative data and indicators of construction activity in the region and European investment frameworks. The study used the regional level of NUTS2 with descriptive statistics, correlation analysis, and regression models, to try to make sense of the endogenous market dynamic and endogenous investment mechanisms in the post-crisis Greek economy.

The results support the hypothesis that there are significant regional disparities in construction performance. Structurally weaker mainland areas are still lagging behind as development is still the main priority in tourism oriented and island regions. The uneven territorial pattern suggests that the recovery of real estate has not been a path of balanced spatial convergence, but rather, it reflects structural disparities at deeper levels in the Greek economy.

The results concerning the role of European investment intensity are more cautious than initially expected. The regression analysis did not show a statistically significant relationship between EU investment per 1,000 residents and construction intensity. Therefore, the findings do not allow the conclusion that European investment directly stimulates, reduces, or redistributes construction activity across Greek regions. The appropriate interpretation is that no statistically significant direct association was identified within the present cross-sectional specification.

At the same time, the results indicate that construction-related structural indicators, such as construction volume per capita and new buildings per 1,000 residents, remain central for understanding regional differences in construction performance. This suggests that regional construction dynamics are more closely associated with existing market conditions, territorial demand, tourism-oriented development, and sector-specific characteristics than with the direct measurable effect of European investment intensity. In this sense, European funding should be approached as a broader contextual factor rather than as an independent statistical driver of construction activity in the present model.

In a more general sense, the study adds to the discussion on the effectiveness of cohesion policy by showing the limits of assuming an automatic relationship between investment allocation and regional construction expansion. The findings do not prove that cohesion policy is ineffective; rather, they show that its direct association with construction activity is not statistically confirmed in this cross-sectional regional analysis. Any potential effect of European investment may require a more detailed longitudinal design, project-level data, or additional variables related to absorption capacity, institutional quality, and local development strategies.

In the end, the findings of this study suggest a fault line between policy goals and empirical facts. The European cohesion policy for balanced regional development is characterized by a spatially uneven construction activity that is mainly market-oriented. But policy interventions are not without meaning: they seem to be effective only in a certain structural context. This underscores the need for region-specific development strategies based on institutions that can achieve sustainable and territorially balanced development outcomes from investment.

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Appendice – Final Data Set

Region	Population	Urban_ Dummy	Number_New _Buildings	Volume_m3	Surface_ m2	EU_Investment_ Total	EU_Investment_per_1000_ residents	Construction _Intensity	Volume_per_Capita	New_Buildings_per _1000
Anatoliki Makedonia , Thraki	562201	0	63	105861	29268	2294752639	4081729,913	52,05967261	0,188297424	0,112059566
Attiki	3814065	1	191	480623	118707	3414274484	895179,9416	31,12348636	0,126013322	0,050077804
Dytiki Ellada	648220	0	51	60236	17293	2256976703	3481806,644	26,67767116	0,092925241	0,078676992
Dytiki Makedonia	254595	0	9	18223	3135	1414326066	5555199,694	12,31367466	0,071576425	0,035350262
Ionia Nisia	204533	0	90	78628	22893	1032075770	5046011,01	111,9281485	0,384426963	0,440026793
Ipeiros	319992	0	31	29266	8305	1529001159	4778248,078	25,95377384	0,091458536	0,096877422
Kentriki Makedonia	1795670	0	135	403780	74686	5180623369	2885064,276	41,59227475	0,224863143	0,075180852
Kriti	624410	0	127	167065	41695	2030377891	3251674,206	66,77503563	0,267556573	0,203392002
Notio Aigaio	327820	0	85	109944	29244	602272038	1837203,459	89,20749192	0,335379171	0,259288634
Peloponnis os	539533	0	74	88289	23561	1471663616	2727661,915	43,66924729	0,163639666	0,137155651
Stereia Ellada	508255	0	53	190205	27701	1529001159	3008334,712	54,50216919	0,374231439	0,104278364
Thessalia	688255	0	60	87405	24409	1987701494	2888030,59	35,46505292	0,126995082	0,087176991
Voreio Aigaio	194943	0	18	18298	4850	1387016861	7114986,745	24,87906721	0,093863334	0,092334682

Author's Statement:

I hereby declare that, in accordance with article 8 of Law 1599/1986 and article 2.4.6 par. 3 of Law 1256/1982, this thesis/dissertation is solely a product of personal work and does not infringe any intellectual property rights of third parties and is not the product of a partial or total plagiarism, and the sources used are strictly limited to the bibliographic references.