VARNA FREE UNIVERSITY "CHERNORIZETS HRABAR"
FACULTY OF ARCHITECTURE
DEPARTMENT OF ARCHITECTURE AND URBAN STUDIES

SEYYID MUHAMMED MARUF ZORTUL

THE EFFECTS OF THE URBAN TRANSFORMATION ON THE PERCEPTION OF SECURITY

ABSTRACT

of a dissertation for awarding the educational-and-scientific degree Ph.D.
professional field 5.7 "Architecture, construction and geodesy",
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The dissertation was discussed and referred for defense before the scientific jury of the Department of Architecture and Urban Studies, Faculty of Architecture of Chernorizets Hrabar Varna Free University, Varna.

The dissertation has 162 pages and consists of an introduction, a presentation in three chapters, a conclusion, a list of references, and four appendices (7 pages). The introduction constitutes Chapter 1 and the conclusion Chapter 5, so that the text comprises five numbered chapters in total. The content of each chapter is divided into separate paragraphs, as specific findings were made at the end of each chapter. The main text contains 25 tables and 33 figures. The list of reference literature consists of 134 titles in English and Turkish.

The defense of the dissertation before the scientific jury will be held on 27 November, 2026 at14:30 h., in the Conference Room of Chernorizets Hrabar Varna Free University at a hearing of the scientific jury. The materials for the defense are available in the office of the Department of Architecture and Urban Studies, Faculty of Architecture of Chernorizets Hrabar Varna Free University, and at the website of the university www.vfu.bg.

I. GENERAL CHARACTERISTICS OF THE DISSERTATION

1. Relevance and Significance of the Topic

The effect of urban transformation on residents' perception of security is relevant and important in Turkiye because a construction-led renewal program legitimized by earthquake risk is currently reshaping the living environment of millions of people, yet the perception of those residents whether they actually feel safer, and whether all social groups feel safer to the same degree has never been measured against the environment being replaced.

The scope of the issue extends beyond a single neighborhood. Law No. 6306 is applicable across the entire country, with similar in-place transformation initiatives active in every major Turkish city. These projects occur on building stock resulting from rapid, mostly informal urban growth. When renewal is driven by disaster risk and carried out through private development, a common tension emerges between the technical need for intervention and its social repercussions. The process analyzed here- the way a perceived current deficit justifies radical future interventions- is not limited to Fikirtepe, Istanbul, or Turkiye; it reflects a broader pattern of risk-based, state-led regeneration wherever it takes place.

Urban transformation is a recurring process that almost every nation experiences periodically in order to modernize its built environment in response to evolving living conditions. In Istanbul, however, which lies on a major seismic belt and concentrates a substantial share of the national building stock, urban transformation has become an urgent necessity rather than a mere architectural preference. Following the 1999 Marmara earthquake, and particularly after the enactment of Law No. 6306 on the Transformation of Areas Under Disaster Risk, the renewal of the existing building stock has been reframed as a question of survival. This framing has granted both public authorities and the private sector an exceptionally strong mandate to intervene in established neighborhoods, and it is precisely this mandate that makes the social consequences of transformation worth examining.

As a case study, Fikirtepe, a former squatter settlement in the Kadikoy district on the Anatolian side of Istanbul, has been chosen. Covering an area of approximately 134 hectares and declared a risk area in 2013, Fikirtepe constitutes the largest and most contested *in situ* transformation project in Turkiye. The neighborhood developed informally after the 1950s, reached a net residential density of 613 persons per hectare, and is currently being replaced by high-rise, gated residential complexes. It therefore offers a unique setting in which the conflict between the spontaneous urban fabric of the past and the planned, securitized, and vertical architecture of the future can be observed while the process is still unfolding.

Knowledge gap

The relevance of the topic also stems from a gap in the way the process has been studied. The existing literature on urban transformation in Turkiye is dominated by macro-level analyses: the legal framework, property rights, rent distribution, and the construction-led growth model. The residents themselves, whose everyday spatial experience is reorganized by these projects, are usually treated as a homogeneous group. Yet a mega-project does not affect a low-income tenant, a small parcel owner, and a recently arrived household in the same way. The present dissertation addresses the process from the perspective of those who live it, and translates their evaluations into measurable data.

The findings derived from this study aim primarily to introduce novel information regarding the socio-spatial impacts of these mega-projects to a wide audience, including urban planners, architects, local administrators, developers, and the residents themselves. The presentation of a new quantitative resource for researchers and its potential to facilitate further comparative studies underscore the critical importance and relevance of this research.

2. Research Problem and Research Questions

Within the scope of the study, the relationship between the urban transformation process, which emerges in response to changing demands and needs, and the perception of social security is investigated. In this direction, **the core research question** is:

- **What are the effects of urban transformation on the perception of social security?**

To address this problem, the study seeks to answer the following specific research questions:

- How do the residents of Fikirtepe and Kadikoy perceive their current security and physical environment compared with the projected urban transformation?
- Does the perception of security and spatial adequacy differ according to socio-demographic variables such as income, education and age?
- How does the duration of residency affect the residents' attachment to the neighborhood and their expectations from the transformation?

3. Object and Subject of the Research

The object of the research is the urban transformation process and its socio-spatial dynamics in Istanbul, with a specific focus on the Fikirtepe neighborhood and the surrounding Kadikoy district.

The subject of the research is the impact of these urban transformation processes on the residents' perception of security, encompassing physical safety, the social environment, the adequacy of social and technical infrastructure, and earthquake resilience.

The choice of two spatial references is deliberate. Fikirtepe is evaluated as the respondents' immediate living environment; Kadikoy as the wider district that surrounds it and functions as a reference standard of urban quality; and the transformation project as a projected future state. This three-fold structure allows the perception gap between the lived present and the promised future to be measured directly, rather than inferred.

4. Objectives and Specific Tasks

The **primary objective** of this study is to ascertain the influence of urban transformation on individuals' perceptions of security. Additionally, the research seeks to investigate whether this relationship varies according to different demographic characteristics.

Accordingly, the specific tasks of this research are:

- **i.** to determine the perceived adequacy of the current Fikirtepe neighborhood across ten urban parameters;
- **ii.** to determine the perceived adequacy of the wider Kadikoy district across the same parameters;
- **iii.** to determine the level of security, resilience and service quality expected from the urban transformation project;
- **iv.** to establish whether participants' security and spatial perceptions differ according to gender, age, marital status, education level, monthly income, and duration of residence in Istanbul and in Fikirtepe;
- **v.** to interpret the resulting differences within the theoretical framework of spatial injustice, place attachment and elite localities.

5. Research Hypotheses

The general hypothesis of the research is formulated as follows:

H1: There is a statistically significant difference in the security and spatial perceptions of the participants regarding Fikirtepe, Kadikoy, and the urban transformation, based on their demographic variables.

H0: There is no statistically significant difference in the security perceptions of the participants based on their demographic variables.

The general hypothesis is operationalized through the following sub-hypotheses:

- **H1.1** (Gender): The perception of security and spatial adequacy differs significantly according to the gender of the participants.

- **H1.2** (Age): The perception of security and spatial adequacy differs significantly according to the age of the participants.
- **H1.3** (Monthly income): The perception of security and spatial adequacy differs significantly according to the monthly income of the participants.
- **H1.4** (Education level): The perception of security and spatial adequacy differs significantly according to the education level of the participants.
- **H1.5** (Duration of residency): The perception of security and spatial adequacy differs significantly according to the duration of residence in Istanbul and in Fikirtepe.

Each sub-hypothesis was tested separately for the three scales (Evaluation of Fikirtepe, Evaluation of Kadikoy, Evaluation of Urban Transformation), and the results are summarized in Chapter 5 of this abstract.

6. Methodology and Research Methods

This dissertation employs a quantitative research approach based on a correlational model. The model was selected in order to test the existence and direction of the relationship between the evaluations of Fikirtepe, Kadikoy, and the urban transformation project.

The primary research method is a face-to-face field survey conducted with individuals aged 18 and over residing in Fikirtepe and the surrounding Kadikoy district. The sample consists of 131 volunteer participants. Participation was voluntary, and the resulting composition closely aligns with the socio-economic profile of the neighborhood outlined in Chapter 2: it is predominantly composed of the working-age population, mainly high-school graduates, and primarily clustered within the two middle-income brackets, with a minimal number of respondents exceeding the average income level. The design is inherently comparative; each respondent assesses all three settings, Fikirtepe, Kadikoy, and the projected transformation, using the same set of parameters. This

methodology ensures that the comparison is made within the same individual, rather than across different groups of respondents.

The data were collected using a demographic information form and three five-point Likert-type scales, each containing ten items:

- **i.** the Evaluation of Fikirtepe Scale, measuring the perceived adequacy of the current neighborhood;
- **ii.** the Evaluation of Kadikoy Scale, measuring the perceived adequacy of the wider district;
- **iii.** the Evaluation of Urban Transformation Scale, measuring the security and quality expected from the mega-project.

Responses were coded from 1 (completely inadequate) to 5 (quite adequate) and treated as ordinal data. The collected data were processed using SPSS 22.0, while the graphs and their statistical evaluation were produced using GraphPad Prism 9.

Although the Kolmogorov-Smirnov and Shapiro-Wilk tests indicated deviation from normality, parametric tests were retained for the demographic comparisons, since the scale scores are composite means of ten items and each compared subgroup exceeded n=30: the independent samples t-test for binary variables and one-way ANOVA for variables with more than two categories. Non-parametric procedures were applied where the design required them: the Friedman test with Dunn's multiple comparisons for the within-subject comparison of the three scales, Spearman's rank correlation for ordinal associations, and the Chi-square test of independence for categorical relationships. A p-value below 0.05 was accepted as statistically significant.

7. Scientific Novelty and Contribution

The scientific novelty of this dissertation lies in its approach to urban transformation not merely as a physical construction process, but as a catalyst for socio-spatial segregation and urban fatigue.

The novelty of the study can be specified in four points:

- **i.** A comparative three-scale measurement model. Instead of evaluating a single setting, the research measures a common core of urban parameters simultaneously for the current neighborhood,

the surrounding district, and the projected transformation, supplemented in the third scale by items specific to the intervention itself. This design makes the perception gap between the lived present and the promised future directly measurable rather than inferred from narrative accounts.

ii. The quantification of "security" as a multi-layered concept. Security is decomposed into physical safety, social environment, infrastructural adequacy and seismic resilience, and each layer is tested separately against demographic variables. The study thereby demonstrates that these layers do not move together: the transformation equalizes the perception of general security across income groups while leaving seismic safety and social services stratified.

iii. The identification of urban fatigue: by demonstrating that mid-term residents (5-10 years) are the most alienated group and that long-term residents display no significant place attachment, the research introduces an empirically grounded correction to the conventional assumption that duration of residence produces attachment and resistance.

iv. Micro-level evidence on the manufacturing of consent. While the existing literature focuses on the economic and architectural dimensions of the Fikirtepe project, this study provides data-driven evidence of how present perceptions of risk legitimize future radical intervention.

8. Assumptions and Limitations of the Research

Two fundamental assumptions underlie this research: first, that the participants who constitute the sample answered honestly; and second, that the scales employed are appropriate for the research objectives.

The research is subject to the following limitations:

- The study is limited to the sources identified through the literature review on the subject.
- The empirical findings are limited to 131 volunteer participants aged 18 and over residing in Fikirtepe and the surrounding

Kadikoy district. Since participation was voluntary rather than randomly sampled, the findings identify trends within this group and are not offered as proportions generalizable to the district or to Istanbul as a whole.

- The data reflect perceptions recorded during a transitional phase, while construction was still ongoing. The evaluation of the transformation therefore expresses an expectation rather than an experience.

- Certain demographic categories, in particular the highest income bracket, contain a limited number of respondents, which reduces the statistical power of the Chi-square tests in those cells. Where this occurs, the descriptive frequency distributions are reported alongside the test statistics and the resulting pattern is presented as descriptive rather than inferential. The comparison of the three scales, which constitutes the principal finding of the study, is not subject to this constraint, since each respondent serves as their own point of reference.

9. Approbation of the Results

The results of the dissertation have been presented at three international scientific conferences in Bulgaria and Turkiye (The II International Youth Scientific Conference with International Participation: Design and Construction of Buildings and Facilities (DCB 2023) in Sofia, Bulgaria, November 09–10, 2023, The 2nd International Conference on Frontiers in Academic Research, Konya, Turkey, December 4-5, 2023, and The XIII International Scientific Conference, Civil Engineering Design and Construction, Varna, Bulgaria, Sept. 12-13, 2024) and in articles published in two journals. These are: The Journal of the Bulgarian Academy of Sciences, Engineering Sciences, and the E-journal of Varna Free University.

The full list is given in section V of this abstract.

Keywords: urban transformation, perception of security, earthquake resilience, spatial injustice, place attachment, urban fatigue, elite localities, Fikirtepe, Istanbul.

10. Structure and Volume of the Dissertation

The dissertation comprises five numbered chapters: an introduction (Chapter 1), a presentation in three chapters (Chapters 2-4), and a conclusion (Chapter 5), comprehensively addressing the theoretical and empirical dimensions of the subject. The total volume is 162 pages, including a list of references and four appendices (7 pages). The main text contains 25 tables and 33 figures. The bibliography comprises 134 literary and informational sources in English and Turkish.

The distribution of the content is as follows:

- **Chapter 1 - Introduction** presents the relevance of the topic, the research problem and questions, the object and subject, the objectives and tasks, the hypotheses, the methodological approach, the scientific novelty and the structure of the study.
- **Chapter 2 - Theoretical Framework** examines the concepts of the urban, urbanization and urban transformation; the historical development of urban transformation in Turkiye from 1923 to the present; the physical, environmental, social, economic and legal/administrative dimensions of the process; and the case of Fikirtepe, concluding with the gaps identified in the existing literature.
- **Chapter 3 - Research Methodology** details the research approach, the instruments, the sample and population, the data collection procedure and the statistical techniques applied, together with the assumptions and limitations of the study.
- **Chapter 4 - Empirical Study and Data Analysis** presents the demographic findings, the descriptive statistics, the normality and difference tests, the findings on the perception of urban security, and the discussion of the results.
- **Chapter 5 - Conclusions and Recommendations** summarizes the main results, confirms or rejects the hypotheses, discusses the theoretical and practical implications, and offers

recommendations for planning practice and for future academic research.

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III. DISSERTATION SUMMARY

CHAPTER 1: INTRODUCTION

The first chapter of the dissertation outlines the fundamental framework of the research. It introduces the core problem, which is centered on how the urban transformation process affects the social security perception of residents, and establishes why this problem deserves to be studied at the scale of a single neighborhood rather than at the scale of national policy.

The chapter opens by establishing the relevance of the topic. It emphasizes that in a metropolis such as Istanbul, transformation is driven not only by the desire for architectural modernization but also by urgent seismic risk. The city concentrates a large share of a building stock produced during decades of rapid, largely informal urbanization, much of it erected before contemporary earthquake regulations and subsequently legalized through successive amnesty laws. The consequence is a built environment whose renewal cannot be postponed and whose renewal, at the same time, redistributes considerable economic value. Urban transformation in Istanbul is therefore simultaneously a technical necessity and an arena of competing interests, and the residents stand at the intersection of the two.

Against this background, the chapter formulates the research problem as the question of what effects urban transformation produces on the perception of social security. Three research questions operationalize this problem: how residents evaluate their present environment in comparison with the projected transformation; whether these evaluations differ according to socio-demographic position; and how the duration of residence shapes attachment to the neighborhood and expectation from the project.

The chapter then defines the object and the subject of the research. The object is the urban transformation process and its socio-spatial dynamics in Istanbul; the subject is the impact of this process on the residents' perception of security in its physical, social, infrastructural and seismic dimensions. This distinction is significant for the design of the

study: the transformation itself is treated as a given process whose technical and legal course is documented in Chapter 2, while the dissertation's analytical attention is directed at what this process produces in the minds of those who inhabit it.

The primary objective is to determine the influence of urban transformation on individuals' perceptions of security, and the secondary objective is to examine whether this influence varies with demographic characteristics. The specific tasks derived from these objectives cover the measurement of perceived adequacy in the current neighborhood, in the surrounding district, and in the projected transformation, followed by the systematic testing of demographic differences across gender, age, marital status, education level, monthly income, and duration of residence in Istanbul and in Fikirtepe.

The general hypothesis states that participants' security and spatial perceptions differ significantly according to their demographic variables, against a null hypothesis of no difference. The chapter sets out that this general hypothesis is examined through five sub-hypotheses, each tested separately for the three scales, so that a variable may be confirmed for one setting and rejected for another. This design proves consequential in Chapter 4, where several variables produce significant differences in the evaluation of the existing neighborhood while losing their explanatory power entirely in the evaluation of the transformation project.

The methodological section of the first chapter introduces the quantitative, correlational design of the study and its rationale. A quantitative approach was selected because the central claim of the dissertation is comparative: it is not sufficient to establish that residents are dissatisfied with Fikirtepe or hopeful about the transformation, since both attitudes are widely reported in the qualitative literature. What the study seeks to establish is the magnitude of the distance between the two evaluations and the demographic lines along which this distance widens or narrows. Such a claim requires measurement on a common metric, applied to the same respondents, for the same set of urban parameters.

The chapter accordingly introduces the three-scale instrument, the field survey conducted face-to-face with 131 volunteer residents, and the statistical apparatus through which the resulting ordinal data are

processed. It also states in advance the constraints that follow from this choice. A perception survey conducted during construction records expectation rather than experience; a sample of 131 respondents supports the identification of trends rather than the generalization of proportions to the whole district; and self-reported evaluations of seismic safety express confidence rather than engineering assessment. These limitations are not incidental to the findings but shape their interpretation throughout Chapter 4.

The chapter concludes by stating the scientific novelty of the study. While existing literature concentrates on the economic and architectural dimensions of the Fikirtepe project, this dissertation contributes to the field of urban planning by empirically demonstrating how security and earthquake risk are perceived differently across class and educational divides. Furthermore, by showing that long-term residents display no significant place attachment as a result of chronic service deficits, the research introduces a critical, data-driven perspective on how mega-projects manufacture social consent.

Three contributions are anticipated at this stage and confirmed in Chapter 5: the empirical demonstration of socio-spatial segregation within a single transformation area; the identification of urban fatigue as a corrective to conventional theories of place attachment; and the methodological proposal of a comparative scale model capable of measuring the perception gap between an existing urban reality and a projected future.

Finally, the chapter presents the structure of the dissertation, outlining the theoretical framework of Chapter 2, the methodology of Chapter 3, the empirical analysis of Chapter 4, and the conclusions and recommendations of Chapter 5.

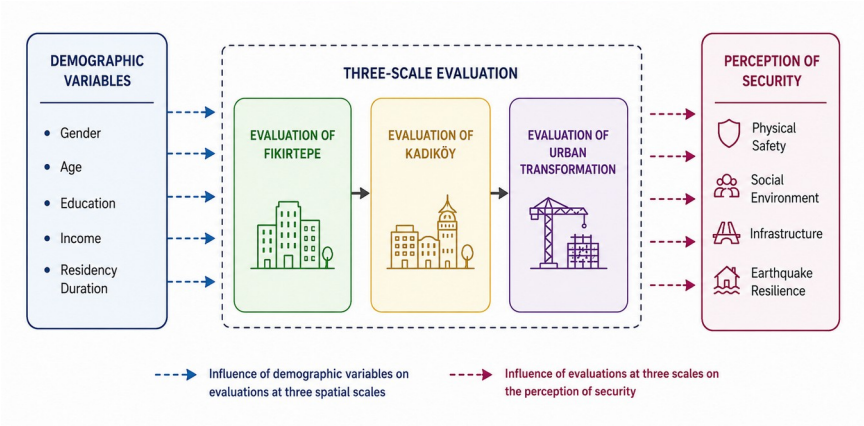


Figure 1.1. Conceptual model of the research.

CHAPTER 2: THEORETICAL FRAMEWORK AND LITERATURE REVIEW

The second chapter provides a comprehensive theoretical background by reviewing the existing literature on urbanization, urban transformation and the concept of urban security. It proceeds from the general to the particular: from the definition of the urban itself, through the mechanisms and historical periodization of transformation in Turkiye, to the specific case of Fikirtepe and the gaps that this dissertation addresses.

The urban and urbanization: The chapter begins by establishing that the city is not a self-evident category. The terminology derives from the Latin civitas, associated with citizenship, community and statehood, while the Greek polis denotes the city-state. Tekeli defines the city as a human settlement that has reached or exceeded a certain level of non-agricultural production, size, density, heterogeneity and integration. Alongside this operational definition, the chapter presents the conceptualizations of the city as the building block of civilization, as the capital of industrialization, as the site where labor is reproduced through mass consumption, as the place where surplus accumulates regionally, and as the center commanding the international economy.

Urbanization is then distinguished from the city itself. Following Keles, urbanization is shown to consist of changes in economic and social structure rather than of population movement alone; it is described through the concepts of heterogeneity, non-agricultural production, globalization, occupational specialization and density. The chapter further separates urbanization from urbanizing; the process by which individuals who migrate to the city adopt urban patterns of economic, social, political, psychological, religious and aesthetic behavior.

The causes of urbanization are examined under four headings. Economically, migration from the countryside is driven by the availability of surplus product and by the possibility of obtaining higher income from less labor, reinforced by specialization, accumulation, the relative cheapness of labor and the abundance of opportunity in the city. Technologically, steam power, electrification and subsequently computing have restructured the relationship between production and settlement. Politically, earthquakes, wars, climatic change, internal turmoil and the designation of capitals redirect population; the settlement of large numbers of people in Turkiye as a consequence of the war in Syria is cited as a contemporary instance. Socio-psychologically, individuals seek environments offering better opportunities and easier income.

The concept of urban transformation: The chapter then turns to the definition of transformation itself, showing that the term carries different content depending on the strategy and objective of the actor employing it. In the dictionary of the Turkish Language Association, it refers to the demolition of unlicensed buildings that do not comply with the zoning plan and the creation of collective settlement areas. Ozturk defines it as the reconsideration of urban development in social, economic and spatial terms, and as the production of projects for demolishing and rebuilding so as to render idle areas of the city sound, safe and livable. Keles defines it as the change of a city, or of certain parts of it, into another form, and notes that among planners the term describes changes in the internal structure of the existing city rather than the addition of new settlement.

The common denominator of these definitions is the improvement of urban areas undergoing attrition, deterioration and collapse. The

chapter adopts this common denominator as its working definition, while insisting that the choice among possible improvements is never technical alone.

Causes and purposes: Urban transformation is never undertaken without a spatial reason. The chapter identifies these reasons as the loss of urban value, buildings that have completed their technical life, the protection of water and air quality, the presence of land on which construction should be prohibited for agricultural reasons, earthquakes and other natural disasters, informal settlement, aging building stock, the distribution of urban rent, and the identification of an area with crime.

Five purposes are attributed to the process: the physically sound restructuring of the city and the adoption of measures against disaster risk; the raising of the quality of life through the use of architectural fabric consistent with local culture; the protection of fundamental rights and freedoms; the elimination of areas of urban collapse together with the causes producing them; and the preservation of the historical structure of the city in the service of sustainable development. The chapter observes at this point that the Fikirtepe case, examined later in the same chapter, satisfies the first of these purposes while conflicting with several of the others; an observation to which the empirical findings return.

Methods: Eight methods of transformation are distinguished and defined: urban clearance, revitalization, gentrification, renewal-renovation, redevelopment, refabrication, rehabilitation and preservation. These methods are not mutually exclusive; renewal may incorporate the others, and clearance may in practice operate as gentrification. The distinction matters because the method selected determines who remains in the area after the intervention. Clearance and redevelopment displace; rehabilitation and preservation retain. The chapter argues that the vocabulary of Turkish practice tends to describe interventions as renewal or rehabilitation while their spatial and social outcomes correspond to clearance followed by gentrification.

The history of urban transformation in Turkiye: The chapter traces the historical evolution of the process through four periods.

The Ottoman background and 1923-1950: The earliest interventions comparable to urban transformation are the rebuilding of the districts of Istanbul destroyed by fire in the final Ottoman decades, notably the zoning plans that followed the Aksaray fire of 1854 and the Hocapasa fire of 1864, together with the reorganization of a street pattern unsuited to wheeled traffic. The Land Code of 1858 and the Ebniye Regulation of 1864 introduced the first systematic controls over building height and physical form, and remained influential until the Zoning Law No. 6785 of 1957. With the proclamation of the Republic, the central problem became the reconstruction of settlements ruined during the war, a task distinguished from post-fire rebuilding by the fact that populations had abandoned the areas concerned. Transformation in this period was also generative rather than corrective: industrial facilities established for defense purposes produced new settlements around them, and the reconstruction of Ankara following the Sehremaneti Law No. 417 of 1924 was conceived as the demonstration of a modern national urbanism.

1950-1980: The transition to a multi-party system was accompanied by a growth model based on industrialization, which accelerated migration from the countryside. Cities unable to house the arriving population produced the gecekondu: irregular dwellings erected on treasury land and on the urban periphery. The state's response alternated between demolition and legalization, and the period established the pattern that would define the following decades: informal housing production, followed by amnesty, followed by densification.

1980-2002: The chapter identifies the 1980s as the critical threshold of urban transformation in Turkiye. The adoption of export-oriented economic policies raised the value of central urban land and directed attention towards the informal districts occupying it. In 1984, the Metropolitan Municipality Law No. 3030 and the Zoning Law No. 3194 transferred substantial planning powers to municipalities, and the regulations governing expropriation were revised in the same period. The Mass Housing Law No. 2985, also of 1984, was intended to meet the housing needs of below-average income households and simultaneously established the institutional apparatus through which large-scale housing production would later be organized. Law No. 2981 brought existing squatter areas within the scope of structures to be recorded and

rehabilitated, granting title deeds to occupants. The unintended consequence of these legalizations was vertical densification: the one- or two-story gecekondu, once titled, became an apartment block. After 1980 the methods of renewal, gentrification and rehabilitation entered Turkish practice.

2002 to the present: From the 2000s onwards urban transformation acquired an explicit legal basis and became a permanent instrument of urban policy, implemented through cooperation between local government and the private sector. In practice, the physical dimension has remained dominant: demolition followed by reconstruction according to revised zoning plans, with social and communal considerations addressed subsequently, if at all. The chapter notes that the majority of Turkish practice consists of immediate responses to the problems of particular areas rather than of comprehensive programs, and that outcomes therefore depend heavily on the dialogue between central and local authorities.

The dimensions of urban transformation: The chapter analyses the process along five dimensions, which together supply the analytical vocabulary used in the empirical chapters.

The physical dimension concerns the replacement of the building stock, the reorganization of the street pattern, density and building height, and the technical adequacy of infrastructure. It is the dimension in which results are most visible and most rapidly achieved, and consequently the dimension by which projects are usually judged successful.

The environmental dimension concerns the provision of green and open space, energy and water efficiency, and the relationship between the intervention and the natural setting; in Fikirtepe, the topography of a sloping ridge and the presence of the Kurbagalidere.

The social dimension concerns the composition of the resident population, the continuity of neighborhood networks, access to education and health facilities, and the capacity of the new environment to accommodate the way of life of those who preceded it.

The economic dimension concerns the generation and distribution of urban rent, the financing model, and the consequences of the intervention for the incomes and asset positions of the existing population.

The legal and administrative dimension concerns the distribution of authority among the central ministry, the metropolitan municipality and the district municipality, the thresholds of owner consent required, the mechanisms of expropriation, and the avenues of judicial review.

The chapter argues that these dimensions are not equally weighted in practice. Where a project is legitimized through disaster risk, the physical dimension acquires an urgency that suspends deliberation in the other four, a mechanism the empirical findings of this dissertation document quantitatively.

Urban transformation in Fikirtepe: The chapter introduces Fikirtepe as a unique case study, tracing the settlement from its origins to its present condition.

The site is of considerable antiquity. Situated on a gently sloping ridge some twenty-six meters high, facing south and south-east and projecting towards the Kurbagalidere, it has given its name to a Late Neolithic culture identified through excavation, with settlement in the wider area accepted to have begun between 5000 and 3000 BC. In the Ottoman period, the area accommodated hunting lodges of the pashas, its abundant water supported the cultivation of strawberries and okra, and the adjacent land at Uzuncayir and Haydarpasa served as pasture for palace horses. The transformation of Kadikoy from a seasonal resort into a year-round town followed two developments of the 1870s: the commencement of steamboat services to the European shore and the opening of the Haydarpasa-Izmit railway.

The neighborhood's contemporary character was established after 1950. Migration from rural areas produced dense, low-quality construction on land of restricted capacity and difficult topography, with steep slopes, stepped streets and improvised technical services. Successive legal interventions consolidated rather than resolved this condition: squatter dwellings were legalized under Law No. 2981 of 1984, title deeds were distributed through the Rehabilitation Zoning Plan of 1991, and the resulting entitlement to build produced additional stories on existing parcels. By 2009, the net residential density had reached 613 persons per hectare, and the population consisted predominantly of low- and middle-

income working households, many of them migrants employed in industry.

The transformation project: The Fikirtepe Urban Transformation Project covers the Fikirtepe, Dumlupinar and Merdivenkoy neighborhoods of Kadikoy over an area of approximately 134 hectares (131 hectares in the 2013 municipal report), bounded by the D-100 motorway, the Kurbagalidere and the Goztepe junction. Its stated objectives are the resolution of property questions, the comprehensive registration of settlement, renewal *in situ* in accordance with the principle of locality, the provision of an earthquake-resistant environment, and the staged distribution of implementation.

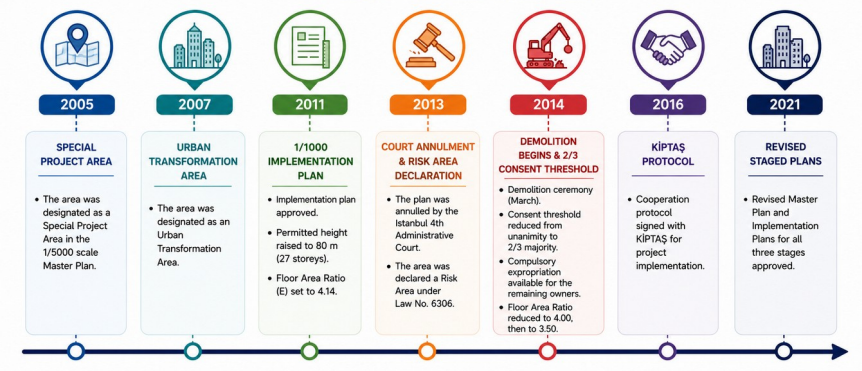


Figure 2.1. Fikirtepe urban transformation project: chronology of key milestones (2005-2021).

The chapter reconstructs the chronology of the project, which is essential to understanding the perceptions recorded in the field survey. The area was designated a Special Project Area in the 1/5000 master plan of 2005 and an Urban Transformation Area in 2007. The 1/1000 implementation plan approved in 2011 raised permitted heights to eighty meters, or twenty-seven stories, and granted a floor area ratio of 4.14. Following actions brought by the professional chambers, the plan was annulled by the Istanbul 4th Administrative Court on grounds of conflict with planning principles and public service provision. In 2013 the area was declared a risk area under Law No. 6306, new plans were approved, licensing began, and the demolition ceremony took place in March 2014.

The consent threshold was reduced from unanimity to two-thirds, with compulsory expropriation available against the remainder; the floor area ratio was successively reduced to 4.00 and then to 3.50. Revised master and implementation plans for all three stages were approved in 2021.

The critical assessment of the project: The chapter evaluates Fikirtepe against the characteristics of exemplary transformation practice and concludes that, while certain physical criteria are formally satisfied, the economic and social criteria are not.

Economically, the exceptionally high floor area ratio granted to the area attracted intense interest from owners, contractors and developers, and converted the project into a competition over the distribution of rent. Implementation on a block-by-block basis rather than genuinely *in situ* extended the process and multiplied the opportunities for gain, while owners of small parcels, unable to reach agreement on a common contract text, were exposed to the threat of expropriation. Contractor insolvency left projects unfinished for years, and rent support payments to displaced owners were interrupted. Approximately one quarter of the property owners reached agreement with contractors and relocated elsewhere.

Socially, the production of high-value housing for middle- and upper-income groups in an area inhabited by low-income households has displaced the existing population, producing gentrification rather than the provision of social housing that the objectives of transformation would imply. Vacated buildings were occupied by refugee households and by homeless individuals under conditions of severe deprivation. Common facilities in the new complexes have been designed as internal amenities rather than as shared public space, limiting encounter between socio-economic groups.

In planning and design terms, vertical construction has altered the silhouette of the district and the natural topography of the parcels; the Fikirtepe Mound, a third-degree archaeological site, was affected during demolition in 2011; social facility areas were allocated proportionally in the plans without site selection, and the schools and health facilities provided remain insufficient for the projected population.

The concept of security: Special attention is given in the chapter to the concept of security itself. The definition of security has expanded from a purely physical or militaristic context to encompass social, environmental and structural dimensions. Safety is not merely the absence of crime but the presence of structural resilience and social harmony; it is produced as much by familiarity, neighborhood networks and the reliability of infrastructure as by walls, gates and surveillance. This expanded definition supplies the ten parameters measured in the field survey.

The chapter frames the Fikirtepe case through two theoretical propositions that recur throughout the empirical analysis: the hegemonic spatial fix, according to which regeneration relies on defining an area as problematic or risky in order to justify a tabula rasa approach, and elite localities, according to which transformation projects are shaped by the expectations of upper-income groups while displacing lower-income residents.

Gaps in the existing literature: The chapter concludes by identifying the gaps that the dissertation addresses. The literature treats the macroeconomic, legal, and physical aspects of transformation extensively, but neglects the micro-level socio-spatial impacts on residents' daily lives. Existing studies frequently treat the public as a homogeneous group, and empirical work measuring residents' expectations differentiated by income, education, and residency duration remains scarce. Although security is frequently invoked, it is rarely quantified through structured scales comparing the present neighborhood with the projected future. This dissertation addresses that gap.

CHAPTER 3: RESEARCH METHODOLOGY

The third chapter details the empirical design of the study.

Research approach: The model of the research is the correlational model, one of the quantitative research methods. The principal reason for this choice is the need to test the existence and direction of the relationship between the evaluation of Fikirtepe, the evaluation of Kadikoy and the evaluation of the urban transformation project. Because the same

respondents evaluate all three settings, the design permits within-subject comparison: the distance between a resident's assessment of the present and of the projected future is measured for that resident, rather than inferred from the comparison of separate groups.

Methods and instruments: Three data collection instruments were employed, together with a demographic information form. The Fikirtepe Evaluation Scale, the Kadikoy Evaluation Scale and the Urban Transformation Scale are all five-point Likert-type scales containing ten items each, coded from 1 (completely inadequate) to 5 (quite adequate).

The first two scales assess the same set of parameters in the two settings, so that the immediate neighborhood may be read against the wider district: security, educational facilities, health facilities, religious facilities, parking, traffic, transportation, green space, infrastructure, earthquake risk, roads and pavements.

The third scale assesses the state expected after transformation, and its items are necessarily different in character, since several of them have no equivalent in the present: security, employment opportunities, social areas, livability, prestige, earthquake resistance, the social composition of the future population, the resolution of infrastructure problems, and educational and health opportunities.

Sample and research population. The population of the research consists of adult individuals over the age of eighteen residing in the Fikirtepe neighborhood of Istanbul and its immediate surroundings in Kadikoy. The sample consists of 131 individuals who participated voluntarily.

The demographic profile of the sample is presented in Table 3.1. The distribution is balanced by gender and concentrated in the working-age population, with more than half of the respondents aged between 26 and 45. Educational attainment is dominated by high-school graduates, while the income distribution is concentrated overwhelmingly in the two middle brackets, with only three respondents above 30,000 TL. The composition reproduces the socio-economic character of the neighborhood described in Chapter 2 and supports the interpretation of the income-related findings; at the same time, the small number of

respondents in the highest bracket constitutes an acknowledged limitation, discussed below.

Table 3.1. Distribution of demographic characteristics of participants

Factor	Groups	f	%
Gender	Male	67	51.1
	Female	64	48.9
Age	18 - 25	20	15.3
	26 - 35	42	32.1
	36 - 45	27	20.6
	46 - 55	24	18.3
	55 +	18	13.7
Education level	Primary	16	12.2
	High-school	57	43.5
	Associate Degree	20	15.3
	Bachelor’s Degree	33	25.2
	Postgraduate	5	3.8
Marital status	Single	51	38.9
	Married	80	61.1
Monthly income	Below 8,500 TL	1	0.8
	8,500 - 15,000 TL	56	42.7
	15,001 - 20,000 TL	56	42.7

	20,001 - 30,000 TL	15	11.5
	Above 30,000 TL	3	2.3
The duration of life in Istanbul	0 - 1 Year	5	3.8
	1 - 3 Years	5	3.8
	3 - 5 Years	15	11.5
	5 - 10 Years	23	17.6
	10 - 20 Years	32	24.4
	20 + Years	51	38.9
The duration of life in Fikirtepe	0 - 1 Year	19	14.5
	1 - 3 Years	18	13.7
	3 - 5 Years	20	15.3
	5 - 10 Years	20	15.3
	10 - 20 Years	25	19.1
	20 + Years	29	22.1

Two residency variables were recorded separately: duration of life in Istanbul and duration of life in Fikirtepe. The distinction proves analytically productive, since the two variables do not behave identically in the difference tests. Nearly two-fifths of the respondents have lived in Istanbul for more than twenty years, whereas residence in Fikirtepe itself is distributed far more evenly across the categories, reflecting the population turnover produced by the transformation process.

Data collection and analysis procedures: Data were collected through face-to-face interviews with the participants using the survey method. The responses were entered into SPSS 22.0, and the graphs

together with their statistical evaluation were produced using GraphPad Prism 9.

Because the data are ordinal and, as established by the normality tests reported in Chapter 4, not normally distributed, non-parametric methods were employed throughout. The statistical evaluation was conducted in three stages.

First, in order to compare the perceptions recorded by the same participants across the three scales, the Friedman test, the non-parametric equivalent of repeated-measures analysis of variance, was applied, with post-hoc analysis performed using Dunn's multiple comparisons test. This procedure identifies not only whether the three settings differ, but which specific pairs differ, and it therefore establishes the hierarchy of perception that constitutes one of the principal findings of the study. Results at this stage are presented as Mean ± SEM.

Second, in order to examine the relationship between categorical demographic variables and perception, pivot tables were constructed to organize the raw frequency distributions, and Chi-square tests of independence were conducted on the raw counts to preserve statistical validity. For visual clarity, the resulting graphs present the same data as percentages.

Third, in order to assess the strength and direction of the relationships between ordinal demographic variables and perception scores, Spearman's rank correlation analysis was performed.

For all tests, a p-value below 0.05 was accepted as statistically significant, and results are reported with correlation coefficients and exact p-values where applicable.

Reliability of the instruments: The internal consistency of the three scales was examined prior to the analysis using Cronbach's alpha, yielding 0.905 for the Evaluation of Fikirtepe Scale, 0.920 for the Evaluation of Kadikoy Scale, and 0.905 for the Evaluation of Urban Transformation Scale. All three values indicate high reliability and support the treatment of the ten items of each scale as a coherent measure of perceived adequacy in the setting concerned.

Assumptions and limitations: Two fundamental assumptions underlie the research: that the participants who constitute the sample answered honestly, and that the scales employed are appropriate for the research objectives.

The limitations of the study follow from its design and are stated explicitly, since they govern the interpretation of the findings presented in the following chapter.

The research is limited to the sources reached through the literature review and to the 131 participants constituting the sample. The findings identify trends within this group and are not offered as proportions generalizable to the district population as a whole.

The survey records perception during a transitional phase, while construction was in progress. The evaluations of the transformation project therefore express expectation rather than experience, and the comparison between the two states is a comparison between a lived present and an anticipated future. This is a limitation of the design and, at the same time, precisely the object of the research: the perception gap under examination exists only while the future remains unrealized.

Certain demographic categories contain a limited number of respondents, most notably the highest income bracket, which reduces the statistical power of the Chi-square tests in the corresponding cells. Where a test fails to reach significance for this reason, the descriptive frequency distributions are reported alongside the test statistic, and the resulting trend is presented as descriptive rather than inferential.

Finally, the assessment of seismic safety recorded by the scales expresses the confidence of the residents in their building stock, not an engineering evaluation of it.

CHAPTER 4: EMPIRICAL STUDY AND DATA ANALYSIS

The fourth chapter constitutes the core of the dissertation, presenting the empirical findings through descriptive and inferential statistics, followed by a profound socio-spatial discussion.

Descriptive Statistics and General Perception

The descriptive statistics reveal a marked dichotomy in the way the urban environment is perceived. The current Fikirtepe neighborhood is viewed with severe dissatisfaction, with a mean adequacy score of 2.88 on a five-point scale. The lowest-rated parameters are earthquake measures and educational and health institutions. The wider Kadikoy district occupies an intermediate position at 3.25, indicating that dissatisfaction is not confined to the neighborhood itself but extends, in attenuated form, to the surrounding district. Conversely, the projected urban transformation is idealized as a comprehensive rescue operation, with a mean of 4.19, scoring highest precisely on the two parameters where the present scores lowest: security and earthquake resistance.

Table 4.1. Descriptive findings regarding the scales

Scales	Min.	Max.	Average
Evaluation of Fikirtepe	1	5	2.88
Evaluation of Kadikoy	1	5	3.25
Evaluation of Urban Transformation	2	5	4.19

The minimum values are themselves informative; no respondent rated the transformation project below 2, whereas both existing settings received the lowest possible score from at least one respondent.

Normality Test Findings

Prior to the difference analyses, the distribution of the three scales was examined in order to determine whether parametric or non-parametric tests should be applied.

Table 4.2. Normality test findings

Scale	K-S Statistic	Sig.	S-W Statistic	Sig.
Evaluation of Fikirtepe	0.076	0.065	0.977	0.028
Evaluation of	0.133	0.000	0.949	0.000

Kadikoy				
Evaluation of Urban Transformation	0.108	0.001	0.932	0.000

The Kolmogorov-Smirnov statistic for the Fikirtepe scale remains marginal ($p = 0.065$), but the Shapiro-Wilk test rejects normality for the same scale ($p = 0.028$), and both tests reject it for the other two scales. The assumption of normality is therefore not met in the strict sense; the justification for the tests applied in the difference analysis is set out in section 6.

The Distribution of Perceived Security

The comparative analysis of security perception reveals a striking contrast between the current environment and the transformation project. In Fikirtepe, a substantial majority of respondents (78.4%) rated security as either completely inadequate (26.9%) or inadequate (51.5%), while only 14.6% found it adequate or quite adequate. The Kadikoy district presents a mixed perception leaning towards the negative, with 45.8% expressing inadequacy against 38.2% finding it adequate to some extent. The transformation project reverses the distribution entirely: 77.7% rated its security as adequate (47.7%) or quite adequate (30.0%), with only 7.7% expressing dissatisfaction.

Figure 4.1. Distribution of security adequacy perception across Fikirtepe, Kadikoy, and urban transformation scales.

Perceived Adequacy Across Urban Parameters

The comparison of individual parameters highlights the gap between current deficiencies and future expectations.

In social services, 55.7% of respondents find health facilities and 59.1% find educational institutions in Fikirtepe inadequate. In stark contrast, adequacy ratings for the transformation project reach 90.7% for health and 90.0% for education. In infrastructure, 50.4% consider the current provision inadequate, whereas 81.4% believe the transformation will supply adequate or quite adequate infrastructure.

The data on earthquake measures show the most critical divergence. The existing buildings in Fikirtepe are considered highly unsafe, with 68.5% rating seismic measures as inadequate and 42.3% as completely inadequate. Even at the scale of the wider Kadikoy district, 57.3% express dissatisfaction. The transformation, however, is viewed almost unanimously as a safety upgrade, with 80.6% rating its earthquake measures as adequate or quite adequate.

Figure 4.2. Adequacy of all parameters across the Fikirtepe, Kadikoy and urban transformation scales. ***$p<0.001$ compared to urban transformation scale; $^{###}p<0.001$ compared to Kadikoy scale. All data are presented as Mean±SD.

For everyday urban amenities, where the comparison is confined to the two existing settings, the results are considerably more moderate. Kadikoy performs better than Fikirtepe for parks and recreational areas (78.6% against 67.9%) and for transportation (64.1% against 52.7%), while parking is rated similarly in both (66.4% and 62.0%). Roads and pavements constitute a notable weakness in Fikirtepe, rated inadequate by 49.6% against 38.5% in Kadikoy. Religious facilities receive the highest satisfaction on both scales, at 86.9% and 86.0% respectively.

This last result is significant beyond its immediate content: the single category in which the present neighborhood performs well is the one associated with traditional community interaction rather than with technical provision.

Comparative Analysis of the Three Scales

To establish whether the differences observed in the descriptive statistics are statistically robust, a Friedman test followed by Dunn's multiple comparisons test was performed for each key parameter. The results are reported with the Friedman statistic and Mean ± SEM.

Security: Perception differed significantly across the three scales ($X^2_r(2) = 192.3$, $p < 0.001$). Fikirtepe scored lowest at 2.10 ± 0.09, reflecting severe safety concerns. Kadikoy scored significantly higher at 2.89 ± 0.09, yet still below the threshold of adequacy. The transformation scored highest at 3.99 ± 0.08. The analysis confirms a consistent hierarchy of security perception, Fikirtepe < Kadikoy < urban transformation, with significant differences between all pairs.

Figure 4.3. Security adequacy across the Fikirtepe, Kadikoy and urban transformation scales. ***p<0.001 compared to urban transformation scale; ###p<0.001 compared to Kadikoy scale. All data are presented as Mean±SEM.

Educational institutions: Significant differences were likewise found ($X^2_r(2) = 144.5$, $p < 0.001$). Kadikoy (3.17 ± 0.09) is perceived as superior to Fikirtepe (2.55 ± 0.10), and the transformation project (4.18 ± 0.06) significantly outperforms both.

Health facilities: The perception of adequacy varied significantly ($X^2_r(2) = 120.4$, $p < 0.001$), with Kadikoy (3.18 ± 0.09) rated above Fikirtepe (2.73 ± 0.10) and the transformation (4.18 ± 0.06) above both.

Earthquake measures: This parameter produced the most theoretically significant result of the comparative analysis ($X^2_r(2) = 169.1$, $p < 0.001$). Fikirtepe (2.10 ± 0.10) and Kadikoy (2.44 ± 0.10) were both rated poorly, and unlike every other parameter, no statistically significant difference was found between them ($p > 0.05$). The transformation project received a high adequacy score of 4.11 ± 0.08, significantly outperforming both existing settings.

Figure 4.4. Earthquake measures/resistance adequacy across the Fikirtepe, Kadikoy and urban transformation scales. ***p<0.001 compared to urban transformation scale. All data are presented as Mean±SEM.

Infrastructure: A comparable pattern emerged ($X^2_r(2) = 88.89$, $p < 0.001$). Fikirtepe (2.79 ± 0.10) and Kadikoy (3.07 ± 0.09) were perceived similarly, with no significant difference between them, while the transformation promised a significant upgrade at 3.95 ± 0.07.

These two results carry an interpretive weight disproportionate to their statistical modesty. For social services and general security, residents distinguish clearly between their own neighborhood and the wider district: the deficit is understood as local. For seismic safety and infrastructure, that distinction disappears. The anxiety concerning the existing building stock is not attached to Fikirtepe as a deprived neighborhood but extends across the district as a whole, and it is therefore not remediable by moving elsewhere within Kadikoy.

The consequence is that the transformation project occupies a position no existing alternative occupies. Where a resident dissatisfied with local schools may compare Fikirtepe unfavorably with Kadikoy, a resident afraid of earthquakes has no comparable point of reference other than the project itself. This structural absence of an alternative is the mechanism through which seismic risk operates as the strongest source of legitimacy for the intervention.

Hypothesis Testing: Difference Analysis

The study tested the impact of demographic variables on spatial perception. Since gender and marital status are binary variables, the independent samples t-test was applied; for variables with more than two categories, one-way ANOVA was used.

Gender and marital status: No statistically significant difference was found in the evaluation of Fikirtepe ($p = 0.43$), Kadikoy ($p = 0.40$), or the urban transformation ($p = 0.50$) according to gender, nor according to marital status ($p = 0.90$, $p = 0.85$, and $p = 0.06$, respectively). The spatial deficiencies of the neighborhood are experienced similarly by both genders and by single and married respondents alike.

Age: A significant difference was found in the evaluation of Fikirtepe ($p < 0.001$) at the 95% confidence level, with participants over 46 holding more positive opinions. Post-hoc results show that the oldest respondents view the neighborhood more favorably than middle-aged residents, indicating a generation gap in which older residents remain more attached to the current urban fabric. No significant difference by age was found for Kadikoy ($p = 0.07$) or for the transformation project ($p = 0.10$).

Table 4.3. Difference analysis of the Fikirtepe scale by age

Scale	Age	N	Average	SD	F	P
Fikirtepe Evaluation	18 - 25	20	2.40	0.805	40.566	<0.001
	26 - 35	42	2.84	0.784		
	36 - 45	27	2.75	0.838		
	46 - 55	24	3.17	0.661		
	55 +	18	3.32	0.715		

Monthly income: A statistically significant difference was found in the evaluation of Fikirtepe ($p = 0.01$): participants with incomes of 20,001 TL and above hold more positive opinions of the current neighborhood than other participants. A significant difference was likewise found in the

evaluation of the transformation project (p = 0.016), where approval rises monotonically with income and reaches 4.70 out of 5.00 among the highest earners.

Table 4.4. Difference analysis of urban transformation scale by monthly income

Scale	Monthly Income	N	Average	SD	F	P
Urban Transformation	Below 8,500 TL	1	3.40	-	3.183	0.016
	8,500 - 15,000 TL	56	4.06	0.581		
	15,001 - 20,000 TL	56	4.22	0.570		
	20,001 - 30,000 TL	15	4.51	0.419		
	Above 30,000 TL	3	4.70	0.265		

Duration of residence: The two residency variables behave differently. By duration of life in Istanbul, significant differences were found in the evaluation of Fikirtepe (p = 0.007) and of the transformation (p = 0.02), with the most recently arrived expressing the most negative view of the neighborhood and those resident for more than twenty years the most positive. By duration of life in Fikirtepe itself, significant differences appeared in the evaluation of Fikirtepe (p = 0.037) and of Kadikoy (p = 0.009), with residents of five to twenty years holding the most negative opinions, but no significant difference whatever in the evaluation of the transformation (p = 0.41).

The last result is the first indication of a pattern that recurs throughout the analysis: variables that differentiate perception of the present lose their power over perception of the future.

Correlation Analysis

Spearman's rank correlation was conducted to examine the relationship between the ordinal demographic variables and the perception of individual parameters.

Income and security: A statistically significant positive correlation was found on the Fikirtepe scale ($rs = 0.25$, $p = 0.004$), indicating that as income rises, the perception of security in the current setting improves. A significant positive correlation was likewise observed on the Kadikoy scale ($rs = 0.19$, $p = 0.03$). No statistically significant correlation was found for the transformation project ($rs = 0.15$, $p = 0.08$).

Income and social services: A divergent pattern emerged. No significant correlation was found in the current Fikirtepe setting ($rs = 0.13$, $p = 0.14$), whereas significant positive correlations were identified for both Kadikoy ($rs = 0.22$, $p = 0.01$) and the transformation project ($rs = 0.20$, $p = 0.02$). Participants with higher incomes are more optimistic about the educational and health facilities promised by the transformation.

Income and earthquake safety: In contrast to education level, monthly income showed a strong and consistent correlation with perceived seismic safety across all three scales: Fikirtepe ($rs = 0.24$, $p = 0.005$), Kadikoy ($rs = 0.23$, $p = 0.01$) and, most notably, the transformation project ($rs = 0.24$, $p = 0.01$). Higher-income groups are significantly more confident in the earthquake resilience promised by the project than lower-income groups.

Income and infrastructure: The same pattern holds for Fikirtepe ($rs = 0.26$, $p = 0.003$), Kadikoy ($rs = 0.21$, $p = 0.01$), and the transformation project ($rs = 0.21$, $p = 0.02$).

Residency duration and earthquake safety: No significant correlation was found on any scale, Fikirtepe ($rs = -0.12$, $p = 0.17$), Kadikoy ($rs = -0.11$, $p = 0.23$), transformation ($rs = 0.10$, p

= 0.22), indicating that long-term residents and newcomers share the same concerns regarding seismic safety.

Contingency and Chi-Square Analysis

To deepen the analysis, Chi-square tests of independence were conducted on the raw frequency distributions.

Education and security: No significant association was found on the Fikirtepe scale ($X^2(4) = 5.84$, $p = 0.212$): perception of security in the current neighborhood is independent of educational background. In contrast, a statistically significant association was found regarding the transformation project ($X^2(4) = 12.76$, $p = 0.013$). Examination of the distribution reveals why. The low-education group demonstrated the highest trust, with 78% rating the project's security as adequate and only 3% as inadequate. Among the middle-education group, 70% found it adequate while 20% remained hesitant. The high-education group proved the most polarized: although 79% rated it adequate, this group also recorded the highest rate of inadequacy at 18%. The relationship is therefore non-linear; dissatisfaction rises with education from 3% to 18%, while approval remains high at both extremes.

Figure 4.5. Contingency analysis of security adequacy by education level.

Income and infrastructure: A highly significant association was found on the Fikirtepe scale ($X^2(4) = 16.20$, $p = 0.003$). Satisfaction with current infrastructure rises sharply with income: 30% among low-income and 39% among middle-income residents, surging to 78% among high-

income residents. In the transformation scenario the differences vanish ($X^2(4) = 1.83$, $p = 0.77$), with adequacy ratings of 79%, 80% and 89% respectively.

Income and seismic safety: A significant disparity was observed on the Fikirtepe scale ($X^2(4) = 17.11$, $p = 0.002$). The vast majority of low-income (81%) and middle-income (66%) residents rated current earthquake measures as inadequate. In stark contrast, 50% of high-income residents rated their existing buildings as adequate, while only 39% were dissatisfied. In the transformation scenario, the disparity again disappears ($X^2(4) = 2.28$, $p = 0.7$), with high approval across all income groups: 75% (low), 82% (middle) and 88% (high).

Figure 4.6. Contingency analysis of adequacy in infrastructure and earthquake measures/resistance by monthly income level.

Income and social services: Although the tests did not reach significance, the frequency distributions reveal a strong socio-economic gradient in the present. Satisfaction with current educational institutions rises from 28% among low-income and 30% among middle-income respondents to 50% among high-income respondents. The gap is widest for health facilities: 26%, 41% and 61% respectively. The transformation

project equalizes these perceptions entirely, with approval converging at 88%, 92% and 89%.

Residency duration: Perceived security in the current neighborhood is uniformly negative regardless of how long residents have lived there ($X^2(4) = 3.54$, $p = 0.47$), with satisfaction rates of 13% for newcomers, 10% for mid-term residents and 19% for long-term residents. For physical parameters, however, a significant association appears (infrastructure $X^2(4) = 12.15$, $p = 0.02$; earthquake measures $X^2(4) = 11.56$, $p = 0.02$). The most striking result concerns the five-to-ten-year group: none of the respondents in this category rated their building's earthquake safety as adequate, while 90% rated it inadequate. Newcomers appeared relatively more secure (32% adequate), and long-term residents reported 15%.

Figure 4.7. Contingency analysis of adequacy in infrastructure and earthquake measures/resistance by duration of residency in Fikirtepe.

Discussion of Findings

The empirical results carry pronounced implications, and three findings in particular structure the interpretation.

First, perceptions of the present are deeply stratified by socio-economic position. The significant associations between income and physical adequacy demonstrate a spatial injustice in which lower-income residents are disproportionately exposed to seismic risk and infrastructural deficiency, while higher-income residents, likely occupying newer or better-constructed buildings and substituting private schools and hospitals for inadequate public provision, are partially insulated from the hazards that dominate the daily lives of their neighbors.

Second, the transformation project narrows these distinctions substantially. In the categorical comparisons, the differences that separate income groups in the evaluation of the present disappear in the evaluation of the future for infrastructure, seismic safety and social services, with approval converging at approximately 80–90% across every income, education and residency group. The convergence is not total: income continues to differentiate the overall evaluation of the project ($p = 0.016$), and education continues to differentiate the perceived security it promises ($p = 0.013$). What the transformation equalizes is the expectation of specific improvements, not the overall enthusiasm for the project. The project thus functions as a hegemonic spatial fix; by reframing a complex social crisis as a technical safety intervention, it manufactures consent through the universal instinct for survival. The consensus is genuine, but it obscures rather than resolves the inequality of the present.

Third, the analysis of residency duration reveals the phenomenon of urban fatigue. Mid-term residents emerged as the most alienated group regarding current infrastructure and seismic safety, showing no romantic place attachment to the existing fabric. Contrary to conventional urban theory, long-term residents display no significant attachment either. The chronic deficit in services and security has severed the emotional bond between resident and space, and the transformation is legitimized not because it offers a better community but because the existing territory has become uninhabitable.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1. Summary of Main Results

The primary objective of this dissertation was to evaluate how the urban transformation process affects the residents' perception of security and socio-spatial adequacy. The findings reveal a marked dichotomy: the current neighborhood is viewed with severe dissatisfaction, heavily associated with physical decay, infrastructural inadequacy and seismic risk, while the transformation project is idealized as a comprehensive solution and a necessary rescue operation.

5.2. Confirmation or Rejection of the Hypotheses

On the basis of the empirical data and the statistical tests applied, the sub-hypotheses formulated in section 5 of the general characteristics are resolved as follows:

- **H1.1** (Gender): Rejected. No significant difference was found between male and female respondents on any of the three scales ($p > 0.05$). The spatial deficiencies are experienced similarly by both genders.
- **H1.2** (Age): Confirmed. A significant difference was found regarding the current neighborhood ($p < 0.001$). Older participants demonstrated a more positive view of the existing environment, indicating stronger place attachment than among middle-aged groups.
- **H1.3** (Monthly income): Confirmed. Significant relationships were established between income and the evaluation of both the current setting and the transformation project. High-income residents gave the highest approval ratings and reported markedly different baseline perceptions of infrastructure and earthquake safety.
- **H1.4** (Education level): Partially confirmed. A significant association was found regarding the security adequacy of the transformation ($p = 0.013$), where lower-education groups showed unconditional acceptance while higher-education groups exhibited polarization and a critical stance. No significant association was found for the current neighborhood ($p = 0.212$),

and education did not correlate with the other parameters as income did.

- **H1.5** (Residency duration): Partially confirmed. No significant difference was found regarding social services or overall security, but a significant difference appeared in perceptions of current physical parameters ($p < 0.05$). Mid-term residents emerged as the most dissatisfied group, experiencing severe urban fatigue.

5.3. Theoretical and Practical Implications

The results carry substantial theoretical implications for urban sociology and planning.

The correlation between high income and total satisfaction with the transformation supports the conceptualization of elite localities. The data imply that the new Fikirtepe is being constructed to meet the lifestyle and security expectations of the upper class. Meanwhile, lower-income groups' dissatisfaction with existing facilities highlights a deeply rooted spatial injustice in which the poor are fully exposed to urban risk, making transformation their only pragmatic hope for a decent standard of living.

A second implication concerns the internal structure of the promise. The transformation succeeds in establishing a uniform baseline of security across all income groups, but it does not democratize the quality of life: the perception of seismic resilience and of social infrastructure remains tethered to economic status. Security is presented as a standard feature for all, while resilience and service quality are perceived as premium commodities. This points to a risk of service-led gentrification, in which the quality of social infrastructure becomes a privilege rather than a public right.

A third implication concerns place attachment. The erosion of attachment observed among long-term and mid-term residents challenges the traditional assumption that duration of residence produces resistance to displacement. Chronic neglect has severed the emotional bond between

residents and space, culminating in urban fatigue. Consequently, the transformation project functions as a hegemonic spatial fix: it neutralizes social, educational and class-based distinctions by promising a standardized, risk-free urban environment, effectively replacing the organic complexity of the neighborhood with the predictable, yet segregated, order of a gated enclave.

In conclusion, the legitimacy of the transformation is constructed upon the systematic devaluation of the present. Consent is manufactured through the contrast between a risky present and an idealized future.

5.4. Recommendations

5.4.1. Recommendations for Urban Planning Practice and Policymakers

- **Community integration:** Given the demographic change in the area, it is essential to work towards social integration and improved living conditions by actively listening to the demands of displaced residents, existing residents, and newly settled residents alike.
- **Participatory planning:** Incorporating the demands and needs of local residents directly into transformation processes would significantly increase the social success and the legitimacy of those processes.
- **Social harmony measures:** Addressing urban transformation not merely as a construction project but as a social phenomenon, and taking proactive measures to enhance harmony between socio-economic groups, will play an important role in preventing spatial segregation.
- **Communication of seismic safety:** The finding that confidence in earthquake resilience correlates with income across all three scales indicates a failure in the project's social communication. Lower-income residents remain unconvinced that their lives are

equally protected. Transparent, accessible information on structural standards should be treated as an obligation of the process rather than as promotional material.

- **Balanced infrastructure provision:** The infrastructural optimism of wealthier residents reflects a planning model oriented towards private-vehicle mobility. Pedestrian permeability, public transport access and the timely completion of social facilities should be given equivalent priority.

5.4.2. Recommendations for Future Academic Research

i. **Longitudinal studies:** Since this study captures perceptions during a transitional phase, follow-up surveys with the same demographic groups five to ten years after completion would reveal whether the high expectations for security and social services were actually met.

ii. **Qualitative in-depth analysis:** Interviews and focus groups would provide a deeper understanding of the psychological dimensions of urban fatigue and of the critical stance of highly educated residents.

iii. **Comparative case studies:** The dynamics observed here should be compared with other transformation zones in Istanbul to determine whether the hegemonic promise of security is a universal characteristic of neoliberal urban policy in Turkiye or specific to this context.

iv. **Diversification of samples:** Studies focusing on a balanced comparison between original locals and newly arrived residents would offer a further perspective.

IV. MAIN ACADEMIC CONTRIBUTIONS

Based on the empirical findings and theoretical discussions of this dissertation, the main scientific and applied contributions to the field of urban planning are as follows:

1. **Empirical proof of socio-spatial segregation:** The study quantitatively demonstrates that urban transformation mega-projects do not affect the public uniformly. It provides data-driven evidence that high-income groups perceive maximum security from these projects, while lower-income groups view them primarily as a survival strategy, thereby empirically confirming the formation of elite localities. The contribution is not the observation of inequality, which is well established in the qualitative literature, but its measurement: the study identifies the specific parameters on which the divide operates, infrastructure and seismic safety, and those on which it does not.
2. **Differentiation of the security concept:** The research demonstrates that "security" does not behave as a single variable. The transformation equalizes the perception of general security across income groups while leaving the perception of earthquake resilience and social services stratified. This finding refines the conventional treatment of security in the regeneration literature as an undifferentiated good, and shows that a project may democratize one layer of safety while commodifying another.
3. **Reframing place attachment:** The research challenges traditional theories of place attachment by identifying and quantifying the phenomenon of urban fatigue. It statistically demonstrates that chronic service deficits and seismic risk can completely sever the emotional bond of long-term residents, aligning their expectations pragmatically with those of newcomers. The identification of mid-term residents, those settled during the onset of transformation but still awaiting its results, as the most alienated segment of the population constitutes a specific empirical contribution, since this group is absent from the conventional dichotomy between established locals and newcomers.

4. **Methodological contribution:** The dissertation developed and successfully applied a comparative three-scale model, evaluating the current neighborhood, the surrounding district and the projected transformation with the same instrument and the same respondents. The model allows the perception gap between urban reality and projected future to be measured directly rather than inferred, and it is transferable to any transformation area in which an intervention has been announced but not completed.
5. **Applied contribution:** By demonstrating that confidence in seismic safety correlates with income even within the transformation scenario, the study identifies a concrete failure in the social communication of state-led transformation and provides administrations with an empirical basis for addressing it.

V. PUBLICATIONS RELATED TO THE DISSERTATION

1. Zortul SMM, Petrov P. Effect of the Urban Transformation on the Perception of Security in Istanbul, Fikirtepe Setting. II.International Youth Scientific Conference with International Participation, 09-10 November 2023, Design and Construction of Buildings and Facilities, Sofia, ISSN 2738-7887 (online); ISSN 2738-7879 (CD-ROM).
2. Zortul SMM, Petrov P. Impact of Urban Transformation Projects on Parameters of Safety Perception in Kadikoy. 2nd International Conference on Frontiers in Academic Research, Abstract Book of ICFAR 2023, December 4-5, 2023, Konya, Turkey.
3. Zortul SMM, Petrov P. Effect of the Urban Transformation on the Perception of Security in Istanbul, Fikirtepe Setting, Engineering Sciences, Journal of the Bulgarian Academy of Sciences, 2024; 23-29, ISSN 1312-5702, e-ISSN 2603-3542.
4. Zortul SMM, Petrov P. Effect of the Urban Transformation on the Perception of Earthquake Measures and Infrastructure Adequacy in Fikirtepe, XIII International Scientific Conference, Civil Engineering Design and Construction, Varna, Bulgaria, Sept. 12-13, 2024; 301-306. ISSN 2683-071X (online).
5. Zortul SMM, Petrov P. Impact of Urban Transformation Projects on Parameters of Safety Perception in Kadikoy, E-Journal VFU, 2026; 25: 154-161.