

## ARTICLE / ARAŞTIRMA

## Exploring the Contemporary Dynamics of Extended Urbanisation: A Comprehensive Analysis on the Case of Denizli, Turkey

*Genişleyen Kentleşmenin Güncel Dinamikleri: Türkiye, Denizli Örneği Üzerinden Kapsamlı Bir Analiz*Büşra Kolaoğlu,<sup>1</sup> Mehmet Penpecioğlu,<sup>2</sup> Aysun Aygün Oğur<sup>3,4</sup><sup>1</sup>Merkezefendi Municipality, Denizli, Turkey<sup>2</sup>Department of City and Regional Planning, İzmir Institute of Technology, İzmir, Turkey<sup>3</sup>Department of Urban and Regional Planning, University of Florida, Florida, USA<sup>4</sup>Department of Urban and Regional Planning, Pamukkale University, Denizli, Turkey

## ABSTRACT

Contemporary discussions about extended urbanization and its inherent practices of suburbanization particularly focus on metropolitan cities in the Global South. There is inadequate empirical evidence on the rapidly developing Anatolian cities in Turkey. To address this gap, this article analyzes Denizli's extended urban development process, elaborates on the dominant practices, and examines the driving forces shaping its rapid, contested, and fragmented socio-spatial landscape. As one of the most ubiquitous cases among rapidly developing Anatolian cities, Denizli highlights the leading role of fragmented urban development planning interventions, the stimulating impact of transportation and infrastructure investments, and the pivotal role of private sector projects. The research consists of urban spatial analysis using statistical data and urban planning documents, detecting land use/cover changes over time, and identifying the driving factors that have influenced and shaped the patterns of urban development in Denizli. The findings indicate that fragmented urban development planning interventions have both triggered and sustained extended urban development in Merkezefendi, Denizli. Moreover, key public investments and real estate projects have fostered this extended urban development process, leading to disjointed fragments in a socio-economically polarized geography. As a diversified and relational formation of extended urbanization, Denizli provides genuine research findings, and includes remarkable similarities as well as differences in the comparative analysis of global urbanism practices.

**Keywords:** Anatolian cities; Denizli; extended urbanisation; fragmented urban development planning; Turkey.

## ÖZ

Günümüzde özellikle küresel Güney'deki metropoliten kentlere odaklanan genişleyen kentleşme olgusu ve alt kentleşme pratikleri üzerine tartışmalar artmaktadır. Türkiye'de hızla gelişen Anadolu kentlerine ilişkin ampirik bulgular yetersizdir. Makale, Denizli'nin genişleyen kentsel gelişim sürecinin kapsamlı bir analizine dayanmakta ve kentsel gelişimin hızlı, tartışmalı ve parçalanmış sosyomekânsal yapısını keşfetmek için itici güçleri araştırmaktadır. Hızla gelişen Anadolu kentleri örneklerden biri olan Denizli, parçalı kentsel gelişim planlama müdahalelerinin öncü rolünü, ulaşım ve altyapı yatırımlarının teşvik edici gücünü ve özel sektör projelerinin önemini vurgulamaktadır. Araştırma yöntemleri, istatistiksel verilerin ve kentsel planlama belgelerinin kapsamlı kentsel mekânsal analizinden, arazi örtüsü değişikliklerinin tespitine ek olarak özgün coğrafi analizler ve kentsel gelişimin itici faktörlerine ilişkin tematik haritalar üretmekten oluşmaktadır. Araştırmanın bulguları, son 40 yıldaki parçalı kentsel gelişim planlama müdahalelerinin Denizli'nin Merkezefendi ilçesindeki genişleyen kentsel gelişimi hem tetiklediğini hem de sürdürdüğünü göstermektedir. Birçok önemli kamu yatırımı ve gayrimenkul projesi bu genişleyen kentsel gelişim sürecini desteklemiş ve kentin sosyo-ekonomik olarak kutuplaşmış coğrafyasında birbirinden kopuk parçaların üretilmesine yol açmıştır. Genişleyen kentleşmenin çeşitlenmiş ve ilişkisel bir oluşumu olarak Denizli örneği, özgün araştırma bulguları sunmakta ve küresel şehircilik uygulamalarının karşılaştırmalı analizinde farklılıkların yanı sıra dikkate değer benzerlikleri de içermektedir.

**Anahtar sözcükler:** Anadolu kentleri; Denizli; genişleyen kentleşme; parçalanmış kentsel gelişim planlaması; Türkiye.

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## 1. Introduction

The contemporary dynamics of extended urbanisation processes have always been at the centre of urban scholarship. Especially in late capitalist countries such as Turkey characterised by a fast-paced urbanisation and dynamic interdependence of built environment and capital accumulation, the production of urban space has been moulded by the capitalist logic of commodification and marketisation under state power. However, despite this fast-paced production of cities; the contested, fragmented and conflict-laden dynamics of extended urbanisation, particularly in the rapidly urbanised geographies of the global South, entails further research and comparative analysis. Except the large metropolises of South America, Africa and Asia (e.g. Beijing, New Mexico, Mumbai, Sao Paulo, Lagos etc.), different cases of extended urbanisation and its inherent practices of suburbanisation still remain relatively unexplored in Turkey, especially in the rapidly developed Anatolian cities (like Konya, Kayseri, Gaziantep, Denizli etc.) which have established their base of capital accumulation through the locomotive effects of industrial growth, neoliberal policies and the construction sector in the last 30–40 years.

This article is a response to fill this gap in the literature of extended urban development and to this end, it concentrates on the case of Denizli, revealing the major urban geographical development trends to the western region (Merkezefendi district) and delving into the driving forces and dominant practices of this remarkable urban development case study. As authors our decades-long observations and initial arguments have signified that Denizli is an essential case to decipher the contested and fragmented practices of extended urbanisation. The leading role of fragmented urban planning interventions, the triggering impacts of public transportation and infrastructure investments and lastly the pivotal function of some flagship private sector projects have shaped a contested and chaotic landscape of extended urban development in Denizli, which is a quite common phenomenon for most of the mid and large sized Anatolian cities. Denizli reflects a ubiquitous case in this respect, share some similarities with other Anatolian cities in Turkey; but it also has distinctive features.

The research findings presented in the article concentrates on the multifarious tendencies of urban development by investigating the case of Denizli within the framework of contemporary urban theories. As the cases of rapid, contested and extended forms of urban development in the countries of the global South have gained a remarkable momentum and attracted research attention world-wide, the traditional-classical theories of urban development fail to provide locally engaged and in-depth explanations especially for these diverse urban geographies (Acara & Penpecioglu, 2022; Schindler,

2017). Contemporary and critical accounts of urban development based on “extended urbanisation,” “fragmented urban development,” and “new forms of suburbanisation” uncovers the untold urban development stories of such Southern/developing cities, meaning that they reveal new dominant trends and driving forces, urban transformative dynamics and place-based regulations and projects (Bayırbağ et al., 2023; Kanai & Schindler, 2022; Castriota & Tonucci, 2018; Keil, 2018a). As the article manifests, unveiling the role of such key planning and governmental elements of urban development entails further research and critical analysis.

The research explores the answers of the following three key questions. In addition to classical urban theories, contemporary theories and approaches on urban development provide which contributions to explaining Denizli's urban development trends in the last two decades? What are the key spatial interventions triggering Denizli's western oriented urban development process? How do these multifarious interventions such as the key projects and investments concomitantly influence the formation of a disjointed, fragmented and extended urban geography on the western side of the city, called Merkezefendi?

To produce genuine answers to these questions, the research draws on a comprehensive urban spatial analysis including the analysis of statistical data and urban planning documents, producing original geographical analyses and thematic maps in addition to the detecting land use/cover changes, illustrations and visualisations on the driving factors of urban development. The methodology includes both spatial and temporal comparisons to detect trends and patterns of urban development over time. The research delves into the statistics on population change on district and neighbourhood levels, geographical analysis via using CORINE land cover/use database, all of which provide critical insight on major trends of Denizli's extended urban development. Moreover, urban spatial analysis such as historical macroform change, unpacking the role of urban development plans and identifying the influences of key public investments, private property development and flagship urban projects constitute multiple sources of data and bases for analysis. Data analysis methods include the use of Geographic Information Systems (GIS) for spatial data processing, overlay analysis to examine relationships between land use patterns and urban policies, and trend analysis to interpret population and development data. By combining these methods, the research delivers an integrated understanding of the key drivers and spatial dynamics of Denizli's urban development.

The following figure describes the research method and its phases. After deciding on the main lines of the explanatory research, including the literature review and the identification of primary and secondary sources of data; the researchers



**Figure 1.** The research method phases (Created by the authors).

GIS: Geographic Information Systems.

determined the methodological and empirical bases of geographical and urban spatial analyses. In the following research phases, these comprehensive analyses of urban macroform changes, development plans and projects, public investments and private property developments are achieved by uncovering the primary and secondary sources of data (Fig. 1).

The primary source of data includes the statistics on population change, the number of building permits, the various geographical datasets and the basic geographical elements of historical macroform changes. The secondary source of data covers the literature reviews and cases on remarkable urban development experiences, the reports and media coverage on urban development plans and projects in Denizli. Taking photos from the sites also become an important source of data, illustrated how urban development shaped under the forces of some key spatial interventions. The article exhibits a complementary analysis of these two sources of data and manifests a fully-fledged analysis of the western-oriented urban development of the city. All data for the study was obtained from the Turkey Statistical Institute, Denizli Metropolitan Municipality, Merkezefendi Municipality and Endeksa real estate platform in Turkey.

The main framework of the arguments indicates that the case of extended urban development in Denizli occurs in a rapid, contested and fragmented way; while triggered and sustained by some partial urban planning interventions on the one hand, on the other hand, it exacerbates existing urban socio-spatial injustices. Fragmented urban planning interventions and some key public and private investments spontaneously fuels this ubiquitous case of urban development in Turkey, which also shares remarkable similarities with the experiences of some countries in the global South, in terms of fragmented urban spatial structure and “bypass urbanism”. The article has

four main sections. The first section introduces the problem definition, research focus and the methodology of the study. In the second section, it focusses on the main axes of contemporary theoretical discussions on (extended) urban development. The third section is devoted to a comprehensive analysis of the case of Denizli’s extended urban development. The conclusion section revisits the major empirical findings and provides an overall summary in the light of the theoretical discussions and it clarifies the contribution of Denizli case study to compare and contrast diverse practices of extended urban development across the world.

## 2. Urban Development Reconsidered: Extensions, Fragments and Articulations

From a historical perspective, modern urban development emerged in response to the complexities of human societies and the growing need for modern urban functions/services (Mumford, 1968; Jacobs, 1961; Lynch, 1960). Urban development can take different forms in the dynamic and contested geographies of cities, such as compact or dispersed, continuous or fragmented, concentrated or extended, planned or unplanned (Güney, 2019; Keil, 2018a; Knox & Marston, 2015). The classical and well-known indicators of urban development are two basic parameters: the growth of population and built-up area. Furthermore, the expanded hinterlands of cities and their heightened capacity in service provision can also trigger extended forms of urban development, including many socio-spatial fragmentations and peripheral urbanisation experiences as well as the changes in urban centre-periphery relations (Phelps et al, 2023; Brenner, 2013).

As economic, social and political changes, innovations and technological advancements impacted the production of urban spaces, the classical theories and models have been renewed and new ideas and arguments progress in the fields of urban development and geography (Lefebvre, 2003; Soja, 1990). The globalised view of extended urbanisation (Schmid & Topalovic, 2023; Schindler & Kanai, 2021; Brenner, 2013) and the contemporary perspectives on the globalised dynamics of suburban development (Keil, 2018a; 2018b) are two key strands of thought, explaining the reasons-consequences of urban development in relation with the capital accumulation regimes, the evolving socio-political conflicts and the prevailing geographical uneven development (Castells, 2009; Harvey, 2002; Storper, 1997).

To analyse contemporary forms of urban development the article draws on three main axes of a critical discussion. Firstly, it elucidates the analytically inspiring concept of extended urbanisation and delves into its underlying urban policies. Secondly, we elaborated the recent discussions on suburbanisation in the literature and derive some key explanations

and themes to analyse urban development in our case study. Lastly, the article manifests a critical review of some key cases from the countries of the global South, embarking light upon how the urban centre-periphery relations and the peri-urban development experiences have unfolded in distinctive ways.

## 2.1. Extending Urban Spaces Beyond the Borders

Most of the metropolitan cities extended under the dominance of spatial planning interventions, meaning that urban areas remarkably grow and extend towards the urban peripheries and rural becomes subordinated to the logic of property-driven and growth-oriented neoliberal urban policies (Brenner & Schmid, 2015; Brenner, 2013). Some prominent underlying reasons behind the extended urbanisation are accessing raw materials and extracting energy resources; relocating industrial investments; accelerating the transportation of people and goods; attracting property development, consumption and financial facilities under the dominant functions of a stimulated construction sector (Katsikis, 2023; Castriota, 2023; Arboleda 2020; 2016; Gago & Mezzadra, 2017). New transport and infrastructure projects deconcentrating urban spatial structure and triggering urban sprawl; profit-driven urban development projects in peripheral locations; new logistic centres and free zones providing international trade deregulations and foreign direct investments; new development corridors, new suburbs and satellite towns, luxury villas and gated residences on the outskirts of cities etc. all could be defined as variegated and relational forms of extended urbanisation (Kanai & Schindler, 2022; Schindler & Kanai, 2021; Gündoğan, 2021; Castriota & Tonucci, 2018; Fahmi, et al., 2014). Such forms of extended urbanisation fail to integrate with the city in general and mostly lead to fragmented urban socio-spatial structure (Wong, 2023; Turgut, 2021; Keil, 2018a; Kanai, 2014).

In a new thought-provoking edited book, Schmid and Topalovic (2023) elaborated remarkable case studies of extended urbanisation and with the critical examination of the cases they shed light on how the contemporary forms of urban development are no longer confined to territorial boundaries of cities; rather, unfolding across geographical hinterlands, resource territories, and broader planetary ecologies. Such forms of contemporary (extended) urban development observed through the cases and under the influences of mine extraction (Casriota, 2023), the horizontal factory organisation (Katsikis, 2023), the corridor development (Hertzog, 2023), and highway construction (Bathla, 2023). Such forms of extended urban development have become widespread particularly in the geographies of the global South and it entails a new critical analytical approach moving beyond the conventional urban and rural divide and taking a closer look on contested landscapes, political struggles and social conflicts (Simone, 2023).

In fact, the divisions between urban and rural are becoming increasingly blurred and contemporary urban spaces does not only cover their own physical elements, but also includes all the geographical agglomerations and complex networks associated with them, even if they are physically distant cities, regions or other types of remote territorial configurations in diverse countries or continents (Schmid & Topalovic, 2023; Brenner & Schmid, 2015; Brenner, 2013; 2014). Thus, the extended forms of urbanisation embody such networked relations amongst cities, reterritorialised and deterritorialised urban development and varied geographical agglomerations (Simone, 2023; Robinson, 2022)

The interdependence of urban development and neoliberal growth-induced extractivist policies (Gago & Mezzadra, 2017; Arboleda 2016); the co-functionality of industrial production, transportation networks and mass consumption; the mutually constitutive relationships between factories and ports, logistics centres and inter-city highways, residential areas and shopping malls (Bathla, 2023; Shatkin, 2022; Kanai & Schindler, 2019); the interdependence of the ingrained economic sectors of development including commerce, tourism and finance, giving rise to new housing developments and attractive tourism spaces in the peri-urban context etc. all such form of urban development leads to a highly dynamic and contested socio-spatial landscape of extended urbanisation especially in the cities of the global South, whose population and built areas are constantly growing. (Bertuzzo, 2023; Bayırbağ, et al. 2023; Castriota & Tonucci, 2018; Fahmi, et al., 2014). The concept of extended urbanisation also suggests that the process of urbanisation is no longer confined to a single region or country, but that urban areas around the world interact with each other and are part of a common global network within a heightened speed of flows and exchanges, circulations and mobilisations (Robinson, 2022; 2018; Brenner & Schmid, 2015; McCann, 2010) This complicated and multifaceted urban development bring about new challenges and opportunities in the associated fields of urban planning, multi-level governance and sustainable development (Acara & Penpecioglu, 2022; Yenigün & Eraydin, 2019; Taşan-Kok, 2011).

In fact, extended urbanisation is historically based on a re-interpretation of Henri Lefebvre's (2003) concept of "urban revolution" under the contemporary dynamics of urban development. With reference to Lefebvre (2003) "urban implosions" in the form concentrated urban developments in the inner cities and "urban explosions" as many forms of extended urbanisation practices have heralded "a new age of cities" (Lefebvre, 2003). Contemporary cities today under the siege of neoliberal political-economic regimes, are both concentrated and extended, and urban areas are becoming increasingly interconnected on a global scale either by destructing rural areas or by subordinating them to the

dominant logic of neoliberal property-driven urban functions. A global network of urban areas is thus emerging (Brenner, 2014). Indeed, Lefebvre (2003) noted half a century ago that this process of extended urbanisation is not only limited to the large metropolitan areas of the global North, which we know as world cities, but also includes mid-sized cities and small settlements, peri-urban developments, and rural areas in the rapidly developing, dynamic and contested geographies of the global South, such as South Asia, Africa and South America. Thus, exploring the extended urbanisation tendencies in a mid-sized Anatolian city (in our case, Denizli) has remarkable importance (Kolaoğlu, 2024).

## 2.2. Disjointed Urban Fragments and New Articulations

Initially developed in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries in response to modern industrial mode of production and mass consumption, suburbanisation has always lie at the heart of contemporary discussions on extended urban geographies. The classical theories point out three key reasons of suburban development in the 20<sup>th</sup> century: economic development, population growth and increased migration (Mumford, 1968). Throughout the 20<sup>th</sup> century, this historical process has been the engine of modern metropolitan urban development and has promoted the peri-urban development, that could also be defined as extended forms of urban development as well (Brenner, 2013; Lefebvre, 2003). Although suburbanisation experiences in diverse countries have varied considerably based on multifarious social-cultural and socio-historical aspects of respective cities, it has led to a dramatic increase in the urban built-up area, a heightened mobility of populations and an intensification of socio-demographical change and deepening socio-spatial inequalities (Duany et al., 2010).

Keil (2018a) reconceptualises the contemporary and global forms of extended urban development as “disjointed fragments,” meaning that cities have been spatially and socially disconnected within their metropolitan regions, characterised by unequal access to resources, infrastructure, and public services. As a widespread phenomenon of extended urbanisation particularly in the contested cities of the global South, the disjointed fragments are striking socio-spatial reflections of the globalised suburban development and associated neoliberal urban policy networks and mobilities.

Within this framework, researchers have to investigate suburbanisation as a globalised process of extended urbanisation. In their book, Güney (2019) reveals that suburbanisation is no longer a static urban development pattern linked to a single national metropolitan city, rather it is highly dynamic, socially contested and linked/connected to a network of many other cities, having fragmented and extended socio-spatial

structures. As many cases from the global South exhibit, suburbanisation becomes unsustainable forms of extended urbanisation in these countries and while it causes damage to ecological sites and agricultural production in rural areas, it also deeply affects population mobility and human settlement patterns (Üçoğlu, 2019; Güney, 2019).

As a globalised agenda, researching suburbanisation entails the uncovering of many complicated phenomenon consisted of infrastructure inadequacies, spatial morphology, demographic and socio-economic changes, spatial segregations, socio-spatial injustices and polarisations (Fillon & Keil, 2017; Keil, 2018b). Especially in the cities of the global South, dynamic and fast-paced processes of suburbanisation cause infrastructure problems, exacerbate existing social inequalities, and lead to dramatic demographic changes (Lawhon et al., 2023; Goodfellow, 2020; Macfarlane, 2010). All these facts address uneven urban geographical development, governmental and societal challenges behind the suburbanisation (True-love, & Cornea, 2021; Keil, 2018a).

Reflecting some remarkable cases from the cities of the global South might be useful to enrich the analytical perspective in the article. To illustrate how contemporary urban and suburban developments spark off “disjointed fragments”, a patchwork of incoherent urban spatial structure, Sawyer et al. (2021) asserts the concept of “bypass urbanism”. Bypass in urbanism, both as an analytical framework and an explanatory concept, comprehended as the deactivation of traditional arrangements in the comprehensive and rigid planning process, thus providing new flexibilities and impetus to extended urbanisation (Schmid et al., 2023; Sawyer et al., 2021). The historic city centre, the traditional inner parts of cities, the declining and deprived urban sites are deactivated (in other words “bypassed”) by new transport-infrastructure investments/connections. In this process of deactivation/bypassing, new attractive urban spaces for affluent upper-income groups are created on the peripheries of cities or in urban centre-periphery transition zones, and these are directly connected to the modern central business districts and new commercial-consumption activity zones. Such a way of bypassing urban spaces changes the geography of intra-urban mobility, residential-work transportation axes, and centre-periphery urban geographical relations; while the quality of activities in the existing city centre declines, the attractiveness of new residential and consumption suburban/extended urban areas in the periphery increases (Sawyer et al., 2021).

As Sawyer et al. (2021) reveals, in the city of Kolkata the Eastern Ring Road project is leading new peri-urban sites around the road, and luxury housing projects are implemented for the upper-income groups on these sites, which were previously agriculture areas. While government gives

up many of the previous investment plans to the city centre and the deprived neighbourhoods, it promotes investment to these new peri-urban sites and as a result, socio-spatial injustices are becoming more visible throughout the city. In the case of the Lekki-Epe Expressway project in the city of Lagos, there are gated communities and private schools constructed for the high-income groups along the expressway that are distinct from the city centre. In Lagos, despite the government's key role in land use decisions and transport infrastructure provisions, the bypassing of the existing city centre has not been the result of a single comprehensive master plan by the government, but has developed gradually, involving changing power relations and actors (Sawyer et al., 2021). Public-private partnerships and joint ventures, property developers, powerful landowning families and large-scale urban projects all play influential roles in the collaborative operation of the entrepreneurial urban governance. Lastly, in Mexico City, the transformation of Santa Fe's central business district has also attracted considerable attention. The site of former sand mines on the outskirts of Mexico City, once a landfill, is now a central business district surrounded by gated communities and luxury country clubs. This area is known as the extension of the central business district on the west side, which extends linearly from the historic centre of Mexico City, separating the high- and low-income residential areas. In this case, the major changes in zoning regulations, mainly in favour of private interests, have resulted in business towers, luxury apartment blocks and gated communities becoming dominant not only in Santa Fe and Interlomas, but also in a large area of the western periphery of the city (Sawyer et al., 2021). This is also reflected in new transport infrastructure such as the Autopista Chamapa-La Venta motorway. Such infrastructure projects in Mexico City encourage the inner-city mobilisation of the affluent classes while restricting such mobility opportunities for urban poor and low-income groups, not able to afford to pay for using the new motorway (Sawyer et al., 2021). Thus, the transformation of urban geography and mobility patterns are strongly related with social injustices and class dynamics.

These remarkable instances of bypass urbanisms indicate that suburban/extended urban development causes "disjointed fragments" and poorly articulated urban spatial structures. Furthermore, they lead to criticism and multiple contestations and reveal that contemporary forms of urban development is not taking place via enacting a single master plan, rather it is through the co-operation of multiple spatial interventions over the production of urban space, including government-initiated transportation-infrastructure projects, large scale construction of shopping malls and gated residences etc. Therefore, in analysing contemporary forms of extended urban developments, we need to focus on the co-operative role of such multiple interventions.

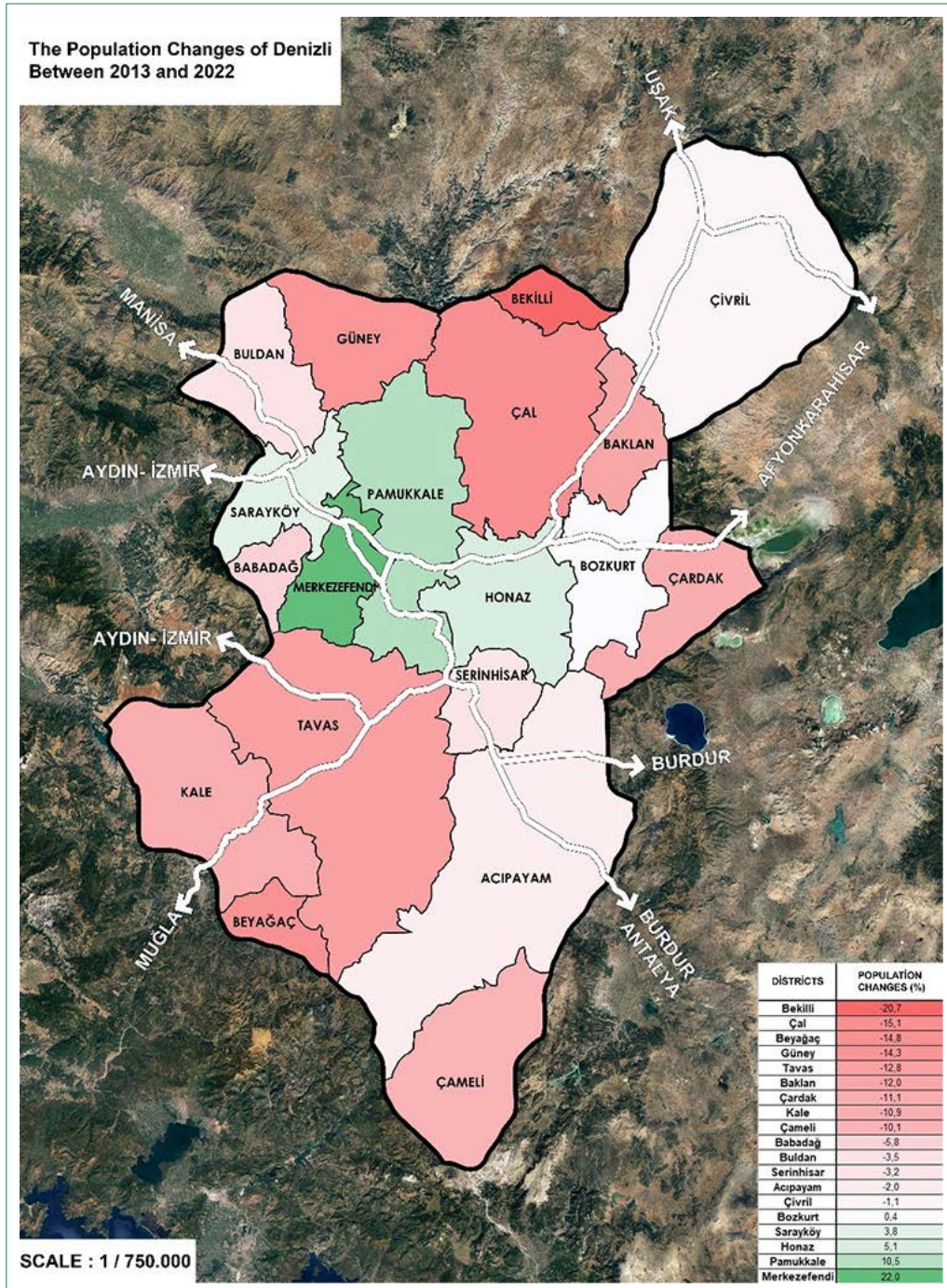
### 3. The Case of Denizli: Unveiling Extended Urbanisation in a Rapidly Developed Anatolian City

Denizli, a rapidly developing Anatolian province in south-western Turkey over the past three decades, consists of 19 districts, including the central districts of Merkezefendi and Pamukkale. According to data gathered from Turkey's Statistical Institute (TÜİK, 2023), population of the province in 2022 was 1,056,332. As the population data indicates, the two districts with the highest population are Merkezefendi (336,818) and Pamukkale (347,926). These two districts are also remarkable in terms of extended urbanisation trends and fragmented suburban development practices. After making some province-level analysis of key variables (including population, construction and building utilisation permits and the size and change of urban built-up area based on CORINE analysis) the research shifted focus of extended urbanisation towards these two rapidly developing districts.

The city centre of Denizli is undergoing rapid development within the boundaries of Merkezefendi and Pamukkale districts. This development is mutually constituted by industrial and commercial activities, as well as housing and residential functions. As the following macroform analysis unveil the classical core of the urban centre in the 1980s is extended over decades as the city has continued to develop towards the different peripheral sites both in the west, south and east. CORINE analysis of land cover/use changes reveal that these peri-urban sites are consisted of a chaotic mixture of low-density residential areas, agricultural and forest lands, and a variety of urban infrastructures.

The topographic structure restricts the extension of urban spaces, especially in the southwest region and it is also observed that natural stream beds are closed by concrete channels in the city that can cause the problems of environmental sustainability. Former rural settlements in three decades ago, now undergone a dominated process of extended urbanisation and transformed dramatically as could be observed in the currently peri-urban neighbourhoods of Göveçlik, Başkarcı, Şirinköy, Hisar, Kadılar, and others. Merkezefendi district with its highest population and intensified construction activities at the western periphery of the city, entails further research to explicate Denizli's contemporary urban development trends.

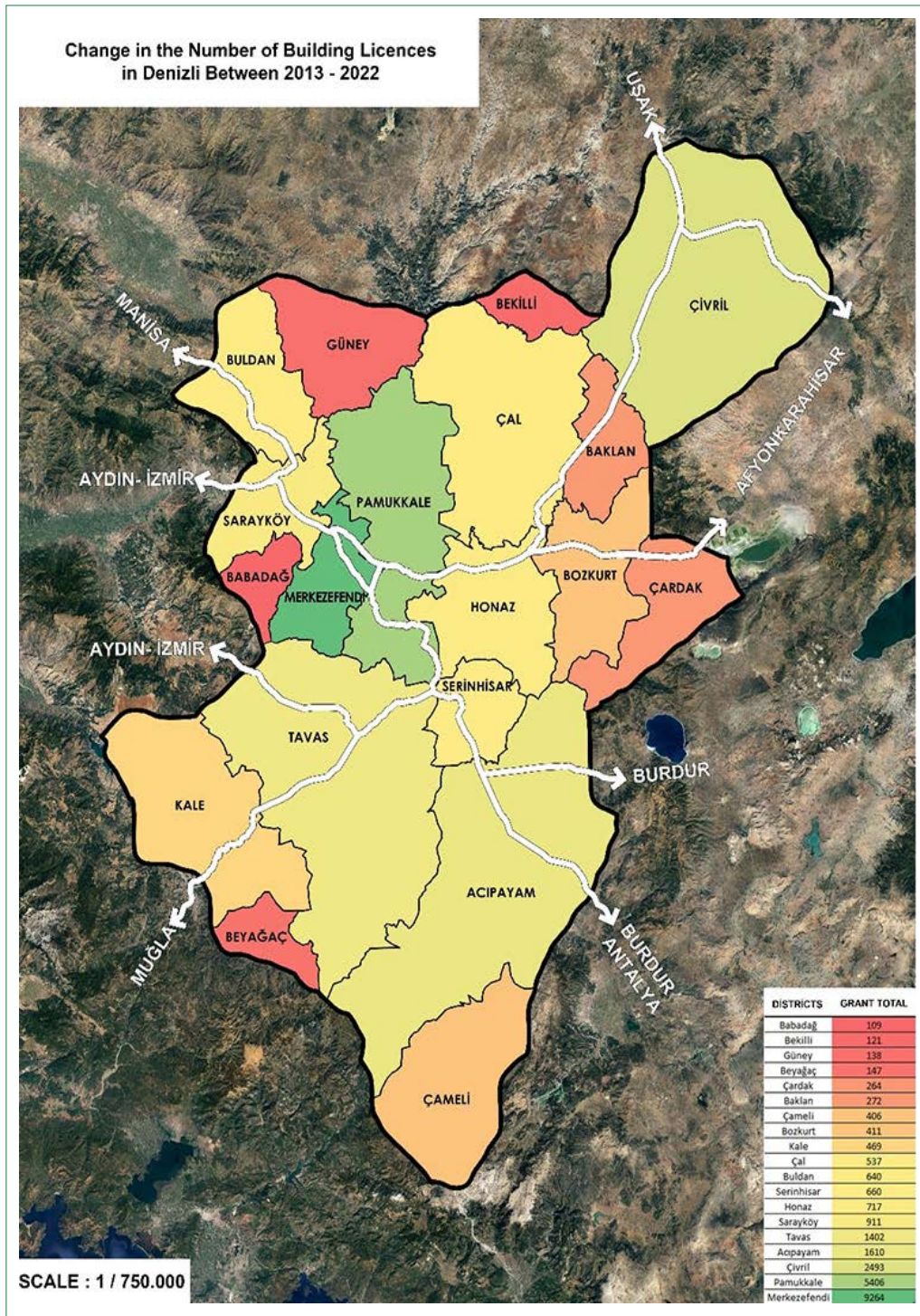
The urban planning process in Denizli began in 1926 with the preparation of a map covering the Kaleiçi region. The first comprehensive zoning plan was proposed by Hermann Jansen in 1934. However, Jansen's plan was not implemented due to its high costs. Following the establishment of municipalities in the city in the 1960s, the Master Development Plan was prepared by the Bank of Provinces in 1964. Nevertheless, flaws in regional development plans and the independent planning efforts arising from the fragmented administrative structure



**Figure 2.** The population changes of Denizli between 2013 and 2022 (Created by the authors using TÜİK data and Google Earth Pro software).

of municipalities led to uncoordinated urban growth. The 1976 earthquake prompted the development of mass housing areas through local zoning plans and local government policies, leading to fragmented urban expansion. Although a holistic planning study was initiated in the 1980s, it was later cancelled due to legal issues. The Master Development Plan, revised in 1994, directed the city's growth towards the west,

encompassing neighbourhoods such as Servergazi, Göveçlik, Başkarıcı, Hallaçlar, Saruhan, Çakmak, and Karahasanlı. The Environmental Master Plan, approved in 2007 by the central government (Republic of Turkey Ministry of Public Works and Settlement), included renewal strategies for unplanned housing areas and integrated the Environmental Highway Project into the plan (Özkan 2010; Başdere 2018; Akay 2019).



**Figure 3.** Changes in the number of building licenses in Denizli between 2013 and 2022 (Created by the authors using TÜİK data and Google Earth Pro software).

Two key regional-scale plans are currently in force in Denizli, guiding urban development: the Aydın-Denizli-Muğla Planning Region 1/100,000 Environmental Master Plan, prepared by the Republic of Turkey Ministry of Environment, Urbanization and Climate Change and the Denizli 1/25,000 Master

Development Plan, prepared by the Denizli Metropolitan Municipality. The Aydın-Denizli-Muğla Planning Region 1/100,000 Environmental Master Plan, approved on March 9, 2011, identifies priority development directions based on natural thresholds such as topography and forest areas, as well as

the presence of public investments, water protection basins, archaeological sites, and agricultural zones. Accordingly, the northeast (Karşıyaka, Esentepe neighbourhoods) and northwest (Barbaros, Karahasanlı, Kumkısık, Saruhan, Şemikler) regions have been designated as priority areas for urban development (Republic of Turkey Ministry of Environment, Urbanization and Climate Change, 2011).

With the enactment of Law No. 6360, Denizli's administrative structure was transformed into a metropolitan municipality, incorporating all town municipalities and villages within its provincial boundaries as neighbourhoods. This transformation affected the district municipalities and the previously approved 1/5,000 Master Development Plans, 1/1,000 Implementation Plans, and zoning plans approved by the Special Provincial Administration. Consequently, the preparation of a 1/25,000 Master Development Plan for the entire province became necessary and approved in 2018. This plan prioritizes urban expansion and population growth toward the northwest and northeast regions in the Merkezefendi district. The old settlements on the periphery of Denizli, designated as neighbourhoods under the Metropolitan Law and characterised by rural areas such as Servergazi, Başkarıcı, Hallaçlar, Göveçlik, Saruhan, and Çakmak-Üçler-Karahasanlı along the western corridor, are intended to be integrated into the urban fabric under the Master Development Plan (Denizli Metropolitan Municipality, 2018). Notably, decisions regarding the designation of residential project areas to prevent unplanned development have significantly driven the development of new residential areas, increased housing demand, and intensified commercial activities.

### 3.1. Merkezefendi District as the Focus of Extended Urban Development in Denizli

The population changes of Denizli between years 2013 and 2022 have been subjected to analysis (TÜİK, 2023). Population statistics clearly show that the population of a large majority of 19 districts decreases between the years analysed 2013 and 2023. As the table mentioned below indicate the population of the majority of the 19 districts has decreased. The district of Bekeilli experienced the most significant population decline, with 20.7%. Conversely, the districts of Bozkurt, Honaz, Merkezefendi, Pamukkale and Sarayköy exhibited an increase in population. Merkezefendi has the most significant population growth, with an increase of 22.0%. The primary factors contributing to this growth are internal migration from rural to urban centres particularly in the 1990s and 2000s owing to the rapid industrial development based on textile and garment production. Merkezefendi district covers an area of both city centre and its extended geographies towards the west and east zones (Fig. 2). In this district, due to the increasing

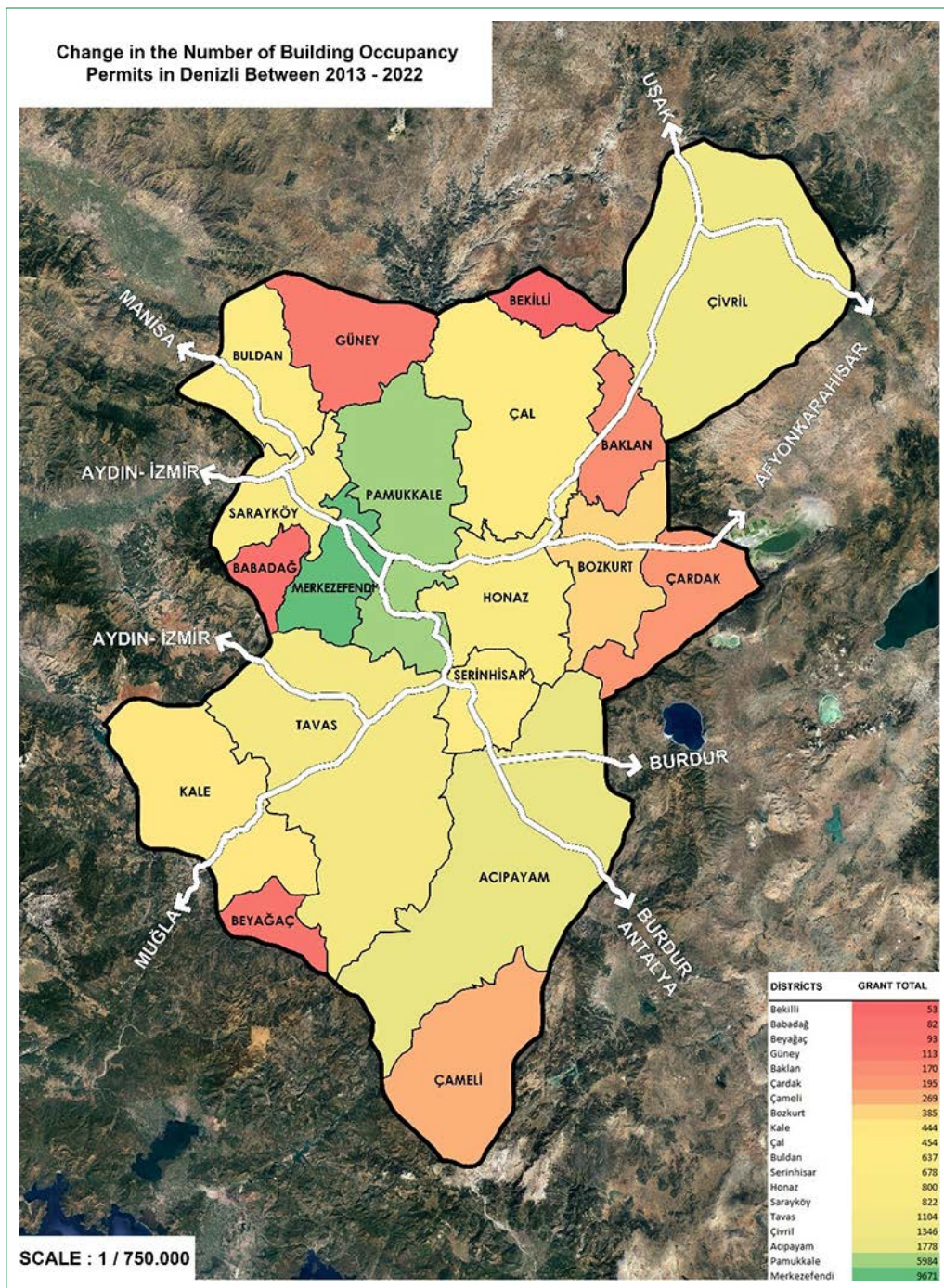
population and internal migration, commercial and service sectors are spatially concentrated and social infrastructures such as education and health have developed over time.

Another data set examined is the number of buildings according to building licenses and occupancy permits of the districts between 2013-2022 (TÜİK, 2023). The districts of Merkezefendi and Pamukkale in Denizli have experienced the most significant fluctuations in the number of building licenses and permits issued between 2013 and 2022. In Merkezefendi, a total of 9,264 building licenses and 9,671 building permits were issued. The districts with the lowest number of building licenses were Babadağ, Bekeilli and Güney, while Bekeilli, Babadağ and Beyağaç had the lowest number of occupancy permits (Figs. 3, 4).

The number of building licenses and occupancy permits are the basic indicators of the triggered construction activities in the city. In Merkezefendi and Pamukkale districts, housing demand constantly raises, and these districts are preferred by most of the households due to their geographical proximity to employment opportunities in industrial, commercial and service sectors and the availability of developed public services like new hospitals and schools etc. Since many of the property developers and construction companies strategically select these districts as more profitable sites to invest, they have directed their property-led housing and commercial projects in the last two decades. Property-led extended urban development could be observed more frequently in Merkezefendi compared to Pamukkale, because in Pamukkale there are natural thresholds and conservation sites restricting urban development in the district.

The results of the CORINE land cover/use analysis conducted for Denizli province indicate that between years 1990 and 2018, there has been a significant decrease in agricultural, forest and semi-natural areas (Table 1). The extended urbanisation in the form of expanded artificial areas can be attributed to two main factors: Urbanisation and industrial development. The increasing population and the industry-led economic growth in the last three decades have created a demand for new housing projects, modern urban functions and professional services, while agricultural and natural areas have been negatively affected by these developments. The increase in artificial areas is particularly evident in Merkezefendi district (Fig. 5), which experiences a higher rate of construction due to its central location, housing and infrastructure projects.

To examine urban macroform change for the city of Denizli, the rapidly extended boundary of the urban area is analysed based on satellite images of years 1984, 1994, 2004, 2007, 2012, 2017, 2022, obtained via Google Earth Pro software (Fig. 6). Between 1984-2022, urban geography of Denizli



**Figure 4.** Changes in the number of occupancy permits in Denizli between 2013 and 2022 (Created by the authors using TÜİK data and Google Earth Pro software).

has changed significantly. It has extended around the main transport axes (Denizli-Izmir, Denizli-Ankara, Denizli-Muğla Highways) and the settlements/neighbourhoods around these axes experienced remarkable urban development. After 2000, new urban areas have developed with the opening of new urban transportation routes (Ali Aygören Boulevard etc.). This geographical analysis shows that the main trans-

portation routes have influence over the practices of extended urbanisation. Rural areas on the peripheral zones have also subjected to the property-led development logic of extended urbanisation and this development has been mostly observable in the west of Merkezefendi district (Gerzele, Servergazi, Yenişehir neighbourhoods etc.), especially after the opening of Ali Aygören Boulevard in 2007.

**Table 1.** Spatial change of artificial areas in the districts of Denizli between 1990 and 2018

Districts	CORINE 1990 (Ha)	CORINE 2000 (Ha)	CORINE 2006 (Ha)	CORINE 2012 (Ha)	CORINE 2018 (Ha)	CORINE 1990-2018 changes (Ha)
Acıpayam	1383.05	1383.05	1500.67	1662.52	1733.12	350.07
Babadağ	72.04	72.04	96.80	96.80	96.8	24.76
Baklan	525.35	525.35	434.28	423.41	430.45	-94.90
Bekilli	439.76	439.76	397.40	441.26	415.52	-24.24
Beyazaç	31.19	31.19	91.65	91.65	91.65	60.46
Bozkurt	625.04	625.04	607.19	625.99	625.99	0.95
Buldan	305.60	324.41	524.24	503.65	503.65	198.05
Çal	1026.85	1091.65	976.88	966.94	966.94	-59.91
Çameli	138.64	138.64	68.17	68.17	68.17	-70.47
Çardak	1171.62	1213.47	1219.79	1212.48	1212.48	40.86
Çivril	2903.69	2958.14	2617.05	2805.74	2956.61	52.92
Güney	210.38	210.38	189.83	277.51	277.51	67.13
Honaz	1291.13	1702.43	2646.10	2926.00	3032.8	1741.67
Kale	390.13	390.13	393.90	471.71	480.48	90.35
Merkezefendi	3868.75	4924.05	5242.21	5740.13	6515.44	2646.69
Pamukkale	1963.64	3582.98	3845.61	4287.86	4389.94	2426.30
Sarayköy	789.42	809.61	825.11	770.94	778.08	-11.34
Serinhisar	533.67	577.35	558.20	579.87	607.34	73.67
Tavas	1610.84	1648.24	1652.93	1721.52	1830.55	219.71

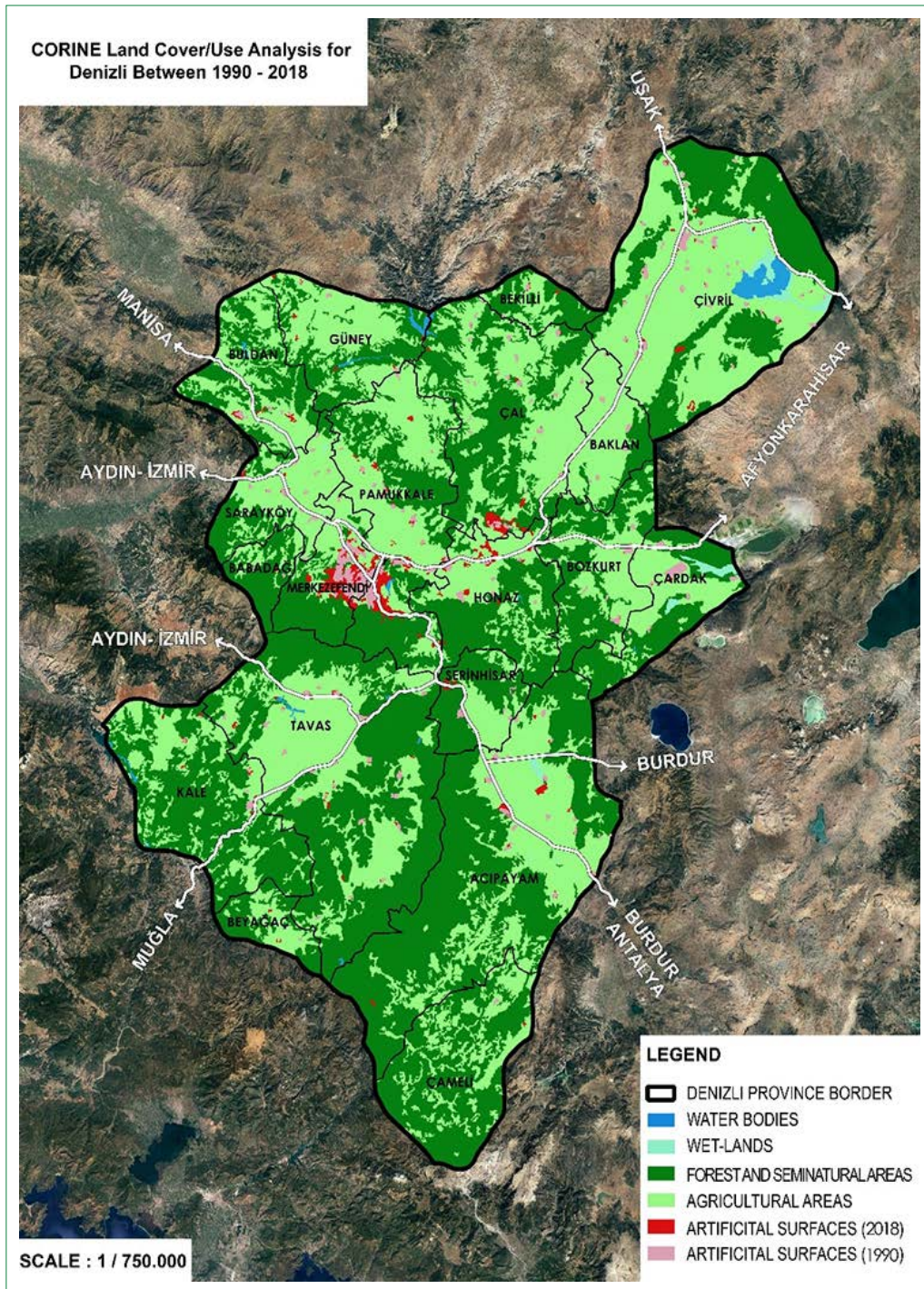
Source: CORINE, 2023.

In Merkezefendi, the initial phase of urban development in 2000s was first characterised as low-density urban sprawl, which subsequently gave way to a property-led extended urbanisation including large scale housing projects, gated residences, shopping malls, new social infrastructures like new schools and hospitals. Actually as a new city has been established in the western zone of Merkezefendi, housing development and all related modern urban functions have intensified respectively.

In the 2000s, the construction of the new transportation axes such as Ali Aygören Boulevard in 2007 has been very influential in triggering the extension of urban spaces towards the west. The extended urban development in Merkezefendi can be attributed to a number of key factors, including the opening of transportation and infrastructure systems, heightened public investments and social infrastructures, large scale housing and residential developments as well as attractive commercial and functions. In the light of findings, we argue that Denizli's extended urbanisation has been shaped as a result of these mutually constitutive driving forces, that will be elaborated in the following sections.

The analysis of CORINE land cover/use data for Denizli city centre between 1990 and 2018 presents a more detailed

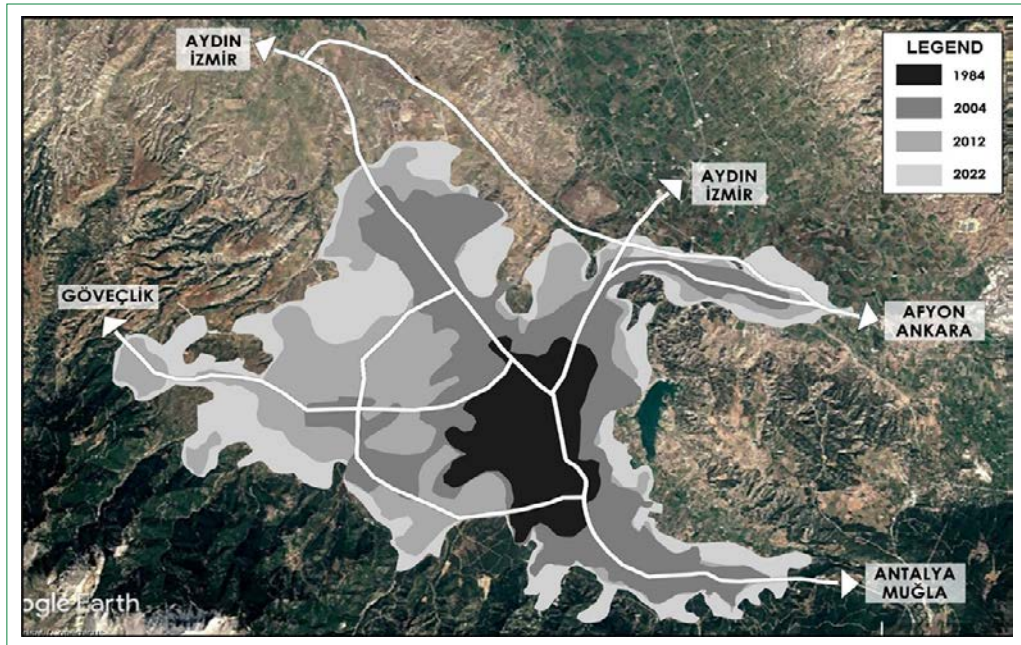
classification of artificial zones, including urban structure, industrial and commercial units, mining, and construction sites (Fig. 7). As analysis unveils, the urban built-up area has extended between 1990–2018. In the period 1990–2000, the urban built-up area dramatically extended, particularly towards to the northwest and southeast directions. This resulted in an intensified urban development observed in neighbourhoods such as Adalet, Bahçelievler, Servergazi, Yenişehir, Hacıyüplü, Bağbaşı, Zeytinköy, and Kınıklı. Additionally, between years 2000 and 2006, there was a change in land cover/use as well as the extended urban development on the west. For instance, in neighbourhoods such as Hacıyüplü, Kumkısık, and Bozburun, the urban structure has turned into commercial and industrial areas. Furthermore, new neighbourhoods developed in the western zone. Between 2006 and 2012, the urban structure extended significantly on the west, with notable growth in neighbourhoods such as Başkarıcı, 1200 Evler and Bahçelievler. The number of industrial and commercial units in the Sevindik Neighbourhood increased. Between 2012 and 2018, the city continued to extend towards western zone on previously agricultural lands in neighbourhoods such as Hallaçlar, Başkarıcı and Bereketler, which are transformed into



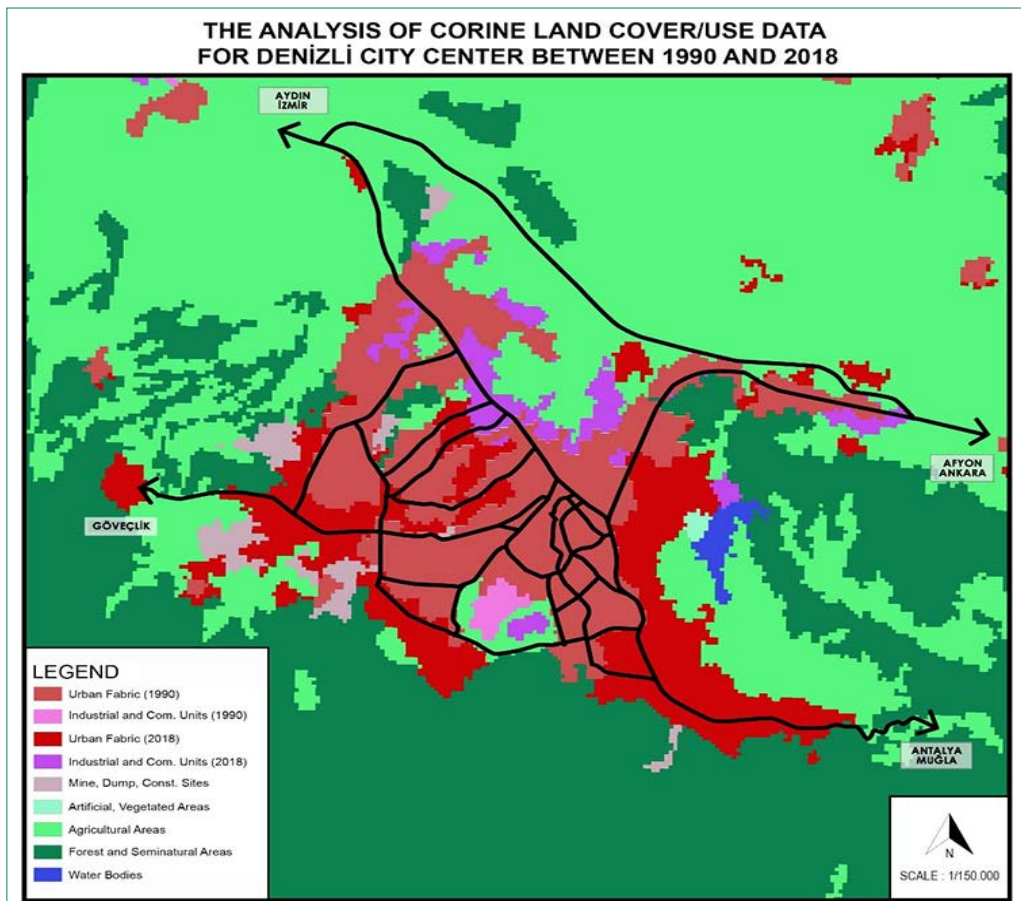
**Figure 5.** Spatial change of artificial areas in the districts of Denizli between 1990 and 2018 (Created by the authors using CORINE data and Google Earth Pro software).

peri urban development sites over years. The examination of Denizli city centre according to the CORINE land classification over the 1990–2018 period reveals that the urban Spatial development pattern has extended dramatically and that there have been significant changes in land cover/use in the meantime. In this period, the most significant extended

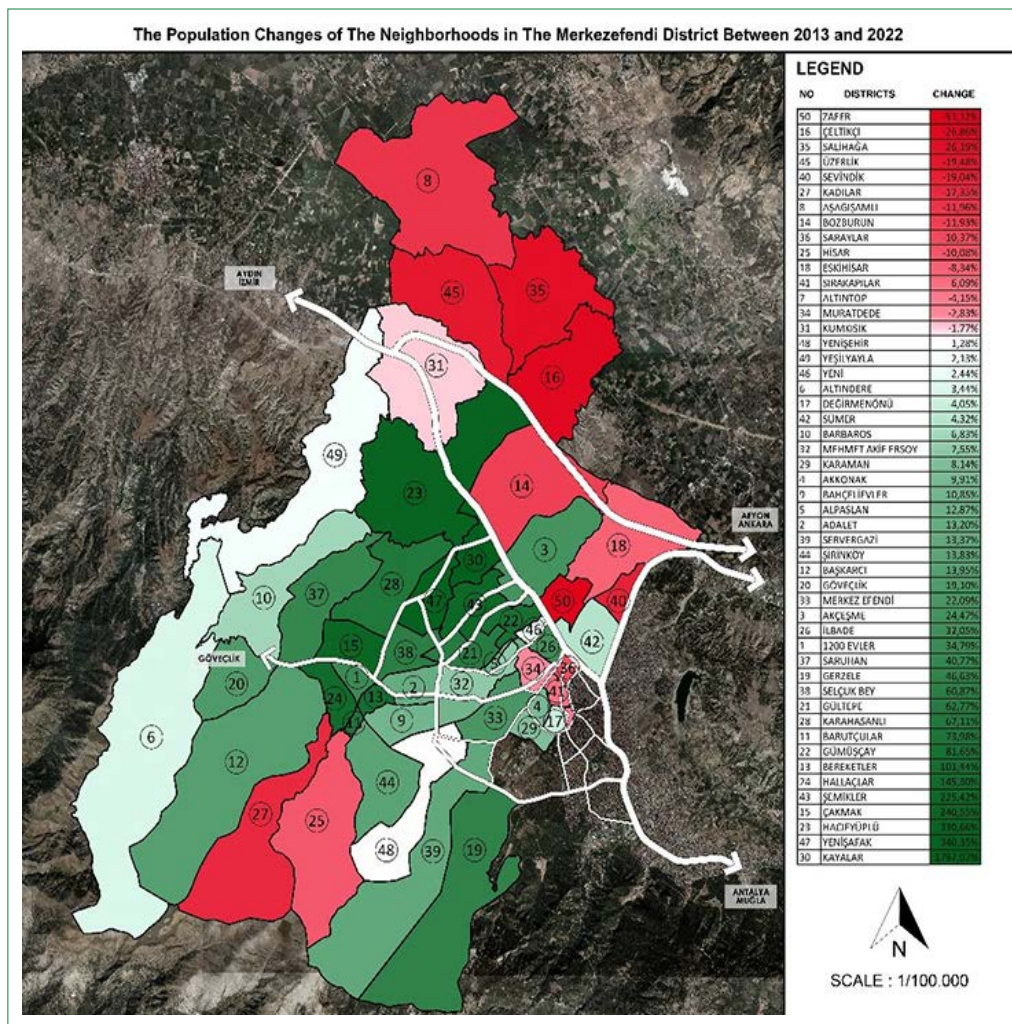
urban development was observed in the northwest and southeast zones. After 2000, there was an increase in the industrial and commercial areas in the northern zone of the city, while residential areas extended towards northwest-westward directions. The urban development of Merkeze-fendi is closely related with projects improving transporta-



**Figure 6.** Urban macroform change for the city of Denizli (1984, 2004, 2012, 2022) (Created by the authors using Google Earth Pro software).



**Figure 7.** The analysis of CORINE land cover/use data for Denizli city centre between 1990 and 2018 (Created by the authors using CORINE data).



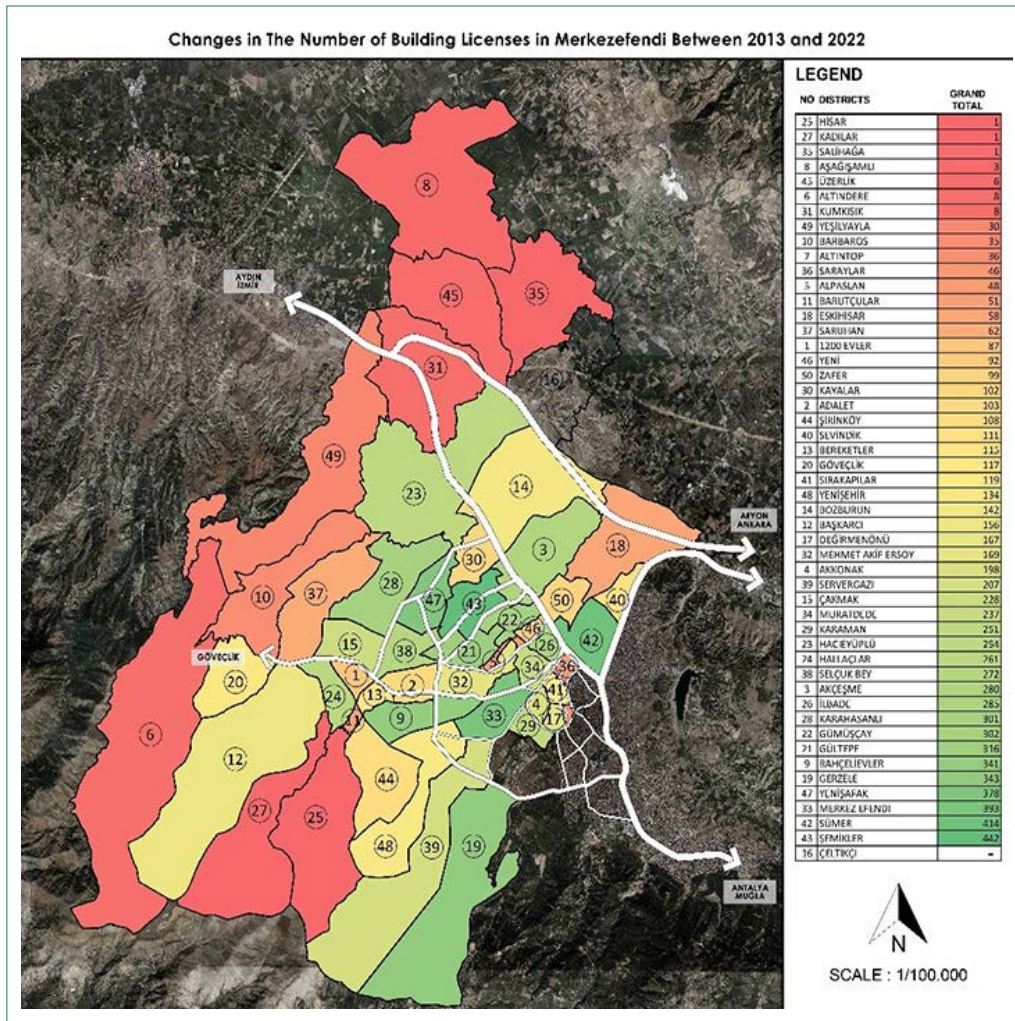
**Figure 8.** The population changes of the neighbourhoods in The Merkezefendi district between 2013 and 2022 (Created by the authors using TÜİK data and Google Earth Pro software).

tion and infrastructure, new peri urban development plans and government-initiated public investments.

The extended urbanisation process in Merkezefendi district were also analysed with reference to the population changes of the neighbourhoods between 2013 and 2022. The data regarding the population of the neighbourhoods was gathered from the Address Based Population Registration System of the TÜİK (Fig. 8). Significant differences in population changes are observed in this analysis, a steady decrease in neighbourhoods such as Zafer, Sevinçlik, Eski-hisar and Bozburun; and a remarkable increase in Kayalar neighbourhood. The reason for the decrease in population is related to the fact that these neighbourhoods are old and decaying urban areas and most of them are close to industrial sites. On the contrary, the construction of high-rise and large-scale housing projects such as TOKİ, Simpaş, Gökent, Su Dünyası and Evora Housing Complexes and newly developed urban services and social infrastructures

around these new residential sites have all initiated urban development and subsequent population growth in the neighbourhoods such as Kayalar, Yenişafak, Hacıyüplü, Çakmak, Şemikler and Hallaçlar.

The analysis of building and occupancy permits in Merkezefendi indicates that construction activities are more dominant in the Şemikler, Sümer, Merkezefendi, Yenişafak and Gerzele neighbourhoods (TÜİK, 2023). The observed increase in these neighbourhoods suggests that development in residential and commercial areas is occurring at a high rate. This is associated with an increase in housing demand, improvements to infrastructure services (Üçler, Ali Marım, Gümüşler, Cinkaya Boulevards) and the implementation of public projects (city hospital and new stadium projects under construction, new regional public parks and recreational spaces). The low number of building and occupancy permits in Salihaga, Üzerlik, Altındere, Barbaros, Yeşilyayla, Saruhan, Aşağısamlı and Çeltikçi neighbourhoods can be at-



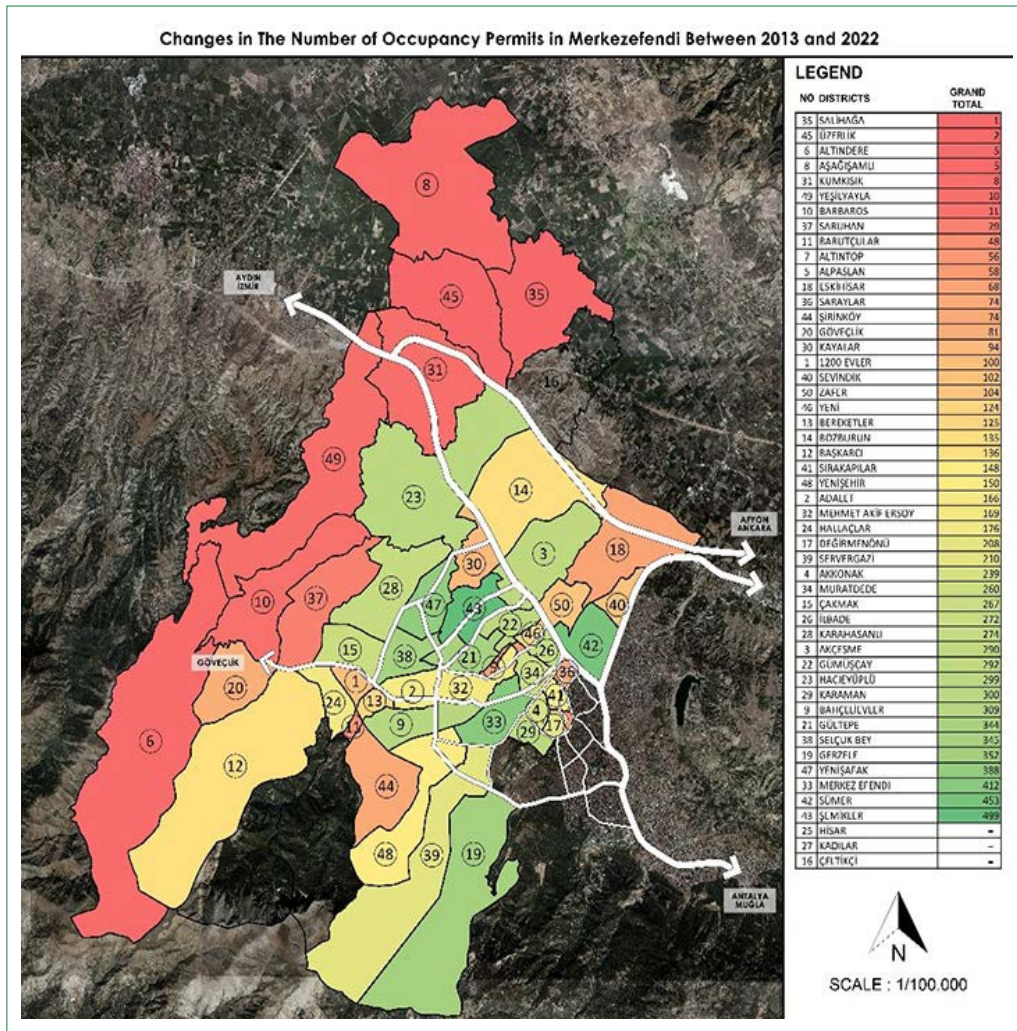
**Figure 9.** Changes in the number of building licenses in Merkezefendi between 2013 and 2022 (Created by the authors using TÜİK data and Google Earth Pro software).

tributed to the fact that these areas are less developed and still have a rural character (Figs. 9, 10).

The fair values of land are also considered in the analysis of Denizli's extended urbanisation. The fluctuations in land market values over the years between 2018 and 2023 are acquired through E-government Land Square Meter Unit Value Inquiry System and the mean of the land market values was taken into consideration (URL-1). Upon examination of the land market values of the neighbourhoods within Merkezefendi district between the years 2018 and 2023, it becomes evident that the greatest change in value is observed in the neighbourhoods of Üzerlik, Yeşilyayla, Sümer, Hacıyeüplü and Karahasanlı. In 2023, the highest land values were observed in the neighbourhoods of Saraylar, Sevinçik, Altıntop, Yenişehir and Merkezefendi. The critical analysis on data indicates that the change in fair value is relatively less in Değirmenönü, Çeltikçi, Akçeşme, Alpaslan and Altındere neighbourhoods. In 2023, the neighbourhoods with the lowest land value were Aşağısamlı, Altındere, Çeltikçi,

Salihaga and Üzerlik. The fluctuations in values across different neighbourhoods stem from a variety of multiple factors. For instance, in Kadılar, Başkarcı and Barutçular neighbourhoods, local economic development and public investments, soaring housing demand, and intensified commercial activities are main motives behind the land value increase. In contrast to this, the relatively low land market values observed in Aşağısamlı, Altındere and Çeltikçi are attributable to the fact that these areas are not subjected to the dominant logic of extended urbanisation, located at a greater distance from the city centre and still based on rural type of activities (Fig. 11).

The soaring housing prices are also incorporated within the framework of analysis. The average square meter unit price data for house prices in 2023 obtained from Endeksa (URL-2). The critical analysis reveals that Kadılar, Başkarcı, Barutçular, Saruhan, Şirinköy, Servergazi, Göveçlik and Gerzele neighbourhoods in Merkezefendi district have remarkably soaring housing prices. One main and critical reason behind this is the



**Figure 10.** Changes in the number of occupancy permits in Merkezefendi between 2013 and 2022 (Created by the authors using TÜİK data and Google Earth Pro software).

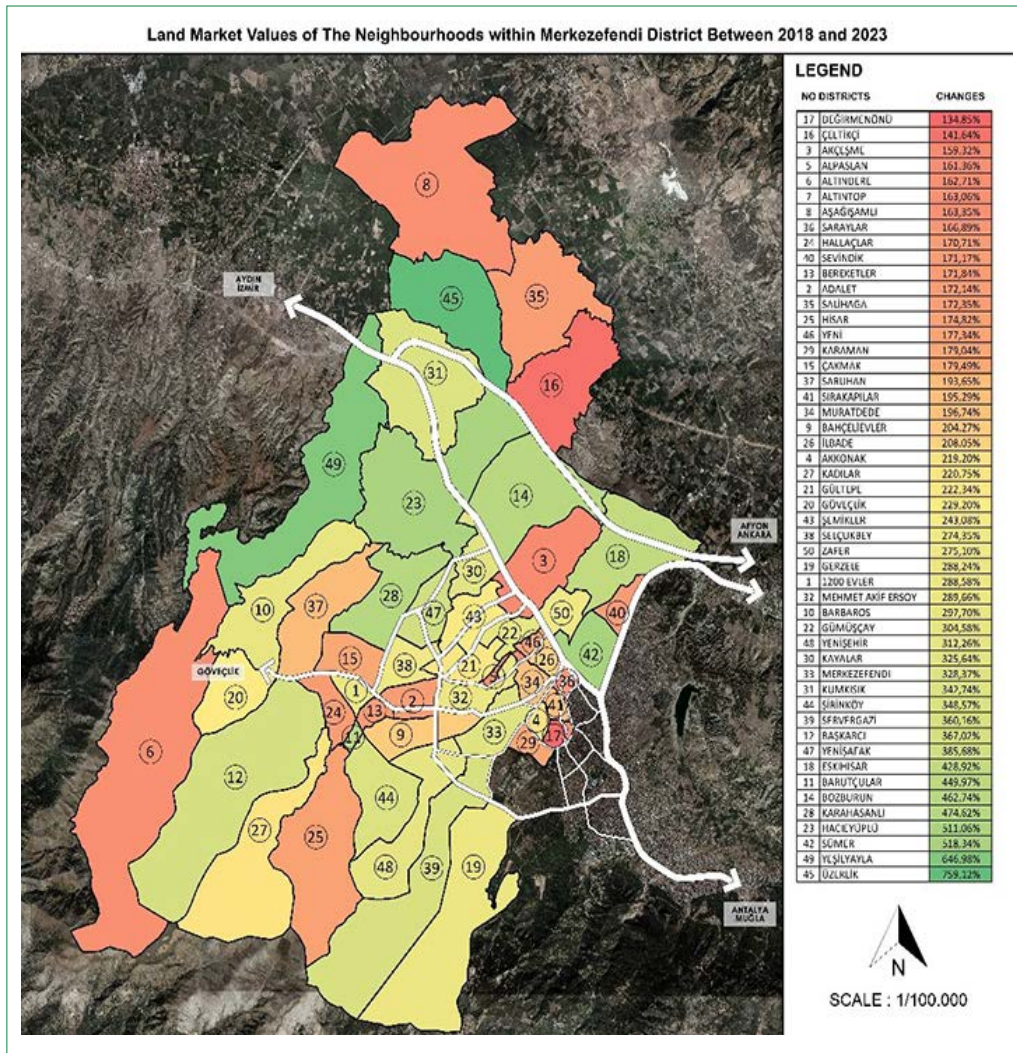
increased demand for detached housing during the pandemic, as well as improvements in transportation, infrastructure and public investments in these neighbourhoods. The neighbourhoods with the lowest housing prices are Sevinçik, Altıntop, Eskihişar, İlbade, Sümer, Değirmenönü and Sırakapılar on the east of Merkezefendi. Owing to the industrial production areas in these sites, urban decline and associated problems of socio-spatial segregation and security, housing prices are relatively low in these eastern neighbourhoods, marked red and orange on the thematic map (Fig. 12).

### 3.2. Fragmented Planning Interventions to Articulate Extended Urban Developments in Denizli

Denizli's extended urbanisation process in Merkezefendi district is strongly supported by partial planning interventions throughout different periods via the enactment of various types of urban development plans. In facts, these planning interventions lack a holistic-comprehensive ap-

proach; implemented for certain parts/zones in a piecemeal manner and thus they lead to a fragmented socio-spatial landscape of extended urbanisation. In the research we investigated this fragment planning interventions within four periods: 1975–1985, 1986–1990, 1991–2000 and after 2000. These plans constitute key secondary sources of data, gathered from the archives of Denizli Metropolitan Municipality and Merkezefendi District Municipality. The boundaries of each urban development plan are mapped by using Google Earth Pro (Figs. 13–16).

After the destructive earthquake in Denizli in 1976, government authorities accelerated urban development planning activities. Between years 1975–1985, four partial planning initiatives could be observed in Şirinköy village of Merkezefendi: Afet Evler, Binevler, Esnaf Sitesi and Ferah Evler partial development plans. Moreover, new residential areas are planned in Gümüşçay village. These five fragmented plan-



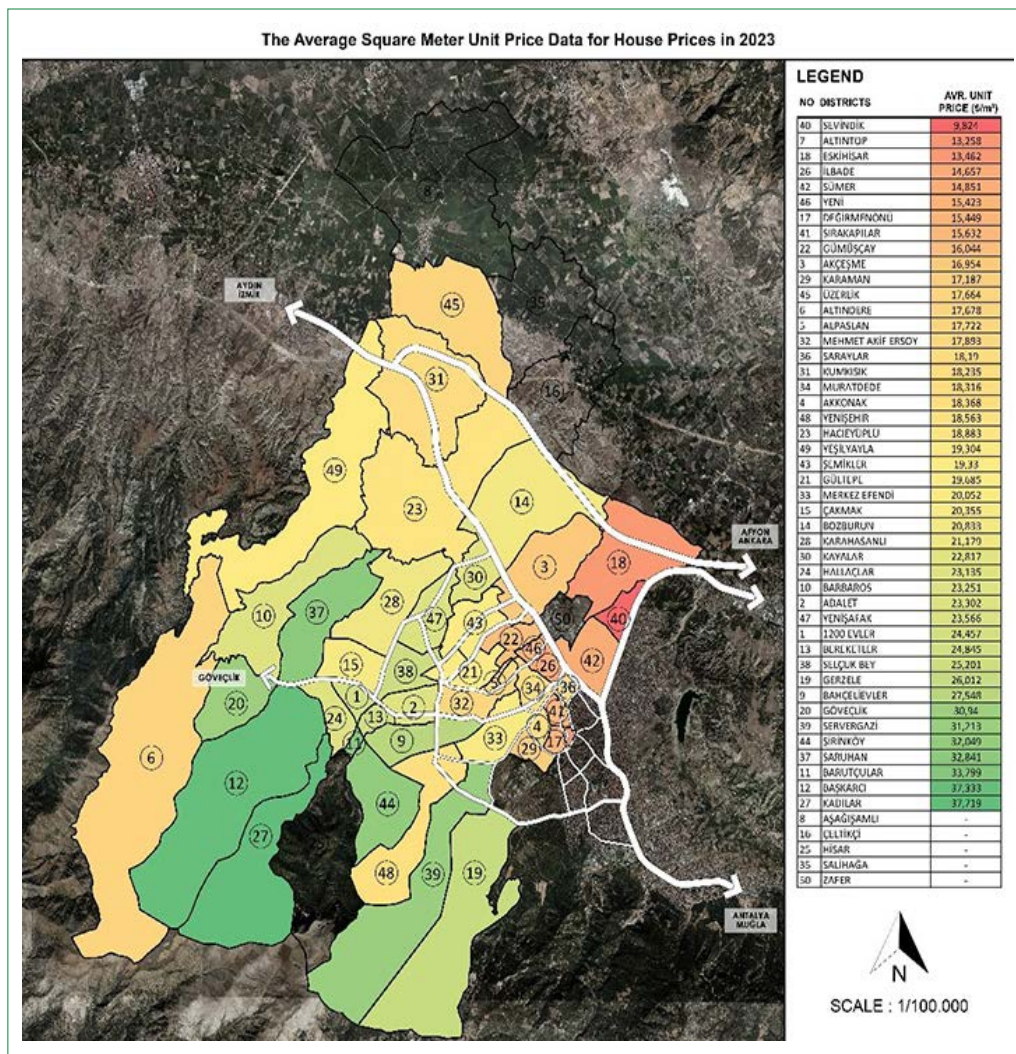
**Figure 11.** Land market values of the neighbourhoods within Merkezefendi district between 2018 and 2023 (Created by the authors using E-government Land Square Meter Unit Value Inquiry System data and Google Earth Pro software).

ning interventions formed the first impetus for urban development towards to the western region (Fig. 13).

After the 1984 Master Zoning Plan, the partial urban development plans in the city of Denizli were intensified and revision, reclamation and additional development plans were implemented by local governments in these years. In the 1980s, a total of 13 town municipalities were established and they were given urban planning authority to make their own development plans with the enactment of Development Law No. 3194, issued in 1984. Between 1986 and 1990, these town municipalities approved and implemented reclamation and revision development plans for areas such as Kınıklı, Bağbaşı and Zeytinköy, triggered development on the south of Merkezefendi. In addition, mass housing projects were also implemented via the enactment of revision and partial urban development plans such as Yenişehir Mass Housing Development Plan and

Meska Revision Development Plan, which were the first large scale housing projects on the west of Merkezefendi in 1980s. The devastating effects of the 1976 earthquake sped up urban planning efforts in Merkezefendi. On the other hand, the presence of a large number of town municipalities, each of which approved and enacted its own partial plans, sowed the first seeds of the formation of a fragmented urban space in the west (Fig. 14).

The third period examined 1991–2000 signifies clearly how the production of urban space is extended on the west and northwest regions. During the 1990s, Denizli Municipality approved the Western Region Development Plan, comprised of a seven-stage plan, covering Yeşilköy, Sırakpılar, Satuhan-Şirinköy, Çakmak-Karahasanlı, Hacıyüplü-Kayaköy, Bozburun, and Eskihişar neighbourhoods. This regional development plan in Merkezefendi was influential in many aspects: It proposed new residential ar-



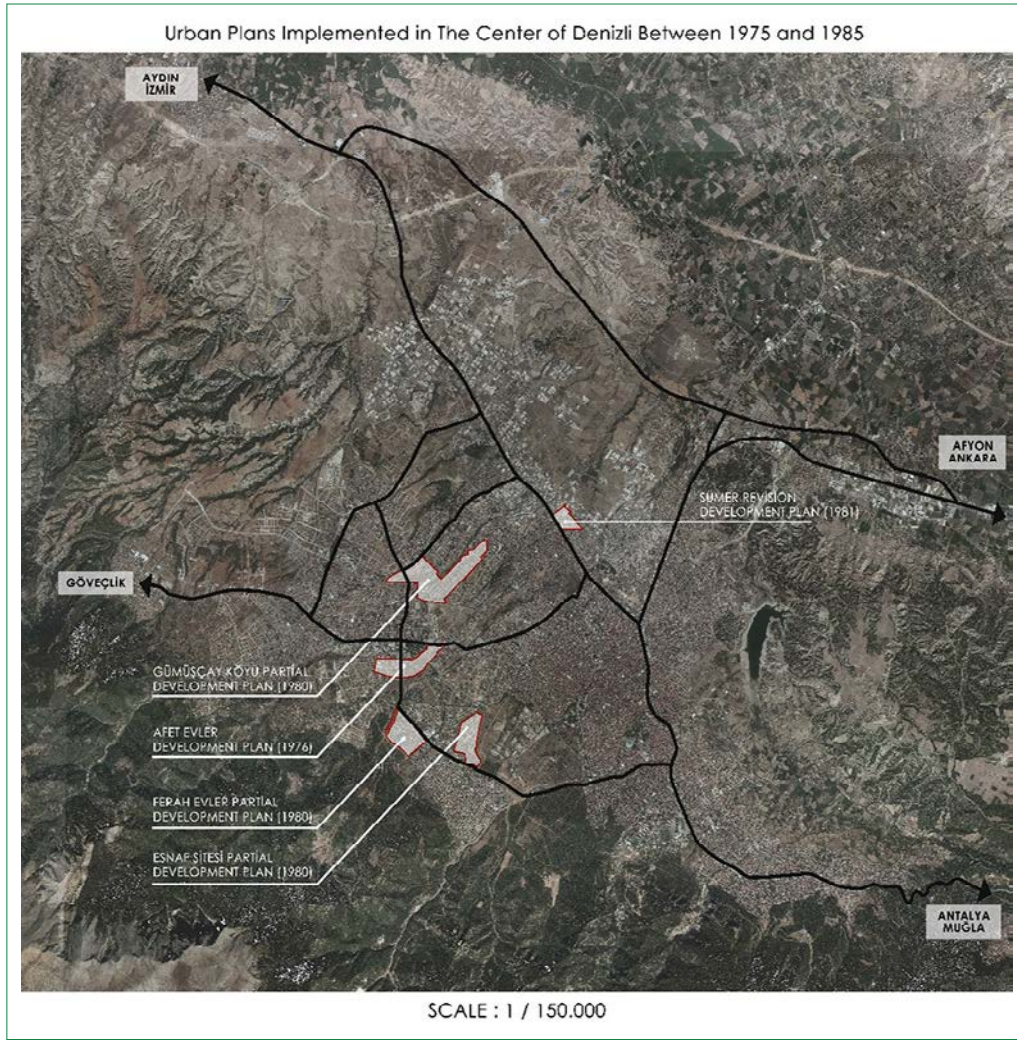
**Figure 12.** The average square meter unit price data for house prices in 2023 (Created by the authors using Endeksa data and Google Earth Pro software).

eas in Yeşilköy, Saruhan-Şirinköy, and Çakmak-Karahasanlı neighbourhoods; developed low-density residential areas in Sırakapılar and small-scale industry, and storage functions in Hacıyeüplü-Kayaköy and Bozburun. Furthermore, it also designated the first slum prevention zone in the west and gave rise to the implementation of mass housing projects for middle and low-income groups in Adalet and Bahçelievler neighbourhoods (Fig. 15).

After 2000s, following the opening of the Ali Aygören Boulevard (in 2007), the main artery road bypassing military zone and providing faster access to the neighbourhoods in the west, new development plans were implemented shortly after for Servergazi, Başkarcı, Hallaçlar, Göveçlik and Saruhan neighbourhoods. During this period, with the enactment of urban development plans, many rural settlements and peri-urban sites were incorporated into the dominant logic of extended urban development (Fig. 16).

In 2005, Denizli Municipality juxtaposed urban development plans prepared by town municipalities of Göveçlik, Servergazi, Başkarcı, Hallaçlar, Bereketli, Üçler and Gümüşler. Then, rather than preparing a regulatory master zoning plan before these lower-scale development plans for the towns, Denizli Municipality decided to merge these lower-scale development plans, digitalised them and integrated with the 1984 Master Zoning Plan and enacted as the current master zoning plan. Contrary to the principles of comprehensive planning, planning unity and hierarchy, this assembled patchwork of fragmented development plans has utilised in the last two decades by local governments as the master zoning plan of the city. Indeed, this pseudo master plan initiative deepens the fragmentation of urban space and fuels extended urban development in the peri-urban sites of Merkezefendi (Fig. 17).

As Table 2 illustrates, there are many urban development plans implemented in Merkezefendi and triggered extended



**Figure 13.** Urban plans implemented in the centre of Denizli between 1975 and 1985 (Created by the authors using Denizli Metropolitan Municipality, Merkezefendi District Municipality data and Google Earth Pro software).

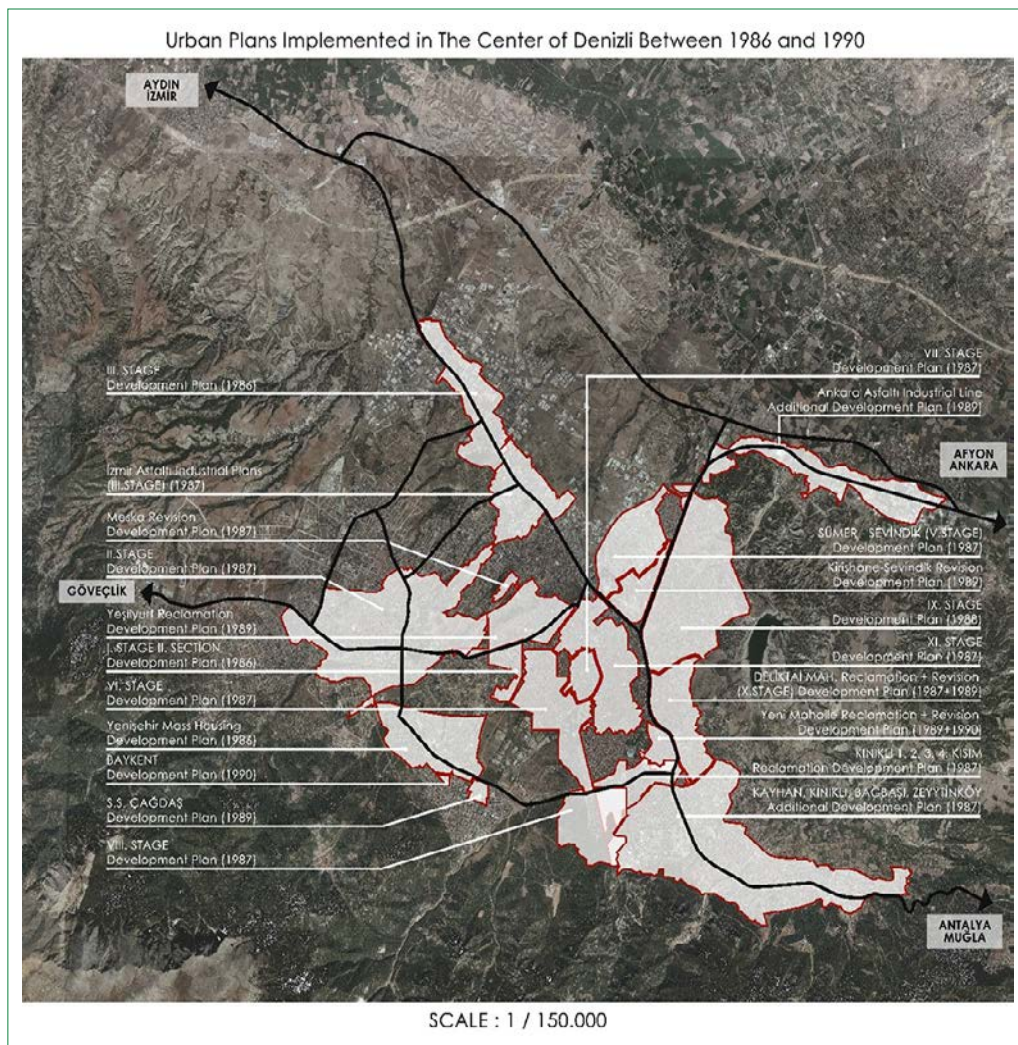
urbanisation in the western region of the city. The comprehensive analysis on urban development plans reveals that much of these planning efforts were fragmented and thus they have formed a fragmented urban socio-spatial structure in the west. Town municipalities' authorities to implement their own development plan (which was cancelled after the new metropolitan municipality law in 2012) reinforced this fragmented structure in extended urbanisation. In the 1990s, Merkezefendi was the focus of extended urban development particularly after the enactment of Western Region Development Plan. In 2005 a comprehensive master plan was prepared but it was a pseudo one, comprised of the merging of the lower-scale development plans prepared for the towns in the previous periods. Therefore, both profit-driven urban development attempts and fragmented planning interventions co-constituted the experience of extended urbanisation in Merkezefendi district of Denizli. There were also many public investments and real

estate projects fostering the growth-induced extended urbanisation strategies, elaborated in the following section.

### 3.3. Public Investments and Real Estate Projects Fostering Extended Urban Development in Denizli

Not only fragmented urban planning efforts, but also many key public investments and flagship real estate projects have fostered extended urban development. In research, we group these investments-projects into three major categories to analyse their multiple impacts on extended urban development: Public and private investment projects; transportation and infrastructure projects, and lastly housing projects including high-rise real estate development and gated residential sites.

Various public and private sector investments in Merkezefendi district since 2000s have initiated an extended urban development process in the western part of the city. Espe-

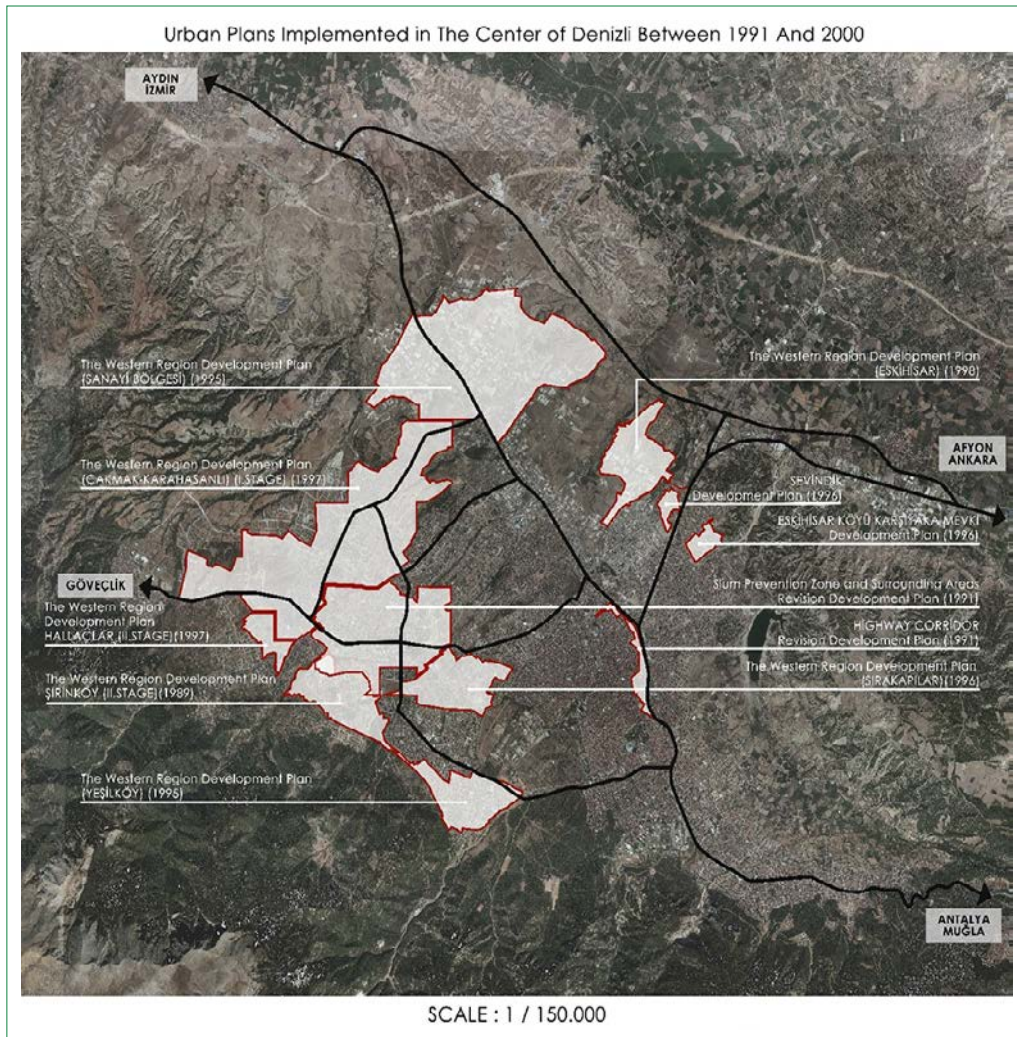


**Figure 14.** Urban plans implemented in the centre of Denizli between 1986 and 1990 (Created by the authors using Denizli Metropolitan Municipality, Merkezefendi District Municipality data and Google Earth Pro software).

cially, the opening of the largest shopping mall in the city, new private and state hospitals, new private schools and the decentralisation of many administrative functions from the city centre to the west, have all triggered urban development in Merkezefendi. Amongst the public investments, there are important projects such as Court Complexes, State Social Security Institution, State Land Registry and Cadastre Directorate, the Regional Directorate of the Turkish Statistical Institute, Servergazi State Hospital, new colleges, cultural centres, regional parks and huge recreational areas and lastly, City Hospital and New Stadium projects that are still under construction. Private sector investments include large shopping malls such as Pekdemir, Teras Park and Sinpaş Aquamall. These public and private investments, which align with the Western Region Development Plan and the 1/25,000 Master Development Plan, have emerged as key landmarks. They have triggered development in their surrounding areas, directed the extended

urban growth toward the west, and contributed to shaping a new sub-centre in the Merkezefendi district. These public and private investments and years of opening are listed below in Table 3 (Fig. 18).

Transportation and infrastructure projects have played pivotal roles in extended urban development. This is also the case for Merkezefendi district of Denizli especially since 2000s. Ali Aygören Boulevard (formerly known as Military Road) has served as a main artery bypassing military area and facilitated transportation to the western region. This resembled example of bypass urbanism strategically connects the east-southeast and the west-southwest urban development zones, and it has provided further momentum to urban development practices of almost all the neighbourhoods in the west of Merkezefendi. Other important projects include 29 Ekim Boulevard followed by Hasan Gönüllü, Gümüşler, Cinkaya and Ali Marım Boulevards, all of which

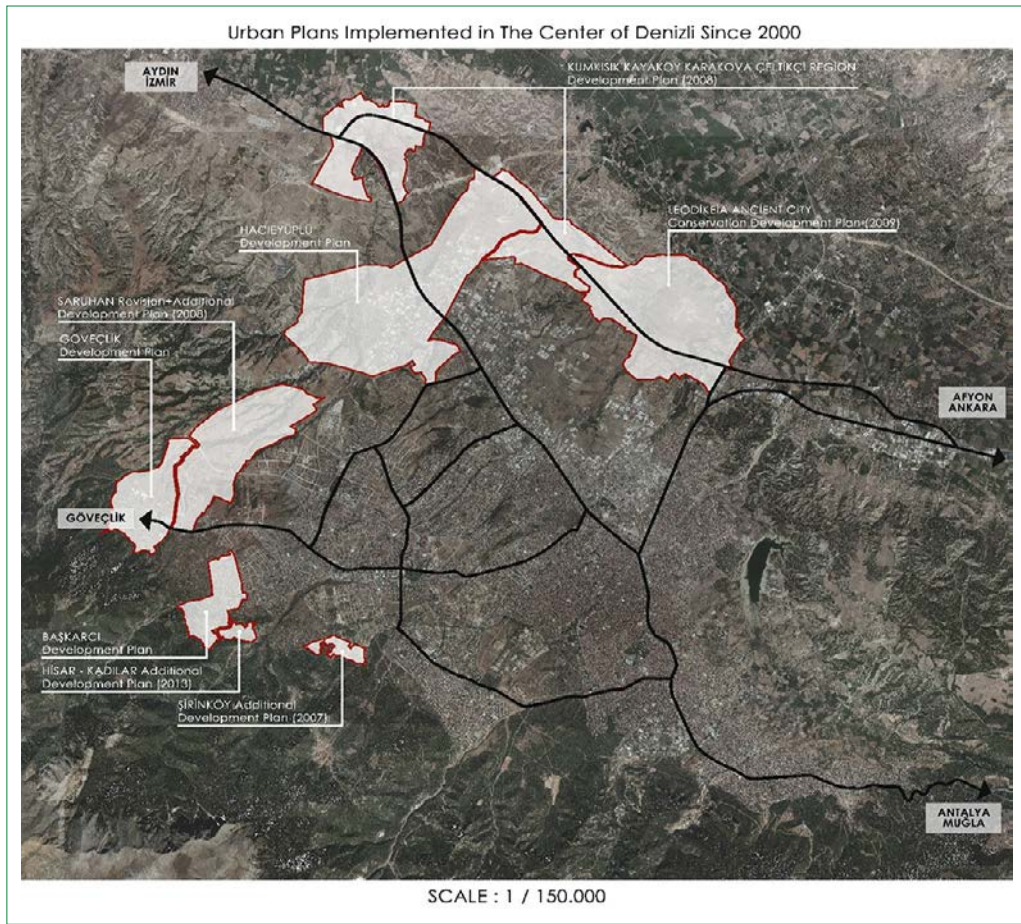


**Figure 15.** Urban plans implemented in the centre of Denizli between 1991 and 2000 (Created by the authors using Denizli Metropolitan Municipality, Merkezefendi District Municipality data and Google Earth Pro software).

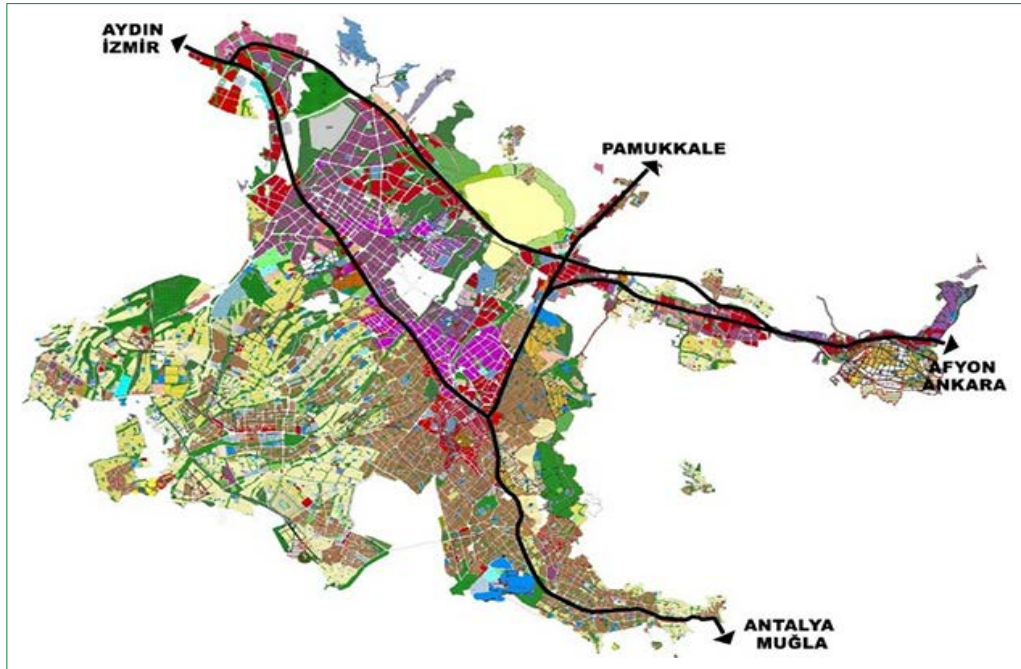
have strengthened the multiple connections between the traditional and modern city centres, subcentres in the west, Pamukkale University, organised industrial zones and other peri-urban development sites. In addition, Yenişehir Pedestrian Road has come to the fore as an important green-recreational corridor for Merkezefendi and it has paved way for various cafes and restaurants, luxury shops and exclusive places. The transportation-infrastructure projects are listed below Table 4, and their construction have always formed the ground for extended urban development (Fig. 19).

Following the 1976 earthquake, particularly affecting Şirinköy and its surrounding areas in the western part of the city, several development plans were initiated. These include the Afet Evler Development Plan, Binevler Development Plan, Esnaf Sitesi Partial Development Plan, Ferah Evler Sitesi Partial Development Plan, Yenişehir Mass Housing Development Plan, and the Meska Revi-

sion Development Plan. These efforts were carried out through housing cooperatives and mass housing projects implemented by both public and private sectors. The mass housing construction in 1990s and the flagship real estate projects in the 2000s and 2010s have been catalyst to extended urban development in Merkezefendi. The most of these housing projects are concentrated in the western part of the district, extending from Yenişehir and Şirinköy to Çakmak and Karahasanlı neighbourhoods. In the late 1990s and early 2000s, housing cooperatives and affordable mass housing projects for mid-income groups, including 800. Yıl Konutları, Umutkent Sitesi, Ferah Evler, 1200 Evler ve Belkon Sitesi have been constructed in the west. Starting particularly in the 2010s, low-density detached houses and gated villa complexes (e.g., Flora Park, Karelya, Elif Evler, Hukukçular, etc.) have been constructed in the Başkarıcı, Göveçlik, Hisar, Kadılar, Bereketler, and Saruhan neighbourhoods. These developments were guided by the



**Figure 16.** Urban plans implemented in the centre of Denizli since 2000 (Created by the authors using Denizli Metropolitan Municipality, Merkezefendi District Municipality data and Google Earth Pro software).



**Figure 17.** The 1/5,000 scale master development Plan for Denizli city centre (Denizli Metropolitan Municipality).

**Table 2.** Urban development plans implemented in the center of Denizli (Merkezefendi District)

Year	Urban development plans	Area (Ha)
1976	Afet Evler development plan	160
1978	Dokuzkavaklar development plan	1200
1979	Binevler development plan	20
1980	Esnaf Sitesi partial development plan	50
1980	Ferah Evler Sitesi partial development plan	50
1981	The industrial plans for Sümerbank and its surrounding areas	220
1986	İzmir asfaltı industrial plans	330
1986	Yenişehir Mass Housing development plan	290
1987	Meska revision development plan	20
1987	Çakmak-Bereketler additional development plan	60
1987	Kiremitçi-Karaman Reclamation Development Plan	20
1988	Karcı Yolu Civarı reclamation development plan	400
1989	Kirişhane-Sevindik revision development plan	320
1989	Yeşilköy-Künarlar Mass Housing development plan	450
1989	Yeşilyurt reclamation development plan	500
1990	Yeni Mahalle reclamation + revision development plan	270
1990	Bakırlı reclamation development plan	60
1991	The urban center and highway corridor reclamation + revision development plan	230
1991	Slum prevention zone and surrounding areas revision development plan	720
1995	Yeşilköy development plan	190
1995	Hacıyüplü-Kayaköy additional + revision development plan	440
1996	Sırapapılar revision development plan	210
1996	Kayaköy-Bozburun Civarı additional + revision development plan	750
1997	Çakmak-Karahasanlı-Kayaköy-Hallaçlar-Şirinköy additional development plan	1500
2007	Şirinköy additional development plan	60
2008	Saruhan additional + revision development plan	55
2008	Kumkısıq-Kayaköy-Karakova-Çeltikçi region development plan	770
2008	Hisar-Kadılar additional development plan	42

Source: Denizli Metropolitan Municipality, Merkezefendi District Municipality.

Western Region Development Plan, for Yeşilköy, Sırapapılar, and Saruhan-Şirinköy regions. In the vicinity of the Çakmak, Karahasanlı, Şemikler and Kayaköy neighbourhoods, there are high-rise gated communities (such as Evora, Sinpaş, Su Dünyası, Gölkent, Tower Centre Residence, Aya Residence) targeting high-income groups and completed in the last 10–15 years. Western Region Development Plan (Çakmak-Karahasanlı-Hallaçlar Regions) played a significant role in encouraging the development of these areas. These gated housing developments have serious impacts over the formation of a fragmented socio-spatial landscape, exacerbating existing spatial segregations and urban injustices within the genuine experience of Denizli's extended urban development (Table 5) (Fig. 20).

#### 4. Conclusion

As a ubiquitous case within the mid and large-scale Anatolian cities in Turkey, the extended urban development of Denizli provides critical insights and renewed contributions to explain actually existing dynamics of contemporary urban development. Denizli's urban geography has been subjected to a growth process, induced by industrial development under the dominance of neoliberal policies and intensified construction activities in the last four decades. The rapidly developed and fragmented urban geography has extended via the functioning of three major transportation axes; Denizli-Izmir and Denizli-Ankara axes based on industrial agglomerations and profit-driven residential developments and Denizli-Muğla axes de-

**Table 3.** The list of public-private investments and years of opening

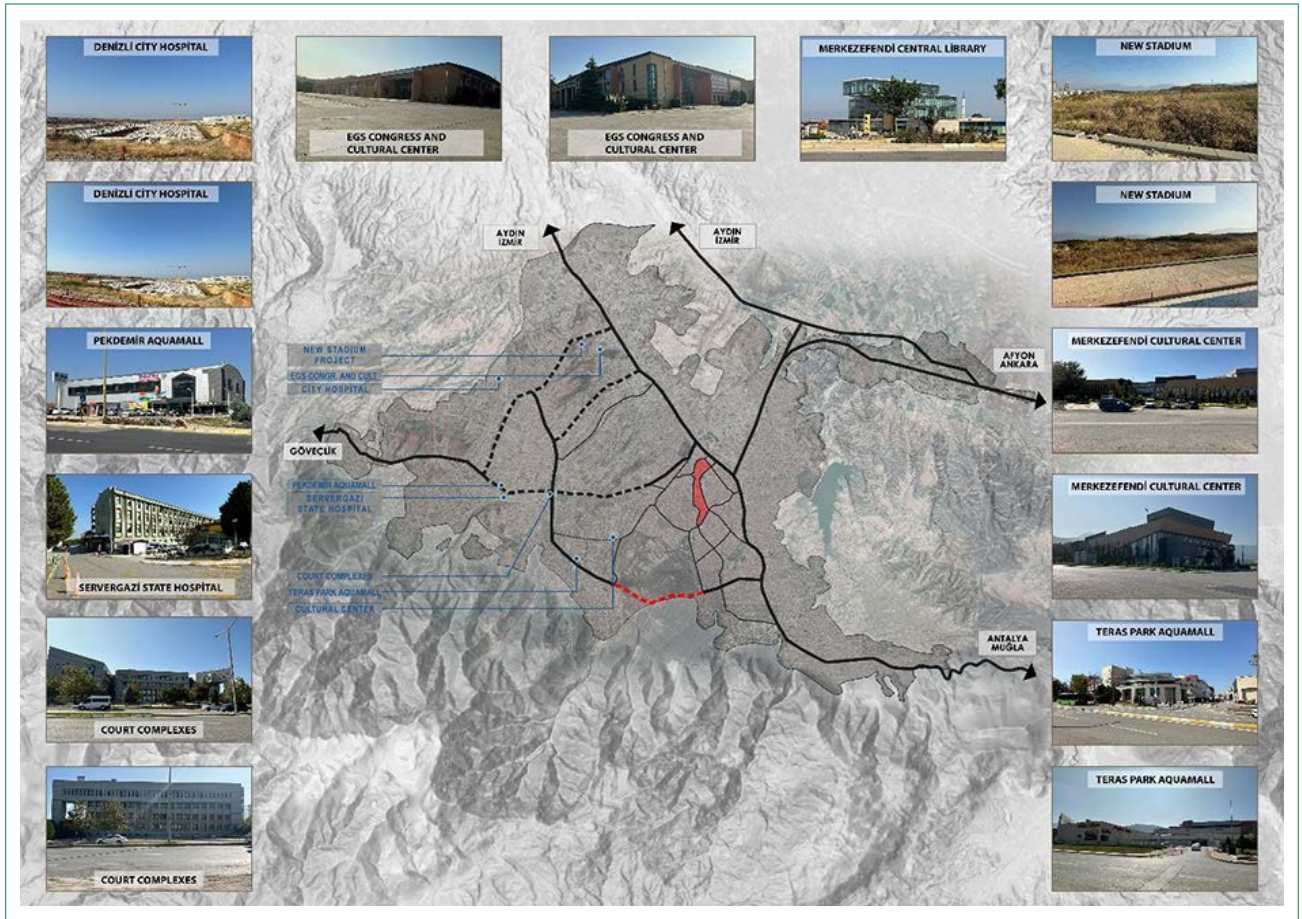
The Public- Private Investments	Year	Neighborhood
Court Complexes	2004	Adalet
Servergazi State Hospital	2005	Bereketler
Teras Park Aquamall	2007	Yenişehir
Egs Congress and Cultural Center	2007	Kayalar
Sümer Regional Park	2007	Sümer
Yunus Emre Regional Park	2008	Yenişehir
Adalet Regional Park	2010	Bahçelievler
Hasan Gönüllü Regional Park	2010	Sırapapılar
Sümer Park Aquamall	2011	Sümer
Servergazi Recreational Area	2013	Servergazi
Denizli State Social Security Institution	2013	Adalet
Bahçeşehir Colage Campus	2013	Bahçelievler
TED Colage Campus	2014	Saruhan
Sevindik Vadisi Regional Park	2014	Sevindik
State Land Registry and Cadastre Directorate	2016	Mehmet Akif Ersoy
Sinpaş Aquamall	2018	Kayalar
Merkezefendi Cultural Center	2018	Merkezefendi
Ornaz Vadisi Recreational Area	2018	Başkarcı
Merkezefendi Central Library	2019	Adalet
Denizli Province National Education Directorate	2019	Mehmet Akif Ersoy
Sınav Colage Campus	2021	Bahçelievler
Lavanta Garden	2021	Yenişafak
Merkezefendi Bilim Merkezi	Under Construction	Selçukbey
Denizli City Hospital	Under Construction	Karahasanlı
New Stadium	Project	Kayalar

Source: Denizli Metropolitan Municipality, Merkezefendi District Municipality.

**Table 4.** The list of transportation-infrastructure projects and years of opening

Transportation-infrastructure projects	Year
Cinkaya Boulevard	2005
Gümüşler Boulevard	2005
Ali Aygören Boulevard	2007
29 Ekim Boulevard (Road Cross-section Widening/Regulation)	2007
Hasan Gönüllü Boulevard (Road Cross-section Widening/Regulation)	2007
1200 Evler – Göveçlik Road	2008
Şirinköy Road (Regulation)	2009
Muhsin Yazıcıoğlu Boulevard	2011
Yenişehir Pedestrian Road	2011
Hallaçlar – Başkarcı Road	2014
Üçler Boulevard (New Beltway)	2019
Ali Marım Boulevard	2019
Aydın-Denizli Highway Project	Under Construction

Source: Denizli Metropolitan Municipality, Merkezefendi District Municipality.



**Figure 18.** The public-private investments (Created by the authors).

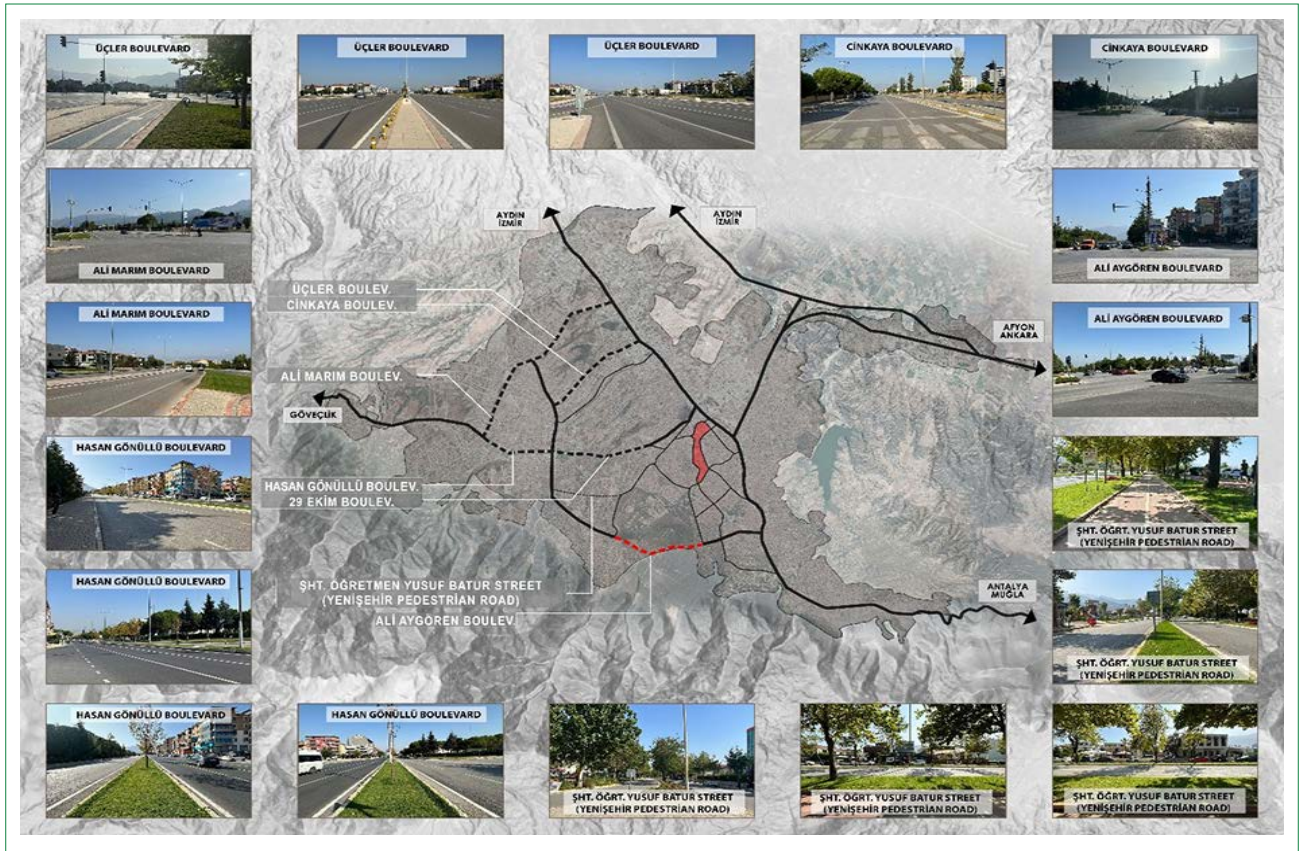
veloped with the influence of Pamukkale University and new housing and commercial investments. Denizli's extended urban development consisted of two of these axes' development (Denizli-Izmir and Denizli-Muğla) and best observed through an analysis of Merkezefendi district, presented in the article.

Merkezefendi, as the target of extended urban development in Denizli in the last three decades, has high rates of population increase, internal migration, construction permits and property values in addition to the rapid development and concentrated investments by public and private sectors. The underlying factors behind the extended urban development observed in Merkezefendi could be summarised as follows: the opening of strategic transportation routes in the city; the heightened public investments and infrastructure systems and lastly, profit-driven large-scale housing and residential developments. Denizli's extended urban development towards the western zone in Merkezefendi has been molded as a result of these mutually constitutive driving forces, which are primarily initiated by particular urban development plans in the last two decades.

Denizli's extended urban development reveals a contested and fragmented process, based on a historical analysis of

urban macroform and a comprehensive analysis of urban development plans, their land use and transportation decisions. Since the 2000s, the interaction of industrial areas (on Denizli-Izmir and Denizli-Ankara transportation axes), central business areas and Pamukkale University has gradually increased. At the background of this first impetus of extended urban development one can easily observe planning interventions, public investments and large-scale housing production in the form of private investments in the peri-urban sites of development. In this extended urbanisation experience, the location and interdependence of production and consumption functions, the opportunities provided by transportation-infrastructure projects and new urban services have played a vital role in the upcoming decades. All these dynamics of extensive urban development have resulted in a fragmented and disjointed urban spatial structure, characterised by a lack of both socio-spatial coherence and the basic principles of modern urbanism, particularly planning unity and hierarchy.

From the perspective of contemporary discussion on post-suburban developments, Denizli case reflects significant resemblances with other cases of urban development mostly in



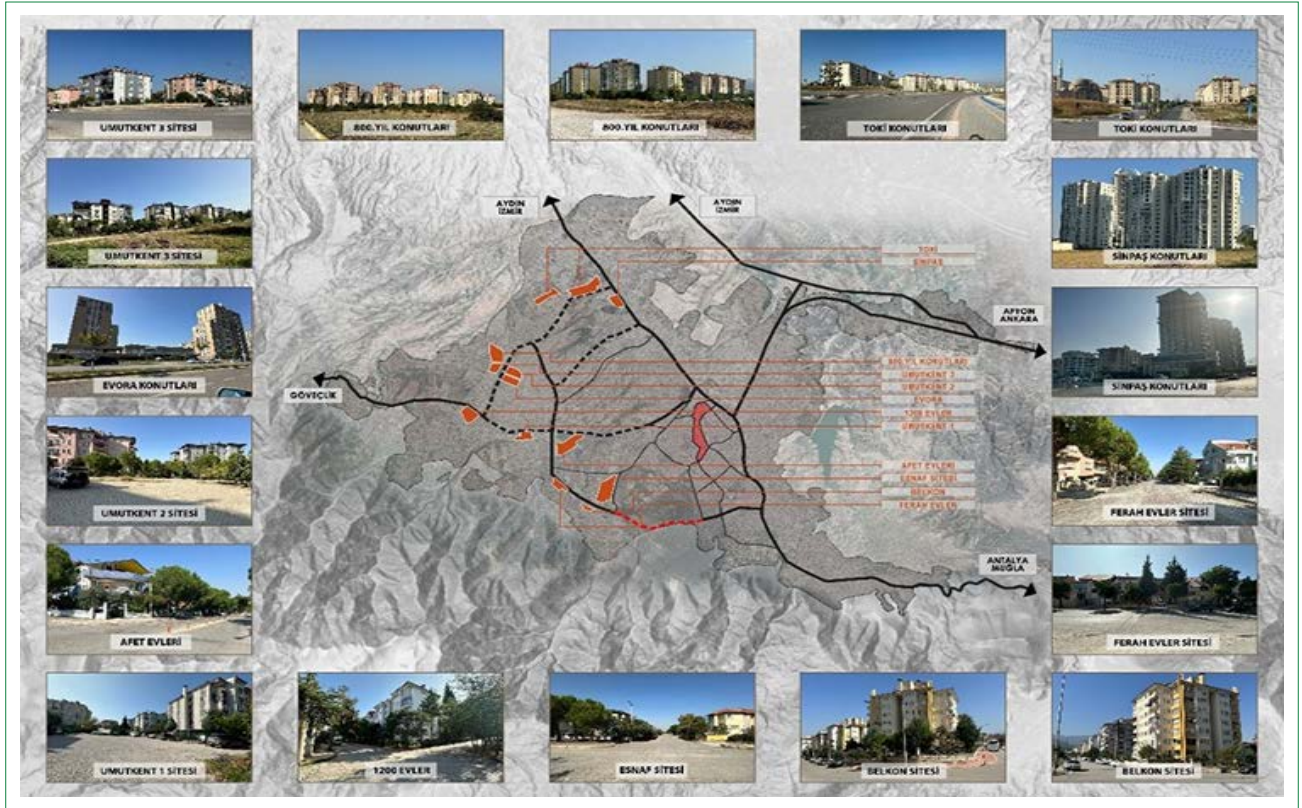
**Figure 19.** The transportation-infrastructure projects (Created by the authors).

the global South, while owning many diverse characteristics. Urban development in Merkezefendi district has been shaped by dramatic demographic changes, strategic transportation-infrastructure investments and challenged by local governance affairs in the production of extended urban geographies. While upper-middle classes have shifted their commercial and residential activities towards to the western zones in Merkezefendi, a rapid and dramatic socio-economic transformation also occurs in this extended socio-spatial landscape of the city. Like many of the cities in the global South, this extended urban development pattern has gained a chaotic character where urban-rural conflicts and socio-economic polarisations (amongst the peasants and urban citizens, low-income and affluent groups) have become strikingly visible. The disjointed fragments in the sites of extended urban development have unfolded through a dramatic and spontaneous transformation of both local community and peri-urban geography in the city. In this context, we argue that rather than the early capitalist countries of the global North, Denizli's extended urban development has certain similarities with the cities of the global South, where extended urban development and suburbanisation tendencies have a fragmented and fast paced character.

Although very different in terms of population and the size of the built-up area, similar to the cities of Kolkata, Lagos

and New Mexico, Denizli's extended urban development has been produced through the practices of bypass urbanism. The opening of Ali Aygören Boulevard in 2007 is a remarkable instance of bypass urbanism since it eliminates the large military area that limited extended urban development towards to the western zone in Merkezefendi. After the implementation of this new boulevard, it becomes possible to travel between the city centre and new residential-commercial sites in the west at a much shorter distance and in a shorter time. This instance of bypass urbanism in Denizli's extended urban development indicate that new residential sites and attractive urban spaces for affluent groups are directly connected to the city centre. With this way of bypassing/deactivation, the geography of intra-urban mobility patterns and the transportation relations between the residential, commercial and industrial sites have undergone significant changes.

The partial urban planning interventions in the last four decades both triggered and sustained the extended urban development in the Merkezefendi district of Denizli. Much of these planning efforts are fragmented and thus they have formed a fragmented urban socio-spatial structure in the west. Furthermore, many key public investments and flagship real estate projects have fostered extended urban development. For instance, Teraspark Shopping Mall and New



**Figure 20.** The housing projects (Created by the authors).

Court Complex implemented in 2010s, City Hospital and New Stadium Project planned to be realised in 2020s are amongst the strategic public and private investments fueling extended urban development in Denizli.

In conclusion, similar to the Southern cities in the world, Denizli's ubiquitous case of extended urban development shows how public authorities rapidly prepare urban development plans in a fragmented and non-coherent logic of spatial intervention, facilitating and speeding up the construction of large-scale housing/residential areas and key public projects and transportation-infrastructure. Unlike the cities of the global North, the logic of private interests and property rents precedes the public-good oriented operation of spatial planning in Denizli's extended urban development, which means striking similarities with the cities of the global South in many respects: fast-paced urban development, socio-economically polarised urban geography and fragmented peri-urban sites. The case study of Denizli provides genuine research findings and outlines future lines of research on the contemporary dynamics of extended urbanisation worldwide with a special focus on the global South. Thus, Denizli could be identified as a variegated and relational formation of extended urbanisation, embarking on remarkable similarities as well as diversities within the comparative analysis of urbanism practices.

**Table 5.** The list of housing projects and years of construction

The housing projects	Year	Neighborhood
Afet Evler	1979	Bahçelievler
Esnaş Sitesi	1993	Yenişehir
Ferah Evler	1997	Yenişehir
Elif Evler Sitesi	2000	Yenişafak
Hukukçular Sitesi	2001	Selçuk Bey
1200 Evler	2002	1200 Evler
Meska Konutları	2004	Mehmet Akif Ersoy
Doruk Kent Sitesi	2005	Yenişehir
Umutkent Sitesi 1-2-3	2006	Adalet
Belkon Sitesi	2007	Servegazi
800. Yıl Konutları	2008	Karahasanlı
Gölkent Konutları	2010	Şemikler
Karelya Sitesi	2013	Başkarcı
Su Dünyası Konutları	2014	Şemikler
Flora Park Evleri	2014	Servegazi
Sümer Park Evleri	2014	Sümer
Aya Rezidans	2015	Çakmak
Tower Center Rezidans	2018	Çakmak
Evora Konutları	2020	Selçuk Bey
Sinpaş Konutları	2020	Kayalar
Toki Konutları	2021	Kayalar

Source: Denizli Metropolitan Municipality, Merkezefendi District Municipality.

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