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Deprivation of social infrastructure in the urban periphery: The case of Esenler District in Istanbul

Kent çeperinde sosyal altyapı yoksunluğu: İstanbul'daki Esenler İlçesi Örneği

Serhat Ay[1], Taner Kılıç[2]

Öz

Bu çalışma sosyal altyapının kentsel eşitsizliklerin önemli bir özelliği olduğunu ilçe ölçeğinde göstermektedir. Ekonomik olanaklarının yanı sıra bir kenti iyi yapan şeylerden birisi de insanlara sunduğu sosyal altyapı hizmetleridir. 21. Yüzyıl kentlerin her bölgesi eşit bir biçimde sosyal altyapıya erişememektedir. Sosyal altyapı, çağdaş kentsel yaşamın gelişimi ve sürdürülebilirliği için oldukça önemlidir. Özellikle büyük kentlerin çeperine göç eden insanların kente tutunmaları, aidiyet kurmaları ve kentsel yaşamı içselleştirmelerinde sosyal altyapı etkili rol oynamaktadır. İstanbul'daki kentsel eşitsizlikleri sosyal altyapı boyutu ile ele alan çalışmalara, Esenler İlçesi örneğinde yürütülen bu çalışma ile elde edilen bulguların değerlendirilmesiyle katkı yapılması amaçlanmıştır. Çalışmada İstanbul'un çeperinde kırdan kente göç, mülteci göçü ve işçi sınıfından meydana gelen Esenler İlçesindeki sosyal altyapı, diğer ilçelerle karşılaştırılarak analiz edilmiştir. Çeşitli veri kaynakları ve uydu görüntülerden oluşturulan veri tabanı tematik haritalarla sunulmuştur. Bulgulara göre İstanbul'da merkez ve çeper ilçeler arasına sosyal altyapı açısından ciddi bir uçurum bulunmaktadır. Bu uçurum eğitim, sağlık, rekreasyon ve konut yakıtı olarak dört biçimde kendisini göstermektedir. Düşük eğitim seviyesine sahip Esenler'in nitelikli bir eğitim profili edinmesinin önünde, okul öncesi eğitim mekânlarının kısıtlılığı, ilköğretim okullarındaki kalabalık sınıf mevcudiyetleri ve liselerin kalite yetersizliği gibi ciddi sorunlar bulunmaktadır. İkincisi, merkezi ilçelere göre sağlık hizmetleri yetersiz olan Esenler'de sadece altı muayenehane bulunmaktadır. Üçüncü olarak, çarpık ve yoğun yapılaşmanın boş alan bırakmadığı ilçede yeşil alan yoğun nüfusun rekreasyonel ihtiyaçlarını karşılayamamaktadır. Son olarak, kalabalık hane halkına rağmen Esenlerde düşük alım gücü sebebiyle doğalgaz tüketimi merkezi ilçelere göre oldukça düşüktür. Tüm bu göstergeler Esenler İlçesinin kente sağlıklı bir biçimde tutunacak başat sosyal altyapı hizmetlerinden eksik kaldığını vurgulamaktadır. Dolayısıyla, kentsel eşitsizliklerin daha iyi anlaşılması, sorunların önüne geçilmesi ve yaşanabilir kent ortamlarını oluşturmanın yolu öncelikli olarak kent çeperlerindeki sosyal altyapının güçlendirilmesinden geçmektedir.

Anahtar Kelimeler: Kentsel eşitsizlik, kentsel çeper, merkez-çeper, işçi sınıfı, sosyal altyapı.

ABSTRACT

This paper emphasizes the significance of social infrastructure in understanding urban inequality. In addition to its economic opportunities, social infrastructure is one of the distinguishing characteristics of metropolitan areas. In cities of the 21st century, social infrastructure is not equally accessible to all residences. For the development and sustainability of urban life, social infrastructure is fundamental. In terms of establishing a sense of belonging and integration to contemporary urban life, social infrastructure is highly crucial especially for refugees and rural migrants who migrate to the periphery of big cities. By evaluating the findings of this study conducted in Esenler District, we aim to contribute to research dealing with urban inequalities in Istanbul from the perspective of social infrastructure. To fill a gap in the literature, the social infrastructure of the Esenler District, which consists of rural-to-urban migration, refugee flow, and the working class in Istanbul's

[1] **Corresponding Author:** Department of Geography, Faculty of Humanities and Social Sciences, Bilecik Şeyh Edebali University, Bilecik, Türkiye, serhat.ay@bilecik.edu.tr, 0000-0003-1604-2208

[2] Department of Geography, Faculty of Humanities and Social Sciences Bilecik Şeyh Edebali University, Bilecik, Türkiye, taner.kilic@bilecik.edu.tr, 0000-0002-1944-8214

periphery, was analyzed by comparing it to other districts. The database created from various data sources and satellite images is presented with thematic maps. According to the findings, there is a significant divide between the central and peripheral districts of Istanbul in terms of social infrastructure. This inequality manifests itself in four ways: education, health, recreation, and fuel for housing. First, there are serious problems, such as the limited number of kindergartens, the high-class size in primary schools, and the poor quality of high schools in front of Esenler, which has a low education level. Second, there are only six healthcare centers in Esenler, where health services are inadequate compared to the central districts. Third, the green space cannot meet the recreational needs of the dense population in the district where unplanned and intensive construction has left no free space. Due to limited purchasing power, natural gas usage in Esenler is fairly low compared to central districts, despite the dense population. On the basis of these indicators, it has been concluded that the Esenler District, lacks the essential social infrastructure services necessary to maintain the city's health. Therefore, strengthening the social infrastructure on the urban periphery is a primary concern for developing a better understanding of urban inequalities, preventing problems, and making livable urban environments.

Keywords: Urban inequality, urban periphery, core and periphery, working-class, social infrastructure.

INTRODUCTION:

The most essential aspect of a city's liveability is its economic opportunities. However, are economic opportunities sufficient to sustain an ideal urban lifestyle? Indeed, the urban life has more to offer than the routine of commuting to and from work. Urban life has been somewhat restricted to this routine. Particularly, the irregularity of rural-to-urban migration and the presence of refugees make it difficult for the social life in poor neighbourhoods. People who have to work in jobs where physical labour is intense and working hours are long live in these districts. Perhaps the relationship these people establish with Istanbul is limited to just going to work. For a healthy urban life, people in a prosperous city like Istanbul should not have such a restricted connection to the urban environment. Otherwise, isolation from city life will lead to social exclusion.

Social theorists, geographers, sociologists, and anthropologists are concerned with social exclusion in urban areas. Roy (2011) argued that developmentalist neoliberal urban policies generate urban poverty through a strategy of "subaltern urbanism." Wacquant, who is deeply concerned about similar issues, evaluates urban peripheries along the axes of marginality, stigma, and informality and sees them as places under power's pressure. Recently, many researchers, especially from both the Global South and the Global North, have turned to research on the urban periphery, creating a kind of "peripheral turn" trend (McFarlane, 2014; Dembski et al., 2017; Collins, 2013; Savini, 2014).

There is a substantial body of literature that emphasizes the urban periphery and study the construction of everyday life in marginal urban environment (Wacquant, 1993, 2008; Freidberg, 2001; Erman, 2004; Holston, 2009). Increasingly, these debates are used to recognize urban life in global contexts, particularly in the context of restricted forms of precarious urban living.

In peripheral districts, social infrastructure is essential for building a liveable urban environment and a sense of belonging to the city. Social infrastructure enables the city to consider and act beyond an economic perspective. This strategy requires a deeper comprehension of how people interact with their cities and how they live in the city. We are concerned about how poverty restricts access to education, healthcare, affordable housing, and recreational spaces. The global economy model and state capitalism, in particular, have led to a rise in social inequality, which has led researchers to look into spatial segregation in terms of social infrastructure in different parts of the world. Silver and McFarlane (2019) examined the urban inequalities created by the lack of social infrastructure in the marginalized areas of Uganda and Iglesias-Pascual et al. (2023) in the large cities of Spain. Klinenberg (2018), on the other hand, is working on ways that suggest the use of social infrastructure services to cover the basic needs of the people.

This study suggests that one of the useful ways to understand urban inequality is to study social infrastructure. Cities enrich public life by providing health services, kindergartens, tiny classrooms, playgrounds, green areas, swimming pools, fitness centres, pedestrian streets, bicycle paths, recreational spaces, movie theatres, and libraries. Rich social infrastructure gives residents a sense of community outside of their homes. It should also be evaluated based on the availability of socialising areas. The inclusion of social infrastructure into urban studies will make it possible for researchers to think about city life from a more holistic perspective. These gathering places are indispensable because they enable citizens with the opportunity to mix and socialise with people of the broader community with whom they share their neighbourhoods and cities. Beyond meeting an instrumental need, they are places where cities can be experienced as inclusive and tolerant (Latham and Layton, 2019).

While neoliberal economic models and policies increase capital mobility and financial growth, they create economic inequalities that deepen the social class divide. Space and place also got their share from such polarizations. In many countries, especially in Europe, "divided city" formats began to increase. High-priced residences, luxury shopping malls, new generation cafes and restaurants, five-star hotels, museums and art galleries take the place of the poor, who are pushed out of the city by the gentrification and touristification strategies in the city centres. The movement of the poor towards the periphery creates a kind of residential segregation in cities. In this context, it is obvious that urban space has undergone a direct transformation with respect to social stratification.

Big cities increasingly become a product of marketing, advertising, urban tourism, and the real estate market. "While most research has focused on urban centres and wealthy and creative groups, less attention has been paid to urban peripheries embedded in working-class environments" (Diebäcker et al., 2018, p. 18). With the rise in housing and workplace prices in urban cores, capital actors have turned to the urban periphery, which they find cheaper under the guise of urban transformation. As a consequence, future urban studies will undoubtedly shift their focus to peripheral development.

Despite having over 15 million people, experiencing significant refugee flow, and being at risk of severe earthquakes, the social infrastructure dimension of urban inequality in Istanbul has not been adequately addressed. In order to fill this gap, spatial analysis of Esenler District, an Istanbul district that is both peripheral and working class. We suggest two ways to identify whether a place is on the periphery or in the centre. First, the distance between the places where people do their social, cultural, and economic activities and their neighbourhoods can be studied. Second, the potential of existing social services to meet the fundamental needs of residents can be investigated. If a person has to go to another place from where he lives in order to participate in activities such as education, health, shopping, recreation, sports, and cultural activities, it shows that he or she is moving from the periphery to the centre. In this situation, our study looks into the social infrastructure to show where the Esenler District is in relation to the core and periphery.

In addition to the Esenler district, the districts of Bağcılar, Gaziosmanpaşa, Sultangazi, Sultanbeyli, and Esenyurt are also profoundly affected by urban inequality. Because of sensitivity to the reflexivity issue, the Esenler district was selected as the study's case study. Recently, social science researchers have placed a greater emphasis on their own positions, namely reflexivity (Bondi, 2009; Sultana, 2017). With the researcher's examination of the field, the significance of prior experience increased (Rose, 1997). The most important factor in selecting Esenler is that 21 years had passed in the district, encompassing his childhood, adolescence, and young adulthood. Neighbourhoods' environment, public spaces, schools, and the hegemonic identity of the district helped the researcher understand the living conditions of Esenler. I spent my childhood in Oruçreis neighborhood, which is in the northernmost part of the district. Until 2011, there was not even a playground in the neighborhood. The residents of the neighborhood were trying to spend their free time in the narrow grassy areas on the roadsides at

the weekends. The children were trying to play on their empty plots in the streets. With the intense urbanization, apartments started to be built one by one on the plots where we play games. Before primary education, there was not any kindergarten. I have been as a student in the schools of the district with a class size of 50-60 students. In many student desks, 3 students had to attend the lesson together. I suggest that educational activities cannot be carried out efficiently under these conditions. These thoughts and experiences have influenced me to include factors such as education, green space and healthcare in social infrastructure measures.

1. Urban periphery and social infrastructure

Cities are viewed as places where material and immaterial exchanges occur and various social relationships are formed. As a result, cities are places where innovation occurs, and information and technology are produced. These cities, however, have hierarchical networks and patterns that are structured as core and periphery (Mugnano, 2012). Modern cities are made up of centres that enrich various social, cultural, and economic activities, as well as peripheral areas that depend on these centres. This type of urban inequality is referred to as core and periphery theory (Wellhofer, 1989). Finance, trade, tourism, higher education, and administrative institutions, as well as white-collar, executive, and creative classes, generally live in Central Business Districts. According to Sayın (2022), despite the growth of the service sector in Istanbul, industrial production continues to persist in the city. On the periphery, people with low qualifications who have been pushed out of the city centre by the deindustrialization process, who can find employment in industrial activities, who have not received an adequate education, and who have migrated largely from rural areas, live. As a result of the global migration crisis, immigrants and refugees who left their homes have been added to the urban peripheries in recent years. Due to the concentration of immigrants, the Ministry of the Interior has closed 61 neighbourhoods in Istanbul to refugees. Many of these neighbourhoods are located in districts on the periphery, including Esenler, Esenyurt, and Avcılar.

Until the 21st century, the dominant settlements in the city periphery were formed by the lower classes. As the capital moved towards the city periphery, American type suburbs and gated communities began to appear far from the city centre (Perouse and Danış, 2005; Geniş, 2009; Bilgic, 2016; Kurtulmuş, 2012; Şahin, 2019). Therefore, distance from the urban cores is not always indicative of a marginalised and impoverished district. Accordingly, Mungano (2012) demonstrates a distinction between geographical and social periphery. He claims that the term social periphery “originally referred to the areas/zones of a city with a greater amount of people living in social exclusion, which includes labour market vulnerability, social welfare dependency, lack of household resources, and insufficient community facilities and services” (Mugnano, 2012, p. 175).

There are socially and spatially excluded populations in both developed and developing countries' urban areas. This circumstance, which has evolved into a form of urban inequality, has over time led to urban segregation. While a portion of the city creates safe and sterile residential areas in the city's most popular areas, the remainder of the city attempts to maintain its presence in neighbourhoods where noise, traffic, crime, violence, and lack of education coexist. The second group is referred to in the literature as the urban periphery (Dembski et al, 2017). Urban peripheries have different names in different places. In the United States, they are referred to as ghettos, in Europe as "deprived districts,"(Mungano, 2012) and in Turkey as "gecekondu," which corresponds to "poor and excluded." Peripheral working-class districts are the geographies of poverty, inequality, and marginalisation left behind by the government's magnificent city image. According to Perouse (2011), these places represent Istanbul's "other reality." From this perspective, we can use "left behind geographies" research to assist our understanding of Istanbul's other reality. The term "left behind" often connotes

geographical periphery, "whether economically (i.e., lack of opportunity, jobs, or income), materially (i.e., lack of infrastructure or access to services), or socially (i.e., feeling politically disaffected or culturally marginalised)" (Rodriguez-Pose, 2018). Turkey's rapid urbanisation has resulted in many of the social infrastructure issues. These issues have been addressed, particularly in urban planning studies. In their study on elder people as a form of othering, Çukur and Ergin (2008) demonstrate the exclusion of elder people from public space due to inadequate toilet infrastructure. Külekçi and Tezer (2021) addressed the issue of social infrastructure through the issue of walkability. Finally, Bektaş (2022) revealed that the concentration of population in urban transformation areas weakens urban resilience.

2. Esenler District: A Working-class District on the Periphery of the Metropolis

According to 2022 data, Istanbul is one of the most populated cities in the world, with a population of approximately 16 million. It is the 13th largest city in the world and the largest in Turkey. It is known as the heart of Turkey due to its economic, socio-cultural, and historical features. The city is divided into 39 districts, consisting of 936 neighbourhoods with various social and economic conditions. The Esenler district is located on the European side of Istanbul, approximately 18 km west of the Bosporus (Figure 1). Even though the district is outside of the centre of Istanbul, it is important for transportation because the TEM Highway goes through its northern part.

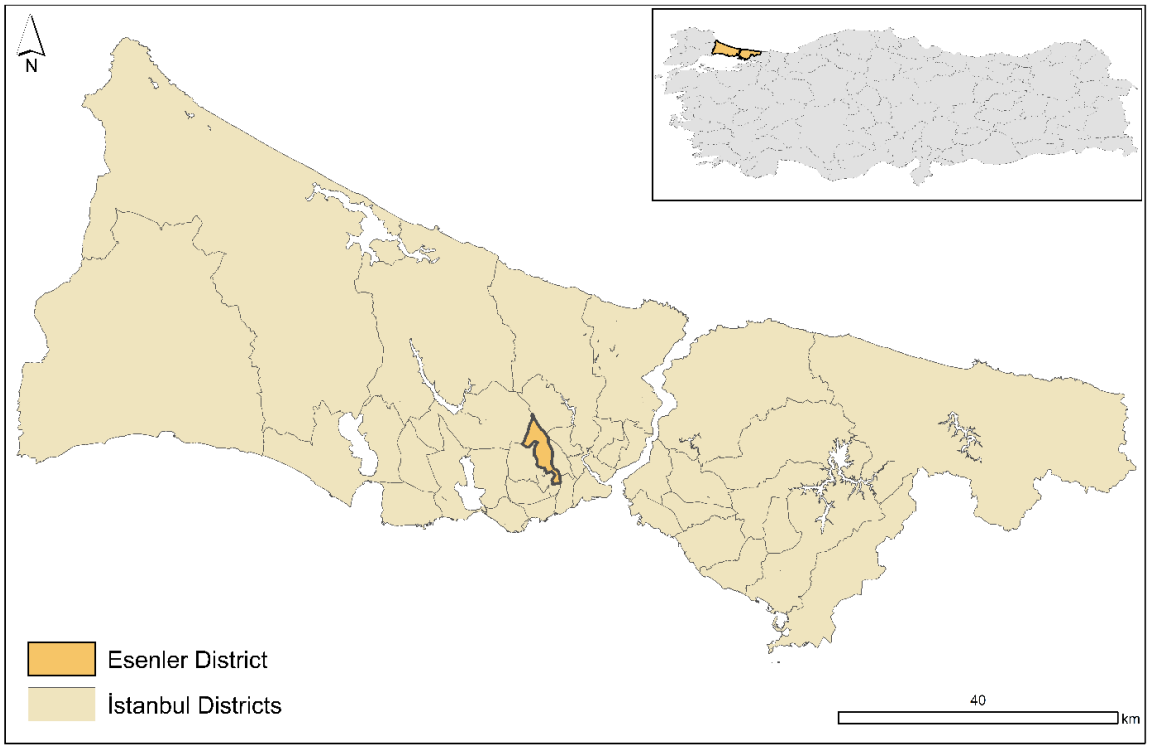


Figure 1. Location map of Esenler District.

Esenler, which covers an area of 19 km²; According to the 2020 Address Based Population Census statistics provided by the Turkish Statistical Institute (TSI), it has a population of 450,344 people. According to this; the number of people per km² is 23.000. In this respect, it has a population density eight times higher than the Istanbul's average (Figure 2).

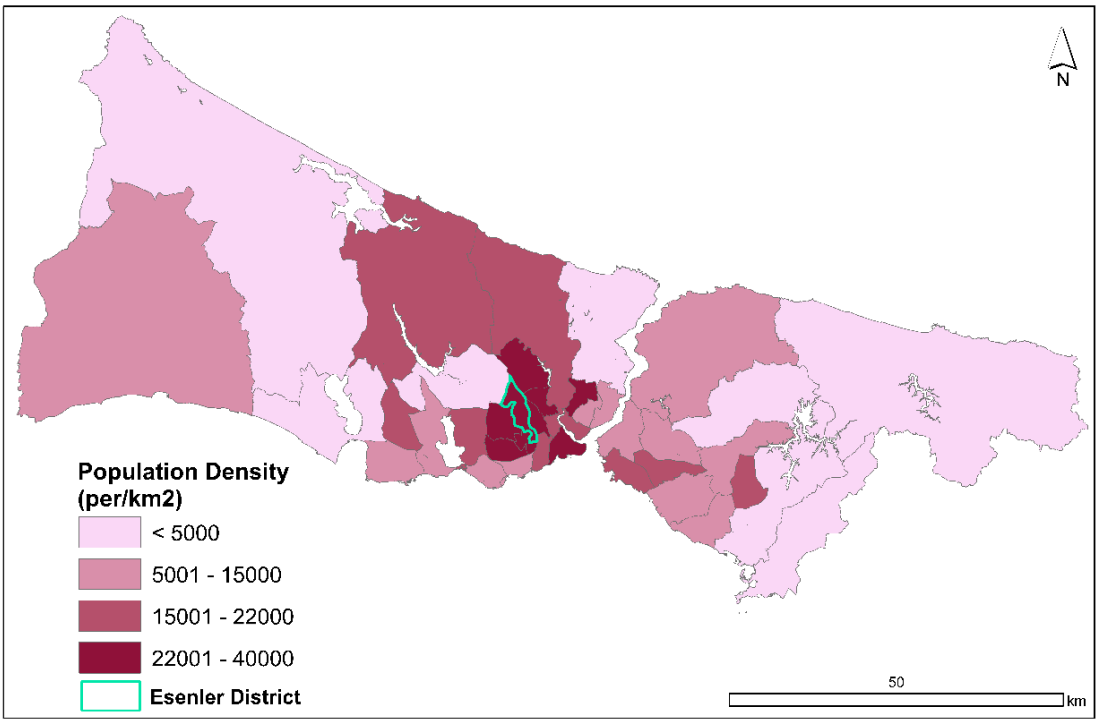


Figure 2. Population density in Istanbul.

One of the reasons for this dense demographic landscape is that the low rental prices of Esenler compared to the central regions of Istanbul are suitable for immigrants from surrounding cities. Only 6% of the people living in Esenler were born in Istanbul. As can be seen in Figure 3, the majority of the residents (%37) in Esenler came from the rural provinces in Central Anatolia, Eastern Anatolia and South-eastern Anatolia, where the income level is quite low.

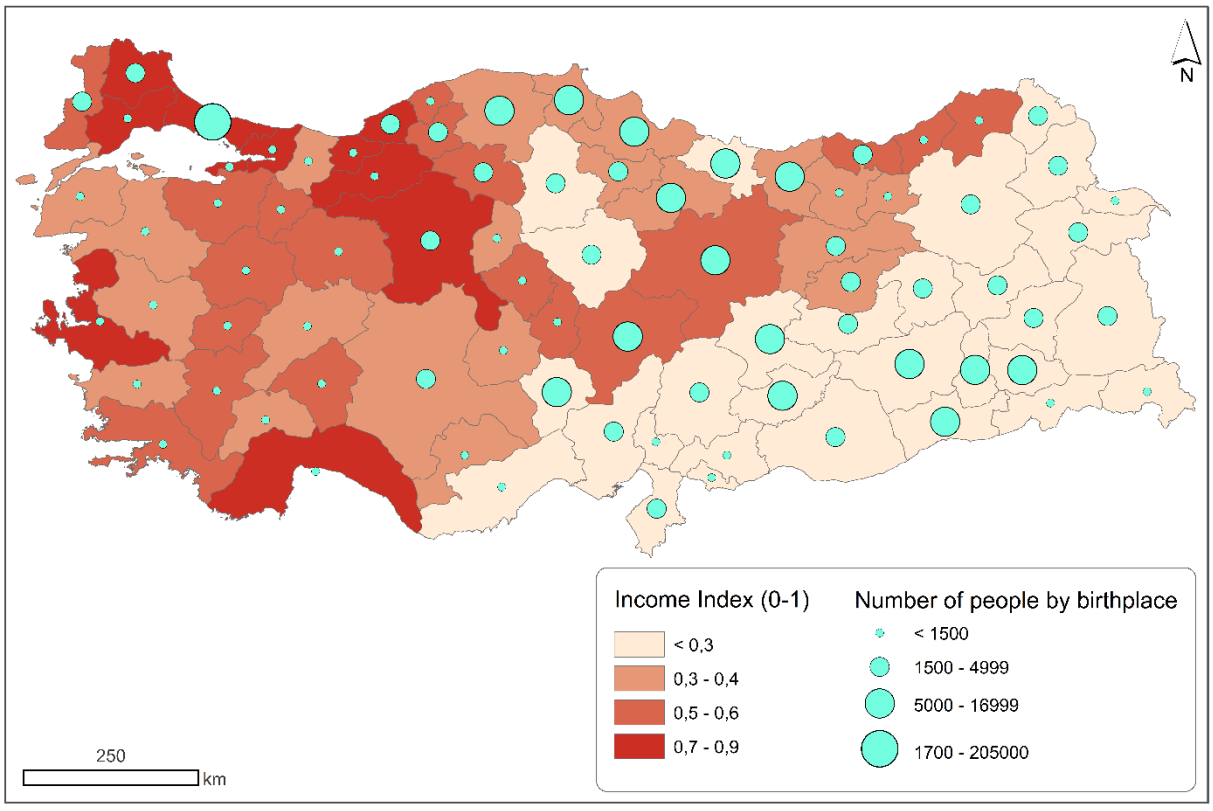


Figure 3. Birthplace of residents in Esenler.

One of the main reasons why immigrants prefer Esenler is the need to commute to work a shorter distance by working in the factories in the industrial areas. There is a close relationship between peripheral districts and industrial establishments. These two relationships have two dimensions. First, firms aiming for high profits set up their factories around areas with high unemployment. Companies hire people in this way because they can get them to work for less money than they would get in a central location. This is the primary reason why large European corporations relocate their production facilities to peripheral regions such as the Middle East, Africa, and Asia. Second, groups migrating from rural areas due to unemployment settle in the periphery of the city's industrial areas. Transportation and low land value are two significant benefits of settling near industrial areas (Figure 4). Therefore, according to Tümertekin (1997), industrial activities play a significant role in the expansion of Istanbul into its suburbs.

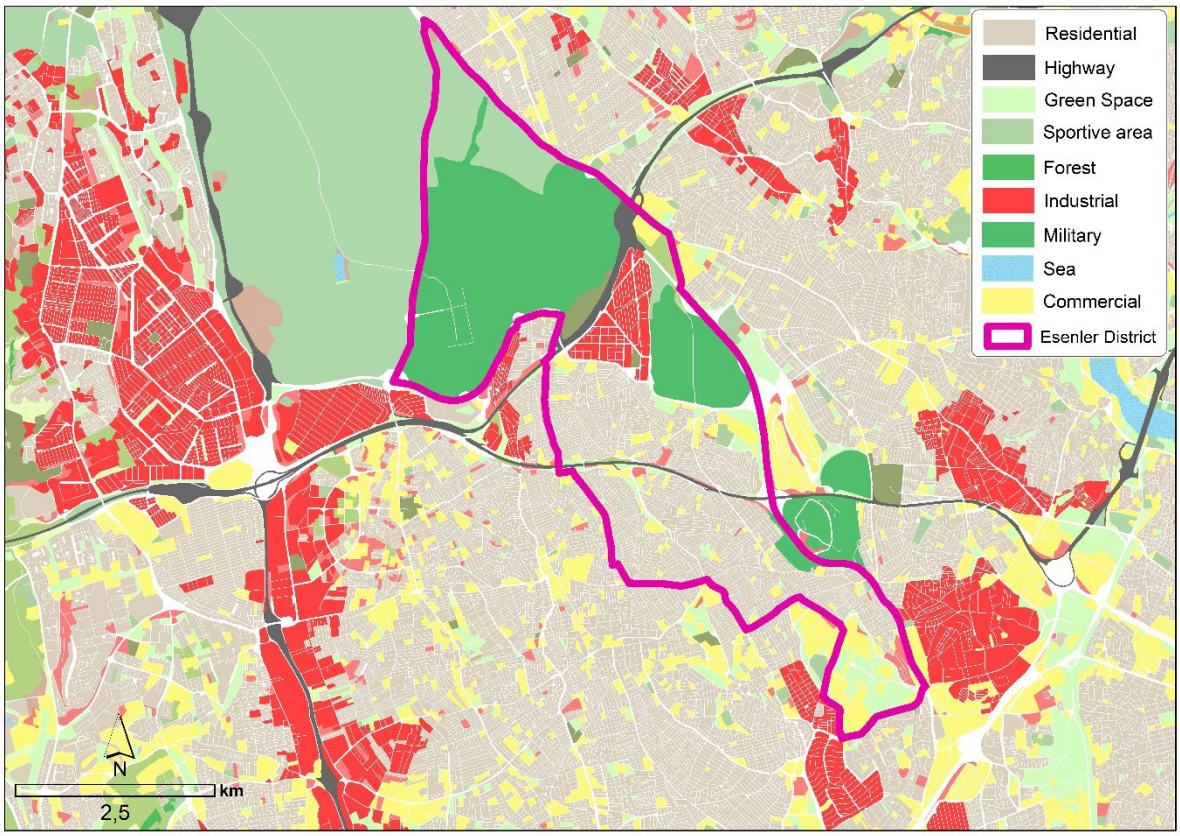


Figure 4. Urban land use map in and around Esenler District.

Industrial activities played a significant role in the urbanisation of Istanbul. Those who migrated from the countryside created a city on the periphery of Istanbul by constructing shantytowns and illegal buildings around industrial areas. In this process, which can be described as a form of urban enclosure, working-class suburbs located around factories. According to Ozden (2008), these settlements, which consist of illegal structures located on the city's periphery, do not fit in with the metropolitan area and pose a threat to the city by culturally establishing their own disconnected "republics."

Esenler, which was a village in Istanbul called Litros until 1970, grew rapidly and reached a population of approximately 350,000 in ten years and became a municipality in 1993. From the 90s to the present, the population of the district has exceeded 400,000 and has turned into a district larger than the population of 37 provinces in Turkey (Figure 5).

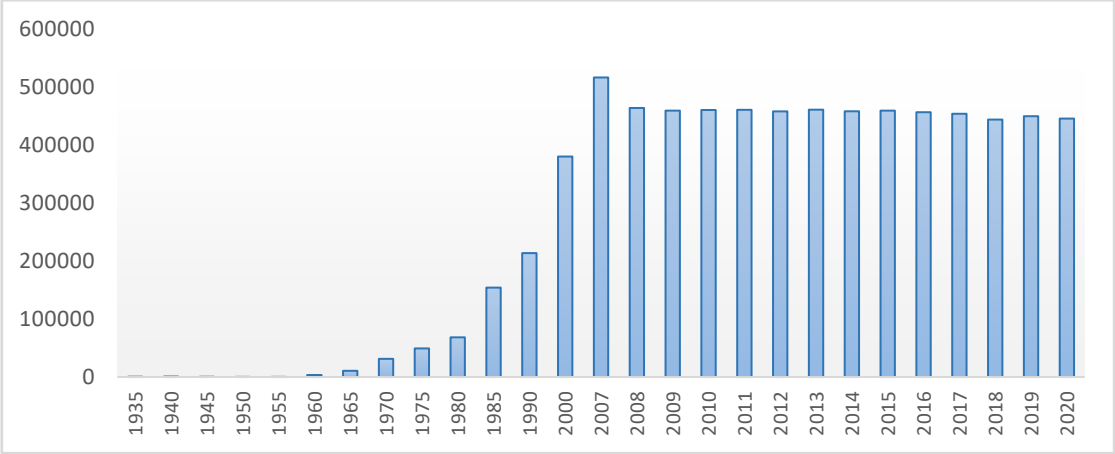


Figure 5. Population of Esenler District (1935-2020).

Due to the district's proximity to the bus terminal and major highways, there is a substantial informal sector in the residential and employment markets that is largely uncontrolled by the government. Although the neighbourhoods are predominantly residential, some apartment basements serve as "konfeksiyon" clothing production workshops where local residents are employed (Photo 1). According to the data of the Istanbul Chamber of Industry, there are 109 production workshops in the district. The interviews Yaman (2016) conducted with the garment workers in Esenler revealed the despair of the working class intertwined with the place:

> *"I have a tumor in my brain. From thinking, stress… They say you can handle it with a laser. But how? I have no insurance; I have nothing insured. Then a lot of drugs. Cost of medicines are yours, hospital treatment is yours. (Buket, 17, High School Leaving - Konfeksiyon Employee, Niğde]" (Yaman, 2012, p. 228).*

These informal textile workshops export fundamental apparel items such as socks, underwear, pants, and slippers. The majority of these businesses perform in the informal economy because they lack a permission. Even without health insurance, the residents of Esenler employed by these small businesses are considered cheap labour. In addition to their economic and social problems these businesses generate noise and environmental pollution in residential areas, making it difficult for healthy neighbourhoods to grow.

Photo 1. A *Konfeksiyon* located in a basement in the Oruçreis neighborhood in Esenler.

In addition, Esenler is one of the densest districts in terms of household size (Figure 6). This means that the household is crowded, as well as sharing more of the household income. Considering that it is a

working-class district, the household size of 3.8 also makes it difficult to distribute the monthly income in a balanced way between food, rent, gas, and education expenses.

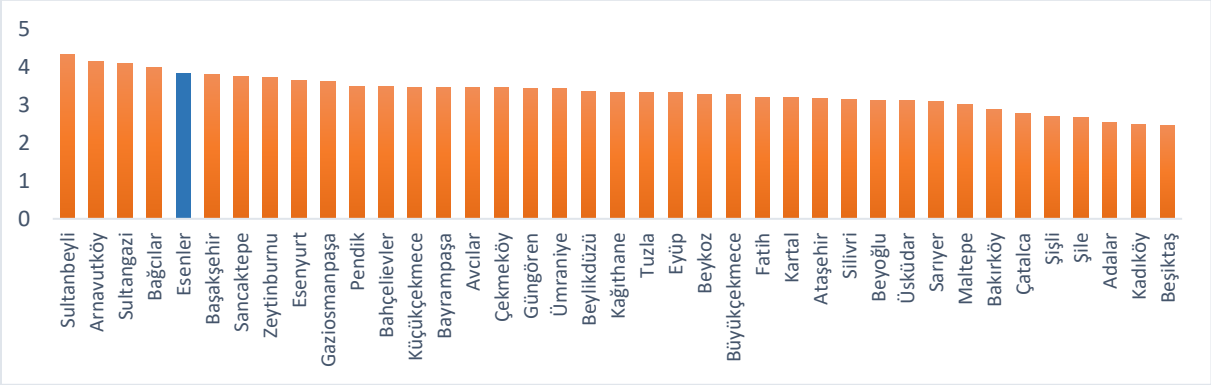


Figure 6. Average household size by districts in Istanbul.

In studies on the district, urban violence by Erman and Eken (2004), Angın (2017), Yulu (2017) and Hardal (2019) and urban transformation, Küçük and Özden (2019) urban transformation and security problems, Acar (2019), issues such as the relationship between neighbourhood and family apartment come to the fore. These studies are closely related to both the class and the densely populated situation of the district.

3. Method and Data

In this quantitative study, the relationship between urban space and social class was examined. The unit of analysis was determined to be working class districts. Four variables were used to collect district-level data: education, health, green space, and energy (Table 1).

Table 1: Variables of data sources

Variables	Data Name	Data Source	Year
Demographic	Share of population	Turkish Statistics Ins.	2022
	Residents' hometown	Turkish Statistics Ins.	2022
	Population density	Turkish Statistics Ins.	2022
	Household size	Turkish Statistics Ins.	2022
Education	University graduates	Turkish Statistics Ins.	2022
	Classroom size	Education Ministry	
	Number of children per kindergarten	Education Ministry	2022
	Average score of high schools	Education Ministry	2022
Health	Number of surgeries	Health Ministry	2022
Recreation	Green space per capita	Urban Atlas	2018
Energy	Gas consumption per capita	Istanbul Metropolitan Municipality	2020
Industry	Industrial Land Use	Urban Atlas	2018

By creating a database of these, thematic maps were produced with the Arcmap 10.8 program. The source of the data was obtained in four stages.

First, the demographic data of the districts was obtained from the Turkish Statistical Institute (TUIK). By making a map of the provinces where the people who live in Esenler District were born, a social pattern was made.

In the second step of the process, data from TSI showing the current graduation rates of the districts were requested in order to define the education level. The number of kindergartens, which is a significant factor in determining the education level, was increased in accordance with the districts, and a ratio was calculated using the total number of people living in the districts. In the end, a new data set was added to this variable by computing the average base score of the high schools located within each district.

The third, the spatial presence of health services in Istanbul, was investigated. Health spaces are basis of urban health, such as healthcare centres. Their locational information was collected from the database of the Ministry of Health.

The fourth variable, the area of urban green areas, was calculated by drawing polygons from the satellite images of Urban Atlas. Natural gas consumption data was collected in winter months by districts from the database of the Statistical Office of Istanbul Metropolitan Municipality. Finally, the distribution of industrial areas in Istanbul were drawn in the map programme from the satellite images of Urban Atlas.

4. Findings

As a result of the data that was collected, four distinct problems have been identified in terms of the social infrastructure in the district of Esenler. These include the level of education and opportunities, the availability of health services, the facilities of urban green space, and the conditions of residential heating.

4.1. Level of education and educational infrastructure in Esenler

Human geographers have produced a great deal of research on the intersection of education and space in recent years. Particularly, the spaces where education occurs and the role education plays in the social transformation of space form the general framework of this study (Holloway and Valentine, 2000). In such matters, a spatial perspective on education has led to explanations about how educational places affect children's everyday experiences and behaviours (Holt, 2007; Daniel and Gustafsson, 2010). Due to the scarcity of recreational areas in densely populated areas of Istanbul, for instance, students are compelled to continue their education in restricted and large sized classrooms.

In addition, by limiting the investment in public schools, the neoliberalization of education pushes families to attend private schools. In public schools, the infrastructure for daily sports activities such as football, basketball, volleyball, and swimming is limited, whereas private schools attract parents with the promise of infrastructure that will reveal the students' sportive, artistic, and creative abilities. In this instance, there are significant differences between public schools' students and those who attend private schools.

In addition to irregular migration and urbanisation, the population of Esenler has a low education profile and cannot attain a sufficient sociocultural level. While only 9% of the population has a university degree, 74% have completed elementary school (Figure 7). It remains below the average of 19% for university graduates in Istanbul.

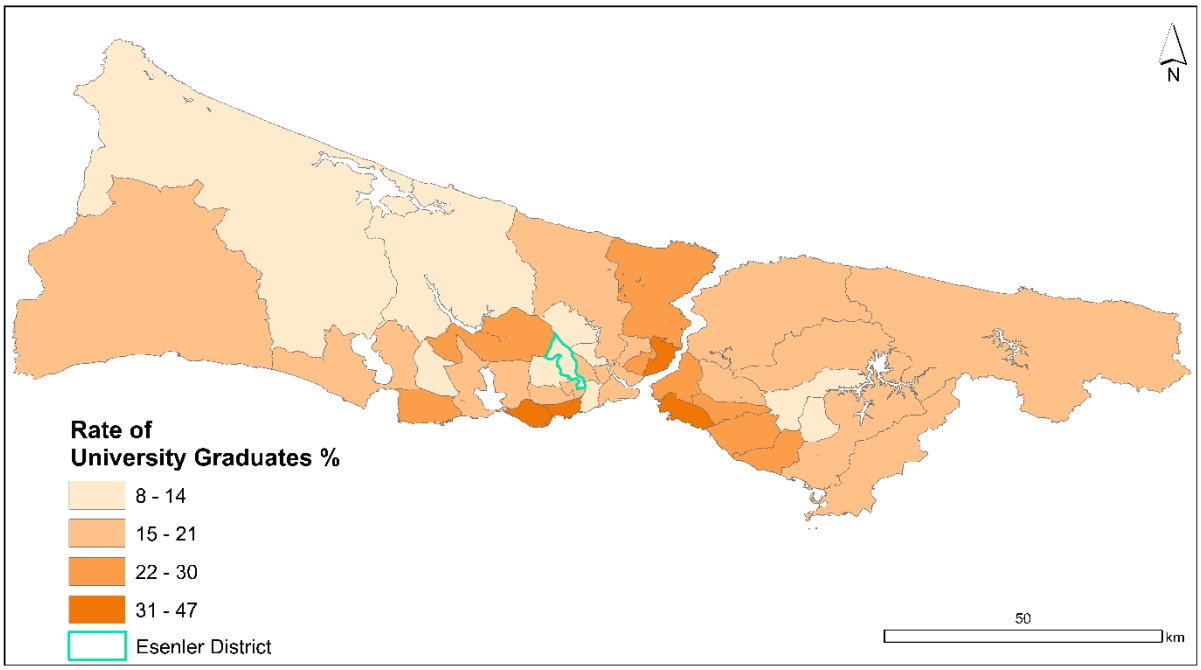


Figure 7. Rate of University degree in Istanbul.

Despite these unfavourable educational characteristics, there are disadvantages to improving the education level of Esenler. The district's primary education infrastructure is inadequate for children, who make up 28% of the population. As an illustration, the average number of students per teacher is 31. (Figure 8).

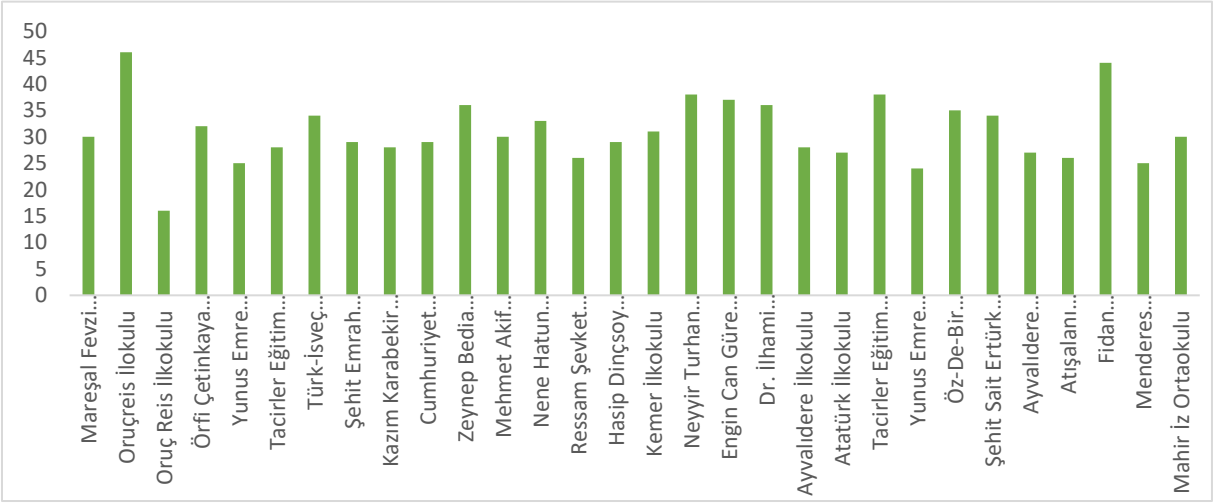


Figure 8. Average classroom size in primary schools in Esenler district.

Both the poor educational attainment of parents and the weakness of classrooms prevent students from gaining access to better education. This disadvantage is also evident in the achievement of the high schools in the pupils' neighbourhoods. It had a negative impact on their performance on the Esenler high school entrance exams. In Esenler, where the high school grade point average is significantly lower than in the central districts. Therefore, families are bound to send their children to these schools (Figure 9).

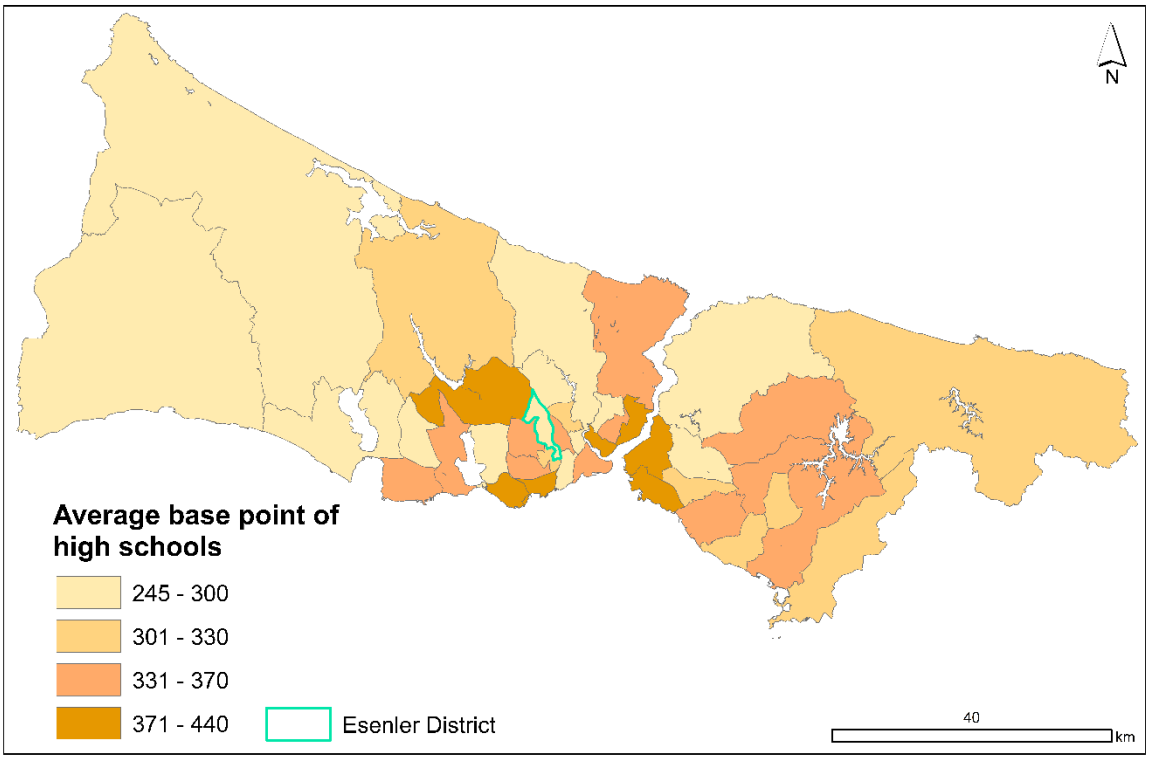


Figure 9. Average base scores of high schools in Istanbul (2020)

In terms of pre-school education for younger ages, the availability of educational services in the district is quite restricted. The fact that there are more than 2,000 children per kindergarten in the district prevents the individual development that early education promotes (Figure 10).

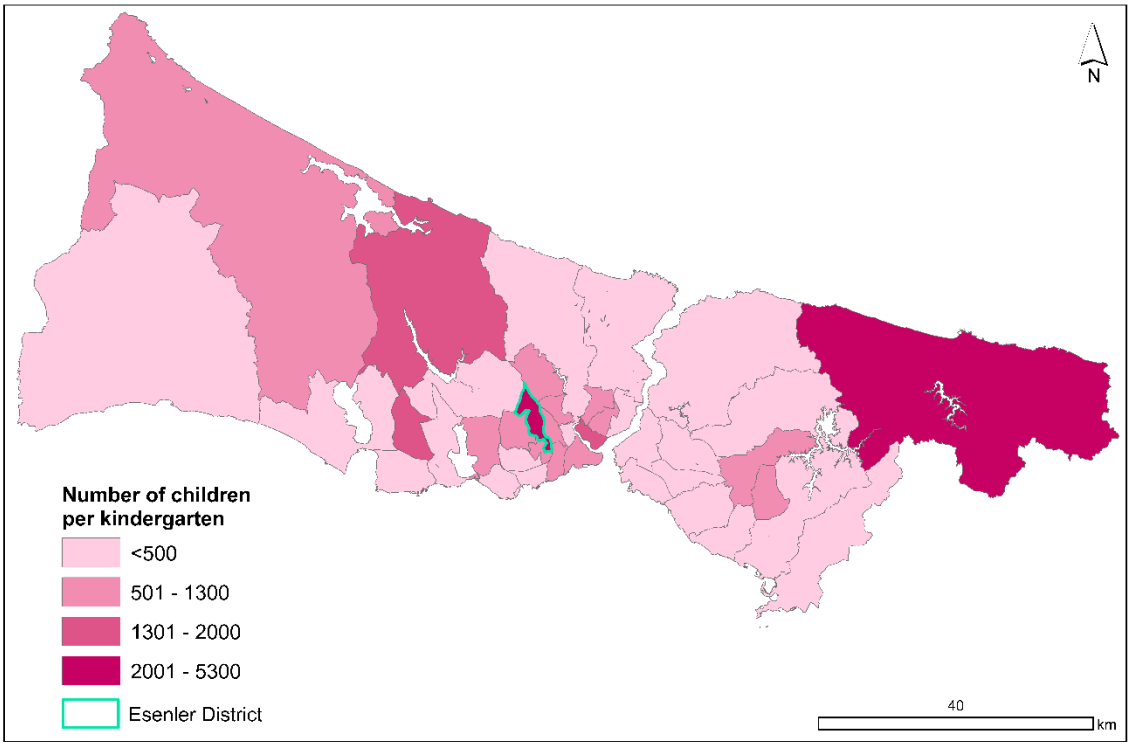


Figure 10. Distribution of the number of children per kindergarten in Istanbul (2022)

4.2. Infrastructure of healthcare services in Esenler

Workers under severe physical conditions had difficulty in finding areas to establish appropriate social distance in factory areas. Since the typical livelihood of Esenler is industrial activities, the number of Covid-19 cases at the beginning in the district was higher than in the central areas of Istanbul due to the working conditions of the factories that prevented social distancing (Figure 11).

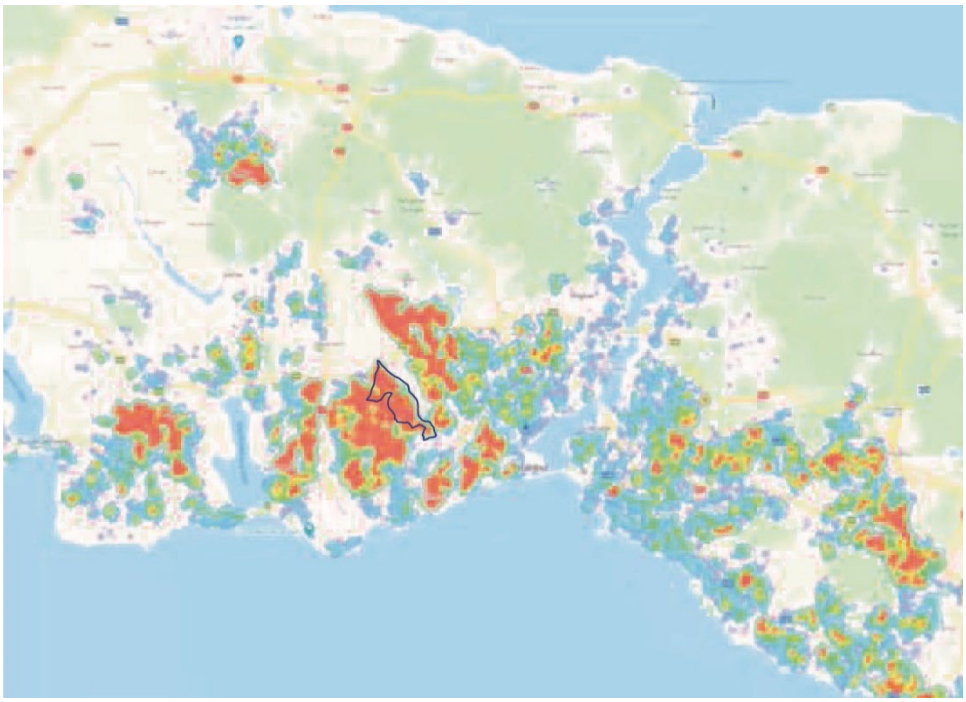
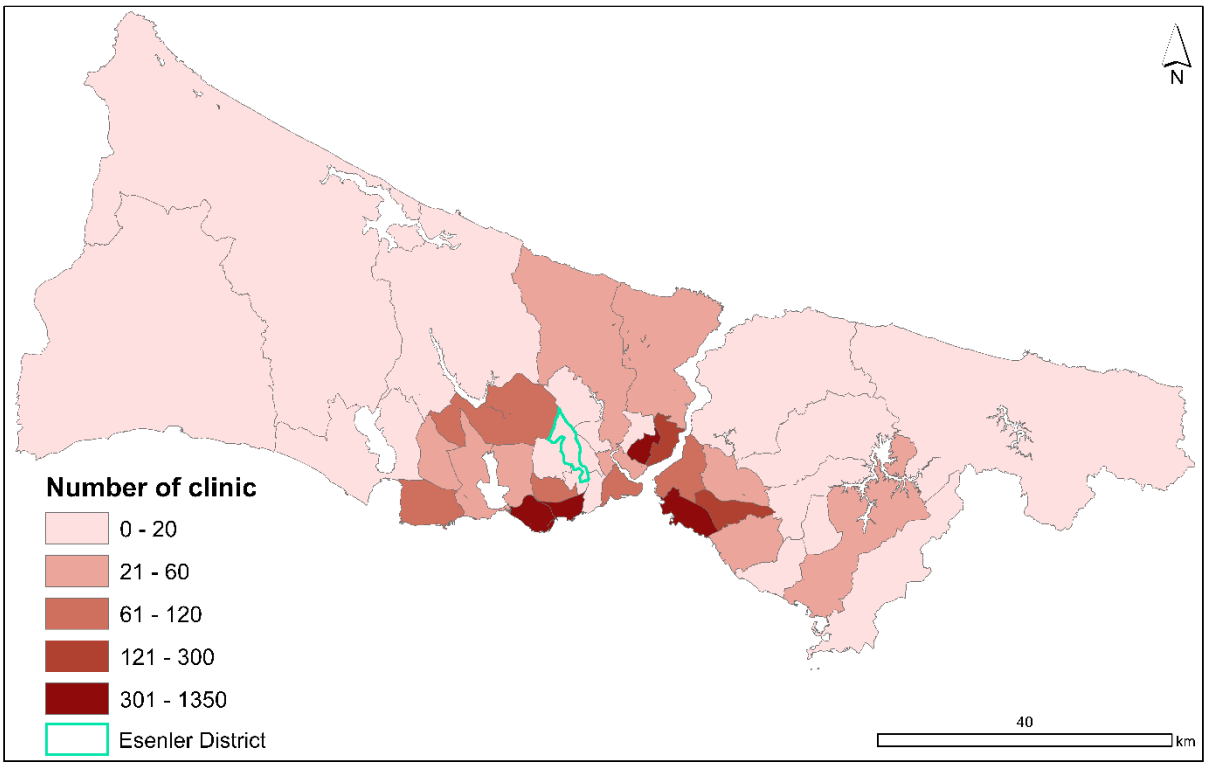


Figure 11. Spatial distribution of Covid-19 cases in Istanbul (April, 2020).

Italy was one of the countries that had the most difficulty in controlling the pandemic. Despite the closure of schools, offices and public places such as cafes, restaurants and museums, the rate of cases has not stopped. Protests started from the working class that the factories should be closed in order to control the virus. After the factories were closed, the rate of increase in cases began to pause. Thus, it was understood that factories were one of the main places that played a role in the spread of the virus. The main reason for this situation is the working conditions in the factories (Bajos et al., 2021).

In addition to working circumstances, urban health services in Esenler lack the capacity to address the needs of the local residents. Despite its demographic composition, access to health services is extremely limited. While districts like Şişli, Kadıköy, and Bakırköy have more over 300 healthcare centers, Esenler only has nine (Figure 12). Although this is because of the fact that private hospitals do not invest in the district because of its low purchasing power, it is also obvious that public health doesn't quite invest in the district's health.



Şekil 12. Distribution of healthcare centers in Istanbul (2022).

4.3. Esenler's green space deprivation

Given that bodily damage is more prevalent in the working class due to hard working conditions than in other upper classes, the lack of physical rehabilitation is a cause for concern. As can be observed in Figure 2, the population of Esenler is quite dense, which results in the frequent settlement that occurs in the district as a direct result of the population density. Based on the urban land use map, there is hardly any space left over in the neighbourhood between the many structures that have been constructed. Because of the concentrated building, the neighbourhood is almost entirely devoid of green space (Figure 13). Again, among all of the districts in Istanbul, Esenler is one of the districts where there is the least amount of green area per capita. It is a crucial situation in terms of urban life that the residents of the district, whose leisure time is limited by the long hour working conditions, cannot find a time for recreation. Likewise, this is one of the places where there is the least amount of green area per capita.

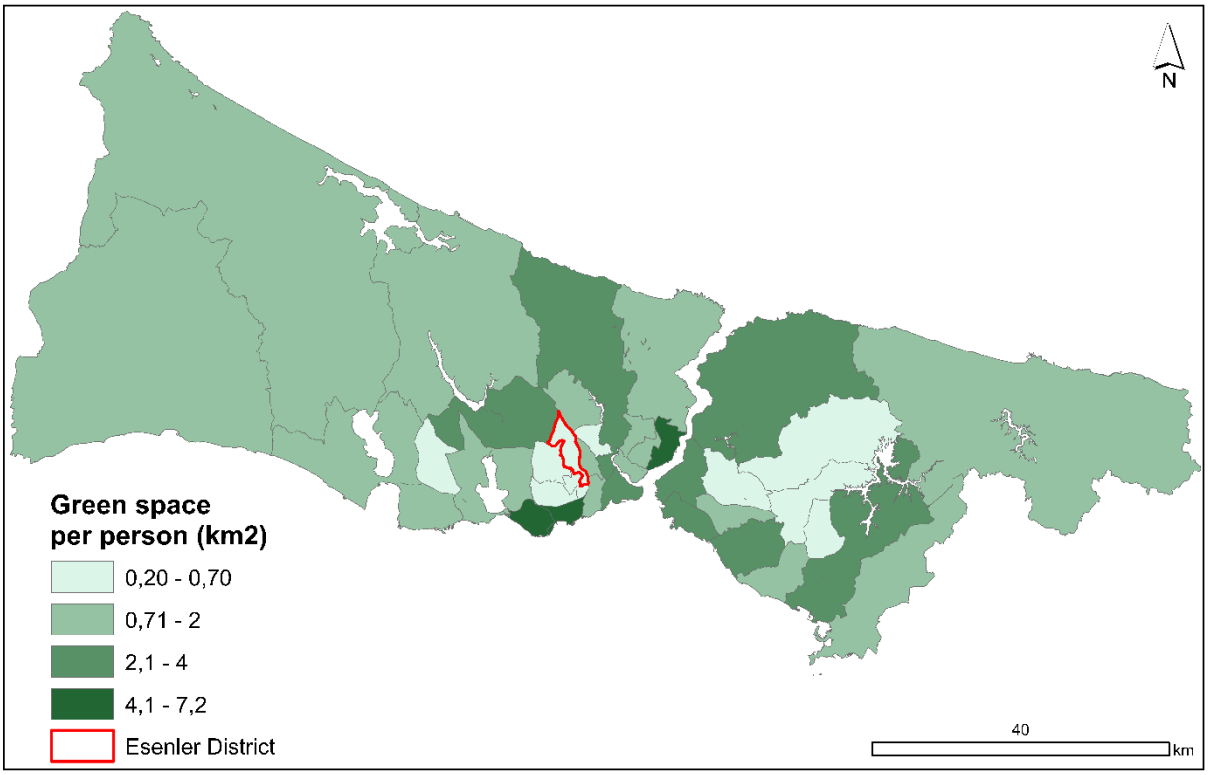


Figure 13. Distribution of green space per capita by districts in Istanbul.

Dogru et al. (2019) conducted a comparative study on the relationship between socioeconomic conditions and children's health status in the districts of Esenler and Bakırköy. Their findings showed that the lack of parks and playgrounds in Esenler had an impact on the mental and biological development of children living in that district.

4.4. Esenler residents cannot afford the high cost of natural gas

Natural gas, which is one of the most fundamental elements of urban life in terms of housing, is making it challenging for those in the lower and middle classes to make it through the impacts of the current economic crisis. In contrast to other districts, the average size of households in Esenler is larger; yet, the district's rate of natural gas consumption is significantly lower than that of white-collar neighbourhoods like Kadıköy, Beşiktaş, and Bakırkoy (Figure 14).

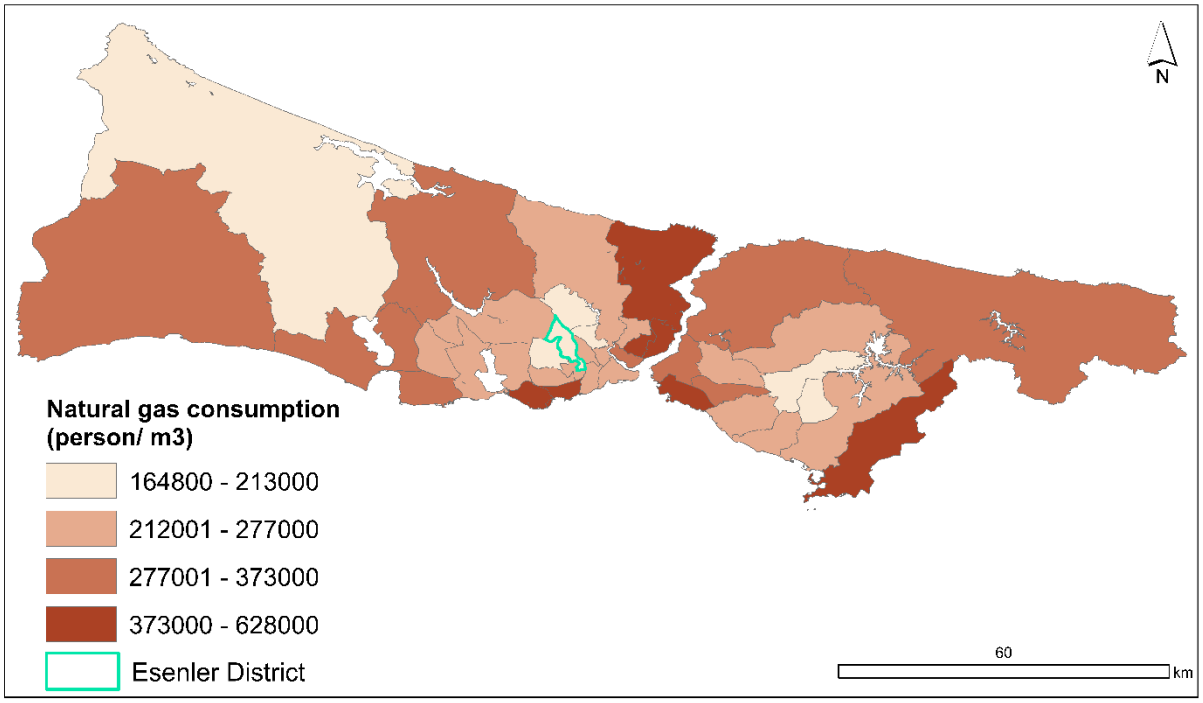


Figure 14. Distribution of natural gas consumption per capita in Istanbul.

In the winter of 2023, the increase in fuel prices due to both inflation and the Ukrainian-Russian war may be one of the most challenging districts in Istanbul.

CONCLUSION

Esenler district, taken as an example in this context, clearly demonstrates the existence of urban inequalities in terms of education, health, leisure, and energy use. Our study provides a combined theory and empiricism-based approach to the geographical analysis of working-class district in the urban periphery. Understanding the poverty in the city requires taking into account the capital groups of the districts in the urban periphery and their urban transformation strategies. Based on this context, as a result of the study, it has been revealed that Esenler district lacks the social infrastructure that can be divided into four different groups.

To begin, secondary and primary education in Turkey have become treated more like a commodity over the course of the past years. The student turned into a client, and the instructor turned the lessons into a commodity. The market that was created as a result of this provided ideal opportunities for high-income groups of the population while simultaneously becoming a measure of inequality for segments of the working-class population. It has been demonstrated that significant inequalities persist at the periphery as a consequence of the following factors: the education level of the households in the Esenler district is quite low; the classrooms in educational institutions are crowded; the success scores of the high schools that students have to choose are insufficient; and the pre-school education places are unable to offer a suitable area for the children in the district. Due to the fact that university graduates in Turkey command higher salaries in their careers than primary and secondary school graduates, the lack of educational opportunities limits the country's ability to achieve vertical social mobility.

The working-class segments are unable to obtain the private services they require for their health care because of their low income. Correspondingly, the state is unable to offer districts like Esenler

adequate healthcare services. There are few options for an urban peripheral community where heavy industrial conditions put their health in danger to overcome their physical and mental disadvantages.

Like the problems with education and health infrastructure, unplanned and illegal housing in Esenler has taken away the open public spaces where people can breathe. In this way, Yüksel's (2017) study about how people interact in public space in Esenler recommends improving public spaces, which are especially important for older people. Along with this, our study showed that Esenler has a very high need for green spaces.

Previous social infrastructure studies and the findings of this study have some similarities. According to Çukur and Ergin (2008), the elderly was excluded from the public space and restricted to the private space due to the inadequacy of toilets in the Konak district of izmir. In terms of being excluded from public space and condemned to private space, the public space in Esenler district is very limited, with neither the young nor the elderly able to participate. In this respect, the inadequacy of urban parks indicates social exclusion. The results of the study, in which Külekçi and Tezer (2021) examined the walkability in the streets of Bakırköy and Bahçelievler districts of Istanbul, also show similarities in this context. Despite being adjacent, the walkability rate in Bakrköy, one of these districts with opposing characteristics, is significantly higher than that of Bahçelievler. The high population density of Bahçelievler as a result of both internal migration and refugee influx is similar to the issues faced by the Esenler district. At this stage, a significant link can be established between walkability and lack of green space in Esenler.

In many studies on the state of the urban periphery, it is seen that a metropolitan change is taking place. These changes are political tension and deindustrialization (Savini, 2014), the spread of smart urbanization (De Falco et al, 2019), green space accessibility (Fan et al, 2017) and sustainable development (Salem et al, 2020). These developments, which can be considered positive for the urban periphery, have not yet been experienced in the periphery of Istanbul. In urban periphery districts such as Esenler, qualified urban life elements such as education, health, green space and energy use are insufficient compared to central districts. Similarly, we see this result in the report titled Socio-economic Development Ranking of Districts prepared by the Ministry of Industry in 2022 on the socio-economic development of districts in Turkey. According to the research's index score, Esenler ranks 90th with a score of 1,354, while the scores of Istanbul neighbourhoods such as Şişli, Beşiktaş, and Kadıköy range between 5 and 6. Therefore, urban governments and national development need to reduce the gap between central and peripheral districts in Istanbul by developing strengthening policies regarding the peripheries.

Compliance with the Ethical Standard

Conflict of Interest: *The authors declare that there is no conflict of interest.*

Ethics Committee Permission: *Ethics committee approval is not required for this study*

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