RENTAL HOUSING ACCESSIBILITY IN IZMIR, TURKEY: AN ANALYTICAL ANALYSIS BETWEEN 2019 AND 2023

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Abstract

Factors like migration lead to over-concentration of the population in urban areas which fosters housing prices and leads to harder budget management for low- and middle-income groups to meet their shelter needs. In cities around the world affordable rental housing is a policy tool developed for low- and middle-income groups to allocate 30% of their budget to rent and continue their lives without reducing their nutritional and social needs. However, since the global neoliberal housing policy with high inflation rates and economic crises, access to affordable rental houses is getting harder, especially in cities from Türkiye. In this regard, this paper analytically investigates the housing affordability spatially in the city of İzmir from 2019 to 2023 yearly for 13 districts (metropolitan area) and 490 neighborhoods. The results show that low-income groups (I. %20 income group) in the İzmir metropolitan area cannot access affordable rental housing. II. %20 income group can access only 24 of 490 neighborhoods to affordable rental housing and for III. %20 income group it is 57. The number of neighborhoods with affordable rental housing declines from 2019 to 2023 for all %20 income groups.

Keywords: affordable rental housing; housing policy; urban planning; low-middle income groups; İzmir.

1. INTRODUCTION

The need for shelter is increasing worldwide due to economic, class, social, and spatial dynamics through rental housing or lease agreements between the owner and the tenant. The continuous restructuring of cities according to economic, social, and spatial dynamics transforms the spatial needs of individuals and social structures using the city and reshaping their consumption preferences (Peppercorn and Taffin 2013). The basic solution to the need for shelter in cities is through housing acquisition, but as an alternative to housing acquisition, rental housing, with its "flexible" structures in terms of social, economic, and spatial aspects, plays a critical role in meeting the housing and shelter demands of individuals who do not or cannot make sufficient savings due to the increasing costs of owning a home in cities and the difficulties in affordability of the housing finances offered. As rental housing is increasingly seen as a part of the solution to the housing need due to global market dynamics such as income inequality and household incomes not being able to afford housing, it has also become important in discussions such as spatially-based changes in urban social structures such as urban segregation in recent years (Hulse and Yates 2017; Crook and Kemp 2014; Scanlon 2011; Kemp and Kofner 2010; Scanlon and Whitehead

2004). This study aims to spatially analyze access to affordable rental housing, which has deepened in metropolitan areas due to neoliberal policies, through the private rental housing market in Izmir, Turkey's third-largest metropolitan city. In this article, rental housing affordability for low and middle-income households in the private rental housing market in the Izmir metropolitan area is analyzed at the neighborhood scale.

In Turkey, which is among the developing economies and has relatively low capital accumulation, housing supply is mostly provided by the private sector. As revealed by Uğurlar and Özelçi Eceral (2022), 90% of housing production is carried out by the private sector. The private sector consists of individual contracting, cooperatives, and build-and-sell housing production companies. Housing production is also carried out by the public sector in Turkey, albeit at a very low rate. In particular, housing produced by the Mass Housing Administration (TOKİ) and municipal subsidiary companies contribute to Turkey's housing stock. Housing production, especially by TOKİ in the 1980s for low-income people, has been restructured over time to include the production of luxury housing (Tekeli 1996; Türel 1996; Özdemir Sarı and Khurami 2023).

In Turkey, the rental housing stock is provided through the rental of all private housing produced by the private and public sectors by their owners. Within the rental housing system of European countries, social rental housing (public) and private rental housing (private) are produced to meet the housing needs of people who cannot afford housing. In Turkey, unlike in European countries, there is no production of rental social housing by the public to meet the housing needs of people who cannot afford housing and disadvantaged groups (Özdemir Sarı and Khurami 2023). In Turkey, the supply of social rental housing is only provided as public housing (lodging) for civil servants, and the percentage of lodgings in the total housing stock is very small. In addition, the privatization of lodgings gained legal status with the "Amendment to the Regulation on the Sale of Public Houses" published in 2011 (Özdemir Sarı and Khurami 2023). Such practices are related to the reduction of the regulatory power of the public in the housing and rental housing market mechanisms imposed by neoliberal housing policies.

There is no publicly produced social rental housing in Turkey, and unlike developed countries, there is no institutionalized rental housing market operated by private equity companies, hedge funds, or real estate investment trusts. Unlike corporate companies, the rental housing market in Turkey consists of investments by individual/small households renting houses (Özdemir Sarı, 2019). As in other developing countries with low capital accumulation, dynamics such as industrialization and regional migration in cities have caused the supply of housing and rental housing to increase in cities. The need for housing resulting from the population growth in Turkey has been left to individuals and groups through shanty houses built in treasury areas and areas owned by individuals since the public sector does not produce planned social

housing areas (social housing and social rental housing produced by the public in developed countries). For this reason, shanty houses have an important place in both housing supply and rental housing supply.

As stated before, neoliberal housing policies treat housing as a commodity and a means of exchange and leave the production of housing aimed at ensuring people's right to shelter to the private sector. The basic argument here is that the market can offer more effective solutions due to the externalities it will create through competition mechanisms compared to the public sector and that it accepts this and prioritizes minimizing the regulatory role of the public in the housing sector. However, it has been stated in studies from different countries that leaving housing and rental housing to market mechanisms triggers housing crises in cities (Rolnik 2013; Craig and Porter 2006). The decrease and/or absence of the public role in the provision of housing and rental housing in urban areas leads to problems such as social inequality in affordable housing purchases and rental housing, migration due to high rents, and the reduction of the budget allocated to nutrition and social needs due to enduring high rents (Friedman and Rosen 2020; Wetzstein 2017; Taruvinga and Mooya 2018). As a result of neoliberal housing and rental housing policies, the effects of the private rental housing market have been frequently emphasized in the literature (Friedman and Rosen 2020; Taruvinga and Mooya 2018), as decreasing housing affordability for low-income earners (Friedman and Rosen 2020) and decreasing rental housing affordability (Subaşı and Baycan, 2022; Subaşı and Sence Türk, 2024).

Neoliberal policies cause income inequality and thus housing acquisition and rental housing affordability become more difficult. This situation has led to the terms "affordable housing" or "housing affordability" coming to the forefront in the last two decades instead of the concept of "right to housing/need for housing" (Engels, 2020), which is at the center of the discussion on providing adequate housing for all. The transition between the concept sets is triggered by market-oriented reforms in the housing sector. In addition to housing acquisition, dynamics such as "homelessness", "housing costs", "credit access difficulties" and "mortgage defaults" have also brought the concept of "affordable rental housing" to the forefront and made it possible to conduct affordable rental housing analyses. Affordable rental housing is defined as less than or equal to 30% of gross income.

The rental housing market in Izmir, as in the rest of Turkey, is dominated by individual homeowners. On the other hand, as a reflection of neoliberal urbanization processes, mega projects and luxury housing options aimed at the middle and upper classes are widespread in the metropolitan center of Izmir. Especially after 2002, due to the encouragement of governments, low interest rates, and changing legal regulations, the housing and construction sector has developed rapidly in Izmir, as in all major cities, and has led to the formation of new housing and rental housing stocks aimed at high-middle-upper income groups. It is stated that a significant part of the housing acquisition trend that has come to the fore in

Turkey in recent years has been realized in consumption forms such as wealth accumulation and investment, beyond the need for shelter (first-time housing acquisition) (Alp and Seven, 2019).

The dynamics mentioned and the fact that the public is not involved in the rental housing supply cause the rental housing market of Izmir to be shaped by supply and demand in a free market environment, and the prevalence of neoliberal urbanization practices in the metropolitan center of Izmir, parallel to the increase in housing prices, which is the reason for this, also causes an increase in rents in the rental housing market. Studies on the affordability of rental housing are important because rental prices in cities especially in metropolitan centers have become open to speculation and make it difficult for middle-low income and vulnerable groups to access affordable rental housing. In this context, this study analyzes the affordability of rental housing by middle and low-income groups at the neighborhood scale in the districts located in the metropolitan center of Izmir on an annual basis in the 2019-2023 period for 490 neighborhoods in 13 districts.

The article consists of five main sections. The second section analyzes the concept of housing affordability and the literature on the affordability of rental housing. The third section analyzes rental housing policies in Turkey. The fourth section analyzes the affordability of rental housing in Izmir. The fifth section is devoted to general evaluation and conclusion.

2. RENTAL HOUSING AFFORDABILITY

Affordable rental housing as a policy expresses the right to housing, previously defined as a right, to enable and facilitate the access of disadvantaged and homeless groups to housing under the influence of liberal policies and to produce solutions within market mechanisms. Therefore, it is not a set of concepts agreed upon and has been explained using different definitions. In the most general terms, affordable housing is a social policy developed by the public to meet the housing needs of households whose income is not sufficient to access affordable housing in the market without assistance.

Ndubueze (2009) simply defines housing affordability as the ability to buy a house. According to Maclennan and Williams (1990), affordable housing is the ability of households to own a certain house in return for a "reasonable" percentage of their income that they allocate to installments or rent. Gan and Hill (2019) define affordable housing as the ratio of the median housing price to the median income. When housing prices in a settlement are ranked from smallest to largest, the middle value is compared to the middle-income value when incomes in the settlement are ranked from smallest to largest, the ratio obtained expresses the accessibility to the price of affordable housing in the relevant settlement. On the other hand, studies that address the budget allocated to housing within the standard of living as a whole conceptualize affordable housing through the realization of non-housing expenditures at acceptable

standards. In this context, Hancock (1993) accepts housing options that consumers can rent without reducing their living standards, in other words, where they can maintain their well-being with the remaining part of their budget for non-housing consumption expenditures after paying the rent, as affordable housing. Yates and Gabriel (2006) define affordable housing as housing that is suitable for the needs of low- to middle-income households and priced in a way that low- and middle-income people can meet other basic living costs. The relationship between housing needs and minimum income for non-housing consumption is discussed by Bramley (1994), and the difficulties encountered in balancing housing costs and non-housing expenditures within household income are discussed by Stone (2006).

Belsky et al. (2005) define housing as affordable if it is less than or equal to 30% of gross income. In addition to household income, dimensions such as who or which social structures the housing affordability is for, the affordability of the housing according to the standards it contains (needs and preferences), the affordability period, the housing stock, and the current housing market are the dynamics that determine the affordability of housing as a whole. The relationship between the income remaining after housing expenses and the poverty line is important. Therefore, how housing affordability is measured is also critical. The most widely used measure of affordability in the literature is the ratio of housing costs to household income (Baker et al. 2015; Haffner and Heylen 2011) and the comparison of the income remaining for households after housing expenses with the poverty line (Thalmann 2003; Hancock 1993). According to the ratio approach, if households spend a maximum of 30% of their monthly income (30% is the threshold rate) for housing, the housing they use is considered affordable (Litman 2013; Keleş 2020; Herbert et al. 2018). While the comparison of the income remaining to households after housing expenses with the poverty line is a measure of affordable housing that is preferred in developed countries and requires more detail and data, the ratio approach is used in developing countries because it can determine housing affordability by summing up housing quality, non-housing consumption, household preferences, and housing options in the market (Li 2015). Since both approaches are reductions, they have advantages and disadvantages as stated.

3. CONTEXT AND CHANGE OF HOUSING POLICIES AS A POLICY SET IN TURKEY

Housing markets in Turkey are dominated by the private sector and consist of market-owned housing and private rental housing. The homeownership rate in the housing market in Turkey has been higher than the rental rate. According to the results of the 2021 Building and Housing Qualifications Survey published by the Turkish Statistical Institute, approximately 15.3 million households own homes while approximately 7 million households are renters (https://nip.tuik.gov.tr/?value=KonutIstatistikleri). This situation is related to the promotion of home ownership in housing policy in Turkey and the domination of the economy by

growth policies through the construction sector in the post-2002 period. The role of meeting the housing needs of poor and low-income households adopted in the 1961 Constitution was undertaken by the public, but this role was abandoned as a reflection of the neoliberal transformation in housing policies after January 24, 1980. As previously stated, with the influence of neoliberal policies, the only type of housing produced by the public in Turkey, namely social rental housing, which provided low-cost rental housing for civil servants, began to be privatized (Uğurlar 2013; Coşgun et al. 2011).

In the post-1980 period, the public supported the production of mass housing through mass housing laws, mass housing funds, and the Mass Housing Administration (TOKİ) and mostly created a housing supply for sale (Koca 2015). Since the 2000s, some legal regulations have come into force under the influence of neoliberal policies. These legal regulations directly affect the rental housing market. With these regulations, on the one hand, mass housing production is supported through TOKİ and private companies, and on the other hand, urban renewal projects have begun to be developed in the city, especially in shantytowns (Koca 2015). Thus, both urban peripheries and city centers have become the focus of capital groups due to their potential to increase value (Özkan and Türk 2016; Koca 2015). While large housing projects, sites, and urban transformation projects have become widespread, especially in large cities, especially in Izmir, all of these have led to the formation of a rental-sale housing stock for the upper-income group (Penpecioğlu, 2013). Other legal regulations, respectively, are the Turkish Code of Obligations No. 6098, published in 2011 but postponed to July 1, 2020, and accepted to enter into force, regulated rental housing and an approach protecting tenant rights was adopted within the scope of the Turkish Code of Obligations (Kılınç, 2020).

The most important regulation in favor of tenants within the scope of the law is the restriction that rent increases, when determined according to lease agreements, do not exceed the rate of change in the consumer price index (CPI) according to the 12-month averages of the previous rental year. Another regulation that determines rent increases in its historical context is the introduction of a 25% upper limit on rent increases in rental agreements between 08/06/2022-1/7/2023 with the temporary law dated 8 June 2022 in the economic crisis and inflationary environment that Turkey entered after 2020 (Demir, 2024). This situation reveals the conceptual change of affordable housing and the importance of analyzing the affordability of rental housing in urban areas in policies developed for affordable housing in Turkey's practice. In the next section, the study area, data, and methodology used in the analyses are presented.

4. STUDY AREA, DATA AND METHOD

The study area focuses on the city of Izmir, Turkey, which encompasses 13 districts in the metropolitan core of the city. Seven of these districts are located around the Gulf of Izmir (Çiğli, Karşıyaka, Bayraklı,

Konak, Balçova, Narlıdere, Güzelbahçe, Urla), while five are inland and have no coastline (Bornova, Karabağlar, Buca, Gaziemir and Menemen). Izmir has a linear urban structure along the Mediterranean coastline, and the surrounding mountains and gulf to the north and south have significant physical effects on the layout of the city (Figure 1).

FIGURE 1 - LOCATION OF THE STUDY AREA AND EXAMINED DISTRICTS

Izmir has historically been a port city, and its economy and growth are closely linked to trade. Following the establishment of the Republic of Turkey and the country's westward turn, Izmir has become one of the most modern cities on the Mediterranean coast of Turkey, offering tourist attractions, major industries, and significant residential and commercial investments. The port, central business district, historical city center, and ancient city of Smyrna are located in the geometric center of the city. In 2023, the city's population reached 4.47 million, with more than 3 million residing in the study area (TURKSTAT, 2024). Izmir's development configuration is based on four main axes. These axes are the northern axis, which includes residential areas, heavy industrial zones, agricultural lands, and protected natural reserves; the eastern axis, which includes a large industrial zone, universities, and residential areas; the southern axis, which includes an international airport, a free industrial zone, warehouses, and both commercial and residential areas; It is the western axis that includes tourism, residential and agricultural regions. Especially after the COVID-19 pandemic, there has been a population movement from the districts located on the periphery of the metropolitan center to those offering low-density built environments due to their summer resort status, both from the Izmir metropolitan center and other cities along with metropolitan cities such as Istanbul and Ankara, and the rental housing prices offered in the neighborhoods of these districts have increased significantly after the pandemic.

In the scope of the study, the data on the Distribution of Annual Household Disposable Income (Average, TL) between 2019 and 2023 according to 20% Groups published by TURKSTATwithin the scope of Income Distribution and Living Conditions Statistics was used as household income data. When households are divided into 5 groups from smallest to largest according to their disposable income; The first 20% group defines the group with the lowest income, and the last 20% group defines the group with the highest income. In determining affordable rental housing values, average rental values published by ENDEKSA on a monthly and neighborhood scale (13 districts, 490 neighborhoods) were used. Within the scope of the study, data for neighborhoods was compiled and analyzed by ENDEKSA for 13 districts between January 2019 and December 2024. Minimum wage values were obtained from the Ministry of Labor and Social Security website, and housing unit cost values were obtained from the Central Bank Housing Price Index statistics.

TABLE 1 – DISTRIBUTION OF MONTHLY IZMIR HOUSEHOLD DISPOSABLE INCOME BY YEAR (AVERAGE, TL)

	2019	2020	2021	2022	2023
1. %20 percent group (First 20%)	1.877,2	2.035,5	2.378,4	2.821,3	4.702,3
2. %20 percent group (Second 20%)	3.184,3	3.723,1	4.321,8	4.874,5	8.084,8
3. %20 percent group (Third 20%)	4.480,3	5.254,6	5.969,3	6.979,0	11.890,8
4. %20 percent group (Fourth 20%)	6.232,2	7.138,8	8.136,0	9.698,3	16.909,4
5. %20 percent group (Last 20%)	11.866,3	13.540,0	16.432,7	20.865,3	38.989,5

Source: TURKSTAT (2024)

In this article, affordable rental housing analyses were conducted for 490 neighborhoods located in 13 districts of Izmir using the ratio approach by following the procedure in Subaşı and Sence Türk (2024). In the ratio approach, as stated in the literature review, the monthly rental expenditure/household income ratio was accepted as a maximum of 30% (Litman 2013; Keleş 2020; Herbert et al. 2018; Isalou et al. 2015; KPMG 2010; Oxley 2004; Ho and Chiu 2002; Arnold and Skaburskis 1989). Rental housing in neighborhoods below 30% was accepted as affordable and rental housing in neighborhoods above 30% was accepted as unaffordable. The monthly household disposable income distribution ratio for five different 20% income groups is given in Table 2. The data published annually by TURKSTAT was divided by 12 to be converted to monthly data. Affordable rental housing values on a neighborhood basis were obtained using a ratio approach and then spatialized in a GIS environment.

5. RENTAL HOUSING AFFORDABILITY IN THE İZMİR METROPOLITAN AREA

Within the study's scope, affordable rental housing was analyzed on a neighborhood basis in 13 districts in the Izmir metropolitan area. Before focusing on the study area, it is important to compare housing unit prices and average rental values per m2 with the minimum wage for Izmir in general (30 districts), as this can provide a general framework for low-income groups to access affordable housing and rental housing.

When the monthly minimum wage values in Izmir (30 districts) and the changing course of housing unit prices per m^2 published by the Central Bank for Izmir are examined within its historical context, it is seen that the access to affordable housing for low-income groups has become more difficult. The difference between the minimum wage and the m^2 housing unit price begins to widen at the end of 2021, and it is clear from Figure 1 that this difference has widened considerably between 2022, 2023, and 2024.
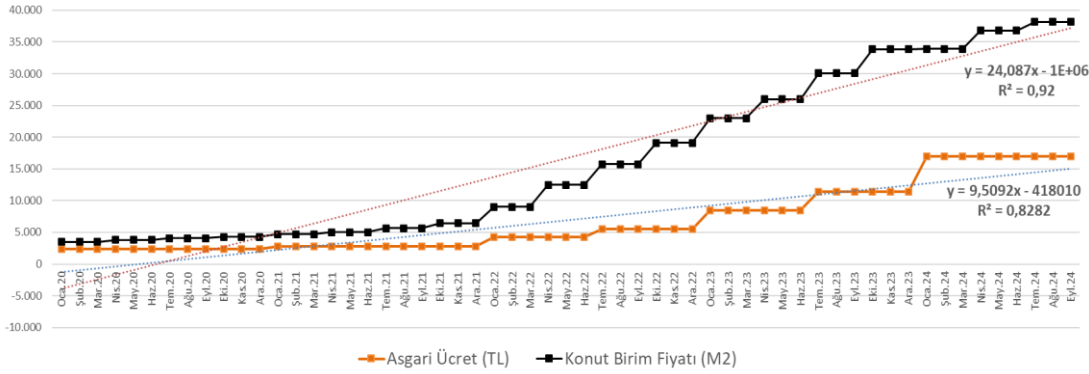
FIGURE 2 – CHANGES IN MINIMUM WAGE AND HOUSING PRICE BY MONTHS IN

In addition to housing acquisition, another important comparison for meeting the housing needs of low-income groups through rental housing is the comparison of average monthly rental values and minimum wage in Izmir. Figure 2 compares monthly rental values between 2020 and 2024 with the minimum wage. As of the end of 2021, the difference between average rent and minimum wage is increasing, and like the change in housing unit prices, it is seen that the difference has increased considerably in 2022, 2023, and 2024. As Figures 2 and 3 reveal, it is becoming more difficult for those earning minimum wage to access housing and rental housing in Izmir.

In a relatively narrow area where approximately 3 million people are concentrated, there are different housing supplies for different income groups to accommodate the population. Average rental values by district and the rates of affordable rental housing values by the first three 20% income groups are shown in Figure 4. Cells showing affordable rental housing below 30% in the districts are colored yellow, and cells above 30% are colored in such a way that the shades of purple become darker as they move away from 30%. No cells show affordable rental housing below 30% for the 1st, 2nd, and 3rd 20% income groups in the districts. Therefore, there are no yellow cells in Figure 4.

When Figure 4 is examined more carefully, it is seen that the cells showing the rates, especially for the 1st 20% income group have darkened over the years and this darkening is also observed in the 2nd and 3rd 20% income groups, but the intensity of the darkening is more obvious in the 2nd and then 3rd 20% income groups. Figure 4 also reveals important trends on a district basis. First, the darkest values for the 1st 20% group are the Narlıdere, Güzelbahçe, and Urla districts, which are considered as the western development axis, where there are no industrial infrastructures, low-density housing and secondary

housing on the seashore or very close to the sea. The highest average rental housing supply is in the Güzelbahçe district. It reflects the demand of the high-income group due to its 20-minute access to Izmir city center via Çeşme Highway, offering detached and luxury housing, and being on the seashore. For similar reasons, the highest rental housing supply is in the Urla district after Güzelbahçe district.
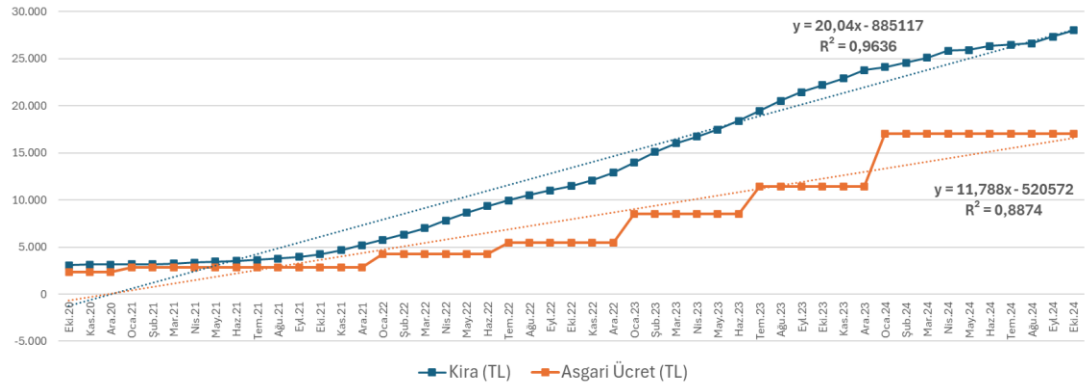

FIGURE 3 – CHANGES IN MINIMUM WAGE AND AVERAGE RENT AMOUNTS BY MONTH IN IZMIR

The average rental housing affordability in other districts is similar and if the 1st 20% group can allocate all their income to housing expenses in 2019 and at least twice as much by 2023, they can access rental housing. These rates are well above the 30% ratio approach. When districts examine the average rental housing affordability for the 2nd 20% income group, it is seen that the housing need can be met when the lowest approximately 55% of the income in 2019 and the highest approximately 4 times the income are allocated to rental expenses. This situation has evolved to a minimum of 116% and a maximum of 315% in 2023. To access housing in 2023 in Izmir districts, the 2nd 20% income group must allocate 16% more of their monthly income and especially in the Güzelbahçe district, more than 3 times their monthly income is required to allocate 16% more of their monthly income to rental expenses. In the 13 districts in the study area, the 3rd 20% income group also cannot access affordable rental housing. The minimum rates of 40% and a maximum of 142% in 2019 turned into minimum rates of 78% and maximum rates of 214% in 2023. It is seen that the accessibility of affordable rental housing for the 3rd 20% income group between 2019 and 2023 exceeded the budget limit. The budget that both the low- and middle-income groups need to allocate to meet their rental housing needs according to the district average is well above their monthly income as of 2023.

In addition to the findings of the analyses conducted on the average rental values of the districts, the neighborhood-based affordable rental housing determinations also reveal important findings (Figure 5). For the 1st and 2nd 20% income groups, there are no neighborhoods where the affordable rent/income ratio is below 30% between 2019 and 2023. Similarly, although the situation is not so bright for the 3rd 20% income group, which is the middle-income group, between 2019 and 2023, there are districts where neighborhoods are below the affordable rent/income ratio.

	I. 20 Percent Income Group					II. 20 Percent Income Group					III. 20 Percent Income Group				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
Balçova	100,7%	132,4%	116,3%	215,5%	280,5%	59,3%	72,4%	64,0%	124,7%	163,1%	42,2%	51,3%	46,4%	87,1%	110,9%
Bayraklı	100,0%	102,5%	124,0%	178,1%	221,5%	58,9%	56,0%	68,2%	103,1%	128,9%	41,9%	39,7%	49,4%	72,0%	87,6%
Bornova	187,1%	190,1%	189,7%	207,3%	247,9%	110,3%	103,9%	104,4%	120,0%	144,2%	78,4%	73,6%	75,6%	83,8%	98,0%
Buca	118,1%	118,2%	114,5%	152,0%	197,0%	69,6%	64,6%	63,0%	87,9%	114,6%	49,5%	45,8%	45,6%	61,4%	77,9%
Çiğli	109,6%	120,1%	134,3%	194,0%	247,9%	64,6%	65,7%	73,9%	112,3%	144,2%	45,9%	46,5%	53,5%	78,4%	98,0%
Gaziemir	146,6%	147,5%	150,4%	199,7%	248,8%	86,4%	80,6%	82,8%	115,6%	144,7%	61,4%	57,1%	59,9%	80,7%	98,4%
Güzelbahçe	180,0%	203,0%	285,6%	418,7%	554,2%	106,1%	111,0%	157,2%	242,3%	322,3%	75,4%	78,6%	113,8%	169,3%	219,2%
Karabağlar	159,5%	152,9%	186,8%	182,9%	199,3%	94,0%	83,6%	102,8%	105,9%	115,9%	66,8%	59,2%	74,4%	73,9%	78,8%
Karşıyaka	95,6%	101,5%	108,2%	202,7%	283,9%	56,4%	55,5%	59,5%	117,3%	165,1%	40,1%	39,3%	43,1%	81,9%	112,3%
Konak	173,0%	187,5%	186,8%	220,7%	219,0%	102,0%	102,5%	102,8%	127,7%	127,4%	72,5%	72,6%	74,4%	89,2%	86,6%
Menemen	325,6%	291,2%	281,8%	210,7%	239,0%	191,9%	159,2%	155,1%	121,9%	139,0%	136,4%	112,8%	112,3%	85,2%	94,5%
Narlıdere	139,1%	160,3%	180,2%	369,5%	434,9%	82,0%	87,6%	99,2%	213,9%	252,9%	58,3%	62,1%	71,8%	149,4%	172,0%
Urla	279,8%	306,1%	343,9%	422,0%	462,4%	164,9%	167,4%	189,3%	244,2%	268,9%	117,2%	118,6%	137,0%	170,6%	182,9%

	I. 20 Percent Income Group					II. 20 Percent Income Group					III. 20 Percent Income Group				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
Balçova (8)															
Bayraklı (24)											2	6	2		
Bornova (45)						1		1			4	5	2		
Buca (47)						1	2	1			11	16	9		
Çiğli (26)											4	8	2		
Gaziemir (16)													1		
Güzelbahçe (12)															
Karabağlar (58)											1	8			
Karşıyaka (27)															
Konak (113)						1	1	1	1	2	7	8	4	1	3
Menemen (65)						4	5	3			5	5	5		
Narlıdere (11)															
Urla (37)											1	1			

FIGURE 4 - Affordability rate analysis And Number of Neighborhoods with Affordable Rental Housing by District (Number of Neighborhoods In Districts).

This also means that there are districts where people in the middle-income group cannot access affordable rental housing with their income. There are no neighborhoods in the Balçova, Güzelbahçe, Karşıyaka, and Narlıdere districts with a rental housing supply that the middle-income group can afford. In Urla, there is only affordable housing supply for the middle-income group in the Kadıovacık neighborhood, which is on the border of Çeşme district. The district with the largest number of affordable rental housing for the middle-income group is Buca. Konak and Karabağlar neighborhoods follow Buca. However, as can be seen, the number of neighborhoods in the districts where the 3rd 20% income group has relative access to affordable rental housing has decreased between 2019 and 2023. To analyze the spatial distribution of neighborhoods where housing rents are affordable, figures were created for the 1st, 2nd, and 3rd 20% income groups for the years 2019, 2021, and 2023. While creating the figures, neighborhoods with unaffordable rental housing supply were colored purple and neighborhoods with 30% and below income were colored red. As Figure 5 also reveals, there was no neighborhood that the 1st 20% income group could afford with 30% of their income in 2019 for the 13 districts in the Figure 6 study area, and this situation did not change for the years 2021 and 2023.

Shantytowns have historically undertaken functions to provide rental housing for low-income groups in Turkey. However, it has been observed that the 1st 20% income group has not been able to access affordable rental housing in neighborhoods with insufficient facilities and lower physical quality of life compared to planned development areas that have been transformed with zoning plans in Izmir between 2019, 2021 and 2023. The fact that the 1st 20% income group has not been able to access rental housing in any of the 490 neighborhoods in the 13 districts located in the Izmir metropolitan center determined as the study area reveals that it has become more difficult for people in the lowest income group to meet their housing needs in the Izmir metropolitan area (Figure 6).

The accessibility of the 2nd 20% income group, which is considered the low-income group, to affordable rental housing in neighborhoods varies, although the 1st 20% income group generally continues its tendency to access affordable rental housing. The differentiation expressed is that the 2nd 20% income group has access to affordable rental housing in 24 neighborhoods within 13 districts. It is observed that the 2nd 20% income group has access to affordable rental housing in neighborhoods in Bornova, Buca, Konak, and Menemen districts. The neighborhoods where the 2nd 20% income group has access to affordable rental housing are located on the periphery of the city center and the northern development axis. The neighborhoods located on the periphery of the city center are the neighborhoods located on and around the Basmane-Buca axis, where the first examples of shantytown areas in Izmir are located and are shown in red in Figure 7. The causality of the existence of neighborhoods in the Menemen district where the low-income group has access to affordable rental housing is that the Çiğli-Menemen axis forms the northern development axis, and the mass housing applications on this axis create the supply of rental housing as well as the supply of housing for sale.

In 2019, the number of neighborhoods offering affordable rental housing for the 3rd 20% income group, which is considered the middle-income group, is higher than the number of neighborhoods offering affordable rental housing for the 1st and 2nd 20% income groups due to the increase in income. The spatial distribution of neighborhoods offering affordable rental housing for the 3rd 20% income group is shown in Figure 7.

The important finding revealed by Figure 5 is that the neighborhoods where the middle-income group can access affordable rental housing are the neighborhoods where the 1st and 2nd 20% income groups can access affordable rental housing and the neighborhoods that are neighbors or nearby neighborhoods. It is seen that the middle-income group (3rd 20%) can access affordable rental housing in the neighborhoods that were developed unplanned and rehabilitated with historical development plans on the Basmane-Buca axis mentioned above in the city center, and similarly, the 3rd 20% income group can access affordable rental housing in neighborhoods that were previously shantytowns and transformed into shantytowns in Bayraklı, Bornova, and Gaziemir districts.
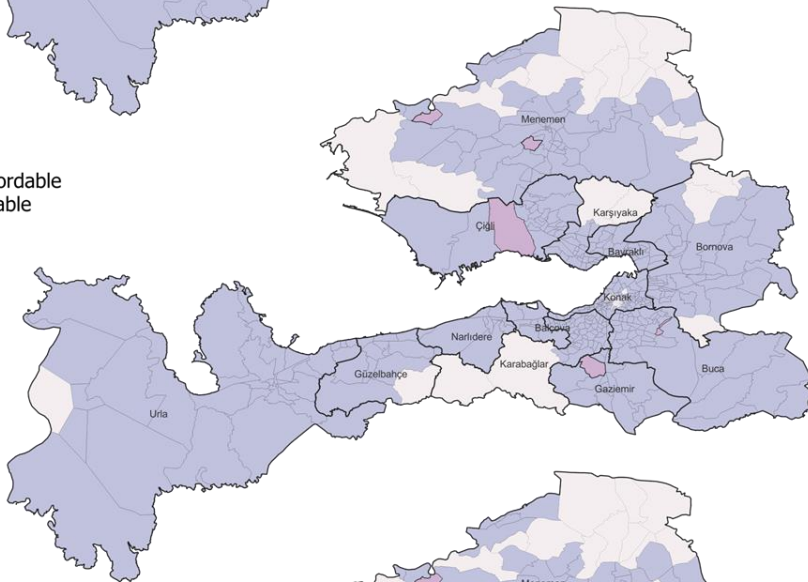
I. 20 Percent Income Group

2019

☐ District Boundry

Neighborhoods
- Over %30 Non-Affordable
- Above %30 Affordable
- No Data
- Industrial Zones
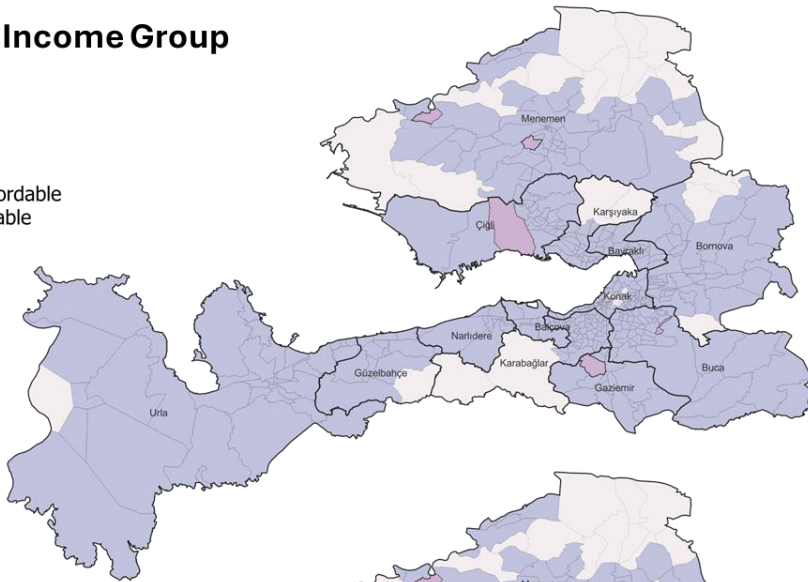
2021

☐ District Boundry

Neighborhoods
- Over %30 Non-Affordable
- Above %30 Affordable
- No Data
- Industrial Zones

2023

☐ District Boundry

Neighborhoods
- Over %30 Non-Affordable
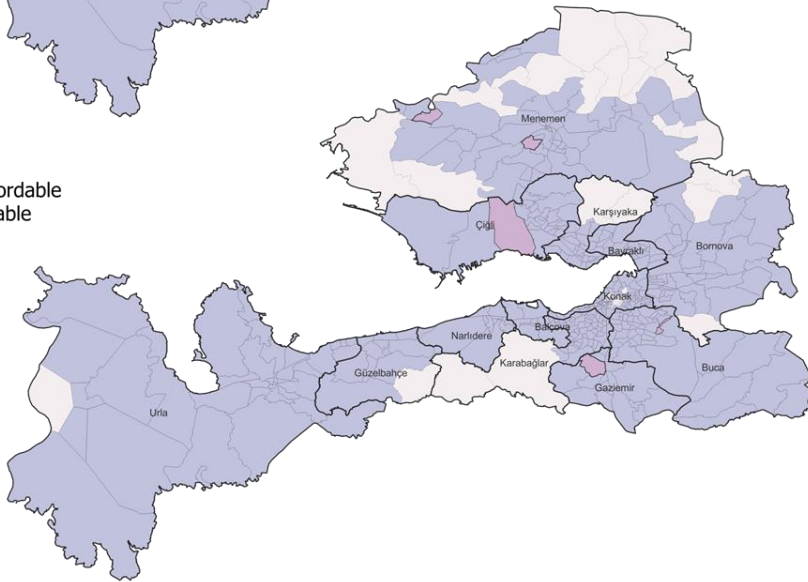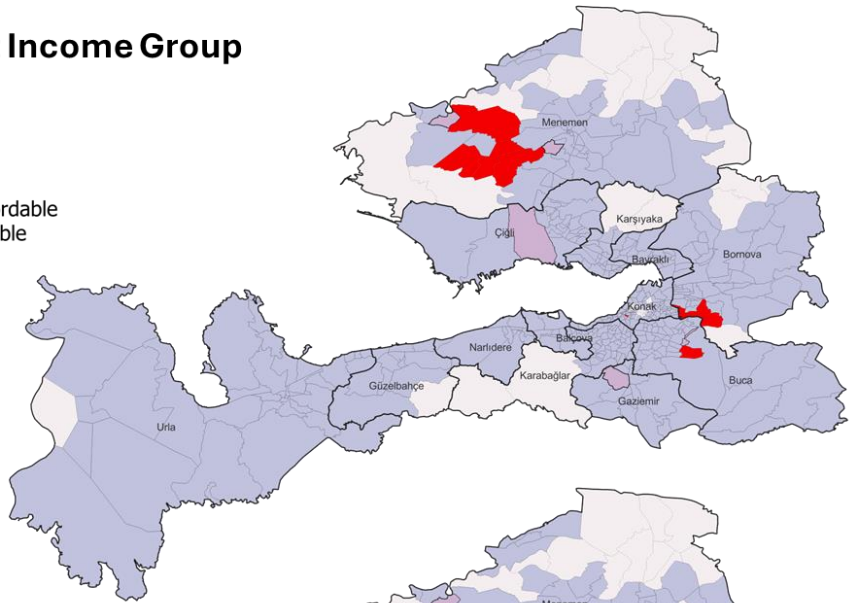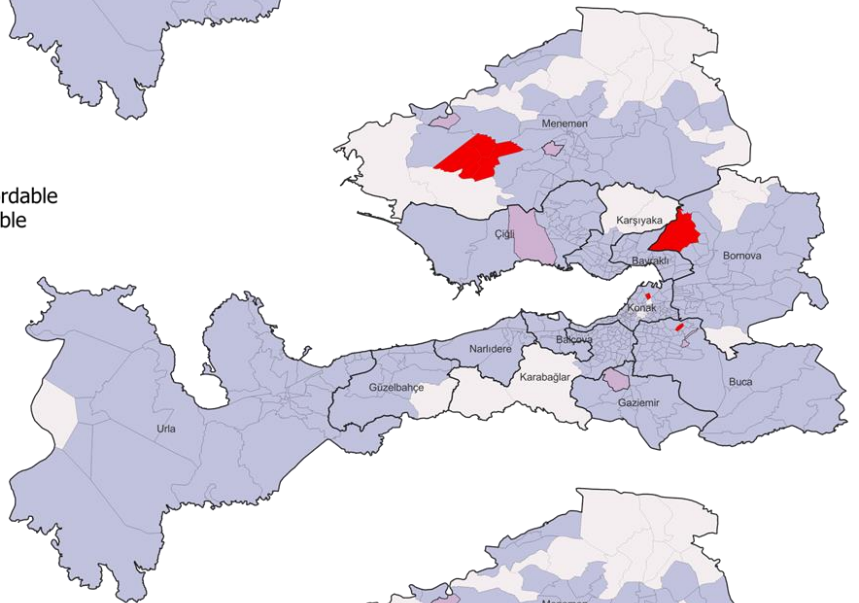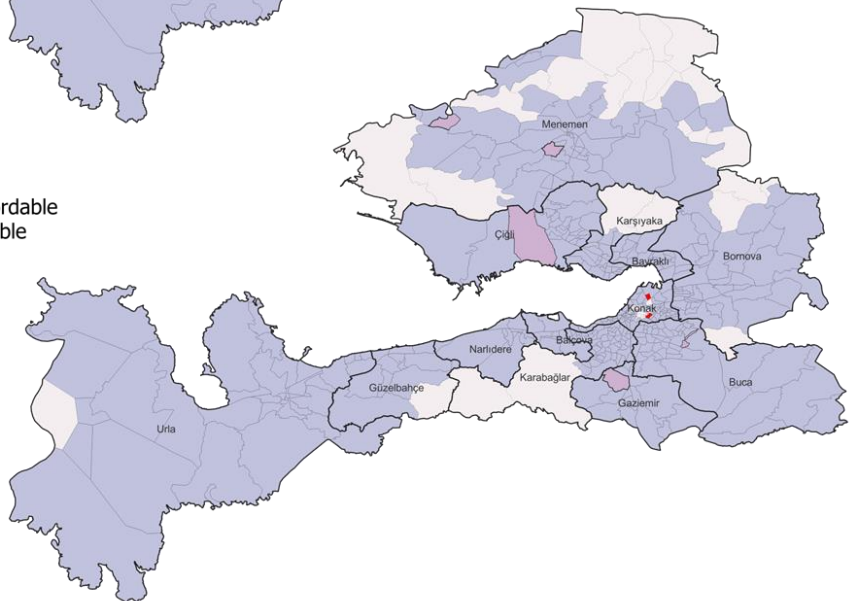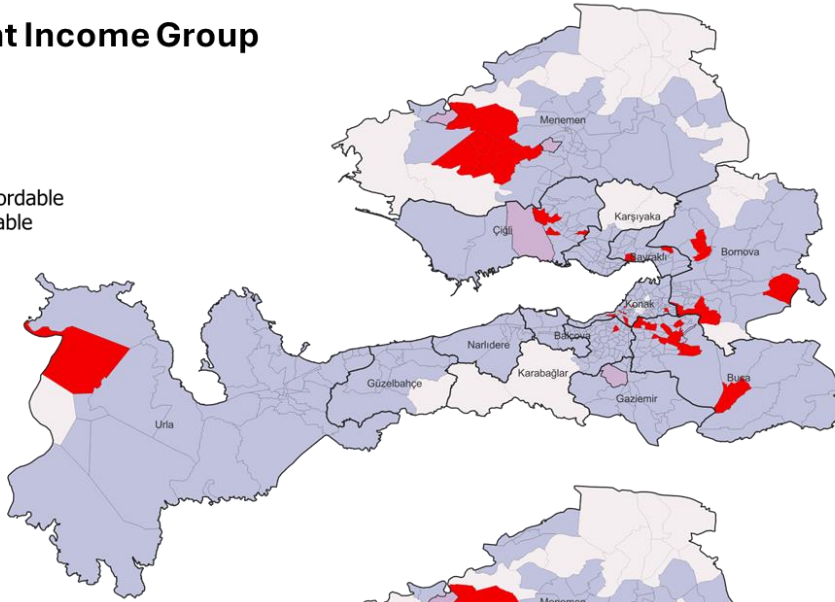- Above %30 Affordable
- No Data
- Industrial Zones

FIGURE 5 - DISTRIBUTION OF NEIGHBORHOODS WITH AFFORDABLE RENTAL HOUSING BY DISTRICT

II. 20 Percent Income Group

2019

☐ District Boundry

Neighborhoods
- ■ Over %30 Non-Affordable
- ■ Above %30 Affordable
- ☐ No Data
- ■ Industrial Zones

2021

☐ District Boundry

Neighborhoods
- ■ Over %30 Non-Affordable
- ■ Above %30 Affordable
- ☐ No Data
- ■ Industrial Zones

2023

☐ District Boundry

Neighborhoods
- ■ Over %30 Non-Affordable
- ■ Above %30 Affordable
- ☐ No Data
- ■ Industrial Zones

FIGURE 6 - DISTRIBUTION OF NEIGHBORHOODS WITH AFFORDABLE RENTAL HOUSING BY DISTRICT
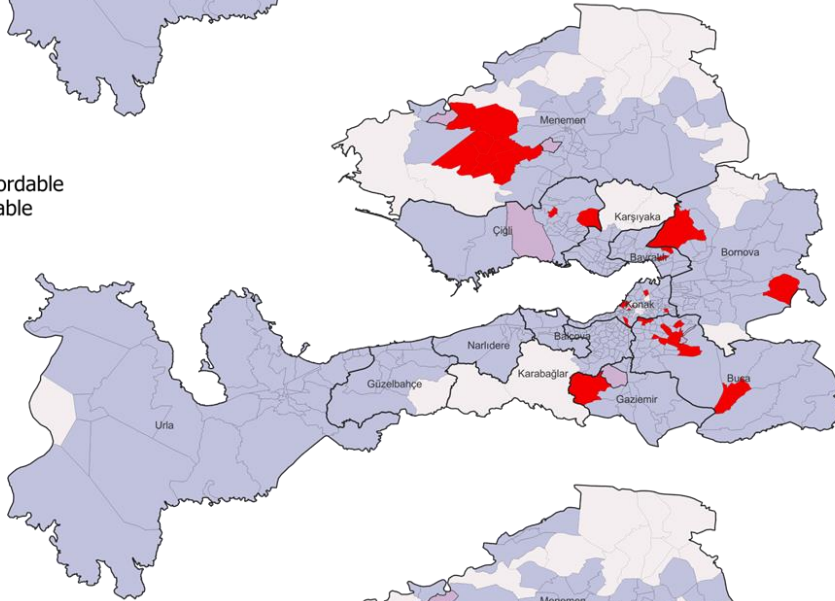
III. 20 Percent Income Group

2019

☐ District Boundry
Neighborhoods
◼ Over %30 Non-Affordable
◼ Above %30 Affordable
☐ No Data
◻ Industrial Zones

2021

☐ District Boundry
Neighborhoods
◼ Over %30 Non-Affordable
◼ Above %30 Affordable
☐ No Data
◻ Industrial Zones

2023

☐ District Boundry
Neighborhoods
◼ Over %30 Non-Affordable
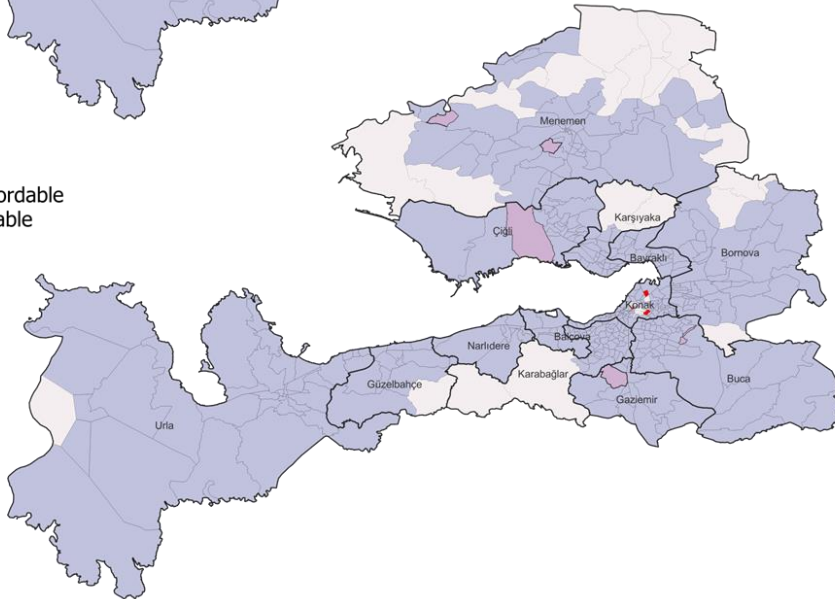◼ Above %30 Affordable
☐ No Data
◻ Industrial Zones

FIGURE 7 - DISTRIBUTION OF NEIGHBORHOODS WITH AFFORDABLE RENTAL HOUSING BY DISTRICT

In 2021, the number of neighborhoods where the middle-income group has access to affordable rental housing is decreasing. In addition, it is seen that the spatial distribution pattern of the neighborhoods where rental housing is accessible to the middle-income group continues the spatial distribution pattern of 2019 in 2021.

However, this situation changes in 2023. The middle-income group, like the households in the 1st and 2nd 20% income groups, can hardly access affordable rental housing in the Izmir metropolitan area in 2023 (only 3 neighborhoods in Konak district). In 2023, the 1st 20% income group cannot access affordable rental housing in any of the 490 neighborhoods in 13 districts, while the 2nd 20% income group has access to affordable rental housing in 2 and 3rd 20% income groups in Konak district in 3 neighborhoods. These neighborhoods are Ege, Süvari, and Yeşildere neighborhoods. The neighborhoods in question are unplanned developed shantytowns and due to their unplanned development, these neighborhoods are areas where facilities such as health, education, green areas, and technical infrastructure that should be in planned areas are relatively lacking. For these reasons, they are areas where the quality of urban life and physical life quality are quite low (Figure 8). However, urban transformation projects are being implemented in the shantytowns mentioned within the scope of Law No. 6306 on the Transformation of Areas at Disaster Risk. Due to the proximity of shantytowns to the city center, they are areas demanded by the upper-middle- and upper-income groups, and therefore, the housing supply in the transformed areas is not aimed at the low- and middle-income groups but rather at the upper and upper-middle-income groups to generate income and rent.

As can be seen in the graph above, which shows the changing trend in housing unit prices and minimum wage, the difference between low- and middle-income group monthly incomes and housing m^2 unit prices is widening at a high rate between 2019 and 2023. In other words, the possibility of low- and middle-income households purchasing a house almost disappeared between 2019 and 2023 due to the inflationary economic environment caused by the economic crisis. It would not be wrong to say that even the middle-income group will not be able to access affordable rental housing in only 3 of the 490 neighborhoods in the 13 districts that make up the metropolitan center soon in the Izmir metropolitan center due to the rent and price increases caused by the urban transformation projects implemented.

6. DISCUSSION AND CONCLUSION

The number of studies focusing on rental housing affordability in the İzmir metropolitan area is few in the literature. Still, there are several studies existing in the literature related to rental housing affordability in İzmir like housing construction cooperatives (Koç, 2022; Koc, 1989) gated housing estates (Altun, 2012) in İzmir, low-rise housing (Akyol Altun, 2010), living conditions of Syrian Refugees (Ayalp and Kiremit, 2021), the spatial distribution of tenants in Bornova district and urban poverty (Özbek Sönmez, 2007)

gecekondu neighborhoods (Karadağ & Mirioğlu, 2014) and application of urban transformation projets (Tezcan & Çelik, 2017).

(a)

(b)

(c)

FIGURE 8. A) AND B) - EXAMPLES OF AFFORDABLE RENTAL HOUSING IN EGE, SÜVARI, AND YEŞILDERE NEIGHBORHOODS, C) - EXAMPLE OF URBAN TRANSFORMATION IN THE YEŞILDERE NEIGHBORHOOD (EGE HABER, 2023).

In this article, the rental housing affordability for low- and middle-income households in the metropolitan area of İzmir is analyzed spatially by using the ratio approach. Affordable rental housing refers to the meeting of the needs of a shelter with the allocation of 30% or less of the income of the households. The analysis reveals important results. In the Izmir metropolitan area, low-income groups (I. 20% income group) cannot access affordable rental housing, and II. It shows that the 20% income group has access to affordable rental housing in only 24 out of 490 neighborhoods and the III. 20% income group has access to 57 neighborhoods. The number of neighborhoods with affordable rental housing has decreased for all 20% of income groups from 2019 to 2023. These results are consistent with the results of Subaşı and Sence Türk (2024) who reported the same trends for Istanbul.

In 2019, the accessibility of affordable rental housing differed between the middle-income and low-income groups. However, by 2023, the affordability of rental housing for both groups is becoming more similar.

Especially in the western axis formed by Narlıdere, Güzelbahçe, and Urla districts, the analyses reveal that low and middle-income groups need to pay at least 3 times their income in the 2019-2023 period and up to 5 times in the process to access affordable rental housing. The supply of rental housing in these districts is increasing due to factors such as luxury housing projects and being on the seashore (Altun, 2012; Akyol Altun, 2010). The functions undertaken by gecekondu areas in İzmir (Karadağ & Mirioğlu, 2014) in terms of providing affordable rental housing for the low and middle-income groups are also among the findings. Gecekondu neighborhoods along the Basmane-Buca axis offered affordable rental housing for the 2nd and 3rd income quintiles (20% groups) between 2019 and 2021. However, by 2023, three neighborhoods were found to provide affordable rental housing for the middle-income group as well. Despite this, even in areas that underwent improvement in zoning plans between 2019 and 2023, the 1st and 2nd income quintiles (the lowest income groups) were still unable to access affordable rental housing in İzmir's gecekondu neighborhoods.

If the rental housing affordability is analyzed as a process from 2019 to 2023, finding affordable rental housing is getting difficult for low and middle-income groups in the İzmir metropolitan area. These groups have almost no opportunity to meet their shelter needs with affordable rental housing rates as the date approaches 2023. Besides, urban transformation projects lead to housing supply for upper and middle-income groups without any supply for the low and middle-income groups. Considering the 25% increase application that regulates rent increases caused by the economic crisis between 2022-2023, which also makes it difficult to access affordable rental housing, and the tendency to increase rental values by terminating the lease agreement and either removing the tenant or re-entering into contracts with higher rent values, since the rental income depreciates against inflation due to the inability to increase the rent, the relevant regulation has been insufficient to regulate access to affordable rental housing.

As a result, income groups that cannot access affordable rental housing with 30% of their income must migrate to districts outside the metropolitan center to meet their housing needs at an affordable level, and spend more than 30% on rent to stay in the metropolitan center, in which case they must reduce the budget they need to allocate for food and other social needs or earn additional income through additional jobs. The findings obtained within the scope of the study show the negative impact of markets that are not regulated by the public on the supply of affordable housing and rental housing as a policy set for policymakers on disadvantaged income groups.

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