# TeMA

The Times They Are a-Changin' and cities have to face challenges which may not be further postponed. The three issues of the 13th volume will collect articles concerning the challenges that cities are going to face in the immediate future, providing readings and interpretations of these phenomena and, mostly, methods, tools, technics and innovative practices (climate proof cities, zero consumption cities, car free cities) oriented to gain and keep a new equilibrium between cities and new external agents.

Pricheria

## Journal of Land Use, Mobility and Environment

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### THE CITY CHALLENGES AND EXTERNAL AGENTS. METHODS, TOOLS AND BEST PRACTICES

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The cover image is a photo of the 1966 flood of the Arno in Florence (Italy).

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## TeMA

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#### Causes of residential mobility and Turkey practice

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#### Abstract

Residential mobility is an economic and social recovery process that determines urban growth and regional development. The urban population relocates due to the events in their lives or their dissatisfaction with the conditions. Such individual movements play a role in the construction of urban geography. The aim of the present study was to discuss the factors that affect the residential mobility in Ortahisar district in Trabzon, Turkey. To determine the mobility, a survey was conducted with 445 individuals in 11 neighborhoods with different socio-demographic, economic and physical attributes in Trabzon urban center. The survey findings were analyzed based on a) the analysis of the socio-demographic structure of households, b) evaluation of the residential buildings, c) the analysis of historical mobility, and d) the assessments of causality in mobility. In the study, the causal factors were analyzed based on the life cycle, life course and satisfaction approaches and mobility classification available in the literature, and the study findings were analyzed with descriptive statistics. It was determined that residential ownership, the structure of the household members, and proximity to the workplace factors were effective on residential mobility in Trabzon.

#### **Keywords**

Residential mobility; Urban growth; Urban geography; Satisfaction; Trabzon/Ortahisar

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#### 1. Introduction

Settlements grow and develop their unique spatial structure, subject to the factors influencing them (Pappu, 2018). At the same time, the cities are subject to continuous and rapid changes that generate instability conditions and make it fragile (Esopi, 2018). While the city and society constantly redefine the relationship between places and actors; unexpected and uncontrolled social conditions and lifestyles build new geographies and centers (Punziano & Terracciano, 2017). The key word to understanding these dynamic urban areas and the nature of society is change (Clark, 1982). Residence mobility is one of the most important factors in several processes that lead to structural change in urban space (Li & Siu, 2001). Today, the mobility of individuals increases every day; however, these individuals are not migrants but those who change their course of movement around the world (Tekeli, 2006). Over the last twenty years, improvements in quality of life and scientific and technological advances have led to an increase in life expectancy (Gaglione et al., 2019). As housing mobility and relocation with social and economic significance continuously increase, 15-17% of the United States population, about 8% of British homeowners, an average of 6.2% of Dutch citizens change their homes every year (Wang & Wang, 2020). Residence mobility, which is one of the important characteristics of human nature driven by socio-economic, political and environmental factors, affects not only households but also the settlements where the movement takes place (Clark, 1982; Parida & Madheswaran, 2010; Coulton et al., 2012). These individual movements lead to rapid changes in settlement design, urban population profile, land use patterns, and as a result, the relationship patterns in traffic flow, reorganizing the urban settlements (Clark, 1982; Clark, 2007). Residence mobility is both the cause and the outcome of the change in urban sociospatial structures (Cadwallader, 1992). To make sense of these processes, it is necessary to analyze the socioeconomic and demographic compositions of mobility and to investigate the changes in the socio-economic, demographic and spatial urban structures (Kamacı, 2013). While the materialisation of density in the built environment involves a wide variety of forms that affect urban and architectural qualities in different ways; how people value these qualities is a context-specific issue affecting the diversity of urban environments that exist not only in different places but also over time (Palacio et al., 2018). Therefore, understanding the structure of mobility aims the prediction of future changes in urban areas and recognition of the effects of policies that affect urban areas (Hanuskek & Quigley, 1978).

Housing mobility expectations dictate that similar individuals with respect to the housing market, economic conditions and social networks tend to live in the same neighborhoods (van Gent et al., 2019). However, the multidimensional differences between the individuals and urban spaces make it impossible to live in a neighborhood where perfect equality prevails. Thus, the phenomenon of residence mobility, which is considered to be an important foundation for the development and differentiation of cities and heterogeneous urban areas, and in planning of future settlements, was the topic of the present study. The study aims to discuss the factors that lead to residential mobility and were effective on shaping the urban areas with a multidimensional approach. It is aimed to find answers to this question in the study where the factors causing the movement are determined; 'What are the real and unique to the city -if any- factors that cause the decision to act?'. There is a need to increase the number of empirical studies dealing with housing mobility and the causes of movement, which vary according to time, place and the characteristics of the moving person. The determination of the profile that relocated to the neighborhood and the reason for selecting the particular neighborhood would be beneficial for planning management decisions.

#### 2. Theoretical framework

Residence mobility entails the process of changing the places, residences, lives and neighborhoods of individuals and households in cities (Hanuskek & Quigley, 1978; Clark, 2007; Coulton et al., 2012). Certain studies described residence mobility as a key demographic process that leads to a permanent change in primary housing and shapes social dynamics, (Wang et al., 2018) as a mechanism that could reorganize the

housing, neighborhood, and local consumption of households based on changing needs and preferences (Coulter & Ham, 2013). Furthermore, it is also a micro-function of the household life cycle and a complex process with a power to transform its geography on a macro scale (Kamacı, 2013).

Although there are studies that approached residence mobility as a type of migration, (Brown & Holmes, 1971; Brown & Moore, 1970) residence mobility differs from migration movements based on the distance, scale, frequency, cause and consequences of the movements. Household change of residence occurs at different scales, including local, regional, national and international (Haque et al., 2020). Unlike long-distance and employment-oriented migration movements, residence mobility is short-distance and residence-oriented with a higher frequency (Clark & Huang, 2004; Dieleman, 2001; Baker, 2003).

Residence mobility has been a topic tackled by geographers, sociologists, economists and psychologists and they proposed a series of analyzes on the causes, destination and origin of the mobility. This multidisciplinary interest led to comprehensive studies on the causes and consequences of various social processes (Morris, 2017). Although the reasons for mobility were underlined by various goals based the conditions of the period, the common goal in all was to change the living conditions (Özgür, 2009) and early studies attempted to explain the phenomenon with economic approaches. According to the economy-oriented approach, the residential change was an attempt to create a balance in consumption within the framework of a reasonable pricing constraints (Hanuskek & Quigley, 1978) and households select a residence by analyzing the costs of components such as income, real estate prices, equipment and distance to work to maximize the benefits within their budgetary constraints (Clark & Dieleman, 1996).

Sociological and geographical approaches conducted to identify the determinants of housing mobility and immigration suggested that various familial, household and residence characteristics may inhibit relocation in addition to economic push and pull factors (Lei & South, 2020). After the 1950s, behavioral approaches were developed due to the increasing significance of human decisions and behavior in residence mobility. First, Rossi attempted to explain the phenomenon of mobility by associating the phenomenon with the concept of life cycle. Rossi considered residence mobility as a response to fundamental changes in life, especially changes in the family structure (Rossi, 1955; Kamaci, 2013; Clark & Withers, 2007). The life cycle concept describes the transition between consecutive stages, from the birth to the death of an individual (Clark & Withers, 2007). There is view which argued that households somehow change in response to events such as birth, death, marriage and divorce, and these changes affect the housing needs of the families at different points in their life cycle (Clark, 2017). By 1980s, due to the limitations of the life cycle approach to explain the complex structure of mobility, the multidimensional life course approach was adopted (Geist & McManus, 2008; Wang et al., 2018). The life course approach that describes a critical life cycle stage reflects changes in status or social roles (Brazil & Clark, 2019). Unlike the life cycle approach, the key to the latter approach was the variations in timing and the order of vital events (Elder et al., 2003). It focused on the experiences of individuals and households based on age, education, work, family structure, parenting and retirement (Eceral & Uğurlar, 2017; Clark & Huang, 2004). Although it has been assumed for a long time that housing mobility is a way for individuals to relocate to better homes and neighborhoods and lead to better socio-economic conditions, life course studies acknowledged that not all relocations were a preference, and mobility may not always result in a better life (Patel et al., 2020). Another behavioral approach to mobility was the approach of satisfaction due to the housing or environmental properties (Brown & Moore, 1970; Earhart & Weber, 1996; Pickvance, 1974; Speare, 1974). Based on this approach, when the stress or dissatisfaction of the household with the residential environment reaches a certain threshold, the household enters a process of search, which could lead to residential mobility (Clark et al., 2006).

Household's decisions about moving or staying from an existing location may depend on many variables (Saghapour & Moridpour, 2019). Primarily, socio-demographic factors and life events have varying effects on the scale of displacement (Haque et al., 2020; van Gent et al., 2019). The desire to change the residence is

mostly affected by factors such as age, family size, household income, the presence of children, and a gradually changing socio-economic structure in the life cycle, vital events, and educational background (Li & Sui, 2001; van Gent et al., 2019; Li & Mao, 2018). Age and household structure are the most important factors that affect residential mobility and among the most utilized concepts in mobility analysis (Ham & Clark, 2009; Wulff et al., 2010). Residence mobility is the highest among young adult individuals and the most active group includes 20-35 years old individuals. Residence mobility decreases with an increase in age (Clark & Onaka, 1983; Li & Sui, 2001; Rossi, 1955; Clark et al., 1984; Clark, 2009).

In addition to the age variable, increases in household size due to marriage and birth and decreases in household size due to divorce, death, and children leaving home also lead to residence mobility (Brazil & Clark, 2019; Greenlee, 2019; Kooiman, 2020; Saghapour & Moridpour, 2019; Wang & Wai Li, 2020; Feijten & van Ham, 2009; Rossi, 1955; Rabe & Taylor, 2010; Wang et al., 2018). Residence mobility is observed especially during the first years of marriage (Chevan, 1971) since couples without children are more active, and the presence of young children in the household prevents mobility (Ham & Clark, 2009; Kooiman, 2020). Also, according to Lei & South (2020); "Young adults who live independently are twice as likely to move in urban movements and four times more likely to move out of the city than young adults living with their parents". The residence mobility studies reported that level of education also affects mobility and educated people are more active when compared to people with lower education levels (Clark, 2009). Especially those with higher education, higher socio-economic status, or civil servants are also more likely to relocate to high-rise housing (Li & Mao, 2018). In addition to the education level, it was reported that income is an important factor in understanding the residential career of individuals (Clark et al., 2006). Changes in employment such as starting a new job, retirement and unemployment, relatively increase mobility (Morris, 2017; Wang et al., 2018). Home ownership and tenancy also affect residential mobility; homeowners are less likely to relocate when compared to the tenants (Saghapour & Moridpour, 2019; Greenlee, 2019). In addition to the socio-demographic and economic household properties, vehicle ownership, driver's license ownership accessibility pedestrian access and especially access to public transport have statistically significant effects on residence preferences and mobility (Kamruzzaman et al., 2020; Haque et al., 2019; Saghapour & Moridpour, 2019). Also, place of birth, job, financial difficulties experienced by the family (Voight, 2020), and ethnicity (Clark & Withers, 2007; van Gent, et al., 2019), also affect mobility.

Another phenomenon that causes households to act for residence purposes is the satisfaction / dissatisfaction with the house and its close environment. The change in housing satisfaction is mainly affected by changes in housing conditions and neighborhood environment. The main determinants of change in housing satisfaction are adjustments in housing conditions (length of residence and house space) and the neighborhood environment (physical design, social interaction, and access to various facilities) (Wang & Wang, 2020). As Aditjandra (2012) stated; urban form characteristics, such as density, settlement size, land-use mix, accessibility and local streets lay out are cumulatively affecting attitudes towards residential location preferences alongside socio-demographic characteristics, housing location and job location (Sinniah et al., 2014). In addition, neighborhoods and resident perceptions about the neighborhood are the main factors that affect the decision to relocate or stay. Neighborhood is considered as one of the components of developmental hierarchy of the cities which is a major element of identity of the cities as a classical component (Zali et al., 2016). As neighborhoods change, demographic and socio-economic changes may prompt residents to consider moving or to stay (Jones & Dantzler, 2020).

The factors that affect residence mobility were first classified as voluntary and involuntary factors by Clark and Onaka. While voluntary movements included organized and stimulated movements, involuntary movements included compulsory movements. While the regulated movements included the actions of individuals to improve their housing and environment due to dissatisfaction, stimulated movements occur as a result of changes in the life cycle or life course of households or individuals. Compulsory movements are less common

when compared to other movements; they occur due to the factors that could not be controlled by the households or the households could not affect the development of these factors (Tab.1) (Clark & Onaka, 1983).

It is necessary and important to make behavioral analyzes at the individual level in order to make sense of the reason for the change in urban space. Studies dealing with residential mobility, which can be considered new for domestic literature, will be useful in revealing context-specific dynamics. In the present study conducted in neighborhoods with different characteristics, the factors that lead to mobility were discussed comparatively based on the framework of the residential mobility classification proposed by Clark and Onaka and the life-course-life-cycle-satisfaction approaches.

Ор	tional	Involuntary
Organized movements	Stimulated movements	Compulsory movements
1. Residential	1. Work / study	1. Residential
Space	Job changes	Evacuation
Quality / plan	Retirement	Accidents
House prices		Disasters
Change about savings		
2. District	2. Life course	2. District
Quality	Formation of the household	City renovation projects
Physical environment	Dispersion of households	Major infrastructure projects
Social composition	Change in household size	Environmental hazards
Public services	Bad event in the household	
3. Accessibility		
To workplace		
To shopping,		
To public services		
To family and friends		

Tab.1 Classification of residence mobility (Clark & Onaka, 1983)

The hypotheses that will form the basis of the study are as follows:

- The reasons based on the life course are more effective than the life cycle factors on movements for residential;
- Housing reasons have a direct impact on residential mobility;
- Involuntary / compulsory movements have little effect on residential mobility;
- Socio-economic variables have the greatest impact on residential mobility.

Within the scope of the study, the life cycle of the reasons that cause mobility, the life course and the holistic, comparative evaluation of the home satisfaction approaches, and the detailed classification of the reasons will also contribute to the literature. In addition to the determination of the factors that lead to mobility, the characteristics of mobility and the effects of individual mobility behavior in the urban space were also discussed in the study. It was considered that the improvements in built environment variables would affect the planning discipline and hence, the urban mobility.

#### 3. Methodological approach

The present study focused on residential mobility, which was considered as an important foundation for understanding future urban development and planning. In the present study that was conducted to determine causality, the Ortahisar district in Trabzon province, Turkey was determined as the study area. The area was selected due to the following factors:

- the need and the goal to determine the mobility factors in a scale and geography that are different from the ones scrutinized in previous studies;
- the increasing population of the province;
- the fact that Ortahisar district was one of the most populated areas in the region;
- the expansion of the real estate industry and the transformations and changes observed in the city.

Trabzon province is located in eastern Black Sea Region and surrounded by Giresun province in the west, Rize province in the east, Bayburt and Gümüşhane provinces in the south and the Black Sea in the north. The surface area of the province is 462,800 ha. The total population in the province, which includes 18 districts and 688 neighborhoods, is 807,903 (Figure 1) (TÜİK, 2018).

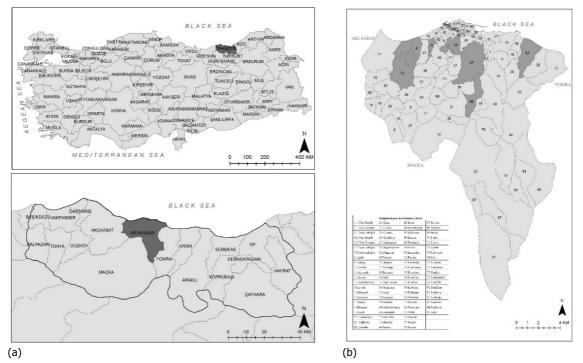


Fig.1 Section (a) Location of Trabzon and Ortahisar district; section (b) Spatial distribution of the neighborhoods in Ortahisar district

As of 2012, Ortahisar District was established with the inclusion of central municipalities and villages (43 in total) in Trabzon province with "Establishment of Metropolitan Municipalities in Fourteen Cities and Twenty-Seven Districts and Amendments in Certain Laws and Decrees" (Act No: 6360) in 2012. As of 2014, when the law came into force, there were 85 neighborhoods in the district and the surface area of the district was 23,200 ha and its population was 317,520 in 2018 (Tab.2).

According to the 2018 census, the neighborhood with the largest population was Çukurçayır (25958), which occupied 8.18% of Ortahisar district. Çukurçayır was followed by Pelitli (17,527) and Beşirli-2 (152,685) neighborhoods. The population of 24 neighborhoods was above the average district population (3,735). The analysis of the population growth between 2007 and 2018 demonstrated that the highest increase was observed in Çukurçayır (4,159.6 ‰) neighborhood. The neighborhoods with the highest population growth were Esenyurt (3,802.0 ‰) and Kanuni (1,951.0 ‰), respectively. In this period, it is observed that the highest population decrease was in Zafer (-962.6 ‰), Çömlekçi (-610.96 ‰) and Pazarkapı (- 560.75 ‰) neighborhoods. Based on the population variations between 2007 and 2018, the population of 51 neighborhoods increased and the population of 34 neighborhoods decreased (Tab.2 and Fig.2).

	Neighborhood	Population (2007)	Population (2018)	Population change (2007-2018) (‰)	Population density (per/hectar)
1	Beşirli-1*	7,238	9,742	346.0	36.22
4	Beşirli-2*	12,842	15,265	188.7	91.41
7	Erdoğdu-3*	13,336	12,836	-37.5	133.71
13	Aydınlıkevler*	8,640	12,695	469.3	154.82
15	Bahçecik*	9,092	11,008	210.7	88.77
26	Çömlekçi	2,329	886	-619.6	26.06
27	Çukurçayır*	5,031	25,958	4,159.6	36.20
33	Esenyurt	197	946	3,802.0	1.52
40	Gülbaharhatun *	3,545	2,504	-293.7	96.31
48	Kanuni	674	1,989	1,951.0	25.83
59	Kutlugün*	1,469	1,651	123.9	5.40
62	Pazarkapı	2,569	1,111	-567.5	31.74
63	Pelitli*	15,067	17,527	163.3	43.38
72	Uğurlu*	1,221	1,430	171.2	3.03
74	Yalı*	4,173	3,281	-213.8	149.14
85	Zafer	1,549	58	-962.6	9.67
Tot (Fo	al r 85 neighborhoods)	292,513	317,520		

Tab.2 Neighborhood population and population change in Trabzon (TUIK; 2007, 2010, 2014, 2018). The neighborhoods with the highest / lowest values in terms of population size are included in the table. In addition the detailed population values of the 11 neighborhoods\* selected for the survey are also shown in the table

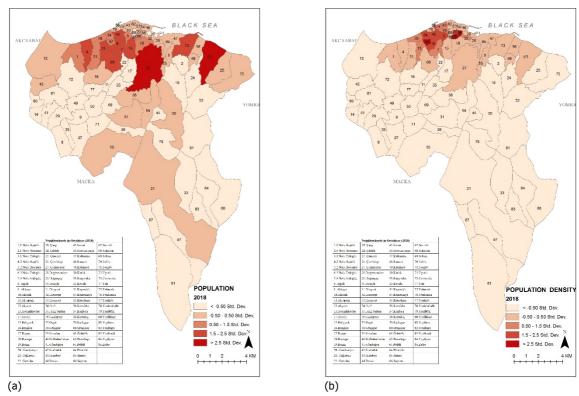


Fig.2 Spatial distribution of the (a) population size and (b) population density of the neighborhoods

In the data collection phase of the study, which aimed to discuss the factors that affected residential mobility in Trabzon, survey method was used, and descriptive statistics and analysis of variance were used to analyze the findings in the framework of causality. Furthermore, the factors determined with

the survey findings were analyzed with the classification by Clark and Onaka and life course, life cycle and satisfaction approaches, and the results were compared with the literature. During the development of the survey questions, 9 domestic and 36 international studies were reviewed, and all variables used for the determination of residential mobility were listed. According to Table 3, the age variable has been the most repeated variable among among the 45 studies examining residential mobility. In addition to the age variable, income (35 repetitions), home ownership and occupation (34 repetitions) variables were also frequently used in mobility studies.

5	Variables and number of repetitions		Variables and number of repetitions		Variables and number of repetitions
3	Economic trouble	6	Marriage	37	Age
2	Duration of stay	6	Closeness to relatives	35	Income (household)
2	Housing age	5	Poverty rate	34	Ownership
2	Housing source	5	Proximity to the city center	34	Education
2	Public opportunities	5	Location of the house	20	Job / status
2	Security	5	Proximity to work / school	18	Number of children / change
2	Income exchange	5	Job change / appointment	17	Marital status /change
2	Problem with the host	5	Unemployment rate (district)	17	Race / ethnicity / minorities
2	Access opportunities	5	Number of friends in the field	13	Household size
2	Cohabitation	4	Building order	11	Gender
1	Traffic status	4	Social opportunity	10	Duration of use
1	Public transport proximity	4	Neighborhood calmness	9	Room stress
1	Social class	4	Neighborhood pressure	9	Unemployment
1	The prestige of the field	4	Missing	8	Dissatisfaction
1	School satisfaction	4	Retirement	8	Marital status change
1	Neighborhood quality index	3	Settlement size	8	Housing type
1	Demolition of the house	3	Number of bedrooms	8	Employment status
1	Housing value	3	Aging / disease	8	Divorce
1	Urbanization status	3	Single person employment	8	Living area size
1	Heating problem of the house	3	Existence of parking areas	7	Neighborhood quality
1	The house's weakness	3	Neighborhood perception	7	Neighbourhood relationship
1	Saving	3	Time to work	6	Appropriate rent
1	Number of bathrooms	3	Job duration	6	Number of rooms
		3	Possibility of movement	6	Age of the first child
-		3	Migration type	6	Movement number

Tab.3 Variables used in domestic and international literature and their frequency of use<sup>1</sup>

<sup>&</sup>lt;sup>1</sup>The 45 studies examined in the table created by the authors are as follows: Wang et al., 2018; Eceral & Uğurlar, 2017; Ren & Folmer, 2017; Morris, 2017; Basolo & Yerana, 2017; Warner & Sharp, 2016; Yasak, 2014; Coulter & Ham, 2013; Liu et al., 2013; Kalelioğlu & Özgür, 2013; Kamacı, 2013; Clark, 2013; Coulton et al., 2012; Alkay, 2011; Clark, 2009; Ham & Clark, 2009; Clark, 2007; Clark & Withers, 2007; Duncan & Newman, 2007; Clark et al., 2006; Fattah et al., 2015; Kamacı, 2012; Sanchez & Andres, 2011; Alkay, 2011b; Huang & Deng, 2006; Kocatürk & Bölen, 2005; Özyıldırım et al., 2005; Clark & Huang, 2004; Clark & Huang, 2003; Li, 2003; Li & Siu, 2001; Clark & Drever, 2000; Clark & Mulder, 2000; Böheim & Taylor, 2000; Molin et al., 1996; Loikkanen, 1992; Landale & Guest, 1985; Clark & Onaka, 1983; Bach & Smith, 1977; Speare, 1974; Kan, 2007; Clark et al., 1984; Hanushek & Quigley, 1978; Kan, 1999; Boehm et al., 1991.

The survey form was developed based on housing satisfaction, location selection literature and questionnaire examples, and determined variables.

The form included open-ended and multiple-choice questions that reflected the socio-demographic structure, household structure, housing data, household mobility history, and possible future mobility of the household members.

Questions that aimed discuss the causality of the movement were developed as a 5-point Likert scale. Questions that aimed discuss the causality of the movement were developed as a 5-point Likert scale. The details of a total of 117 questions in the questionnaire prepared under six headings are as follows:

- questions about the socio-demographic structure of the household (12 questions) For each individual living in the household, gender, date of birth, marital status, marital status change, disability and disease status, education status, economic status, occupation, years of work, distance from workplace / school, unemployed time;
- Questions about household structure (5 questions) household size change and its reason, welfare level, total income, income change, vehicle ownership;
- Questions about housing and its immediate surroundings (12 questions) type of housing today, ownership status, age of the housing, the size of the housing, duration of use, number of rooms, rent / sales value, residence time in the neighborhood, the previous neighborhood, the reason for the last move, secondary home ownership;
- Questions about the mobility history of the individual participating in the survey (5 basic questions) the neighborhood where the first residence was located, the number of dwellings lived in, neighborhood information for each house, the reasons for movement and the years of movement;
- About possible movement (3 questions) desire for mobility, neighborhood suggestions and reasons of possible movement;
- Regarding the causality of the mobility (80 questions in total) 20 questions reflecting the characteristics of the household, 17 questions about the house, 11 questions about the home environment, 17 questions about the neighborhood, 8 questions about the social structure, 7 questions about the other factors.

After the study area was determined, the developed survey form was applied to a sample from Ortahisar district.

The number of questionnaires that should be applied to provide statistically feasible findings was determined as 383 questionnaires with a 5% error margin and 95% confidence interval based on 93,223 households, which were the total number of households in 2018, and the questionnaire was applied to 442 households with stratified sampling method.

The number of households in the neighborhoods was considered in the distribution of the survey conducted in 11 neighborhoods that represented Ortahisar district and with different socio-demographic, economic and physical structures (Fig.1b).

#### 4. Findings

Residential mobility is both the cause and the outcome of changes in urban socio-spatial structures. Individuals react to their economic, demographic and political experiences, and changes in the demographic structure are reflected in residential mobility.

Therefore, to understand the mobility processes, it is necessary to investigate the socio-demographic structure and changes among mobile individuals.

In the next section, the survey findings are included, and the analyses are presented under four headings:

- The analyses conducted on the socio-demographic structure of the households and members;
- General analysis of the housing facilities;

- The analysis of household member mobility;
- The analysis of the factors that affect final mobility.

#### 4.1 Socio-demographic analyses

The factors in the stimulated movement category are discussed under the life cycle and life course sections.

#### Life cycle

In this approach, gender, marital status, age, education, household size, disease, old age and disability subdimensions were analyzed. It was determined that 62.22% of the respondents were male and 37.78% were female, 94.12% were married, 5.88% were single.

The participant ages varied between 22 and 74, 29.66% of the respondents were between 40 and 44 years old, 24.75% of them were 35 and 39 years old, and 16.42% of them were 45 and 49 years old.

Most of the households were nuclear families, 42.12% included 4 individuals, 25.06% included 5 individuals, 15.50% included 3 individuals. The age of the first child was effective on residential mobility and 27,62% of them were between 10 and 14 years old, 20,99% of them were 5 and 9 years old, and 18,78% of them were between 15 and 19 years old (Tab.4).

#### The Life Course

In this approach, education, profession, income, employment, appointment, change of job, unemployment and welfare level sub-dimensions were analyzed.

It was determined that 37.10% of the respondents were college, 29.86% were high school and 9.05% were primary school graduates. While 66.74% of the individuals were employed, 22.40% were housewives, 8.37% were retired and 2.26% were unemployed.

Furthermore, 22.65% of the individuals had 10-14 years of professional experience, 21.60% had 15-19 years, and 21.25% had 20-24 years of professional experience. In 50.23%, 1 member was employed 2 members were employed in 21.95% and 3 members were employed in 0.90%.

The household income was TL 2501-5000 in 39.31%, TL 1501-2500 in 24.60%, and TL 5001-7500 in 17.70%. It was determined that the income in 63.86% of the households did not change, the income in 23.86% increased and the income in 12.27% decreased. In the household saving category, it was determined that 65.19% of the households owned at least one vehicle and 19% of households owned at least one home (Tab.4).

#### 4.2 Housing analysis

The households were asked questions on the size, number of rooms, age of housing unit, ownership, type of residence, residence period and residence value in the category of organized movement.

#### **Residence**

It was determined that 49.02% of the households were between 121-160m<sup>2</sup>, 25.37% were 81-120m<sup>2</sup>, 21.46% were 161-200m<sup>2</sup>, 66.11% were 3-room housing, 19.33% were 4-room housing, and 11.93% were 2-room housing.

About 33.33% of the households lived in 6-10 years old, 17.52% lived in 0-5, 13.87% lived in 11-15 years old residences.

About 62.95% of the participants were homeowners and 27.27% were tenants. 62.27% of the households lived in a condominium, 30.91% lived in an apartment and 6.59% live in a detached home, 38.46% resided in the same residence for 1-5 years, 35.10% for 6-10 years, and 12.98% for 11-15 years.

House market values varied between TL 100-400k, 20.34% varied between TL 251-300k, 16.90% varied between TL 301-350k, and 16.55% varied between TL 151-200k (Tab.4).

		Junuale	d movements				ated movemen	
A) descriptive	statistics al cycle	bout the life	, ,	otive statistics abo life course	ut		iptive statistic satisfaction	s on
Variab	les	(%)	Vari	ables	(%)	Varia	ables	(%)
Condon	cycle         Yariables       (%)         Female $37.78$ Male $62.22$ Married $94.12$ Educe         22-24 $1.23$ Educe         25-29 $1.96$ $53$ Econo $30-34$ $8.82$ $82$ $55-59$ $3.68$ $40-44$ $29.66$ $60-64$ $1.96$ $65-69$ $1.72$ $50-54$ $8.09$ $55-59$ $3.68$ $60-64$ $1.96$ $65-69$ $1.72$ $70-74$ $1.72$ $70-74$ $1.72$ $70-74$ $1.72$ $70-74$ $1.72$ $70-74$ $1.72$ $90-68$ $60-61$ $1.96$ $65-69$ $1.72$ $70-74$ $1.72$ $70-74$ $1.72$ $70-74$ $1.72$ $70-74$ $1.72$ $70-74$ $1.72$ $70-74$ $1.72$		Illiterate	0.45		56-80	2.20	
Gender	Male	62.22		Literate	0.45	- Living area	81-120	25.3
Marital	Single	5.88		Primary School	9.05	size	121-160	49.0
status	Married	94.12	Education status	Middle School	8.37	(m²)	161-200	21.4
	22-24	1.23		High School	29.86	-	201+	1.95
	25-29	1.96		University	37.10		1	0.48
	30-34	8.82		Master	2.71	-	2	11.9
	35-39	24.75		Employed	66.74	Number of rooms	3	66.1
	40-44	29.66		Unemployed 2.26		-	4	19.3
Age	45-49	16.42	Economical situation	Retired	8.37	-	4+	2.15
	50-54	8.09		Housewife	22.40		0-5	17.5
	55-59	3.68		Student	0.23	-	6-10	33.3
	60-64	1.96		0-4	9.06	-	11-15	13.8
	65-69	1.72		5-9	10.80	Housing age	16-20	9.98
	70-74	1.72		10-14	22.65	uge	21-25	8.52
	1	2.33	Professional	15-19	21.60	5	26-30	7.30
	2	8.27	experience (year)	20-24	21.25		30+	9.49
Household size	3	15.50		25-29	8.01		Houseowner	62.9
(person)	4	42.12		30-34	4.18	-	Tenants	27.2
	5	25.06		35+	2.45	Ownership	Lodgings	0.68
	6	6.72		No	26.92	-	With Family	8.18
	0-4	16.64	Number of	1	50.23		With Family-p	0.91
	5-9	20.99	employees (member)	2	21.95		Apartment	30.9
	10-14	27.62		3	0.90		Condominium	62.2
	15-19	18.78		0-1,500	4.60	Housing type	Detached	6 50
Age of the first child	20-24	8.29	Total	1,501-2,500	24.60		Home	6.59
	25-29	7.18	income	2,501-5,000	39.31	_	Slum	0.00
	30-34	1.38	(TI)	5,001-7,500	17.70		1-5	38.4
	35-39	0.55		7,500	13.79	Residence	6-10	35.1
	40-44	0.55		0	34.39	time	11-15	12.9
	No	11.28	Number of	1	58.14	(years)	16-20	6.25
	1	14.10	vehicles	2	7.01	-	20+	7.21
Number of children	2	44.87		3	0.45	·	100-150,000	11.3
	3	24.10		0	81.00	-	151-200,000	16.5
	4	5.64	Number of	1	16.29	- Housing	201-250,000	13.4
			housing	2	1.81	sales	251-300,000	20.3
				3	0.90	value	301-350,000	16.9
		-				-	351-400,000	12.0
							400,000+	9.31

#### Tab.4 Factors causing stimulated and regulated movement

#### 4.3 The analysis of individual mobility

In addition to the individual socio-demographics, their mobility background is also an important factor in the determination of their present and future impact on urban spaces.

The number of residential movements of individuals, their rhythm, type and direction of movement, causes, and categories of movement are discussed in this section.

#### The Number of Movements

The analysis of the total number of individual lifetime movements demonstrated that 20.81% of the individuals moved 2 times, 19.46% moved once, and 17.87% moved 3 times (Fig.3).

#### The Frequency of Movement

It was observed that 32.2% of the participants moved for the first time when they were 18-25 years old, 29.18% moved when they were 0-17 years old, and 19.46% moved when they were 26-30 years old.

The important threshold in the change of residence was the first year and it is accepted that individuals are more likely to move again when they move during their initial year of residence. 16.62% of the individuals moved during the first year and 68.25% moved during the first 5 years.

While the rate of a movement in the first 10 years was 86.80%, it was observed that the residence mobility frequency decreased as the residence period increased (Fig.3).

#### The Type of Movement

The movements of individuals throughout their lives were analyzed based on direction and distance, and short and long-distance movements were determined.

Residential movements between Ortahisar neighborhoods were categorized as short, and all other movements were categorized as long-distance movements. It was determined that 69.46% of the total movements were short, and 30.54% were long-distance movements. 16.52% of all movements were within the same neighborhood and 12.22% were between the neighborhoods.

The rate of the movements between provinces was 12.22%. The most common movement (69.46%) was the short distance movements within Ortahisar (Fig.3).

#### The Reasons for Movement

The reasons for lifetime residency mobility collected with the survey form were categorized based on the Clark and Onaka (1983) method. It was determined that 90.03% of the movements were voluntary and 4.04% were involuntary movements.

The remaining 5.93% could not be categorized based on Clark's classification system. 58.58% of the total movements were organized movements due to the satisfaction with housing and immediate environment, 31.45% were stimulated movements that reflected the individual or household structure, and 4.04% were compulsory movements due to residential and neighborhood conditions (Tab.5).

#### The factors that led to organized mobility

It was determined that 51.53% of the movements associated with the satisfaction approach were due to residential, 42.48% were due to accessibility, and 5.98% were due to district factors.

It was observed that 67.56% of the lifetime residence-oriented movements were due to savings preferences such as purchasing a home, 13.10% were due to quality, 10.71% were due to house prices and 8.63% were due to spatial reasons.

35.90% of the mobility within the neighborhood was due to the physical properties of the neighborhood, 33.33% were due to social causes, 20.51% were due to public services, and 10.26% were due to the quality of the neighborhood.

58.12% of accessibility-oriented movements were due to workplace access, 32.49% were due to access to public services, and 9.39% were due to access to family and friends (Tab.5).

#### The factors that led to stimulated mobility

36.29% of all lifetime stimulated movements were associated with the life cycle and 63.71% were associated with the life course. 99.21% of the work-based and work-related movements were due to job changes and 0.79% was due to retirement.

It was observed that 97.31% of the life cycle factors were associated with starting a new household, 2.7% were due to the end of the household, the change in the household size and the unfortunate events experienced in the household (Tab.5).

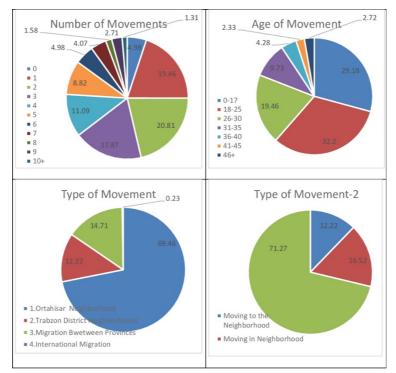


Fig.3. Mobility histories of individuals

#### The factors that led to compulsory mobility

These include factors associated with the residence and neighborhood and 82.22% of the compulsory movements were due to housing and 17.78% were due to neighborhood factors. 81.08% of the residential factors were due to evictions and 18.92% were due to disasters.

All neighborhood-oriented factors were associated with urban renewal projects.

The analysis of the lifetime mobility factors demonstrated that the most effective factors were the change in savings preferences (20,40%), the formation of a new household (19,49%) and proximity to the workplace (14,47%) (Tab.5).

The analysis of the mobility history of individuals demonstrated that the most effective factors behind the first individual movements in Ortahisar district included the formation of a new household (38.64%), proximity to the workplace (13.77%) and change in savings preferences (12.09%), respectively. In the second movement, it was observed that the most effective factor was change in savings preferences (20.00%).

The spatial and quality properties of the house, which was not mentioned in the first residential mobility, was effective on the second movement.

The factors such as the presence of public services, proximity to shopping, accidents, major infrastructure projects and environmental hazards were not determined as mobility factors in the present study (Tab.6).

			<b>Turkey Practice</b>	

Movement class	Movement sub- class	The factors causing the movement	The ratio of all causes (%) <sup>1</sup>	The ratio of causes in sub- class (%) <sup>2</sup>	The ratio of sub- class (%) <sup>3</sup>	The ratio of movement class (%) <sup>4</sup>
		Space	2.61	8.63		
	- 1.1 residential -	Quality / plan	3.95	13.10	- 51.53	
	1.1 residential	House prices	3.23	10.71	51.55	
	-	Change about savings	20.40	67.56		
		Quality	0.36	10.26		
1. Organized	1.2.	Physical environment	1.26	35.90	5.98	58.58
movements	District	Social composition	1.17	33.33	5.90	20.20
	-	Public services	0.72	20.51		
		Proximity to workplace	14.47	58.12		-
	1.3.	Proximity to shopping	0.00	0.00	42.48	
	Accessibility	Proximity to public services	8.09	32.49	42.40	
	_	Proximity to family and friends	2.34	9.39		
	2.1.	Job changes	11.32	99.21	26.20	-
	Work / study	Retirement	0.09	0.79	36.29	_
2. Stimulated		Formation of the household	19.49	97.31		31.45
movements	2.2.	Dispersion of households	0.18	0.9	63.71	31.45
	Life course	Change in household size	0.18	0.9		
	-	Bad event in the household	0.18	0.9		
		Evacuation	2.70	81.08		-
	3.1. Residential	Accidents	0.00	0.00	82.22	
3.	-	Disasters	0.63	18.92	-	4.04
Compulsory movements		City renovation projects	0.72	100		4.04
	3.2 District -	Major infrastructure projects	0.00	0.00	17.78	
		Environmental hazards	0.00	0.00	-	

Tab.5 Classification the survey results according to the classes of movement<sup>2</sup>

	Movement sub-class	The factors causing the movement	1. Movement	2. Movement	3. Movement	4. Movement	5. Movement	6. Movement	7. Movement	8. Movement
		Space	0.00	4.91	2.21	1.71	1.28	0.00	0.00	0.00
	1.1	Quality / plan	0.00	6.42	2.21	5.98	3.85	8.70	7.14	0.00
	residential	House prices	3.83	4.15	2.76	2.56	6.41	0.00	0.00	0.00
		Change about savings	12.09	20.0	22.7	29.1	28.2	30.7	35.7	30.77
zed nts		Quality	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1. Organized Movements	1.2.	Physical environment	1.18	1.89	1.10	0.85	1.28	0	0.00	0.00
L. O. Mov	District	Social composition	0.29	1.51	3.31	0.00	0.00	2.17	0.00	0.00
-		Public services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-		Proximity to workplace	13.77	13.6	16.0	14.5	19.2	17.4	14.3	0.00
	1.3.	Proximity to shopping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Accessibilit y	Proximity to public services	10.03	7.17	12.2	6.84	8.97	10.9	7.14	23.08
	,	Proximity to family and friends	1.77	4.15	2.76	1.71	5.13	0.00	3.57	7.69
st st	2.1.	Job changes	0.00	10.9	17.7	19.7	12.8	19.6	10.7	23.08
	Work/stud y	Retirement	5.01	0.75	0.00	0.00	0.00	0.00	0.00	0.00

<sup>&</sup>lt;sup>2</sup> 1.This column shows the ratio of factors causing movement within the total movement.
2.This column shows the ratio of factors causing movement within the movement subclass.
3.This column returns the proportion of subclasses within the motion class.
4.All movements are grouped under three headings: organized, stimulated and compulsory.

	2.2. Life course	Formation of the household	38.64	15.5	0.00	8.55	10.3	10.9	14.3	15.38
		Dispersion of households	0.00	0.00	0.00	0.85	0.00	0.00	0.00	0.00
		Change in household size	0.58	1.13	8.29	0.00	0.00	0.00	3.57	0.00
		Bad event in the household	0.59	0.00	0.00	0.85	0.00	0.00	0.00	0.00
		Evacuation	3.82	5.66	6.63	5.13	2.56	0.00	0.00	0.00
ts S	3.1. Residential	Accidents	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
oulso		Disasters	1.47	0.75	0.55	0.00	0.00	0.00	0.00	0.00
omp	Residential Residential CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTO	City renovation projects	0.29	0.75	1.66	0.00	0.00	0.00	3.57	0.00
ο ε ώ		Major infrastructure projects	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Environmental hazards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Tab.6 Movement histories of individuals

#### 4.4 Causality analysis for residential mobility

The effects of 80 mobility propositions, which have been/are effective on the mobility of individuals and were developed based on all variables reported in the literature, were analyzed with a 5-point Likert-type scale.

	Factors that may be effective in the residential movement	Not effective at all (%)	Less effective (%)	Moderately effective (%)	Quite effective (%)	Very effective (%)	Quite+very effective (%)
	Age of household head	36.07	25.80	23.52	8.22	6.39	14.61
	Marital status	15.98	19.41	20.55	21.92	22.15	44.06
	Death of one of the spouses	14.91	20.64	29.36	20.64	14.45	35.09
	Education status	18.71	16.40	32.10	20.55	12.24	32.79
	Number of households	10.37	12.90	29.26	31.11	16.36	47.47
	Number of children in household	9.89	14.94	28.28	28.05	18.85	46.90
	The birth of the first child	29.36	31.88	19.50	11.93	7.34	19.27
es	Starting school of children	8.24	16.93	30.21	26.09	18.54	44.62
Individual features	Leaving home of children	19.91	26.62	27.55	16.44	9.49	25.93
l fe	Household income	4.37	10.80	20.92	33.79	30.11	63.91
idua	Number of employees (household)	10.85	13.39	27.25	29.33	19.17	48.50
Np	Individuals' professions	12.21	16.36	23.50	27.42	20.51	47.93
H	Appointment	4.15	3.46	8.76	16.82	66.82	83.64
	Number of unemployed (household)	10.14	18.89	21.20	25.12	24.65	49.77
	Household accumulation	11.06	9.45	29.03	29.03	21.43	50.46
	Retirement	11.42	15.53	29.91	26.48	16.67	43.15
	Number of sick in the household	12.41	19.54	31.26	22.07	14.71	36.78
	Number of old person (household)	12.36	20.59	33.87	18.54	14.65	33.18
	Number of disability in the household	10.11	13.79	27.82	26.21	22.07	48.28
	The desire to live independently	11.72	17.24	26.21	26.21	18.62	44.83
	Interior design of the housing	13.56	17.93	32.87	23.91	11.72	35.63
	Number of floors of the housing	15.26	27.33	31.89	17.54	7.97	25.51
6	Age of the housing	6.64	12.81	32.72	29.75	18.08	47.83
ISI	New housing	9.36	10.96	25.11	30.37	24.20	54.57
hou	Property ownership	3.87	5.24	15.03	29.61	46.24	75.85
out	The size of the housing	5.49	9.38	27.23	33.18	24.71	57.89
Reasons about housing	Duration of stay at housing	13.07	24.08	28.44	21.10	13.30	34.40
son:	Number of rooms in the housing	5.49	9.15	29.29	32.72	23.34	56.06
Rea	The soundness of the housing	5.09	5.79	17.36	35.88	35.88	71.76
_	Heating status of the housing	3.42	6.62	15.75	36.53	37.67	74.20
	Lift presence of the housing	4.12	10.30	20.37	35.01	30.21	65.22
	Affordable rent	4.79	5.02	14.16	34.70	41.32	76.03

	Parking facilities of the residence	8.94	12.39	30.50	28.44	19.72	48.17
	Maintenance costs of the housing	5.26	9.84	30.21	32.72	21.97	54.69
	The view of the house	10.78	17.89	33.72	20.41	17.20	37.6
	Advertising of the housing	29.20	24.37	25.52	13.56	7.36	20.92
	Reliable contractor	10.96	14.16	27.17	27.40	20.32	47.7
	To be in the site	8.22	14.16	26.71	31.51	19.41	50.9
ent	Desire to live in a luxurious housing	9.38	12.13	27.46	28.15	22.88	51.0
Ĕ	Residential opportunity with a garden	5.48	15.53	25.57	26.26	27.17	53.4
	The security of the residential environment	1.83	6.18	18.99	30.21	42.79	73.0
l en	Presence of a playground around the residence	4.35	10.76	23.57	30.43	30.89	61.3
SID	Common area around the housing	6.85	10.73	29.45	30.14	22.83	52.9
	Privacy	4.13	8.72	22.02	29.13	36.01	65.1
8	Construction density	6.22	18.89	31.57	25.35	17.97	43.3
	The harmonization of the residential area with the environment	7.14	15.21	29.26	28.11	20.28	48.3
Ŷ	Suitability for climate	11.81	18.98	26.16	26.16	16.90	43.0
	Security of residential areas against natural disasters	2.77	7.16	17.78	23.33	48.96	72.2
	Location of the neighborhood	3.67	7.57	26.38	30.28	32.11	62.3
	The size of the neighborhood	10.98	25.86	35.93	18.08	9.15	27.2
	Planned structure of the neighborhood	9.01	15.70	27.02	30.02	18.24	48.2
	The prestigious structure of the neighborhood	9.38	14.42	29.75	26.32	20.14	46.4
8	Duration of stay in the neighborhood	8.94	16.51	30.05	26.15	18.35	44.5
Ê	Proximity to work	2.97	5.26	21.74	32.72	37.30	70.0
Other Social reasons Reasons for the neighborhood Reasons to housing environment	Proximity to daily trading centers	2.51	7.31	20.09	36.30	33.79	70.0
	Proximity to different trade centers	6.19	16.51	30.96	27.52	18.81	46.3
	Proximity to the city center	4.58	9.15	22.88	34.55	28.83	63.3
	Proximity to children's school	2.74	6.16	11.42	33.56	46.12	79.6
	Proximity to the health facility	3.44	8.94	23.85	34.40	29.36	63.7
	Proximity to religious facilities	10.53	17.39	30.21	25.63	16.25	41.8
	Proximity to sports fields	8.47	19.22	34.55	24.49	13.27	37.7
	Proximity to recreational and leisure areas	9.43	19.54	37.70	20.69	12.64	33.3
	Proximity to public transport line and stops	3.70	10.16	21.71	36.26	28.18	64.4
	Infrastructure status of the neighborhood	4.79	7.08	16.89	34.25	36.99	71.2
	Vehicle density in the neighborhood	5.26	12.36	30.66	30.43	21.28	51.7
	Similar social structure	9.20	13.10	26.67	34.25	16.78	51.0
	Proximity to parents	10.85	16.63	31.18	21.48	19.86	41.3
SUOS	Proximity to relatives	19.04	22.94	32.80	13.76	11.47	25.2
reas	Distance to relatives	20.97	30.11	32.80	1.88	14.25	16.1
Clai	Neighbourhood relationships	8.51	11.95	32.64	27.36	19.54	46.9
Š	Crowd of people	12.39	21.79	32.80	19.27	13.76	33.0
	Neighborhood calm	5.98	12.87	28.97	27.82	24.37	52.1
	Dialogue with the landlord	6.94	7.18	19.68	29.40	36.81	66.2
	Neighborhood cleaning	3.90	7.80	21.33	33.26	33.72	66.9
	Feeling safe in the neighborhood	2.76	5.30	7.83	25.81	58.29	84.1
5	Natural disasters	3.66	5.26	14.19	26.32	50.57	76.8
	Potential to invest of neighbourhood	8.74	8.51	23.45	30.11	29.20	59.3
	Closeness to job opportunities of neighbourhood	7.66	10.21	29.93	31.32	20.88	52.2
	Number of housing changes	21.73	23.36	30.37	15.89	8.64	24.5
	Sales with government assurance	17.92	19.10	31.13	20.05	11.79	31.8

Tab 7. Variables that are or may be effective in mobility

The cell (s) with the highest repetition rate for each variable are indicated by padding. 2. The most effective variables specified in the mobility are indicated by the red frame. 3. Variables are listed according to the effect level by giving points from 1 to 5. (1: Not at all effective, 2: Less effective, 3: Moderately effective, 4: Effective, 5: Very effective)

The results of the analysis conducted based on the variable frequency in each effect level demonstrated that factors such as appointment, neighborhood safety perception and natural disasters were "very effective," being "warm" towards the house, the proximity to the malls, and the proximity to public transport stations were "quite effective," proximity to recreational and leisure areas, neighborhood size and proximity to sports centers were "moderately effective," the birth of the first child, the distance to relatives and the number of floors in the buildings were "less effective," the head of the household, the birth of the first child, and the advertising about the house were "not effective at all" (Tab.7).

#### 5. Discussion and conclusion

Residential mobility is the desire and process of individuals or households to change their residences and immediate environment as a result of both dissatisfaction and changes in their life cycle and life course. The factors that shape the demographic, economic, social and physical structure of the individual or their city are the foundations of this desire for change. In the present study conducted in Trabzon province Ortahisar district, the reasons for residential mobility that shaped the urban spaces were determined based on location, and information about the general characteristics and movement preferences of the residents were identified. Statistical analysis conducted on the variables about the individual, household, residence and the environment and mobility variables revealed the results listed below:

- There were correlations between individual mobility for residential reasons and household size, number of children, educational status, total income, type of residence, the length of residence, the length of residence in the same neighborhood, and number of rooms in the residence;
- It was determined that the increase in household size first increased then decreased residential mobility, the highest mobility (above 10 moves) occurred in 3-individual households, 26% of the individuals without any residence movement in their lifetime were 2-individual (highest rate) households;
- Childbirth initially increased mobility, the mobility decreased after two children, and the highest rate (36.8%) in the non-mobile households belonged to no children households;
- Based on the educational level, the most mobile group included college graduates, only literate and those with graduate degrees moved at least once in their lifetime, 40% (maximum rate) of the immobile group included primary school graduates;
- The increase in household income increased residential mobility, the households with the highest income (TL 7500+) moved at least once in their lifetime, while the immobile group (54.5%) had an income level of TL 1501-2500;
- As the length of residence in the house and neighborhood increased, mobility decreased, and the highest mobility was observed among those who were residents for 1-5 years in the same home and neighborhood;
- As the housing age increased, residential mobility decreased, and the highest number of movements were observed in individuals who lived in 11-20 year old homes;
- The residential mobility of the households with 1-2 individuals differed from the mobility of households with 3-4 individuals;
- The mobility of the households without children was different when compared to those with 1 child;
- The residential mobility of the college graduate individuals was different when compared to that of the literate, primary school and middle school graduates;
- The mobility of the household with an income of TL 7500 and over was different when compared to all other income groups (except TL 5001-7500 income group);
- The mobility of the households with 1-5 years length of residence was different when compared to all other groups.

In general, it has been observed that a significant portion of individuals perform their first movements between the ages of 18-25, short-distance movements occur more than long-distance movements, and a very small part of the movements are caused by compulsory reasons. With the study, it was observed that the factors related to the satisfaction of the residence and its close surroundings were more effective than the neighborhood satisfaction in the mobility of the individuals residing in Ortahisar district throughout their lives. It was concluded that the factors affecting the life course approach, which replaced the life cycle over time, were more effective in Ortahisar mobility. According to the mobility histories of the individuals, the first mobility was mainly due to household formation, and the subsequent movements were due to housing ownership. It is seen that these results obtained from Ortahisar district field study are compatible with literature and hypotheses. In addition to these, it was concluded that the factors regulated regarding the satisfaction of the house and its surroundings are more effective than the induced reasons that describe the socio-demographic and economic structure of the individuals. This result does not support the related hypothesis of the study. Furthermore, it was concluded that the reasons based on the satisfaction approach were more effective than the life cycle and life course factors on movements for residential purposes in the present study. The most important factors that led to movements for residential reasons included the changes in savings preferences, household changes, and proximity to the workplace. The detailed interpretation of the factors that cause the regulated movement is a guide for local administrations, researchers, planners and implementers in terms of questioning the housing sector, accessibility decisions and livability levels.

In conclusion, it is known that the changes in the spatial structure in urban areas is mainly the result of housing mobility. The past and future impact of individual mobility on cities is an issue that should be addressed in a holistic manner on separate scales. It is important to analyze the individual, household and the urban factors that lead to mobility and to determine the changes in the process. As Yakubu & Spocter (2020) mentioned, it is important to accept the general limitations of traditional perspectives on residential mobility based on the differences in housing market dynamics in various cities with different socio-economic and cultural realities. In the study conducted on selected neighborhoods in Ortahisar district, it was observed that the individual factors that affected mobility mostly coincided with the reports in the literature. In addition to the general acknowledgments of residential mobility, a broad and multidimensional causality debate was conducted in the study. In addition to the determination of the mobility profile and comparison with the literature, the characteristics of the selected urban settlements in Ortahisar district were revealed with the housing/neighborhood selection decisions and mobility reasons. The findings of this the present study aimed not only to contribute to the literature on residential satisfaction and mobility, but also to help improve urban planning and housing policies.

The heterogeneous consequences of relocation should be further explored since the improvement of residential and neighborhood satisfaction is a determining factor in mobility decisions, and context-specific measures should be developed to improve living conditions. Finally, identification and classification of the factors that lead to mobility would provide planning guidelines through association of the variables of urban service areas, adequacy of these areas, and quantitative variables related to urban spatial problems and opportunities.

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#### **Image Sources**

All figures are original produced by the authors for this paper.

#### Author's profile

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