FAILING PROMISES OF HOMEOWNERSHIP IN TURKEY

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ABSTRACT

FAILING PROMISES OF HOMEOWNERSHIP IN TURKEY

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Homeownership is not a new agenda of housing policy in Turkey. During the last 20 years, policies promoting homeownership have been executed, and planning has been used as a pair of tongs. Through new house building, the increase in homeownership rates is expected to provide individuals with a means of opportunity. As initial promises, homeownership is argued to provide everyone with a chance to acquire a stable home, a way of refraining from affordability problems, wealth accumulation through housing, and the establishment of economic security. The approach of governments to the homeownership focused more on the equalizer effect of homeownership among low- and high-income households through housing wealth; a significant trade-off between housing asset and welfare provision. Although governments and individuals take those promises for granted, whether these commitments of homeownership are satisfied in Turkey or not remains uninvestigated. The success of policies that promote homeownership in the provision of housing wealth and housing security is not observed. This thesis first investigates the country-wide data sources and optimal methodology to analyze the housing wealth and housing security promises of homeownership separately. Then, it labors the measurement of the promises of homeownership simultaneously in Ankara.

The findings display that homeownership ends up with various outcomes for Turkish households. Promoting homeownership does not serve equal opportunities for housing wealth and housing security. Overall success is 25.5 percent for housing wealth and 15.2 percent for housing security in Turkey. The levels of achievement in housing wealth and housing security display that not all of the owner-occupier households benefit from homeownership promises. This study has three major conclusions: (i) Policies should focus on improving low-income households' housing security rather than promoting homeownership among low-income households. (ii) Rather than favouring homeownership alone, housing policies should be tenure neutral and focus on developing various tenure modes. (iii) Policies should always be monitored for intended and not intended outcomes. In the case of promises o homeownership, comprehensive panel data that allows simultaneous examination of housing wealth and housing security is required to observe the effects of the national-level homeownership encouraging policies.

Keywords: Homeownership, Housing Wealth, Housing Security, Turkey, Ankara

ÖZ

TÜRKİYE'DE EV SAHİPLİĞİNİN YERİNE GETİREMEDİĞİ VAATLERİ

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Ev sahipliği Türkiyede yeni bir politika gündemi değildir. Ancak son 20 yılda, ev sahipliğini teşvik eden politikalardaki artış ve planlamanın bu doğrultuda araç olarak kullanıldığı aşikardır. Yeni konut sunumu aracılığıyla ev sahibi olan hanehalklarının oranı arttırılarak ev sahipliğinin hanehalklarına sunduğu avantajlardan daha fazla kişinin yararlanması hedeflenmiştir. İlk avantajlar arasında sabit bir eve sahip olmak ve orada yaşamak, beklenmedik düzeyde kira artışı gibi konuta ekonomik olarak erişebilmeyi zorlaştıran süreçlerle karşılaşmamak, konut sahibi olmak yoluyla varlık sahibi olup birikim yapabilmek ve hanehalklarının bu sayede ekonomik güvencelerini sağlaması sayılmıştır. Yeni konut sunumu yoluyla iş gücü piyasalarının hareketlenmesi ve yeni istihdam yaratılması, sosyal konut gibi kamu mülkiyetinde bulunan kiralık konut sunumuna duyulacak ihtiyacın azalması ve en önemlisi ev sahipliği vasıtasıyla varlık elde eden hanehalklarının ilerleyen yaşlarında konut harcamalarının azalması ve devlete duyacakları ihtiyacın azalması hükümetler açısından ev sahipliğinin başlıca avantajları olarak tartışmalarda yerini almıştır. Eşitleyici bir rol üstlenecek olan ev sahipliği aracılığıyla hükümetlerin hanehalklarının refah ve yaşam kalitesini iyileştirmeye yönelik sorumluluklarını yerine getirmesinin de kolaylaşacağı umulmuştur. Ancak Türkiye'de ev sahipliğinin

artışı ile elde edilmesi beklenen avantajların ne düzeyde gerçekleştiği araştırılmamış ve sonuçları göz önünde bulunduran yeni politikalar geliştirilmemiştir. Bu boşluğu doldurmayı hedefleyen çalışma, ilk olarak ülke genelinde temsili bulunan veri setleri vasıtasıyla konut sahipliğinin konut varlık ve konut güvencesi vaatlerini ayrı ayrı incelemek için en uygun yöntemi araştırmaktadır. Akabinde ev sahipliğinin bu iki vaadini bir bütün olarak ele alıp Ankara özelinde incelemektedir.

Bu çalışmanın bulguları, ev sahipliğinin Türk hanehalkları için çeşitli sonuçlar doğurduğunu göstermektedir. Ev sahipliğini teşvik etmek, konut varlığı ve konut güvencesi açısından eşit fırsatlar sunmamaktadır. Türkiye geneli değerlendirmelerinde hanehalklarının %25.5'i konut varlığı vaadinde başarıya ulaşırken bu oran konut güvencesinde %15.2 düzeyindedir. Konut varlığı ve konut güvencesindeki başarı düzeyleri, ev sahibi hanehalklarının tamamının ev sahipliğinin vaatlerinden yararlanamadığını göstermektedir. Bu çalışmanın üç ana sonucu bulunmaktadır: (i) Politikalar, düşük gelirli hane halkları arasında ev sahipliğini teşvik etmek yerine, düşük gelirli hane halklarının konut güvencesini iyileştirmeye odaklanmalıdır. (ii) Tek başına ev sahipliğini tercih etmektense, konut politikaları çeşitli mülkiyet türlerini geliştirmeye odaklanmalıdır. (iii) Politikalar, amaçlanan ve amaçlanmayan sonuçları açısından her zaman izlenmelidir. Ev sahipliğinin vaatleri açısından bakıldığında, ulusal düzeyde ev sahipliğini teşvik edici politikaların etkilerini gözlemlemek için konut varlığı ve konut güvencesini eşzamanlı inceleme olanağı tanıyacak kapsamlı panel verilere ihtiyaç vardır.

Anahtar Kelimeler: Ev Sahipliği, Konut Varlığı, Konut Güvencesi, Türkiye, Ankara

To my beloved family

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ABBREVIATIONS

HBS: Household Budget Survey

SILC: Survey of Income and Living Conditions

AKP: Justice and Development Party

SPK: Capital Markets Board of Turkey

TURKSTAT: Turkish Statistical Institute

HDA: Housing Development Agency

UK: United Kingdom

TL: Turkish Lira

OECD: Organisation for Economic Co-operation and Development

BDDK: Banking Regulation and Supervision Agency

RTB: Right to Buy

Hh: Household

CHAPTER 1

INTRODUCTION

After World War II, many geographies testified massive changes in housing tenure structures discussed in homeownership and the responsibilities of governments. The direction of changes has varied among countries, the meaning of homeownership, the propensity of households to be a homeowner and attitudes of governments against these changes have questioned in several studies (Kemeny, 1981; Forrest, 1983; Doling and Stafford, 1989; Saunders, 1990; Forrest, Murie and Williams, 1990; Hamnett, 1999; Rohe et al., 2002; Bramley et al., 2004; Boelhouwer et al., 2005; Ronald, 2008; Sarioglu, 2010; Doling and Ronald, 2010; Davis, 2012; Kohl, 2017). Although the centrality of homeownership first arose in the Anglo-Saxon homeowner societies of North America, the UK, and Australia with expressions of the "American Dream", the "Australian Dream" or an "Englishman's home is his castle" (Ronald, 2008), it has spread to many others in the different forms of mass homeownership such as China, Post-soviet countries and Turkey. In a particular context of countries, the motivations of households and governments in the promotion of homeownership are discussed. At first, increasing homeownership rates promised a means of opportunity for individuals. Providing everyone the chance to acquire a stable home, no surprise to face with changing affordability problems and the chance to accumulate wealth through the housing for their elderly period and heirs, and establish independent economic security are some of the initial promises. By the time, these promises no longer became widespread for individual aims, but governments' (Forrest and Hirayama, 2014; Retsinas and Belsky, 2005; Ronald, 2008). The approach of governments to the homeownership is focused more on the equalizer effect of homeownership among low- and high-income households

through the housing wealth (Hamnett, 1999; Hancock, 1998) and a significant trade-off between housing asset and welfare provision (Kemeny, 1981; Castles, 1998).

Undoubtfully, these homeownership promises were not satisfied in different social, political, and economic contexts in many countries, including Turkey. It ended up with various outcomes for households and governments. To put it in another way, while homeownership is an opportunity for some groups to exploit promises, it is a resource absorbing tenure mode and a trapping hole for others. This study aims to examine the promises of homeownership and their multiple reflections on different household groups (segments) in society and elaborate on how these promises can be employed as an input in the planning discipline. The Turkish case underlines how the increase and downward fluctuations in the share of owner-occupier households affected governments' housing policies and attitudes.

1.1 The Context of the Thesis

From the beginning of humankind, housing serves opportunities for individuals and society. “By the mid-nineteenth century, house property began to develop as an individual commodity that was bought and sold, and that conveyed social, political and economic meaning and power” (Forrest et al., 1990, p.78-79). Much earlier than the First World War, a remarkable change in the concept of housing occurred as a result of industrialization and urbanization, after which fundamental changes in social and economic relations took place that leads to a continuous modification in living habits, and homeownership gained new dimensions in society and promises for its residents. After the First World War, the redistribution of agricultural land, the fall of empires opened a new era for the spread of homeownership during the twentieth century (Linklater, 2013). It gave millions of people the prospect of a secure, decent home for the first time. It also gave them an economic entity and status besides being a shelter, which protects from heat, sun, rain, and privacy, housing guarantees a social space and some facilities for the households and a strong tie for social relations within the society. Without treating unequally among suburban and

urban, this case is universal for the single-family detached house, apartment blocks, self-built units, etc. While some offers of housing are highly bounded with ownership, some others are eligible for all modes of tenures.

Homeownership promises a social status for households as the better, higher, more profitable, or natural form of tenure (Gurney, 1999; Ronald, 2008). The primary motivation behind this promise originates from the investment function of the housing. Investing money in housing refers to being richer and applying a profitable strategy in many countries. With rising house prices, housing is seen as a way of wealth creation for households without using the wealth stored in the house, knowing the wealth is there. Through homeownership, homeowners can accumulate housing wealth and transfer to their children through intergenerational transfers to enter or move up the housing ladder.

Security is another promise of housing differing among housing tenures regarding many aspects. Concerning tenure security, homeownership is mostly seen as a more secure tenure than a tenancy, although homeowners have an outstanding mortgage and possible foreclosures. As payment is made, the bank has no grounds to recall the ownership rights of the property. In terms of physical security, homeowners are more secure than tenants because they are the only responsible body to enter their house, while landlords will also have the keys for rental units. Regarding payment, the change in the mortgage payment rate and the annual increase in rent defines the advantaged group. If homeowners pay their mortgage payment with previously defined interest rates, they will not face unexpected affordability problems. However, if the rate is not previously fixed, they can have economic security problems. If the leasing agreement does not indicate the increase in housing rent, the tenant household will confront financial security problems in the tenancy case.

Last but not least, the security type in rental property is time-related. Here, time-related security refers to any surprise that households are encountering about leaving the unit. It also changes with the leasing agreement; tenant households are more prone to face the time-related security problem.

Although states' role in housing provision and the approaches to housing policies vary among the countries and the political regimes, these promises were not only a part of households' dream; also, these promising narratives on the homeownership become driving forces of policy approaches for governments. By force of welfare state-regime politics in some European countries to actualize the right to housing, the state had been highly responsive to provide housing units and manage the housing market for households' sake. However, due to several economic crises, the shift in policy approach had to transform the state's role in providing some services. It led to the varying importance of housing across countries. The tendencies of households to create their welfare via housing units and the support of states to make households owner-occupiers to decrease their welfare expenditures led to the complexity of housing as new welfare good to provide a pension in stone (De Decker and Dewilde, 2010). Governments have increasingly sought to encourage the personal accumulation of assets such as housing equity to meet the cost of social care and retirement needs in an aging population (Doling and Ronald, 2010). Also, housing as an industry under the construction sector generates employment opportunities, income, tax revenues, and extra spending (Schwartz, 2006).

Countries developed policies to maintain control over housing stock and provide adequate housing, at least to arrange access to housing. While in some countries, public housing, shared ownership, social rental units have been used as housing policy choices to overcome housing-related problems, in Turkey, households are abandoned to their fates. Except few attempts such as providing rental units in metropolitan cities, the state did not provide any housing policies rather than supporting homeownership. Housing production has become a significant part of the housing policy to execute homeownership and ensure economic development by utilizing the construction sector. During 2000s, with the initiation of "a country-wide housing program" aiming the increase in the share of owner-occupier households, new housing construction activities have accelerated and discussed in studies on spatial and social dimensions (Özdemir Sarı and Aksoy Khurami, 2018; Çelik, 2020; Topal, Yalman and Çelik, 2018; Erman, 2019; Friedman, Kurtuluş and Koç, 2020)

and economic and political dimensions (Erol, 2018 and 2019; Coşkun, Seven, Ertuğrul and Alp, 2017; Ergüven, 2020; Yeşilbağ, 2020; Ceritoğlu, 2020).

Furthermore, several measures have been undertaken to increase the private sector's housing activities and encourage the sale of produced housing units since 2002. By this means, homeowner households are assumed to benefit from homeownership's advantages, the increasing housing prices as the capital asset through their housing units, and the increasing wealth in the country created via construction activities. However, the effects of those housing policies adopted since 2002 on households and the expected promises of homeownership for households have never been monitored by governments. On the research side, very few studies considered these policies (Özdemir Sarı and Aksoy, 2016; Aksoy, 2017). It is evident that whether owned or rented, housing, and any consumption related to it is fragile for individuals and families regarding many different aspects. Mostly, for low-income households, housing holds a high proportion of their income to afford and hampers to meet other needs (Stone, 2006; Dolbeare, 2001).

1.2 Aim and Main Research Questions of the Thesis

With the argument of a gap both on the policy and research side about the consequences of Turkish housing policy, this thesis proposes to investigate whether the promises of homeownership in Turkey are fulfilled through studying the effects of housing policies employed after 2002 and discussing the possible implications of these promises on urban planning and housing policies. It aims to investigate failed and succeeded promises of homeownership in Turkey by overviewing an international framework and evaluating whether homeownership is a rational housing policy for all households in the country. Thus, this study needs to clarify these promises at the first stage based on the international housing literature and Turkish housing policy to explain which of these promises have failed or succeeded for different income groups, primarily low-income households. A better understanding of the drawbacks and success of homeownership policies, especially

for low-income households, will contribute to the improvement of housing policy and strategies in Turkey. To do those, multi-level research questions are generated to evaluate and explain homeownership's contemporary promises in Turkey.

First of all, this thesis main hypothesis is derived from the unique housing experiences of Turkish households, which is influenced and shaped by the centrality of homeownership promoting housing policies. Homeownership is evaluated as an absolute success that is obtained once and lasts forever for households and a policy objective for governments in Turkey. Beyond is unquestioned, and for this reason, households are considered to be homeowners and non-homeowners. Their status as owner-occupiers to get the advantages, they are aiming to acquire or intended to obtain by governments has not been a subject to discuss. From this shortcoming, this thesis tests a hypothesis***: Homeownership as the major and country-wide housing policy, fulfill the promises of housing wealth and housing security for all households.***

Following the hypothesis, the following questions are raised.

Research Question 1: What are the promises of homeownership affecting the decision to buy a home for Turkish households?

Research Question 2: To what extent are these promises achieved for owner-occupier households?

Research Question 3: Which factors and characteristics of household and housing units have a statistically significant effect on explaining the differences between households?

1.3 Data and Research Design

During the last 50 years, homeownership and housing contributed many academic disciplines in sociology, economics, and welfare studies due to their dynamic context. Many studies examine different aspects of homeownership. While economists primarily focus on the price of unit and households' income as two of the essential determinations of choice between renting and owning, social sciences mainly examine tenure choice by focusing on individual households' behaviors, the burden of this choice on households' budget, and quality of their life. Socio-economic and demographic variables in the lifecycle of households have built cornerstones in studies (Coolen et al., 2002).

In this thesis, housing security and housing wealth create a structure of research design as visualized in Figure 1.1. Altogether determines the achievement of the promises of homeownership (housing security and housing wealth) of households in the primary residence. It is expected that not only the price of the unit defines housing wealth of households but also the access to services. Also, the burden of housing expenditures together with the housing condition in the current unit shape the housing security of households.

No matter households intend to be a homeowner to shelter in or invest on, if an owned housing unit has more features than average, it is expected to have high quality in housing and environment or/and comparatively higher current market value. The support of public services is expected to increase the value of the unit, on the other hand, if public service is not supported to housing units with the comparatively middle and lower current value, an enormous/moderate decrease in the market value of housing unit is expected in the long run. While the first group is obtaining a high level of housing wealth, the latter acquires the lower. Features that housing unit having also defines the quality of the housing unit and environment. To reach this quality, if housing expenditures in the form of housing debt, maintenance or repair payment bring burden to household's budget, these households experience a low level of housing security.

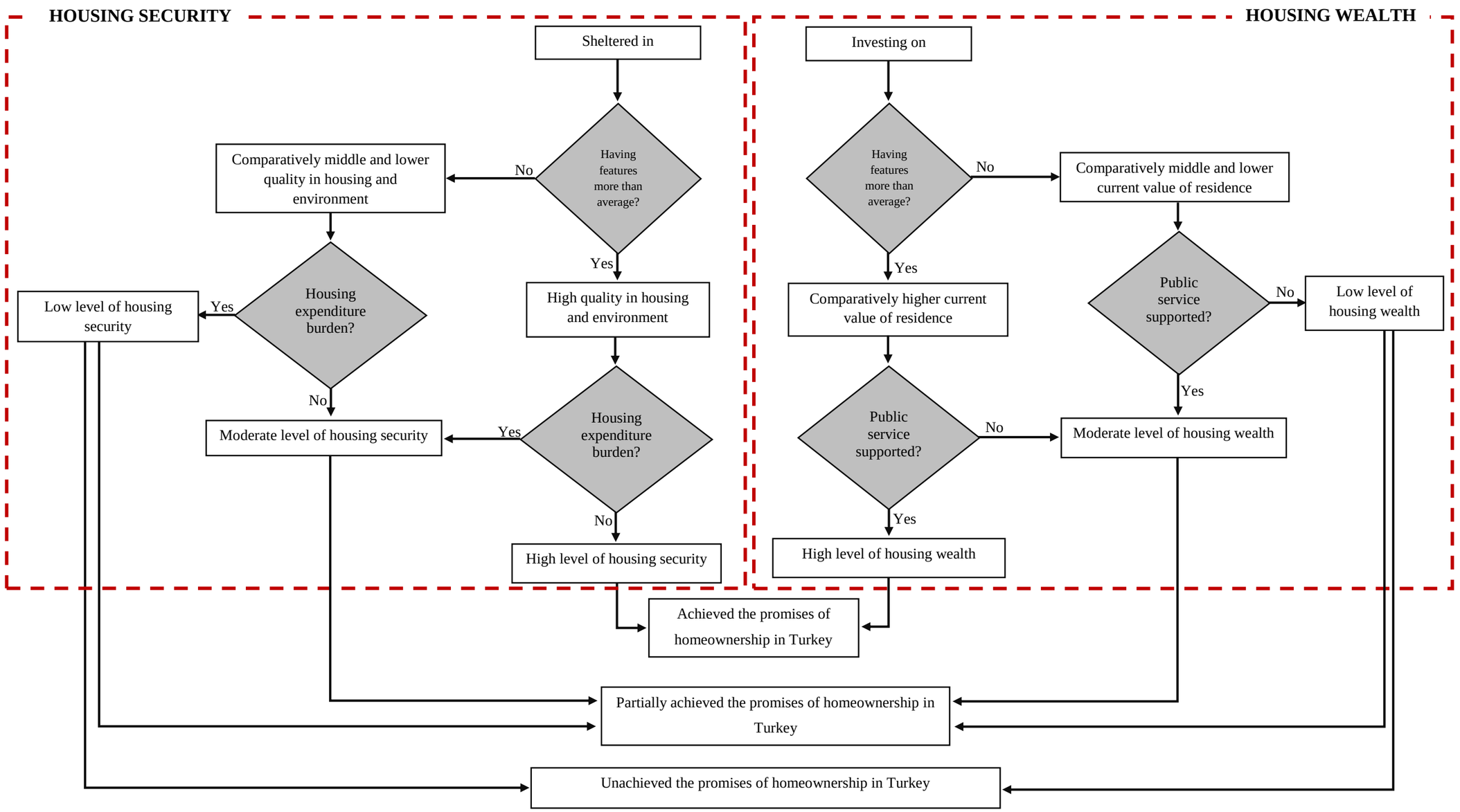

Figure 1.1. The Structure of the Promises of Homeownership

To explore determinants of the failed and succeeded promises empirically, this research adopts three essential data sources. Two of them are the secondary data sources; Household Budget Survey (HBS) and Survey of Income and Living Conditions (SILC), compiled by Turkish Statistical Institute (TURKSTAT), made available for public use. The third one is produced within the scope of a research project named "The Investigation of the Promises of Homeownership" supported by TUBITAK. It adopted a survey of eight districts of Ankara, including 663 households in 114 neighborhood units.

Even the first two data sets were not explicitly conducted for housing research; they provide crucial variables based on households (Hh income, mode of tenure, type and age of dwelling, demographic characteristics, the availability of housing debt, difficulties that households are facing due to the location of their housing units). Also, they provide a sufficient number of observations to investigate the success of the promises of the homeownership for Turkish households.

Although HBS provides opportunities to explore the success of the promises of homeownership, it has many shortcomings. Unfortunately, the data does not provide location information, even at the province level, making it impossible to integrate data from other sources. It obliges the researcher to evaluate a country as a whole. A second drawback was the lack of crucial information on the price of units when households bought it. Thirdly, the dataset does not provide the amount of remaining and paid debt, the type, and interest rate of debt for the housing unit. These shortcomings do not give a chance to compare the exact change in the unit's price to comment on the change in housing-related wealth of households. Also, SILC has many drawbacks to work on the promises of homeownership. For instance, it does not provide variables about the current price of the unit and the number of owned units but covers the extent of (non)housing expenditures burden on households and geographical reference at the level of NUTS-1 and 2. In other words, some variables are available in only one of these data sources. Therefore, a combination of these data sources and interpretations of them together becomes necessary for the researcher. A different methodology should be considered for the data combination;

however, it is not focused in this thesis. Although these data sources have many deficits to examine the success/failure of homeownership promises, they are the only data sources that provide many variables about households and the housing unit itself for a country-wide study.

To bridge the gaps of SILC and HBS, the Ankara survey is designed to overcome the limitations mentioned above to investigate the promises of homeownership and the measurement of the level of achievement. Conducting surveys coincided with the Coronavirus pandemic, which hampers to conduct site surveys; therefore, households are hardly reached. Even so, it is worthy due to the variables missing in HBS and SILC such as geographic reference at the district level, households own assessment on their income level, the price of the housing unit and rent for all households, whether they calculate their financial advantage through being an owner-occupier, the motivations to be a homeowner and the negative experiences of homeownership. Last but most, significant variables which are enabling to measure housing wealth and housing security promises of homeownership simultaneously based on households' assessment are the price level of housing unit, level of satisfaction with the location of housing unit, the level of satisfaction with housing, and its environment, and the level of burden of housing expenditures.

Similar to the data section, the analysis part of this dissertation also comprised two different parts. In comparison, the first part focuses on the country-level analysis of homeownership promises, housing wealth, and housing security separately, the second step targeted district level measurement of these promises simultaneously. These parts follow different methodologies of analysis, considering the type and existence of variables. However, both part aims to test "Whether homeownership as an only and country-wide housing policy fulfill promises as mentioned above for all households or not". The first part focuses on owner-occupier households by selecting the methodology to measure housing wealth and housing security and then assessing the household and housing variables on the prediction of the level of achievement of housing wealth and housing security. It consists of seven main phases on an ongoing

basis. The prediction of housing wealth and housing security focuses on the steps given below;

- Identification of the variables to measure housing wealth and housing security considering the variables in literature and the Turkish experience of housing policy and homeownership.
- The decision on the allocation of the use of datasets for the measurement of housing security and housing wealth
- The selection of methodologies to formulate housing wealth and housing security variables regarding defining variables and their types enable them to measure.
- Preparation of independent variable groups of owner-occupier households according to the categorization of equalized income, imputed rent, the age of the head of household, the number of earners, the number of rooms, the size of the housing unit, total year of residency, etc. At the end of this phase, it becomes possible to analyze households on the basis of these categories. In other words, the success and failure of promises of the homeownership are tested with a comparative frame of households.
- Descriptive evaluations of the factors to predict the level of success of the promises of homeownership
- Overviews of the statistical methods of analysis and deciding on
- Employment of the statistically significant factors to run a Multinominal Logistic Regression model.

In the second part of the analysis, the main aim is to measure housing wealth and housing security for the same households. It only enables to produce of a dataset considering the need for measurement and variables. It tests the hypothesis of this dissertation focuses on owner-occupier households, then assessing the household and housing variables on predicting the level of achievement of the promises of homeownership (housing wealth and housing security). Due to the survey questionnaire's preparation based on the need for analysis, the phases like identifying

variables are not included in this part. It consists of five main phases on an ongoing basis. The prediction of overall success in the achievement of the promises of homeownership in Ankara focuses on the steps given below;

- Preparation of independent variable groups of owner-occupier households according to the reasons on households' desire to be a homeowner, the existence of negative experiences of homeownership, districts, housing price and imputed rent per m^2, the age of the building, the number of rooms, households' assessment on income level, the existence of financial calculations on advantages.
- Descriptively evaluations of the factors to predict the level of success of the promises of homeownership
- Observing the level of associations between housing wealth and housing security and other independent variables
- Overviews of the statistical methods of analysis and deciding on
- Employment of the statistically significant factors to run a Binary Logistic Regression model.

1.4 Outline of the Chapters

This thesis is planned in six chapters. In the introduction part, the main structure and context of the thesis are summarized by focusing on the aim and main research questions of the thesis, employed data, and research design of the thesis.

After the Introduction, Chapter 2 reviews the relevant literature on homeownership and related policies from the perspective of the promises by classifying the studies under the household perspective of homeownership and government side homeownership. The dimension of housing for households, price of the unit, housing wealth, accumulation, liquidity, habitability, security, and entrapment are reviewed. Also, homeownership from the point of governments' view is covered by discussing the trade-off between housing and the welfare state and citizens' commitment to

governments. Then, the reliance of governments on property-led development in achieving economic growth targets is discussed.

Chapter 3 provides information about the conceptual framework of homeownership in Turkey. The chapter starts with a discussion of homeownership as encouraging policies and programs in Turkey. It evaluates homeownership in Turkey in two parts before 2002 and since 2002. How homeownership has evolved, and the current attempts to promote homeownership form this chapter's content.

Chapter 4 evaluates the findings of a theoretical framework to fictionalize the methodology of the analysis of the promises of homeownership. In light of findings and HBS, SILC, and Ankara Survey data, the thesis's main variables, and methodology are envisioned and described in more detail.

Chapter 5 is the main stage of the country-wide analysis of the thesis covering two different empirical investigations of the success of the homeownership's promises in Turkey; housing wealth and housing security. For country-wide evaluation, in the first analysis, the consecutive steps of the identification of the groups of owner-occupier households and housing wealth and housing security measuring variables, exploration of the factors affecting the promises of homeownership for each group of households, and employment of the statistically significant factors are followed by utilizing the Multinominal Logistic Regression to observe the effects of different household and housing units related factors.

Chapter 6 fulfills the missing aspects of country-wide analysis through the case of Ankara at the district level. It focuses on the aspects of households' desire to be a homeowner and negative experiences of homeownership. Considering them, to what extent households succeed in reaching their objectives is answered together with the prediction of the factors affecting the level of achievement of the promises of homeownership in this chapter.

The last chapter concludes the thesis, which summarizes and provides insights on the study's general findings. This chapter also aims to direct discussions for future

research areas and policy proposals about housing and widen the housing policy perspective in Turkey.

CHAPTER 2

HOMEOWNERSHIP AS A(N) (UN)PROMISING POLICY

Urbanization represents the most dominant force and the most significant single challenge of our time to realize the right to housing (UN, 2016). It beclouds to provide everyone a fundamental human right to housing, through ensuring access to a safe, secure, habitable, and affordable home without risk from forced eviction. The changes in processes and geographies do not shade in the fact that the primary responsibility to promote housing policies and provide or at least control the provision and management of housing by considering tenure choices of households is employed for the central and local government. After that, selecting the best options for the tenure structure pattern, corresponding to the requisitions of this selection according to the country's current condition (demographic and economic characteristics and the concerns of adopted social and housing policy), is expected under normal circumstances. With the current process of globalization and financial crisis, even countries such as the Netherlands and the UK, which are seen as the ancestors of social housing provided by governments, the provision of housing has shifted from the state to more commodified and self-provided strategies. The right to housing has disguised the form of homeownership with the bidirectional forces of households and governments as an only tenure choice to get universal positive consequences. As UN Report on adequate housing indicated, "Housing has increasingly been treated as a market commodity rather than a social good and a fundamental human right, left to individuals and households and the forces of increasingly unregulated markets rather than being made subject to coordinated government policies and human rights commitments (2005)". Neoliberal conceptions of housing wealth and asset-owning homeowners have also begun to permeate these societies, undermining the logic of equality and justice in the

provision of housing and tenure neutrality in policy, to forge alignment around homeownership as the state-favored tenure (Ronald and Dewilde, 2016).

As expected, households approached this change by making housing the most substantial property that most households desire to have. However, as the rates of homeownership of different countries have shown, while homeownership is becoming the massive tenure mode for some, the mass homeownership reached its end for remaining countries (Arundel, 2017a). Whether it comes to an end or not, homeownership as a housing policy provides dozens of promises to households. To benefit from these promises, households are fascinated with the homeownership. The decision to own a home is an important one because it involves investing a large amount of money and an agreement for governments to work up in connection with households regarding many aspects. Saunders and Harris revealed that owner-occupied households are aware of their increasing gain originated from the housing (1988). Many of them develop strategies to sustain and increase their earnings. It has brought and empowered a specific division of society and space as homeowner-others. The housing market has driven social class inequality in favor of housing market insider (owner-occupied household) with increased house prices (Saunders, 1984). While tenants are explicitly removed from for-sale housing units because of an increase in prices, housing provides concomitant gains and losses for households with changes in housing prices. These changes in prices as gain or loss are revealed, namely housing wealth, as one of the blockbuster's promises of homeownership. The promise of security in various forms (tenure, physical, payment) is disclosed as a differential among housing tenures. Homeowner and tenant households are mostly compared to reveal the advantages and disadvantages. Except for surprises affecting payment such as divorce, unemployment, being a homeowner is evaluated as more secure. However, for whom is still under research by comparative studies.

In addition to the promises of homeownership to households, it also bounds governments to cut expenditures. Links between housing and welfare systems are investigated by dozens of studies, focused on the trade-off between real estate-housing and state pension systems. "If it is difficult to cut welfare state, then

governments will tend to look for alternative means of achieving their objectives, and in this context, the housing market emerges as a possible tool or lever of change, rather than a driver of it (Malpass, 2008, p.8)".

There is no doubt that housing has the only pivotal role in households' lives for a range of benefits, and homeownership is just a mere tenure choice to reach these benefits. To be clear, being a right does not make housing free of charge for everybody. However, at the same time, when it is evaluated as a commodity, owning (willing to pay) is not settled all problems and guarantee to benefit from advantages.

2.1 The Narrative Review of the Homeownership Studies

The fact of owning a home, homeownership, has had a significant part in housing literature. Especially with the changes in housing since the 1970s about tectonic shifts in a social, economic, and political context (Malpass and Rowland, 2010), many scholars have covered different aspects of homeownership. Due to its prevalence characteristics throughout the US's history, homeownership is accepted as an ordinary way to consume housing. However, during the last century, almost all countries in Europe have experienced major shifts in housing tenure and called "a union of homeowners" (Doling and Ford, 2007). The triggering events for these shifts were associated with the two World Wars, changing regimes of countries (privatization of statehouses), legislative frameworks (the right to buy), and social policies of countries (welfare state, homelessness, etc.). Undoubtfully, the British case in homeownership studies has covered the lion's share with the right to buy and widespread effects of the transition in central and local decisions. The British housing market, which was 90% private tenant in the period of World War I, started to reverse in the 1960s, and private rent dropped to 10%. While all this happens, housing ownership reached 50% of total households in the 1960s and 70% in 2003 (Doling and Ford, 2007). However, in the recent period, homeownership in Britain has fallen to its lowest level for 30 years, the number of people privately renting is now higher than in the early 1960s, according to official figures. Although the entry to homeownership of households has differed from the Turkish case, the British

housing market has faced the first increase in owner-occupancy then a sharp decrease in the recent period as observed in Turkey.

The declaration of the Right to Buy (RTB) policy under the Thatcher government in 1979 has shaped the future of the housing market. In order to display the broad sphere of influence, Jones and Murie underlined that "By 1979, around 32% of all dwellings in Britain were council houses, totaling some 6.5 million properties - a far greater share of the total housing stock than that of public housing in, for example, the United States" (2006, p.52). Overall, controversial policy, RTB, was admitted responsible for an increase in homeownership ratio from 55% in 1979 to over 70% in the early 2000s in the UK (Doling and Ford, 2007). Under the RTB as a halfway house privatization because the price paid was below the market level, households exploited discounts and grants. Also, the aforementioned units were proposed to their current tenant households.

Housing without profit motives has been built by central and local authorities and a group of non-profit organizations as representative bodies of the state. In the UK case, Council Housing is used as a term for Public Housing since the 1920s, local authorities have become the responsible body for the construction and allocation of these units as a part of slum clearance and rehousing action of low-income families. Until the last quarter of the 1970s, council housing has served as a subsidized rental housing to meet vulnerable groups' housing needs. As a result of the application and waiting lists, these units were allocated. However, a changing mechanism of the property-owning democracy, giving a right to tenant households to own their home and supporting them, has changed the way of housing consumed by British households. Housing units were started to be considered as beauty and the beast based on the location. In the end, some neighborhoods have become unpreferable to buy their living tenants who were mostly at the lowest end of income groups, not able to take a mortgage loan, older, do not have regular jobs and income. On the contrary, some neighborhoods close to working areas had hosted lower- and middle-income households with comparably better housing and environmental quality. In the process of RTB, council housing units and council housing's neighborhoods

were divided into categories in response to their rate of sale and household living in these neighborhoods.

A narrative review in the form of the summaries of different primary studies to exhibit the steps which homeownership passed through, the methods of milestone studies handled homeownership, their critics by other scholars chronologically have revisited. Seven main studies have shaped this part of the thesis.

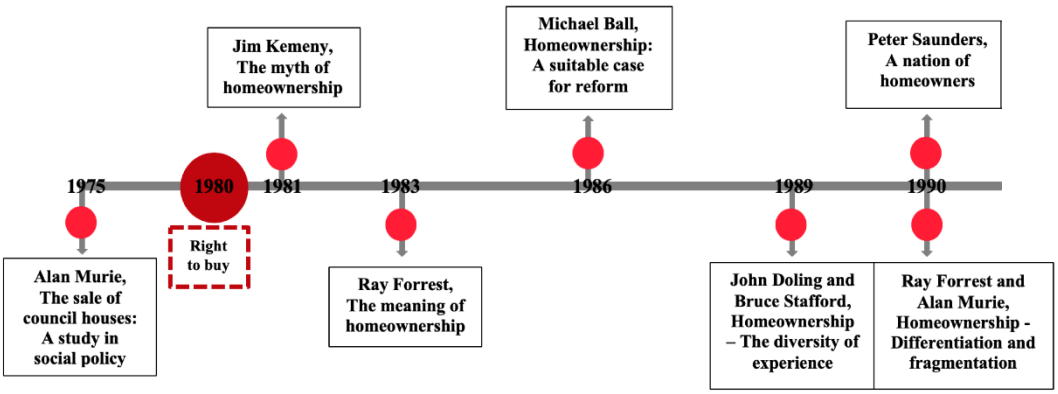

Figure 2.1. Timeline of the Narrative Review Studies

The review of studies has started with the study of Alan Murie; in his essay type paper, he examined the relational roles of central and local government in council housing units' sales. Although central authority was blamed and regarded as responsible for the sale of units, Murie's research showed the unexpected result that "The increases in sales between 1966-73 were initially due to the activities of a few key local authorities which embarked upon substantial programs, rather than a widespread response to central government policy changes" (Nevitt, 1977, p.112). Even the expansion of homeownership has changed the encapsulating title of "a man of property" from aristocratic elites to working class in the UK, Murie argued that the sale of council houses that will not meet the interests and needs of households on waiting and transfer lists.

The purport of housing class has become the momentous part of the various theoretical or political perspectives (Rex and Moore, 1967; Haddon, 1970; Saunders,

1978); whether their base has differed or not, many have arrived at a consensus about the uniqueness of housing. However, in his paper, Forrest has tried to show that the meanings, attitudes, and material interests are highly varied between owner-occupation types (1983). To exemplify that, he focused on the negative and non-mentioned implications of homeownership. Forrest interrogated homeownership and the RTB policy from the social class transformation, consumption pattern, and political ground.

First, the changing perspectives of political parties have their shares on the critics of the Forrest. According to him, with RTB policy, a critical difference in housing and its consumption between the two main British political parties has been observed. It was a well-known fact that the Conservative Party's support of homeownership as cited "Homeownership gives personal mobility, personal pride, and stimulates the natural instinct of care over, and preservation of, what is one's own. It helps create greater responsibility and stability in society" (CCO, 1979, p.1). Hereafter, homeownership will not only be the encouragement and policy of the Conservative Party; it has also expanded to and associated with the leftist parties in the UK. The stretched issue to encourage homeownership with the discourse of property-owning democracy was summarized that "the property-owning democracy is a false promise; the stake in the system is illusory" (Forrest, 1983, p.214). Forrest argued that this democracy is restricted to consumption. Especially with credit-based consumption, homeownership was used to stabilize countries' economies and encourage more consumption. As a result, capitalist ideology has enabled to expand of its sphere.

Then, Forrest discussed the social classes in society from the modes of tenure. The meanings which owners, therefore, attach to their dwellings differ fundamentally from those used by tenants. Owners have a two-fold relationship to housing in terms of both use-value and exchange-value, whereas, for tenants, housing constitutes simply a use-value (unless we are considering rental income). For example, a high rate of house-price inflation will represent potential capital gains for the owner but is likely to be reflected in higher rents for the tenant. Homeowners are also blessed

with rental income from their rented units. Whether a homeowner has single or multiple units, only these households are seen as potential gainers from rents. However, it should be considered that tenants do not have any restrictions to rent some parts of their units (a room, entrance, roof). They can also get some returns through this trade-off. Therefore, encouraging homeownership having regard to rental income does not work separately. Social classes based on the ownership and income associated with ownership should be revisited (Forrest, 1983). Differentiation of homeowner households continues in the two terminals: outright owners and mortgaged owners. Housing careers of different households have been affected by the time and the conditions of purchasing. For this comparison, Forrest defined two groups of households; one purchased their house in the early 1970s, with high house-price inflation and relatively low-interest rates, the second entered the housing market as a homeowner in the early 1980s, while the opposite was valid. Also, Forrest argues that homeownership is no longer be taken for granted. A severe repairs problem, for instance, has emerged in the owner-occupied sector. It is quite clear that once owner-occupation is achieved, problems do not vanish; also, he adds that "House ownership may be a game we can all play, but the chances of winning are skewed heavily in certain directions" (Forrest, 1983, p.214).

Different than the homeownership opponent arguments of Forrest, Jim Kemeny started his study with the comparison of the three different modes of tenure (the consumption of housing); public (cost) renting, private (profit) renting, and owner-occupancy; in the long and short run to reveal the discourse of the myth of homeownership due to the relatively low cost of owner-occupancy. The basic thesis underlying The Myth of Home Ownership (Sweden, Australia, Britain) is that there has been a divergence process within the small group of industrialized societies between corporate and private forms of social structure. He examined these societies according to the characteristics of the housing markets and observed noticeable differentiation among them. The comparison is named occupancy cost of tenure mode, and Kemeny approached this cost considering fixed and differentiated debt structures, the share of the cost, and the government's role and financial support.

Kemeny criticized a previous study focusing on the superiority of owner-occupancy due to its lower cost than other tenure modes and also biased evaluation about the benefits of owner-occupancy. He labels them as "a summary of successful encouragement of economic and political arrangement to promote homeownership" (Kemeny, 1981, p.13) and points out the deficiencies and missed approaches of these studies. By indicating the misleading methods in the calculation of the cost of housing tenures modes (Hamnett, 1982, p.91) (averaging the mortgage cost of old and new houses, historical costs of construction, the ignorance of rent-pooling in public housing, the duplicated payments of historical costs of owner-occupied housing via reselling these units), Kemeny repents the neglected side of housing studies.

According to Kemeny's study, while homeowning societies have private dominated housing market (Australia), cost-rental societies (Sweden) have a well-developed market. Due to its limited capacity in number, social housing serves for few households with various restrictions in the former one. In the second one, rents are arranged jointly based on the actual cost price. According to him, Britain was in danger of transforming the dominant tenure structure from rental to owner-occupied. The findings of Kemeny are summarized by Gellen (1982, p.512), conveyed as "Private renting is cheaper than public renting, which in turn is cheaper than first-time buying. Both public renting and private owning are severely handicapped by the high initial mortgage credit cost and must be subsidized in the early years to compete with private renting. Over the long run, however, public renting does better than private renting and owner-occupancy because collective ownership allows for the pooling of historic costs-that is, if the public rental sector is large and properly age-balanced concerning debt structure". Gellen denominates The Myth of Homeownership as creating a tremendous impression attracting the housing analysts and planners in the US and researcher in many other countries due to its different perspectives about the housing tenure because Kemeny defines the shape of housing tenure and its system as a consequence of government's policies.

Michael Ball penned another monograph in homeownership studies in 1986 after a few years of RTB policy declaration. He observed the semi-result of owner-occupation policy via the right to buy and then came with his main findings and possible future outcomes. Ball argued that there was a housing crisis, inordinate in quality, and various styles and content. It is mainly about the level of physical deterioration and the increasing disadvantage experienced by certain groups. According to Ball, "the structure of provision" in other words, the delivery system of housing creates instability, leads to unaffordability and unavailability of housing for outsider-non-beneficiary of the RTB. To overcome these problems, he proposed a 10-point reform plan. Changes in the form of reform in housing construction and housing finance (mortgage) should be offered and implemented. Tax relief, state intervention in the buying and selling of houses, the public ownership of land, the development of non-profit housebuilders, and the decasualization of building work can be counted as the primary form of a reform attempt. Although he gave basic presumption about his reform proposal, Ball criticized by Yates due to the lack of clear indication of "how the effective nationalization of the land is to be undertaken, how regulation of house prices is to be implemented or how non-profit finance institutions are to be financed" (1987, p. 137). Also, to reduce the overall cost of housing, the study of Ball with suggested policies on the separation of the use and exchange value of housing and its rigorous and convincing analysis to point the crisis of owner-occupation out is appreciated (Yates, 1987).

Saunders discussed the pure effects of private and public initiatives on the increase of homeownership and indicated the unvalued push from household level with the increasing income in the post-war era. He defines the decision of homeownership as economically rational due to the wealth generation. As a eulogizer father of homeownership studies, Peter Saunders sees homeownership's growth as being driven by consumer preferences for that tenure. For him, homeownership is the preferred choice of the overwhelming majority of British households, whatever their present future (Saunders, 1990). Hamnett underlined that Saunders' argument to be

addressed by the left that the desire for security, freedom, and control can be achieved totally on housing consumption as a homeowner (1991, p.133).

Further, he argues that those fortunate enough to attain homeownership achieve substantial benefits in the form of wealth accumulation and ontological security. Homeownership gives a greater sense of control over one's environment and satisfies people's innate instinct of possessiveness. Homeowners feel differently about their houses than do non-owners, purely because of the fact of ownership. He shows that increasing wealth accumulation through homeownership led to a substantial increase in the wealth of holdings of those in the middle of wealth distribution and has increased their proportion of total wealth at the expense of those at the top end of the distribution. He thanks to homeownership due to its spreading effect on the share of the nation's wealth. In addition to the economic side of homeownership, Saunders dealt with the social one. He found in his comparative research that "Owners are more likely than council tenants to belong to social organizations, to go out socially, and to be satisfied with their social lives" (Kingston, 1992, p. 63). Similar to other scholars, Saunders is also criticized due to the limitation of his survey and some misuse of the representativeness of his survey (focusing only on three towns in Britain). Clapham touched this issue with the unworthy note number (only 45 homeowner-former council tenants and 113 council tenants) (1991, p.649).

Contrary to Saunders, Forrest, Murie, and Williams trio, homeownership could not only understand consumers' preferences (1990). The commodification and changes in financing, producing, and organizing of housing should be evaluated to understand the growth of homeownership. Also, the division of mode of tenure cannot be the only way to group households due to its limits; besides, tenures are differentiated and fragmented, as seen in the title of the book. They accepted the positive values of housing for its owner, yet indicated that, but some even in the owners' group can suffer to keep of the property, meet mortgage payments, and decline in the real market value of housing units. The main argument of the book, the differentiation, and fragmentation of homeownership, is frequently mentioned in the text; Clapham

criticizes the trio on the occasion of the incomplete and inadequate evidence (1991, p.650). Also, Forrest, Murie, and Williams believe the ongoing process of homeownership as an individual and public experience; therefore, making arguments according to one point in time can be misleading. Even the future of homeowner society will change with the maturity of the housing sector.

Finally, in their research memorandum, Forrest and et al. expected the discrimination of some groups who need decent housing rather than their existing unpopular rental estates (1990). Certain types and council housing locations will not be offered as a choice for these households, and segregation will be an explicit outcome.

Clapham asserted homeownership studies as a dual carriageway; one goes to Saunders, a sympathizer of homeownership, other to Forrest, Murie, and Williams not holding with homeownership. "Overall, if Saunders is too inclined to eulogize homeownership, Forrest, Murie, and Williams are, in my view, too inclined to dismiss its positive elements" (Clapham, 1991, p.650).

In addition to the first sale of council housing units to their current tenant, the second sale started with these units' resale by their current owners (previous tenants) to someone else as private housing units. For some groups of households, who had advantages due to their rental units' location, buying them below market values had brought extra advantages in the form of financial value when they decided to sell these units. Because when the RTB purchaser chooses to sell, they will sell through normal market processes at market prices. Although these prices may be below those of similar properties with a different history or are indifferent neighborhoods, the transaction becomes fully commodified.

Many of these scholars have recommendations about improving the housing market in favor of households, whether in the form of homeownership or not. To achieve this task, Kemeny argues the necessity of tenure neutral housing policies to provide alternatives and give households chances to choose among them under the neutral

condition. After he believes the comparison on the cost of housing tenure would be meaningful. In Saunders's policy recommendation, he approached the major housing problem: the failure to achieve homeownership status for many households who wish to be owner-occupier. He suggests a proposal for housing vouchers to switch with housing subsidies. By this means, he believes that the sufferer of the existing housing system, low-income households, will be a homeowner as they wish. In the recommendation side of the book, Saunders advised that "Homeownership should be extended to all those who are, at present, marginalized in rented accommodation since they are unable to enjoy the psychological, social, and economic benefits enjoyed by homeowners" (Scase, 1991, p.637). With this property-owning democracy, a more egalitarian society will create in his point of view. However, many people desiring to be a homeowner are not able to achieve this status. To overcome this obstacle, he proposes housing vouchers to replace housing subsidies.

To sum up, almost all of these studies have arrived at a consensus on the diversity of homeownership experience and the effects of housing policies. What homeownership means in Denmark or France in the 1990s may not necessarily mean the same as it did in the 1980s. Also, it is undoubtful to define homeownership temporally and spatially contingent. Within any one country, changes in the homeownership market over the last decade, for example, may have had the effect of adapting what ownership means. At the social level, homeownership might mean entirely different things: status, independence, pride, individualism, and achievement; while, at the economic level, the meanings might be investment, financial burden, collateral, and security, in the legal context; a right to design, make non-structural changes. What scholars are sure about the homeownership is with the expansion of homeownership, the market is becoming more stratified and more segmented (Doling and Stafford, 1989). Thorns summarized the concept, "The housing market functions to create a growing differentiation amongst owner-occupiers. This growing differentiation means that wealth accrues to some more rapidly than it does to others. The evidence further suggests that this process of

accumulation transfers wealth to those who already have substantial assets, thus reinforcing rather than reducing existing social inequalities" (Thorns, 1981, p. 28).

2.2 Household Perspective of Homeownership

Housing whether owned or rented has a unique place in the lives of households being "a basic building block for a range of related benefits; personal health, safety, employment opportunities, a decent education, security of tenure, and economic security" (Bratt, Stone, and Hartman, 2006, p.1). However, these benefits are not provided for all households, Boelhouwer et al. (2005) defined some of them according to commodity type. When it is considered for the modes of tenure, a renter, owner, and renter but also owner, the latter has the most significant share of benefits.

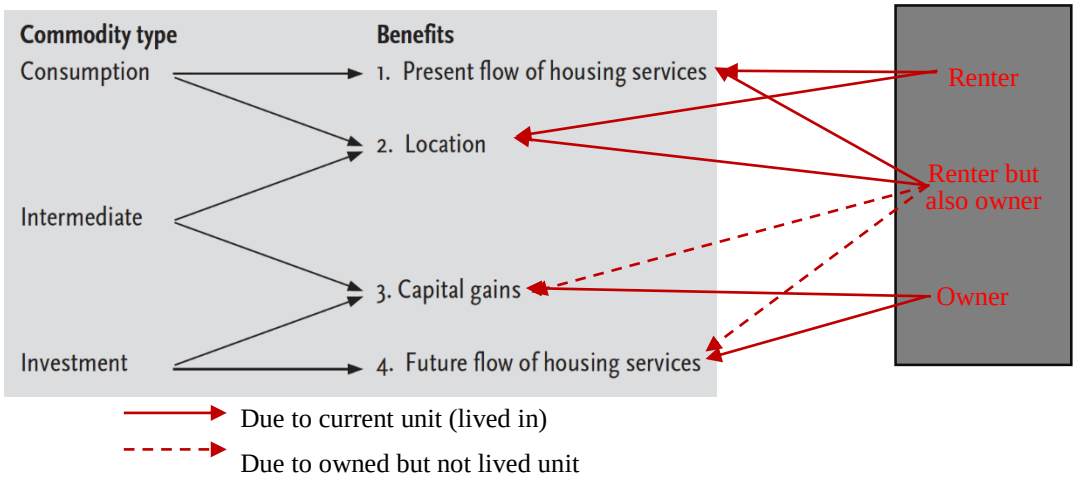

Figure 2.2. User Benefits of Housing (adapted from Boelhouwer et al, 2005)

The literature on housing studies approaches homeownership by focusing on many dimensions; one of these is the household perspective of homeownership. Due to the diversity of housing markets and studies based on them, scholars' focus has varied. While in some studies, homeownership is reached as the achievement of individual and societal norms, others discuss the benefits of homeownership for owner-occupier households than tenants considering the user rights on the housing unit. In this section of the thesis, existing studies tried to evaluate in order to shed light on why households prefer to be a homeowner? A quotation from Forrest and

Murie, "Homeownership may be a game that all can play, but the chances of winning are skewed heavily in certain directions (1990, p.90)" has become the primary motivation of this literature survey. The discussion based on this quotation is approached in two headings; Homeownership: A Prisoner Dilemma, and Housing for All but Housing Wealth for Some.

In "A Nation of Home Owners", Saunders argued that as a kind of possessive instinct, households have a natural tendency to become a homeowner (1990). This tendency does not change the duality of homeownership. Here, homeownership is discussed as two sides of the coin: the security situation for households to remain safe and unthreatened against surprises. However, only homeownership is associated with household entrapment due to the long-term agreement, hard saleable, and moving conditions.

Since housing has a major role in households' lives as a shelter to live safely, the enchanted housing era has started with housing perception changes as a life chance of households (Pahl, 1975). Being a homeowner creates an opportunity to gain capital; this means it would blur or decrease inequalities due to the labor market. It will originate from another pole; renters and owners. By the time, this division has varied, as Dupuis (1991) examined via New Zealand case, all or at least most the households are a homeowner, it cannot create any sense. Therefore, rather than owning, what households own, where and under which conditions should be considered to define housing wealth. All in all, while housing is a right for all, it is wealth for some households.

2.2.1 Homeownership: Being Secure VS Trapped

Homeownership is a status having advantages and disadvantages for households. In addition to the distinction between the insider and outsider of the housing market, there are also specific advantages and disadvantages for various market groups. Until the last decade, homeownership has been mostly mentioned by its definite promises

to ensure households; it was associated with an ideology of "safe haven" for households (Dupuis and Thorns, 1998). Although there is a general tendency to accept homeownership as the most advantageous mode of tenure, the global financial crisis revealed that homeownership does not provide household security and insecurity (Schwartz, 2012). A house cannot always act as "a nest egg" (Andre, 2017); price volatility, reduced labor mobility, and payment problems in the case of income losses can all make one's house a liability (Ansell, 2014; Doling & Ford, 2007; Elsinga, De Decker, Teller, & Toussaint, 2007; Nettleton & Burrows, 1998).

With the empirical evidence from three UK towns, Burnley, Slough, and Derby, Saunders argued that two drives motivate households to become homeowners. "One is financial - buying is seen as cheaper in the long run, or rent is seen as a waste of money, or rising prices are seen as a means of saving for the future or accumulating capital. The other has to do with the sense of independence and autonomy which ownership confers - the freedom from control and surveillance by a landlord and the ability to personalize the property according to one's tastes" (1990, p. 84). Similar to the motivation of households in Saunders' cases, the (in)security of households is approached in two forms: non-financial and financial; hence, households were compared according to them. In the financial dimension of security, wealth and affordability are mostly discussed.

All around the world, rising incomes have affected the demand for property ownership rather than renting. However, limited housing supply, increasing house prices, and difficulties in accessing credit prevented households from becoming homeowners. In this context, housing affordability arises as a primary subject of housing and is covered by the concept of housing need (Monk and Whitehead, 2000). Regarding payment, the mortgage payment rate and the annual rent increase define the advantaged group. If homeowners pay their mortgage payment with fixed interest rates, they will not face unexpected affordability problems. However, if the rate is not previously defined as fixed, they can have economic security problems. In addition to mortgage payments, Haurin et al. focus on the other homeownership

costs, such as legal fees, inspection costs, and closing costs (2007). Then, they argue in the condition of limited financial sources of households, the security of households will be on the danger list. According to O'Leary, not only the interest rate of housing credit defines homeowners' risks, but also crises lead to insecurity for some households. He indicates that "when the housing bubble burst, homeowners on the financial margin could not keep up with mortgage payments" (O'Leary, 2011). It brings skyrocketing foreclosures for low-income households. Although owner-occupier households are accepted as the more secure group in society concerning unexpected affordability problems due to no or at least slow change in payment, the cost of maintenance brings the concern for homeowners. Associated with the age, quality, and structure, housing maintenance can also be a tremendous burden. In owner-occupier household groups, low-income households are the ones who will be affected mostly (Rohe & Stegman, 1994).

Also, other concern of housing researchers is who can afford higher prices housing units, mostly choose to buy lower price. It leads to the mismatch of a limited supply of housing stock. Moreover, yet to whom homeownership promises are raised as a question. Forrest and Hirayama approach crises from another point of view, "homeownership systems which have emerged from the crises are ones which favor the financially privileged – the primes rather than the subprimes" (2015, p.237). Also, to decrease their risk due to the insolvency, the beneficiary of mortgage has been changed to low-risk households with a high income, secure employment, and private assets at their disposal (Hochstenbach, 2018). The expected result of this shift is the exclusion of some households having low-income, insecure jobs, and no asset owner. Demographically, young adults prolong their stay in the parental home and return there more often in boomerang moves (Lennartz et al., 2016). Furthermore, they depend to a greater extent on rental housing sectors that are relatively small and unaffordable in many contexts, subject to long-standing decline, or marked by precarity and insecurity (Kemp, 2015; McKee, 2012; Pattison et al., 2016). While households are not already secure, this system makes them maybe forever insecure.

The security of tenure can be protected through a tenancy-leasing agreement by indicating the conditions of renting. Simultaneously, if the leasing agreement does not indicate the increase in housing rent and not covering protection articles for tenants, the tenant household will confront financial security problems to pay the changing amount of rent. Also, the leasing agreement indicates the condition of the housing unit's current infrastructure as working correctly, partially damaged, painted. By this means, at the end of the agreement, tenant households will not be blamed for former damages and be responsible for fixing them. There are two main remarks about the duration of the agreement, first arguing the longer duration of the agreement, the more secure tenant, latter believing the longer duration of the agreement, the more bounding housing unit. While the long duration of the tenancy period contributes to tenure security and avoids the unexpected eviction, it also prevents the change of housing unit before the agreement period expired. Tenant households cannot change their unit if dissatisfaction with the housing unit or any change due to a job opportunity or health problems.

For non-financial security, tenure, physical and psychological security are evaluated. Homeownership is also insurance for the future and present days. Costs of homeownership are concentrated earlier in adulthood, providing economic security later in life through lower housing costs and accumulated assets during retirement and old-age health costs. Widespread homeownership functions as quasi-old age insurance; homeowners can get by on lower pensions because homeownership limits their housing costs in old age; hence, they do not press for more generous pensions (Ronald and Dewilde, 2016). Residential mobility is one of the units of measure to exhibit the (in)security of tenure. In the case of single homeownership, it was assumed that it was more difficult for owner-occupier households to evacuate their homes and move to another house for various reasons. The required duration to sell an existing unit, the existence of ongoing mortgage payment, the feeling of lingering from their elaborately decorated house, and the sense of attachment are mostly mentioned in the literature. As a result of these reasons, homeowners are known for their more extended enjoyment of investments because of their more substantial

residential stability (DiPasquale and Glaeser, 1999). It does not always have to have positive effects. A group of studies focused on the relationship between unemployment and residential stability in homeownership to reveal the advantageous and disadvantageous sides of homeownership. Oswald (1996; 1999) has conducted a dozen studies for OECD countries to tell what kind of change causes unemployment. He explained, "Mass unemployment exists because of a secular change that has happened in all but a few Western housing markets – the rise of homeownership and the decline of private renting" (1996, p.2). It is a natural result of the reduced mobility of home-owners relative to private renters due to the higher costs of buying and selling homes to accept a job offer. In this instance, homeowners face two possibilities: the necessity to shuttle longer distance or the latter is the stay in the current condition. If a homeowner is already working, it can cause the labor market's inefficiency due to the limit of worker mobility. If he/she is not working, they are more likely to be unemployed for a more extended period because of the scarcity of job opportunity in nearby places. After Oswald, Coulson, and Fisher (2002) for the US and Munch et al. (2006), Denmark conducted experienced studies to understand different tenure modes' unemployment duration. They reached that it is shorter for owner-occupier households compared to renter households.

Another side of the assumption accepts that "if renters feel insecure in their tenure they will choose (or be forced) to move to seek greater security; or that the general insecurity attached to private rental is indicated when renters are forced by their landlords to move" (Minnery et al., 2003). Time-related security means any surprise that households are encountering about leaving the unit. As well as it changes with leasing agreement, tenure households are closer to facing the time-related security problem. The tenancy agreement should negotiate between tenant and landlord on a mutually agreeable term and conditions for a lease. The previously defined period of the agreement protects two sides of the agreement. However, as Minnery et al. indicated, in Queensland, while tenants have two weeks to notice termination, landlords have a more extended period, two months (2003). Homeowners differ from tenants regarding their absolute rights on the housing unit as long as payments are

made. They are the only responsible body to enter their house with a sense of safety, while their landlords will also have the keys for tenants' units (Bratt, 2002; Colic-Peisker et al., 2015; Saunders, 1990).

Although it is not directly the scope of this thesis, homeownership has a psychological and physical health dimension. The mode of housing tenure can also directly affect well-being due to the provision of higher quality houses and tenure security. The literature of "homemaking" evaluated the positive effect of homeownership on well-being rather than economic extent. "What these families do is not only to maintain and decorate a house, it is also or primarily to build a home and a family" (Gram-Hanssen & Bech-Danielsen, 2004, p. 18). The home is a key for unity and family, providing feelings of stability and security (Poppe, Collard, & Jakobsen, 2016). Losing one's safety and security is owned home or worrying about the (supposed) wealth in the owned house can lead to higher stress and, consequently, to lower subjective well-being (Nettleton & Burrows, 1998). Lower subjective well-being also affects success in school. Bramley and Karley (2005) compared households living as tenants and homeowners in terms of living standards and its reflections on children; the result revealed that homeowners' children are better in education.

2.2.2 Housing for All but Housing Wealth for Some

In recent years, returns on housing and other capital assets have been much higher than increases in incomes with undue advantage for capital holders, who have urban real estate as a store of wealth (Piketty, 2014). It also leads to inequalities and diminishing opportunities to access housing wealth among lower-income households. Recent decades have seen housing wealth increase faster than other types of wealth and considerably faster than national income. Also, there has been growing public concern over the widening gap between higher and lower-income groups and their impact on societies. Piketty's findings imply rethinking both the role

of the housing system and the efficacy of housing policy in terms of equality and the distribution of housing wealth (Maclennan and Miao, 2017).

Housing has become the single most crucial component of personal wealth for most households in the more developed, and primarily the English-speaking world (Muellbauer, 2006; Smith, 2006). While tenants are removed from for-sale housing units because of the increase in prices, housing provides concomitant gains and losses for households with housing prices changes. These changes in prices as gain or loss are revealed, namely housing wealth. Although housing wealth is distributed less unequally than most other types of asset (Smith, 2005), its distribution is nevertheless highly skewed, and increasingly so (Dorling et al. 2007). Households' housing wealth is defined as "the value at current market prices of all residential dwellings, including the value of the land on which the buildings are built, owned by households" (ECB, 2006). According to this definition, housing wealth is around 60% of the total wealth of households in 2005 in the Euro area and has significant impacts on households' consumption, investment, and portfolio decisions. The primary measure of housing wealth is net housing equity, representing all reported property values minus all outstanding mortgage debts (Arundel, 2017b). Housing wealth corresponding the value of the home minus outstanding residential debts (Dettling and Hsu, 2017) expresses the value of housing-as-investment (Wind, 2017). It is formulated as:

"Housing wealth = homeownership * (purchase price – mortgage + mortgage amortization + house price gains – historical transaction costs)" (Wind, 2017).

However, according to the availability of the data, the measurement methods and detail for housing wealth change a lot. The specific effects of housing assets on housing wealth inequality diverge from country to country and period to period (Maclennan and Miao, 2017) also from household to household. Saunders indicates that homeownership leads to the enrichment of households by participating in the housing market (1984) (equalizer for wealth accumulation, especially for workers and low-income households). However, unlike Saunders, McKee (2010) argued that with the entrance of low-income groups to the housing market, the division owners,

and non-owners diversified. Then households are defined with many paths; households have high quality, and households have low quality; households have no unit. So, the homeownership did not embark on being the only criterion to define housing wealth. As Dupuis (1991) examined via New Zealand case, all or at least most the households are a homeowner, and it cannot create any sense. Therefore, rather than owning, what you own, where and under which conditions should be considered to define housing wealth.

In a context of expansion in owner-occupation and house price inflation, households have also been increasingly oriented around their housing wealth as a means to boost their consumption and take care of their own welfare needs (Doling and Ronald, 2010). However, this condition brings consumption and welfare terminals based on ownership. Households can use this (extra) earning as consumption for their new housing and other consumption and savings. If house prices temporarily increase under the life-cycle model, this may encourage homeowners to increase their consumption as they feel wealthier than before, and their net wealth (their assets minus their liabilities) has increased. However, it is often argued that this effect will be canceled out in the aggregate because rents will also rise, and thus non-property owners will need to save more for a deposit and thus reduce their consumption if they wish to buy a home. Therefore, changes to house prices (as opposed to investment in homes or the building of new homes) affect household sector wealth distribution rather than the total amount of household sector wealth (Goodhart and Hofmann, 2008, pp. 181–182).

Rising house prices present an essential driver of diverging housing opportunities as they both promote wealth accumulation of housing market insiders while contributing to an increasing barrier in homeownership entry for those without sufficient economic capacity (Arundel, 2017a). Despite the GFC's economic outcomes, house prices have not significantly dropped even it was raised in many countries relative to incomes (Whitehead and Williams, 2011). Following the crisis, financial policy boosted credit availability at attractive rates but combined with

stricter lending criteria, and these loans went out to home-buyers already in better financial positions.

While studies on housing wealth are focusing on the creation of housing wealth differentiation due to institutional characteristics (Wind, 2017; Goffette-Nogat and Sidibe, 2014; Lennartz, 2017; Helderman and Mulder, 2007), cohort groups are one of the selective indicators of the beneficiary and non-beneficiary of housing wealth among households. Homeownership is more common among older and higher-income groups, who can provide increasingly large amounts of housing wealth because most of them entered the housing market in the early stage of housing (comparably lower prices and easy access to finance) (Wind, 2017). Critically, increasing over-consumption of property by housing wealthy people has been a driving force in excluding younger and marginal households from the housing market (Ronald and et al., 2017). Recent analyses indicate significant decreases in homeownership access for 18-34-year old across all core European countries from 2007 to 2012, with especially significant declines where financialized homeownership sectors had been most heavily promoted (Lennartz, Arundel and Ronald, 2016). Also, housing wealth accounts for approximately 90 percent of homeowners' total wealth in their 20s, and about 80 percent for those in their 30s and 40s (Iwata and Naoi, 2017).

"Housing equity could play an essential role for older adults through low housing expenses in the case of outright owners and could also be a source of income if a household uses the equity release products that are becoming more and more available in European countries" (Elsinga and Mandic, 2010, p.941). Reverse mortgage exists to create revenue in the retirement period by selling their unit and moving to the rental unit. In that way, they retake their payments by selling their unit to someone else (Elsinga and Mandic, 2010). Downsizing is another mechanism to increase income and liquid wealth during the retirement period. Owners can capture wealth by downsizing: selling the home and moving to a cheaper property or rented accommodation (potentially with adult children) to lower housing costs. It also

creates a budget to spend on their health expenditures by downsizing-changing their units with a smaller one (Palmans and De Decker, 2010). They are renting out individual rooms as another means of providing income from home, although not an incredibly popular option (Ronald and et al., 2017). Some owners do not prefer downsizing, reverse mortgage, or renting out; they evaluate housing and wealth as an inheritance to accumulate future generations. Elsinga and Mandic discussed that What is the role of housing equity in the old age puzzle? They reached that first, a tool to help their children buy a housing unit, then a valuable heritage to bequeath housing wealth to their children (Elsinga and Mandic, 2010). Leaving property to the children was something that most household heads felt was part of their parents' duty.

The uneven distribution of housing wealth for cohort groups creates another disparity; whose parents have housing wealth and who do not have. It defines the importance of inter-generational housing wealth accumulation to sustain existing wealth or create their own families' help. Rising property prices increase the level of inter-generational assistance for the first-time buyer, thus eroding the amounts of equity left to augment pensions and pay for long-term care (Riseborough and Fletcher, 2006).

The critical trend underpinning the changes in housing wealth distribution in recent decades has been the widening gap between those who own property and those who do not. For those who own property, rising house prices represent untaxed capital gains, which increase net wealth and, as a secondary effect, boosts consumption. For those who do not own property, rising house prices mean facing higher rents in the rental market and have to save more to afford a deposit for a mortgage (Ryan-Collins et al., 2017).

Recent rises in house prices have contributed towards growing inequalities between two classes separated not by their contribution to production but by access to a property and exclusive control of a scarce natural resource (land). As house prices

continue to rise, this divide between the 'housing haves and the housing have-nots' will continue to get wider as the wealth of those at the bottom remains zero or negative (Appleyard and Rowlingson, 2010). While a resurgence in equity release may indicate that housing wealth is becoming particularly liquid again, its role in supporting asset-based welfare strategies has been questioned.

Also, some society sections believe and behave according to that the increase-change in housing prices is more reliable than changes in foreign currencies such as the dollar and euro (Fereidouni and Tajaddini, 2017). They allege the collateral function of housing rather than the euro-dollar as an indicator of this relation.

The differentiation of housing wealth among income groups are defined as extreme points of housing. Kemeny indicated that buying a home, repaying a mortgage, and accumulating housing wealth has long represented means to offset the risk of a low income in later life (1981).

The concentration of asset wealth so housing wealth is always more than the concentration of income wealth. It is possible to this accumulation on income groups and their share of asset-based wealth. While the first four income groups have 35-40 percent of asset wealth, the highest income group has 60-90 percent of the total in the 1990s (Piketty, 2014). However, recent changes in housing wealth concentration showed that there is also a shift from the highest income group to high and middle-income groups. It creates contemporary discussions and arguments on the rise of the middle-income class based on housing wealth accumulation (Piketty, 2014). Bastagli and Hills (2012) examined changes in net housing wealth between 1995 and 2005, which saw the most rapid increase in house prices in UK history. The most substantial gains in absolute terms went to the wealthiest group (90-100 percentile group) of households, but in percentage terms, the most dramatic increase was experienced by middle wealth households (40-60 percentile group). Again, the lowest 10 percent of households saw no increase in net housing wealth over the period. Similar results are found in Karagiannaki (2011), which examined changes

in net housing wealth simultaneously. In their study, Boehm and Schlottmann (2008) examined the likelihood of homeownership to accumulate wealth. They reached that being a homeowner is not a guarantee to wealth accumulation for low-income households; however, the household wealth can be positively affected by being a homeowner.

Who is conscious of housing's power to create wealth directly became an actor in the global arena. As a result, the global geography of homeownership has also changed dramatically. "We are now in a situation where high and rising levels of homeownership are more closely associated with other parts of the world" rather than the USA (Forrest, 2015, p.17). House prices increased, especially in capital cities, globalization and speculation led to a housing price bubble in some countries (Hegedüs, 2009). The promise of capital gains has enticed new buyers into these areas, most noticeably overseas investors who can usually buy outright and gain from speculation.

Commonly every year, households' net wealth rises due to the increase in housing prices and a decrease in the remaining debt (Di et al., 2007). However, it does not mean that the housing wealth will not increase forever or, in areas of low demand, have immediate prospects of making any gains at all. Rather than the more stable local market and locations, "hot spots" (Bramley et al., 2004, p.54) will create more significant gains (Malpass, 2008, p.15). Houses in more attractive neighborhoods come to be treated as luxury goods under the tendency of households to consent to pay high prices. This consent brings new levels to inequality by the land value appreciation in grandeur districts.

A noticeable shift from housing assets was essentially "inert, immobile and illiquid" to one in which homes became "live, cashable and liquid" (Schwartz and Seabrooke, 2009, p.210). However, some scholars argue that housing wealth is not liquid; therefore, it cannot affect households' consumption expenditures. Housing wealth is formed by the price and liquidity of a unit and accumulated by homeownership. Thus, only having a unit does not sound the requires duration to sell a unit; liquidity

defines the housing wealth. The length is highly related to the price, location, and credit availability for a housing unit. According to Rohe et al., when a job is offered to a low-income household, the required duration to sell an existing unit and finding and moving a new one is long and sometimes unlimited (2002).

2.2.3 Conclusion

Housing security and housing wealth as benefits of homeownership have objectively evaluated in the previous sections of this thesis. Hereafter, how these literature and theories configure the structure of the thesis will be discussed. To do that, empirical studies are categorized into two; housing security and housing wealth-oriented studies. First; concerns, main arguments, dependent variables, independent variables, employed data sets, and main methods of housing security-oriented studies have been highlighted in table 2.1 and 2.2. These findings are approached to wield in the analysis and method parts of the thesis.

How studies defined housing security is not obvious and agreed on. However, the cost of living in the current housing, the certainty and feelings about the present and future in housing unit and any factors affecting these two are frequently discussed in housing security studies. While Minnery et al (2003) focused on only tenant households, the context expanded to the other modes of tenure (Andre, 2017; van Gelder, 2007; 2009; 2010). Mostly income based differentiation is considered and descriptive statistics are employed to overview the measurement of housing security. Andre (2017) underlines that housing wealth and housing regimes impact security and insecurity for a household and housing tenure. Also, they influence political attitudes and subjective well-being. However, this thesis argues that government policies that aim to make every household owner-occupier segment also lead to the bad and good housing experiences for owner-occupier households. In his series of studies (2007; 2009; 2010), Van Gelder argues that security can be in the form of legal tenure security and perceived tenure security. While the rights of households define legal one on property, threats or risks, crime, noise pollution, and any danger

from residents of the same neighborhood and apartment generate the perceived tenure security. Rather than owning, under which conditions households are living gains importance.

In addition to the studies in table 2.1, many studies have approached the effects of the cost of living in the current housing, the certainty and feelings about the present and future in housing unit and any factors affecting them in housing career of households.

Firstly, housing affordability and the provision of affordable housing are the hot topics in national housing policies. It dates back to the 2008 Global Financial Crisis. Like Turkey, the housing sector is not directly affected by the crisis but indirectly through international trade. For others severely affected by the crisis, housing affordability was raised as a research and policy agenda to provide housing security. Also, in the reduction of poverty, a need to obtain housing security is stipulated to decrease the housing induced poverty (Payne and Durand-Lasserve, 2012); households are expected to be secure (no financial burden/reason to move) as long as they pay an irretrievable level in housing payments (Reeves, 2014). Homeownership is summarized with the inversely proportional relationship between housing price and the location of housing units in Turkey (Özdemir Sarı and Aksoy Khurami, 2018). In the provision of housing security, the importance of housing affordability arises as to the main subject. Owner-occupier households are perused as more prosperous households due to the comparatively lower numbers of unbeknownst conditions. If a household can get mortgage credit from banks after evaluation processes, they prove their regular income flows. According to the amount of their incomes and the prices of the housing unit, the maximum amount of payment is decided to make the process risk-free in terms of the burden on households. As a result, they have considered households with fewer affordability problems than the previously determined mortgage payment. However, housing maintenance and repair, service, and taxes are excluded from the housing cost list. Owner-occupier and tenant households are compared, then owner-occupier is

viewed as less faced with housing affordability problems. However, this thesis argues that owner-occupier households also have sub-groups in terms of the achievement of housing affordability conditions. First, according to their previous and current income flows, the evaluation of households does not mean that it will always go in the same direction. In countries, housing finance is developed more, and households can be protected from unexpected changes with some incentives. However, in ones still, housing finance is less regulated and underdeveloped, owner-occupier households are abandoned on their own after the home purchasing process. Even if they get mortgage credit from banks, it is not always in a fixed interest rate. If they do not get or not able to get, they have to find their way. The share of these payments, living conditions with the remaining amount, the demand-supply match, and the physical conditions of lived environments are not the subject of discussion.
Kiddle (2010) argued on the need to understand housing security beyond a legal and illegal dichotomy, especially for developing countries. Considering the unique housing system of countries, scholars focused on housing security on multiple dimensions. Zhang and He (2020) addressed housing security of Chinese households living in the small property right housing under three dimensions regarding the 5 points Likert scale subjective assessment of households on; physical, psychological and institutional manners, Patel et al. (2020) accepted experience in housing deprivation as a reflection of insecure housing status in urban India. The lack of a bathroom, kitchen, electricity, and sufficient living space was interpreted as deprivation and insecurity in housing.

With the expansion of homeownership, in other words, an increase in the wide-spectrums (prices) of housing supply, the demand-supply mismatch issue arises as a concern of housing researchers because households who able to afford higher-priced housing units mostly choose to buy lower prices as a main or second housing unit. It leads to an affordability problem for those who could not find a housing unit according to their budget, results in buying a more expensive one.

Table 2.1 Housing Security Studies and their Highlights

AUTHOR, YEAR	*CONCERN*	*MAIN ARGUMENT*	*DEPENDENT VARIABLE*	*INDEPENDENT VARIABLES*	*DATA*	*MAIN METHOD*	*INTERPRETATION FOR THESIS*
Minnery and et al., 2003	How low- and moderate-income private renters experience perceive and indicate a need for security of tenure?	The flexibility of tenure should be considered as much as tenure security.	-Head of household -Age -Gender -Employment -Household structure	-Legal security of tenure -Certainty -Cost of tenancy - Feeling of control	Primary data from 1000 individual (low to moderate-income) and focus groups with private tenants from associations	Descriptive statistics	-Difficulty of living with current income -Minimum income expectation for households in order to meet their needs -Total working years in the current job and living in the same housing -The ratio of housing expenditures to income
Van Gelder, 2007; 2009; 2010	Even though the importance of tenure security is widely acknowledged, it is not led to a consensus as to what it exactly entails and in what way it should be realized.	Security does not only mean the force of eviction. It should have some types, such as legal tenure security and perceived tenure security	-Three types of property right holders	-Perceived security -Threats or risk from land and neighbors, even family members, -Crime -Noise pollution and any kind of danger	Primary data from 3 different property right holders	Descriptive statistics	-Existence of problems in neighborhood unit and housing -The age of the building
Andre, 2017	Housing tenure, housing wealth, and housing regime impact security and insecurity for a household and influence political attitudes, political behavior, and subjective well-being.	The role of homeownership can play as a resource and as a place of security varies according to social, economic, and political circumstances, and the effect of political attitudes and behavior can therefore vary as well.	- National electoral participation - Financial support of redistribution (social support)	-Mode of tenure -Length of residence -Housing regime -Income -Age	-European Social Survey -The General Social Survey -The European Union Survey on Income and Living Conditions (EU-SILC) -The Long-term Internet Study for the Social Sciences (LISS panel) -The Household Income and Labor Dynamics Australia data (HILDA)	Multilevel regression analysis	-Income groups -The duration of ownership

The main discussion of housing wealth has positioned on the trade-off between housing wealth and pension systems. Therefore, the existence of housing wealth has been evaluated as a recovery mechanism of pension funds. However, Bradbury (2010) argued that focusing on the elderly's wealth allocation patterns of the elderly could be misleading in many country comparisons. A comparison of a proxy for own-home housing consumption with various estimates of non-housing consumption should be considered. Because as much as housing wealth, income flows, housing, and non-housing consumption define households' wealth. Also, comparing the housing wealth of older and younger cohort groups does not sound explanatory. As explained in the table 2.2 to make a meaningful comparison, Bradbury advises using equivalent disposable income quintile within the age group general one. Bradbury (2010) invites scholars to be aware of the difference between income-poor – asset-rich and income-rich – asset-poor households. While the first approaches housing wealth as a completed saving, the latter defined housing wealth as a goal to achieve.

What is the most common in developing countries is the lack of data in housing studies. The drawbacks of the lack of comprehensive datasets in developing countries reach vast geography, including Soviet transition countries, Latin American countries, India, Malaysia, and many others. Researchers in these countries tried to find their methods to overview the housing wealth and security based on their country characteristics. In the Indonesia case, Soseco (2018) benefited from the Indonesian Family Life Survey to observe the distribution and composition of household wealth among income groups through mean and median values. Although this survey unfolds the housing wealth (all owned housing properties and land having development rights), financial wealth, and non-financial wealth of households, it limits researcher due to the lack of specifically housing debt on the exact measure of housing wealth. It only covers the total debt of households. What should be questioned on the lack of housing debt is households paying housing debt such as mortgage use or traditional. If this level is low to consider, it is possible to omit.

Most importantly, rising prices and having housing wealth promoted wealth accumulation of housing market insiders while contributing to an increasing barrier in homeownership entry for those without sufficient economic capacity. In addition to the accumulation of housing wealth for households themselves, the accumulation of wealth through intergenerational transfers also affects new families' housing career. Studies showed that the share of owner-occupier households among 18-34 years old has decreasing day by day in Europe. Uneven distribution of housing wealth for cohort groups creates another disparity; whose parents have housing wealth and do not. Overall, the existence of their housing wealth, intergenerational transfers, and having several housing experiences in different periods creates the housing wealth pathways of societies. In order to explain housing wealth inequality between social classes and birth cohorts based on individual life courses and the institutional context, Wind (2017) conducted a group of studies. As a result of different housing policy approaches, social policy, and economic policy, it is reached that housing wealth differs between different cohorts, occupations, marital status, income, age, and tenure groups.

Table 2.2 Housing Wealth Studies and their Highlights

AUTHOR, YEAR	*CONCERN*	*MAIN ARGUMENT*	*DEPENDENT VARIABLE*	*INDEPENDENT VARIABLES*	*DATA*	*MAIN METHOD*	*INTERPRETATION FOR THESIS*
Fessler et al., 2009	The measurement aims to improve the basis for analyzing monetary policy and financial stability-related issues within the Euro area. Due to the lack of data in Austria's case, the study also focused on data collection.	Although real estate holdings play a significant role in Austria, so far, there have been only a few data sources and studies that estimate real estate wealth	-Homeownership ratio -Housing and other real estate wealth	-Education level -Occupation -The size of the family -Income -Marital status -Age -Location of living unit	-The OeNB Household Survey on Housing Wealth	Descriptive analysis	-Occupational status -The size of the family -Geographical information
Bradbury, 2010	How to compare the housing wealth of different countries and age groups in several contexts	When comparing countries, a focus on the wealth allocation patterns of the elderly can be misleading, as wealth data collections do not include the value of future pension rights. A comparison of a proxy for own-home housing consumption with various estimates of non-housing consumption should consider.	-Tenure -Wealth -Age of (female) household head -Marital status	-Disposable income -Equivalent disposable income quintile within the age group -Housing wealth -Rent -Housing costs -Housing consumption -Non-housing consumption -Total consumption	-Income and Labour Dynamics in Australia (HILDA) -Household Wealth Survey -ABS (Household Income and Expenditure Survey) -British Household Panel Survey -German Socio-Economic Panel -Bank of Italy: Survey of Household Income and Wealth	Descriptive analysis	-Saving status -The number of breadwinners in a household
Wind, 2017	Explaining housing wealth inequality between social classes and birth cohorts based on individual life courses and the institutional context, following an internationally-comparative perspective.	As a result of different approaches to housing policy, social policy, and economic policy, the socio-economic and socio-spatial trends that have been discussed differ between countries	-Tenure -Housing wealth -Financial wealth -Capital gains	-Occupational class -Birth cohort -Partnership dissolution -Educational level -Housing pathway -Tenure -Income	-GeoSweden -The Household Finance and Consumption Survey (HFCS) of the European Central Bank (ECB), -The Survey of Health and Retirement in Europe (SHARE)	Descriptive and multilevel regression analysis	-Income groups -The price of the owned housing unit -The existence of housing debt -Possible amount of saving

The housing wealth studies' findings also argue that recent housing wealth concentration changes showed a shift from the highest income groups to high- and middle-income groups (Piketty, 2014). It creates contemporary discussions and arguments on the new middle-income class's rise based on housing wealth accumulation. While the rise is becoming the subject of discussions, liquidity also occurs as another aspect of housing wealth. Having a unit does not sound; the required duration to sell a unit defines liquidity, so housing wealth. The length is highly related to the price, location, and availability of credit. If a current mortgage payment for a housing unit is going, the remaining debt should be closed in many countries. It takes time to fulfill the requirement to sell a mentioned housing unit. Also, the location of a housing unit defines the liquidity of property. Households want to prefer easily accessible housing units and believe that if a housing unit has more access to services, this unit's price will positively affect the future.

The promise of capital gains has enticed new buyers into some areas, most noticeably overseas investors who can usually buy outright and gain from speculation. Even in some countries, the existence of real estate property has become a justification in the residency permit application. Therefore, London, New York, and Tokyo are global cities, but cities like İstanbul is also global with its property market. Therefore, having a unit abroad is a condition that needs attention while evaluating the housing wealth of households.

2.3 Homeownership from the Perspective of Government

The existence of international crisis (migration effects), the increase in the share of homelessness, an aging population in the developed countries, changing roles in the family, state and individual triangles for the accession of housing, the decrease in the diversity of the modes of tenure created during the 1900s even in some countries the existence of two option; owner-occupier and tenant have led to move of homeownership and housing into central policy discussions. The government focused on attracting investment in the built environment, although their strength is

shaken after the housing mentioned above. The change in governments' perception of social policy has affected the role of homeownership (Ronald and Dewilde, 2016). The growing literature and expanding the geography of housing studies have been discussed.

Whether homeownership contributes to the development of governments and eases to achieve their responsibilities affects households' quality in the right way (as policy advisors believe). It is evident that homeownership changes households' economic and political interest and their attitudes, behaviors, roles, and status in society. These changes influence national policies, regulations, and ideology and vice versa.

Johnson and Sherraden (1992) mentioned the benefits of homeownership that cover the protection from sudden and unexpected income shocks, the ability to invest any other asset. Also, they added the increasing desire to participate in the social processes and hence, the rising impact of individuals (homeowners) on the final decision concerning overall society. The most important, through income and expenditures, homeownership as an asset holding change person's "psychological outlook, behavioral effect, cognitive and emotional state" (p.67).

In the US and other countries gained independence or established lately, observing similar ownership patterns is a coincidence. For example, land ownership refers to autonomy, rights on the property, power, and higher status than non-owners (Wright, 1983). The perception and importance of land ownership have transformed into the importance of labeling households according to where they live in cities. If households lived in central neighborhoods of cities, they were entitled to crime-prone, an immoral person also experiencing crowded and low-quality urban infrastructure. American dream via new housing production at the outskirt of cities (suburbs) with low density and crime, high quality of construction, and infrastructure was defined as a panacea; homeownership was selected as the best mode of tenure.

After establishing the American Dream, the sociological and behavioral dimensions of homeownership have been discussed a lot. How households are motivated to be a

homeowner, how other households and institutions are affected their vision of homeownership are questioned. Searle argues that any act or policy first had been constructed as a norm, then "reinforced and legitimized as fact" (Searle, 1995). Repetition and ritualization contribute to the construction of this system (Drew, 2013).

During the post-war periods, the internalization of homeownership as a housing policy has continued to be a supported mode of tenure due to its ability that necessitates the production of new housing units, hence stimulating the economy and contributing to the rise of emotional condition. In the long run, this tendency formulates the cultural background and public eye on homeownership. Seeing homeownership as a preferred mode of tenure in culture and society led to government aggravated policies to support homeownership in responding and satisfying household demands. In other words, it is fairer to evaluate homeownership as a bidirectional loop between households and governments.

In terms of political orientation, although the points of origin and tools are differentiated between Labour and Conservative governments, Hamnett and Randolph are evaluated as mutant policies (1988). The discussion of homeownership studies mostly focused on the motivations and performance of central governments. Unlike other scholars, Basolo handled government and examined "the attitudes of city mayors" (2007). As a result of his study, he underlined the developmental role of homeownership for local authorities. As mentioned in previous chapters of the thesis, homeownership is a phenomenon that contributes to the various segments and cohorts of society. Here, the goal of governments is defined to equalize and promote these advantages to the citizen through homeownership. Unlike local governments, central governments reached homeownership as a redistributive item on the national level.

For central policies, the UK and U.S. have become the subject of studies due to their different trends in the promotion of homeownership. The UK is mostly correlated with the significant role of government as producer, facilitator, and finance provider

(Bevan and Laurie, 2017). Especially with the 2016 Housing and Planning Act, homeownership explicitly promoted above other modes of tenure in the UK to provide long term stability. It is commented that the end of security of local authority tenants and responsibility of municipalities.

The U.S. is associated with the moderator role of government between households and private initiatives to support homeownership. Following these diversified approaches, policy-oriented studies of governments in the US aimed to reveal the main reasons households become homeowners. According to Collins (2002), "the lack of income, lack of wealth and high wealth, poor credit history, lack of information and lack of quality in housing supply" were very first of these reasons. For each of these problems, multiple federal policy response was formulated. Collaterally to the role of US governments in the promotion of homeownership, the government acted as a guarantee of former renter households who intended to become a homeowner against private institutions. The spectrum of policies also expanded to distribute the benefits of homeownership and lead to vertical mobility of migrant and public housing tenants (Johnson and Sherraden, 1992).

Since 1996, the higher-risk mortgages to low-income households have been employed within the National Housing Policy scope. The downpayment ratio has been decreased to 10% of the value of housing and even less. Therefore, income streams and savings are started not to evaluate as the only predictor of homeownership. With these attempts, governments have taken excessive responsibilities and risk for the long run by giving mortgages via (government-sponsored enterprises) to households who could not choose from other private institutions (Floetotto and et al., 2016; Gervais, 2002; Sommer and Sullivan, 2013). Homeownership has also been supported through tax regulations, credits, and insurance to reduce the increasing cost and risk of owner-occupation. Extracting imputed rent or mortgage payments from owner-occupier households' total income supported them by decreasing their taxable income. Even in some years under the regulation of "fair market value," households are accepted responsibility for paying

only 30 % of their income for the remaining amount of payment governments hold to account. However, increasing voices on over-consumption of housing due to fair market value policy has been canceled. These homeownership promoting attempts had continued and evaluated successfully until 2007; however, GFC in 2008 showed the impossible and burdened applicability of these policies.

To sum up, homeownership is a standard policy of many countries, and its benefits should not be evaluated as a single exact outcome for all countries. It is evident to observe differences between Norway promoting homeownership via social housing with some subsidies and the UK with the right to buy, rent, and let scheme and the US with the support of finance providing bodies as suburban homeownership. Therefore, the variety in supply method, motivation, and targeted population makes the advantages of homeownership common and unique for each country.

In the following part of the thesis, the advantages of homeownership will be discussed by the government side. Job creation and economic stability; welfare state, social policy, and homelessness; active aging; responsible and better citizens; bound between components of society; voting and participation compose some of these advantages.

2.3.1 Job Creation and Economic Stability

The last decade has witnessed a global financial crisis as the subject of many studies from different disciplines (including sociology, planning, housing, economics). While some policymakers have profited from the causes and consequences of crisis to overcome the existing condition and not face another crisis, others have heedlessly followed their way. These cause-effect relations have been discussed. The scour of homeownership is a social project that integrates households and the effects of economic liberalization to support profit-oriented, neoliberal construction projects. However, relating the homeownership perception only with current changes will be insufficient because it had many intentions in previous periods. For example,

Dunleavy (1981) touched upon the high-rise buildings in inner parts of UK cities and the policies supporting homeownership as a win-win condition during the 1970s. With that way, for households who cannot be a homeowner in other (expensive) parts of cities, high-rise buildings decreased the cost of housing unit; therefore, unit price. For governments, these households were meant guaranteed and settled labor force close to the work areas. In terms of planning discipline, these high-rise settlements had an opinion to overcome the urban sprawl phenomenon.

Unlike the constructive side effect of homeownership to planning, Emrath (1997) supported the bidirectional relationship between the stimulation of the economy and job creation through the promotion of homeownership. Producing 1000 single-family housing in the U.S. creates 2500 full-time job opportunities during the different stages, including construction and material supply. It also covers 80 million dollars as wages and 43 million dollars as revenues and fees to several institutions.

Keohane and Broughton (2013) approached governments' support to the homeownership from the pieces of evidence from the UK. From their point of view, the changes in housing prices to heat the market, encourage governments.

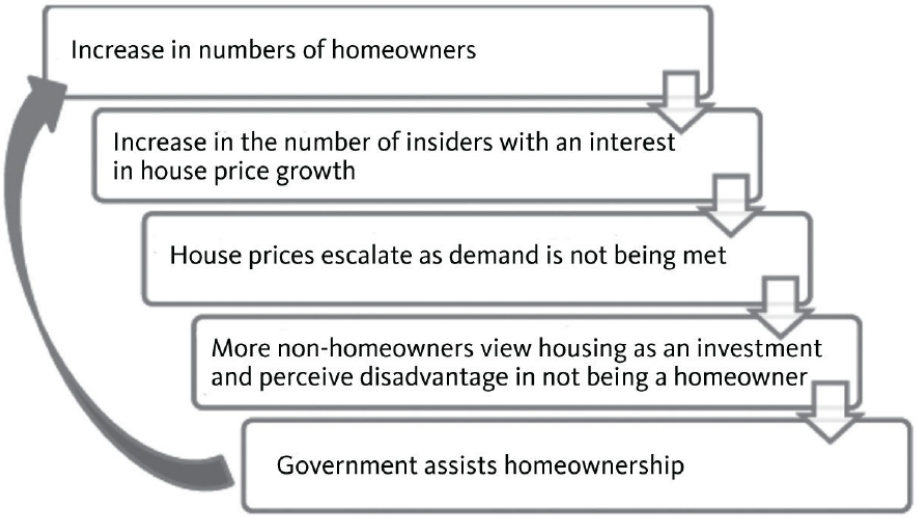

Figure 2.3. Homeownership and a Low Supply Equilibrium for UK

Jaffee and Quigley indicate the match between the new construction of affordable housing and the economic dimensions of this kind of production (2011). They argue that the new supply selection does not coincide, providing a better living environment for households via these new housing units and heat economic activities and job opportunities. Supporting homeownership via new housing generates job and stimulate the economy (Davis, 2012). Moreover, housing voucher programs, taxation, and expansion of homeownership to a different class of households are not tools that make homeownership attractive. They are also seen to lead a dynamic and alive economy (Lerman et al., 2012).

The close relations among labor force, saving, and ability to be a homeowner are underlined with The Conservative Party 2015 Manifesto in the UK. It is stated that "how good it feels when you have worked long hours, saved money for years, and finally take possession of the keys to your first home." They roughly highlighted the motivation of governments for homeownership. Work hard; be a homeowner. Ronald also supported this argument and said that households are bound to wage labor through mortgage debt (2008).

Schwartz (2009) established a relationship between the economic growth of countries in the pre-crisis period and the performance of housing markets and inflated asset values. He adds that governments typically returned to this as a presumed assumption in the post-crisis period and now locked themselves in situations where they could do little to disperse the market. Whatever the attitude of governments includes, Rünstler argued that the escape of high homeownership countries from an economic crisis would not be successful as long as the current credit system and housing prices exist (2016). Aiming to promote financial stability via high homeownership rates is obliged to end with primarily economic, subsequently political instability either in the long or short-run (Funke et al., 2015).

2.3.2 The Welfare State, Social Policy, and Homelessness

Housing as a core item of social policy has been subject to the changing roles of institutions in the supply, allocation, and management of housing stock (Bengtsson, 2012). The market has a preponderated housing system even in affordable housing provision and has been a person of distinction for the permanence of housing systems. Homeownership and welfare expenditures are related in many studies due to the counterpart effect on each other. Housing is evaluated as a pillar of welfare (Doling and Ronald, 2010). Traditional conceptions of housing and welfare focus on either the welfare state and a shelter provider for vulnerable or low-income households through social rental housing. There is a trade-off between welfare and homeownership.

By this means, "If it is difficult to cut welfare state then governments will tend to look for alternative means of achieving their objectives, and in this context, the housing market emerges as a possible tool or lever of change, rather than a driver of it (Malpass, 2008, p.8)". It creates a new version of the welfare state that is asset-based. Asset-based welfare means that individuals accept greater responsibility for their own welfare needs by investing in financial products and property assets, which augments value over time. A housing-based welfare state, in which housing wealth becomes a crucial resource to be deployed to pay for welfare need (Lowe, 2004). Rather than renting, home buying so homeownership is handled as "pension in stone and "reduction in housing costs in old age" (Kemeny, 1981; Ronald and Dewilde, 2016).

The demographic population changes have been queried the capacity of states to provide housing and welfare expenditures. The way to create new prosperity and welfare became the private housing ownership and housing market because of the economic and social investments in the housing (Doling and Ronald, 2010). Castles and Ferrera indicated that "home purchase and the social insurance contributions that

fund pensions are simultaneously the two most significant items of expenditure that confront families across the life-cycle. Hence, the trade-off is not just theoretical, but actual; other things being equal, the more taxes one pays for a high pension in old age, the less one can afford for housing purchase and vice versa (1996, p.164). Fitszpatrick and Watts (2016) indicated that "successive governments have sought to utilize enhanced conditionality within social housing tenancies to influence the behavior of social tenants considered anti-social, welfare-dependent or otherwise deviant" (p.1022).

The causality of the relationship focuses on the lower welfare arrangement, the higher homeownership rates because housing expenditures have the highest share of households' expenditures. Especially with the aging population in Europe, the role of housing in the provision of the welfare state has been discussed a lot. If households achieve to decrease these expenditures by being a homeowner in their younger period, the need to pay pension funds in their older ages will be diminished as a state responsibility. Even in Australia, homeownership and aging well are evaluated as a twin that makes comparatively right choices about their budget to decrease the burden of expenditures made by the government (Power, 2017).

Müller investigated the mentioned trade-off between housing wealth and pension system for 11 European countries (2019); it reached the more generous welfare system, the less need to build housing wealth. Selling (ability to use housing wealth as an income) or leasing (rental income) their houses might provide owner-occupier households extra income in their old age. Even it is not verbalized a lot, many developed countries, including the UK, are dealing with homelessness. In this matter, homeownership is seen to protect households from being homeless and the government from providing shelter for them. Peterson et al. nominated non-homeowners as the highest risk group of homelessness in future periods (2014).

2.3.3 Active Aging

Homeownership has been a leading actor as a fundamental element of active aging, especially in liberal countries. Connections between housing and aging by taking the motivation of (liberal) governments into consideration are defined by Power (2017) in terms of economic well-being (Asquith, 2009), independence (Rowles and Bernard, 2013), active producer and consumer (Blunt and Dowling, 2006). The importance of homeownership for the older population has been mentioned as non-homeowners called "failed agers" (Power, 2017, p.234). Not only for the favor of governments but also for the life quality of households, homeownership has been praised as a medium to live in comfort and dignity (Laliberte-Rudman, 2006).

Like the homeowners' contribution participating labor force to the overall economy, homeownership of the aged population has explained with a decrease in housing expenditure; therefore, the opportunity to spend more on others. By being a homeowner, the aged population is thought to be a better consumer. These households do not pay rent; it helps to increase disposable income; also, with leasing or selling. They are called as a prudential consumer who can be able to make own risk management. If an aged and non-homeowner household are left to market conditions for housing, the very first challenge will be the burden of market rent and housing security. According to Crane and Joly, the decrease in the provision of social and affordable housing will sharpen homeownership effects, especially for old aged households (2014).

There is a noticeable tendency in policies promoting housing equity withdrawals and reverse mortgage to support welfare expenditures. The target group for these policies mostly consisted of the old generation. While they are easing the responsibility of governments, they can also blur the significant role of intergenerational transfer and family support for first-time home-buyers.

2.3.4 Responsible Citizens and Better Environment

Homeownership policy is a way to follow in the promotion of individual responsibility to households. It covers individual, national, and local benefits, all together form the motivation of governments. Creating responsible citizens and a better environment have been figured as an expected outcome. The advantage of promoting homeownership has been mentioned as "a commitment to strengthening families and good citizenship" in the US National Housing Strategy (1995).

Gregory (2016) handled homeownership in terms of decreased welfare responsibility by making household individually responsible. He explained that "whereas homeownership is presented as a means of creating virtuous citizens, social housing is increasingly depicted as creating the vice of welfare dependence" (p.340). Bevan and Laurie added that "owning a home is what good citizens do" (2017, p.40). If a household is a non-homeowner household, they are a charge on government. For Bosman (2012), you are even a burden not only on the government but also for different society (families, institutions). While Bosman labeled non-homeowner households as a burden, Basolo named homeowners as supporters of local government and economy by payment of local taxes and construction activities (2007).

Green and White approached the role of homeownership in the improvement of neighborhood units. They argued that the decrease in the number of moves due to homeownership leads to developed social relations and networks among households. It ends with the joint effort of homeowners to embellish their neighborhoods (1994). In the positive side effect of homeownership, DiIenno emphasized the payment stress of non-homeowner households. She revealed that the decrease in housing expenditure stress via homeownership helped parents or single parents spend more time with their children and provide a better environment (2016).

2.3.5 Compulsory Ties among the Components of Society

To gain the benefits of homeownership, several components of society (family, governments, and authorities) have hidden but compulsory ties. The most well-known one is between state and owner-occupier households, as indicated in the HUD Report in 2015, with a low dependency on the state. By being a homeowner, due to the decrease in the government-sponsored housing system, households are considered as more independent, governments as less responsible. However, Fitzpatrick and Pawson argued that preferring homeownership instead of time-limited social housing as an ambulance service would tie households to state and other institutions for longer terms (2013).

In addition to the tie between household and state, Basolo (2007) revealed the bidirectional bounds of local authorities and households. The prices of owned housing units change with the planning decision of local authorities; households are affected. Hence households do not prefer any possible adverse change in local government or plan. Secondly, local authorities are bounded homeowners due to local taxes taken only from these households. In their study, DiPasquale and Glaeser (1999) found that when all other conditions are considered equal, homeowner households are more likely to effort to solve local problems and join local activities. They also add that participation is also related to the duration spent by homeowners in a specific area more than tenants.

Lastly, homeownership is also associated with strong ties between couples. In the National Housing Strategy of the U.S., Bill Clinton announced that "homeownership reinforces family values and encourage two-parent families in the U.S." (1995). The obliged condition to easily pay mortgage payment to get more mortgage by showing income more with two breadwinners can be achieved more easily by two-parent families than single ones.

2.3.6 Voting and Participation

The close relation of homeownership with the political orientation of parties has become a subject of policy documents. Especially in the UK case, council housing (rental) has commemorated with the labor party. The right to buy the policy has meant the destruction of the labor party housing policy. By this means, the votes coming to the labor party due to council housing provision would be no longer. Therefore, the support to the labor party will be minimized with the right to buy the Conservatives' policy.

With their study employing American National Election Survey, Rossi and Weber revealed that homeowners are more likely to join political campaigns and public events than renters. What political parties prefer is directly the behavior of owner-occupier households.

2.4 Conclusion

The government's attempts to make homeownership a central housing policy has led to the marginalization of some households in Turkish society. They are the ones who do not have a regular job in their 20-50s, do not save money to pay down payment and mortgages, do not have any assets like home providing opportunity to use as equity, need the help of the government for housing and social assistance also the support in older periods of lifespan.

Encouraging homeownership with propaganda by underlining the advantages has created advocacy groups that request the expansion of homeownership to the different segments of society to benefit these advantages. Especially after the saturation of middle- and high-income groups' homeownership levels, the U.S. has constituted housing policies to promote homeownership for low-income households. The increase in the share of owner-occupier households (low-income) has triggered significant economic growth during the 1990s. Intending to maintain the same

growth trend until 2008, the U.S. has witnessed homeownership promoting policies. Drew (2013) had focused on households who bought their houses before 2008, reached that policies are only promoting homeownership but not helping households to stay as owner-occupier. Therefore, the advantages of homeownership are not valid for all households who entered homeownership but have not remained. It is very possible result for housing market in Turkey.

The advantages of homeownership have been measured based on the experiences of middle- and high-income households. The living environment of these homeowners and middle-high-income households have been evaluated as better neighborhoods than others; they have ascribed more likely households who are spending efforts to better their neighborhood. While these advantages are used to encourage households, some realities are neglected. These households are the ones who have more income and so wealth, a regular job, and a steady family. Therefore, there is a need to consider homeownership as an intermediary variable rather than primary. Drew approached the generalization of the benefits of homeownership to all homeowner households as nonsense (2013). Instead of evaluating households as homeowners and non-homeowner, many other variables should be included in the division.

Governments' neoliberal orientation supported homeownership by establishing the commitment between the market and households rather than the government and households. In that way, the risk of being a homeowner will be shared by the market and households. However, the number of delinquent or irresponsible households affected governments even as a snowball result of the 2008 GFC. Homeownership policies have been tried to be open and equal to each household; governments' enthusiasm has hampered to catch their unrealistic vision.

Last but not least, single homeownership has been discussed in the advantages of homeownership. However, with the expansion of multiple homeownership, which is so much more advantageous than a single one, the perception and benefits of

homeownership will change. Both households and governments will be motivated more.

In this thesis, considering the experiences of other states and applied policies in Turkey; the promises of homeownership in Turkey are defined over the housing security and housing wealth. Due to the limits in datasets, some conditions such as multiple homeownership, match of housing unit to the households and legal status of housing units are omitted.

Housing security is approached, a condition that households face, means "not having to leave owned housing unit". It can be due to financial and non-financial issues. Considering housing security, the fact that owner-occupier households take advantage involves two primary evaluation criteria; habitability and affordability. Habitability provides households well-being because of living in an owned house. It is believed that owner-occupier households have the right to change their housing units' design however they want. However, tenant households have very limited rights on these issues. Although there are some exceptions, rental housing units' quality is estimated worse than owner-occupied housing units. Also, owner-occupier households are considered after managing budgets to search for a home to buy to find a more proper house for their needs. Therefore, the preference of households between owning or renting a unit in terms of the benefits of housing security has been utilized as choosing a better habitat or worse. The affordability ensures a secure way to meet housing and non-housing expenditures of households. If the amount of housing expenditures is leading a burden on households' budgets, it is expected that these living conditions are not sustainable for households.

Housing wealth, a condition not only represents a value of an owned asset but is seen as "a current value and possible changes (location, potential to make a saving) in owner-occupied housing price" in this thesis. Being the single most crucial component of personal wealth of households make housing wealth a worth to analyze. It was previously splitting households into housing wealthy or non-wealthy.

The recent changes in housing prices also shape the categories of wealthy housing households. Rather than owning, what you own, where and under which conditions should be considered to define housing wealth.

CHAPTER 3

ENCOURAGING HOMEOWNERSHIP THROUGH POLICIES AND PROGRAMS IN TURKEY

Since the proclamation of the Republic, urbanization processes have become a strong relation with the provision of housing in Turkey. However, the responsibility of public and private sectors for the housing provision has not been well-defined and clear, neither in the past nor in the present. It had resulted in self-organizing and market-led housing production in the Turkish case. Before the 1950s, the state did not take part in housing provision for citizens with a few exceptions, such as the reconstruction of the new capital city, Ankara, to provide accommodation for the civil servants of newly established the Turkish Republic. Nevertheless, with the industrialization policies and the increasing population of workers such as in Ankara, İstanbul, İzmir and Bursa, households have found out their way of housing production that was illegal and called squatter housing (*gecekondu*). After the 1950s, almost every government recognized the problem of housing for the amount and location of squatter housing. However, none of them were able to develop sound solutions and interventions. In the late 1940s and early 1950s, a new type of relationship emerged in the society, called 'flat-ownership relations' (Balamir, 1975), and enabled the production of multiple dwelling units in single urban plots. The flat-ownership system was legalized in 1965 through the "Flat Ownership Law" (no. 634). This system, producing multiple housing units in time, emerged in the society between landowners, small scale developers, and households to solve the housing problem that arose due to the scarcity of urban land and unaffordable land prices. While squatters invaded the urban fringe, flat ownership was experienced at the urban core as a renewal or peripheral growth (Tuna, 1999). In other words, as an authorized way of housing production, high-rise apartment blocks have been built on individual parcels by demolishing existing houses or transforming vacant land around the city center based on a flat ownership-system (Balamir, 1975).

After the 1980s, the state got involved in the housing market by establishing new institutions, legal contexts, and financial instruments for mass housing to revitalize the construction sector's decreased activity. Through that way, the construction sector was made attractive for new and existing investors aimed at large scale projects. The decline in the housing production was observed through the decreasing numbers of housing permits in the early 1980s (Kentkoop, 1983); however, with the support of governments, the construction sector's activities reached its peak level in a short period. Also, state-provided credits and supported private actors with different tools. To increase housing production through Mass Housing Law (no. 2985), which was enacted in 1984, 5 percent of the total budget was separated for the mass housing fund (Türel, 1989).

In recent decades, Turkish cities have witnessed an enormous housing production process that occurred through the public sector's deliberate efforts and mainly by private investment. More than five million dwellings have been produced between 2012 and 2020. The government's motivation for this production activity was to increase owner-occupation among low-middle income households and increase the country's economic activity through the construction sector. However, the remarkable rise of house prices has hampered homeownership entry, particularly for households with no property. The owner-occupancy rate has declined from 71 percent in 2004 to 61 percent in 2014, whereas the private rented sector's tenancy remained steady. In the same period, the proportion of households who live in a dwelling owned by their parents/relatives increased from 6 percent to 15 percent.

3.1 Promotion of Homeownership with Policies until 2002

Distinctly from the other countries, Turkish households have a traditional tendency to be homeowners in every milestone of their lives. This tendency has shaped the form of the entry to homeownership and the purchasing of extra housing units and the existing unit. In the Turkish language, a base of a word of "*evlenmek*" (to marry) is directly associated with "*ev*" (home, housing). Even it was not inherited from

generation to generation as a tradition until today when two people were decided to marry, the first question asked to groom side to understand the existence of homeownership or the opportunity to buy a housing unit. Starting from the establishment of a new household via marriage, housing has become a significant determinant. Sarıoğlu (2010, p.118) explained the tendency to homeownership as "The high homeownership rates that have been maintained even in the absence of a housing finance system in Turkey can be attributed to the serious concerns of households both for "shelter" and "future ambiguities", for which owner-occupancy is considered traditionally as the best solution".

For households to live in that housing unit and for future generations, whether housing will be used as a primary unit or an investment tool, homeownership was seen as the safest solution. Also, Coşkun et al. (2014) pointed out that housing is a traditional investment tool instead of other Turkish households' investments. "As a result of experiences during the high inflation, negative real interest rate periods following the 1970s, the majority of Turkish households believe that housing is the strongest available anti-inflationary hedging instrument" (Coşkun et al. 2014). Furthermore, being a member of homeowner households helps save ready for second homes based on a decrease in housing rent. For the third and more housing units, households are expected to have capital returns by renting these properties out. Therefore, homeownership was not handled only as a means of shelter, also a way of earning financial gains in Turkey. This traditional and family-based process in homeownership has created multi-homeowner households together with private rental housing stock.

The formation of the housing stock in Turkey has distinctive features from the historical development of housing stock in Europe. This differentiation directly shaped the meaning of homeownership and the unique characteristics of the housing market's functioning in many ways. Although homeownership was not fully articulated housing policy until 2002, almost all Turkish governments consciously or unconsciously asserted a bunch of homeownership-feeding implementations. In

contrast, some of these implementations aimed to regulate and increase housing production to overcome the housing shortage. New housing production was also seen as the only way to ensure physical quality and provide safe urban areas. Other implementations prioritized the sale of produced housing units to solve the housing question of households. All in all, they made owner-occupancy an implicit and massive housing policy (Türel, 1996).

Not only the legal production of housing but also illegal ways and their fates affected the homeownership. With the migration processes from rural to urban areas, the construction of illegal housing shaped the homeownership perception in different ways. Households aimed to guarantee themselves for increasing prices of sale and rents, also become an owner-occupier in their illegal unit. Many development amnesties supported this tendency of households to build a house and being and owner of that unit. While Law no. 5218 focused on Ankara case only, Law no. 5431 and 6188 expanded the geography of legalization of squatter housing to the Ankara and İstanbul. Almost twenty development amnesty law enacted until 2002, they provided first legality to builder-owner and the increase in the share of owner-occupier households.

One of the main peculiarities of housing in Turkey is the composition and production pattern of housing stock. Before 2002, a large part of the housing production in Turkey has been carried out by a great number of contractors with small capital and low production capacity. Due to the lack of investment capital and legislation in housing production, the housing shortage has been an obstacle to be hurdled. The state did not participate in housing production directly except for a few projects. The major disasters, placement of immigrants from the Balkans, the provision of lodgments for civil servants were counted as a limited example of state execution. In the Turkish tenant household's housing experience, although some wartime cautions seemed to support the tenancy and protect the tenants in the first place when it was evaluated in the long run with the results, homeownership strengthened its authority. During and after the Second World War (1955-1962), the measures to stop the rent

increase were taken. However, after the deregulation of housing rents in 1962, rents began to increase very rapidly. Homeownership becomes more attractive for tenants; housing has transformed into a different dimension as a means of fundraising and income-earning for homeowners.

The dual matrix of the form of ownership (privately-owned rental and owner-occupied) and legitimacy (legal and illegal housing) has generated the housing market (Özdemir Sarı and Aksoy Khurami, 2018; Turk and Korthals Altes 2014, p. 508). The provision and continuity of rental stock are profoundly different from the experience of other countries. Public hands or mass production attempts do not produce the stock of rental housing units and, on the contrary, are based upon private ownership (Balamir, 1996). For this reason, being a rental unit for the current year does not mean that it will be rented in the next year. The possibility of change leads to the uncertainty and insecurity of rental housing stock and tenants accommodating in. Indirectly, it sharpens the security dimension of homeownership and makes homeownership the superior mode of tenure.

Balamir explained the different forms of private rented housing stock with an alternative standpoint. Instead of saying homeownership is encouraged in Turkey, we could comment that tenancy or any other ownership rather than homeownership is not incentivized. However, there is no doubt to discuss that Turkish governments have taken extra measures to support the homeownership of a specific group of households (able to reach housing finance with their down payment, has land to develop, a member of a particular institution or employee association). Although there was a quantitative fluctuation in housing production, this limited number of housing units have been purchased by some households additively to their existing housing unit in order to generate wealth and to obtain income. Therefore, the concept of homeownership in Turkey includes ownership of residential housing and explains how to gain rental income via single or multiple housing units due to the lack of public rental stock. Also, mechanisms that encourage tenancy, such as rent subsidies and public housing, frequently used in welfare states, have been implemented at a

minimal level in Turkey. However, Türel argued that the increase in the share of owner-occupier households between 1970 and 1985 was directly related to the protection of tenant households (1996). Owner-occupied housing demand has declined since court decisions had a certain degree of protection for tenants against the eviction and rent increase requests from the property-owners. The monetary erosion of rental income because of the high inflation rate led to a decrease in demand. Under these conditions, several households having more than one housing unit sold their rental units and preferred to invest money in the more profitable areas rather than housing. Thereby, while the supply of rental housing units and the ratio of tenant households decreased, the ratio of owner-occupier households was rising.

Land provision policies as a part of homeownership promoting implementations have been on the agenda of Turkish governments in order to support and accelerate housing production by providing infrastructure ensured land. The land provision was also aimed to avoid the scarcity of land and decrease the price of land. This means that the decrease in land price was sought to diminish the housing production expense for housebuilders. The decrease in the price of newly produced units was aimed to raise the housing units' salability produced on these lands. Ultimately, the increase in the share of owner-occupier households was beheld.

Another significant change in Turkey's housing policy was observed with the flat ownership system and *"apartmanlaşma"* (building block system). This arrangement aimed to eliminate the high cost of housing and the housing deficit in number, which are obstacles to the entry to homeownership of middle-income households. Although making housing production exponentially increases, the flat ownership system only helps decrease deficiency; it does not entirely terminate. The housing deficiency problem and discourse have continued until the 2000s in Turkey. This discourse has enabled the revival of construction as a sector to increase the housing production level at a minimum after crises.

The implemented housing policies did not make the homeownership equally accessible for each income group, although it was the main housing policy. Unfortunately, the institutions for housing finance have not been able to work effectively in the high inflation environment and have been accessible to limited households. While higher-income groups had their own units, middle-income groups preferred both owner-occupied and rental units. However, lower-income groups did not participate in the legal housing market due to the high prices and the lack of adequate housing. They are inclined to squatter housing as their own solution to the housing problem in the form of homeownership in industrialized cities (Uzun, 2005). In the first stage, the increase in the number of households living in their own homes, even in the squatter housing, so homeowners have observed. The legalization and transformation of the squatter housing have turned these units into building blocks with the rebuilding processes, especially with the electoral promises. While in the second stage, other groups of households living in a housing unit owned by one of the relatives or families without paying any rent have increased. For the 15 years change between 1970 and 1985 in the share of owner-occupier households, the number showed an increase from 59,2 percent of the urban population in 1970 to 61,4 percent in 1985 (Türel, 1996).

As an influencing variable of the homeownership, housing finance policies were on the Turkish governments' front burner. Turkish governments, some private banks, and a group of institutions delivered credits to a small-large building contractor, cooperatives, and individual builders to regulate and increase the level of housing production; to households and their members to increase the sale of produced housing units. Concurrently, the Turkish housing supply mechanisms have emerged due to the lack of housing loans to buy or build housing for households or to ensure the required capital to build for contractors. In the speculative (profit-oriented) housing supply, build and sell contractors; in the non-profit oriented housing supply, housing cooperatives have had a significant share. With the establishment of the Housing Development Agency (HDA) in 1984, the state was included in the housing market as a direct housing supplier and financer (Özdemir, 2011). The establishment

of the Mass Housing Fund in 1984 under the Mass Housing Law (no. 2985) initiated the collection of considerable amounts of capital from tax deduction that has been transferred to the housing sector. Housing cooperatives with 85 percent share became the dominant stakeholder as an owner-occupied housing producer.

The demand for residential use of housing is undoubtedly different from the demand for housing for investment purposes. In the first type of demand for the same quality housing unit, the imputed rental income of the unit is compared with the real rent of the unit, while in the second, the return of the housing investment and the return of alternative investments are compared. Entry to homeownership or the investment of the secondary housing unit is decided after these comparison processes. Besides, the household's regular income, the meaning of homeownership for family, the existence, amount, and interest rate of housing credit are the significant variable in the definition of homeownership decision. Before 1980 the ratio of housing rent to household income and the ratio of housing unit value to household income was remarkably higher than the ratio of monthly housing debt payment to Turkey's household income (Türel, 1981). Türel explained the encouragement of homeownership in terms of housing affordability for some households to take a loan from banks with the effect of a highly subsidized housing loan. However, as Türel (1981) indicated, the share of housing credit until 1980 was about 7-15 percent of the total construction cost of legal housing stock. At the end of 1992, the ratio of housing credit stock to the gross national product was calculated as 0.25 (Türel, 1996). Also, in countries with no positive real interest rate on bank deposits, investing in housing has functioned to protect deposits against inflation. The increase in owner-occupier households has emerged due to the positive relationship between the high inflation rate and high housing demand in the 1980s.

3.2 Attempts Promoting Homeownership in the 2000s

Delivering and managing housing supply following household needs require a set of comprehensive policies at a national and local level. Rather than quantitative goals,

policies should also concern with adequate and affordable housing for a growing population; meeting the aspirations of individuals as to the amount of space, the location and nature of housing to be provided; efficient allocation of resources, in particular, land; and environmental and amenity considerations (Barker, 2004). Also, the determination of policies provides resilience for housing, and the action and implementation of actors, consequences of determining policies on spatial environment and households, changing conditions, and households' needs create a complex system for housing policies.

In the recent decade, with the current globalization and financial crisis, housing policies have exceeded the border of countries. The global economic climate has created a butterfly effect on countries and their housing policies. As a result of these processes, even in countries such as the Netherlands and the UK, which are seen as the ancestors of social housing provided by governments, the provision of wealth accordingly housing has shifted from the state to more commodified and self-provided strategies. Neoliberal conceptions of housing wealth and asset-owning homeowners have also begun to permeate these societies, undermining the logic of equality and justice in the provision of housing and tenure neutrality in policy, to forge alignment around homeownership as the state-favored tenure (Ronald and Dewilde, 2016). Rather than other assets and investments, housing became the most extensive property that the majority of households desires to have as current increases in homeownership rate showed. This shift has empowered certain divisions of society and space as homeowner-others regarding income level, cohort groups, and wealth. While tenants are removed from for-sale housing units because of the increase in prices, housing provides concomitant gains and losses for households with housing prices changes. These changes in prices as gain or losses are revealed as housing wealth.

According to their homeownership, the division of households is triggered by two main measures in the last 15 years in the Turkish case. These are direct and indirect measures. In this part of the thesis, housing supply and housing finance are evaluated

as direct measures of homeownership promotion while incentives to save and tax, the program for housing sale, development peace, and leasing agreement are handled as indirect measures.

3.2.1 Direct Measures

3.2.1.1 Housing Supply

In the late 20th century, housing supply was mostly seen as a major challenge for housing policy (Bramley, 2007) due to the inadequate housing provision against the increasing population of countries, especially in urban areas. However, with the early 2000s, various constraints depending upon the characteristic of the country have emerged, such as the role of the state in housing provision, the threat of the welfare state based on homeownership, the success and sustainability of housing policies, affordability problems, the future of social housing, housing finance, crisis. These policy challenges vary among countries and demonstrate unique features throughout history.

In Turkey, the role of the state has been limited in the provision of housing for a very long period. While in other countries, housing supply is categorized as rental and owner-occupied housing with private and public supply, in the Turkish case, Türel (1996) defined housing supply into two classes; non-profit and speculative supply. Similar to Türel, Tekeli (1988) also indicates housing supply categories as individual production (production of squatter housing, individual formal producers) and mass production (housing cooperatives, local governments, housing contractors, mass housing producers, and Housing Development Agency).

With the establishment of the Housing Development Agency (HDA) in 1984, the state was included in the housing market as a direct housing supplier and financer (Özdemir, 2011). As a result of the dismantling of some institutions during the 2000s, HDA's duties are expended to reduce the uneven distribution of resources on housing

provision, balance the allocation of housing investments, and meet the housing needs low-income groups (HDA, 2011). In order to achieve these goals, HDA is also empowered "to develop alternatives for opening new residential areas with infrastructure following the cleaning up of squatter settlements, providing financial support for housing construction, pooling public funds for urbanization and house production, obtaining new sources and mobilize them for housing purposes, to improve construction quality in urban settlements" (Yüksel & Gökmen, 2008, p.1-2), to regulate urban rent and increase land supply, to improve transportation and other urban infrastructure facilities and to enhance planned urbanization within the country.

Moreover, under the Law No.5162, enacted in 2004, HDA is authorized "to realize all kinds and scales of development plans, to have made all these types of plans and to alter these plans in areas determined as the mass housing settlement regions; expropriate all the extensions and buildings on or inside the lands and areas owned by real and legal entities, within the framework of its duties under Law; and to develop renovation of squatter areas for eliminating or regaining via rehabilitation to make construction implementations and to perform financial regulations. Also, in this framework, HDA is authorized to determine the construction prices under the actual construction costs, considering the income status of squatter area regions' residents, current construction costs, natural disasters, and current economic status of the provinces in which implementation is made" (Law No.5162).

With these entire legal regulations, HDA has become the single responsible authority in the housing sector in Turkey. The Agency became the most important executive body in defining settlement policies as a fund and land provider and enabler at the country and local level. During 2003-2010, 500,000 residential units were constructed in 81 provinces and 830 townships, and 1,900 construction sites. Nevertheless, due to the economic and political crises in the country, housing production levels displayed fluctuations. These housing production fluctuations

continued until 2002 when the annual housing production reached its lowest level (refer to Table 3.1).

Table 3.1 Annual Housing Production between 1992 and 2001

Year	The Number of Flat
1992	279.616
1993	315.162
1994	339.446
1995	432.599
1996	464.117
1997	454.295
1998	518.236
1999	523.794
2000	548.130
2001	472.817
2002	161.431

In 2002, with the country's general elections, the existing government was replaced by the Justice and Development Party government. The new government initiated a "Country-Wide Housing Program," which aimed to increase owner-occupied housing provision for low-income families through new housing construction (The Ministry of Development, 2003). HDA was made responsible for producing 500,000 new dwelling units at the first stage, and this target was achieved in 2010. A new target was recently set, and until 2023 HDA is expected to produce 700,000 new dwelling units. The government's country-wide housing program and other attempts to realize urban transformation projects also triggered the private sector's housing production after 2002, and in 2014 annual new housing starts exceeded one million dwelling units. As indicated in Table 3.2, a total of 11.829.331 housing units were produced between 2002 and 2019. However, in 2019, the lowest level of annual housing production is experienced since 2004.

Table 3.2 Annual Housing Production between 2002 and 2019

Year	**The Number of Flats**	**Year**	**The Number of Flats**
2002	161.431	**2011**	647.710
2003	202.239	**2012**	767.455
2004	329.777	**2013**	836.171
2005	545.346	**2014**	1.027.306
2006	597.797	**2015**	893.428
2007	581.030	**2016**	998.033
2008	501.020	**2017**	1.348.492
2009	516.234	**2018**	661.472
2010	902.645	**2019**	311.745

Furthermore, despite the housing production performance of the country, house prices continue to rise both for the existing and new housing units (Özdemir Sarı and Aksoy Khurami, 2018: Turk and Korthals Altes, 2014). Although the country has displayed significantly high housing production levels since 2002, the lowest and low-income households' housing affordability has been impaired significantly in this period (Özdemir-Sarı and Aksoy, 2016). As the Central Bank of the Turkish Republic indicated, units' price has increased 1.5 times on average since 2010. This increase is two times in metropolitan regions. As a result of the increase in prices, demand for newly produced units has recently declined. As housing sales statistics of TURKSTAT display, rather than first-hand housing units, households mostly prefer to buy second-hand housing units (refer to Table 3.3).

Table 3.3 Housing Sales: First and Second-Hand Units

Year	Housing Sales in Number	First Hand Housing Sales	Second Hand Housing Sales
2013	1.157.190	529.129	628.061
2014	1.165.381	541.554	623.827
2015	1.289.320	598.667	690.653
2016	1.341.453	631.686	709.767
2017	1.409.314	659.698	749.616
2018	1.375.398	651.572	723.826
2019	1.348.729	511.682	837.047

In the last 30 years, the housing experience of Turkish households has been highly affected by four milestones in institutional arrangements. These are the establishment of HDA, initiation of Country-Wide Housing Program, empowerment of HDA, and Development Amnesty. All of them aimed to increase housing production in quantity without taking the environmental and social impact of their implementation.

3.2.1.2 Housing Finance

Housing finance systems aim to provide funds through public and private institutions to households who want to buy a house and organizations that realize large housing projects. Housing finance systems vary among countries, depending on housing stock, financial market, economic conditions, banking, insurance sector, the legal system, the choice of households, and cultural background (Warnock and Warnock, 2008). In developing countries like Turkey, households' savings are the most critical source of housing finance (Türel and Koç, 2015). As Sarıoğlu-Erdoğdu (2010) classifies Turkish homeowners' profiles under the finance system, non-institutional finance users form a high household share. A research project conducted by HDA in

2006 displays that personal savings, with a 75.5% share, take the first rank as the primary source of housing finance for homeowners who did not employ housing loans (2006, p.62).

Before the 1980s, due to the non-institutional characteristics of Turkey's housing finance system, the production and sale of housing had been volatile against the financial crisis. To overcome this instability, special housing finance programs were started in the 1980s as products of Commercial Banks. Small-scaled loans with fixed interest rates were offered for 2-3 years of payment, and some commercial banks have offered credits with payment periods extending from 8 to 20 years (Demir et al., 2003). However, after the economic crisis in 2001, the terms of these credits have been lowered down.

One of the most significant contributions to financing housing was made in 1984 by the establishment of HDA. Until 2002, HDA provided housing credits for more than a million housing units mostly produced by cooperatives. However, after 2002 HDA's role has changed, and it started to build houses on public lands and sell these units mostly through the loans provided by commercial banks. To improve its financial constriction, the recent popular application of the Agency is to share revenues in housing projects with the private sector, which has certain technical and financial resources. Rather than individual credits, HDA defined special credit categories such as mass housing credits, credits for projects intended for improvement of rural architecture, etc.

In 2007, the Turkish Parliament enacted a law to define rules and actors for enabling the operation of a mortgage system. Legal arrangements had been made about the mortgage system and primary and secondary market institutions, which operate within the housing finance framework and have been defined with mortgage law. Although Law had passed 11 years ago, a mortgage system had not yet fully developed in the country. The main inhibiting factor for developing a mortgage system in Turkey is the lack of macroeconomic stability in the country. They are

changing the macroeconomic environment after the 2001 crisis had positive effects on the issued amount of housing loans. Especially starting with 2003, inflation and interest rates had declined in Turkey. As long as macroeconomic stability is maintained, and inflation is kept under control, there is a bright future for the Turkish housing finance system (Turhan, 2008). However, 'for whom' is still a question. In Turkey, housing credits by banks have been offered a maximum of 20 years, and the interest rates are far from being affordable. Homebuyers borrowing from a bank have to pay a high real interest rate. It also leads to high monthly payments for households. Consequently, only some income groups and a group of the professions can take and afford banks' housing credits.

In the early phases of Turkish urbanization, the major challenge was to increase the supply of new buildings to meet the growing housing demand of the increasing population, especially in urban areas. This challenge was mainly tackled in the free-market environment with almost no support from the governments of that period. The state's role in housing provision has been changed, and the state has become a direct actor in housing provision. In this process, housing supply and housing finance are changing, though the question of who is buying housing by using these mechanisms remained unanswered.

In the first week of June, to heat the economy and provide support to the households and companies due to the COVID-19 pandemic, loan packages were initiated under public banks' leadership and subsequently contributed by private banks. Three public banks, Ziraat Bank, Halkbank, and Vakıf Bank, announced their packages to finance needs under appropriate conditions to transition to the normalization process.

In particular, the monthly interest rate of 0.64 percent aimed to be applied for first-hand houses. Financing is offered with a maximum 12-month non-payment period, a maturity of up to 15 years, and a monthly interest rate of 0.64% for first-hand homes. Loans are also available for second-hand houses with an interest rate of 0.74 percent on the same terms. The upper limit of housing loans per customer is defined

as 750.000 TL in metropolitan cities (İstanbul, Ankara, and İzmir) and 500.000 TL in other cities. A low downpayment ratio starting at 10 percent is initiated.

According to the Banking Regulation and Supervision Agency (BDDK) data, the increase in the volume of housing loans of banks was only 10 billion 162 million TL in 2019, while the housing loan volume of banks increased by 18 billion 931 million TL in the 21 days between June 5 and June 26, 2020.

3.2.2 Indirect Measures

The variables called indirect measures have mostly aimed at increasing homeownership by influencing or focusing on a certain household group. However, these initiatives were shaped by three major economic crises from the post-2000 period. For this reason, firstly, the changes observed in Turkey and Worldwide economy and housing have been discussed during and after these crises. After that, the primary indirect measures since 2002 have been overviewed.

Starting with the 1991 government coalition of DYP-SHP and including the last Turkish coalition government DSP-MHP-ANAP in 2002, the government's primary motivation was to overcome downswings in the economy. However, the programs did not cover adequate structural implementations and consistent courage. As a cumulation of the faults of the previous coalitions, the last Turkish coalition government came up against the 2000-2001 financial crisis. The causes and results of the crisis are discussed in the economics and banking system (Akyüz and Boratav, 2003; Temiz and Gökmen, 2009; Akyürek, 2006). Mainly the fragile structure of the banking sector and excessive lending to affiliated institutions, sweeping political instability, rapidly changing governments, and the earthquakes of 1999 had pointed as significant reasons for the crisis.

Temiz and Gökmen indicated that “In 2000 and 2001, the crises stemmed from the own structural and financial constraints of Turkey, and it was possible to find international financial sources and assistance to manage both of the crises. Furthermore, the IMF and Turkey agreed on a standby program, made structural changes, and put the economy back on its track.” (Temiz and Gökmen, 2009, p.2). In January 2000, at the end of a three-year standby agreement with the IMF, to reduce inflation to 25% and public debt, Turkey applied for the second agreement. Although the program was designed to balance and strengthen the economic order, it collapsed in November 2000 due to a liquidity crisis stemming from the sudden capital outflow. The slowdown in economic indicators was felt in the second half of 2000, as capital inflows began to decline, short-term bank loans were shrinking, interest rates tended to increase, and the devastating crisis was at the stage of threatening the economy.

The decline in the security level, mainly due to bank failures, especially foreign investors, delays in privatization, and structural reforms, significantly affected the economy and the finance sector. High current account and trade deficit, foreign exchange shortage, and duty losses of state banks intensified the process. Besides, the inflation rate and the interest rate remained high, unemployment has grown, and the Turkish currency lost half of the overnight value (Keyder, 2001). Bankruptcy news has spread as a country-wide outbreak. While it was not mentioned in economy papers, housing has become the first expandable and fragile household asset. Even though most households did not take a housing loan from banks, they had difficulty paying their debts to their relatives, families, or other non-institutional bodies. Therefore, the sale of existing units and staying in rental units have been adopted as a way to overcome the financial deficit.

The devastating effects of the 1999 earthquakes led to questioning the construction sector's continuity and the quality of construction and qualification of building contractors to build housing units. To minimize the harmful effect of earthquakes on households, under the law numbered 7269 (focusing on some subsidizations to

households faced with earthquakes), a group of measures has been applied to grant financial aid and credit to the contractor, co-operative and individual owners of the residences that have been affected by the 1999 earthquake or the houses that are under construction. Building control and security, which have been discussed in Turkey for many years, became the most important issue of the country's agenda after the 1999 earthquakes. Once again, it revealed the necessity to take severe and urgent measures to build control issues and safety. As earthquakes showed, law numbered 3194, indicating the procedure and methods about settlements and constructions, and other relevant regulations introduced by the supervision of the relevant administrations were not followed. To fill this implementation gap, to ensure the safety of life and property against disasters, and to regulate the procedures and principles regarding the quality construction in accordance with the development plan, rules and standards, law numbered 4708 was adopted in 2001. As a result of these strict legal arrangements, the minimum housing production level in 2002 was observed.

With the election of 2002, the Justice and Development Party (AKP) formed government alone after a long coalition government period. According to Coşkun, until 2007, a remarkable economic growth period was spied on Turkey's economy. This growth has been associated with various reasons such as full membership candidacy to the EU, improved political and economic stability, and increased liquidity stemming from increases in direct and portfolio investments and also foreign direct investment (2011).

The global financial fluctuation in the world during 2007-2008 is the mortgage crisis that started in August 2007 in the USA. Market structure, lack of control, and policies followed in this process have led to unexpected consequences. In 2008, the Global Financial Crisis (GFC) hit the Turkish economy, even if not as much as the World Economy. Based on the crisis, high-risk subprime mortgage loans are given to low-income households with weak credit history. To create more funds, in the US, mortgage lenders have been issuing bonds as collateral. However, with the fall in the

housing prices, the households who use this credit once checked the difficulty of withdrawal of these bonds, and the value of these bonds was dropped, and the financial structure of the institutions' issuers broke down. The value of their receivables fell, and their debts remained at the same level. In some way, their indebtedness increased, liquidity crunch of banks has started. The credits that were recalled due to the increase in risks created a severe shock in the USA's financial sector. Despite many interventions, the crisis was not prevented in the financial sector and spread throughout the real sector. Globalized economies have caused the crisis to spread very rapidly across the continents.

The GFC's most significant difference from past crises is that the global crisis affects more developed countries, although the past crises have affected the underdeveloped and emerging market economies. The financial derivatives markets, which will produce the asset types based on mortgaged real estate markets and loans, are more developed in developed countries. One of the most important reasons for the relatively less troubled economies is the reforms they have made in the financial and banking sectors following the crises they experienced in the last decade and the robust macroeconomic structures they have experienced during the pre-crisis period. The existing structural feature of the banking system to overcome previous crises and traditional borrowing methods in housing finance in Turkey, GFC has caused relatively little damage to the Turkish economy. Still, it spread via financial markets and trade. While the unemployment rate reached its highest level since 2002, households cut consumption abruptly; companies reduced their investment and significantly depleted inventories.

During the failed coup attempt in July 2016, the recent housing market trend, which is the housing projects and sale to foreign investors, has lost its dynamism. As seen in figure 3.1, the number of housing sales to a foreigner has decreased too. However, with the unexpected increase in Euro/TL and USD/TL, housing sales have jumped enormously after May 2018.

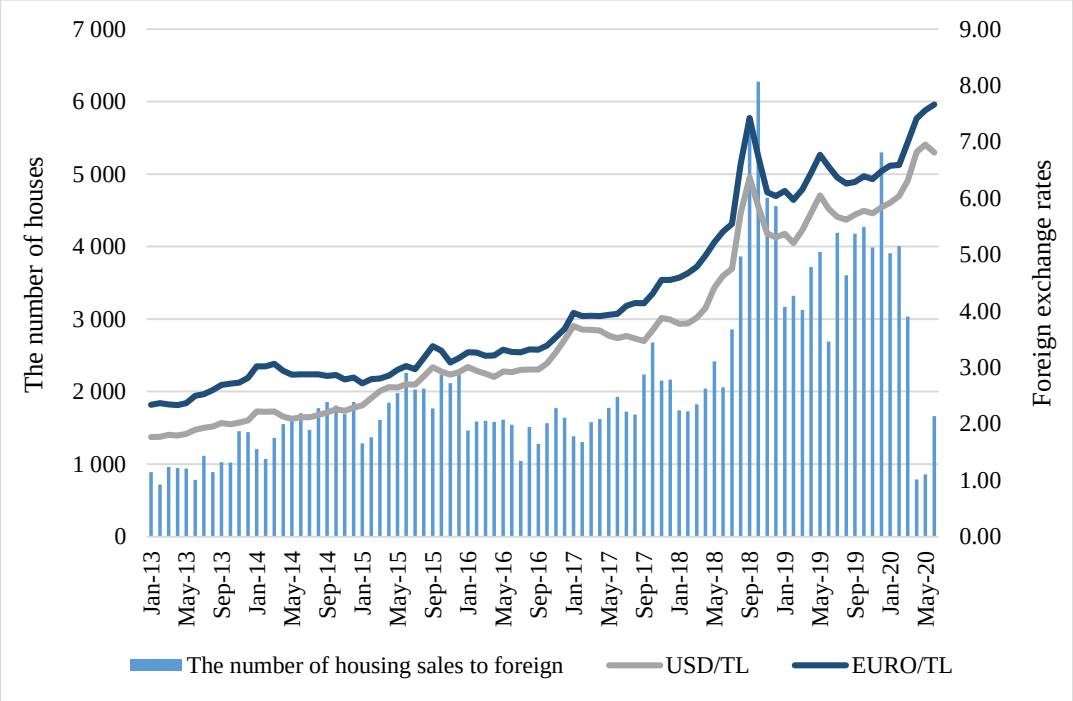

Figure 3.1. USD/TL and Euro/TL Exchange and the Number of Housing Sales to Foreign

After the minor effect of the failed coup attempt, the housing sector indirectly Turkish economy has witnessed another trouble due to the International Monetary Fund (IMF) report. In the report, the IMF indicated its concern about a remarkable increase in housing prices in Turkey. “Turkish house prices have been markedly increasing for several years. The prices for homes rose cumulatively by 110% in nominal and 35% in real terms between end-2010 and July 2016. Valuation appears stretched by several metrics, such as price-to-income and price-to-rent ratios. The burden of household debt has also increased” (IMF, 2017, p. 19).

Although the foreign currency has increased since January 2020, the share of housing sales to foreigners did not follow similar patterns with the previous periods. Flight restrictions and lockdowns affected housing market activities.

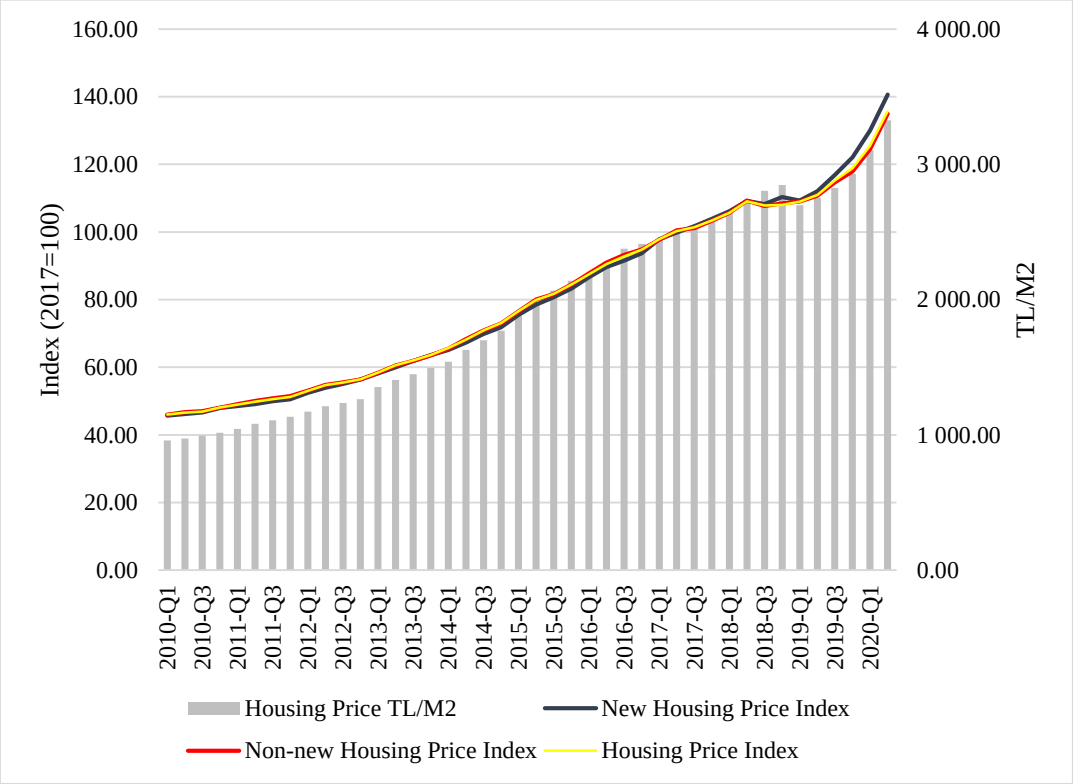

Figure 3.2. Housing Price Index between 2010 and 2020

It has not been discussed by a broad group of scholars in Turkey; some housing market experts have criticized the possible housing bubble and its burst. However, Özdemir Sarı interpreted the report of IMF as "The IMF's evaluation of house prices relies on the House Price Index (HPI), prepared by the Central Bank of Turkey, the data of which under-represent the Turkish housing market. Data employed in the calculation of the HPI cover solely the dwelling units' subject to valuation due to housing loan applications" (2019, p.173). The ratio of mortgaged sales was about 30-40 percent of total sales in 2017; the representation problem occurred. However, rumors about the housing bubble and burst were enough to affect the following period. As seen in figure 3.3, indicating housing sales in number and percentage, albeit housing sales programs, the number did not reach the level of 2017 and before. Even the share of mortgage users in home purchasing decreased at the lowest level of the last five years.

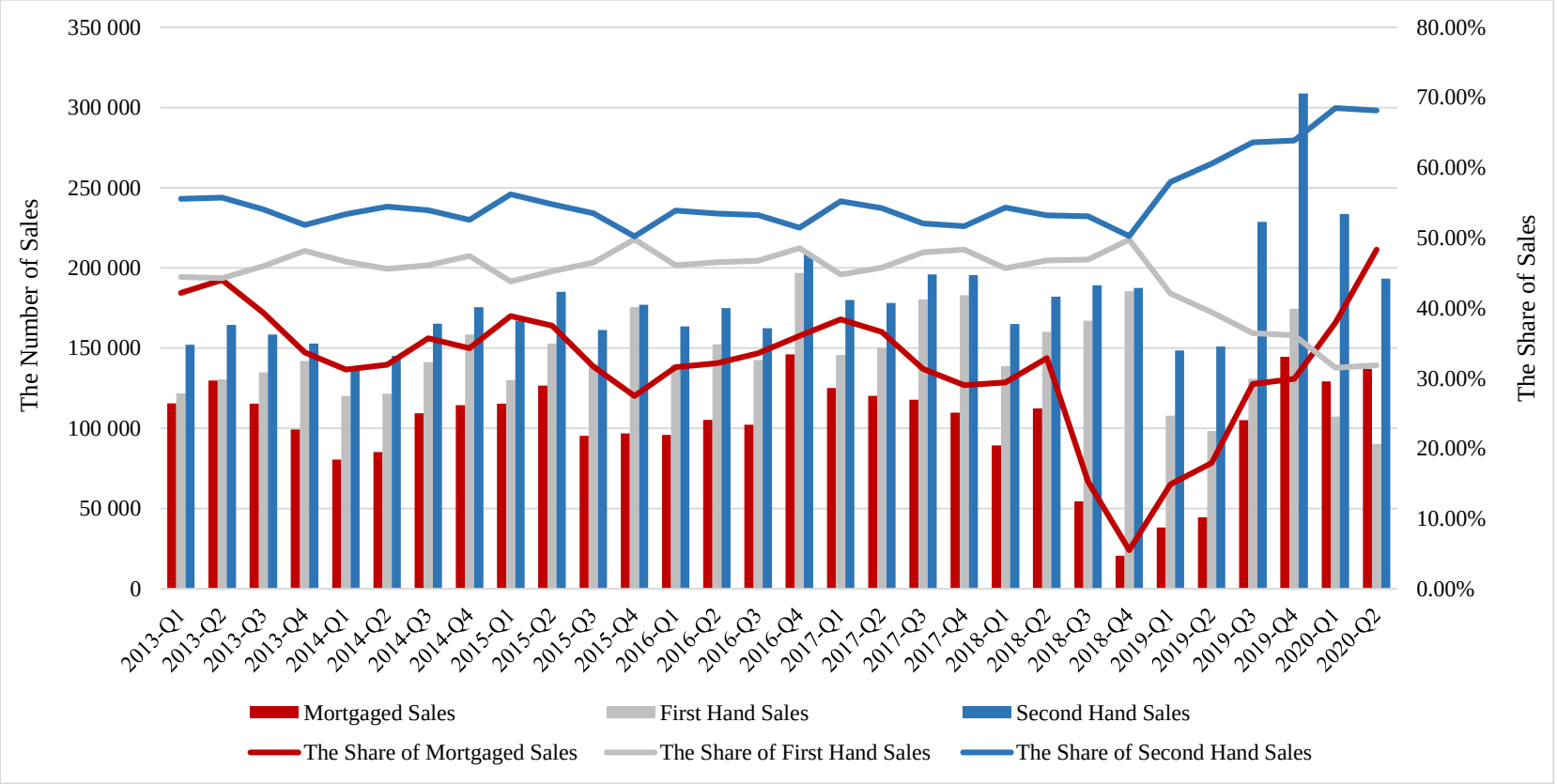

Figure 3.3. Housing Sales in Number and Percentage

With the unexpected increase in foreign currency (Dollar and Euro), Turkey faced another side of the coin from the diplomatic crisis to an economic crisis. In addition to the Pasteur Brunson crisis, Boratav indicated that due to the cash flow problem in the internal market, the decreasing investments of foreign investors, and the large-scale public investment, the Turkish economy was prone to economic ups-downs during the first two quartiles of 2018. The depreciation of TL, excessive rises, and bankruptcies in August 2018 were derived from a diplomatic crisis and observed economic fragility.

The fluctuations in the construction material costs for residential buildings also had effects on the housing and real estate sectors. During the 12 years between 2005 and 2017, Construction Material Cost Index has increased from 100 to 266, as observed in figure 3.4. Although data indicating housing completion is not available to compare the share of completed construction with new housing starts, it is a well-known fact that many housing constructions could not be completed due to the changes in construction material prices. Also, the close of some construction firms blamed to support the failed military coup directly led to the incomplete housing constructions all around the country.

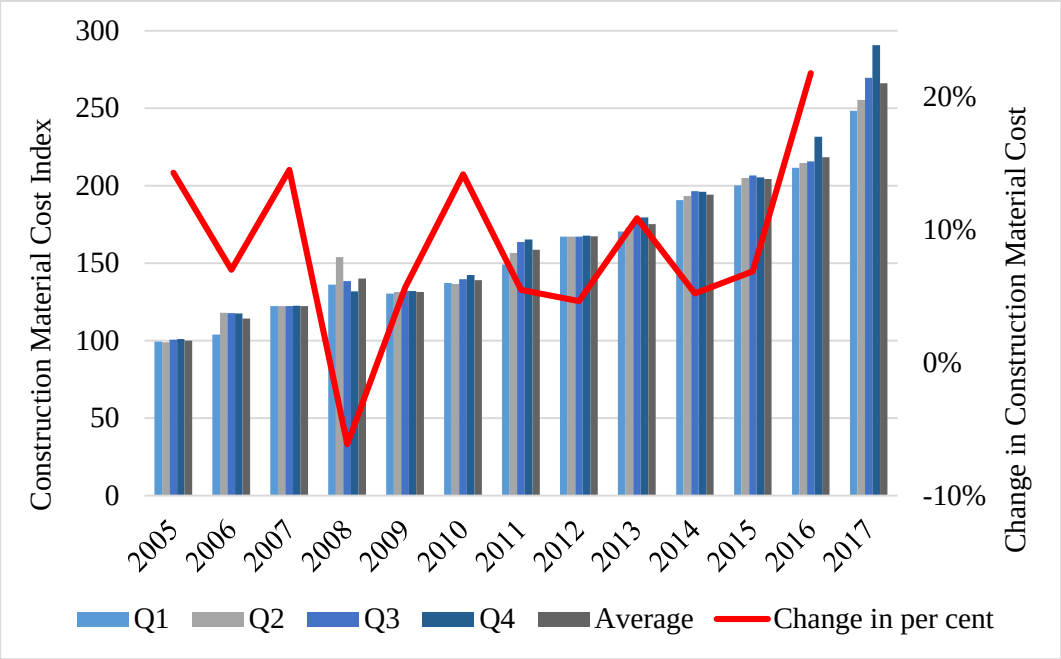

Figure 3.4. Construction Material Cost for Residential Building and the Changes between 2005 and 2017

While all the changes mentioned above were happening in the Turkish economy, the construction sector maintained its throne. According to monthly statistics of The Union of Chambers and Commodity Exchanges of Turkey (TOBB) indicating the number, capital stock, NACE-2 sectoral categories, and some geographical distribution of firms, the number of construction firms has had the highest share in both the established and closed firm categories between 2010 and 2018 (TOBB, 2018). While the share of established construction firms on total established firms increased until 2017, it started to decrease in 2018. After the sharp decrease in 2010, closed construction firms' share on total closed firms remained 6-9 percent between 2011 and 2018. 2019 follows a different path than other years, with a 17 percent share of closed construction firms on total closed firms, as observed in Figure 3.5.

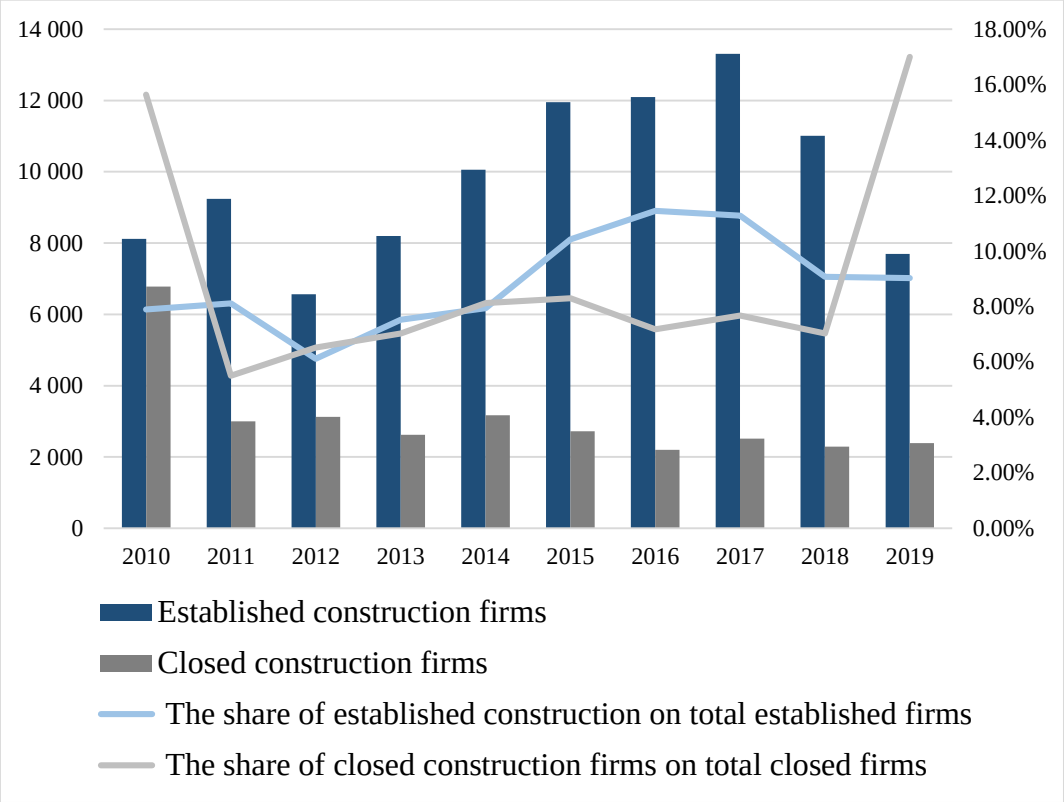

Figure 3.5. The Number and Share of Construction Firms

3.2.2.1 Housing Sale Programs

The main attempt to support home purchasing is the programs on housing sales during 2018 and 2020. The first program, including 100,000 housing units, was announced on May 15, 2018, and lasted on June 15, 2018, with the public and private sector's cooperation. With this program, the value-added tax for developers and home-buyers, the title deed fees, and interest rates are regulated. Also, three leading real estate institutions, KONUTDER, GYODER, and İNDER, have announced a 20 percent decrease in housing prices for cash and mortgage purchases, valid for their 45 housing construction companies and in 150 large-scale housing projects. While value-added- tax for households has been decreased from 18 percent to 8 percent, the title deed fees have been decreased from 2 percent to 1.5 percent. With the arrangement of an interest rate for housing finance, households can obtain credit for assigned projects with 0.99 -0.98 percent interest rate (declined from 1.35).

In another housing sale program between August and November 2018, housing prices and finance regulations were regulated. A 10 percent discount on housing prices is applied for a group of housing projects after households are expected to pay a 10 percent down payment. At the end of the first (12. month) and 2nd year (24. month), 15 percent of housing price as interim payment for each period will be paid. For the remaining 60 percent of discounted housing prices, households will be able to take housing credit with a 0.98 interest rate for a maximum 120 months' term.

3.2.2.2 Recovery Plan for Private Constructors and Banks

The high level of housing production since 2002 brought a decrease in the proportion of sold houses in recent years. Whether these housing units are in the hand of households or private contractors, Özdemir Sarı and Aksoy Khurami (2018) remarked the vitality of housing research about vacant housing units. On the same days, to save and avoid the bankruptcy of private contractors, an attempt of the Capital Markets Boards (SPK), the Central Bank and Banking Regulation and Supervision Agency (BDDK) has been leaked to media about the asset-backed securities.

SPK announced an important decision with its bulletin on November 23, 2018. Development Bank of Turkey (TKB) gave export authorization to Asset Finance Fund for 3 billion 250 million TL as Asset-Backed Securities. With the Asset-Backed Securities issued by TKB, it is planned to replace the Mortgage-Backed Securities, which banks have already issued for housing loans. BDDK decreases the risk ratio of Asset-Backed Securities to zero, which means that the paper is equated with the Government Domestic Debt Securities (DİBS). In the next critical phase, the Central Bank is expected to accept these papers as collateral. These papers are exchanged with government bonds held by the state banks as collateral in the Central Bank. It is foreseen that the repurchased DİBS will be converted into cash in the Treasury and BIST bond market. Thus, the opportunity of lending to public banks will be again provided.

As Toker mentioned in her opinion column on November 28, 2018, banks with an asset-backed securities portfolio decided to apply a zero-risk weight to these securities. With this implementation, both banks and private contractors are aimed to save through making risky security risk-free.

3.2.2.3 100 Days Action Plans

On August 3, 2018, I. 100 Days Action Plan was initiated by The Presidency of the Republic of Turkey to remark the duties, goals, and implementation of public utilities for the following 100 days. The plan did not explicitly include homeownership as major housing policy, yet homeownership has supported some actions. In this plan, completing incomplete and pre-planned housing projects has been intended; also, low-income households were mentioned as a target group of households to be homeowners with the sale of existing and new owner-occupied housing projects. The registration of 13 million buildings without a license or contrary to license and license annexes has been aimed at Development Peace (amnesty).

Similar to the first plan, Although II. 100 Days Action Plan, announced on December 13, 2018, did not directly execute homeownership; it inclined to complete housing projects and the sale of housing units produced by public authorities. Also, making martyrs' relatives owner-occupier was targeted within the scope of this plan. Finally, this plan stunningly aimed to start research to establish the Housing Market Monitoring System to ensure the continuity of the housing market.

3.2.2.4 Development Peace (Amnesty)

In Turkey, the dual housing market structure, which includes authorized and unauthorized parts of the stock, continue. Unauthorized housing refers to squatter dwellings and dwellings that obtained construction permits but not issued an occupancy permit due to illegal additions or compliance to the original architectural project. Although there are many attempts focusing on the legalization of housing

unit through development amnesties until 2018, in May 2018, (one month before the parliament election) government added an article to Development Law (No: 3194) to legalize 13 million unauthorized dwelling units constructed before 31.12.2017. The program to legalize these dwellings is named “Development Peace” (Amnesty) by the Ministry of Environment and Urbanization. In the first declaration, the applications are aimed to complete until October 31, 2018; however, it extended to June 15, 2019. With that way, a Building Registration Certificate will be issued to register the unlicensed or illegal buildings within the scope of disaster risk preparation and to secure the construction permit and the harmonization of the constructions. The title of the application and the property's ownership status, building class and group, and other matters will be recorded according to the building owner’s declaration in the Building Registration System prepared by the Ministry. To benefit from this program, households must first apply and then pay 3 percent of the land price and construction cost to the Ministry. This amnesty also covers the illegal and abandoned construction in some parts of Bosphorus, pasture areas, coastal lines, and natural environment and forestry zones.

3.2.2.5 Taxes and Saving Incentives

In 2016, to support first-time homebuyers, a regulation has been enacted to encourage households’ savings for home purchases. Through this regulation, the state provides partial financial support to first-time homebuyers for mortgage downpayment.

The person who opens a housing account can deposit up to 30.000 TL on an opening day. Households can make payments once a month or quarterly according to their preferences. If they make their payments monthly, the deposit should be at least 250 TL, a maximum of 2.500 TL per month, and at least 750 TL and a maximum of 7.500 TL for quarterly payments. If a household does not pay more than three times in a year (who prefers to pay monthly) or does not pay more than once in a year (who chooses to make a quarterly payment), the state contribution is not paid to these

people. In this case, the account is removed from the housing account status. Households paying during 36 to 47 months can take 15 percent of the payment accumulated in the account; however, the support of the state cannot exceed 13.000 TL; for 48 to 59 months, payment 18 percent but not more than 14.000 TL, and for 60 months and over 20 percent of the payment but not exceeding 15.000 TL.

In 2018, housing finance support regulation was rearranged, the minimum and maximum amount of monthly payment made by households, and the rate and maximum amount of state support have redefined. Changing with the duration of payment, households had the right to get a maximum of 25 percent of their savings but not more than 20.000 TL.

3.2.2.6 The Sale of Public Housing Units

Another step taken towards increasing homeownership has been the sale of public housing units in the last months of 2019. A total of 190.000 units of public housing units in Turkey have been a subject of the sale, excluding 50.000 units currently used in the defense, security, justice, and intelligence services and deplorable condition.

To encourage the purchase of current residents, some amenities are imposed. For the sale of the public houses by open tender method, the current residents prioritize purchasing the unit they reside in after defining the price of the unit. The highest price and payment conditions given in the tender are notified to the residents. Then, the residents are expected to inform the administration that whether they want to buy the house. Payment procedures also include some amenities for the current residents. If the current resident wants to pay the tender price in five years, 20 percent of the tender price; similarly, 25 percent of the tender price for seven years' payment, 30 percent of the tender price for ten years, is defined as a downpayment. Payments are based on the change in consumer price index as 12 percent at most. Besides, if cash purchase is preferred, a 10 percent discount is applied to the tender price. If the current residents of public housing units do not want to buy, the unit will be sold to

the highest bidder in the tender in cash or installments up to 2 years, 25 percent of housing price is expected pay in cash. Finally, some transaction advantages for the buyers of units owned by the Ministry of Treasury are announced, such as the exemption of real estate tax, a title deed, and charges following the five years of the sale.

3.2.2.7 The Production of For-Sale Public Housing Units

With the Ministry of Environment and Urbanization's coordination and the Ministry of Treasury and Finance's support, "100 Thousand New Social Housing Project Every Year" has started at the end of 2019. Households who wanted to benefit from these projects had applications between 16.12.2019 and 15.01.2020. For the houses to be built within the 100 Thousand Social Housing Project scope by the Housing Development Administration, two housing typologies are defined; 2+1 and 3+1. The beneficiaries are decided as families of martyrs, war and duty disabled, widows and orphans (i), at least 40% disabled citizens (ii), other buyer candidates (iii). After the tender processes, the sales prices with goodwill will be determined.

To apply for the project, the applicant has to be a citizen of the Republic of Turkey, reside within the project province/district's boundaries for not less than one year, or be registered to the project province or district population. Also, monthly household income should be a maximum net 5,000 TL, but for Istanbul, 6,000 TL, including all kinds of aid received by the applicant and his spouse for food, transportation, etc. Only one application can be made on behalf of a household aged at least 25 years old, that is, on behalf of the person himself, spouse, and children under his custody.

Housseholds having right to be a holder are expected to pay 10 percent of the sales price in advance (the amount remaining after deducting the application fee), the remaining amount will be paid in fixed installments with a monthly rate of 0.49 percent and a maturity of 240 months. Monthly installments of two rooms and one

living room houses' will be minimum 894 TL, for three rooms and one living room 1,022 TL.

3.2.3 Conclusion

The practices mentioned before and after 2002 were influential on homeownership perception and its proportional change indirectly or directly. This effect has led to an increase in the number of dwellings that some groups of households are able to own. For example, policies that encourage low-income households and relatives of martyrs and veterans to be homeowners can be considered in this group. Households who will benefit from the houses produced by the HDA are only those who have been residing in that city for a defined period aims to limit the beneficiaries of the houses produced.

However, no policy other than housing programs covering households who will benefit from TOKI's housing has questioned whether or not households are currently homeowners. In other words, while non-homeowners are encouraged to own a home, no restrictive measure has been taken for already owner-occupier households, and they are provided with the same opportunities. This situation led to increased demand for housing prices and thus an increase in the price level.

Another effect has been observed as a result of the new housing production activities at the peripheries of cities. Many areas in agricultural or protection status in previous plans were opened for development and housing production. However, these newly built areas cost households long commuting times and transportation costs due to their distance from the city centers. On the other hand, they increased the burden of local governments in the provision of urban services. The handover process of relatively old residences, which generally remain in central areas, was also affected by this construction process. The households, who could not afford the high prices and price increases on the periphery, turned to the old houses in the central areas. Urban transformation projects were implemented in buildings where the right holders were less in number or whose development rights were increased with the

existing zoning plan changes. While the flats in the buildings where the urban transformation is applied have a higher quality but lower housing size compared to the old conditions.

CHAPTER 4

METHODS OF ANALYSIS: MEASURING HOUSING WEALTH AND HOUSING SECURITY

In previous chapters, homeownership has been discussed from two main perspectives; governments and households. Within these perspectives, the promises of homeownership have come under review. For households, homeownership has been principally associated with higher housing security and housing wealth for owner-occupiers rather than other tenure modes. However, it is also underlined that the generalization of these promises for all owner-occupied households is fallacious. Many other factors affect the existence and level of housing security and wealth for owner-occupier households, such as households' age, household composition, housing debt, legal rights on ownership, income level, and locational advantage of the housing unit. For governments, homeownership identified with labor power potential through new housing constructions, the decrease in the burden of social policy expenditures such as social housing and pension system, active participation of citizens from different age groups, and occupational status (to pay their housing debt).

Homeownership is not a recently emerged housing policy in the Turkish context. However, it is the first time, policies to promote homeownership are that much executed. Also, the Turkish context differs from others in terms of the lack of observing the results of employed housing policies. For researchers, it is mostly due to data limitations to measure the success or failure of housing policies. This chapter aims first to investigate the country-wide data sources and optimal methodology to analyze the housing wealth and housing security promises of homeownership to fill this research gap about overviewing the results of current homeownership promoting policies. It then focuses on creating a data source at the district level in Ankara and

analyzing housing wealth and housing security simultaneously under the heading of the promises of homeownership.

With the aim of the chapter in mind, reminding the scope of housing security and housing wealth; then, the main research questions employed in this thesis will avail.

• Housing security (not having to leave an owned and living housing unit)

• Housing wealth (not only represents the value of an owned asset but a current value and possible changes (location, the existence of the debt)

• The promises of homeownership correspond to the evaluation of housing wealth and housing security for the same households.

Research questions and their implications in this chapter are explained below.

• To what extent these promises are achieved for owner-occupier households?

This chapter focuses on the preparation of data for the measurement of extent first for country-wide then for eight districts of Ankara. Before measurement of extent, it first attempts to define housing wealth and housing security level of households. Using thresholds based on mean values or classifying ordinality based on conditions are evaluated as two main options. Then, the optimal analysis method is determined in this chapter based on the outcomes of previous steps. In Ankara case, housing wealth (The level of housing price and Satisfaction level of the location of housing) and housing security (Satisfaction level of housing and environment and The level of burden of housing expenditures on households' budget) scores are created. The mean values of these scores are employed as thresholds showing the achievement level of these two promises.

• Which factors and characteristics (household related (income, age, the number of earners), housing unit related (age, size, price)) have a primary effect on explaining the differences between owner-occupier households?

To include factors and characteristics in the analysis, this chapter deals with the interpretations of dependent and independent variables in literature and relations, leading to multicollinearity among variables.

- Based on significant factors and characteristics affecting housing wealth and housing security of owner-occupier households, is it possible to identify households who do not benefit from being a homeowner?

Although this question will be addressed in chapter 5 and 6, it is beneficial to mention other research questions.

4.1 Country-Wide Evaluation of the Promises of Homeownership

4.1.1 Household Budget Survey (HBS-Cross-sectional) and Survey of Income and Living Conditions (SILC-Cross-sectional)

As the main difference between housing studies in developed countries and developing countries, the limitations of the lack or limited data sources can be mentioned. Researchers endeavor to overcome these limitations by employing case studies. However, if the differentiation of outcomes of policies is planned to study, the only way to conduct the study is by using existing country-wide data sources. To explore determinants of the failed and succeeded promises empirically, this research adopts two essential and recent data sources. These are the Household Budget Survey (HBS) raw data and Survey of Income and Living Conditions (SILC), which were compiled by TURKSTAT, made available for public use.

Although the Household Budget Survey had been started to conduct firstly in 1987, it reached the current version in 2003. During the period between January 1 - December 31, 2018, based on stratified sampling for each month, 1296, 15552 different households are included in the 2018 Household Budget Survey Cross-sectional Micro Dataset (however, 11828 responses are turned). Dataset provides a country-wide representation with no locational or administrative division. It is

mainly conducted to make a variety of statistical analyzes, cross-tabulations between studies based on different expense items, and model studies to estimate at the level of households.

Since 2006, to fulfill the lack of data enabling to measure the distribution between households and individuals' income, a household's living conditions, social exclusion, and poverty, annually conducted Survey of Income and Living Conditions (based on stratified sampling) has been implemented in Turkey. Within the scope of European Union harmonization studies, the survey aims to produce data on income distribution, relative poverty based on income, living conditions, and social exclusion comparable to those of European Union countries. To do that, TURKSTAT executes panel (four-year observations at most) and cross-sectional data gathering methods for SILC. In 2018, 25586 households were included in the sample; however, 24068 households responded survey living in 12 NUTS-Level 1 and 26 NUTS-Level 2 regions.

Even both were not explicitly conducted for housing research; they provide crucial variables on the basis of households as shown in table 4.1 (Hh income, mode of tenure, type and age of dwelling, demographic characteristics, the availability of housing debt, difficulties that households are facing due to the location of their housing units). Also, they provide a sufficient number of observations to investigate the success of the promises of the homeownership for Turkish households.

Table 4.1 The Availability of Variables in SILC and HBS

Variable name	**Survey of Income and Living Conditions**	**Household Budget Survey**
Geographic reference	✓	
Household type	✓ (14 groups)	✓ (7 groups)
Dwelling type	✓ (5 groups)	✓ (7 groups)
Mode of tenure	✓	✓
Monthly rent (TL)	✓	✓
Condition of furniture		✓
Imputed rent (TL)	✓	✓
Year of ownership	✓ (for all households)	✓ (only for owner-occupiers)
Existence of housing debt	✓	✓
Duration of occupancy	✓	✓
Monthly average housing expenditures (TL)	✓	✓
House value (TL) (assessed by owner)		✓
Dwelling size (sq meter)	✓	✓
Number of rooms	✓	✓
Existence of leaking roof, damp wall, rotten window frame	✓	
Existence of heating problem due to isolation	✓	
Existence of dark room and daylight	✓	
Existence of noise from street and neighbors	✓	
Sufficiency of dwelling size	✓	
Existence of air, environmental pollution and any other problems related with traffic and industry	✓	
Confrontation with crime and violence	✓	

Table 4.2 (Cont'd) The Availability of Variables in SILC and HBS

Accessibility of daily shopping facilities		✓
Accessibility of banking services		✓
Accessibility of post office services		✓
Accessibility of public transport		✓
Accessibility of health services		✓
Accessibility of primary school		✓
Existence, type and amount and rent from second housing unit		✓
Car ownership	✓	✓
OECD equalized household size		✓
Household annual income (TL)	✓	✓
The monthly expenditure of household (TL)		✓
Household size	✓	✓
Minimum income expectation for households in order to meet their needs	✓	
Difficulty of living with current income	✓	
Housing cost burden	✓	
Non-housing cost burden	✓	
Age of building		✓
Household head age	✓ (grouped)	✓
Number of earners in household	✓	✓

Although HBS provides opportunities to explore the success of the promises of homeownership, it has many shortcomings. Unfortunately, the data does not provide location information, even at the province level, making it impossible to integrate data from other sources. It obliges the researcher to evaluate a country as a whole. A second drawback was the lack of crucial information on the price of units when households bought it. Thirdly, the dataset does not provide the amount of remaining and paid debt, the type, and interest rate of debt for the housing unit. These

shortcomings do not give a chance to compare the exact change in the price of the unit to evaluate the change in housing-related wealth of households. It just enables the researcher to examine the cross-sectional housing wealth of households and possible changes due to the housing unit's locational advantages. Also, SILC has many drawbacks to work on the promises of homeownership, such as the lack of legal status of owned housing units, multiple homeownership of households.

While HBS is providing the variable about the current unit price and the number of owned units, SILC covers the extent of (non)housing expenditures burden on households. Moreover, each of these variables is available in only one of these data sources. Therefore, it is decided to study housing wealth from the Household Budget Survey and housing security from the Survey of Income and Living Conditions.

4.1.2 The Methodology of Measuring Housing Wealth and Housing Security

4.1.2.1 The Definition of Housing Wealth

In the expression of having a financial advantage through homeownership, housing wealth has frequently been mentioned. Whether housing debt exists or not, homeownership instantly allows having cash (liquidity) by selling the housing unit. Hence, the housing unit is accepted as a property. The financial meaning of this property to its owner has been measured with the price of the unit. The current price of the housing unit shows the cross-section housing wealth of the household. For the accumulation of housing wealth, in other words, the feasibility of homeownership decision in the long-run, the price of the unit when the time that households had bought gains importance. Wind adds that the total amount of paid debt and its components (interest rate, duration, etc.) also matter in measuring housing wealth (2017).

Due to previously mentioned limitations in the data section, housing wealth needs peculiar delineation in the Turkish context, similar to other developing countries. The current price of the housing units and locational advantage, affecting the possible changes in the unit price, has been utilized. At that point, two options are evaluated; one is classifying the housing wealth index and the other based on housing wealth categorization. The housing wealth index has composed of the combination of the existence of housing debt ((-1) if there is, (+1) if there is not), the price of housing unit (5 weight group), and locational advantages of a housing unit for the access of 6 services (5 weight group) as illustrated in figure 4.1. For instance, households are questioned about their housing debt; if a household has a housing debt, they are weighted as minus one (-1) due to the decrease in the chance to turn liquid quickly and sell it quickly, possibly decreases prices). According to the housing unit's price, if a household is in the middle group, three (3) points are given. In terms of locational advantages of the housing unit, if a household is categorized in the highest group, they are weighted as five (5). Household for owned unit collected seven (7) points according to these three characteristics.

Under these three characteristics, households who have maximum housing wealth can have eleven (11) points at most and one (1) point at least. From 1 to 11, housing wealth increase ordinally.

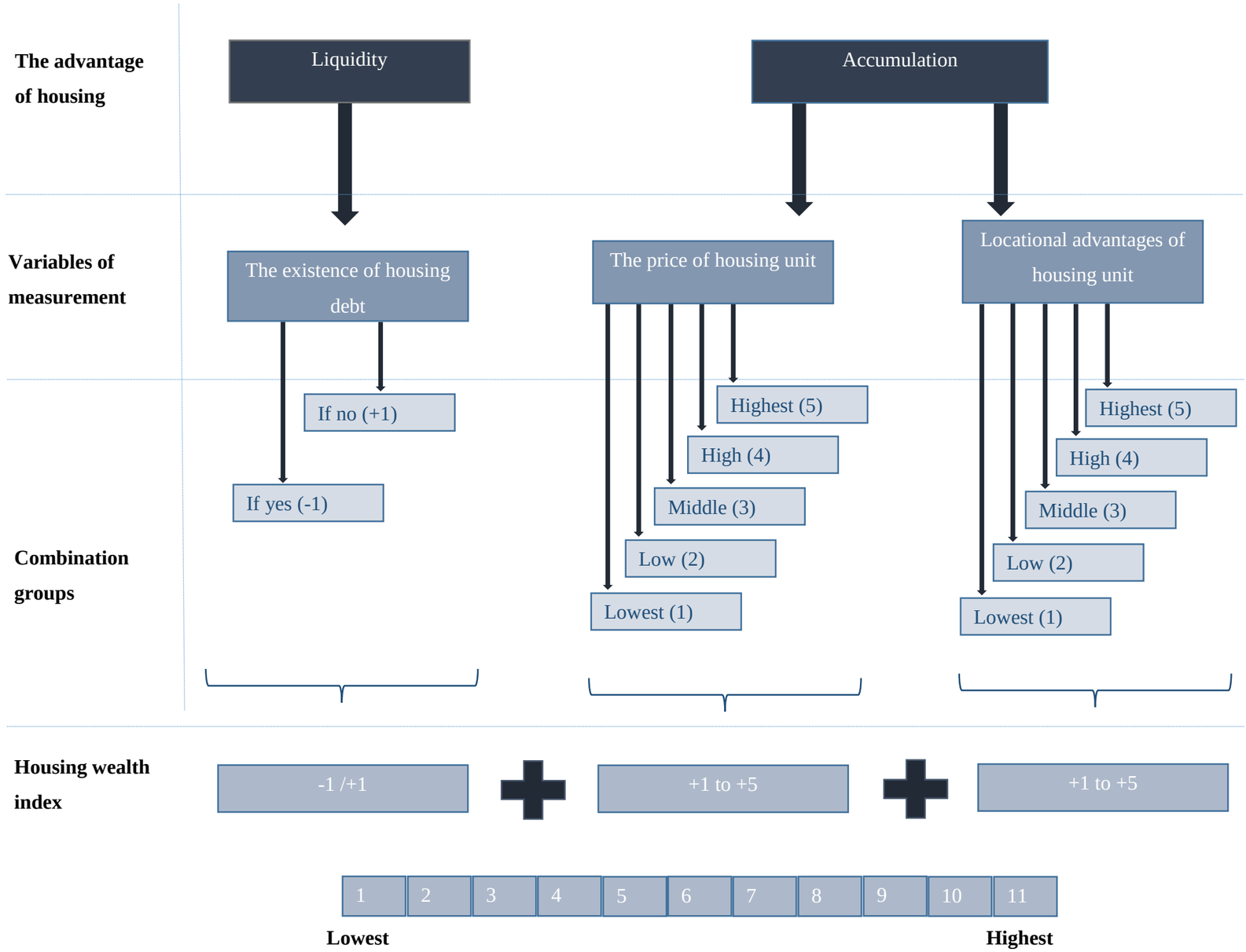

Figure 4.1. The Illustration of the Measurement of the Housing Wealth Method I

The second option to measure housing wealth is based on the categorization of households according to their achievement (having values above mean) of housing wealth indicators, liquidity, and accumulation. However, in the evaluation of liquidity, the existence of housing debt has shown that in HBS 2018 data, only 13,2% of owner-occupier households have ongoing debt. Therefore, using the existence of housing debt does not provide improvements due to the meager share in households compared to other country examples in analysis to form housing wealth categories. Therefore, accumulation is employed as a principle to define housing wealth categories. Accumulation has been evaluated under two headings; one is the current price, and the other is a possible positive price changes-easy sale process due to the locational advantages to access services. After eliminating some outliers, based on the housing unit's declared price by household, the mean value of housing units' price is defined. Firstly, households are categorized as those above or below this mean value, as shown in figure 4.2. According to the households' subjective declarations regarding the access scale to daily shopping facilities, banking services, post office services, public transport, health services, and education services, the mean value of access scale is defined. Secondly, households are divided into two groups; households having access scale value above mean and below mean. As a result, households are grouped into three categories, having above mean values for two indicators, having below mean value for one and above mean value for another indicator, having below mean values for two indicators.

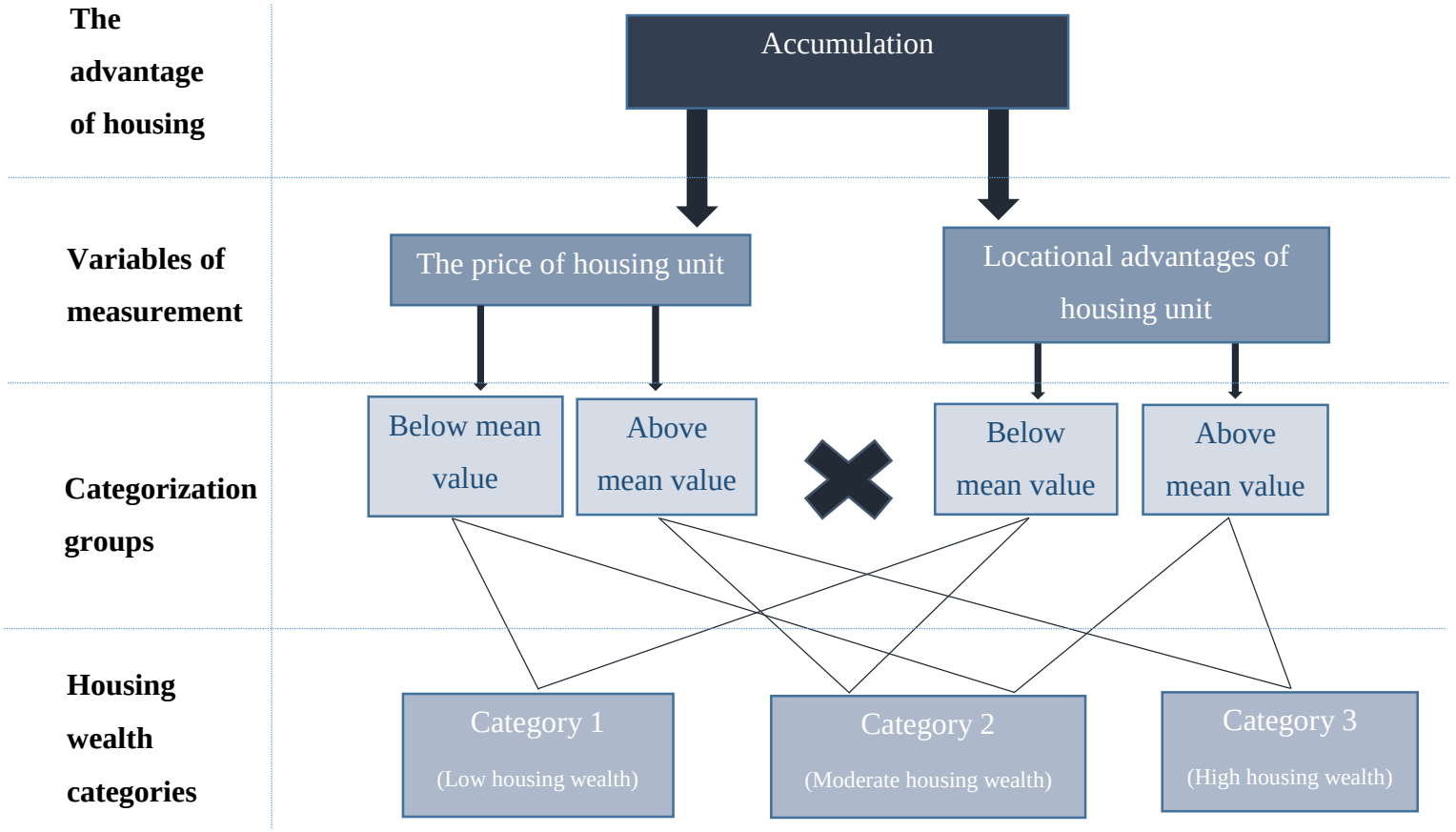

Figure 4.2. The Illustration of the Measurement of the Housing Wealth Method II

4.1.2.2 The Selection of Housing Wealth Formation Method

After evaluating two different housing wealth formation methods, the second one is chosen to apply analysis due to some superiorities. The first method does not provide a direct criterion for housing wealth. It defines the superiority relationship among the households only according to the scores obtained from the index. However, the primary purpose of this thesis is to determine the success or failure of households in terms of housing wealth. Also, the inclusion of the existence of housing debt in the housing wealth definition has been discussed. Due to the unknown duration of the remaining debt (1 month or ten years) and the low rate of debt having households, it is not meaningful to use housing debt to measure the housing wealth. However, the second option has provided a framework to compare households according to their level of success and failure. As a result, the second option is chosen to measure housing wealth based on the categorization of households according to their achievement (having values above mean) of housing wealth indicators. To categorize households to test their housing wealth conditions, the mean values of the price of housing units, and the accessibility scale of services have been adopted, as shown in table 4.2.

Table 4.3 Mean Values of Indicators in the Measurement of Housing Wealth

Variables of measurement	**Mean values for owner-occupier households**	**The share households of above mean values***
The price of housing unit	170,575.83 TL	32.3
Daily shopping facilities	2.46*	65.2
Banking services	2.86*	48.6
Post offices services	2.76*	52.8
Public transport	2.53*	62.8
Health services	2.60*	59.8
Education services	2.46*	66.5
Overall evaluation of services	2.61*	56.5

*Degree of accessibility (from 1 to 5 very easy to very hard access)

Households are divided into categories as above and below the average (mean) values shown in table 4.3. In this regard, 2637 households are evaluated in the low housing wealth category because of the above-average values in both the price of the housing unit and the scale of access to services. 2705 households are grouped in the moderate housing wealth category due to their below-average values in the housing price and above-average values in the scale of access to services (2221 households) or their above-average values in the housing price and below-average values in the scale of access to services (484 households). The last one consists of the high housing wealth category with 1825 households with above-average values in both the price of housing units and the scale of access to services.

Table 4.4 The Distribution of Households according to Housing Wealth Indicators

Distribution of households according to their housing wealth		**The price of the housing unit**		Total number of households
		Above mean	Below mean	
Access to services	Above mean	1825 (High)	2221 (Moderate)	4046
	Below mean	484 (Moderate)	2637 (Low)	3121
Total number of households		2309	4858	7167

Hereafter, considering the main aim of thesis which is to reveal the success and failure of the promises of homeownership (housing security and housing wealth) in Turkey, households are evaluated under these three categories.

4.1.2.3 The Definition of Housing Security

Housing security has been mentioned as an advantage of homeownership protecting households from unexpected material and non-material-based events. Through having a housing unit and being a homeowner, households have their druthers on their units. They can have extra precautions to be protected from external influences or without taking permissions (as much as the building's main structure is not harmed); they can create their habitats. Therefore, homeownership is believed to provide habitability for owner-occupier households rather than other modes of tenure. Secondly, the exact definition of housing debt payment is identified in many countries (the interest rate, duration of repayment, down payment, loan to value ratio). For the duration of housing debt repayment, households are previously informed. They are expected to face unaffordable conditions in the payment of housing less than other modes of tenure. Hence, while homeownership is believed to avoid affordability problems, in this way, it contributes to the housing security of households.

Figure 4.3 displays the first option to measure housing security based on the categorization of households according to their achievement (having or not having) of housing security indicators; habitability and affordability. In the evaluation of habitability, the existence of at least one of seven housing and environment-related problems are questioned. If households have one or more of these problems, they are categorized in "there is" group in habitability. If they do not have any of these problems, they are included in the "there is no" category. At this stage, households not having any problems are evaluated as more secure than households having some of these problems. Then, the second categorization is formulated according to the level of housing affordability. If the amount of housing expenditures is leading a burden on households' budgets based on households' subjective declaration, it is expected that these living conditions are not sustainable for households. In other words, it is not a secure way to meet housing and non-housing expenditures of households. As a result, two groups are created; one is having a burden due to housing expenditures on budget, and the latter is not having a burden due to housing expenditures on budget.

The cross-tabulation of these two main evaluations advantaged the creation of four housing security categories. Category 1 indicates the low-security households which are facing affordability and habitability problems in their units. Category 2 consists of the moderate housing security households which have habitability problems but no affordability problems. They are interpreted as a group of households, whether they have housing and environment-related problems, they do not spend money to solve these problems. Category 3 refers to moderate housing security households. However, different than the previous one, these households do not have any habitability problems but have a burden of housing expenditures on their budget. Category 4 corresponds to the high housing security households who do not have any habitability and affordability problems in their owned unit.

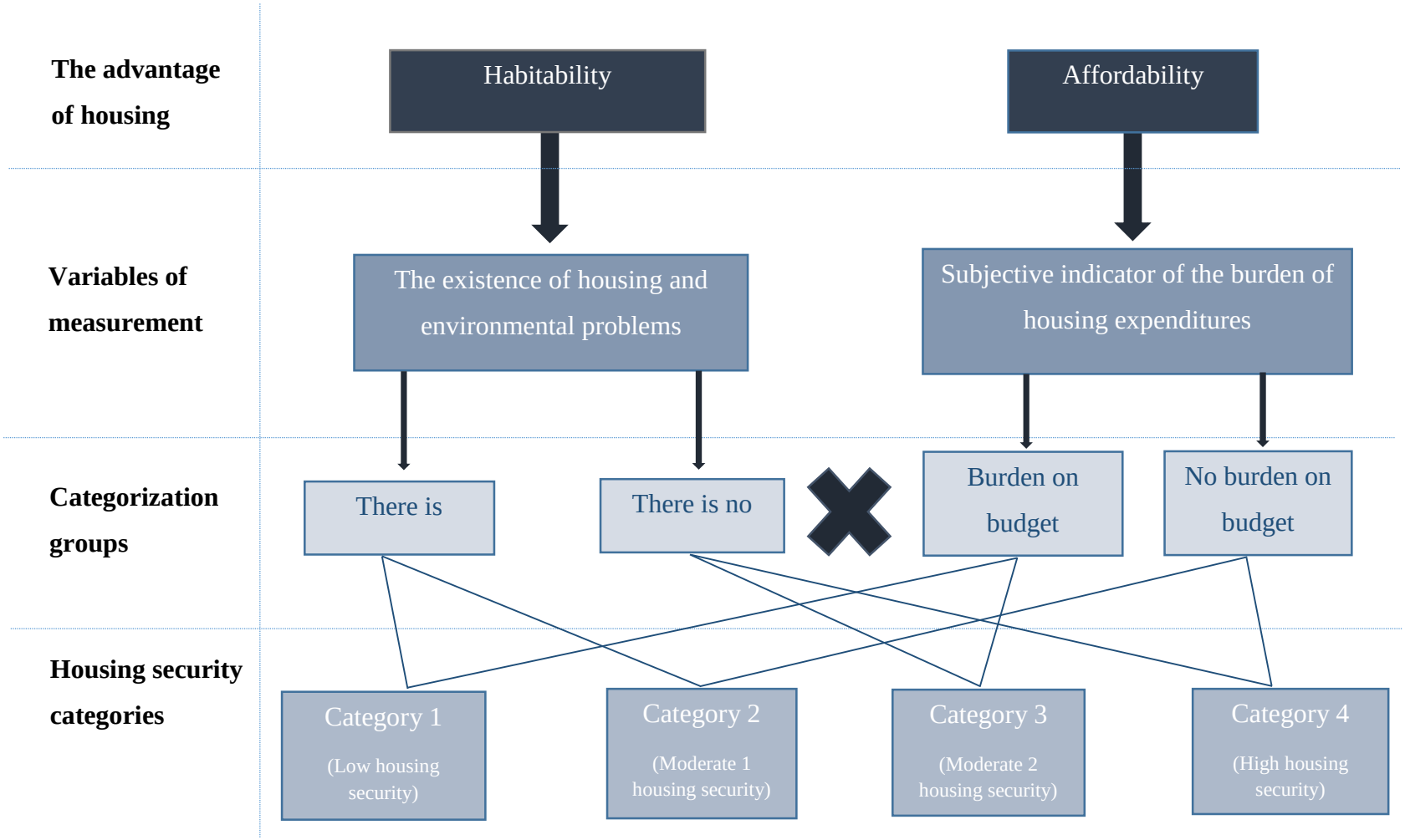

Figure 4.3. The Illustration of the Measurement of the Housing Security Method I

In the second method measuring the housing security of households, the creation of a housing security index is utilized, as illustrated in figure 4.4. Instead of categorizing households according to their achievement of the housing security (achieved or not), in this method, households are evaluated comparatively based on the degree of habitability and affordability. Habitability is represented with three degrees (do not have any housing and environment-related problems, have 3 and less in 7 problems, have 4 and more in 7 problems). If households do not have any problems, they are estimated as the most advantageous group in housing security. This group is given +2 points in the index. Households having 3 and less in 7 problems are scored as +1 in the index. The last group of households with 4 and more in 7 problems is the most disadvantageous and given 0 points in the index.

In this method, the objective indicator of the burden of housing expenditure on the budget is benefited. First, paying more than 30 percent of household income for housing expenditures is thought to be estimated as a threshold for categorizing households. However, Survey of Income and Living Conditions gathers only the amount of rent (merely for tenant households), bills, maintenance, and housing service. It lacks the amount of housing debt payment to any institution, bank, or someone else. Therefore, the 30 percent threshold does not make sense for owner-occupier households. As a second option for housing expenditure burden, the mean value for the share of housing expenditure is measured. Then, households are classified as being above or below this mean value. While being above mean value is referring to more insecurity, below-mean value is subtending more secure housing. Hence, the above-mean value is evaluated with 1 point and the below-mean value with 2 points.

All in all, households are indexed according to their habitability and affordability points. Households who have the utmost housing security can have four (4) points and one (1) point at least. From 1 to 4, housing security increase ordinally.

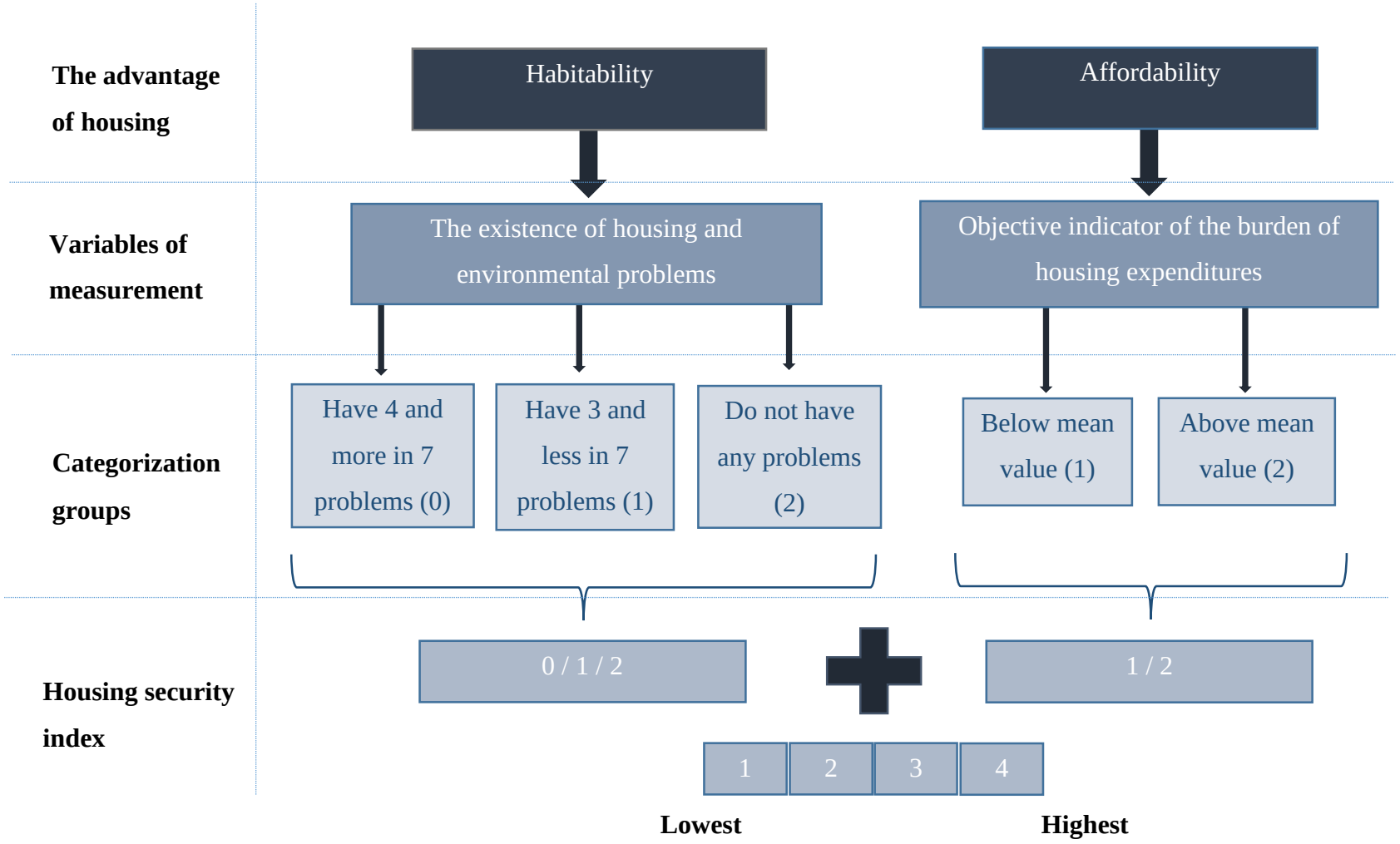

Figure 4.4. The Illustration of the Measurement of the Housing Security Method II

4.1.2.4 The Selection of Housing Security Formation Method

After evaluating two different housing security measurement methods, the first method is selected to analyze due to some superiorities because of the thesis's previously mentioned purposes. It has provided a framework to compare households according to their level of success and failure (having / not having a burden and having / not having problems).

Households are divided into categories as having or not having burden and housing and environment-related problems, as shown in table 4.4. In this regard, 6066 households are evaluated in the low housing security category; 2819 households are grouped in the first moderate housing security category because they have a burden in housing expenditure and do not have any problem conditions. The second moderate housing security category includes 3227 households with at least one of these problems and does not burden housing expenditures on their budget. The last one consists of the high housing security category, with 2166 households is not experiencing any burden and problems.

Table 4.5 The Distribution of Households according to their Housing Security

Distribution of households according to their housing security		**The burden of housing expenditures on budget**		Total number of households
		Do not have a burden	Have a burden	
Having housing and environment-related problem	Do not have	2166 (High)	2819 (Moderate 1)	4985
	Have at least 1	3227 (Moderate 2)	6066 (Low)	9293
Total number of households		5393	8885	14278

4.1.3 Selection of Analysis Method

Data could be analyzed in multiple ways; each of them provides legitimate answers. However, to avoid misinterpretation based on results, choosing the appropriate method matters. In this selection process, the nature of dependent and independent variables, main hypothesis, and first and foremost, the research questions that the researcher aimed to answer become determinative. To decide the causality of independent variables in predicting the dependent variable, three main multivariate analysis methods have been overviewed in this thesis; Discriminant function analysis, Logit analysis, and Logistic regression. They can be used to assess the same research problems (Antonogeorgos and et al., 2009). Their assumptions, merits, and demerits are investigated within the scope of research questions and data sources. Due to the below-mentioned reasons, multinominal logistics regression has been selected as a primary analysis method of the prediction of the factors affecting the level of housing security and housing wealth in Turkey with other exploratory analyses.

First of all, the discriminant analysis focuses on the discriminant functions to maximize the difference between groups. Simultaneously, logit and logistic regression are mostly used if the researcher is not dealing with categorization but in getting the odds ratios for each variable to predict the dependent variable. In other words, Discriminant function analysis aims to reveal discrimination between groups such as “Which group of the dependent variable is the case most likely to belong to”. Logistic regression and logit address “What are the most important predictors and How likely is the case to belong to the dependent variable”. It means that “logistics regression and logit are more interested in the independent variables’ prediction power of the outcome rather than the outcome itself, which is more critical in discriminant function analysis” (Pohar and et al., 2004).

Discriminant function analysis requires normality and homogeneity of variances, while others are robust against deviations from normality (Tabachnick and Fidell, 2001). However, preliminary analysis of data has shown that there are skewed and

unnormal distributions of variables. Unlike discriminant analysis, logistic regression and logit have no assumptions about the distributions of the predictor variables. Independent variables do not have to be normally distributed, linearly related to the dependent variable, or of equal variance within each group. Therefore, discriminant function analysis has been eliminated as an option.

After the elimination of discriminant function analysis, logit and logistic regression are evaluated. The significant difference between logit analysis and logistic regression is the type of independent variables. In logit analysis, independent variables have to be discrete; however, in logistic regression, independent variables are allowed to be several in type; a mix of continuous, discrete, and dichotomous variables. By considering the independent variables in predicting the level of housing wealth and housing security of households, logistic regression transcended over other methods. The type of dependent variable is considered multinominal logistic regression that has been employed in this thesis.

4.2 The Evaluation of the Promises of Homeownership in Ankara

4.2.1 Data Source

The third data source employed in measuring the achievement level of housing promises of Turkish households is a survey sample gathering by way of a project titled “The Investigation of the Promises of Homeownership in Turkey” funded by TUBİTAK. This project mainly aimed to obtain data and variables to query housing wealth and housing security simultaneously. To reach this objective, the survey questionnaire (Appendix D) is prepared to include variables to measure both housing wealth and housing security. Also, the survey comprises district level geographic information focusing on urban Ankara. Geographic coverage involves eight central districts of Ankara; Çankaya, Mamak, Altındağ, Gölbaşı, Etimesgut, Yenimahalle, Keciören, Sincan, as shown in figure 4.5. The total population of these districts in 2019 is 4.887.984 (TURKSTAT, 2020) and 1.471.817 households (TURKSTAT,

2019). Considering the statistically significant representation of the survey area, 663 households in eight districts (114 neighborhood units) are involved in the sample during survey trips from July to September 2020. This period coincided with a severe period of the COVID-19 pandemic in Ankara. Therefore, households are reached in streets, cafe houses, public spaces such as urban parks, libraries, schools, and rarely in their flats.

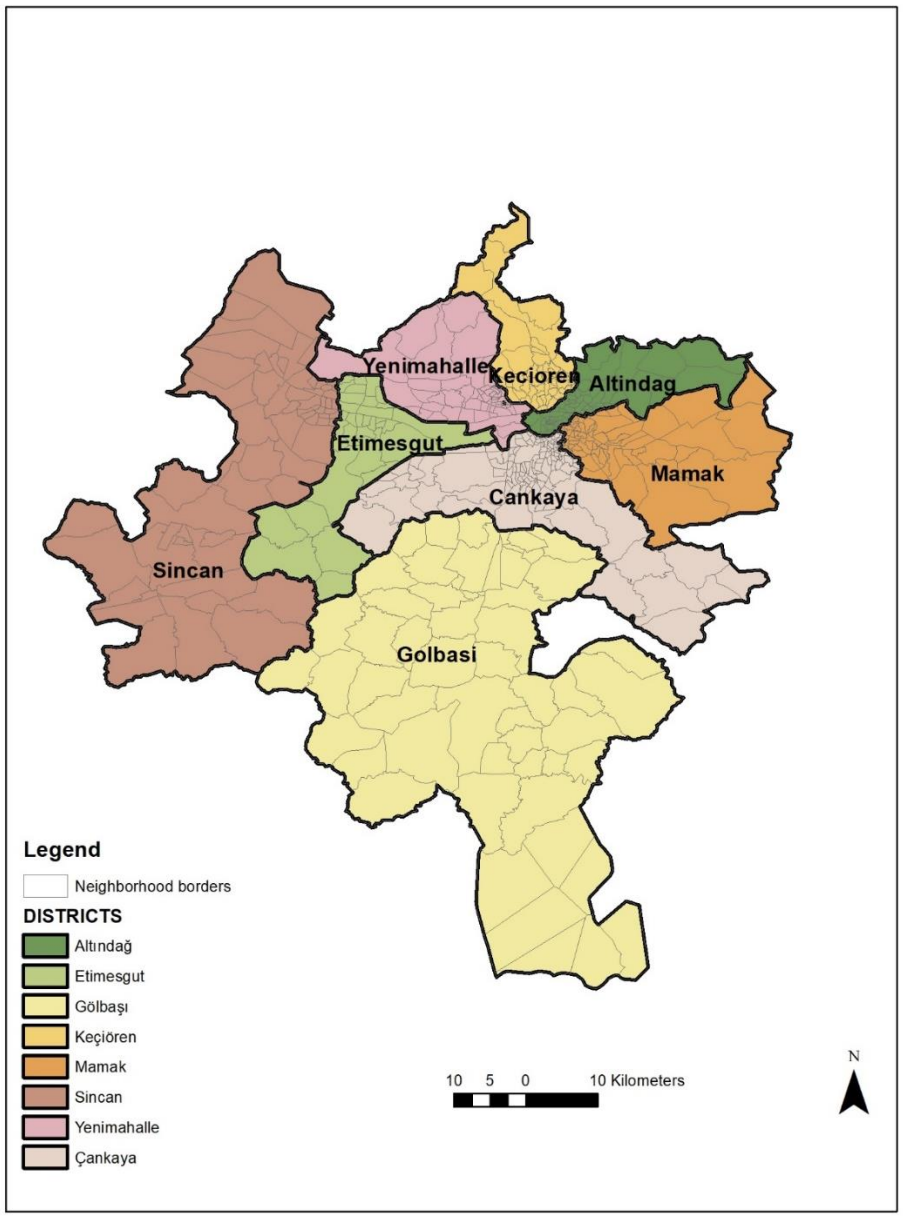

Figure 4.5. Selected Districts of Ankara

In Ankara Survey, households are questioned cross-sectionally to observe their current condition of housing and living. Some questions are expected to answer by all participants, while some are only for owner-occupier households. It provides 15 independent variables for all participants and two more independent variables only for owner-occupier households. It also questions dependent variables, housing wealth, and housing security, through 4 different variables. Variables and changing with the type of variable their range and mean, the share of sub-categories is summarized in table 4.5. The number of missing cases for each variable is meager (at most 7 cases). The range of variables is observed on similar patterns with SILC and HBS. However, urban Ankara differs from two other data sources (SILC and HBS) due to the higher level of income and a higher share of government officials.

Ankara survey aims to close a deficit of HBS and SILC data sources. First of these lies on desiring to own a house to overview motivations and expectations of households to be a homeowner. The highest share in reasons is observed as securing myself in landlord eviction for all surveys (20.2) and owner-occupier households (21.1). The reason follows it- the money paid for rent is waste with 18.1 percent for all participants and 19.2 percent for owner-occupiers. The lowest share is observed because it uses money obtained from the sale of an owned unit in need, with 8.3 percent for all participants and 7.7 percent for owner-occupiers.

Table 4.6 Summaries of Variable in Survey Questionnaire

Expected to answer by all households (N=663)			
Variable	**Range (Share in percentage - %)**	**Mean**	**Missing cases**
Dwelling size (sq meter)	40-500	138.0	1 case
Number of rooms	2-8	3.9	-
Age of building	0-65	18.1	1 case
Duration of occupancy	0-53	8.8	-
Household head age	21-85	49.2	1 case
Household size	1-7	3.3	-
Total income of households (TL/monhtly)	1000-100,000	9236.5	2 cases
Household assessment on housing price (TL)	820-2,000,000	421,123.2	7 cases
Household assessment on housing rent	100-10,000	1509.4	5 cases
District of residence	1-Çankaya (22.9) 2-Mamak (7.4) 3-Altındağ (14.5) 4-Gölbaşı (10.3) 5-Etimesgut (17.2) 6-Yenimahalle (6.0) 7-Keciören (9.4) 8-Sincan (12.4)	-	-
Modes of tenure	1-Owner-occupier (61.5) 2-Tenant-paying rent at market prices (29.4) 3-Tenant-paying rent below market level to relatives (2.4) 4- Do not own a residing unit and paying no rent to relatives (6.6)	-	-

Table 4.7 (Cont'd) Summaries of Variable in Survey Questionnaire

Working condition of household head	1-Government official (33.5) 2-Blue-collar worker (5.4) 3-Self-employed (16.7) 4-Wage earner (13.0) 5-Retired (26.5) 6-Others (4.8)	-	-
Household assessment on income groups	1-Poor household (2.6) 2-Low-income household (18.3) 3-Middle-income household (71.9) 4-High-income household (7.2)	-	-
Satisfaction level of housing (considering all components)	1-Very low (0.9) 2-Low (6.2) 3-Middle (36.3) 4-High (41.0) 5-Very high (15.5)	-	-
The reasons of desiring to own a house	1-Saving through the payment house debt instead of rent (buying the 2nd or 3rd house) (17.5) 2-Securing myself in case of landlord eviction (20.2) 3-To have a legacy to bequeath my children (13.7) 4-Having a higher level of housing expenses in rental housing unit (9.2) 5-To have a better housing conditions than a rental unit (12.2) 6-To use money obtained from the sale of owned unit in case of need (8.3) 7-The money paid for rent is wasted (18.1) 8- Others (0.7)	-	2 cases

This survey also improves the analysis of the promises of homeownership through additional variables such as the existence of calculation for financial advantages before owning a house and the negative experiences of being owner-occupier. In that manner, it is observed that 57.3 percent of owner-occupier households indicated that they had already calculated their financial advantages before owning a house. Owner-occupier households also remarked that being responsible for maintaining and repairing the housing unit is the most experienced negative aspect of owning a house (25.0). It is followed by the burden of housing debt (19.1) and facing security, noise, and other problems due to the location of the housing unit (16.8).

Table 4.8 Summaries of Variable only Answered by Owner-Occupiers in Survey Questionnaire

Expected to answer by owner-occupier households		
Variable	**Range (%)**	**Missing cases**
The existence of calculation for financial advantages before owning a house	1-Yes (57.3) 2-No (42.7)	5 cases
The negative experiences of being owner-occupier	1-The burden of housing debt (19.1) 2-Facing security, noise and other problems due to the location of housing unit (16.8) 3- Being responsible of the maintenance and repair of housing unit (25.0) 4-Having high transportation cost and long travel time due to the location of housing unit (11.9) 5-Decrease in the price of housing unit (11.2) 6-Mismatch of the housing unit in terms of the size of houshold (overcrowding and overconsumption) (13.8) 7-Others (2.1)	4 cases

Table 4.9 (Cont'd) Summaries of Variable only Answered by Owner-Occupiers in Survey Questionnaire

The level of housing price	1-Very low (0.2) 2-Low (12.8) 3-Middle (54.8) 4-High (25.4) 5-Very high (6.7)	3 cases
Satisfaction level of the location of housing	1-Very low (2.0) 2-Low (14.1) 3-Middle (32.8) 4-High (33.1) 5-Very high (18.0)	3 cases
Satisfaction level of housing and environment	1-Very low (3.2) 2-Low (15.8) 3-Middle (31.9) 4-High (33.1) 5-Very high (16.0)	3 cases
The level of burden of housing expenditures on households budget	1-Very low (3.7) 2-Low (22.7) 3-Middle (54.6) 4-High (14.3) 5-Very high (4.7)	3 cases

4.2.2 Method of Analysis in Ankara Districts

4.2.2.1 The Definition of the Achievement Level of the Promises of Homeownership

The definition of housing wealth and housing security has remained the same as discussed in Chapter 4; however, the way they are measured is changed. In the Ankara survey, housing security is reviewed with two variables; habitability (satisfaction level of housing and environment) and affordability (the level of burden of housing expenditures on households' budget). Housing wealth is questioned on accumulation with two variables; the level of housing price and satisfaction level of

housing location. Owner-occupier households are expected to evaluate their condition for each variable over the 5-point Likert scale, as shown in table 4.7.

Table 4.10 The Share of Household Assessment on Satisfaction Level

Household assessment on	**Level of measurement (%)**				
	Very low (1)	**Low (2)**	**Medium (3)**	**High (4)**	**Very high (5)**
The level of housing price	0.2	12.8	54.8	25.4	6.7
Satisfaction level of the location of housing	2.0	14.1	32.8	33.1	18.0
Satisfaction level of housing and environment	3.2	15.8	31.9	33.1	16.0
The level of burden of housing expenditures on households budget	3.7	22.7	54.6	14.3	4.7

In the second step of creating two dependent variables, housing wealth and housing security scores are obtained through the sum of related sub-variables. As a result, a minimum of two points and a maximum of ten points are expected to represent households' condition. The mean score of housing security is measured as 6.49, and housing wealth is measured as 6.76. The mean values of these scores are evaluated as a threshold in the definition of the achievement level of the promises of homeownership, which are housing security and housing wealth. For each of these scores, households remaining below the 7 points were grouped as unachieved households about related topics. Others (obtained seven and more on scores) are categorized as households achieved related promises of homeownership.

As a result of the categorization of scores, 35.6 percent of owner-occupier households in the Ankara survey are observed with the achieved level for housing wealth and security, as represented in table 4.8. 31.4 percent of households are monitored unachieved to have housing security and housing wealth.

Table 4.11 The Share of Household on Housing Security and Housing Wealth Score

The share of households		Housing wealth		
		Achieved (above average)	**Unachieved** (below average)	**Total**
Housing security	**Achieved** (above average)	35.6%	13.3%	48.9%
	Unachieved (below average)	19.8%	31.4%	51.1%
	Total	55.3%	44.7%	100.0%

(Cramer's V:.34 and p < .001)

Households achieving both housing security and housing wealth are accepted the group who succeeded in getting the promises of homeownership in the following parts of analysis. Simultaneously, the ones categorized in unachieved are called the groups who failed to get homeownership promises. The remaining households are accepted as semi-achieved households while achieving one of two promises failing to get the other. However, analysis has continued with two categories; Achieved households and unachieved households of the promises of homeownership.

4.2.2.2 The Selection of the Measurement Method of the Promises of Homeownership

In this selection process, the nature of dependent and independent variables are considered, and the research questions are aimed to answer. To decide the causality of independent variables in predicting the dependent variable, three main multivariate analysis methods are mentioned in section 4.1.3, and logistic regression is selected in the end. In this part, the likelihood of achieving the promises of homeownership in Ankara is investigated through the binary logistic regression method. This method is employed on a dichotomous dependent variable, achieved by households and unachieved by households. Factors affecting this achievement status are investigated over independent variables; Districts, Housing price per m^2,

Imputed rent per m^2, The age of building, The number of rooms, Reasons for desiring to be a homeowner (Saving through the payment house debt instead of rent, Securing myself in case of landlord eviction, To have a legacy to bequeath my children, Having a higher level of housing expenses in rental housing unit, To have a better housing conditions than a rental unit, To use money obtained from the sale of owned unit in case of need, The money paid for rent is wasted), Negative experiences of homeownership (The burden of housing debt, Facing security, noise and other problems due to the location of housing unit, Being responsible of the maintenance and repair of housing unit, Having high transportation cost and long travel time due to the location of housing unit, Decrease in the price of housing unit, Mismatch of the housing unit in terms of the size of household) and The existence of financial calculations on advantages.

CHAPTER 5

ANALYSING THE PROMISES OF HOMEOWNERSHIP FOR TURKISH HOUSEHOLDS: HOUSING WEALTH AND HOUSING SECURITY

Considering the previous chapters, this thesis's main argument is that all households do not fulfill the promises of homeownership (housing security and housing wealth) in Turkey. Country-wide housing policies encouraging homeownership have multiple reflections on different household groups (segments) in society. Ultimately, this chapter employs some inferential and multivariate analysis to present reflections. In this way, it investigates the failed and succeeded promises of homeownership in Turkey by overviewing an international framework and evaluating whether homeownership is a rational housing policy for all households.

Like the many other databases, Households Budget Survey and Survey of Income and Living Conditions include some raw variables. While detecting and cleaning the outliers, the analysis results, the formation of new variables should be prepared according to the analysis needs. The critical point for the researcher is the decision of the right sequence of processes.

In this thesis, after deciding the methods of analysis, the data preparation process has started. Without losing representation of the data, the creation of these variables is focused, such as median income, poverty line, and equalized households 'income-based income groups in this thesis. Then, outliers are defined and examined. If a variable is used directly in analysis, these outliers are eliminated. However, if a new order of variable will be created from the existing variable (including outliers), outliers are not removed. To illustrate, outliers are defined both for the monthly housing expenditure and the size of the household. Monthly housing expenditure is a variable that will be directly included in the analysis; therefore, it needs to be rescued from outliers. However, the size of households will not be directly used in this thesis. Instead, households are categorized according to their representation of

traditional Turkish family composition (parent with child (ren)). In this condition, the outliers are not removed.

The analysis is conducted in three main steps. Firstly, households in datasets are evaluated all together according to some essential variables defining housing wealth and housing security in section 5.1.1 and 5.2.1. Under the heading 5.1.1 employing Household Budget Survey-2018, the number of rooms, the size of housing unit, access scale to six different services, age of the head of household, and monthly expenditure are investigated based on the mode of tenure, income quintiles, saving status, poverty conditions of households. Also, household type, the year of housing construction, and housing type are examined for tenure modes. In 5.2.1, the existence of seven different housing and environment-related problems, housing cost burden, the unpaid status of housing cost in the last twelve months, and monthly housing expenditures are discussed for the income quintiles and tenure modes. Household type regarding the age of head of household, type of dwelling unit, and starting year of residency in the current unit elaborated for tenure modes.

In the second step, detailed results on owner-occupier households are carried out in section 5.1.2 and 5.2.2. In this way, the differentiation of households based on housing wealth and housing security categories is presented in housing, household, and related independent variables. In the housing wealth section (5.1.2), these variables are composed of the mean values of the price of housing unit, the size of housing unit, the number of rooms, total year of residency, amount of imputed rent, price of per m2 housing unit, amount of annual housing expenditures, amount of annual transport expenditures, size of household, annual income, equalized household income, amount of monthly expenditures, age of head of the household for each housing wealth group. Having a second housing unit, having a housing debt, being retired, residing in a current housing unit in 2003, and later on, having any real estate income, being able to save in any way are evaluated as the percentage of households representing these variables for each housing wealth group. In the housing security section (5.2.2), the mean values of monthly housing expenditures,

number of rooms, dwelling size, annual imputed rent, size of annual household income, and equalized household income are emphasized. The share of housing security groups in income quintiles, imputed rent groups, households with housing debt, and real estate income is shown in percentages.

In the third step, the multivariate analysis of factors in the investigation of housing wealth and housing security is conducted. Multiple homeownership, household composition, the number of workers, real estate income, income groups, housing typology, housing, and transport expenditures, income quintiles are employed as independent variables in measuring housing wealth. The existence of real estate income, subsistence level with current income, imputed rent quintiles, the number of breadwinners, and housing typology are included in multivariate analysis to investigate housing security. Finally, further details explaining housing wealth and housing security categories are overviewed and discussed in the Turkish context with crosstabulations.

5.1 The Analysis of Housing Wealth in Turkey

5.1.1 Differentiation of Households based on Household Budget Survey

On the basis of the processes, as mentioned above, first households are descriptively examined. They have some categories and sub-categories as dependent variables, and independents are divided mostly into two main groups; housing and related - household and related characteristics, as shown in table 5.1. Based on the mode of tenure, income quintiles, saving status, and poverty conditions, households are questioned about their characteristics with mean values such as the number of rooms, access scale to some services, and age of the household head. The descriptive results are comparatively evaluated hereafter. In terms of the number of rooms in the housing unit and the size of the unit, owner-occupier households in the modes of tenure, the highest income in the income quintiles, households having any saving in saving status groups, and households not at the risk of poverty in poverty groups are

comparatively living in bigger housing units with more rooms than other sub-categories in their category.

Table 5.1 The Comparison of Households based on Housing and Household Characteristics (with mean values)

Household categories		Housing Characteristics								Household Characteristics	
		The number of rooms	The size of housing unit (m^2)	Access scale to*						Age of the head of household	Monthly expenditure
				Daily shopping	Banking services	Post offices	Public transport	Health services	Education services		
All households		3.55	108.67	2.33	2.73	2.63	2.41	2.48	2.36	50.63	4185.23
Mode of tenure	Owner-occupier	3.63	112.26	2.46	2,.86	2.76	2.53	2.60	2.46	54.79	4291.85
	Tenant	3.45	104.97	1.99	2.35	2.26	2.07	2.15	2.07	42.58	4159.11
	Lodgment	3.27	93.02	2.20	2.41	2.30	2.14	2.22	2.14	41.70	5211.77
	Others	3.41	101.23	2.36	2.84	2.71	2.48	2.54	2.43	47.13	3663.10
Income Quintiles	Highest	3.82	121.00	2.00	2.33	2.28	2.11	2.17	2.10	48.87	7142.84
	High	3.65	110.63	2.15	2.58	2.47	2.22	2.33	2.24	51.31	4623.67
	Middle	3.53	106.57	2.32	2.72	2.61	2.39	2.48	2.40	52.14	3739.59
	Low	3.47	104.66	2.42	2.84	2.73	2.49	2.54	2.44	51.31	3048.47
	Lowest	3.29	100.50	2.78	3.17	3.06	2.84	2.88	2.62	49.53	2379.22
Saving status	Any kind of saving(s)	3.70	114.04	2.23	2.62	2.54	2.32	2.40	2.30	50.32	5049.31
	No saving	3.46	105.33	2.40	2.80	2.69	2.46	2.53	2.39	50.83	3647.71
Poverty	At the risk of poverty	3.28	100.39	2.79	3.18	3.07	2.85	2.89	2.62	49.50	2365.71
	Not at the risk of poverty	3.62	110.63	2.22	2.62	2.53	2.30	2.38	2.29	50.90	4616.67

*Accessibility decreases from 1 to 5

Based on households' subjective evolution according to the location of their housing unit, access scale to daily shopping activities, banking services, post offices, public transport, health services, and education services are evaluated. Tenant households in the modes of tenure and highest income groups correspond to the highest access to services. Also, compared to the households having any savings, households with no savings are suffering because of their units' location. Similarly, households at the risk of poverty are facing with the accession problem to these services.

Although the age of the head of households is in the narrow range (between 47 and 52) for many sub-categories, households who are owner-occupier, tenant, and living in lodgments differ from others. Owner-occupier households are the oldest group in sub-categories with a mean 55, while tenant households with 43 and lodgment households with 42 become the youngest household sub-category.

Then, households are examined according to the type of household, the type of dwelling unit, the year of the housing unit, and the share of income and saving groups in different tenure modes. In overall society and all tenure modes, two parents with child(ren) have the highest share, as seen in table 5.2. While the second-highest household type is parents with no kids for owner-occupier, tenant, and lodgment living households, being a single person is the second-highest share in others category.

Table 5.2 The Share of Household according to the Type of Household in Modes of Tenure

Household type (sub-categories)	Frequency	The share of subcategory in category (%)			
		Owner-occupier	Tenant	Lodgment	Others
Single person	1148	8.40	11.00	6.40	13.50
One nuclear family and others	1537	16.60	8.00	3.70	6.90
No nuclear family but others	186	0.90	3.30	1.60	1.50
Two parents with no kids	2226	23.00	12.20	12.30	12.60
Two parents and child(ren)	5878	44.90	56.50	74.30	56.80
Single parent and child(ren)	837	6.10	9.00	1.60	8.70
Total	11812	100.00	100.00	100.00	100.00

The examination of the age of head of households for single-person households in others categories showed that these households are comparatively older households with an averagely 60 years old. It means that the beneficiaries of others groups are not only composed of younger households but also older.

The utilization of housing stock based on the construction year of buildings is distributed in the modes of tenure categories, as shown in table 5.3. It is evident that housing stock in Turkey comparatively newer than other countries due to intensive

housing production activities. HBS (2018) showed that one-third of households are living in units built after 2001. More than 30 percent of owner-occupier, tenant, and lodgment categories are living in these units. However, others category differs in terms of two-issue; one is the lower share of building built after 2001, and second is the higher share of building constructed before 1970.

Table 5.3 The Share of Households according to the Year of Construction of their Housing Unit

The year of housing construction	**Frequency**	**The share of subcategory in category (%)**			
		Owner-occupier	**Tenant**	**Lodgment**	**Others**
1945 and before	193	2.00	0.70	0.50	1.90
1946-1960	434	4.20	1.30	3.20	5.30
1961-1970	737	6.20	4.70	3.20	9.10
1971-1980	1601	13.70	12.00	16.00	15.20
1981-1990	2264	17.30	21.90	24.10	22.00
1991-2000	2681	22.10	24.30	21.90	22.60
2001-2005	1245	10.60	11.20	9.60	9.50
2006 and later	2657	23.90	23.90	21.40	14.40
Total	11812	100.00	100.00	100.00	100.00

According to table 5.4, single housing units and building blocks with ten and more dwellings are the most commonly observed types of dwelling units. However, the share of the type of dwelling units varied among the modes of tenure. While the single housing unit covers 41 percent of owner-occupier and 34 percent of others households, it remains a 10 percent level for tenant households. While 76 percent of owner-occupier households in single housing units live in buildings constructed before 2000, 43 percent of owner-occupier households in building blocks with ten

or more dwelling units continue their lives in buildings constructed before 2000. If an owner-occupier household is living in a single housing unit, it is living in the older housing stock section.

Table 5.4 The Share of Households according to the Type of Dwelling Unit and the Modes of Tenure

Type of dwelling unit	**Frequency**	**The share of subcategory in category (%)**			
		Owner-occupier	**Tenant**	**Lodgment**	**Others**
Single housing unit	3870	41.40	9.90	24.10	34.30
Two dwellings with seperate entrance	747	6.30	4.50	2.70	9.70
Two dwellings with single entrance	742	6.00	5.30	2.70	9.40
3-9 dwellings with seperate entrance	345	2.10	4.10	2.70	4.60
10 and more dwellings with single entrance	116	0.90	1.40	1.10	0.40
3-9 dwellings with single entrance	2778	17.70	36.60	17.60	27.30
10 and more dwellings with seperate entrance	3214	25.50	38.10	49.20	14.20
Total	11812	100.00	100.00	100.00	100.00

There is no legal status indicating variables, but these units are thought of as squatter housing or housing on divided parcels. Furthermore, if the owner-occupier household is living in building blocks with ten or more dwelling units, they utilize newer parts of housing stock.

Table 5.5 displays that in terms of saving status, lodgment households have the highest share in any saving(s) sub-category, and others have the lowest share in the same. The modes of tenure are evaluated in detail according to their monthly expenditure and annual income, lodgment households are revealed as the highest mean values in income and expenditure. It means that even they are spending more than other households, they are also earning more. It gives them more opportunities to save compared to the other modes of tenure. Also, it is revealed that others category households have the lowest income and expenditure in mean values. It hampers making any savings for them.

Table 5.5 The Distribution of the Modes of Tenure based on their Savings' and Income Quantiles

Category		**Frequency**	**The share of subcategory in category (%)**			
			Owner-occupier	**Tenant**	**Lodgment**	**Others**
Saving status	**Any kind of saving(s)**	4530	42.70	30.40	66.80	29.80
	No saving	7282	57.30	69.60	33.20	70.20
Income quintiles	**Highest**	2357	59.60	29.10	2.90	8.40
	High	2365	61.90	23.60	1.90	12.50
	Middle	2363	61.40	22.70	1.4	14.50
	Low	2364	60.00	22.00	0.90	17.10
	Lowest	2363	60.50	19.60	0.80	19.10

Last but not least, households are objected to evaluation according to their shares in income quintiles. Surprisingly, there is no such significant differentiation in the share of owner-occupier households in each income quintile. However, the share of tenant and others categories varies in the lowest and highest income quintiles. While 29

percent of households in the highest income are tenant, 19 percent of households in the lowest income group are the tenant. Also, 19 percent of households in the lowest income quintile are others (living in their relatives and families housing unit with market below rents or no rents), and 8 percent of the highest income groups have consisted of others.

5.1.2 Descriptive Results on Owner-Occupier Households

Based on the methods in section 4.2.2, owner-occupier households are categorized into three groups indicating the success and failure in housing wealth accumulation. The low housing wealth category is consisted of households having the housing unit, but the price of the unit and locational advantages of the housing unit to reach some services are being below-mean value. The moderate housing wealth category is formulated as either having a below-mean value for the housing unit's price and above-mean value for the locational advantages of a housing unit or having an above-mean value for the price of the housing unit and below-mean value for the locational advantages of the housing unit. The high housing wealth category is regulated above-mean values for both the housing unit's price and the locational advantages.

In this section, owner-occupier households are evaluated under these three categories regarding mean values and households' share in independent variables. In table 5.6, housing and household-related characteristics of owner-occupiers are indicated.

Table 5.6 Household and Housing related Characteristics of Housing Wealth Categories

Characteristics of owner-occupier households		**High Wealth**	**Moderate Wealth**	**Low Wealth**
Housing and related	**The price of housing unit (TL)**	336905	148005	78615
	The size of housing unit (m^2)	126.27	111.74	103.29
	The number of rooms	3.92	3.64	3.43
	The total year of residency (year)	13.40	18.53	23.52
	The amount of imputed rent (TL)	1102.37	553.77	302.94
	The price of per m2 housing unit (m^2/ TL)	2767.51	1315.21	797.32
	The amount of annual housing expenditures (TL)	18515.54	11443.33	7356.76
	The amount of annual transport expenditures (TL)	2953.65	1976.04	1600.78
Household and related	**The size of household (people)**	3.22	3.42	3.78
	Annual income (TL)	76297	49168	39363
	Equalized household income (TL)	40143	24689	18839
	The amount of monthly expenditures (TL)	6255.83	4120.36	3140.71
	The age of head of household (year)	53.21	54.87	55.82

It is observed that the mean prices of housing units, the size of the housing unit, the number of rooms, the amount of imputed rent, the price of per m2 housing unit, the

amount of annual housing, and transport expenditures are decreasing from high housing wealth to low housing wealth. In other words, households with low housing wealth are living in a smaller unit with fewer rooms than high and moderate housing wealth households; they are staying in their unit more extended periods (almost 24 years for low housing wealth households and 13 years for high housing wealth households) and spending less for their housing and transport expenditures. Also, the cross-tabulation of housing wealth categories and the existence of any total heating system is questioned. While 87 percent of high housing wealth households have a total heating system, this number decreases to 51 percent for moderate housing wealth households and 13 percent for low housing wealth holding households.

Even though the household size is increasing from high housing wealth households to low housing wealth households, the annual income relatedly equalized household income decreases. However, the age of the head of the household does not change significantly among housing wealth groups (range between 53 and 56). In addition to assessments based on mean values, households are subjected to the investigation of the share in having a second housing unit, having a housing debt, being retired, residing in a current housing unit in 2003, and later on, having any real estate income, being able to save in any way as shown in table 5.7. High housing wealth households are the groups that have the highest proportion in having a second housing unit (18%), having a housing debt (20%), being retired (45%). Also, 66 percent of high housing wealth households live in units that they moved in 2003 and later on. In terms of having any real estate income and saving in any way, low housing wealth households hold the lowest shares.

Table 5.7 The Share of Household in Housing Wealth Group based on Variables

The share of household in owner-occupier households (%)			
	High Wealth	**Moderate Wealth**	**Low Wealth**
Having a second housing unit	18.00	9.50	6.80
Having a housing debt	20.30	14.00	7.50
Being retired	44.60	43.20	38.00
Residing in current housing unit in 2003 and later on	66.00	50.30	38.60
Having any kind of real estate income	26.90	16.80	10.90
Being able to save in any way	55.70	40.90	35.60

To sum up, as descriptive analyzes partly indicated that having high housing wealth is directly related to having a higher income (see table 5.8), extra housing units also any real estate income (both of them ease to get housing credits due to mortgage security).

Table 5.8 The Distribution of Income Quintiles in Housing Wealth Categories

Categories		**High wealth (%)**	**Moderate wealth (%)**	**Low wealth (%)**	**Total**	
					Frequency	**%**
Income quintiles	**Highest**	53.20	31.20	15.50	1407	100
	High	31.00	41.90	27.10	1464	100
	Middle	22.10	41.40	36.50	1448	100
	Low	15.70	41.30	43.00	1417	100
	Lowest	5.50	32.60	61.90	1431	100
Total		25.50	37.70	36.80	7167	100

5.1.3 Multivariate Analysis of Factors in the Investigation of Housing Wealth

Within the light of previously discussed variables and their differentiation among housing wealth categories, first, the correlation between variables that are thought to be entered into the multivariate analysis is observed. Tabachnick and Fidell (2001) summarized the need for correlation checks to overcome the multicollinearity of variables (r >.65). They added that in the case of multicollinear variables in a multivariate analysis, coefficients might be misleading. To avoid misleading, they advised using one of these variables in the analysis. In the sequel of theoretical investigations, all possible dependent and independent variables are included in correlation tables. These correlations are benefited in the creation of the dependent and independent variables in the analysis.

As indicated in the Appendix A, using access scales to services individually is not proper due to high correlations between them (0.67 - 0.90). Therefore, creating a variable by considering all of these variables is employed, having locational advantages or not (being above-mean value or not). Then, housing wealth groups are formulated by the combination of having locational advantages and having a housing with the above-mean price. The use of the price of housing units and having locational advantages is eliminated other variables in the model due to comparatively high correlation such as imputed rent, house price, and imputed rent-based groups, m2 value of housing unit.

Similarly, the income status of households is asked with poverty status and income quintiles. Due to the high correlation, income quintiles are preferred rather than poverty status. The age of the head of the household and the type of households are detected as positively correlated variables. Based on the descriptive analysis, a new variable, households' composition as a representation of traditional Turkish households, is created. The use of cohort groups, retirement status, the number of

breadwinners in a household is evaluated together. The number of breadwinners has opted because it covers a retired person in the household.

Last but the most interesting, a newly created variable, which is the existence of a heating system for all rooms in the housing unit, has been the one sharing multicollinearity with many variables such as housing wealth groups and housing typology. Therefore, this variable is omitted in multivariate analysis.

5.1.3.1 Dependent and Independent Variables

Previous studies have guided the definition of dependent and independent variables to predict factors to explain the differentiation of households' housing wealth. Based on the empirical investigation of literature, some key-dependent and independent variables are identified, as shown in table 5.9. It is necessary to remark that this thesis attempt to measure housing wealth with very limited data sources compared to similar studies. Most of the housing wealth studies have used the current price of the housing unit, the paid and unpaid amount of housing debt, interest rate, duration of the total, and unpaid debt. It provided to reach net housing wealth between the period that the household had bought the unit and the current period. In this way, these studies indirectly presented the feasibility of homeownership to have housing wealth. However, this thesis concentrates on the level of housing wealth based on the being above and below-average values of access scale to services and the price of the housing unit.

Table 5.9 Empirical Investigation of Housing Wealth Studies and Interpretation of Variables

Empirical Investigation of Literature		**Interpretation for Thesis**
Dependent Variables	**Independent Variables**	
• Tenure • Housing wealth • Financial wealth • Capital gains • Age of (female) household head • Marital status • Homeownership ratio • Real estate wealth	• Occupational class • Birth cohort • Partnership dissolution • Educational level • Housing pathway • Tenure • Income • Age • Disposable income • Equivalent disposable income quintile within age groups • Housing wealth • Rent • Housing expenditure • Non-housing expenditure • Total consumption • The size of family • Location of living unit • Marital status	Dependent variable • Housing wealth groups Independent variables • Income (groups) • The price of owned housing unit • The existence of housing debt • The existence of saving • Ranked groups based on possible amount of saving • Age • The number of employed members in household • The number of retired members in household • Occupation status • The size of family

Studies focusing on the differentiation of housing wealth on several households' compositions, marital status, and cohorts based on the age of female household (due to the shorter life-span of males in the European context) are employed as the dependent variable. To show that housing wealth is not the only way to accumulate wealth, financial wealth and housing wealth are also dependent and independent variables. Based on the mentioned dependent variables, households are included in the analysis according to their occupational class, birth cohorts, educational level, income level (total or ranked group-based), housing and non-housing expenditures,

family size, the location of the living unit. As a result of analyses, households are less or more likely to have higher housing wealth.

By considering country-specific issues, high correlations among variable alternatives, and increasing empty cell percentage in analysis, some variables are eliminated. Some others are also added, such as multiple homeownership, having real estate income, and housing typology.

Due to the selected analysis method (multinominal logistic regression), instead of using continuous variables, dichotomous or categorical variables are preferred. For example, according to the share of housing and transport expenditures in total income, households are evaluated in two categories; one is severe, which means sharing more than 30 percent of their income, the other is moderate amounting 30 and less than 30 percent of their income. Similarly, in terms of the number of breadwinners and the number of extra housing units that households have, thresholds are defined, and households are categorized according to these premises.

5.1.3.2 Prediction of Housing Wealth through Multinominal Logistic Regression

A direct multinominal logistic regression analysis was performed by using SPSS on previously defined three housing wealth groups to assess the predictors; Household characteristics (The number of workers, Household composition), Incomes and Expenditures (Real Estate Income, Income groups, Housing and transport expenditures) and Housing characteristics (Multiple homeownership and Housing typology). There are no missing cases in the analysis because households who are not responding to the value of their housing unit and access scale to daily shopping activities, banking services, post offices, public transport, health services, and education services are eliminated within the process of housing wealth group categorization. In the end, 7167 cases are available for analysis (1825 cases in the high housing wealth group, 2705 cases in the moderate housing wealth group, and 2637 cases in low housing wealth group, as shown in Table 5.10).

Table 5.10 Distribution of Categories and Sub-categories

Category	Sub-categories	Frequency	Percentage
Wealth groups	High wealth	1,825	25.5%
	Moderate wealth	2,705	37.7%
	Low wealth	2,637	36.8%
Multiple homeownership	Do not have extra housing units	5,100	71.2%
	Have extra housing units	2,067	28.8%
Household composition	All other household types	3,952	55.1%
	Parents with child(ren)	3,215	44.9%
The number of workers	1 and less than 1 breadwinner	4,722	65.9%
	More than 1 breadwinner	2,445	34.1%
Real estate income	Do not have real estate income	5,939	82.9%
	Have real estate income	1,228	17.1%
Income groups	Highest	1,407	19.6%
	High	1,464	20.4%
	Middle	1,448	20.2%
	Low	1,417	19.8%
	Lowest	1,431	20.0%
Housing typology	High-rise	1,894	26.4%
	Low-rise	1,418	19.8%
	Single or double	3,855	53.8%
Housing and transport expenditures	30% and less than 30%	3,926	54.8%
	More than 30%	3,241	45.2%
Total		7,167	100.0%

After evaluating the adequacy of frequencies for predictors, the need to change model structure is not required. Correlations are observed; the associations among variables and multicollinearity of variables are not monitored, as shown in table 5.11.

Table 5.11 Measures of Association (Crammer's V)

Nominal VS Nominal	Wealth groups	Multiple home ownership	Household composition	The number of workers	Real estate income	Income groups	Housing typology	Housing and transport expenditures
Wealth groups	1	.18***	.14***	.06***	.16***	.29***	.42***	.12***
Multiple homeownership	.18***	1	.06***	.00	.51***	.27***	.13**	.02*
Household composition	.14***	.06***	1	.18***	.02	.05***	.21***	.05***
The number of workers	.06***	.00	.18***	1	.05***	.18***	.08***	.29***
Real estate income	.16***	.51***	.02	.05***	1	.22**	.12**	.03**
Income groups	.29***	.27***	.05***	.18***	.22**	1	.26**	.30***
Housing typology	.42***	.13***	.21***	.08***	.12**	.26**	1	.13**
Housing and transport expenditures	.12***	.02*	.05***	.29***	.03**	.30**	.13**	1

The multinominal regression model results evaluating the probability of having low, moderate, and high housing wealth are represented in table 5.12. First of all, to see the goodness of fit of the model for examined cases, multilevel tests are conducted. $\chi 2$ (394, N=7167) = 775.30, p=.38 with a deviance criterion while Nagelkerke R2=.44 indicated that predictors are significantly disjoined among housing wealth groups. 62.2% of the high housing wealth group, 37.1% of moderate housing wealth group, and impressively 80.2% of low housing wealth group are predicted, overall classification success is measured as 59.4%.

The outcome is predicted from multiple homeownership, household composition, the number of workers, real estate income, income groups, housing typology, housing, and transport expenditures. Table 5.12 shows the regression coefficients, standard error, odds ratios, and 95% confidence intervals. In this regression model, odds ratios less than 1 means a decrease in the probability of having higher housing wealth. In other words, values smaller than 1 indicates that "the outcome is more likely to be in the referent group" (Fidell and Tabachnick, 2014). Accordingly, odds ratios more than 1 subtends the increase in the likelihood of having higher housing wealth. To compare the likelihoods of subcategories on housing wealth groups, the reference category of each variable has previously defined. Being in low, moderate, and high housing wealth group are statistically associated with all predictors.

The results of multinominal logistic regression predicting the likelihood of housing wealth are represented in table 5.12. In comparing high housing wealth and low housing wealth households, income groups (based on equalized household income) and housing typology of unit remark attention more than others. High housing wealth households are more likely than low housing wealth households to be in higher-income groups. The highest income group's odds are above 30 times as great for the high housing wealth group as for the low housing wealth group. Similarly, the odds of being in high-income groups almost 11 times, being in middle-income groups five times, and being in low-income groups three times as great for high housing wealth households as for low housing wealth households. Not as high as the odds of being

the highest income group and high housing wealth, the odds of being the highest income group are three times as great for moderate housing wealth households as for low housing wealth households. The odds changes to 2.5 times for the high-income group, almost two times for the middle-income group, and 1.6 times for low-income groups.

Table 5.12 Results of Multinominal Logistics Regression Predicting the Likelihood of Housing Wealth

High housing wealth category[a]	B	Exp(B)	95% Confidence Interval Bound	
			Lower	Upper
Intercept	-2.381	(***)	--	--
Household characteristics				
The number of workers				
1 and less than 1 breadwinner	.265	1.304 (**)	1.088	1.563
More than 1 breadwinner[b]		--		
Household composition				
All other household types	-.555	.574 (***)	.486	.679
Parents with child(ren)[b]		--		
Incomes and Expenditures				
Real Estate Income				
Do not have real estate income	-.399	.671 (**)	.528	.853
Have real estate income[b]		--		
Income groups				
Highest income group	3.422	30.627 (***)	21.639	43.347
High income group	2.378	10.782 (***)	7.817	14.871
Middle income group	1.620	5.052 (***)	3.697	6.6904
Low income group	1.155	3.173 (***)	2.315	4.348
Lowest income group[b]		--		
Housing and transport expenditures				
Less than 30%	-1.328	.265 (***)	.220	.319
More than 30%[b]		--		
Housing characteristics				
Multiple homeownership				
Do not have extra housing units	-.480	.619 (***)	.506	.757
Have extra a housing unit(s)[b]		--		
Housing typology				
Living in high-rise apartment	3.541	34.498 (***)	27.265	43.651
Living in low-rise apartment	2.851	17.312 (***)	13.807	21.708
Living in single housing [b]	--			

[a]Reference Category: Low Housing Wealth
[b]Reference Group of independent variables

Table 5.13 (Cont'd) Results of Multinominal Logistics Regression Predicting the Likelihood of Housing Wealth

Moderate housing wealth category[a]	**B**	**Exp(B)**	**95% Confidence Interval Bound**	
			Lower	**Upper**
Intercept	-.467	(***)	--	--
Household characteristics				
The number of workers				
1 and less than 1 breadwinner	.280	1.323 (**)	1.157	1.513
More than 1 breadwinner[b]		--		
Household composition				
All other household types	-.231	.794 (***)	.699	.900
Parents with child(ren)[b]		--		
Incomes and Expenditures				
Real Estate Income				
Do not have real estate income	-.121	.886	.732	1.074
Have real estate income[b]		--		
Income groups				
Highest income group	1.105	3.018 (***)	2.383	3.823
High income group	.948	2.581 (***)	2.117	3.147
Middle income group	.622	1.862 (***)	1.552	2.233
Low income group	.497	1.643 (***)	1.381	1.956
Lowest income group[b]		--		
Housing and transport expenditures				
Less than 30%	-.450	.637 (***)	.557	.729
More than 30%[b]		--		
Housing characteristics				
Multiple homeownership				
Do not have extra housing units	-.298	.742 (***)	.636	.866
Have extra a housing unit(s)[b]		--		
Housing typology				
Living in high-rise apartment	1.853	6.382 (***)	5.235	7.780
Living in low-rise apartment	1.436	4.203 (***)	3.511	5.032
Living in single housing [b]		--		

[a]Reference Category: Low Housing Wealth [b]Referent group of independent variables

N=7157	$\chi 2$=775.30	Df=22
Log likelihood=2071.83		Nagelkerke R^2=0.44

Surprisingly, housing typology displays significant odds. Households living in high-rise apartment blocks are almost 35 times more likely to be a high housing wealth household than low housing wealth households. Low housing wealth households are more likely to live in single housing units than high housing wealth households. Moderate housing wealth households are more likely to live in high-rise (odds ratio: 6.382) and low-rise apartment blocks (odds ratio: 4.203) than low housing wealth households. It is explained in detail with crosstabulation in the following section 5.1.4. However, the role of former illegal housing in the form of single housing (squatter and joint subdivision) should not be omitted.

The number of workers in households significantly affects the likelihood of having a different level of housing wealth. The increase in the number of breadwinners in the household is associated with higher housing wealth in many studies; it follows a divergent path in the Turkish case. High housing wealth households and moderate housing wealth households are more likely to be one and less than one breadwinner than low housing wealth households. In addition to multinominal regression results, the number of workers and related variables (retirement condition, working agreement, etc.) are investigated elaboratively in previous sections.

To investigate household composition's role in housing wealth conditions, households are evaluated as parents with children (regular Turkish household composition) and other households' groups (irregular). High housing wealth is 43% less for parents with child(ren) than all other household composition. Also, having moderate housing wealth is less likely than having low housing wealth for parents with child(ren) than all other household types.

Real estate income and multiple homeownership are included in the model to test another Turkish specific context, which is an increase in the share of the others category in modes of tenure. Having high housing wealth is less likely than having low housing wealth to have real estate income. In other words, the odds of having real estate income are 33% less in high housing wealth households than low housing

wealth households. The likelihood of moderate housing wealth or low housing wealth of households having or not having real estate income is not statistically differentiated. Stunningly, having high housing wealth is less likely than having low housing wealth to have extra housing units. Having extra housing units is 39% less for high housing wealth households than low housing wealth households. Also, having extra housing units is 26% less for moderate housing wealth households than low housing wealth households. The explanation of intergenerational transfer by providing the housing unit to heirs can be observed frequently in low housing wealth households.

The share of housing and transport expenditures in total income is also included in the model. It is expected that households separating a higher percentage of their income for housing and transport should be higher housing wealth due to the high amount of monthly payment. Oddly enough, having high housing wealth is less likely than having low housing wealth for whom paying more than 30% of their incomes for housing and transport expenditures. Paying more than 30 percent thresholds is 74% less for high housing wealth households than low-income housing wealth. Also, in comparing the odds between moderate housing wealth and low housing wealth households, the odds of paying less than 30% of their income is 37% less for households with low housing wealth than having moderate housing wealth. It means that living under unaffordable housing conditions does not contribute to the housing wealth of households positively. However, the duration of occupancy, the existence of housing debt, and the physical condition of housing units in housing stock should be overviewed.

5.1.4 Further Details on the Prediction of Housing Wealth

After the multivariate analysis results, in the investigation of further details on the prediction of households' housing wealth, some cross-tabulations are produced and interpreted below.

The income groups based on the equalized household income are the most significant predictor of housing wealth. The composition of income is questioned to comment on the effects of the number of breadwinners and occupational classes in table 5.13. In this regard, while 57.4 percent of high housing wealth households have one person as a breadwinner (part and full time), this proportion decreases to 56.9 percent for moderate housing wealth households and 47.1 percent of low housing wealth households. In the overall evaluation of retired heads of households and the number of breadwinners, even the head of the household is retired, he/she continues to work in another job.

Table 5.14 The Distribution of Hhs with respect to Housing Wealth, Income Quintiles, Occupational Classes and Retirement

Housing wealth categories	Occupational classes	Income quintiles					
		Highest	High	Middle	Low	Lowest	All Hh
High housing wealth	Professionals and executives	52.1	14.0	13.4	5.4	2.6	29.9
	Assisting professionals	17.2	16.9	13.9	9.9	10.5	15.6
	Service and sales staff	17.4	30.5	25.1	33.3	26.3	23.8
	Blue collar worker	11.1	29.8	37.4	39.6	50.0	24.3
	Unqualified worker	2.2	8.8	10.2	11.7	10.5	6.4
	The share of retired head of households	48.1	48.5	36.3	41.3	32.9	44.6
Moderate housing wealth	Professionals and executives	31.0	9.2	6.9	1.3	5.6	10.9
	Assisting professionals	18.5	9.7	8.4	7.2	3.2	9.7
	Service and sales staff	31.3	37.2	44.5	35.7	38.6	37.5
	Blue collar worker	16.3	31.8	29.0	43.3	33.5	30.7
	Unqualified worker	2.8	12.1	11.3	12.5	19.1	11.3
	The share of retired head of households	51.4	53.1	47.8	37.4	23.4	43.1
Low housing wealth	Professionals and executives	14.5	5.9	4.5	1.5	1.4	4.3
	Assisting professionals	4.3	4.2	3.6	3.3	1.2	7.3
	Service and sales staff	67.7	62.6	60.9	61.5	60.4	62.0
	Blue collar worker	10.2	22.1	19.4	21.2	20.5	19.5
	Unqualified worker	3.2	5.2	11.6	12.4	16.4	11.1
	The share of retired head of households	60.1	56.8	50.4	40.1	15.5	38

Also, the distribution of occupation classes (based on the head of household) and the percentage of the retired head of household differs among housing wealth categories. In the joint evaluation of households based on occupational classes, 29.9 percent of high housing wealth households, the highest share, is working in the position of professional and executive. From high housing wealth to moderate and low housing wealth categories, the share of professionals and executives decreases. Secondly, the share of service and sales staff varies among housing wealth categories. The category of households with low housing wealth remarks with 62 percent of households and 37.5 percent of moderate housing wealth category as working in service and sales staff, the highest shares of occupation class in mentioned housing wealth categories, while only 23.8 percent of high housing wealth category works in the same position.

When income groups are taken into consideration, the distribution of household changes among the occupational class, the higher income means a higher share in professionals and executives, and assisting professionals' classes. The share of unqualified workers in income groups increases with the decrease in income category (from highest to lowest).

Last but not least, the share of the retired head of households varies among income groups of the same housing wealth category. While the share of the retired head of household diversified between 48.5 and 32.59 percent of the high housing wealth household category, the range gets wider in moderate and low housing wealth household categories. In the moderate housing wealth household category, the percent of the retired head of household changes between 53. 1 and 23.4, it represents the households between 60.1 and 15.5 percent of low housing wealth household category.

To reveal households are holding higher housing wealth, housing wealth categories, income groups, the existence of extra housing unit(s), real estate income, and the mean age of the head of households for these groups are evaluated in table… Without any exception based on housing wealth categories, the highest income group is

revealed as the groups of households holding the highest share in having real estate income and extra housing unit(s). However, the highest income group is stunningly presented with the lowest share in having extra housing unit(s) but no real estate income. It indicates that even they have the highest share in the existence of extra housing unit(s), they are giving these units to someone else without charge. They are supporting the category of “others” in the modes of tenure at least.

Table 5.15 The Distribution of Hhs based on the Housing Wealth Category, the Existence of Real Estate Income and Extra Housing Units (the mean of the age of head of households in parenthesis)

Categories		The existence of extra housing unit(s) and real estate income	All households	The share of households to income groups				
				Highest	High	Middle	Low	Lowest
All households		**Have extra housing unit(s)**	28.8 (58.3)	48.2 (57.5)	35.4 (58.5)	28.2 (58.9)	21.4 (59.4)	11.2 (57.1)
		Do not have extra housing unit(s)	71.2 (53.3)	51.8 (50.2)	64.6 (53.2)	71.8 (55.3)	78.6 (55.4)	88.8 (51.8)
		Have real estate income	17.1 (58.7)	31.3 (57.5)	20.0 (57.9)	17.1 (59.4)	10.9 (61.2)	6.4 (60.3)
		Do not have real estate income	82.9 (53.9)	68.7 (52.0)	80.0 (54.4)	82.9 (55.6)	89.1 (55.6)	93.6 (51.8)
		Have extra housing unit but no real estate income	40.5* (58.4)	34.9* (57.1)	43.4* (58.6)	39.2* (58.7)	49.1* (60.5)	42.5* (56.9)
Housing Wealth Categories	**High**	**Have extra housing unit(s)**	41.3 (57.5)	49.3 (57.7)	41.2 (57.0)	33.1 (56.6)	34.1 (58.7)	19.0 (57.6)
		Do not have extra housing unit(s)	58.7 (50.1)	50.7 (48.3)	58.8 (51.1)	66.9 (51.3)	65.9 (50.7)	81.0 (51.9)
		Have real estate income	26.8 (57.4)	34.7 (57.6)	26.9 (56.5)	20.0 (57.6)	15.7 (58.8)	10.1 (56.3)
		Do not have real estate income	62.3 (51.6)	65.3 (50.4)	73.1 (52.5)	80.0 (51.9)	84.3 (52.5)	89.9 (52.6)
		Have extra housing unit but no real estate income	35.0** (57.5)	29.5** (57.2)	34.7** (57.5)	39.6** (56.0)	53.9** (59.5)	46.6** (59.0)
	Moderate	**Have extra housing unit**	29.4 (58.9)	48.2 (57.2)	35.8 (59.4)	28.7 (58.8)	21.0 (61.5)	14.4 (57.5)
		Do not have extra housing unit(s)	70.6 (53.1)	51.8 (50.7)	64.2 (52.1)	71.3 (55.4)	79.0 (54.3)	85.6 (51.8)
		Have real estate income	16.7 (58.4)	30.5 (56.8)	19.5 (58.8)	18.8 (59.2)	8.5 (59.9)	7.3 (59.1)
		Do not have real estate income	83.3 (54.1)	69.5 (52.5)	80.5 (53.8)	81.2 (55.75)	91.5 (55.4)	92.7 (52.1)
		Have extra housing unit but no real estate income	43.1** (59.3)	36.7** (56.8)	45.4** (59.2)	34.3** (59.1)	59.3** (62.6)	49.2** (58.0)
	Low	**Have extra housing unit**	19.7 (58.6)	44.5 (57.3)	28.0 (59.3)	24.6 (60.8)	17.1 (57.6)	8.8 (56.7
		Do not have extra housing unit(s)	80.3 (55.1)	55.5 (55.3)	72.0 (56.7)	75.4 (57.3)	82.9 (57.4)	91.2 (51.7)
		Have real estate income	10.9 (61.1)	21.6 (58.8)	12.9 (59.2)	13.4 (61.49)	11.3 (63.4)	5.6 (61.8)
		Do not have real estate income	89.1 (55.1)	78.4 (55.57)	87.1 (57.2)	86.6 (57.73)	88.7 (56.9)	94.4 (51.6)
		Have extra housing unit but no real estate income	44.6** (58.3)	51.5** (57.2)	54.0** (58.9)	45.3** (60.0)	33.6** (58.6)	35.8** (55.8)

*The share in having extra housing unit group

**The share in having extra housing unit group of wealth category

Also, the low-income group consists of households giving their unit to their relatives without charge. 50.9 percent of households in the low-income group and having an extra unit(s) can be evaluated in housing providers for “others” mode of tenure. Considering the housing wealth categories, households with extra housing unit(s), real estate income, and extra housing unit(s), no real estate income is examined. The high housing wealth category displays that although they have the highest share of having extra housing unit(s) and real estate income in their category, they have the lowest share in having extra housing unit(s) but no real estate income in their category.

Overall evaluation of housing wealth categories and income groups showed that in the same housing wealth category from the highest to lowest income and same income group from high housing wealth to low housing wealth, the share of households having extra housing unit(s) and real estate income decreases.

The mean value of the ages of the head of households (as indicated in parenthesis) is evaluated to interpret the age effect on having extra housing units, real estate income, and having an extra housing unit but no real estate income. The households having extra housing unit(s) are older than households who do not have any extra housing units in overall and income-based evaluations. Similarly, households with real estate income are older than households who do not have real estate income. It means that to have an extra housing unit(s) and real estate income, households need more years, and income may be transferred from their families. The head of households' age in mean values is interpreted as the housing units provider to “others” mode of tenure. These mean values show that parents could be the owner of these units. However, more detailed analysis is needed to have exact estimations.

Lastly, the type of building and year of construction is examined for all households and housing wealth categories. The result of multivariate analysis showed that living in high-rise apartments is the indicator of higher housing wealth. However, the year of construction, in other words, the age of the building, is not considered. In Turkey,

the high-rise building block is a phenomenon emerging in the last two decades. Although single housing units have always existed, their meaning, quality, and concept have changed significantly. Fifty years ago, living in a single housing unit means living in a housing unit in rural parts of cities and constructed by the owner of the unit itself (mostly illegally). Mostly, they are composed of squatter housing units. However, in the last 20 years, living or having a single housing unit has two main alternatives. The first one refers to housing units built by owner on divided parcels mostly with low quality. Latter presents the gated single housing sites built by professional builders with good qualities.

With the recalls mentioned above, households' distribution based on the year of construction and type of building (the mean values of the years of residency) are questioned in the table 5.15. In the overall evaluation of households disregarding the construction year, 53.8 percent of housing stock in Turkey consists of single housing units. Averagely, households living in these single housing units have resided almost 25 years in these units. This number climbs to 80.7 of housing stock for housing units constructed before 1980, and total years of residency increases to 37.6 years.

Table 5.16 The Distribution of Hhs based on the Year of Construction and Type of Building (the mean values of the years of residency)

Categories		The year of construction	Type of building including housing unit		
			Single	Low-rise	High-rise
All households		2001 and later on	36.5 (8.4)	20.2 (6.5)	43.3 (6.2)
		1981-2000	51.1 (21.7)	24.7 (17.7)	24.2 (14.7)
		Before 1980	80.7 (37.6)	11.9 (24.8)	7.4 (20.2)
		Overall	53.8 (24.8)	19.8 (14.9)	26.4 (10.3)
Housing Wealth Categories	High	2001 and later on	6.8 (9.0)	27.0 (6.0)	66.2 (6.5)
		1981-2000	14.3 (20.2)	38.1 (18.0)	47.6 (15.1)
		Before 1980	24.3 (33.8)	36.0 (28.2)	39.7 (22.0)
		Overall	12.1 (20.9)	32.5 (14.8)	55.3 (10.9)
	Moderate	2001 and later on	31.9 (8.3)	21.9 (6.8)	46.2 (6.2)
		1981-2000	45.0 (21.4)	29.1 (17.8)	25.9 (14.5)
		Before 1980	79.7 (36.3)	15.0 (22.2)	5.3 (16.8)
		Overall	49.5 (24.7)	23.2 (15.1)	27.3 (10.0)
	Low	2001 and later on	77.5 (8.4)	9.9 (6.9)	12.5 (4.9)
		1981-2000	85.2 (22.1)	9.7 (16.7)	5.1 (12.7)
		Before 1980	96.3 (38.7))	3.2 (24.5)	0.5 (11.0)
		Overall	87.0 (25.3)	7.4 (14.3)	5.5 (7.8)

In the same building and year of construction category, residency duration increases from high housing wealth to low housing wealth. Similarly, from high-rise to low-rise in the same housing wealth category and year of construction, the duration rises.

It can be explained that living in a single housing unit specially built before 2000 traps households for long periods. It is thought that even if households want to change or sell their unit, the legal status of the housing unit can be avoiding this change. However, it is a well-known fact that these units are not built in good quality, and also due to their aging process, they need some repairs and maintenance. Also, the housing wealth category of these units shows their qualities. However, households who live in these units do not have high incomes to meet housing expenses. To sum up, being homeowners does not provide these households with higher housing wealth and living environments with good qualities.

5.2 The Analysis of Housing Security in Turkey

5.2.1 The Differentiation of Households based on Survey of Income and Living Conditions

Within the descriptive investigation of households based on the Survey of Income and Living Conditions, seven physical housing and environmental conditions (The existence of leaking roof, damp wall, rotten window frame, a Heating problem due to isolation, Darkroom and insufficient daylight, Noise from street and neighbors, Insufficiency in dwelling size, air, Environmental pollution and any other issues related to traffic and industry and Confrontation with crime and violence), two housing cost induced problems (housing cost burden and facing with an unpaid status of housing cost) and the amount of monthly housing expenditures are evaluated in table 5.16.

Firstly, the housing cost burden is the most commonly seen problem among Turkish households with 66.9 percent prevalence and heating problems due to isolation (37.8), leaking roof, damp wall, and rotten window frame (34). According to equalized household income groups of households, the highest income households are the one facing with a leaking roof, damp wall, rotten window frame, a heating problem due to isolation, darkroom and insufficient daylight, insufficiency in

dwelling size, housing cost burden, the unpaid status of housing cost at the least. However, they are confronted with noise from street and neighbors, air, environmental pollution, and any other traffic and industry problems, crime, and violence at the most. In other words, less income means a higher percentage of households encountering leaking roof, damp wall, rotten window frame, a heating problem due to isolation, darkroom and insufficient daylight, insufficiency in dwelling size, housing cost burden, the unpaid status of housing cost as shown in table 5.16.

The housing and environment-related experiences presented the most suffered mode of tenure in Turkey. Except for the unpaid status of housing cost, others, the mode of tenure group, faced with all other problems more than owner-occupier, tenant, and lodgment living households. In the comparison of owner-occupier and tenant households, it is revealed that while tenants are coming up against dark room and insufficient daylight, noise from street and neighbors, insufficiency in dwelling size, air, environmental pollution, and any other problems related to traffic and industry, confrontation with crime and violence, housing cost burden and unpaid status of housing cost more frequently than owner-occupier households, owner-occupier households are confronting with a leaking roof, damp wall, rotten window frame and heating problem due to isolation more often than tenants.

Table 5.17 The Comparison of Hhs based on Housing and Environment related Problems (with percentage and mean values)

Indicators		Household Groups									
		All Hhs	Income Quintiles					Modes of tenure			
			Highest	High	Middle	Low	Lowest	Owner-occupier	Tenant	Lodgment	Others
Having (%)	Leaking roof, damp wall, rotten window frame	34.0	16.0	24.9	33.4	40.7	54.7	32.7	31.0	34.8	43.3
	Heating problem due to isolation	37.8	18.2	29.7	37.6	46.6	56.8	36.7	34.7	34.2	47.0
	Dark room and insufficient daylight	16.4	10.1	14.6	17.1	19.2	21.0	14.5	19.4	19.2	18.7
	Noise from street and neighbors	14.5	17.2	16.4	15.1	13.7	10.4	12.2	20.5	12.9	14.5
	Insufficiency in dwelling size	16.4	9.3	13.6	16.8	19.2	23.2	15.2	16.5	28.2	20.0
	Air, environmental pollution and any other problems related with traffic and industry	22.3	23.4	24.2	22.6	21.4	20.1	20.4	25.0	24.9	25.6
	Confrontation with crime and violence	8.4	8.9	10.1	8.9	8.1	6.1	6.9	11.3	7.2	10.0
	Housing cost burden	66.9	40.8	62.6	72.5	77.7	80.8	62.2	79.3	39	68.1
	Unpaid status of housing cost	7.5	3.1	6.3	7.8	10.5	9.9	1.2	28.4	0.6	0
Monthly housing expenditure (TL)		462.10	753.85	515.11	423.29	354.28	263.90	338.86	914.83	477.12	231.22

The amount of monthly housing expenditures showed that the highest-income households in income quintiles and tenant households in the tenure modes pay the highest amount for housing expenditures. Others category in the modes of tenure represents households paying the minimum amount for housing expenditure.

Then, households are investigated in terms of the distribution of household types in the modes of tenure; results are represented in table 5.17. The two parents with child(ren) household type differ from other household types due to the highest share in all modes of tenure. A comparatively higher share of single-person households in others category is a point that needs to indicate. The mean values of the age of head of households are displayed in parenthesis of table 5.17. A single person in the owner-occupier household category is symbolized the oldest household group with 68.5 years old mean value, and it followed by two parents with no kids' households in owner-occupier (63.6 years) and single-person households in others (61.6 years). In the overall evaluation of households based on the modes of tenure, owner-occupier households represented the oldest cohort with 55.1 years old and others households with 48.0 years old. At the same time, tenants and lodgment living households are at the level of 42 years old.

Table 5.18 The Distribution of Hh Type according to the Modes of Tenure

Categories		Owner-occupier	Tenant	Lodgment	Others
Household type	**Single person**	10.1 (68.5)	11.6 (44.1)	9.9 (40.4)	14.9 (61.6)
	One nuclear family and others	14.4 (55.9)	7.0 (51.4)	4.8 (45.0)	6.6 (50.2)
	No nuclear family but others	0.9 (58.0)	2.8 (34.7)	0.6 (28)	1.3 (52.9)
	Two parents with no kids	23.4 (63.6)	14.4 (43.5)	9.6 (45.3)	15.7 (52.4)
	Two parents and child(ren)	44.9 (48.4)	55.4 (41.0)	71.8 (42.4)	53.6 (42.1)
	Single parent and child(ren)	6.3 (56.3)	8.8 (46.8)	3.3 (44.3)	7.9 (51.0)
The age of head of households		55.1	42.8	42.6	48.0

In the Survey of Income and Living Conditions dataset, the construction year of housing units is not explicitly included. Even if it does not give the same clearness about the housing unit's age, the starting year of residency in the current unit is incorporated. More or less, it helps investigate the age of housing unit based on households' movements. If the household moved 30 years ago, it means that the building's age, including the housing unit, is at least 30 years old. To reveal the differentiation of tenure modes according to the age of the building (starting year of

residency), four different range is defined; more than 45 years, 45-31 years, 30-16 years, and 15-0 years in table 5.18. Owner-occupier and others households are introduced as the beneficiaries of the older part of housing stock.

Table 5.19 The Distribution of the Modes of Tenure based on the Starting Year of Residency

Categories		**Owner-occupier**	**Tenant**	**Lodgment**	**Others**
Starting year of residency in current unit (%)	**Before 1973 (More than 45 years)**	5.9	0.0	0.0	4.8
	1973 – 1987 (45-31 years)	13.5	0.4	0.0	9.7
	1988 – 2002 (30-16 years)	28.6	3.6	9.6	25.5
	2003 – 2018 (15-0 years)	52	96.0	90.4	60.0

Similar to the descriptive results of the Household Budget Survey on the type of dwelling unit, the Survey of Income and Living conditions revealed that for owner-occupier households and others households, a single housing unit has the highest share in the type of dwelling unit as shown in table 5.19. Living in apartment blocks including 3-9 dwellings with a separate - single entrance and ten and more dwellings with separate - single entrance represents more than 75 percent of tenant and lodgment households' categories.

Table 5.20 The Distribution of the Type of Dwelling Unit according to the Modes of Tenure

Categories		Frequency	The share of subcategory in category (%)			
			Owner-occupier	Tenant	Lodging	Others
Type of dwelling unit	Single housing unit	7587	38.8	9.8	20.4	38.5
	Two dwellings with separate entrance	667	2.4	2.4	0.9	5.1
	Two dwellings with single entrance	1403	5.3	5.5	1.5	8.7
	3-9 dwellings with separate entrance	453	1.1	3.1	1.5	2.9
	10 and more dwellings with single entrance	76	0.2	0.5	0.3	0.2
	3-9 dwellings with single entrance	6158	21.0	35.9	27.6	27.4
	10 and more dwellings with separate entrance	7701	31.2	42.7	47.4	17.3
Total		24047	100.0	100.0	100.0	100.0

5.2.2 Descriptive Results on Owner-Occupier Households

Based on the methods in section 4.2.4, owner-occupier households are categorized into four groups indicating the level of housing security. The high housing security category is consisted of households not having housing and environmental related problems and no burden of housing expenditures on their budget. The moderate housing security category is evaluated under two sub-categories. Simultaneously, the first one represents households not having housing and environmental related problems, but the burden of housing expenditures and the latter includes households

with housing and environmental related problems but no burden of housing expenditures. The last category is formulated as low housing security households have housing and environmental related problems and burden of housing expenditures.

In this section, owner-occupier households are evaluated under these four categories regarding their housing security. In table 5.20, housing and household-related characteristics of owner-occupiers are indicated.

It is observed that the amount of monthly housing expenditures explains the housing and environment-related problems and the burden of housing expenditures. While one group of households in a moderate housing security group is spending more on housing expenditures, they face burden but no problems. It can be a result of two possible explanations. First of all, these households can have a continuing housing debt payment. Therefore, compared to the other moderate housing security category, they live in a newer housing unit with less annual income. As a result, they do not have housing and environment-related problems. The second option explains the burden of housing expenditures with maintenance and repair expenditures. To get rid of these problems, moderate housing security (Do not have problems but burden) households are dealing with repairing their housing units.

The size of the housing unit, the number of rooms, the amount of imputed rent, the amount of annual income, equalized household income, and the share of households with real estate income are the highest for high housing security households.

Table 5.21 Household and Housing related Characteristics of Housing Security Categories

Categories		**High housing security (Do not have problems and no burden)**	**Moderate housing security (Do not have problems but burden)**	**Moderate housing security (Have problems but no burden)**	**Low housing security (Have problems and burden)**
Housing and household characteristics (mean)	**Monthly housing expenditures (TL)**	372.91	408.49	284.63	323.13
	The number of rooms	3.86	3.75	3.56	3.47
	The size of housing (m^2)	125.85	118.90	119.96	106.77
	Annual imputed rent (TL)	5854.15	5434.11	4654.32	4205.44
	The size of household	2.50	2.48	2.84	2.76
	Annual income (TL)	72947.87	39472.15	56830.78	32459.77
	Equalized household income (TL)	47014.36	25639.12	34989.79	20058.63
Income quintiles (%)	**Highest**	32.4	16.4	32.8	18.4
	High	16.5	23.3	26.1	34.1
	Middle	12.2	22.9	19.3	45.7
	Low	9.0	20.6	17.9	52.4
	Lowest	5.4	15.9	16.6	62.1
Imputed rent groups (%)	**Highest**	22.8	24.9	23.0	29.3
	High	17.2	26.9	17.6	38.3
	Middle	13.3	22.6	19.8	44.3
	Low	11.0	14.5	21.5	52.9
	Lowest	11.6	9.8	31.0	47.5
Housing debt (%)	**Do not have**	88.0	77.3	92.2	87.8
Real estate income (%)	**Have**	26.5	17.1	20.0	12.4

Last but not least, the distribution of households living in NUTS-Level 1 and Level 2 regions according to their housing security level in Turkey has been shown in table 5.21. The division of regions are showed in figure 5.1 and figure 5.2. Regions are named as TR1-İstanbul, TR2-West Marmara, TR3-Aegean, TR4-East Marmara, TR5-West Anatolia, TR6-Mediteranean, TR7-Central Anatolia, TR8-West Black Sea, TR9-East Black Sea, TRA-Northeast Anatolia, TRB-Central East Anatolia, TRC- Southeast Anatolia.

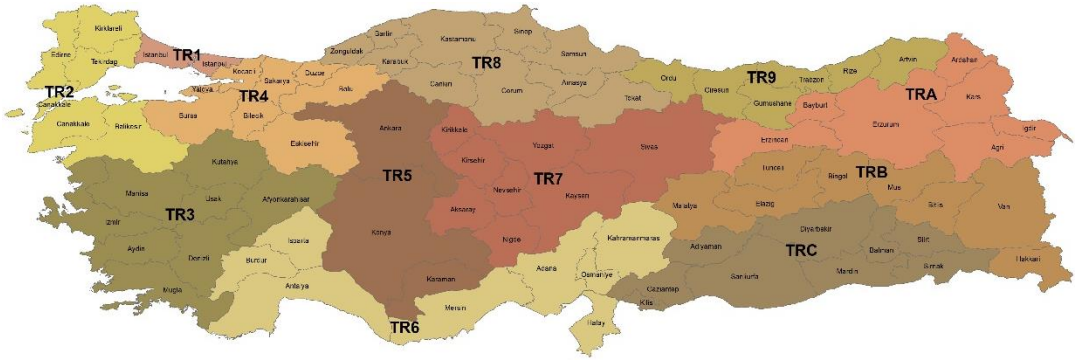

Figure 5.1. NUTS-Level 1 Regions of Turkey

Level 2- regions are called as the subregions of leading city; TR10-İstanbul, TR21-Tekirdağ subregion (Tekirdağ, Edirne, Kırıklareli), TR22-Balıkesir subregion (Balıkesir and Çanakkale), TR31-İzmir subregion, TR32-Aydın subregion (Aydın, Denizli and Muğla), TR33-Manisa subregion (Manisa, Afyonkarahisar, Kütahya and Uşak), TR41-Bursa subregion (Bursa, Eskişehir and Bilecik), TR42-Kocaeli subregion (Kocaeli, Sakarya, Düzce, Bolu and Yalova), TR51-Ankara subregion, TR52-Konya subregion (Konya and Karaman), TR61-Antalya subregion (Antalya, Isparta and Burdur), TR62-Adana subregion (Adana and Mersin), TR63-Hatay subregion (Hatay, Kahramanmaraş and Osmaniye), TR71-Kırıkkale subregion (Kırıkkale, Aksaray, Niğde, Nevşehir and Kırşehir), TR72-Kayseri subregion (Kayseri, Sivas and Yozgat), TR81-Zonguldak subregion (Zonguldak, Karabük and Bartın), TR82-Kastamonu subregion (Kastamonu, Çankırı and Sinop), TR83-Samsun subregion (Samsun, Tokat, Çorum and Amasya), TR90-Trabzon subregion (Trabzon, Ordu, Giresun, Rize, Artvin and Gümüşhane), TR1A-Erzurum subregion (Erzurum, Erzincan and Bayburt), TRA2-Ağrı subregion (Ağrı, Kars, Iğdır and

Ardahan), TRB1-Malatya subregion (Malatya, Elazığ, Bingöl and Tunceli), TRB2-Van subregion (Van, Muş, Bitlis and Hakkari), TRC1-Gaziantep subregion (Gaziantep, Adıyaman and Kilis), TRC2-Şanlıurfa subregion (Şanlıurfa and Diyarbakır), TRC3-Mardin subregion (Mardin, Batman, Şırnak and Siirt).

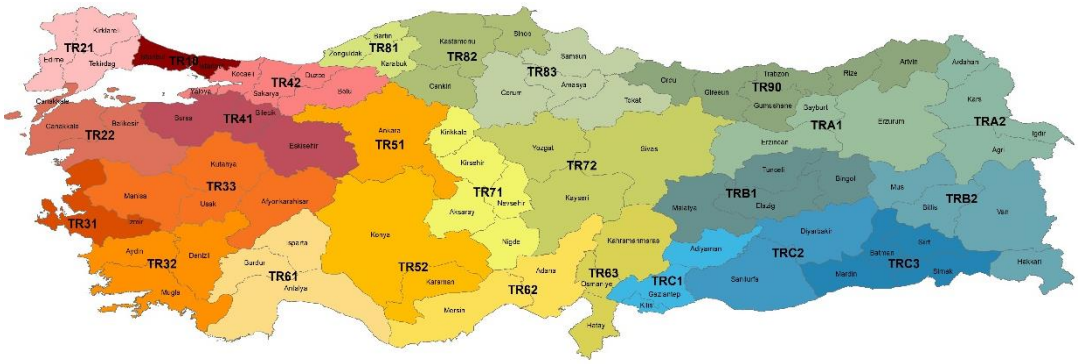

Figure 5.2. NUTS-Level 2 Regions of Turkey

Based on the empirical pieces of evidence, the differentiation of the distribution of housing security conditions among regions is highlighted. TR3 region and TR33 region are investigated as the highest share and in high housing security and lowest share in low housing security. TR9, TRA, and TRC regions represent the high housing security with the lowest share and low housing security with the highest share. The differences among Level-2 regions in the same Level-1 region, TRA and TRB regions get attention. TRA2 and TRB2 regions have a lower percentage of households with high housing security and higher percentage with low housing security, TRA1 and TRB1 regions have a comparatively higher percentage for high housing security and lower percentages for low housing security.

Overall, only 15.2 percentage of Turkish households are satisfied with living in a housing unit without housing and environment-related problems and the burden of housing expenditures on their budget. 42.5 percent of households, low housing security category, are witnessed housing and environment-related problems and housing cost burden.

Table 5.22 The Distribution of Housing Security Conditions in TR Level-1 and Level-2 Regions

Categories		High housing security	Moderate housing security (Do not have problems but burden)	Moderate housing security (Have problems but no burden)	Low housing security
NUTS Level-1 Regions (%)	**TR1**	17.0	13.9	31.6	37.4
	TR2	17.6	19.5	26.2	36.7
	TR3	20.2	25.8	21.5	32.5
	TR4	15.0	22.7	18.7	43.6
	TR5	18.6	30.1	15.8	35.6
	TR6	16.8	15.0	23.8	44.5
	TR7	14.9	22.3	21.2	41.7
	TR8	17.2	15.1	27.1	40.5
	TR9	8.0	21.0	14.5	56.6
	TRA	7.5	20.0	15.3	57.2
	TRB	12.7	16.0	24.9	46.4
	TRC	6.9	14.7	25.5	52.8
NUTS Level-2 Regions (%)	**TR10**	17.0	13.9	31.6	37.4
	TR21	16.5	21.5	19.5	42.5
	TR22	18.8	17.4	33.1	30.6
	TR31	15.2	15.1	31.8	37.9
	TR32	17.4	25.7	16.6	40.3
	TR33	27.1	36.0	15.5	21.4
	TR41	11.8	19.5	16.4	52.3
	TR42	18.4	26.1	21.2	34.3
	TR51	16.2	31.5	14.5	37.9
	TR52	22.3	27.8	18.0	31.9
	TR61	19.7	17.6	25.6	37.1
	TR62	17.9	14.8	27.2	40.2
	TR63	12.7	12.7	18.3	56.2
	TR71	11.4	28.1	16.1	44.4
	TR72	18.3	16.7	25.8	39.2
	TR81	13.8	14.1	23.4	48.7
	TR82	22.8	16.7	26.2	34.3
	TR83	14.8	14.5	30.1	40.6
	TR91	8.0	21.0	14.5	56.6
	TRA1	10.9	26.9	15.7	46.5
	TRA2	4.3	13.6	14.9	67.2
	TRB1	20.6	26.0	23.0	30.4
	TRB2	5.2	6.6	26.7	61.5
	TRC1	6.8	18.1	14.3	60.8
	TRC2	7.6	7.2	41.4	43.7
	TRC3	6.1	20.2	18.6	55.1
Overall		15.2	19.7	22.6	42.5

5.2.3 Multivariate Analysis of Factors in the Investigation of Housing Security

5.2.3.1 Dependent and Independent Variables

In the definition of dependent and independent variables to predict factors to explain the differentiation of housing security of households, previous studies have utilized. Based on the empirical investigation of literature, some key-dependent and independent variables are identified, as shown in the table 5.22. It is necessary to remark that this thesis attempt to measure housing security with very limited data sources compared to similar studies. Most housing security studies have used housing units' legal status to evaluate the force of eviction, employment status (a type of agreement with an employee, occupational rights), financial support of redistribution (social support), head of household-based variables. Also, the differentiation of subjective (perceived) and objective housing security with changes in the modes of tenure, length of residency, the age of building, housing regime, income, cost of tenancy, threats or risk from land and neighbors, even family members, crime rates, noise pollution and any kind of danger were investigated in these studies.

Due to limitations in the dataset, some variables are eliminated or recoded to be included in the analysis. In addition to the frequently used age of building in studies, the age of building defines the possibility to face with urban transformation for housing units in the Turkish context. Using this variable could help to measure the likelihood of housing security for older parts of housing stock. However, the age of the building is not included in the Survey of Income and Living Conditions dataset. Instead, the starting year of residency in the current unit has been covered. The starting year of residency is not preferred as an independent variable due to the main reason. While the previous years in residency can explain the older parts of housing stock, the recent years in residency do not explain the newer housing stock parts. It

can mislead the evaluation of the role of the age of building in the housing security of households. Therefore, it is not included in the multivariate analysis but crosstabulations based on the premise mentioned above.

The second limitation is emerged due to the definition of non-worker individuals in the dataset. Overall evaluation of being retired, old and disabled hampered the use of retirement status and total working year of individuals in multivariate analysis.

This thesis defines housing security under the frameworks of habitability and affordability. Habitability employs housing and environment-related problems, and for affordability, the level of burden of housing expenditures on households' budgets. Households are included analysis according to housing security groups (dependent variable), income quintiles, real estate income, subsistence level with current income, imputed rent quintiles, the number of breadwinners, housing typology. As a result, households are less or more likely to have higher housing security.

Table 5.23 Empirical Investigation of Housing Security Studies and Interpretation of Variables

Empirical Investigation of Literature		**Interpretation for Thesis**
Dependent Variables	**Independent Variables**	
• National electoral participation • Financial support of redistribution (social support) • Head of household • Age • Gender • Employment • Household structure • Types of property right holders	• Mode of tenure • Length of residency • Housing regime • Income • Age • Legal security of tenure • Certainty • Cost of tenancy • Feeling of control • Perceived security • Threats or risk from land and neighbors even family members, • Crime • Noise pollution and any kind of danger	Dependent variable • Housing security categories Independent variables • Income groups • The duration of ownership • Existence of problems in neighborhood unit and housing • The age of building • Difficulty of living with current income • Payment status with current income • Total working years in current job and living in same housing • Burden of housing expenditures on budget

By considering country-specific issues, high correlations among variable alternatives, and increasing empty cell percentage in analysis, some variables are eliminated. Due to the selected analysis method (multinominal logistic regression),

instead of using continuous variables, dichotomous or categorical variables are preferred.

5.2.3.2 Prediction of Housing Security through Multinominal Logistics Regression

A direct multinominal logistic regression analysis was performed by using SPSS on previously defined four housing security groups to assess the predictors; Household characteristic (the number of workers), Incomes and expenditures (The existence of real estate income, income quintiles, the level of subsistence with current income) and Housing characteristics (Housing typology and imputed rent quintiles). No missing cases in the analysis are observed because households who are not responding to the housing and environment-related problems and the burden of housing expenditures are eliminated within housing security group categorization. In the end, 14278 cases are available for analysis (2166 cases in the high housing security group, 6046 cases in moderate housing security groups (2819 cases represent households do not have problems but the burden and 3227 cases for households having problems but no burden), and 6066 cases in low housing security group as shown in table 5.23.

Table 5.24 The Distribution of Dependent and Independent Variables

Category	Sub-categories	Frequency	Percentage
Housing security groups	High housing security (Do not have problems and no burden)	2,166	15.2%
	Moderate housing security (Do not have problems but burden)	2,819	19.7%
	Moderate housing security (Have problems but no burden)	3,227	22.6%
	Low housing security (Have problems and burden)	6,066	42.5%
Income quintiles	Highest	2,939	20.6%
	High	2,797	19.6%
	Middle	2,830	19.8%
	Low	2,780	19.5%
	Lowest	2,932	20.5%
The existence of real estate income	Do not have real estate income	11,825	82.8%
	Have real estate income	2,453	17.2%
The level of subsistence with current income	Hard	1,661	11.6%
	A bit hard	2,325	16.3%
	A bit easy	6,248	43.8%
	Easy	4,044	28.3%
Imputed rent quintiles	Lowest	2,895	20.3%
	Low	2,832	19.8%
	Middle	2,835	19.9%
	High	2,889	20.2%
	Highest	2,827	19.8%
The number of breadwinners	1 and less than 1	9,658	67.6%
	More than 1	4,620	32.4%
Housing typology	Others	6,641	46.5%
	High rise apartments	7,637	53.5%

After evaluation of the adequacy of frequencies for predictors, the need to change model structure is not required. Correlations are observed; the associations among variables and multicollinearity of variables are not monitored as shown in the table 5.24.

Table 5.25 Measures of Association (Crammer's V)

Nominal VS Nominal	Security groups	Income quintiles	Existence of real estate income	Subsistence with current income	Imputed rent quintiles	Number of bread winners	Housing typology
Security groups	1	.21***	.13***	.23***	.14***	.12***	.18***
Income quintiles	.21***	1	.19***	.29***	.27***	.24***	.32***
The existence of real estate income	.13***	.19***	1	.15***	.13***	.05***	.03***
The level of subsistence with current income	.23***	.29***	.15***	1	.11***	.15***	.11***
Imputed rent quintiles	.14***	.27***	.13***	.11***	1	.09***	.59***
The number of breadwinners	.12***	.24***	.05***	.15***	.09***	1	.03***
Housing typology	.19***	.32***	.03***	.11***	.59***	.03***	1

The multinominal regression model results evaluating the probability of having low, two types of moderate and high housing security are represented in the table 5.25. First of all, to see the goodness of fit of the model for examined cases, multilevel tests are conducted. $\chi 2$ (1728, N=14278) = 1838.73, p=.06 with a deviance criterion while Nagelkerke R2=.26 indicated that predictors are significantly disjoined among housing security groups. 22.4% of the high housing wealth group, 9.9% of the first moderate housing security group (do not have problems but burden), 30.8% of the second moderate housing security group (have problems but no burden), and 83.9% of low housing wealth group are predicted, overall classification success is measured as 48%.

Table 5.25 shows the regression coefficients, standard error, odds ratios, and 95% confidence intervals. In this regression model, odds ratios less than 1 means a decrease in the probability of having higher housing security. In other words, values smaller than 1 indicates that "the outcome is more likely to be in the referent group" (Fidell and Tabachnick, 2014). Accordingly, odds ratios more than 1 subtends the increase in the likelihood of having higher housing security. To compare the likelihoods of sub-categories on housing security groups, the reference category of each variable has previously defined. Being in a low, first moderate, second moderate, and high housing security group are statistically associated with all predictors.

The results of multinominal logistic regression predicting the likelihood of housing security are represented. The existence of real estate income, income groups, the level of subsistence with current income are revealed as statistically significant odds for all categories. In comparing high housing security and low housing security households, income groups (based on equalized household income) have been revealed the most important predictor. High housing security households are more likely than low housing security households to be in higher-income groups. The odds of being the highest income group are above nine times as great for the high housing security group as for the low housing security group.

Similarly, the odds of being high-income groups almost four times, being middle-income groups more than two times, and being low-income groups almost two times as great for high housing security households as for low housing security households. Not as high as the odds of being the highest income group and high housing wealth, the odds of being the highest income group are five times as great for moderate housing security (have problems but no burden) households as for low housing security households. The odds changes to 2.6 times for the high-income group, 1.5 times for the middle-income group, and 1.2 times for low-income groups. To compare moderate housing security (do not have problems but burden) households and low housing security households, the highest income group households are more likely than the lowest income group to be in the moderate housing security category rather than a low housing security category. Also, the odds of being moderate housing security households are almost 1.5 times as great for the high-income group as for the lowest income group.

Surprisingly, the existence of real estate income displays significant odds for all comparisons. High housing security households less likely to have real estate income than low housing security households. Also, having a real estate income is 15 percent for moderate housing security (do not have problems but burden) and 22 percent less for moderate housing security (have problems but no burden) than low housing security households.

Four sub-categories are created and evaluated to reveal the role of subsistence level with current income. High housing security households are less likely to have difficulties (hard) with current income than low housing security households (odds ratio:0.059). Moderate housing security households (do not have problems but burden) are also less likely to have difficulties with current income than low housing security households (odds ratio: 0.525)

The number of workers in households significantly affects the likelihood of having a different level of housing security. High housing security and moderate housing

security (do not have problems but burden) households are more likely to have one and less than one breadwinner than low housing security households as odds ratios shown.

To investigate the housing typology in housing security prediction, units are evaluated as high-rise apartments and others. No statistically significant odds are observed in the comparison of high housing security and low housing security categories.

However, having moderate housing security (do not have problems but burden) is 32 percent less for households living in high-rise apartments than others. The odds of living in high-rise apartments are 1.2 times as great for moderate housing security (have problems but no burden) households for low housing security households.

The odds of living in a housing unit with the highest imputed rent are 2.2 times as great for moderate housing security (do not have problems but burden) households as for the low housing security households. The odds change to 2 times for the high imputed rent group, 1.8 times for the middle-imputed rent group, and 1.1 times for the low imputed rent group. Oddly enough, having high housing security is less likely than having low housing security for those living in the lowest, low, middle, and high imputed rent groups compared to the highest imputed rent group.

Table 5.26 Results of Multinominal Logistics Regression Predicting the Likelihood of Housing Security

High housing security category[a] (Do not have problems and no burden)	**B**	**Exp(B)**	**95% Confidence Interval Bound**	
			Lower	**Upper**
Intercept	-.636	(***)	--	--
Household characteristics				
The number of workers				
1 and less than 1 breadwinner	.224	1.251 (***)	1.109	1.410
More than 1 breadwinner[b]		--		
Incomes and Expenditures				
Real Estate Income				
Do not have real estate income	-.386	.680 (***)	.593	.779
Have real estate income[b]		--		
Income groups				
Highest income group	2.247	9.462 (***)	7.436	12.040
High income group	1.281	3.600 (***)	2.878	4.503
Middle income group	.833	2.301 (***)	1.851	2.862
Low income group	.513	1.670 (***)	1.340	2.082
Lowest income group[b]		--		
The level of subsistence with current income				
Highly hard	-2.824	.059 (***)	.042	.083
Hard	-2.021	.133 (***)	.107	.164
Easy	-.950	.387 (***)	.341	.439
Highly easy[b]		--		
Housing characteristics				
Housing typology				
Others	.047	1.048	.911	1.207
High-rise apartments [b]		--		
Imputed rent quintiles				
Lowest	-.400	.670 (***)	.541	.831
Low	-.469	.626 (***)	.509	.769
Middle	-.533	.587 (***)	.485	.710
High	-.533	.587 (***)	.488	.706
Highest		--		

[a]Reference Category: Low Housing Security
[b]Referent group of independent variables

Table 5.27 (Cont'd) Results of Multinominal Logistics Regression Predicting the Likelihood of Housing Security

Moderate housing security category[a] (Do not have problems but burden)	**B**	**Exp(B)**	**95% Confidence Interval Bound**	
			Lower	**Upper**
Intercept	-1.099	(***)	--	--
Household characteristics				
The number of workers				
1 and less than 1 breadwinner	.182	1.200 (**)	1.076	1.338
More than 1 breadwinner[b]		--		
Incomes and Expenditures				
Real Estate Income				
Do not have real estate income	-.154	.857 (*)	.753	.975
Have real estate income[b]		--		
Income groups				
Highest income group	.465	1.593(***)	1.308	1.939
High income group	.367	1.444 (***)	1.225	1.701
Middle income group	.199	1.220 (**)	1.048	1.421
Low income group	.117	1.124	.970	1.302
Lowest income group[b]		--		
The level of subsistence with current income				
Highly hard	-.644	.525 (***)	.437	.632
Hard	-.241	.786 (**)	.672	.920
Easy	.064	1.066	.934	1.216
Highly easy[b]		--		
Housing characteristics				
Housing typology				
Others	-.379	.685 (***)	.609	.769
High-rise apartments[b]		--		
Imputed rent groups				
Lowest	.804	2.234 (***)	1.833	2.722
Low	.708	2.029 (***)	1.686	2.443
Middle	.604	1.829 (**)	1.543	2.168
High	.172	1.188 (*)	1.002	1.408
Highest		--		

[a]Reference Category: Low Housing Security
[b]Referent group of independent variables

Table 5.28 (Cont'd) Results of Multinominal Logistics Regression Predicting the Likelihood of Housing Security

Moderate housing security category[a] (Have problems but not burden)	**B**	**Exp(B)**	**95% Confidence Interval Bound**	
			Lower	**Upper**
Intercept	.326	(**)	--	--
Household characteristics				
The number of workers				
1 and less than 1 breadwinner	-.079	.924	.835	1.023
More than 1 breadwinner[b]			--	
Incomes and Expenditures				
Real Estate Income				
Do not have real estate income	-.245	.782 (***)	.690	.888
Have real estate income[b]			--	
Income groups				
Highest income group	1.669	5.307 (***)	4.381	6.430
High income group	.986	2.680 (***)	2.271	3.163
Middle income group	.426	1.531 (***)	1.307	1.792
Low income group	.237	1.268 (**)	1.089	1.477
Lowest income group[b]			--	
The level of subsistence with current income				
Highly hard	-1.900	.150 (***)	.123	.181
Hard	-1.631	.196 (***)	.166	.230
Easy	-.790	.454 (***)	.405	.509
Highly easy[b]			--	
Housing characteristics				
Housing typology				
Others	.240	1.227 (**)	1.075	1.399
High-rise apartments [b]			--	
Imputed rent groups				
Lowest	-.914	.401 (***)	.333	.482
Low	-1.054	.348 (***)	.292	.416
Middle	-.853	.426 (***)	.366	.496
High	-.731	.481 (***)	.419	.553
Highest			--	

[a]Reference Category: Low Housing Security [b]Referent group of independent variables

N=14278 $\chi 2$=1838.73 Df=42

Log likelihood=4081.34 Nagelkerke R^2=0.26

5.2.4 Further Details on Housing Security

According to the multivariate analysis results, living in a high-rise apartment is an indicator of higher housing security in Turkey. However, this may differ at the regional level, and some descriptive analysis is needed to understand this. The lack of a housing typology in a region can make it more secure, but it can also be less secure as it provides species that are tried to get rid of. In this context, first of all, the observation of housing security categories, TR-Level-1 regions, and type of buildings is conducted as seen in table 5.26.

The housing type distribution, which has a high share in a region, is also high within the housing security categories. However, TR9, TRB, and TRC regions display a difference on this issue. Although it is the single housing type with the highest share in the entire stock of mentioned regions, the type of housing with the highest share in the high housing security group is high-rise apartments. While TR1 and TR5 regions correspond to the highest shares in high-rise apartments type of housing among TR-Level-1 regions, the TR1 region represents the lowest share in a single housing in the type of housing in Turkey with 5.8 percent. TR1 and TR5 regions consist of cities İstanbul, Ankara-Konya-Karaman equaling to 29.5 percent of the total population.

Bearing in mind that high-rise apartments representing the higher housing security, high housing security category, and the distribution of the type of buildings into regions are evaluated. In TR2, TR3, TR6, TR7, TR8, and TRA regions, single housing units are stunningly having higher shares in the high housing security category. TR1, TR5, TR9, TRB, and TRC regions have the highest share in high-rise apartment experiencing high hosing security. TR1 and TR5 regions also have high-rise apartments as the highest share in the housing stock. Although TR9, TRA, and TRC regions hold the lowest share of high-rise apartments in the building types, they have the highest share of high-rise apartments in the high housing security category. In other words, in TR1 and TR5 regions, living in the most common type of building, high-rise apartments, indicates high housing security, but in TR9, TRA, and TRC

regions, living in the uncommon type of building, which is high-rise building again clarifies high housing security. For the low housing security category, TR1, TRA, and TRB regions remarks due to their extraordinary distribution of type of building. TRA and TRB regions have the highest share of single housing in building types in both moderate (have problems but no burden) and low housing security category.

Table 5.29 The Distribution of Type of Buildings based on TR-Level 1 Regions and Housing Security Categories

Categories		Type of building	TR1	TR2	TR3	TR4	TR5	TR6	TR7	TR8	TR9	TRA	TRB	TRC
All households		**Single housing**	5.8	45.1	51.6	37.8	24.9	54.1	45.4	53.4	55.6	66.0	61.0	57.8
		Low-rise apartment	38.7	22.9	26.9	39.4	16.9	18.4	17.1	19.7	20.5	11.6	15.7	13.7
		High-rise apartment	55.5	32.0	21.5	22.8	58.2	27.5	37.5	26.9	23.9	22.4	23.3	28.5
Housing Security Categories	**High**	**Single housing**	5.6	40.6	52.5	34.9	22.0	47.0	44.0	39.5	34.2	47.1	37.4	36.0
		Low-rise apartment	32.0	28.1	23.5	42.5	21.2	18.0	12.8	23.8	26.3	23.5	18.7	12.4
		High-rise apartment	62.4	31.3	24.0	22.6	56.8	35.0	43.2	36.7	39.5	29.4	43.9	51.6
	Moderate (Do not have problems but burden)	**Single housing**	2.7	33.4	46.3	31.6	18.1	39.1	25.3	28.4	36.0	41.7	31.0	22.6
		Low-rise apartment	39.2	16.9	30.0	41.1	15.2	19.8	19.9	24.4	24.0	14.3	25.8	15.8
		High-rise apartment	58.1	49.7	23.7	27.3	66.7	41.1	54.8	47.2	40.0	44.0	43.2	61.6
	Moderate (Have problems but no burden)	**Single housing**	5.7	55.0	51.4	44.2	31.9	58.8	56.0	65.3	58.0	76.3	71.4	71.7
		Low-rise apartment	39.5	20.6	23.8	40.8	15.4	17.7	18.2	16.1	24.6	11.5	15.8	11.6
		High-rise apartment	54.8	24.4	24.8	15.0	52.7	23.5	25.8	18.6	17.4	12.2	12.8	16.7
	Low	**Single housing**	7.3	28.6	55.2	41.5	29.0	59.5	51.2	60.8	65.2	74.3	72.3	63.9
		Low-rise apartment	40.7	25.2	28.7	36.8	16.8	18.3	16.7	18.6	17.4	9.0	11.3	14.2
		High-rise apartment	52.0	46.2	16.1	21.7	54.2	22.2	32.1	20.6	17.4	16.7	16.4	21.9

Survey of Income and Living Conditions do not provide any variable that indicates the existence of a second dwelling unit. Therefore, to test the effects of an extra housing unit(s) in predicting housing security categories, an equipollent variable, the existence of real estate income, is used. The source of real estate income can be properties such as housing, fields, vineyards, and gardens. By having and leasing these properties, households can acquire extra incomes (Remind that households with more income are more likely to have higher housing security than lower housing security). As displayed in the table 5.27, the presence of real estate income can be explained by being in the upper-income group in overall and regional evaluation. However, not having real estate income may not be possible to explain in the same way.

In explaining the low share of the highest income group in the TRC region, the average number of people living in the household and the total income and the equalized household income are investigated. Although there is no significant difference between other regions and TRC regarding the variables mentioned above, the share of the highest income group is low in the TRC region.

Having real estate group in regions other than TRA, TRB and TRC is predominantly the highest income group, but in these three regions, the share of highest and lowest income groups in having real estate income category is almost equal. As shown in parenthesis, the share of real estate income in the total income of households is at the level of 15-20 percent in all income groups except TRA, the highest income group.

Table 5.30 The Distribution of Hhs based on Income Groups and the Existence of Real Estate Income

(the share of real estate income in their disposable income as percentage)

Categories		**Income groups**				
		Highest	**High**	**Middle**	**Low**	**Lowest**
Owner-occupier households in all TR regions	**All households**	20.6	19.6	19.8	19.5	20.5
	Have real estate income	34.8	21.6	20.2	14.8	8.7
	Not have real estate income	17.6	19.2	19.7	20.4	23
TR1	**All households**	40.2	26.7	15.7	11.0	6.4
	Have real estate income	56.9 (22)	26.1 (21)	11.1 (29)	4.7 (20)	1.2 (42)
	Not have real estate income	34.9	26.9	17.2	13.0	8.0
TR2	**All households**	24.6	19.1	19.1	16.5	20.8
	Have real estate income	35.5 (16)	18.3 (26)	21.8 (17)	14.2 (15)	10.2 (18)
	Not have real estate income	21.5	19.3	18.3	17.2	23.8
TR3	**All households**	22.4	20.6	19.9	19.0	18.1
	Have real estate income	36.1 (17)	23.5 (21)	17.6 (26)	15.4 (19)	7.3 (17)
	Not have real estate income	19.3	19.9	20.4	19.8	20.5
TR4	**All households**	24.2	28.9	21.6	15.5	9.8
	Have real estate income	32.8 (15)	23.8 (18)	25.4 (23)	13.1 (19)	4.9 (28)
	Not have real estate income	22.1	30.1	20.7	16.1	11.0
TR5	**All households**	26.5	22.0	21.6	16.9	13.1
	Have real estate income	36.3 (14)	20.7 (15)	21.1 (20)	15.2 (16)	6.6 (16)
	Not have real estate income	24.0	22.3	21.7	17.3	14.7
TR6	**All households**	21.2	17.2	19.4	20.3	21.9
	Have real estate income	36.3 (16)	21.4 (18)	17.9 (17)	14.6 (14)	9.8 (18)
	Not have real estate income	17.6	16.2	19.7	21.7	24.8
TR7	**All households**	17.5	20.4	22.4	20.3	19.5
	Have real estate income	25.6 (10)	24.4 (17)	25.0 (19)	14.8 (14)	10.2 (20)
	Not have real estate income	15.8	19.5	21.8	21.4	21.4
TR8	**All households**	18.9	20.5	20.5	20.7	19.4
	Have real estate income	33.7 (15)	18.3 (15)	22.0 (14)	14.6 (17)	11.4 (29)
	Not have real estate income	16.0	20.9	20.2	21.9	21.0
TR9	**All households**	14.7	22.0	23.9	21.0	18.4
	Have real estate income	35.4 (16)	33.3 (20)	18.8 (14)	10.4 (39)	2.1 (30)
	Not have real estate income	12.4	20.7	24.5	22.1	20.3
TRA	**All households**	11.2	14.6	23.9	22.8	27.5
	Have real estate income	19.6 (7)	19.6 (12)	25.0 (19)	21.7 (15)	14.1 (16)
	Not have real estate income	10.3	14.1	23.7	22.9	29.0
TRB	**All households**	11.0	13.5	17.1	25.7	32.6
	Have real estate income	23.5 (20)	19.1 (17)	22.6 (13)	19.1 (16)	15.7 (23)
	Not have real estate income	9.4	12.8	16.4	26.6	34.9
TRC	**All households**	9.0	10.1	15.7	24.8	40.3
	Have real estate income	18.8 (17)	12.0 (29)	22.6 (16)	28.6 (19)	18.0 (22)
	Not have real estate income	7.9	9.9	15.0	24.4	42.9

In the interpretation of the analysis, imputed rent is first used to represent the quality of the house, and therefore the quality of life of the household. Secondly, it refers to the price of the house that is not available in the Survey of Income and Living Conditions Data. Through imputed rent, it is planned to express the debt that the household should pay to have that residence.

In Turkey, housing units usually in better conditions (having no housing and environment-related problems) would have been given on lease to higher imputed rent value. Secondly, the existence of regional differences among different security groups has been questioned. For example, in a region, if most of the housing units are already in the lowest imputed group or below more middle, it indicates that housing units in that region are comparatively more affordable than other regions. The minimum wage paid to most of the service and sales staff and inexperienced white-collar employees is equal in all regions. Hence, the higher share in the highest imputed rent categories in regions such as TR1, TR4, and TR5, households expected to pay more for housing debt, will face more affordability problems with the same amount of income. Also, it is essential to note that households should be able to find housing in any imputed rent group in a region so that there is a broad spectrum of selection for households. It avoids the extra burden of housing expenditures on a budget of households.

In the interpretation of the relative rent, it is crucial to determine which relative rent group dwellings in which most of the households in the region live. If most of the relative rents in a region are high, it can be interpreted as follows: landlords either live in a relatively new and not yet problematic part of the stock or repair it even though it is old but does not feel a burden in it because it is high incomes.

In TR7, TR8, TR9, TRA, and TRB regions, the rate of high relative rents is low compared to the rest of the country, which may be due to the reason that the rented accommodation in regions with the high rate of ownership may be something that is not preferred; therefore the relative rent may be lower.

Finally, the question of where households with low housing security and higher income live are discussed. This situation has opened up to the question of whether the conditions of all the housing units in these regions are concerned bad. TR2, TR4, and TR5 are regions having a higher share in the high-income group but which households with low housing security. These regions are rich in terms of job opportunities, these people probably could not come here to work and have not yet improved their housing conditions. The mentioned households both live in problematic housing units with housing and environmental conditions, and they face higher housing expenditures than other regions.

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As income increases in the same housing security group, it is determined that households can get along with their current income more easily, as shown in the table 5.28. While it is not surprising that the households with high housing security get along easily, it is surprising that the moderate households (have problems but no burden) indicated a higher level of subsistence with current income than other households. Since these households do not take the necessary measures (repair, maintenance, etc.) to solve the current problems, it is thought that they keep their housing expenditures lower compare to the other housing security categories. Therefore, they do not have difficulty to meet their needs with current income.

Table 5.31 The Distribution of Hhs based on their Income Groups according to their Housing Security and the Level of Subsistence with Current Income

Housing Security and Level of Subsistence Categories		**Income groups**				
		Highest	High	Middle	Low	Lowest
High	Highly hard	0.3	1.1	2.0	3.6	10.2
	Hard	2.1	4.3	7.2	10.8	19.7
	Easy	21.2	44.9	55.5	56.6	48.4
	Highly easy	76.4	49.7	35.3	29.1	21.7
Moderate (Do not have problems but burden)	Highly hard	3.3	5.4	5.9	11.9	22.5
	Hard	8.3	16.4	19.6	25.1	25.1
	Easy	43.2	55.3	58.3	53.9	46.5
	Highly easy	45.1	22.9	16.2	9.1	6.0
Moderate (Have problems but no burden)	Highly hard	1.2	2.2	5.3	7.8	16.0
	Hard	2.5	6.0	10.5	12.9	18.0
	Easy	23.5	45.3	51.9	54.0	47.7
	Highly easy	72.6	46.5	32.3	25.3	18.2
Low	Highly hard	6.6	9.5	14.0	18.0	33.8
	Hard	13.1	18.4	22.1	26.0	26.3
	Easy	37.8	49.1	50.1	46.7	33.7
	Highly easy	42.4	23.0	13.9	9.3	6.2

CHAPTER 6

THE INVESTIGATION OF THE PROMISES OF HOMEOWNERSHIP IN ANKARA

In the overall evaluation of the promises of homeownership in Turkey, two different data sets (SILC and HBS) were employed. Due to the limitation of variables, housing security, and housing wealth of owner-occupier households were not studied simultaneously for the same households. Instead, the success in the achievement of housing wealth and housing security of owner-occupier households are evaluated on group-based categorizations such as income groups, imputed rent groups. To fulfill this gap and improve the measurement of the promises, producing a primary dataset arises as a critical step of the analysis. This chapter of the thesis presents a concurrent measurement (housing wealth and security) for households. In this context, data produced within the scope of a project funded by TÜBİTAK named "The Investigation of the Promises of Homeownership in Turkey", with grant number 120K084, has been the primary basis of this chapter.

The empirical analysis of this chapter aims to discuss the missing aspects of country-wide analysis on the achievement level of the promises of homeownership for Turkish households. First of these aspects originates from the reveal of country-specific factors and evaluation of the explanation of households' desire to be a homeowner. Relating these factors with housing wealth and housing security and presenting the households intentions to be a homeowner and their level of achievement raises as the second issue to review. Finally, the need to measure the achievement level of housing security and housing wealth promises of homeownership simultaneously for the same households is required. In sequencing the aspects mentioned above, urban Ankara is chosen as a case study area seeking to answer questions below.

- What are the reasons for the desire to own a house?

- How well do households achieve housing security and housing wealth?

- Do those levels of achievement change in different districts, income groups, house price levels, and ages of the building?

- What are the main troubles of being an owner-occupier?

- Considering the reasons explaining desire and troubles in the homeownership experience, to what extent do households succeed in reaching their objectives?

6.1 Data Analysis and Results

6.1.1 Descriptive Results

Descriptive results are first to apply to reveal differences among districts and households on the variaebles of the reasons for the desire to own a house, the main troubles of being owner-occupier, level of achievement for housing security, housing wealth, and both of these promises. Districts are employed as the previously defined independent variable. For further analysis, income groups on households' assessment, housing price level (TL/m2), and the building's age are other independent variables created based on the distribution of cases in the Ankara Survey. Unlike the analysis employed by HBS and SILC in chapter 5, this chapter uses households' subjective assessment of income groups for some reasons.

First, categorizing income groups of these households based on the equalized household income does not reflect country-wide conditions and can lead to distorted results. Even a household belongs to a high-income group in a country-wide evaluation; it can be categorized in the Ankara survey in the middle-income group. Second, using at risk of poverty or median income is discussed as an option. However, the poverty line of Ankara has a profound difference from the country-wide poverty line. Last, country-wide income group ranges (min and max values for

each income group) could be implied for the Ankara case; however, the most recent year for this range is available for 2018. Therefore, it cannot represent the condition in 2020. As a result, it is decided to add a variable to measure the income group of households based on their assessment. Although four categories are created for income groups (poor, low, middle, high), poor and low-income are merged due to the low number of cases in the poor household category.

For evaluating housing prices, the values are measured on TL/m2 to have a comparable scale. Categories are evaluated in three; low (2000 and less than TL/m2), middle (2001-4000 TL/m2), high (4001 and more TL/m2). Considering the distribution of cases and Turkish housing production experience, the age of the building is classified into four groups; new building (5 years and less than), relatively new building (6 and 15 years), moderately new building (16-30 years), and old building (31 years and more).

In addition to the price of housing in TL/m2, imputed rent per m2 is evaluated in three categories (i) 7.5 TL and less, (ii) Between 7.51 and 13.75 TL, and (iii) 13.76 TL and more. The last categorical variable is the number of rooms in the housing unit; 3 rooms and less, 4 rooms and 5 rooms, and more.

Questions are planned to answer independent variables of owner-occupier households; districts, housing price groups, imputed rent groups, income level assessment categories, the number of rooms, and the age of the building.

The first question lies in the reasons for the desire to own a house. Owner-occupier households are expected to choose three main reasons to represent their desire to be a homeowner. Although the share of reasons differs for the households of each district, as shown in table 6.2, “the money paid for rent is wasted” is evaluated in the top three reasons of desire to be a homeowner in all districts of urban Ankara. “Securing myself in case of landlord eviction” is evaluated as a fundamental reason in seven out of eight districts. Similarly, “saving through the payment house debt

instead of rent (buying the 2nd or 3rd house)" is observed as one of the most important three reasons in explaining the desire to be a homeowner in seven out of eight districts of urban Ankara. While "to have a legacy to bequeath my children" and "to have a better housing condition than a rental unit" are somehow monitored in one of three reasons in Altindag and Etimesgut districts, "to have a better housing condition than a rental unit" is observed only in Yenimahalle. Lastly, "having a higher level of housing expenses in rental housing unit" and "to use money obtained from the sale of an owned unit in case of need" are not sorted in the top three reasons for any of the districts.

Table 6.1 The Share of Reasons on Households' Desire to be a Homeowner

	Cankaya	Mamak	Altindag	Golbasi	Etimesgut	Yenimahalle	Kecioren	Sincan
Saving through the payment house debt instead of rent (buying the 2nd or 3rd house)	16.7	19.4	11.1	15.6	18.8	20.2	22.2	17.7
Securing myself in case of landlord eviction	21.2	20.4	23.9	24.8	15.2	18.2	20.6	26.2
To have a legacy to bequeath my children	13.3	16.1	16.1	13.8	17.3	5.1	14.3	16.2
Having a higher level of housing expenses in rental housing unit	8.7	6.5	11.7	11	7.6	6.1	6.3	4.6
To have a better housing conditions than a rental unit	14.8	12.9	6.1	10.1	9.6	19.2	7.9	14.6
To use money obtained from the sale of owned unit in case of need	6.1	6.5	7.8	4.6	13.7	7.1	8.7	4.6
The money paid for rent is wasted	18.2	18.3	23.3	20.2	17.3	21.2	19.8	16.2
Others	1.1	0	0	0	0	3.0	0	0

After the overview of reasons in the explanation of desire to be a homeowner for owner-occupier households, the main troubles of being an owner-occupier is questioned. In that respect, households are expected to remark three main troubles out of eight. Then, the share of reasons is evaluated for each district based on the number of responses represented in table 6.3.

Being responsible for the maintenance and repair of housing units is one of these three troubles having the highest shares for all districts. It is followed by the burden of housing debt with seven districts and by facing security, noise, and other problems due to the location of the housing unit in six of eight districts. Owner-occupier households living in Etimesgut and Yenimahalle districts indicate that they are not faced or disturbed by security noise and other problems due to the location of their housing unit. However, different from the households of other districts, households living in Etimesgut specify having high transportation costs and long travel time due to the location of the housing unit as trouble with the highest share. Also, households in Yenimahalle state that they have trouble due to the decrease in the housing unit price. Last but not least, the mismatch of the housing unit in terms of the size of the household is identified by households living in Cankaya, Golbasi, and Yenimahalle as one of these highest share having a negative experience of being a homeowner.

Table 6.2 The Share of Reasons on Households` Negative Experiences of Homeownership

The Share of Reasons in Each District	Cankaya	Mamak	Altindag	Golbasi	Etimesgut	Yenimahalle	Kecioren	Sincan
The burden of housing debt	16	23.7	21.1	19.6	19.3	23.7	20.2	14.6
Facing security, noise and other problems due to the location of housing unit	16.7	22.6	20	17.4	8.1	9.3	21.8	21.5
Being responsible for the maintenance and repair of housing unit	28.8	23.7	24.4	21.7	21.8	23.7	22.6	29.2
Having high transportation cost and long travel time due to the location of housing unit	8.2	4.3	8.3	15.2	24.9	10.3	8.1	13.1
Decrease in the price of housing unit	10.1	10.8	11.1	6.5	17.3	13.4	9.7	7.7
Mismatch of the housing unit in terms of the size of household	16.7	10.8	15	17.4	8.6	13.4	16.1	12.3
Others	3.5	4.3	0	2.2	0	6.2	1.6	1.5

As mentioned before, in section 4.2.2.1, a result of the categorization of scores, 35.6 percent of owner-occupier households in the Ankara survey is observed with the achieved level for housing wealth and security. 31.4 percent of households are monitored as unachieved to have housing security and housing wealth. Besides this categorization, households are investigated in their districts. How the achievement levels of housing security and housing wealth at the district level differ is spatialized, as shown in figure 6.1 and 6.2. After separate evaluations of these two promises, they are questioned together.

The share of households in districts achieved housing security is represented in figure 6.1. Altindag district has the lowest share in housing security achievement, with only 30 percent of owner-occupier households in the urban Ankara survey. Besides, Kecioren, Sincan, Mamak, and Golbasi share the low level of housing security achievement with less than 50 percent of households. Etimesgut (59.7), Yenimahalle (63.6), and Cankaya (71.6) point out the achieved status for housing security.

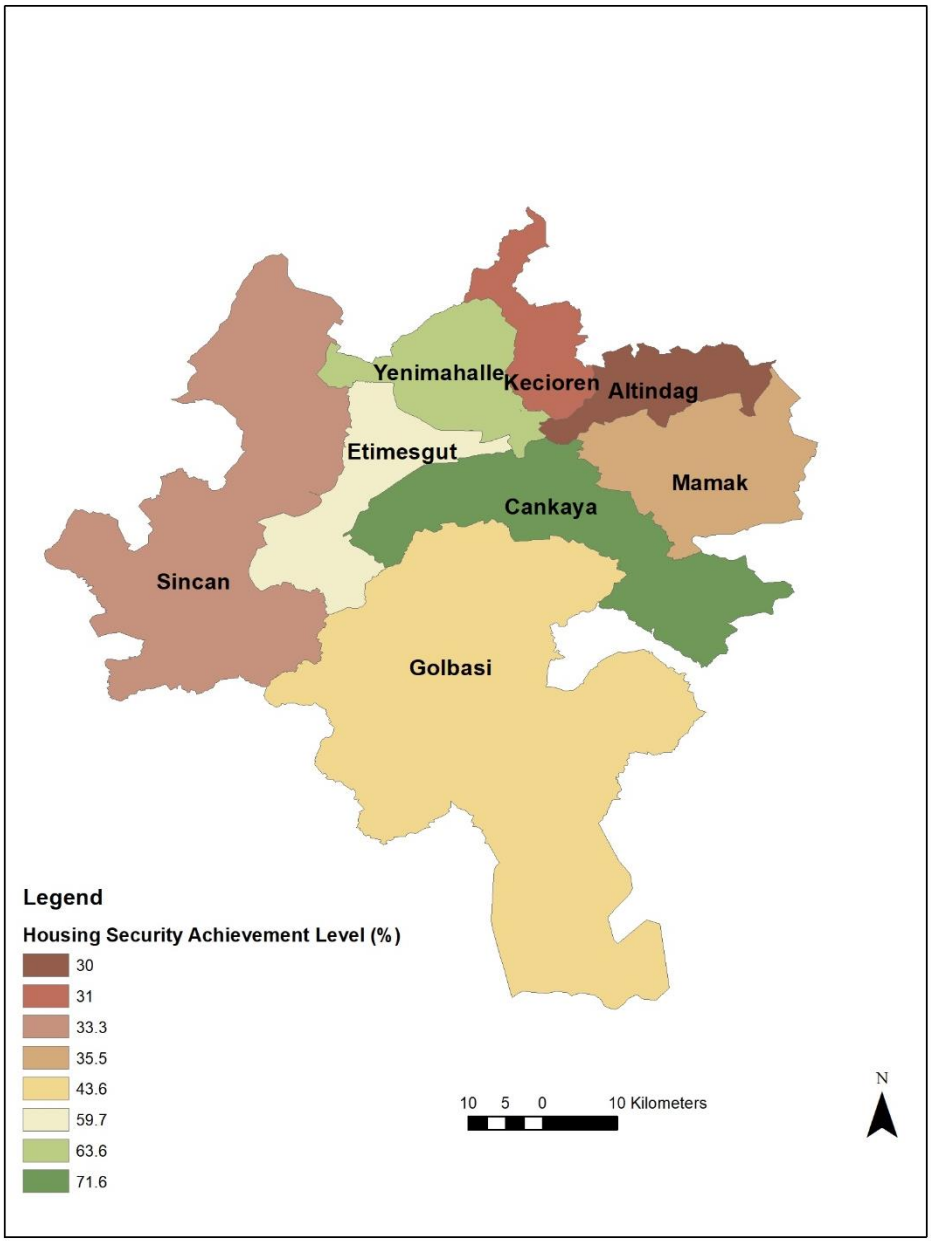

Figure 6.1. Housing Security Achievement Level of Districts

The achievement levels are also evaluated considering the factors affecting housing security, dwelling size, household size, the number of rooms for habitability and age of the building, households' total income, and household head age for affordability. In that respect, the low share of achieving housing security in Altindag district can be explained with the smallest size in the housing unit, the highest age of the building, the lowest number of rooms, and the comparatively high household head

age, low level of income. Due to the old buildings, households are expected to face physical problems and the need for maintenance and repair. Although the size of housing units is not big too much, households indicate their challenges with the current income level. It represents their level of housing security with a low level of achievement. However, to review districts and their housing and household characteristics, table 6.3 represents the mean values of some variables.

Table 6.3 Housing and Household Characteristics on District Level Related to Housing Security

The mean values of	Dwelling size	Age of building	Number of rooms	Household size	Total income of households	Household head age
Cankaya	141.53	21.9	3.9	3.0	13,731	55.0
Mamak	134.1	13.8	3.6	2.9	7,790	53.9
Altindag	117.5	24.9	3.3	3.3	7,779	54.2
Golbasi	130.5	13.4	3.9	3.8	5,385	50.4
Etimesgut	199.3	10.2	4.6	3.4	13,808	51.5
Yenimahalle	145.3	12.3	4.1	3.7	9,606	47.4
Kecioren	143.9	14.3	4.2	3.6	8,542	49.4
Sincan	129.0	20.7	3.9	3.6	7,573	51.4

Considering the factors mentioned above, the Etimesgut district is expected to have a higher level of achievement for housing security due to comparatively newer buildings, bigger housing units in size and the number of rooms, high level of income.

Regarding the level of achievement of housing wealth as represented in figure 6.2, Cankaya and Yenimahalle show a similar pattern: the high level of achievement and the housing security level. Like the low level of achievement for housing security, Sincan, Golbasi, Mamak, Altindag, and Kecioren have a low level of achievement

for housing wealth; surprisingly, households living in Etimesgut experience the low level of achievement housing wealth. Only 44.8 percent of owner-occupier households in Etimesgut are scored above the mean of housing wealth toward the high achievement level of housing security.

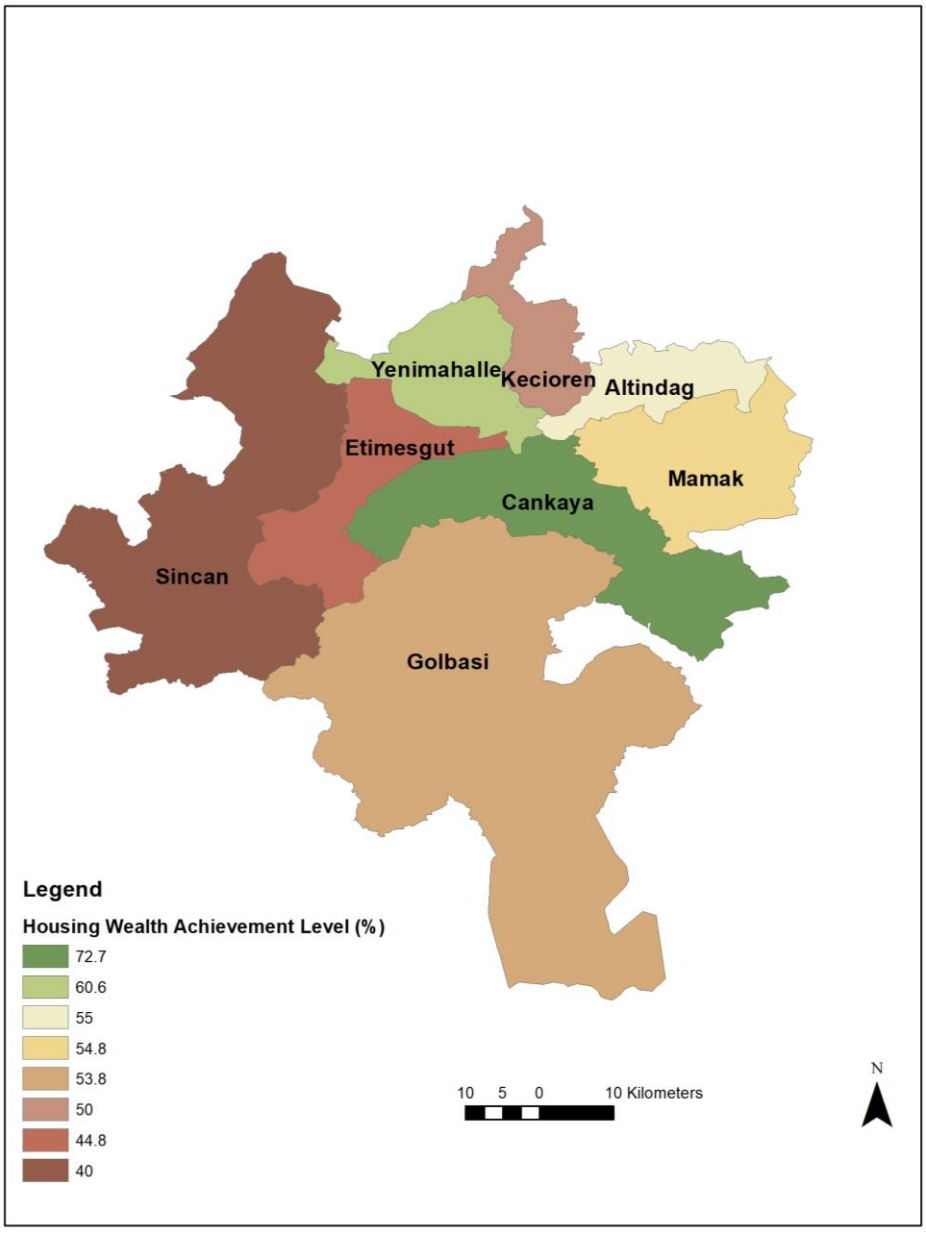

Figure 6.2. Housing Wealth Achievement Level of Districts

To review the level of achievement of housing wealth in Ankara districts, related housing, and household characteristics are represented in mean values in the table 6.4.

Table 6.4 Housing and Household Characteristics on District Level Related to Housing Wealth

The mean values of	The price of housing unit (TL)	Imputed rent (TL)	Experiencing the decrease in housing price (%)	Total income of households (TL)	Housing Price to Total Income Ratio
Cankaya	593,977	2003	10.1	13,731	62
Mamak	289,709	1355	10.8	7,790	39
Altindag	276,750	1030	11.1	7,779	38
Golbasi	392,820	1476	6.5	5,385	87
Etimesgut	643,243	2266	17.3	13,808	52
Yenimahalle	452,272	1615	13.4	9,606	58
Kecioren	367,380	1313	9.7	8,542	47
Sincan	269,666	1041	7.7	7,573	40

It is remarkable that although Etimesgut district has a high level of housing price and imputed rent, 44.8 percent of households are measured in a group achieved housing wealth. On the other hand, it can be explained through the perception and expectation of households about housing wealth or the decrease in housing prices between the year they owned housing unit and right now. 17.3 percent of households living in Etimesgut stated that they had experienced a decrease in the owned housing unit's price.

In the overview of three districts with similar income levels; Mamak, Altindag, and Sincan, a similar housing price ratio to total income is observed. However, in

measuring housing wealth, the share of households achieving housing wealth is less than the other two districts. It can be interpreted due to the remote location of Sincan to the city center and a low level of satisfaction with the location of the housing unit.

In the evaluation of housing security and housing wealth, named the promises of homeownership, Cankaya and Yenimahalle districts become prominent due to their high share of households achieving both of these promises, 57.1 percent in Cankaya and 52.9 in Yenimahalle, and the low share of households achieving none of them, 11.4 percent in Cankaya and 23.5 percent in Yenimahalle as shown in figure 6.3.

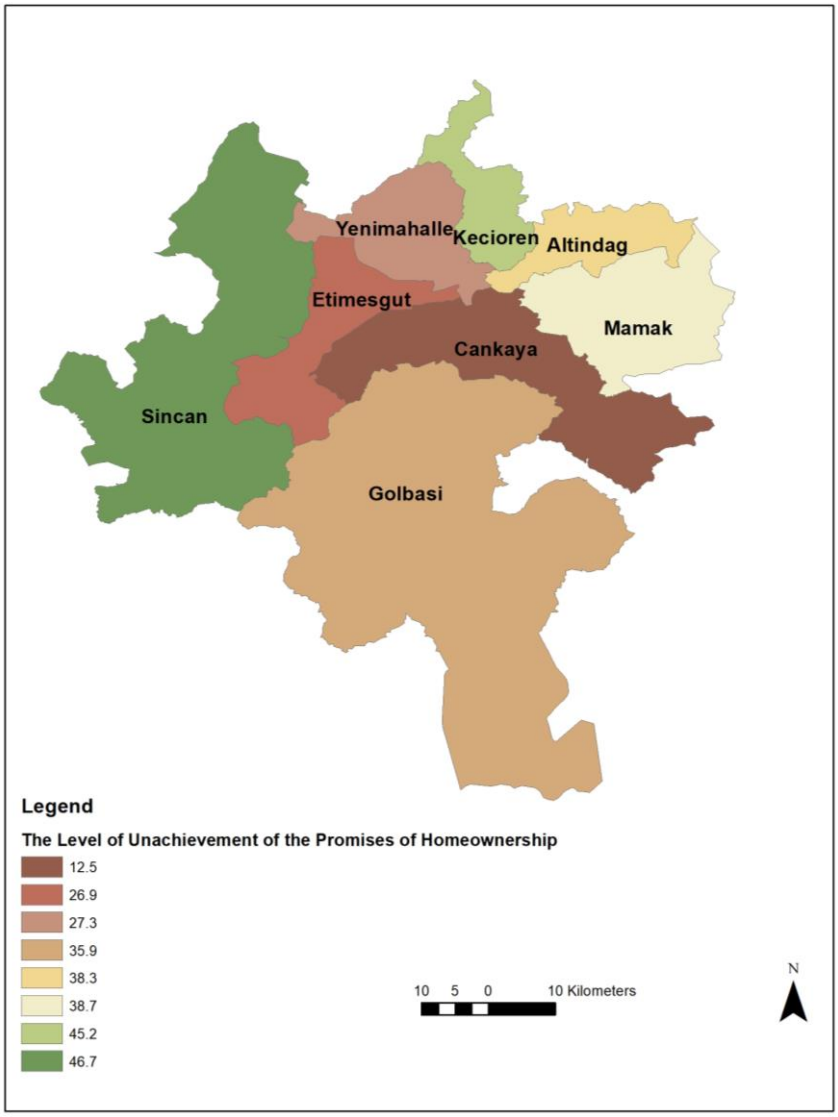

Figure 6.3. The Level of Unachievement of the Promises of Homeownership

While Mamak, Altindag, and Golbasi have comparatively equal percentages of households among the level of achievement groups, Kecioren and Sincan have an enormously high level of unachievement to get the promises of homeownership.

In addition to the descriptive analysis, the association of housing security and housing wealth is observed. Both variables are nominal; hence, Cramer's V indicates a correlation: .34 and $p < .001$.

6.1.2 Multivariate Analysis in the Prediction of the Achievement of the Promises of Homeownership

A binary logistic regression analysis was performed using SPSS on previously defined groups based on their success level to achieve the promises of homeownership; they have achieved and have not achieved. In the assessment of the predictors; Districts, Housing price per m2, Imputed rent per m2, The age of building, The number of rooms, Reasons for desiring to be a homeowner (Saving through the payment house debt instead of rent, Securing myself in case of landlord eviction, To have a legacy to bequeath my children, Having a higher level of housing expenses in rental housing unit, To have a better housing conditions than a rental unit, To use money obtained from the sale of owned unit in case of need, The money paid for rent is wasted), Negative experiences of homeownership (The burden of housing debt, Facing security, noise and other problems due to the location of housing unit, Being responsible of the maintenance and repair of housing unit, Having high transportation cost and long travel time due to the location of housing unit, Decrease in the price of housing unit, Mismatch of the housing unit in terms of the size of household) and The existence of financial calculations on advantages are employed as independent variables. No missing cases in the analysis are observed because households who do not respond to related questions are eliminated within the process. In the end, 270 cases are available for analysis (127 cases in the unachieved group and 143 cases in achieved groups). After evaluating the adequacy of frequencies for predictors, the need to change model structure is not required.

Correlations are observed; the associations among variables and multi-collinearity of variables are not monitored as shown in the Appendix C.

The results of the binary logistic regression model evaluating the probability of achieving the promises of homeownership are represented in the table 6.5. First of all, to see the goodness of fit of the model for examined cases, multilevel tests are conducted, while Nagelkerke R2=.45 indicated that predictors are significantly disjoined among the groups. 75.6% of the unachieved group and 79.0% of the achieved group are predicted, overall classification success is 77.4%.

Table …. shows the regression coefficients, odds ratios, and the level of significance. In this regression model, B (coefficient) shows the logistic regression equation's values for predicting the dependent variable from the independent variable. They are in log-odds units. If B is positive, a change in an independent variable from the reference category to the predicting category raises the odds of the event happening, after controlling for the other predictors. However, if B is negative, the odds of the event decrease with a change in the independent variable from the predicting category to the reference category. Exp(B) is the exponentiation of the B coefficient, an odds ratio comparing the likelihoods of sub-categories of the independent variable to predict a dependent variable. If B is positive, Exp(B) directly shows how many times predicting the independent variable category is more likely to explain the dependent variable than the independent variable's reference category. If B is negative, the odds ratio should be calculated on the inverse of Exp(B).

The results of binary logistic regression predicting the likelihood of achieving the promises of homeownership are represented in the table 6.5. Districts, imputed rent per m2, the age of the building, households' assessment on income level, reasons for desiring to be a homeowner (having a higher level of housing expenses in the rental housing unit), negative experiences of homeownership (the burden of housing debt, facing security, noise, and other problems due to the location of housing unit, having high transportation cost and long travel time due to the location of housing unit, decrease in the price of housing unit) and the existence of financial calculations on

advantages are revealed as statistically significant odds for the prediction of the dependent variable. In that respect, a household living in the Cankaya district is 5.3 times more likely to achieve the promises of homeownership than a household living in the Golbasi district, which is 4.5 times than of living in Kecioren and 6.4 times than living in Sincan.

Regarding the price level of housing and imputed rent, while imputed rent per m2 is revealed statistically significant in predicting the dependent variable, housing price per m2 is not. In the comparison of the category of 13.76 TL and more and 7.5 TL and less, a household owning a housing unit with imputed rent per m2 is 13.76 TL, and more is 8.2 times more likely to achieve the promises of homeownership than owning a unit with imputed rent category which is 7.5 TL and less.

Surprisingly, the age of building in categorical order is revealed statistically significant only for comparing two categories: 31 years and more and between 16 and 30 years. A household living in a building aged 31 years and more is almost 5 times more likely to achieve the promises of homeownership than the ones living in a building aged between 16 and 30 years. The number of rooms is not executed statistically significant factors in the prediction of the dependent variable.

Similar to the findings of the analysis in Chapter 5 on SILC and HBS, income level is observed as a significant factor; a middle-income family 2.5 times more likely to achieve the promises of homeownership than poor and low-income families.

Table 6.5 Multivariate Analysis on the Prediction of the Achievement of the Promises of Homeownership

Dependent variable: Probability of achieving the promises of homeownership (0:unachieved, 1:achieved)		
	B	**Odds ratio**
Districts		
Cankaya (REF)		
Mamak	-.828	.437
Altindag	-1.019	.361
Golbasi	-1.683	.186*
Etimesgut	-.876	.416
Yenimahalle	-1.065	.345
Kecioren	-1.511	.221*
Sincan	-1.860	.156*
Housing price per m^2		
2000 TL and less (REF)		
Between 2001 and 4000 TL	.116	1.123
4001 TL and more	.221	1.248
Imputed rent per m^2		
7.5 TL and less (REF)		
Between 7.51 and 13.75 TL	.710	2.035
13.76 TL and more	2.115	8.293**
The age of building		
31 years and more (REF)		
5 years and less	1.098	3.000
Between 6 and 15 years	.920	2.508
Between 16 and 30 years	1.568	4.797*

Table 6.6 (Cont'd) Multivariate Analysis on the Prediction of the Achievement of the Promises of Homeownership

	B	Odds ratio
The number of rooms		
3 rooms and less (REF)		
4 rooms	.300	1.350
5 rooms and more	.331	1.392
Households' assessment on income level		
Poor and low-income family (REF)		
Middle income family	.927	2.526*
High income family	1.250	3.489
Reasons for desiring to be a homeowner		
Saving through the payment house debt instead of rent		
Have that reason (REF)		
Do not have that reason	-1.318	.268
Securing myself in case of landlord eviction		
Have that reason (REF)		
Do not have that reason	-.841	.431
To have a legacy to bequeath my children		
Have that reason (REF)		
Do not have that reason	-1.053	.349
Having a higher level of housing expenses in rental housing unit		
Have that reason (REF)		
Do not have that reason	-1.898	.150*
To have a better housing conditions than a rental unit		
Have that reason (REF)		
Do not have that reason	-1.693	.184
To use money obtained from the sale of owned unit in case of need		
Have that reason (REF)		
Do not have that reason	-1.662	.190
The money paid for rent is wasted		
Have that reason (REF)		
Do not have that reason	-.483	.617

Table 6.7 (Cont'd) Multivariate Analysis on the Prediction of the Achievement of the Promises of Homeownership

	B	Odds ratio
Negative experiences of homeownership		
The burden of housing debt		
Have experienced (REF)		
Have not experienced	1.276	3.583*
Facing security, noise and other problems due to the location of housing unit		
Have experienced (REF)		
Have not experienced	1.819	6.165**
Being responsible of the maintenance and repair of housing unit		
Have experienced (REF)		
Have not experienced	.981	2.668
Having high transportation cost and long travel time due to the location of housing unit		
Have experienced (REF)		
Have not experienced	1.469	4.343*
Decrease in the price of housing unit		
Have experienced (REF)		
Have not experienced	1.797	6.034**
Mismatch of the housing unit in terms of the size of household		
Have experienced (REF)		
Have not experienced	.729	2.074
The existence of financial calculations on advantages		
Have a calculation (REF)		
Do not have any calculation	.797	2.219*
Log-likelihood 261.10	Df 32	
Nagelkerke R^2 .45	N 270	

REF: Reference category

Reasons for desiring to be a homeowner are evaluated one by one; only the reason for having a higher level of housing expenses in the rental housing unit is observed statistically significant. A household indicating that reason in the explanation of desire to be a homeowner is 6.6 times more likely to achieve the promises of homeownership than the one is not indicated that reason.

Based on the negative experiences of owner-occupier households, households have not experienced the burden of housing debt (3.5 times), facing security, noise, and other problems due to the location of housing unit (6.1 times), having high transportation cost, and long travel time due to the location of housing unit (4.3 times), decrease in the price of housing unit (6 times) are revealed more likely to achieve the promises of homeownership than households have experienced.

Lastly, households are questioned on the existence of financial calculations on advantages. Contrary to the expectation, households do not have any financial calculations on advantages and are 2.2 times more likely to achieve the promises of homeownership than households having calculations.

CHAPTER 7

CONCLUSION

7.1 The Promises of Homeownership: Overview of Findings

Through the history of the Republic of Turkey, homeownership has been on the agenda of households. Mainly since the 2000s, the tendency of households to be a homeowner is supported by a series of attempts of government. The campaigns of homeownership always remain in a position of profit for governments. The share of (new) homeowner households shaded in the living and housing conditions of others. However, homeownership means more than buying a housing unit, such as being responsible for the quality of the physical and living environment, legal duties, taxation, being right holder, being able to accumulate wealth and etc.

In addition to its meaning, homeownership provides many promises for households. This study focused on two of these promises that Turkish households are highly engaged with: housing wealth and housing security. The main motivation of households to be a homeowner lies on the reach to these two promises. This study argues that motivations of households and a series of attempts of governments do not enable all households to achieve these promises in Turkey. For the investigation of this argument, HBS (2018) and SILC (2018) data at the national level, and Ankara Survey (2020) data at the municipal level of central districts of Ankara are employed. Housing security of owner-occupier households is defined through affordability and habitability of households. Housing wealth is measured on the accumulation and possible changes in the price of the housing unit. The primary findings of the study are summarized in this chapter of the thesis. The analysis showed that even though most households in Turkey intended to be a homeowner, very few of them achieve to acquire the promises of homeownership.

The findings on housing wealth (analysis of HBS raw data);

- When Turkish households are distributed to the housing wealth categories, 25.5 percent of them are observed to take place in high housing wealth category while 36.8 percent of them are in low housing wealth category. Additionally, the higher share of high housing wealth refers to the higher level of equivalized household income. For example, only 5.5 percent of the lowest income households have high housing wealth level, while this ratio reaches to 53.2 percent for the households in the highest income bracket.
- The number of workers in the household, household composition, real estate income, income groups, housing and transport expenditures, multiple homeownership and housing typology are significantly related to the housing wealth of households.
- Having higher housing wealth level is more likely for households;
  - **(i)** Having one and less than one breadwinner (including retired person and part-time worker),
  - **(ii)** With a composition of 'parents with child(ren)',
  - **(iii)** Having higher equivalized household income,
  - **(iv)** Spending more than 30% of household income for housing and transport expenditures
  - **(v)** Having an extra housing unit
  - **(vi)** Living in high-rise and low-rise apartments rather than single-family homes.

The findings on housing security (analysis of SILC raw data);

- The findings reveal that only 15.2 percent of owner-occupier households in Turkey achieved high level of housing security. Nevertheless, 42.5 percent of owner-occupier households are experiencing housing security. Furthermore, households having low housing security are more likely to suffer from unaffordability and inhabitability particularly in eastern NUTS1

regions of Turkey. However, NUTS2 regions have quite different housing security levels, although they are in the same NUTS1 region.

- The number of breadwinners, the existence of real estate income, income quintiles, subsistence level with current income, housing typology, and imputed rent quintiles are significant predictors of housing security categories of households.
- Having higher housing security is more likely for households;

  (i) Having real estate income

  (ii) Having higher equivalized household income

  (iii) Living in dwellings with higher imputed rent.

The findings of the Ankara Survey on the promises of homeownership;

- For Ankara case, simultaneous evaluation of housing wealth and housing security promises of homeownership reveals that 35.6 percent of owner-occupier households have achieved housing wealth and security. Of all households, 31.4 percent is unable to achieve housing security and housing wealth. Geographically, Çankaya district is spied on the highest share of achievement level while Sincan district has the highest share of failure.
- The findings of Ankara Survey also indicate where households live, age of the building, the number of rooms, calculation of financial advantages by households, reasons for desiring to be a homeowner, and define the level of achievement of the promises of homeownership.
- Achievement of the promises of homeownership is more likely for households;

  (i) Living in Çankaya district rather than Gölbaşı, Keciören and Sincan districts,

  (ii) Having high imputed rent per m^2 level (more than 13.76 TL/m^2) rather than low (7.5 and less TL/m^2),

(iii) Living in a building aged between 16 - 30 years than 31 years and more,

(iv) Assessing themselves as middle income family than poor and low-income family,

(v) Aiming to reduce housing expenses experienced in rental units through homeownership,

(vi) Experienced the burden of housing debt,

(vii) Faced security, noise and other problems due to the location of the housing unit,

(viii) Having high transportation cost and long commuting time due to the location of the housing unit,

(ix) Experienced a decrease in the price of the housing unit,

(x) Have already calculations to assess the financial advantages of homeownership.

All in all, three different data sources reveal that household income is the common determinant factor in predicting the level of the achievement of the promises of homeownership in Turkey. Although the age of the building, housing size, number of rooms in a housing unit and the size of household are expected to be significant factors to predict the likelihood of the level of achievement, they are not displayed as signficant. It is thought that Turkey has many sub-markets even in district level, and each has its own characteristics. For example, some cities in eastern regions have comparatively larger housing units, and they were expected to diplay higher achievement. At the same time, some of these cities have higher person per room ratios in housing unit that leads to expect lower achievement level, whereas some are below the national average. Also, the age of buildings in the same district changes based on the development strategies of municipalities. It hampers to evaluate geographies in a city as a whole and also affects the significances of some housing unit related factors.

The empirical part provides comprehensions to measure and assess the housing wealth, housing security and both. It is just an attempt for Turkey to start on studies

in housing wealth, security and homeownership. It is evident that additional data and investigations are required to improve the models in explaining the differentiation of owner-occupier households about their experiences of homeownership.

7.2 Implications of Country-Wide Homeownership Policies and Low Achievement Level of Promises

The promotion and promises of homeownership have many aspects to discuss at the individual and society level. These discussions should also include questioning both the data constraint in Turkey and the target of housing policies and their contribution in reaching the defined goals. It has been stated in many studies that policies aiming to increase the rate of homeownership in Turkey have not achieved the desired outcomes from the quantitative perspective. Despite the decline in the homeownership rate, the continuation of housing sales evokes ***multiple homeownership discussions***. On the other hand, according to the findings of the study, households with the medium and low level of housing security are identified as those who cannot fully benefit from the promises of homeownership. In this context, the multiple homeownership status of these households should be discussed. However, from the available datasets, reaching a clear conclusion about the state of households owning another house, the house type, the value of the other houses, the housing debt status, and the income from this house is not possible. Nevertheless, some inferences and alternatives can be interrogated. Firstly, households with low and moderate housing security levels and housing assets are currently expected to have no other housing. These households became homeowners as a result of existing housing policies that encourage homeownership. However, they cannot fully benefit from the advantages expected from homeownership. This is due to the physical condition of the house they own, the housing expenses and difficulties in paying the debt, the price level of the house compared to the national average or the difficulty of accessing basic services depending on the location of the house. To solve these problems and improve housing and living conditions of single homeowners, first time (entry to) homeownership should find a separate place in housing policies than

already homeowners and multiple homeowner households. For first-time buyers, the difficulty of paying rent and saving on a downpayment can be avoided, and these households can be protected from a mismatch with relatively affordable but old houses, houses with outstanding maintenance-repair expenses, and affordable houses with public service/infrastructure problems due to their location.

The second issue to focus is the attention-grabbing phenomenon of Turkey, the distinction between ***"other"*** tenure mode (households living at below-market rents or paying no rent at all in the homes of family members or relatives) and owner-occupier households. Households who do not own the dwelling they reside in but reside in the dwellings that belong to their parents can consider themselves homeowners. Even if they do not pay a housing debt, they can face high repair costs due to the age of the inherited dwelling. Also, it is a situation that can be met as an obstacle for households to benefit from homeownership due to expenses.

The combination of the first two inferences gives rise to the third issue. Homeowner households with low and moderate housing security and housing wealth are composed of households with more than one house. Two different cases may arise here: (i) Households prefer to earn rental income from their houses with better conditions and reside in more affordable and comparatively poor housing condition. (ii) Households provide their children an opportunity to live in the relatively better houses they own instead of earning rental income from their house. Existence of households in the investigated samples who represent themselves as owner-occupier with a high level of housing wealth and housing security, despite having low-income, confirms the second possibility. This situation reveals ***the importance of intergenerational transfers*** not only in entry to homeownership but also in terms of housing security and housing wealth, as well as the polarities it creates.

The analyses conducted in this thesis are based on the cross-sectional evaluation of households' housing wealth and housing security statusdue to the limitations of data and analysis. However, ***the need to investigate households in a panel*** is obvious to observe the effect of national-level policies and changes in household. Even at the

city level, planning decisions and development directions highly affect housing wealth of households, while household-related changes determine housing security such as the trouble to pay housing debt due to the job loss or mismatch of the housing unit in size and physical quality when a new member is added to the family.

The focus on the unheeded housing conditions of the owner-occupier household, housing security, needs to be highlighted. Housing security is mostly associated with tenant households and households living in illegal housing units. Owner-occupier households are not seen as a tenure type living at risk of insecure housing. Having some housing debt payment problems or risk of eviction are not the only variables to measure housing security of households. The multidimensionality and unique character of housing security hamper its measurement. ***The alternatives on the measurement of housing security for owner-occupier households*** is also a need for upcoming years.

7.3 Policy Perspective

The promotion of homeownership in Turkey mainly focuses on increasing the share of owner-occupiers among low-income households. However, the results of this study showed that these households are lacking housing security at most. In other words, households that already have high housing security are higher-income households and households that do not have much difficulty living with current income. Promoting homeownership does not serve equal opportunities for housing security and housing quality for all households. The success of the effects of country-wide homeownership policy should be discussed, and alternatives should be examined. To improve housing security of low housing secure households, these households should be investigated. These households are the ones having real estate income, yet the form of real estate is unknown. However, it is reached that having real estate income does not solve the housing security problems of these households. It may be the case that the cost of housing maintenance and repair can require a large amount of money for one time.

Policy perspectives to provide housing security and housing wealth of owner-occupier households ***require discussion of country-specific issues***; legal status of housing units, housing finance mechanisms, housing typology, and vulnerable groups (low-income households, one and less than one breadwinner, single households). The legal status of the housing unit defines the first prerequisite of housing security. Through having authorization for their houses, households eliminate the risk of eviction or demolishment by governments or municipalities. In order to protect households, the first thing should be providing a legal status for the housing units. However, the way to do that should also check the physical robustness and conditions of housing units before legitimizing units. Also, generalized findings and interventions lead to misinterpretation of housing conditions of households. Therefore, as dataset and pre-policy research enable, ***specific measurement methods and policies*** reflecting the perception of households in the analyzed area should be considered.

The need for tenure neutral housing policies to provide options for households is a requirement. Especially the levels of achievement in housing wealth and housing security showed that some households in owner-occupier mode of tenure do not benefit from the promises of homeownership. At that point, first, the reasonableness of homeownership as a common mode of tenure and institutional aspects preparing and enabling households to be a homeowner should be discussed. Then, different alternatives promoting various modes of tenure should be presented.

Although the state plays an essential role in housing provision in Turkey, ***the roles of local governments and plans*** also change the housing careers of households in many ways. In Turkish cities, local governments aim to increase the housing production level by transforming existing housing units (mostly increase in the development right) and opening new areas for housing development. Previous and future development plans are decisive in the definition of housing wealth and housing security of households. If a household cannot own a housing unit with

affordable prices and accessible location due to the planning decisions of municipalities, that household can face with affordability problems for both tenancy and owner periods. In other words, what a household will experience in housing wealth and housing security is a result of the effects of planning decision in the local area. Considering the central districts in Ankara, the role of planning decisions on housing wealth and housing security of households are discussed in some aspects. First arose the perception about the age of buildings. In these districts, the share of housing units produced in the last six years changes between 9-30 percent. It is expected that in comparatively newer built-up areas, higher housing prices and newer services is likely to occur; hence, higher housing wealth is observed. However, Çankaya having the lowest share in newer housing stock displays the highest housing wealth and housing security achievement. Also, it has the lowest level of housing unit sales in the last five years compared to the other districts of Ankara. Keçiören has the second-lowest level in the share of newer units in housing stock but one of the highest share in the sale of the housing unit in last five years. It means that older housing units are rarely transacted in Çankaya and frequently transacted in Keçiören. On the allocation of housing wealth, Çankaya has higher housing wealth, whereas Keçiören has lower. To sum up, age of the building is not the only factor defining housing wealth, therefore, demolishing old buildings and constructing new ones do not guarantee to have higher housing wealth for households. ***The need to have good access to public services*** should also be considered at the local level to understand the difference between the districts of Ankara.

It is also worthy to comment on ***the effect of distance to central areas on determining the achievement of the promises of homeownership***. Land value in the city center is comparatively higher than the peripheral regions, regardless of building age. This increases the prices of housing units, however, high-income households usually do not prefer inner-city units due to some trends such as gated communities, security and problems like pollution, noise and parking. Due to the filtering processes, middle-and low-income households are the residents of these units as tenants or owners. If they bought these units many years ago, they have to spend

some money on renewing and repairing the unit. If this unit is recently bought, the household will face high housing debt due to the higher prices of central areas. Whether these households get the high level of housing wealth, they will suffer the lack of housing security in these units. At that condition, two options arise (1) transformation of housing units (usually by the state) without change in the function, (2) transformation in the function from housing to commercial. In the first option, in addition to the high value of land, house value will also increase, and it will result in an enormous property price (land value+housing value). In the second option, the number of housing units will decrease, the new production will be needed. In any case, households will be affected negatively.

7.4 Contribution and Limitations of Study

Housing researchers in developing countries suffer from ***the lack of comprehensive datasets*** designed purposefully for housing research. A limited number of datasets exist in most countries, offering limited variables to be used in housing research. Turkey is no exception. Due to these limitations, this study cannot test the housing security and housing wealth level for the same households at the national level.

This situation brings along ***the necessity of case studies and field surveys***. For this reason, in this thesis, in addition to the two major data sources, the investigation of the promises of homeownership to understand the level of achievement for Turkish households was carried out in eight districts of Ankara. The coincidence of the data collection process in Ankara with the pandemic specifically constituted one of the main limits of this study. Difficulty to reach households and the curfew especially on weekends and holidays has delayed the time of the fieldwork to summer periods of 2020.

In the pilot study carried out before the field study, the survey was tried to be finalized. In this process, some questions such as whether households actually have other residences, whether they earn income from their real estate, the number of

people actively working at home, net income, whether there is a housing debt, if there is then who is the lender and what is the maturity date, net amount of the housing expenditures or housing debt payments were removed from the survey because the households did not want to answer or ***households found these questions suspicious for their own benefits***. This situation was reflected in the analysis and variables.

Despite all these limitations, this study also contributes to the questioning of the research capability of housing wealth and housing security, which are two important motivations of homeownership, for researchers with data constraints. Another contribution of this thesis is that it revealed this by ***using different methods***. This study attempted to reconsider the measurement of housing wealth and housing security in a developing country context where there are data limitations for housing research. The HBS and SILC were employed for the empirical investigation of Turkish households. Two major conclusions follow from this investigation. The first conclusion is related to the differences observed in the distribution of cases to the chosen method and the dataset. In ***the index-based measurement*** of housing wealth, very few cases were observed at the highest and lowest values, and the agglomeration was in the intermediate values. The same problem was not experienced in housing security analysis (index). The difference in the number of cases between two datasets and the range of index values is considered the reason for this distribution. The low share of some index values can lead to a severe increase in the number of empty cells in the analysis. Adding some sub-groups such as income quintiles activates more empty cells in the analysis. In this case, if a researcher insists on using the index, evaluating and merging the lower and upper values in studies may yield healthier results.

The observation of cases in different categories and index level (based on the measurement methods) forms the second issue to discuss. The cases with the lowest values in the index-based measurement of housing wealth may be in equipoise the middle group in the categorical measurement. A similar situation is observed in the housing security evaluation of households. According to the correlation values

between the methods, a high correlation is determined between the two methods for housing security (.857) and housing wealth (.655) (Tabachnick and Fidell (2001) summarize that the high correlation corresponds r > .65). These findings reveal the importance of the research question in determining the appropriate method. ***Categorical evaluation*** is a more appropriate research method that questions whether housing security and housing wealth are obtained among households. However, if the research aims to analyze the achievement/actualization level of housing wealth and home security, indexing may be more meaningful.

7.5 For Further Studies

In this study, an objective evaluation is used for the habitability of households in the current owned unit. To do that, owner-occupier households are questioned in terms of the existence of housing and environment-related problems. In other words, households are cross-examined over the same problems. However, for the housing affordability of households, subjective declaration of households is considered rather than the ratio of housing expenditures to income. There is no single variable showing the amount of monthly mortgage payment in the dataset. It is also observed that households varied in their disposable income, significantly influencing the affordability ratio.

Also, the consideration of the existence of ongoing housing debt can direct further studies. This study does not question the extent to which households pay their housing payments or how often they have difficulty paying or postponing their payments. If households with housing debt have enough share to be represented in a study, they can be subject to another analysis considering whether payments are made regularly.

Although national level data sources do not provide any information on the legal status of the housing unit, the distinction between legal and illegal housing units affects both housing security and housing wealth of households. Recent

developments in the built environment showed that Turkish households had made structural changes in their housing units to increase their housing and the environment habitability. To legalize these changes, they follow some steps of amnesty. However, the employed data set, Survey of Income and Living Condition, does not include any variable showing this kind of an attempt of households and the legal status of the housing unit. For studies generating its own data, this variable can be considered.

Last but not least, this study aimed to reveal the households having/not having housing security. Therefore, households are categorized rather than be ranked. For further studies, equivalized household income and monthly housing expenditures to define housing affordability of households' can be employed. However, at that point, a new threshold for the ratio of housing expenditures to disposable household income should be defined considering the conditions of the country of interest, instead of the frequetnly used ratio of housing affordability (0.30).

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APPENDICES

A. The Measurement of Association in HHB

1	Wealth groups	Position in occupation	Housing and transport expenditure level	Existence of real estate income	Housing price to income ratio	Existence of any kind of savings	Housing price per m^2	Construction year of housing	Housing size groups	Hh head based cohort groups	Hh head working status	Retirement of Hh head	Income quintiles	Risk of poverty	Car ownership
Wealth groups	1	.26 **	.12**	.16**	.25**	.15**	.53**	.16**	.20**	.06**	.20**	.05**	.29**	.28**	.17**
Position in occupation	.26**	1	.08**	.05**	.07**	.18**	.26**	.18**	.17**	.24**	.26**	.17**	.38**	.15**	.21**
Housing and transport expenditure level	.12**	.08**	1	.03*	.39**	.22**	.16**	.02	.01	.08**	.09**	.01	.30**	.16**	.00
Existence of real estate income	.16**	.05**	.03*	1	.04**	.11**	.16**	.03	.08**	.13**	.06**	.15**	.22	.14**	.12**
Housing price to income ratio	.25**	.07**	.39**	.04**	1	.20**	.28**	.12**	.10**	.10**	.13**	.13**	.33**	.25**	.09**
Existence of any kind of savings	.15**	.18**	.22**	.11**	.20**	1	.14**	.08**	.11**	.05**	.12**	.03*	.42**	.27**	.15**
Housing price per m^2	.53**	.26**	.16**	.16**	.28**	.14**	1	.14**	.04*	.04**	.18**	.08**	.23**	.32**	.15**
Construction year of housing	.16**	.18**	.02	.03	.12**	.08**	.14**	1	.27**	.22**	.11**	.17**	.09**	.07**	.15**
Housing size groups	.20**	.17**	.01	.08**	.10**	.11**	.04*	.27**	1	.11**	.06**	.00	.18**	.10**	.16**
Hh head based cohort groups	.06**	.24**	.08**	.13**	.10**	.05**	.04**	.22**	.11**	1	.21**	.59**	.08**	.11**	.19**
Hh head working status	.20**	.26**	.09**	.06**	.13**	.12**	.18**	.11**	.06**	.21**	1	.33**	.11**	.16**	.08**
Retirement of Hh head	.05**	.17**	.01	.15**	.13**	.03*	.08**	.17**	.00	.59**	.33**	1	.24**	.23**	.06**
Income quintiles	.29**	.38**	.30**	.22	.33**	.42**	.23**	.09**	.18**	.08**	.11**	.24**	1	.97**	.33**
Risk of poverty	.28**	.15**	.16**	.14**	.25**	.27**	.32**	.07**	.10**	.11**	.16**	.23**	.97**	1	.22**
Car ownership	.17**	.21**	.00	.12**	.09**	.15**	.15**	.15**	.16**	.19**	.08**	.06**	.33**	.22**	1
White cells: the correlation of Nominal VS Nominal Variables (Cramer's V (0-1)), Light blue cells: Nominal VS Continous Variables (Eta (0-1)), Dark blue cells: Continous VS Continous Variables (Pearson (-1-+1))															

2	Existence of real estate investment	Any kind of traditional investment	Investments in own business	Constructed after 2002	Started to reside before 2002	Existence of heating system	Existence of garden	Existence of children play ground	Number of breadwinner	Access to all services	Housing price level	Existence of secondary housing	Hh type	Housing typology
Wealth groups	.13**	.16**	.13**	.16**	.22**	.57**	.14**	.12**	.06**	.88**	.86**	.14**	.17**	.43**
Position in occupation	.12**	.14**	.00	.16**	.20**	.27**	.00	.15**	.09**	.15**	.27**	.04**	.18**	.31**
Housing and transport expenditure level	.10**	.09**	.19**	.01	.02*	.13**	.05**	.04**	.29**	.09**	.10**	.01	.24**	.14**
Existence of real estate income	.04**	.12**	.01	.01	.02*	.12**	.00	.01	.05**	.10**	.15**	.15**	.08**	.15**
Housing price to income ratio	.05**	.07**	.26**	.15**	.19**	.23**	.08**	.11**	.18**	.15**	.40**	.04*	.09**	.19**
Existence of any kind of savings	.37**	.50	.37**	.07**	.07**	.17**	.03*	.04**	.16**	.08**	.16**	.08**	.04*	.17**
Housing price per m^2	.13**	.16**	.16**	.15**	.22**	.57**	.11**	.13**	.07**	.39**	.78**	.14**	.10**	.31**
Construction year of housing	.17**	.03*	.04*	1	.69**	.32**	.04*	.17**	.04*	.13**	.26**	.04*	.16**	.24**
Housing size groups	.06**	.07**	.04*	.24**	.19**	.21**	.03*	.13**	.05**	.10**	.23**	.03*	.15**	.22**
Hh head based cohort groups	.16**	.05**	.04*	.33**	.42**	.13**	.05*	.11**	.26**	.05**	.08**	.12**	.26**	.10**
Hh head working status	.14**	.08**	.35**	.16**	.30**	.33**	.11**	.06**	.12**	.24**	.22**	.09**	.15**	.23**
Retirement of Hh head	.05**	.06**	.02*	.17**	.23**	.03*	.05*	.07**	.12**	.04**	.04**	.14**	.40**	.08**
Income quintiles	.19**	.27**	.15**	.10**	.10**	.39**	.03	.16**	.18**	.24**	.41**	.19**	.08**	.19**
Risk of poverty	.12**	.14**	.10**	.02	.02	.30**	.01	.06**	.10**	.20**	.26**	.11**	.13**	.28**
Car ownership	.07**	.09**	.07**	.10**	.11**	.20**	.02*	.04**	.17**	.10**	.17**	.12**	.26**	.17**

White cells: the correlation of Nominal VS Nominal Variables (Cramer's V (0-1)), Light blue cells: Nominal VS Continous Variables (Eta (0-1)), Dark blue cells: Continous VS Continous Variables (Pearson (-1-+1))

3	Housing price quintiles	Housing price per m^2 quintiles	Hh size based groups	Imputed rent quintiles	Housing size	Imputed rent	Access to daily shopping	Access to bank	Access to post office	Access to public transport	Access to health facilities	Access to education	Housing price	Equalized Hh income	Monthly exp.	Age of Hh head	Housing and transport exp. to income ratio
Wealth groups	.63**	.53*	.19**	.55**	.23**	.59**	.67**	.74**	.76**	.70**	.70**	.61**	.55**	.30**	.31**	.07**	.13**
Position in occupation	.32**	.26**	.16**	.33**	.20**	.34**	.13**	.16**	.15**	.14**	.14**	.13**	.31**	.37**	.35**	.24**	.06**
Housing and transport expenditure level	.15**	.16**	.23**	.22**	.01	.17**	.08**	.10**	.10**	.10**	.09**	.07**	.10**	.23**	.05**	.06**	.60**
Existence of real estate income	.19**	.16**	.09**	.16**	.13**	.19**	.11**	.11**	.10**	.11**	.10**	.08**	.22**	.22**	.17**	.12**	.01
Housing price to income ratio	.34**	.28**	.09**	.24**	.11**	.24**	.12**	.16**	.16**	.16**	.15**	.14**	.24**	.20**	.05**	.11**	.40**
Existence of any kind of savings	.18**	.14**	.08**	.16**	.11**	.16**	.10**	.08**	.08**	.08**	.07**	.04**	.16**	.31**	.16**	.04**	.20**
Housing price per m^2	.60**	1	.14**	.44**	.04*	.68**	.40**	.41**	.41**	.42**	.39**	.31**	.67**	.34**	.33**	.06**	.17**
Construction year of housing	.22**	.14**	.14**	.20**	.28**	.23**	.10**	.12**	.13**	.13**	.15**	.12**	.20**	.11**	.18**	.37**	.02
Housing size groups	.30**	.04*	.15**	.23**	.69**	.21**	.05**	.11**	.10**	.09**	.09**	.09**	.24**	.16**	.19**	.10**	.02
Hh head based cohort groups	.06**	.04**	.30**	.08**	.11**	.08**	.04*	.04*	.05**	.05**	.06**	.08**	.04*	.08**	.18**	.96**	.08**
Hh head working status	.18**	.18**	.12**	.23**	.07**	.23**	.21**	.24**	.23**	.23**	.24**	.21**	.16**	.10**	.10**	.37**	.09**
Retirement of Hh head	.09**	.08**	.35**	.06**	.00	.04**	.07**	.04**	.05**	.05**	.04*	.02*	.07**	.11**	.01	.53**	.02*
Income quintiles	.25**	.23**	.19**	.23**	.21**	.44**	.27**	.25**	.25**	.25**	.23**	.18**	.43**	.66**	.45**	.11**	.29**
Risk of poverty	.35**	.32**	.28**	.31**	.10**	.23**	.23**	.20**	.21**	.22**	.20**	.14**	.22**	.31**	.23**	.08**	.22**
Car ownership	.22**	.15**	.24**	.19**	.20**	.16**	.09**	.10**	.09**	.09**	.09**	.06**	.17**	.23**	.34**	.17**	.03*

White cells: the correlation of Nominal VS Nominal Variables (Cramer's V (0-1)), Light blue cells: Nominal VS Continous Variables (Eta (0-1)), Dark blue cells: Continous VS Continous Variables (Pearson (-1-+1))

4	Existence of real estate investment	Any kind of traditional investment	Investments in own business	Constructed after 2002	Started to reside before 2002	Existence of heating system	Existence of garden	Existence of children play ground	Number of bread winner	Access to all services	Housing price level	Existence of secondary housing	Hh type	Housing typology
Existence of real estate investment	1	.02*	.02	.16**	.17**	.17**	.00	.05**	.09**	.11**	.10**	.03*	.11**	.22**
Any kind of traditional investment	.02*	1	.06**	.01	.03*	.14**	.00	.06**	.01	.09**	.16**	.07**	.05**	.15**
Investments in own business	.02	.06**	1	.04**	.09**	.12**	.07**	.06**	.21**	.11**	.09**	.02*	.11**	.17**
Constructed after 2002	.16**	.01	.04**	1	.67**	.24**	.02*	.17**	.02*	.04**	.21**	.02	.23**	.30**
Started to reside before 2002	.17**	.03*	.09**	.67**	1	.30**	.05**	.14**	.02	.13**	.22**	.02	.31**	.38**
Existence of heating system	.17**	.14**	.12**	.24**	.30**	1	.11**	.11**	.05**	.41**	.52**	.07**	.19**	.72**
Existence of garden	.00	.00	.07**	.02*	.05**	.11**	1	.24**	.03*	.15**	.06**	.03*	.07*	.26**
Existence of children play ground	.05**	.06**	.06**	.17**	.14**	.11**	.24**	1	.07	.01	.16**	.00	.09**	.24**
Number of breadwinner	.09**	.01	.21**	.02*	.02	.05**	.03*	.07	1	.06**	.02*	.00	.35**	.08**
Access to all services	.10**	.16**	.09**	.21**	.22**	.52**	.06**	.16**	.02*	1	.31**	.09**	.13**	.47**
Housing price level	.11**	.09**	.11**	.04**	.13**	.41**	.15**	.01	.06**	.31**	1	.13**	.14**	.52**
Existence of secondary housing	.03*	.07**	.02*	.02	.02	.07**	.03*	.00	.00	.09**	.13**	1	.08**	.10**
Hh type	.11**	.05**	.11**	.23**	.31**	.19**	.07**	.09**	.35**	.13**	.14**	.08**	1	.11**
Housing typology	.22**	.15**	.17**	.30**	.38**	.72**	.26**	.24**	.08**	.47**	.52**	.10**	.11**	1

White cells: the correlation of Nominal VS Nominal Variables (Cramer's V (0-1)), Light blue cells: Nominal VS Continous Variables (Eta (0-1)), Dark blue cells: Continous VS Continous Variables (Pearson (-1-+1))

5	Housing price quintiles	Housing price per m^2 quintiles	Hh size based groups	Imputed rent quintiles	Housing size	Imputed rent	Access to daily shopping	Access to bank	Access to post office	Access to public transport	Access to health facilities	Access to education	Housing price	Equalized Hh income	Monthly exp.	Age of Hh head	Housing and transport exp. to income ratio
Existence of real estate investment	.16**	.13**	.10**	.16**	.06**	.10**	.11**	.11**	.11**	.12**	.11**	.09**	.07**	.14**	.07**	.16**	.09**
Any kind of traditional investment	.19**	.16**	.07**	.17**	.08**	.19**	.09**	.11**	.10**	.09*	.08**	.06**	.19**	.25**	.11**	.02	.09**
Investments in own business	.14**	.16**	.09**	.17**	.04**	.10**	.10**	.12**	.12**	.13**	.10**	.10**	.06**	.14**	.03*	.01	.17**
Constructed after 2002	.26**	.15**	.20**	.24**	.25**	.17**	.02	.04**	.03*	.05**	.05**	.04**	.16**	.09**	.14**	.33**	.00
Started to reside before 2002	.30**	.22**	.26**	.33**	.19**	.24**	.09**	.13**	.12**	.13**	.13**	.11**	.19**	.09**	.16**	.43**	.02
Existence of heating system	.65**	.57**	.21**	.71**	.21**	.54**	.38**	.41**	.41**	.41**	.39**	.34**	.44**	.28**	.30**	.13**	.13**
Existence of garden	.09**	.11**	.06**	.16**	.06**	.06**	.12**	.18**	.16**	.13**	.15**	.16**	.00	.03*	.01	.04**	.05**
Existence of children play ground	.18**	.13**	.10**	.17**	.18**	.23**	.06**	.01	.03*	.04**	.05**	.03*	.21**	.15**	.14**	.11**	.00
Number of breadwinner	.04*	.07**	.35**	.07**	.05**	.03*	.04**	.06**	.06**	.05**	.05**	.04**	.01	.11**	.17**	.18**	.26**
Access to all services	.42**	.39**	.12**	.48**	.09**	.32**	.73**	.80**	.83**	.74**	.76**	.67**	.25**	.15**	.16**	.04**	.09**
Housing price level	.94**	.78**	.18**	.73**	.29**	.62**	.29**	.33**	.31**	.30**	.29**	.25**	.62**	.32**	.33**	.07**	.12**
Existence of secondary housing	.15**	.14**	.08**	.13**	.07**	.14**	.07**	.10**	.09**	.07**	.06**	.05**	.18**	.19**	.12**	.10**	.00
Hh type	.10**	.10**	.82**	.11**	.17**	.16**	.13**	.12**	.13**	.12**	.12**	.09**	.12**	.10**	.22**	.50**	.26**
Housing typology	.35**	.31**	.12**	.40**	.18**	.55**	.44**	.48**	.47**	.47**	.45**	.38**	.41**	.26**	.27**	.19**	.13**

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6	Housing price quintiles	Housing price per m^2 quintiles	Hh size based groups	Imputed rent quintiles	Housing size	Imputed rent	Access to daily shopping	Access to bank	Access to post office	Access to public transport	Access to health facilities	Access to education	Housing price	Equalized Hh income	Monthly exp.	Age of Hh head	Housing and transport exp. to income ratio
Housing price quintiles	1	.60**	.13**	.50**	.34**	.72**	.41**	.45**	.44**	.45**	.42**	.35**	.72**	.38**	.39**	.12**	.16**
Housing price per m^2 quintiles	.60**	1	.14**	.44**	.04*	.68**	.40**	.41**	.41**	.42**	.39**	.31**	.67**	.34**	.33**	.06**	.17**
Hh size based groups	.13**	.14**	1	.13**	.17**	.19**	.16**	.13**	.14**	.13**	.13**	.08**	.16**	.19**	.22**	.49**	.26**
Imputed rent quintiles	.50**	.44**	.13**	1	.27**	.81**	.46**	.51**	.50**	.49**	.48**	.40**	.65**	.36**	.38**	.15**	.22**
Housing size	.34**	.04*	.17**	.27**	1	.32**	-.03**	-.10**	-.09**	-.09**	-.09**	-.09**	.41**	-.10**	.30**	-.10**	.00
Imputed rent	.72**	.68**	.19**	.81**	.32**	1	-.31**	-.35**	-.33**	-.31**	-.31**	-.27**	.87**	.47**	.47**	-.07**	.21**
Access to daily shopping	.41**	.40**	.16**	.46**	-.03*	-.31**	1	.73**	.78**	.79**	.78**	.71**	-.23**	-.17**	-.15**	.02	-.09**
Access to bank	.45**	.41**	.13**	.51**	-.10**	-.35**	.73**	1	.90**	.74**	.76**	.67**	-.27**	-.17**	-.16**	.03*	-.09**
Access to post office	.44**	.41**	.14**	.50**	-.09**	-.33**	.78**	.90**	1	.80**	.80**	.71**	-.25**	-.15**	-.16**	.04*	-.10**
Access to public transport	.45**	.42**	.13**	.49**	-.09**	-.31**	.79**	.74**	.80**	1	.81**	.73**	-.24**	-.14**	-.16**	.03*	-.09**
Access to health facilities	.42**	.39**	.13**	.48**	-.09**	-.31**	.78**	.76**	.80**	.81**	1	.78**	-.23**	-.14**	-.14**	.05**	-.09**
Access to education	.35**	.31**	.08**	.40**	-.09**	-.27**	.71**	.67**	.71**	.73**	.78**	1	-.21**	-.12**	-.13**	.06**	-.07**
Housing price	.72**	.67**	.16**	.65**	.41**	.87**	-.23**	-.27**	-.25**	-.24**	-.23**	-.21**	1	.55**	.47**	-.02	.14**
Equalized Hh income	.38**	.34**	.19**	.36**	-.10**	.47**	-.17**	-.17**	-.15**	-.14**	-.14**	-.12**	.55**	1	.48**	-.01	-.22**
Monthly exp.	.39**	.33**	.22**	.38**	.30**	.47**	-.15**	-.16**	-.16**	-.16**	-.14**	-.13**	.47**	.48**	1	-.16**	-.04**
Age of Hh head	.12**	.06**	.49**	.15**	-.10**	-.07**	.02	.03*	.04*	.03*	.05**	.06**	-.02	-.01	-.16**	1	.07**
Housing and transport exp. to income ratio	.16**	.17**	.26**	.22**	.00	.21**	-.09**	-.09**	-.10**	-.09**	-.09**	-.07**	.14**	-.22**	-.04**	.07**	1

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B. The Measurement of Association in SILC

1	Housing security groups	NUTS1	NUTS2	Household type	Housing typology	Number of room	Existence of heating system	Car ownership	Leaking roof, damp wall, rotten window frame	Heating problem due to isolation	Dark room and insufficient daylight
Housing security groups	1	.12***	.18***	.07***	.12***	.11***	.14***	.16***	.51***	.56***	.30***
NUTS1	.12***	1	1	.12***	.16***	.09***	.22***	.22***	.20***	.21***	.13***
NUTS2	.18***	1	1	.14***	.20***	.11***	.27***	.24***	.24***	.26***	.19***
Household type	.07***	.12***	.14***	1	.10***	.10***	.09***	.30***	.12***	.12***	.04***
Housing typology	.12***	.16***	.20***	.10***	1	.15***	.33***	.14***	.36***	.36***	.06***
Number of room	.11***	.09***	.11***	.10***	.15***	1	.16***	.17***	.26***	.19***	.10***
Existence of heating system	.14***	.22***	.27***	.09***	.33***	.16***	1	.17***	.38***	.39***	.08***
Car ownership	.16***	.22***	.24***	.30***	.14***	.17***	.17***	1	.21***	.20***	.09***
Leaking roof, damp wall, rotten window frame	.51***	.20***	.24***	.12***	.36***	.26***	.38***	.21***	1	.51***	.18***
Heating problem due to isolation	.56***	.21***	.26***	.12***	.36***	.19***	.39***	.20***	.51***	1	.18***
Dark room and insufficient daylight	.30***	.13***	.19***	.04***	.06***	.10***	.08***	.09***	.18***	.18***	1
Noise from street and neighbors	.27***	.15***	.19***	.07***	.17***	.04***	.13***	.06***	.03***	.04***	.10***
Insufficiency in dwelling size	.31***	.21***	.23***	.28***	.14***	.26***	.16***	.17***	.21***	.18***	.12***
Air, environmental pollution and any other problems related with traffic and industry	.37***	.12***	.22***	.10***	.11***	.04***	.06***	.08***	.08***	.08***	.09***
Confrontation with crime and violence	.19***	.19***	.23***	.06***	.11***	.04**	.09***	.05***	.04***	.04***	.07***
Unpaid status of housing cost	.09***	.08***	.10***	.11***	.19***	.07**	.16***	.08***	.16***	.17***	.04***
Unpaid status of bills	.14***	.13***	.19***	.12***	.08***	.08***	.10***	.16***	.22***	.20***	.11***
Unpaid status of credit cards and debts	.11***	.13***	.18***	.16***	.14***	.11***	.14***	.20***	.19***	.17***	.09***
Subsistence with current income	.24***	.10***	.19***	.04***	.06***	.09***	.08***	.18***	.19***	.18***	.07***
Housing cost burden	.71***	.14***	.20***	.06***	.02***	.06***	.04***	.15***	.12***	.11***	.07***
Non-housing cost and debt burden	.22***	.11***	.17***	.14***	.12***	.10***	.12***	.18***	.12***	.11***	.04***
Number of breadwinner	.12***	.08***	.12***	.36***	.08***	.10***	.05***	.16***	0.01	.01*	.01*
White cells: the correlation of Nominal VS Nominal Variables (Cramer's V (0-1)), Light blue cells: Nominal VS Continous Variables (Eta (0-1)), Dark blue cells: Continous VS Continous Variables (Pearson (-1-+1))											

2	Noise from street and neighbors	Insufficiency in dwelling size	Air, environmental pollution and any other problems related with traffic and industry	Confrontation with crime and violence	Unpaid status of housing cost	Unpaid status of bills	Unpaid status of credit cards and debts	Subsistence with current income	Housing cost burden	Non-housing cost and debt burden	Number of breadwinner
Housing security groups	.27***	.31***	.37***	.19***	.09***	.14***	.11***	.24***	.71***	.22***	.12***
NUTS1	.15***	.21***	.12***	.19***	.08***	.13***	.13***	.10***	.14***	.11***	.08***
NUTS2	.19***	.23***	.22***	.23***	.10***	.19***	.18***	.19***	.20***	.17***	.12***
Household type	.07***	.28***	.10***	.06***	.11***	.12***	.16***	.04***	.06***	.14***	.36***
Housing typology	.17***	.14***	.11***	.11***	.19***	.08***	.14***	.06***	.02***	.12***	.08***
Number of room	.04***	.26***	.04***	.04**	.07**	.08***	.11***	.09***	.06***	.10***	.10***
Existence of heating system	.13***	.16***	.06***	.09***	.16***	.10***	.14***	.08***	.04***	.12***	.05***
Car ownership	.06***	.17***	.08***	.05***	.08***	.16***	.20***	.18***	.15***	.18***	.16***
Leaking roof, damp wall, rotten window frame	.03***	.21***	.08***	.04***	.16***	.22***	.19***	.19***	.12***	.12***	0.01
Heating problem due to isolation	.04***	.18***	.08***	.04***	.17***	.20***	.17***	.18***	.11***	.11***	.01*
Dark room and insufficient daylight	.10***	.12***	.09***	.07***	.04***	.11***	.09***	.07***	.07***	.04***	.01*
Noise from street and neighbors	1	.03***	.28***	.26***	.04***	.05***	.07***	.03***	.03***	.07***	.01***
Insufficiency in dwelling size	.03***	1	.05***	.05***	.04***	.18***	.14***	.08***	.07***	.04***	.10***
Air, environmental pollution and any other problems related with traffic and industry	.28***	.05***	1	.25***	.04***	.09***	.08***	.08***	.06***	.07***	0
Confrontation with crime and violence	.26***	.05***	.25***	1	.03**	.07***	.08***	.04***	.03**	.06***	0
Unpaid status of housing cost	.04***	.04***	.04***	.03**	1	.10***	.18***	.04***	.08***	.13***	.09***
Unpaid status of bills	.05***	.18***	.09***	.07***	.10***	1	.38***	.15***	.16***	.12***	.06***
Unpaid status of credit cards and debts	.07***	.14***	.08***	.08***	.18***	.38***	1	.13***	.12***	.59***	.14***
Subsistence with current income	.03***	.08***	.08***	.04***	.04***	.15***	.13***	1	.33***	.18***	.15***
Housing cost burden	.03***	.07***	.06***	.03**	.08***	.16***	.12***	.33***	1	.37***	.11***
Non-housing cost and debt burden	.07***	.04***	.07***	.06***	.13***	.12***	.59***	.18***	.37***	1	.15***
Number of breadwinner	.01***	.10***	0	0	.09***	.06***	.14***	.15***	.11***	.15***	1

White cells: the correlation of Nominal VS Nominal Variables (Cramer’s V (0-1)), Light blue cells: Nominal VS Continous Variables (Eta (0-1)), Dark blue cells: Continous VS Continous Variables (Pearson (-1-+1))

C. The Measurement of Association in Ankara Survey

1	Promises achievement status	District	Neighborhood	Number of room	Years of residing	Occupational status of Hh head	Hh size	Income level assessment	Existence of financial calcu.	Housing satisfaction level
Promises achievement status	1	.23***	.39*	0.13	0.29	0.09	0.1	.16**	.17**	.29***
District	.23***	1	1	.22***	.35***	.18***	.17**	0.13	0.08	.19***
Neighborhood	.39*	1	1	.39**	.41***	0.37	0.33	0.3	0.37	0.35
Number of room	0.13	.22***	.39**	1	0.32	.15*	0.13	.26***	0.08	.17**
Years of residing	0.29	.35***	.41***	0.32	1	.34*	.35***	0.3	0.31	0.28
Occupational status of Hh head	0.09	.18***	0.37	.15*	.34*	1	.18***	.15*	0.09	0.1
Hh size	0.1	.17**	0.33	0.13	.35***	.18***	1	.15*	0.15	0.11
Income level assessment	.16**	0.13	0.3	.26***	0.3	.15*	.15*	1	0.1	.21***
Existence of financial calcu.	.17**	0.08	0.37	0.08	0.31	0.09	0.15	0.1	1	.23***
Housing satisfaction level	.29***	.19***	0.35	.17**	0.28	0.1	0.11	.21***	.23***	1
White cells: the correlation of Nominal VS Nominal Variables (Cramer's V (0-1)), Light blue cells: Nominal VS Continous Variables (Eta (0-1)), Dark blue cells: Continous VS Continous Variables (Pearson (-1-+1))										

2	Promises achievement status	District	Neighborhood	Number of room	Years of residing	Occupational status of Hh head	Hh size	Income level assessment	Existence of financial calcu.	Housing satisfaction level
Housing price level	.33***	.21***	.38*	.23***	0.29	0.13	0.14	.28***	0.15	.28***
Satisfaction level on location of housing	.48***	.21***	.43***	0.09	0.27	0.08	0.13	0.12	0.15	.17***
Satisfaction level on housing environment	.53***	.25***	.39**	.17**	0.32	0.1	0.09	.21***	.17***	.33***
The burden level of housing exp.	.26***	.16*	0.36	0.12	0.29	.15*	.15*	0.11	0.05	.13*
Housing size	0.44	0.38	0.38	0.81	0.57	0.43	0.46	0.54	0.51	0.48
Age of building	0.32	0.4	0.47	0.42	0.77	0.35	0.41	0.31	0.43	0.35
Hh head age	0.35	0.41	0.46	0.38	0.64	0.55	0.58	0.34	0.41	0.37
Monthly income	0.4	0.41	0.37	0.5	0.45	0.38	0.41	0.57	0.4	0.45
Equalized Hh income	0.56	0.57	0.49	0.61	0.66	0.54	0.91	0.69	0.57	0.57
Housing price	0.46	0.44	0.42	0.68	0.47	0.43	0.36	0.54	0.43	0.58
Housing rent	0.44	0.37	0.4	0.64	0.43	0.35	0.27	0.49	0.38	0.55

White cells: the correlation of Nominal VS Nominal Variables (Cramer's V (0-1)), Light blue cells: Nominal VS Continous Variables (Eta (0-1)), Dark blue cells: Continous VS Continous Variables (Pearson (-1-+1))

3	Housing price level	Satisfaction level on location of housing	Satisfaction level on housing environment	The burden level of housing exp.	Housing size	Age of building	Hh head age	Monthly income	Equalized Hh income	Housing price	Housing rent
Housing price level	1	.15**	.27***	.20***	0.55	0.37	0.37	0.45	0.6	0.67	0.63
Satisfaction level on location of housing	.15**	1	.34***	0.12	0.4	0.35	0.37	0.33	0.52	0.39	0.38
Satisfaction level on housing environment	.27***	.34***	1	.14*	0.45	0.26	0.38	0.44	0.6	0.52	0.54
The burden level of housing exp.	.20***	0.12	.14*	1	0.39	0.37	0.37	0.35	0.54	0.38	0.36
Housing size	0.55	0.4	0.45	0.39	1	-.33***	-.11*	.44***	.40***	.69***	.71***
Age of building	0.37	0.35	0.26	0.37	-.33***	1	.37***	-.18***	-.15**	-.30***	-.26***
Hh head age	0.37	0.37	0.38	0.37	-.11*	.37***	1	-0.06	-0.03	-0.06	-0.05
Monthly income	0.45	0.33	0.44	0.35	.44***	-.18***	-0.06	1	.97***	.57***	.48***
Equalized Hh income	0.6	0.52	0.6	0.54	.40***	-.15**	-0.03	.97***	1	.57***	.48***
Housing price	0.67	0.39	0.52	0.38	.69***	-.30***	-0.06	.57***	.57***	1	.81***
Housing rent	0.63	0.38	0.54	0.36	.71***	-.26***	-0.05	.48***	.48***	.81***	1

White cells: the correlation of Nominal VS Nominal Variables (Cramer's V (0-1)), Light blue cells: Nominal VS Continous Variables (Eta (0-1)), Dark blue cells: Continous VS Continous Variables (Pearson (-1-+1))

D. Survey Questionnaire

Bu çalışma Orta Doğu Teknik Üniversitesi akademik personeli Doç. Dr. Özgül Burcu Özdemir Sarı danışmanlığında, Araştırma Görevlisi Esma Aksoy Khurami'nin TÜBİTAK 120K084 numaralı projesi kapsamında "Türkiye'de ev sahipliğinin vaatleri" başlıklı Doktora tezinde kullanılmak üzere yürütülmektedir.

Bu görüşmeye katılmanızdan dolayı teşekkür eder, kimlik bilgilerinizin talep edilmeyeceğini belirtiriz. Ayrıca kişisel bilgilerinizin hiçbir şekilde kimse ile paylaşılmacağını ve sadece bilimsel amaçlı çalışmalarda anonim olarak kullanılacağını garanti ederiz.

Konut ve Hanehalkı Özellikleri

1. Görüşmeye katılan kişinin oturduğu **Mahalle**_____**İlçe**_____
2. Oturduğunuz ev kaç metrekare?_____
3. Oturduğunuz ev kaç yaşında?_____
4. Oturduğunuz evde salon dahil (mutfak, banyo, tuvalet hariç) kaç oda var?_____
5. Kaç yıldır aynı evde oturuyorsunuz?_____
6. Oturduğunuz evde hangi koşulla bulunuyorsunuz?
   - ☐ Kendi evim
   - ☐ Kira ödüyorum, yakınımın evi
   - ☐ Kira ödüyorum, başkasının evi
   - ☐ Kira ödemiyorum, yakınımın evi
7. Hanehalkı reisinin yaşı:_____
8. Hanehalkı reisinin iş durumu
   - ☐ Memur
   - ☐ Ücretli çalışan
   - ☐ Diğer (belirtiniz)_____
   - ☐ İşçi
   - ☐ Emekli
   - ☐ Serbest meslek
9. Hanehalkı (yani dairenizde devamlı oturanlar) kaç kişidir?_____
10. Ailenizin yaklaşık aylık toplam geliri ne kadardır?_____
11. Ailenizin aylık toplam gelirine göre kendinizi aşağıdaki hangi grupta görüyorsunuz?

Yoksul aile ( )	Dar gelirli aile ( )	Orta gelirli aile ( )	Yüksek gelirli aile ( )

12. Oturduğunuz ev bugün satılacak olsa kaç TL'ye satılırdı? _____
13. Oturduğunuz ev bugün kiraya verilse kaç TL'ye kiraya verilirdi? _____
14. Ev sahibi iseniz, bu evi satın alırken elde edeceğiniz avantajları (maddi olarak) hesapladınız mı?
    - ☐ Evet
    - ☐ Hayır
15. Oturduğunuz evin olumlu ve olumsuz yanlarını göz önünde bulundurarak tatmin düzeyinizi nasıl tanımlarsınız?

Çok kötü (1)	Kötü (2)	Orta (3)	İyi (4)	Çok iyi (5)

16. Hem kiracı hem de ev sahipleri için, aşağıda belirtilen sebeplerden hangileri ev sahibi olma isteğinizi açıklamaktadır? Lütfen uygun bulduğunuz 3 seçeneği işaretleyiniz.

- ☐ Kira yerine ev borcumu ödeyerek birikim yapmak (2. ya da 3. konutu alarak)
- ☐ Kendimi güvence altına almak (ev sahibinin evden çıkarma ihtimaline karşı)
- ☐ Çocuklarıma bırakabilecek bir mirasım olması için
- ☐ Kirada oturduğum durumda aylık masrafım daha fazla olduğu için
- ☐ Kiralık bir evden daha iyi konut koşullarında yaşamak
- ☐ İhtiyaç durumunda satarak elde edilen parayı kullanabilmek (düğün, başka bir ev vb. için)
- ☐ Kiraya verilen paranın boşa gittiğini düşündüğüm için
- ☐ Diğer……

17. Ev sahibi hanehalkları için, ev sahibi olmanın hangi olumsuz yanlarını deneyimlediniz? Lütfen uygun bulduğunuz 3 seçeneği işaretleyiniz.

- ☐ Aylık ev borcumu ödemenin yükü
- ☐ Evin konumundan kaynaklı güvenlik, gürültü vb. sorunlarla karşılaşmak
- ☐ Evin tamir, bakım ve onarımından sorumlu olmak
- ☐ Diğer……
- ☐ Evin konumundan kaynaklı ulaşım masrafı ve süresinin çok olması
- ☐ Evin fiyatının düşmesi
- ☐ Evin içinde yaşayan kişi sayısına küçük ya da büyük gelmesi

18. Ev sahibi hanehalkları için, sahip olduğunuz evin fiyat düzeyi nedir?

Çok düşük (1)	Düşük (2)	Orta (3)	Yüksek (4)	Çok yüksek (5)

19. Ev sahibi hanehalkları için, sahip olduğunuz evin yerinden kaynaklı (okula, alışveriş yerlerine, kamu hizmetlerine ulaşımda) memnuniyet düzeyiniz nedir?

Çok kötü (1)	Kötü (2)	Orta (3)	İyi (4)	Çok iyi (5)

20. Ev sahibi hanehalkları için, sahip olduğunuz konut ve konut çevresinde yaşamaktan memnuniyet düzeyiniz nedir?

Çok kötü (1)	Kötü (2)	Orta (3)	İyi (4)	Çok iyi (5)

21. Ev sahibi hanehalkları için, sahip olduğunuz eve ilişkin harcamaların bütçenize getirdiği yük ne düzeydedir?

Çok az (1)	Az (2)	Orta (3)	Fazla (4)	Çok fazla (5)

Katılımınız için çok teşekkür ederiz…

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PUBLICATIONS

1.Aksoy Khurami, E., Özdemir Sarı, Ö.B., 2020," Utilization of Vacant Housing Units in Social Housing Provision: An Evaluation in the Case of Cevizlidere Neighbourhood" (in Turkish), İdealkent, Vol:11, No 3, p. 1207-1230.

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