



A Cohort Analysis on Falling Homeownership and Rising Tenancy for Younger Generations in Türkiye

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Abstract: *In recent years, there has been a noticeable shift among younger generations in Europe, characterized by a reduced propensity for homeownership and a growing preference for renting residential properties. Younger generations in Türkiye have also experienced a similar trend in homeownership and tenancy. This study aims to decompose the effects of age, period, and cohort (generation) on homeownership and tenancy in Türkiye. In addition, it seeks to uncover factors that may be related to the decline in homeownership and the rise in tenancy among younger cohorts. In this regard, we applied a decomposition analysis on homeownership and tenancy using an age-period-cohort (APC) model for the period of 2006-2020. The findings indicated an inverted U-shaped relationship between homeownership and age, while a U-shaped relationship exists between tenancy and age. The period's effect on homeownership was positive between 2012 and 2016, while its effect on tenancy was negative throughout the entire period. Finally, we found that younger generations had a lower homeownership rate and a higher tenancy rate than older generations.*

Keywords: Age-Homeownership Profile, Cohort Analysis, Housing Market, Tenants, Younger Generation

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1. Introduction

In recent years, the extent of the change in homeownership rates has varied substantially among age groups. Most studies indicated that the homeownership rate fell significantly for younger individuals, decreased or nearly remained stable for over middle-aged individuals, and increased for older individuals over time (Andrews & Sánchez, 2011; Blanden et al., 2023; Fisher & Gervais, 2011; Myers et al., 2020). Saunders (2021) argued that the decline in homeownership rates among young individuals in Britain is not a result of a lack of desire for homeownership, but rather due to boosting house prices, which make it difficult for them to afford a home. Laeven and Popov (2017) asserted that younger households were markedly less likely to purchase residential property in regions where house price growth was most pronounced between 2001 and 2006. Atalay et al. (2024) found that homeownership declined for younger individuals (age 30) in Australia as housing affordability, measured as the ratio of house price to income, fell. Doroszczyk (2024) also stated that house prices have increased in almost all OECD countries over the last decade and young people were significantly more concerned about homeownership than their parents.

In addition to the rise in housing prices, additional factors have also played a role in affecting the fall in the homeownership rate among young individuals. Fisher and Gervais (2011) showed that the decrease in

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marriage rates and the increase in earnings risk caused the fall of homeownership among young household heads, despite the legal and institutional arrangements that enabled ownership in the US between 1980 and 2000. Arundel and Doling (2017) stated that the decline in homeownership among young individuals in Europe has been attributed to changes in the labor market, which have adversely affected this demographic. The decline in employment participation among young adults, the reduction in the proportion of those in well-paid and permanent jobs, and the increase in income poverty have all contributed to the lack of the necessary conditions for obtaining mortgage loans and owning a home. Paz-Pardo (2022) examined the contributions of factors such as labor market income dynamics, asset returns, the business cycle, and borrowing conditions on the fall of homeownership for younger generations in the US. The author found that the decline in the homeownership of the 1960s and 1980s generation was largely explained by changes in labor market income dynamics, which are represented by earnings inequality and risk. Mayer (2017) also claimed that the notable rise in homeownership among older people was mainly attributed to age cohorts whose income and wealth experienced substantial growth throughout their working years.

After the global financial crisis in 2007, the lending criteria for mortgages have become more stringent, resulting in a more challenging process for entering the housing market due to the significant down payment now required for young individuals who are prepared to become homeowners (McKee, 2012). Ma and Zubary (2021) focused on the impact of loan-to-value (LTV), debt-to-income (DTI) and transaction costs on ownership by age group. The authors found that a relaxation of the DTI constraint had the potential to exert a significant influence on ownership, particularly among younger households, given that this credit constraint is more likely to be binding for them. Nevertheless, alterations to the LTV ratio had a comparatively limited impact on ownership. In this context, it revealed that DTI credit restrictions after the Great Recession may explain the fall in the homeownership of young individuals. In addition, Goodman and Mayer (2018) emphasized that a substantial increase in student loan debt may have contributed to a decline in homeownership among younger individuals.

The changes in homeownership and tenant rates may be influenced negatively or positively by age, cohort and period effects. Theoretically, as stated in Chiuri and Jappelli (2010), the optimal situation to achieve consumption smoothing in standard life cycle models is to transfer resources from wealthy periods to cash-limited periods¹. This suggests that it is optimal situation for individuals to sell their homes and switch to renting as they approach the latter part of their lives. Thus, the age-homeownership profile is expected to be hump-shaped (Angelini et al., 2013). To put it differently, the homeownership initially rises with age, attains its highest point at a specific age range, and then begins to shrink. In this regard, it is expected that age has a positive effect on the homeownership rate while it has a negative effect on the tenant rate. Furthermore, it is anticipated that the magnitude of the positive and negative effects on homeownership and tenant rates firstly will increase and then decline, respectively. Thus, the homeownership rate is likely to be relatively higher for middle-aged groups compared to young and old age groups, in contrast, middle-aged groups are likely to have relatively lower tenant rate than younger and older groups.

Different birth cohorts may have different housing trajectories due to their position in a particular socio-economic and political environment (Yip et al., 2007). Younger cohorts may possess lower real incomes and confront higher house prices compared to older cohorts². In such cases, younger cohorts may have lower homeownership rates and higher tenant rates than older cohorts. In other words, the cohort effect on homeownership and tenant rates may be negative and positive, respectively. Furthermore, when borrowing costs and down payments are favorable and access to housing credit is readily available, homeownership becomes comparatively more straightforward in some periods. In such periods is therefore expected to have a positive period effect on homeownership rates and a negative period effect on tenant rates. In conclusion, the relationship between the aforementioned three effects and changes in homeownership and tenancy rates in Türkiye can be examined.

This study aims to decompose the effects of age, period and cohort on the changes in homeownership and tenant rates in Türkiye for the period 2006-2020. Additionally, we aim to uncover the factors that may be related to the decline in homeownership and the rise in tenant rates among younger generations. This study purposes to contributions to the literature by revealing the effects of age, period and cohort on

homeownership, in parallel with previous studies, and the effects of these factors on tenancy, unlike previous studies.

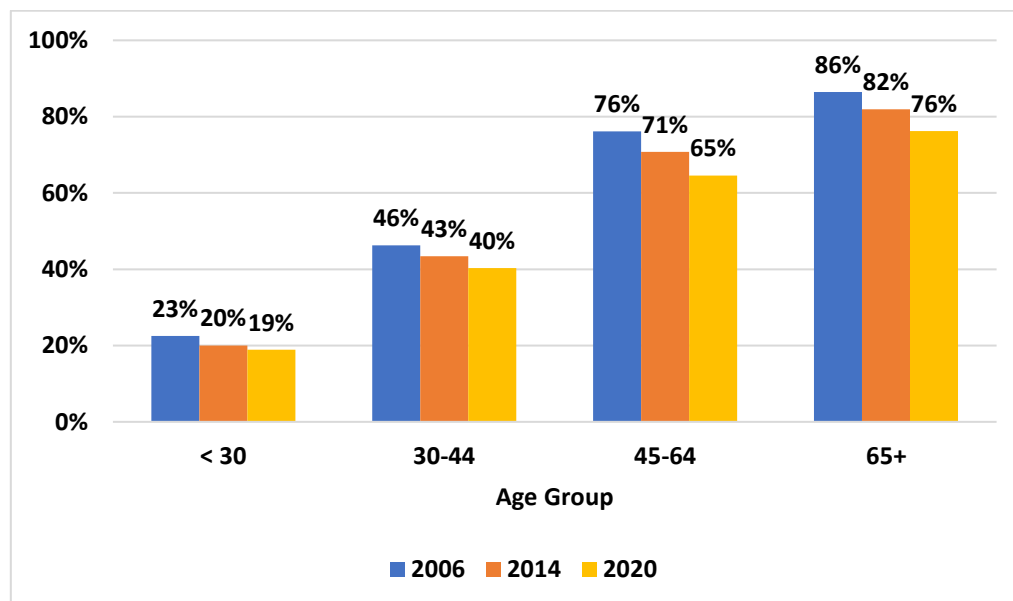
The remainder of this study is organized as follows. The next section provides information on homeownership and tenancy profiles in Türkiye. Section 3 presents data and methodology. Section 4 gives findings from the decomposition analysis. Section 5 provides a discussion of the findings. The final section presents conclusions.

2. Homeownership and Tenancy Profiles in Türkiye by Age and Cohort

A significant transformation has been observed among younger generations in Europe in recent decades, characterized by a decline in homeownership and an increasing tendency to rent residential properties. This trend is similarly evident among younger generations in Türkiye, reflecting changes in homeownership and rental preferences.

Figure 1 illustrates that the patterns in homeownership rates across different age groups for 2006, 2014 and 2020 in Türkiye. The homeownership rate has increased with age for selected years in Türkiye. The homeownership rate was accompanied by a consistent decline across all age groups. More specifically, the fall in homeownership rates during this time was particularly pronounced for middle-aged (45-65) and elderly (65+) populations. Furthermore, Türkiye's homeownership patterns for younger individuals align with those observed in many European countries, whereas the trends for individuals aged 65 and above diverge from these international comparisons.

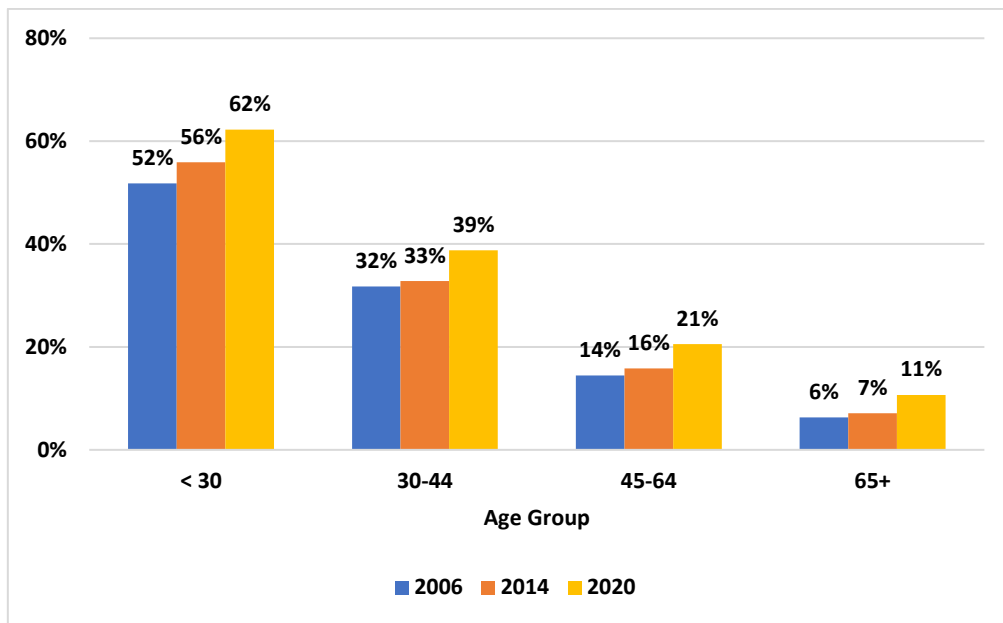
Figure 1. The Patterns of Homeownership Rates in Türkiye Across Time and Age Group



Source: The authors' calculation based on SILC 2006, 2014 and 2020.

Notes: The sample of observations is limited to household head. Data are weighted using weights provided by the SILC.

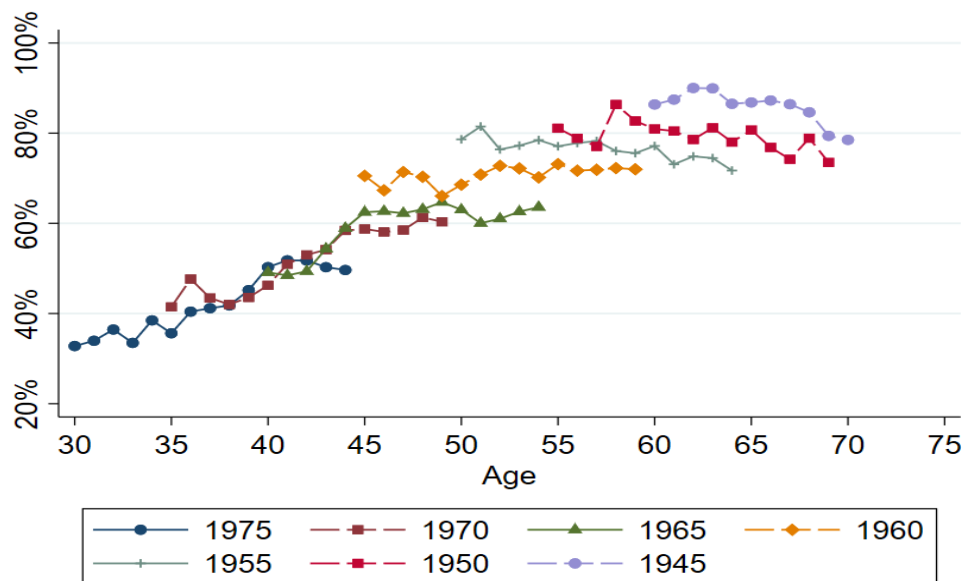
Figure 2 indicates the patterns in tenant rates across different age groups for 2006, 2014 and 2020 in Türkiye. As can be seen in Figure 2, the tenant rate declined as age increased in selected years. Additionally, the tenant rates have increased for all age groups in parallel with the fall in the homeownership rate during this time, and the rise in the tenant rates was relatively more obvious for the younger age group (<30).

Figure 2. The Patterns of Tenant Rates in Türkiye Across Time and Age Group

Source: The authors' calculation based on SILC 2006, 2014 and 2020.

Notes: The sample of observations is limited to household head. Data are weighted using weights provided by the SILC.

Figure 3 shows the age-homeownership profile for the selected seven cohorts in Türkiye.

Figure 3. Age-Homeownership Profile for Selected Seven Cohorts in Türkiye

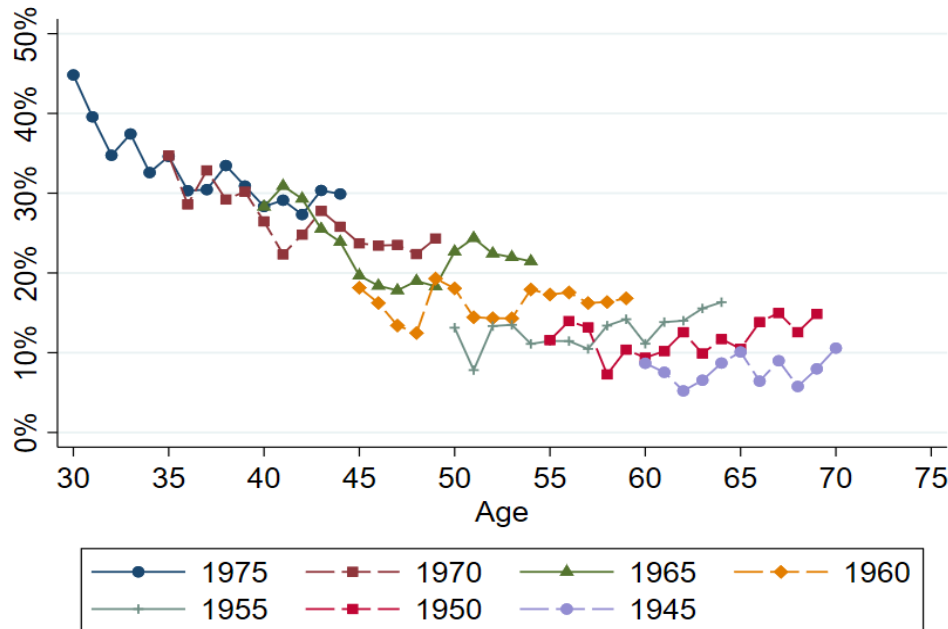
Source: The authors' calculation based on SILC 2006-2020.

Notes: The sample of observations is limited to household head. Data are weighted using weights provided by the SILC.

Here, the first line gives the average homeownership rate of individuals who were 31 years old in 2006, 32 years old in 2007 and so on until 45 years old in 2020. In other words, it presents the average homeownership rate for the youngest cohorts (1975s) between 2006 and 2020. The remaining six lines illustrate the age-homeownership profile of the other cohorts. Although there are some exceptions among younger generations, younger generations had lower homeownership rates than older counterparts, at the same age. For example, the average homeownership rate for age 45 for the 1960, 1965 and 1970 cohorts were 70.5%, 62.5% and 58.7%, respectively. Similarly, Kalay et al. (2024) showed that among heads of household aged 30-34 in Australia, the homeownership rate for younger cohorts fell from 60% to 49% between 1991 and 2021.

Figure 4 indicates the age-tenants profile for the selected seven cohorts in Türkiye. Among the younger generations, with some exceptions, the tenant rates of the younger generations were higher than those of the older generations, at the same age. For instance, the average tenant rates for individuals aged 45 for the 1960, 1965 and 1970 cohorts were 18.1%, 19.7% and 23.7%, respectively. As expressed in McKee (2012), this supports the discourse that the younger generations are increasingly becoming a tenant generation.

Figure 4. Age-Tenants Profile for The Selected Seven Cohorts in Türkiye



Source: The authors' calculation based on SILC 2006-2020.

Notes: The sample of observations is limited to household head. Data are weighted using weights provided by the SILC.

To summarize, it reveals a reduction in homeownership rates across all age group, while tenancy rates have risen in Türkiye from 2004 to 2020. In addition, the older cohorts have a higher rate of home ownership than the younger cohorts, while the opposite is true for the rate of tenant. The possible explanations of the observed patterns are discussed in more detail in the study's discussion section.

3. Data and Methodology

3.1. Data

Data used in this study is obtained from the Survey on Income and Living Conditions (SILC), which is conducted by the Turkish Statistical Institute (TURKSTAT) for the period 2006 to 2020. The survey is a nationally representative sample of the Turkish population. It provides insights into income distribution, poverty and social exclusion, as well as dwelling and housing conditions. It classifies households' tenancy status into four groups: homeowner, tenant, lodging and others. In this study, we were only interested in households that were homeowners and tenants. It also covers individual characteristics such as age, date of birth, sex and educational level, etc. The SILC 2006 encompassed a total of 42,795 individuals from 10,920 households while the SILC 2020 included a total of 86,923 persons from 25,706 households.

Data from the SILC is available in both panel and cross-sectional designs. In the panel data set, the individuals who are aged 13 and above can be tracked for 4, 3, and 2 years. These time dimensions are insufficient for conducting a comprehensive standard life cycle analysis of individuals' tenancy status. However, like birth year, groups with common individual characteristics can be followed through time and a synthetic panel can be constructed using a cross-sectional data set. A primary advantage of the synthetic panel is the reduction of measurement error bias through the aggregation of individuals within same cohorts (Verbeek & Nijman, 1992)³.

Furthermore, individuals within the same cohort experience comparable housing market, labor market, and demographic conditions, and they exhibit distinct behavioral patterns from those of other cohorts. For this, we constructed a synthetic panel data set to analyze age, period and cohort (generation) effects on homeownership and tenant rates. The number of cohorts that we can construct depends on the number of surveys and the age interval of interest. The formula for the number of cohorts is that number of cohorts = (number of ages + (number of surveys – 1)). We have 15 surveys. Since we consider individuals between 31 and 71, there are 41 years in this range. Thus, the number of cohorts is 55. However, we consider 31 cohorts born between 1945 and 1975. In our sample, the youngest cohort was 31 years old in 2006 (born in 1975), while the oldest cohort was 61 years old in 2006 (born in 1945).

3.2. Methodology

There are well-written books and papers that explain (advantages and disadvantages of) the age-profile-cohort analysis (O'Brien, 2015; Yang et.al, 2008). The analysis can be based on graphical and/or statistical methods. Explanations in section 2 can be considered a graphical one. In this part, we consider the primary focus of a statistical analysis model.

The statistical analysis of age-period-cohort data suffered from what is known as the identification problem. Since there is a perfect correlation between age, period, and cohort, it was argued that without strict assumptions, the effects of those variables would not be individually measured. To be able to find finite solutions, some constraints have to be imposed on the variables. In the age-period-cohort (APC) literature different estimators based on different constraints have been proposed and labelled such as the minimum norm solution, the intrinsic estimator, and the maximum entropy estimators. Naturally, each solution to the identification problem and each estimator has advantages and disadvantages. O'Brien (2015) provides explanations and relationships of those estimators which he classifies as a perpendicular solution.

The APC analysis uses the following econometrics specification, which looks like a fixed effects panel data format:

$$Y_{ij} = \mu + \alpha_i + \beta_j + \gamma_k + \varepsilon_{ij} \quad (1)$$

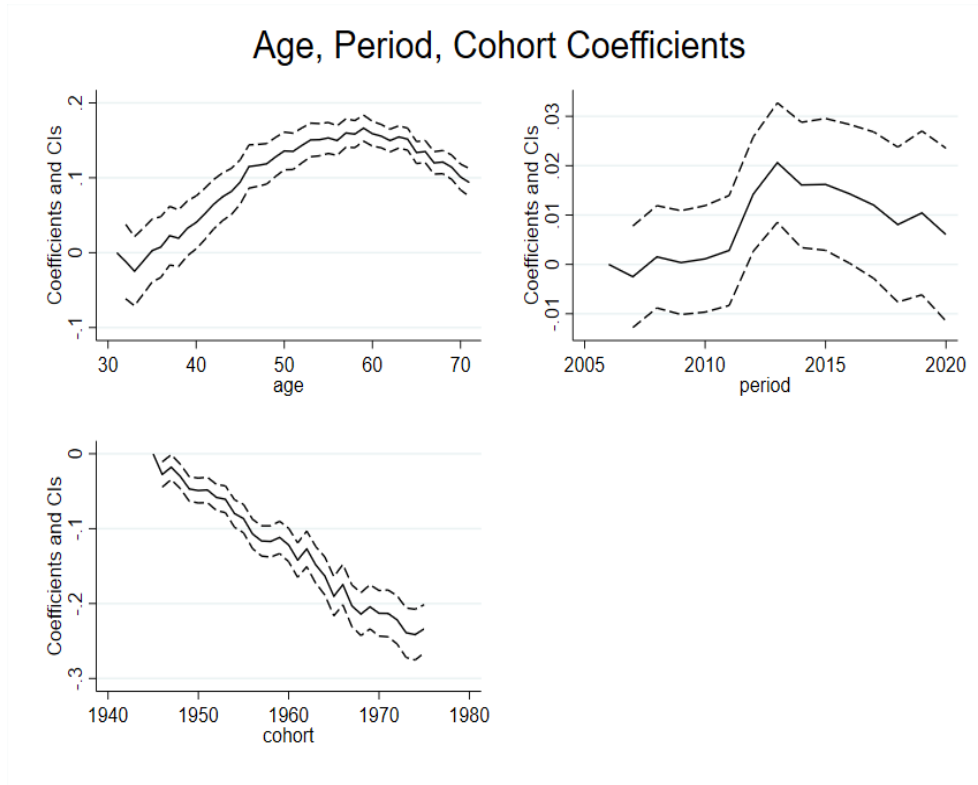
In Eq (1), μ shows the overall grand mean, α_i represents the age effect, β_j and γ_k are for period and cohort effects, respectively. ε_{ij} is an error term with satisfying classical assumptions. It is important to note that the estimated coefficients for effects of age, period and cohort are not able to capture the essence of a causal relationship. In fact, these coefficients in our model reflect the influence of some factors related to homeownership and tenancy. For example, Browning et al. (2012), using APC analysis for female labor force participation, argue that the age effect may include decisions such as the timing of education, age and retirement, the period effect may include business cycle effects or policy changes, and the cohort effect may include the improved educational attainment and lower fertility rates of younger cohorts, and changed social norms. In this regard, based on existing literature, we proposed that the age effect may include consumption smoothing behavior that depends on standard life cycle models. This indicates an inverted U-shaped relationship between age and homeownership, as well as a U-shaped relationship between age and tenancy. The period effect may encompass financial conditions, including borrowing costs, constraints, and down payment amounts, which in turn influence decisions regarding homeownership and tenancy. Finally, cohort effects may include higher housing prices, lower purchasing power, more adverse labor market dynamics, and a decline in the number of children for younger cohorts.

A Stata code written by O'Dea (2012) is used in estimation. This code allows estimating the effects of age, period, and cohort by two methods. One is based on Deaton and Paxton (1994), and the other is the maximum entropy method of Browning et al. (2012). Browning et al. (2012) shows also that essentially the maximum entropy and the intrinsic estimator are the same. The maximum entropy and Deaton and Paxton methods use different identification schemes. We also present results based on the method of Deaton and Paxton (1994) in the appendix. The results are essentially similar.

4. Results

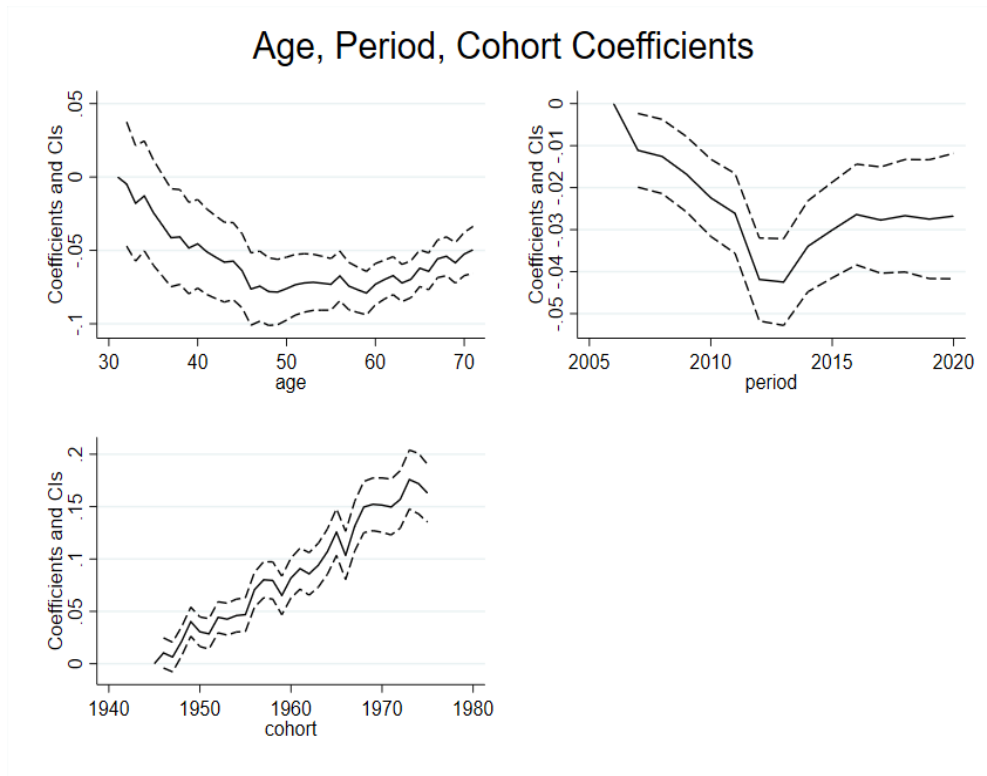
In Figures 5 and 6, we presented our findings from the APC decomposition using a maximum entropy approach for homeownership and tenancy, respectively.

Figure 5. Coefficients and Confidence Intervals from APC Decomposition with Maximum Entropy Approach for Homeownership



As shown in Figure 5, the coefficients for age are positive, except for in the early 30s, and before age 39 are not statistically significant. The homeownership rates increase up to age 59 and then begin to decline. It is approximately 17 and 10 percentage points higher for 60 and 70 years old than for 31 years old, respectively. This finding is consistent with that of Chiuri and Jappelli (2010).

The period coefficients are positive, except for 2007, and are statistically significant from 2012 to 2016. In the period 2012-2016, the homeownership rate increased by around 1.5-2 percentage points compared to 2006. The cohort coefficients consistently exhibit negative values. This indicates that the homeownership rate is lower for younger cohorts compared to older cohorts. More specifically, the homeownership rates for individuals born in 1960 and 1975 are 12 and 23 percentage points lower than for those born in 1945, respectively. In sum, the relationship between age and homeownership is consistent with the standard life cycle theory. A considerable negative cohort effect is exerted on the homeownership rate over time. Furthermore, the proximity of the period coefficients' magnitude to zero indicates that period effects on the homeownership rate are substantially lower than age and cohort effects.

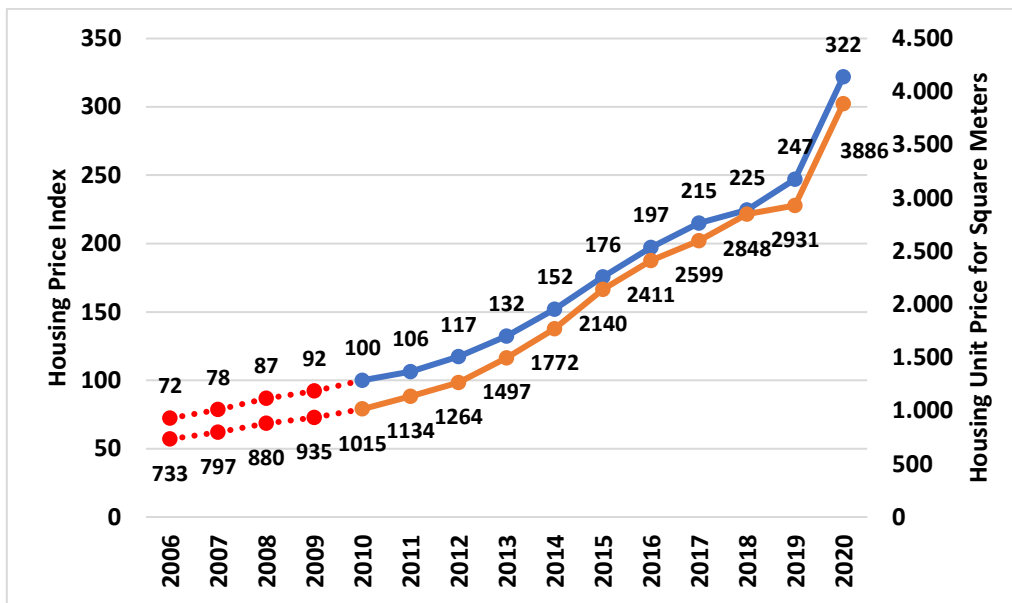
Figure 6. Coefficients and Confidence Intervals from APC Decomposition with Maximum Entropy Approach for Tenancy

As can be seen in Figure 6, the age coefficients are negative, but it is not statistically significant for those under 36 years of age. In other words, it reveals that there is a U-shaped relationship between age and the tenant rate. Tenant rates are lower by 5-8 percentage points for those aged 50 and 70 compared to those aged 31. These findings are also supported the life cycle theory. The period coefficients are negative and statistically significant. In comparison to 2006, the tenant rate in 2013 and 2020 is lower by 4 and 2.7 percentage points, respectively. The cohort coefficients are positive and are statistically significant, except for the 1946 and 1947 cohorts. The rate of tenants is higher for younger cohorts than for older cohorts. The tenant rates for the 1960 and 1975 cohorts are 8 and 16 percentage points higher than for the 1945 cohort, respectively. Accordingly, a substantial positive cohort effect on tenant rates is evident.

5. Discussion

As we have stated before, based on the literature, cohort effects may include higher housing prices, lower purchasing power, more adverse labor market dynamics, and a decline in the number of children for younger cohorts. Thus, we argue that the emergence of negative cohort effects on homeownership and positive cohort effects on tenancy in Türkiye are associated with these factors.

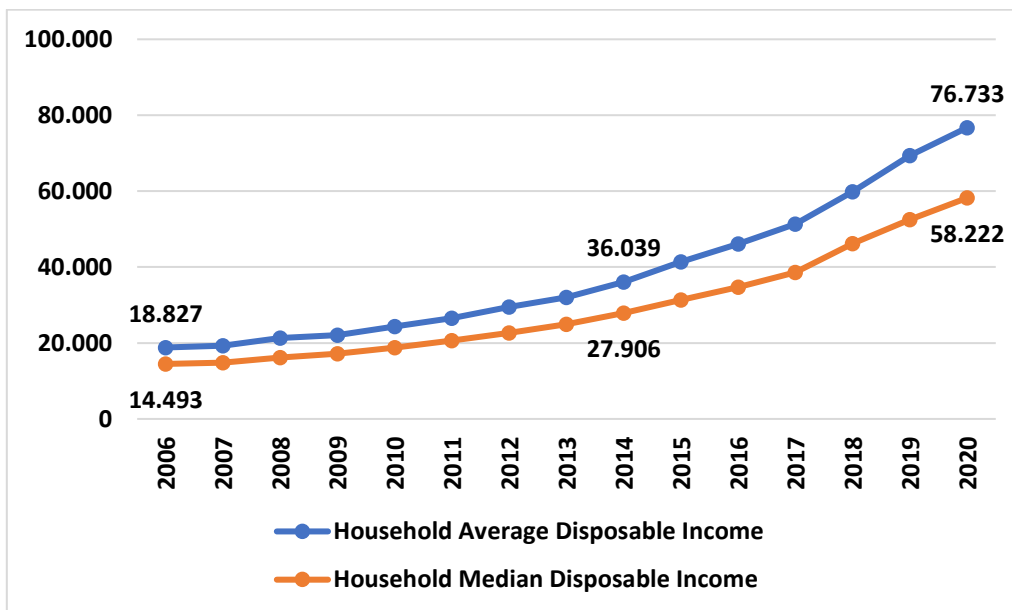
Housing prices play an important role in homeownership and are associated with lower homeownership rates (Atalay et al., 2024; Coulter, 2017; Saunders, 2021). Figure 7 shows the housing price index and unit price from 2006 to 2020 in Türkiye. The left axis depicts the housing price index (HPI), which is shown as a blue line, while the right axis illustrates the housing unit price per square meter in Turkish Lira, which is shown as an orange line⁴.

Figure 7. Housing Price Index and Housing Unit Price in Türkiye

Source: The Central Bank of the Republic of Türkiye.

The HPI increased from 72 to 322, and the housing unit price increased from 733 TL to 3886 TL between 2006 and 2020. There was a 430% increase in housing unit prices in this period. To provide a more precise illustration for cohorts in terms of increases in housing prices, an individual born in 1980 which is 30 years in 2010, could purchase a house with a spending of 1015 TL per square meter. By 2020, the housing prices for a 30-year-old individual born in 1990 had increased to 2931 TL. In summary, younger cohorts face much higher housing prices than older cohorts in Türkiye over time.

Household wealth and income are one of the most important determinants of homeownership (Boehm & Schlottmann, 2008; Haurin et al., 1996; Di & Liu, 2007; Wagner, 2014). Figure 8 illustrates that both the average and median household disposable income in Turkish Lira from 2006 to 2020 in Türkiye⁵.

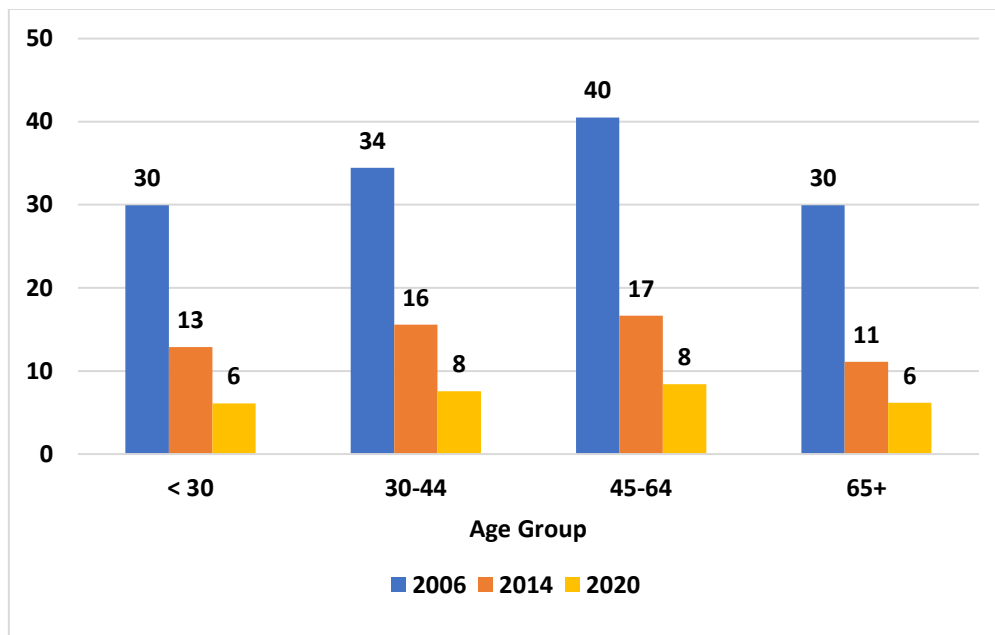
Figure 8. Average and Median Household Disposable Income in Türkiye

Source: Authors' calculations from 2006-2020 SILC.

The average and median household disposable income growth rate was approximately 300%, which lagged behind the 430% growth rate in housing unit prices. However, the decision to purchase a dwelling is not solely determined by the increases in housing prices. Since price increases in other goods within their consumption baskets result in a reduction of purchasing power, it would be more appropriate to examine the housing unit that households can acquire with their real income.

Figure 9 indicates that a substantial decline in housing units that can be purchased with the average real disposable income of the household for all age groups in the period considered. In this regard, it can be said that young cohorts are at a significant disadvantage compared to older cohorts in terms of homeownership. More specifically, in 2006, all age groups could purchase housing units of 30 square meters and above, while in 2014 and 2020, they could buy housing units of under 20 and 10 square meters, respectively.

Figure 9. Housing Unit That Can Be Purchased with Household Average Real Disposable Income in Türkiye



Source: Authors' calculations from 2006, 2014 and 2020 SILC.

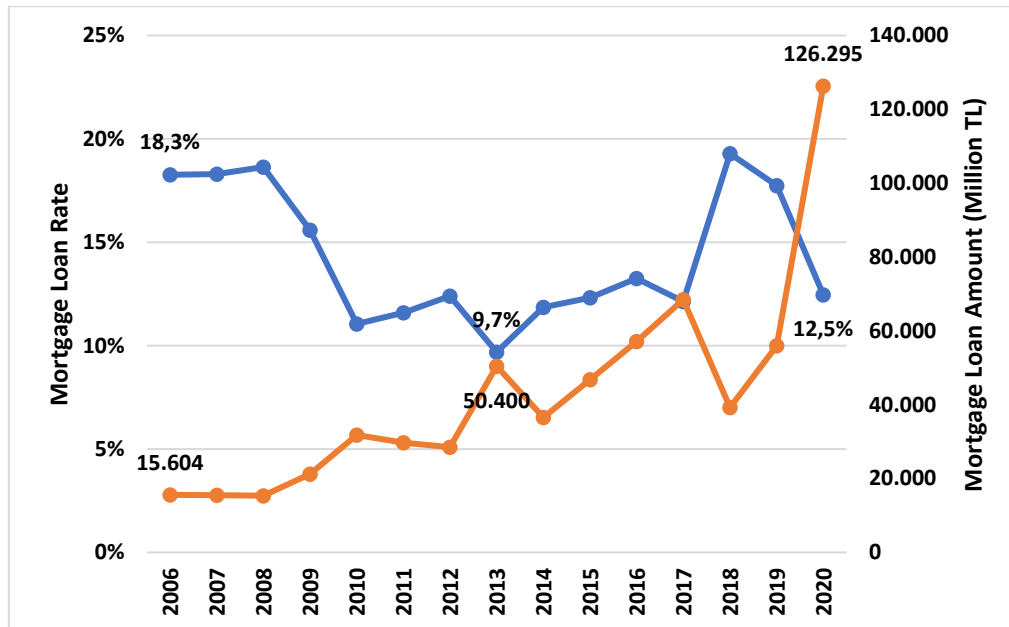
In Türkiye, slightly less than half of total household disposable income comes from salary and wages⁶, so the relationship between labor market dynamics and homeownership should also be considered. Average wages and salaries in Türkiye have gradually converged to the minimum wage over the years (DİSK-AR, 2024)⁷. In other words, younger cohorts recently entered the labor market have been exposed to lower wages. It is also known that informal and temporary employment and part-time jobs, which have a reducing effect on earnings, are more prevalent among young people in recent years. These labor market dynamics for younger cohorts may be related to the decline in homeownership rates among this demographic group.

There is a positive association between family formation and homeownership and family formation accelerates the process of home acquisition (Andrews & Sánchez, 2011; Haurin et al., 1996; Mulder, 2006;). The changes in the family structure over time may also lead to differences in the process of home acquisition across cohorts (Blanden et al., 2023). The increase in the average age of the first marriage and the decline in the marriage rate in Türkiye in recent years is an indication that family formation is being postponed. All these demographic transformations may be linked to the decline in homeownership rates among young cohorts.

The possibility of owning a home is also affected by financial conditions such as borrowing costs and constraints and down payment amounts (Acolin et al., 2016; Linneman & Wachter, 1989; Quercia et al., 2003). In this regard, Figure 10 presents that the mortgage loan rate and amount for the period 2006-2020. The mortgage loan rate was marginally above 18% during the 2006-2008 period and fluctuated between 9.7% and 13.3% from 2009 to 2017. Thus, there has been a corresponding increase in the mortgage loan amount

depending on readily accessible credit due to the fall in mortgage loan rates in this period⁸. In 2018, the mortgage loan rate increased to 19%, resulting in a decrease in the mortgage loan amount. Subsequently, in 2020, the mortgage loan rate declined to 12.5%, leading to a considerable increase in the mortgage loan amount.

Figure 10. The Mortgage Loan Rate and Amount in Türkiye



Source: The Central Bank of the Republic of Türkiye (CBRT) and Banking Regulation and Supervision Agency (BRSA).

In addition, as a favorable development, LTV in Türkiye was increased by BRSA from 75% in 2010 to 90% in 2020. Put differently, while households were required to finance 25% of the housing price themselves when purchasing a house in 2010, this rate was reduced to 10% in 2020. The findings of the decomposition suggest a negative correlation between the period effect on the homeownership rate and the mortgage loan rate. In other words, the period effect increases when mortgage loan rates are low, while it decreases when mortgage loan rates are high.

The decrease in the rate of homeownership for younger generations over the years has gradually led to the formation of a renting generation as shown in our findings. The emergence of a generation predominantly comprised of renters is likely to precipitate an increase in demand for rental properties and a subsequent rise in rental costs, potentially reducing the economic well-being of future generations. Moreover, having a parent who owns a home increases the probability of homeownership by 30 percentage points (Wagner, 2014), but the probability of homeownership is much lower for younger generations whose parents do not own a home. In this regard, the transfer of homeownership which is regarded as a component of wealth will gradually diminish from younger generations to future generations. This phenomenon is likely to exacerbate existing housing and wealth inequality. In addition, this is poised to incite a generational conflict between younger individuals lacking adequate housing and older individuals with substantial housing assets, as discussed by McKee (2012).

Policymakers can raise the declining homeownership among younger generations by designing policies that make housing purchasing more accessible to younger generations. For instance, it could keep low mortgage loan rates and down payments for younger generations purchasing their first homes. The amounts of mortgage loans can be adjusted in accordance with the income levels of younger generations. Younger generations can be given priority in the allocation of social housing such as lodging. Moreover, if the inheritance mechanism works well, distributing a certain proportion of newly built public housing among low-income households may also be associated with reducing the decline in home ownership rates both in general and for younger generations.

In a country such as Türkiye, characterized by a relatively lower income level and significant income inequality, the implementation of the aforementioned measures is crucial to prevent a decline in the homeownership rate, particularly among the younger generation within low and middle-income groups. Conversely, it is important to recognize that these measures may hold less significance in high-income countries like Switzerland, where the homeownership rate is merely 5%, or in countries like Romania, which, despite not being high-income, boasts a homeownership rate of 94%.

6. Conclusions

This paper focuses on the decline in homeownership rate and the rise in tenant rate in Türkiye by decomposing effects of age, cohort and period. Utilizing Turkish data from SILC on tenant status, we find an inverted U-shaped relationship between the homeownership rate and age, while a U-shaped relationship exists between the tenant rate and age. In addition, our results show the cohort effect is negatively associated with homeownership rates over time, indicating that younger cohorts have disadvantages compared to older cohorts in terms of homeownership. It is also positively associated with tenant rates over time, meaning that the younger cohorts are more likely to be tenants than older cohorts. The period effect on the homeownership rate between 2012 and 2016 was positive, whereas its effect on the tenant rate was negative throughout the entire period. Additionally, we argued that the decline in homeownership and the increase in tenant rates among younger generations can be linked to factors such as falling housing prices, reduced purchasing power, changes in labor market dynamics and family structure.

The main limitation of this study is the inability to track the tenure status of the same individuals throughout their lifetime for Türkiye. If we had a dataset that followed the same individuals throughout their lifetime, we could have observed these individuals transitioning from home ownership to tenancy and vice versa. This would have allowed us to examine more clearly the effects of age, cohort and period on homeownership and tenancy. In subsequent studies, the effect of age, period and cohort on homeownership and tenancy can be examined using a synthetic panel data set that spans a more extensive period for Türkiye.

Declarations and Disclosures

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Plagiarism Checking: This article was screened for potential plagiarism using a plagiarism screening program.

End Notes

1. However, individuals who are selfish are expected to behave in this way, while individuals who are altruistic are not expected to behave in this way. Because selfish individuals prioritize themselves, they will want to finance their consumption expenditures in the last periods of their lives by selling their homes. In contrast, altruistic individuals tend to transfer ownership of their homes to others through bequest or gift. Angelini et al. (2013) stated that 11.5% of European individuals acquired their first home before age 50 as a bequest or gift.
2. On the contrary, younger cohorts may possess higher real incomes and confront lower house prices in comparison to older cohorts. Thus, the cohort effect on homeownership and tenant rates may have a positive and negative, respectively.

3. Verbeek & Nijman (1992) also recommend that the number of individuals in each cohort be greater than one hundred in order to ensure that measurement error bias is at a negligible level. We have more than 100 observations for each cohort.
4. As the Central Bank of the Republic of Türkiye (CBRT) started to calculate the HPI and housing unit prices in 2010, these data are not available for the period 2006-2009. However, it was observed that the Consumer Price Index (CPI) and HPI exhibited similar values during the period 2010-2012. Consequently, we have retrospectively calculated the HPI and housing unit price for the period 2006-2009 by utilizing the change rates in CPI.
5. As the data set did not include information on wealth, it was not possible to make an assessment based on wealth for the cohorts. However, given the documented positive correlation between wealth and income, it is hypothesized that the assessment based on wealth will be analogous to the assessment based on income.
6. According to TURKSTAT (2022), the share of salaries and wages in total household disposable income in 2021 and 2022 is 47.1%.
7. DİSK-AR (2024) shows that the ratio of minimum wage to monthly individual wage and salary increased from 46% to 60% between 2006-2020.
8. The mortgage loan rates were calculated by averaging weekly interest rates for housing credit.

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Appendixes

Figure A1. Coefficients and Confidence Intervals from APC Decomposition with Deaton and Paxson Approach for Homeownership

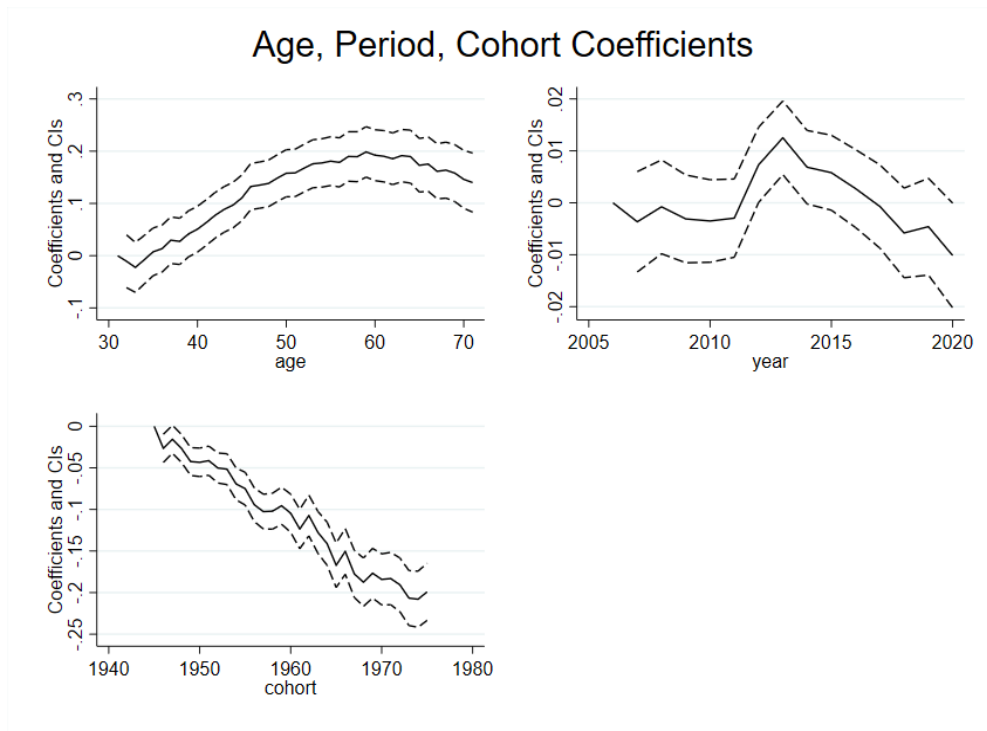
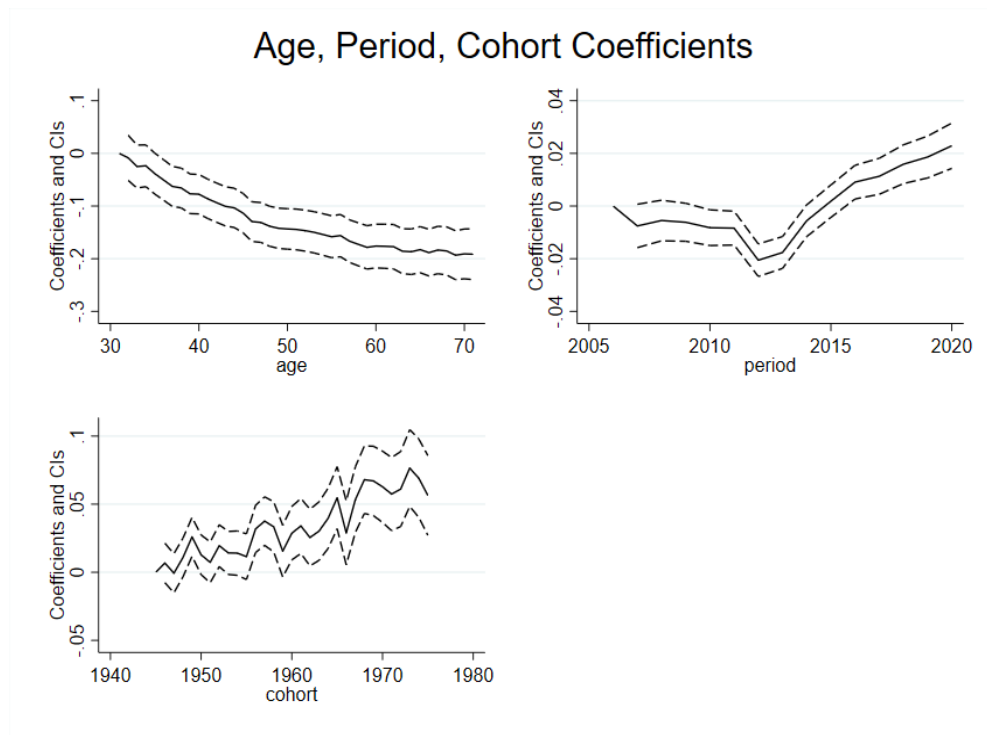


Figure A2. Coefficients and Confidence Intervals from APC Decomposition with Deaton and Paxson Approach for Tenancy



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