

Intergenerational Wealth Persistence in the Viennese Housing Market

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Abstract

Inherited wealth is a crucial factor in explaining why inequalities persist in society. Measuring and estimating economic inequality over multiple generations can be challenging due to a lack of adequate data sources. Surname studies offer a compelling methodological alternative to estimate long-run intergenerational mobility over multiple generations by using historical data. Based on indices of real estate owners in Vienna from 1930 and 2011, information of surnames can be used to estimate intergenerational pass-on of wealth - in the form of real estate - in Vienna over 80 years, or in other words, over 2 to 3 generations. Conservatively estimated, between 1.1% and 3.8% of real estate was passed on over generations, so that in 2011 still the same family holds it. Demographic indicators and stochastic modelling can be consulted to set these percentages into relation. The combination of these methodological approaches offers an insight into wealth transmission and its persistence in the Viennese housing market.

1 Introduction and Motivation

Since Piketty (2018) brought out his book "Capital in the Twenty-First Century", wealth and income inequality have increasingly come into the focus of economic research. The aim of this research project is to investigate transmission of wealth, in the form of real estate, over generations. As a case study I look at the Viennese housing market and make use of a surname study. Cross-sectional surname data make it possible to retrace pass-on of real estate over 80 years, which is equivalent to approximately 2 to 3 generations. Real estate, where the owners' surnames remained the same over the observed 80 years, will be assumed to be passed-on within the same family. This is a very conservative estimate of wealth persistence in the Viennese housing market, as female heirs cannot be traced if they change their surnames after marriage. In a next step, the surname study is complemented by a counterfactual, where I approximate the share of houses that would have been passed on to individuals of the same surname, when we assume perfect wealth persistence. For this purpose, I conduct a demographic analysis of the Viennese population and model extinction rates of surnames by a stochastic branching process. Thus, the expected share of inherited real estate - which in the setting of this analysis can be understood as 2011's owner having the same surname as 1930's owner - can be modelled and then be compared to the actual share of inherited real estate found in the surname study.

Estimating intergenerational wealth persistence in the Viennese housing market contributes to the empirical literature on economic inequality in various ways: (1) Real estate is an important part of household wealth. Investigating its pass-through over generations can give an insight into how

inheritance of wealth plays into the rise in inequality over the last decades. (2) Vienna has the highest real estate prices in Austria. The Viennese housing market offers a compelling setting to investigate wealth persistence, as I might be able to capture the wealthiest of the wealthy. (3) Looking at long-term social mobility can be a very interesting addition to "two-generation" estimates of social mobility, which are more common in Economics. When analysing long-term trends by using historical data, it can be assessed how social mobility evolved over time and can help us understand short-run estimates on wealth persistence and its consequences better.

2 Data

In this analysis, two data sets on the owners of real estate in Vienna are used, as well as demographic indicators for the Viennese population. The first data set on Vienna's real estate owners is from the years 1927 - 1930. The data features newly digitized information from the first four volumes of Salzberg's "Häuser-Kataster der Bundeshauptstadt Wien" (Housing Cataster of Vienna). In these books, J. Wolfgang Salzberg gathered official data on Vienna's real estate market for the years 1927, 1929 and 1930. Up to now, only books containing information on the districts 1 - 9 have been digitized. Salzberg's books include a complete index of all owners of real estate in Vienna. It contains the full name of every legal entity and person that owned property in Vienna at the time and connects it to the identification number of the property ("Einlagezahl").

The second data set on Vienna's real estate owners is from the year 2011. Current data on owners and their property in Vienna can be obtained from the Austrian Federal Office of Metrology and Surveying ("Bundesamt für Eich- und Vermessungswesen"). The data set used in this analysis, like the data set from the 1930s, contains full names of the owners and the identification number of the property.

In order to retrace the demographic change in the Viennese population, I use data from the Statistical Yearbook of Vienna ("Statistisches Jahrbuch der Stadt Wien"). It provides annual fertility rates, mortality rates and migration in- and outflows, as well as many more pieces of information on the demographic development of Vienna's population on a district level.

3 Methodology

In order to analyse the intergenerational mobility of wealth in Vienna, I conduct a surname study. The methodological approach of the proposed surname study is twofold: On the one hand, the share of houses that has been inherited over the observed period of 80 years is approximated by comparing surnames of each real estate asset. On the other hand, the development of the population throughout the observed period is modeled based on demographic indicators.

In a first step, I apply a matching procedure to surnames of today's owners and 1930's owners: If the owner of a building has the same surname as the owner in 1930, it is assumed that the building was passed on to him/her within a family via inheritance. The most conservative, but also the most reliable estimate is to only classify houses that still have owners with the same surname as 80 years before as "inherited" or "bequeathed". Nevertheless, in order to link heirs to their ancestors, simply matching surnames will not be enough. On the one hand, it could underestimate the share of inherited wealth strongly, as approximately half of the heirs might be female and they might change their names after marriage and cannot be linked to their ancestors anymore. On the other hand, it could overestimate the share of inherited wealth, as people with the same surname do not necessarily have to be related. To contextualize the estimated share of inherited wealth, further demographic analyses have to be employed.

The second step of this analysis is to retrace changes in the Viennese population by investigating demographic trends. Modelling changes in the population based on fertility data, mortality data and migration flows can help me get an idea, how many potential heirs 1930's owners might have and how many of them might be found in 2011's owners index. Starting from a population of 13.319 owners of real estate in 1930, by taking into account fertility rates, mortality rates and migration flows in simple back-on-the-envelope calculations, it can be approximated, how many descendants there might be in 2011. In these calculations, it is assumed that housing owners do not differ substantially from the average Viennese inhabitant. After having approximated the number of potential off-springs of 1930's real estate owners, a Galton-Watson process can be applied to the data, to estimate the "survival" of surnames over generations (Watson & Galton, 1875). The branching process models surnames patrilineally, assuming that having a female or a male child has the same probability. Using the number of potential heirs from the demographic model over time and applying to them the results from the Galton-Watson branching process will then lead me to a number of people that might be descendants of owners in 1930 and still carry the same surname, if we assumed perfect intergenerational persistence, or in other words, that buildings have always been passed on to the children. Comparing the outcome of this analysis to the actual number of assets, where the owner still has the same surname as 1930's owner, conclusions on wealth persistence in the Viennese housing market can be drawn.

4 Conclusion

Inherited wealth is a crucial factor in explaining why inequalities persist in society. Surname studies offer a compelling methodological alternative to estimate long-run intergenerational mobility over multiple generations by using historical data. Estimating intergenerational wealth persistence in the Viennese housing market is of great relevance due to a variety of reasons: It helps us understand the transmission and persistence of wealth throughout generations and offers an opportunity to analyse the wealthiest share of the Austrian population.

Surname studies are quite common in Economics, and have been done for many countries such as Sweden, Italy, Denmark, China and the US (Clark & Cummins, 2014; Clark, 2012; Güell, Rodríguez Mora, & Telmer, 2014; Barone & Mocetti, 2016; Olivetti & Paserman, 2015). Following this empirical literature, I exploit surname data from two real estate owners indices for Vienna, from the years 1927-1930 and 2011. I assume that pieces of property, where the owners' surnames did not change over the observed period of 80 years was passed on within the same family through inheritance. Preliminary results of the surname study suggests that 2 - 4% of today's real estate remained within the same family over the last 2 to 3 generations. As a counterfactual, I approximate the share of houses that would have been passed on to individuals of the same surname, when we assume perfect wealth persistence. In order to do so, I use demographic indicators on fertility, mortality and migration and employ a stochastic branching process. The comparison of these two outcomes enables me to draw conclusions concerning wealth persistence in the Viennese housing market.

References

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