

**“The general custom in this country”**  
**Immigrant Homeownership, Economic Assimilation, and Return Migration**  
**During the Age of Mass Migration to the United States**

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Paper prepared for presentation at the National Bureau of Economic Research  
Development of the American Economy Summer Institute  
Cambridge, Massachusetts, July 24, 2012

Draft of July 15, 2012

**ABSTRACT:** This report investigates the state of knowledge about urban and non-farm home ownership by the native- and foreign-born population before World War I. The hypothesis I entertain is that home ownership was relatively common for all non-farm residents in this era because an owned home was a good life-cycle asset. I also suggest that the life-cycle motive for saving was particularly strong for immigrants who intended to become permanent residents of the U.S. For 1900 and 1910 I rely on samples drawn from the manuscript enumeration schedules underlying those two U.S. censuses. For 1890 I reproduce data published in the U.S. Census *Reports* of that year. Approximations to homeownership rates are calculated from the response to questions about real estate ownership asked in conjunction with the federal census of 1870. I suggest that the official published statistics on homeownership rates are biased upwards by failure to include all life-cycle relevant families. Using my definitions, I report that the incidence of home ownership rose with age for both the foreign- and native born in cross-sections drawn from the census samples. Homeownership rates calculated for immigrants exceeded those for the native born except at the youngest ages. I found little reason to be concerned that negative selection among returning migrants distorted the cross-section profiles. A measure of success in achieving home ownership is the homeownership rate for seniors (say age 55 and above). I consistently found ownership rates at older ages exceeding 40 percent and in smaller urban places reaching 60 percent of the families examined. Ownership was less common in large cities than in smaller urban places. Foreign-born home ownership is highly correlated with other markers of immigrant assimilation such as the ability to speak English and residential desegregation.

**ACKNOWLEDGEMENTS:** Comments by participants at the DAE's NBER program meeting in 2011 on an earlier paper [Sutch "Hard Work" 2011] and at the NBER Universities Research Conference on Housing and Mortgage Markets in Historical Perspective were helpful in clarifying several empirical issues. Particular thanks are due to Price Fishback, Michael Haines, Robert Margo, Kenneth Snowden, and Eugene White. Susan B. Carter provided valuable advice and wise council.

*... the tendencies toward acquiring their own homes exhibited by families the heads of which were of foreign birth and employed in the industries of the United States, may be taken as an indication of progress toward assimilation and of the intention to permanently settle in this country.* – U.S. Immigration Commission (1911), *Report: I*, 467.

There is a long-debated issue in economics about how well or poorly immigrants assimilate after arrival in their host country.<sup>1</sup> Much of the attention has been on the experience of the last 50 years or so and the main empirical focus has been on earnings. The question typically asked is whether the earnings of recent immigrants converge on those of the native-born as years in the U.S. increase [Chiswick 1978, 1986; Borjas 1985]. Economic historians studying immigration to the United States during the age of mass immigration (roughly 1880 to 1914) have thinner, less rich, and less appropriate data sets available to estimate earnings convergence. The issue is complicated (perhaps more so in the historical past than in recent years) because there are two different dimensions on which to assimilate. One has to do with the economic success of those who end up staying. The other concerns the positive or negative selection of return migrants. Some immigrants only intend to be seasonal sojourners, others return to their home country in late life after making their American fortunes, and still others return, probably sooner than later, because they fared poorly in the American labor market or found cultural assimilation difficult.

Researchers working with the scattered earnings data from the age of mass migration have yet to reach a firm conclusion concerning economic assimilation [Hatton 1997, Abramitzky, Boustan, and Eriksson 2011]. Rather than take another look at earnings convergence, this report follows up on a suggestion offered by the 1911 U.S. Immigration Commission (the Dillingham Commission) and uses the

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<sup>1</sup> Assimilation (or “acculturation,” a term preferred by anthropologists) is usually thought of as a dynamic cultural phenomenon that occurs after two groups with different heritages come into contact. Close contact and communication supposedly induces the attitudes and customs of the minority group to converge to those of the dominant culture and lead eventually to “acceptance” of the minority residents as equal (even undistinguishable) members of the dominant culture [Gordon 1964: Chapter 3]. Defined in this way the term “assimilation” would carry problematic connotations for the social history of immigration to the United States if it is taken to imply the elevation of White-Anglo-Saxon-Protestant culture as an ideal or to suggest that success in assimilation should be judged by the extent to which foreign cultural patterns are extinguished. The concept of assimilation I consider in this report is measured by the success (or lack thereof) in achieving economic parity with the native-born population. I make no attempt to address cultural or linguistic assimilation. The economic assimilation of economic migrants is, to my mind, unambiguously desirable while cultural assimilation is less obviously so. America has always been a multi-cultural nation and each immigrant group has contributed some of its own cultural traits to the dominant society. A brief review of the literature on immigrant assimilation broadly defined is offered by Mary Waters and Tomás Jiménez [2005]. For a review (now out of date) of the quantitatively-oriented historical material, see Stanley Lieberson [1980].

acquisition of a home as a measure of economic assimilation.<sup>2</sup> The commission's interest in home ownership is understandable. Because of the illiquidity of real estate, ownership is unlikely to appeal to the sojourner, "those who come to this country with no intention to become American citizens or even to maintain a permanent residence here, but merely to save enough, by the adoption, if necessary, of low standards of living, to return permanently to their home country" [Immigration Commission 1911: I, p. 47]. Savings invested in the purchase of home would not be sent abroad, a practice the Commission sought to discourage [p. 46].

Immigrant home ownership, in the view of the Commission, was a marker of economic success, the signature of a permanent resident, and a demonstrated commitment to a specific community.<sup>3</sup> On the other hand, the rental of a home or lodging need not indicate a failure of assimilation. Indeed, many native-born remained renters even though they were thoroughly assimilated into the American culture and the American labor market. Insufficient funds for a down payment and imperfect access to credit barred some from ownership, particularly younger men. A reluctance to settle down for labor market reasons or a taste for wanderlust would discourage others. House prices, rents, and the current condition of the available housing stock offered for sale, might have appeared unfavorable to potential purchasers in some localities. And, as the Commission noted, in some industries the company-house system prevailed. This was particularly true in mining districts where workers were compelled to rent from the mine owners who owned the surrounding land and properties [Fishback 1992: Chapter 9]. Nevertheless, as I will show, there was a strong motivation favoring ownership over renting among native-born Americans as early as 1870.

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<sup>2</sup> Senator William P. Dillingham (Republican, Vermont) was the chair of the joint Senate and House Commission composed of three senators, three representatives, and three members appointed by President Theodore Roosevelt. One of the presidential appointees was Cornell economist, Jeremiah Jenks. The Commission was established in 1907 and reported in 1911. The Commission recommended restricting admission of unskilled laborers particularly those unaccompanied by wives or families [U.S. Immigration Commission 1911: I, pp. 47-48]. On the political history of the Commission see John Lund [1994].

<sup>3</sup> Despite their interest in the subject, the Commission's analysis of their homeownership data was seriously flawed. They relied on a small and unbalanced sample restricted to workers in manufacturing and mining. They failed to control for age or length of time in the U.S. and they focused on a misguided attempt to identify those ethnicities (labeled as "races") that were successful (and therefore "desirable") by this measure and those which were not. The Commissioners' conclusion was that "as a rule the races of older immigration from Great Britain and northern Europe are more extensive home owners than are the members of races of recent immigration" [p. 469]. For what it is worth, the Immigration Commission found no difference in unadjusted homeownership rates between white native-born-of-native-father home owners and immigrants (21.8 percent and 21.6 percent respectively). As I will show, both of these figures seriously understate the situation.

The age of mass migration was well before home ownership became an entrenched and essential ingredient of middle-class American aspirations. The inclusion of home ownership into the “American Dream” was instigated only a half-century ago by the American Association of Realtors through an extensive advertising campaign [Sutch “American Dream” 2011]. It is probable, however, that the realtors’ association simply capitalized on a pre-existing, if unnamed, aspect of the evolving American character. As the introduction to *Census of 1890* remarked “the general custom in this country is to make the first land that a person buys the place of his home” [U.S. Census 1890, volume 13, p. 19].

It is my contention that the origin of this “general custom” favoring ownership over renting was the spread of life-cycle saving during the nineteenth century. This “life-cycle transition,” which began around 1830 and picked up steam after the six-year depression of 1837-1843, gradually replaced the pre-modern tradition of relying on large families and grown children for care and support in old age. The modern strategy which replaced this family-based system required saving during the productive phase of life to build a store of assets that could and generally would be used to finance consumption in late life. It was a transition from reliance on family to self-reliance and from “babies to bank accounts” [Ransom and Sutch 1986, 1989; Sutch 1991 and “Hard Work” 2011]. I suggest that immigrants, typically entering the country in their late teens or twenties and intending to become permanent residents, generally adopted the life-cycle strategy since they had left their family and support communities behind in Europe.

The connection of the life-cycle strategy to home ownership is that a home is a good life-cycle asset. In the context of the financial markets of the nineteenth century, it might well have been a life-cycle asset that dominated alternative investments. A home of one’s own would smooth consumption of housing services in the face of volatile income and support consumption during retirement when the household income stream was reduced or extinguished. In this sense a home provided an annuitized stream of services. If the home was owned outright then the continued flow of housing services would not depend upon the uncertain trends in rents, the rate of return to financial assets, or the stability of banks. The home could be used to generate income if needed by accommodating boarders or roomers.

Classically there are other motives for saving besides old-age consumption: a precautionary motive, a bequest motive, and an entrepreneurial motive are highlighted in the theoretical literature. For life-cycle savers homes also can serve to satisfy a secondary precautionary motive for asset holding [Poterba, Venti, and Wise 2011]. A house can be sold, if necessary, to finance consumption in old age. However, the relative illiquidity of real estate suggests that individuals with no life-cycle motive would prefer liquid assets to satisfy a purely precautionary motive. For parents following a life-cycle strategy

but with a secondary bequest motive, the house could serve as the primary inheritance left to their children. However, absent a life-cycle motive, liquid assets would better serve the bequest motive. Absent a life-cycle motive, real estate wealth tied up in a residence would be a poor form of entrepreneurial wealth which would more productively be invested in plant, equipment, and commercial real estate.<sup>4</sup> I suggest, then, that home ownership indicates that the primary motive for asset holding by the homeowner was to secure consumption in the later stages of life. This does not rule out the existence of secondary motives.

Saving to purchase a home provided a proximate objective for saving that, perhaps, proved more salient than the ultimate objective of retirement security. The purchase of a home also represented a binding commitment to the life-cycle strategy since the relative illiquidity of real estate discouraged lapsing back to the older approach. From the beginning of the life-cycle transition, home ownership represented responsibility, self-reliance, geographic stability, commitment to a community, and love of family. These characteristics of home owners help explain the importance of owner-occupied houses in late-nineteenth century portfolios and the ultimate ascendance of home ownership to its star role in the American Dream [Carter et al 2006, Series Dc761-780; Collins and Margo 2011; Sutch “American Dream” 2011].<sup>5</sup>

The previous literature on home ownership among immigrants before World War I is sparse and has, in my opinion, resulted in a rather muddled picture. Much of the earlier qualitative social history emphasized the low wages received by immigrants and the inferiority of tenement housing in the immigrant districts of large cities [Thomas and Znaniecki 1918-1920, Abbott 1936]. Based on such descriptions scholars speculated that “many [immigrants] lived in poverty or on the edge of poverty” [Reimers 2011: 355]. Implicitly, in this view, most immigrants were too poor to save and purchase homes. At other points scholars have noted that not all immigrants were poor but then went on to emphasize the propensity of immigrants to live frugally, to save heavily, and send remittances abroad. Implicitly, these more prosperous immigrants were willing to forego home purchases to support family

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<sup>4</sup> The exception is farming, where ownership of the home was almost universally tied to ownership of the agricultural land. This report focuses attention upon non-farm home ownership.

<sup>5</sup> Sojourners, in contrast to permanent immigrants, typically rented rooms in boarding houses or lived with employers during their stay in the United States. But these temporary residents usually returned well before their late 50s to spend their last years in their home country.

members who remained behind or to purchase passage for potential brides, relatives, and friends who wished to immigrate and join them.<sup>6</sup>

In seeming contradiction, social and economic historians who have focused on specific geographical locations in the U.S. rather than on immigrants' living standards have tended to report "surprising" levels of home ownership among the foreign-born. Stephan Thernstrom's study of Newburyport, Massachusetts reported that homes were "strikingly available to working class men who remained in Newburyport for any length of time" [Thernstrom 1964: 117]. Most of these working class men were immigrants. However, Thernstrom somewhat contradictorily also asserted that:

The ordinary workman of nineteenth century Newburyport could rarely build up a savings account and purchase a home without making severe sacrifices. To cut family consumption expenditures to the bone was one such sacrifice. To withdraw the children from school and to put them to work at the age of ten to twelve was another. ... This pattern was particularly characteristic of Irish working class families in Newburyport [Thernstrom 1964: 155].

A study of Pittsburgh that relied on the manuscripts of the 1900 census reported higher homeownership rates for foreign-born whites than among native whites. "It would appear that the foreign-born, in general, had a greater propensity to buy" [Bodnar, Simon, and Weber 1983: 155]. Michael Haines and Allen Goodman also reported high rates of home ownership for immigrants in 1890 and 1900 [Haines and Goodman 1995: Figures 7.3 and 7.7; pp. 215-216].

The life-cycle perspective, I suggest, can help to clarify the situation with regard to immigrants' place of residence and resolve some of the contradictions in the historical literature. If a home is a life-cycle asset then I would expect to observe that homeownership rates would increase with the age of the household head, at least up to the typical date of retirement. During the age of mass migration immigrants who were head of household were on average younger than their native-born counterparts. The more recent the flow from a given country of origin, the younger would be the average age. Thus when comparing homeownership rates across nativities, as did the Immigration Commission in its 1911 report [Table 89, p. 468], each observation would reflect a different point on a rising age profile of rates. This will confound any attempt to judge the relative propensities to own a home of distinct émigré

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<sup>6</sup> The combination of the willingness "to live in the most beggarly way, ... [to] spend as little for living as possible, and to carry out of the country what they can thus save" was frequently cited as an argument against free immigration in the late nineteenth century. The quotation here is from a report on "Uniform Hours of Labor" and was directed specifically at French Canadian immigrants [Massachusetts Bureau of Statistics of Labor 1881: 470].

groups. The social historians who focused on immigrant welfare typically did not have data on homeownership. Scholars who made detailed studies of a locality typically were able to examine manuscript census returns with information on home ownership, but, because the number of nationalities involved was circumscribed, could not shed light on possible differences across groups in the propensity to assimilate.

The fact that homeownership rates rise with age is evident when examining recent data. Figure 1 presents profiles by age for five selected cohorts born between 1936 and 1960 based on data for 1985 to 2010. Interestingly, each birth cohort traced out a trajectory as its members aged that follows the same path traversed by the other cohorts. Overall the homeownership rate shown rises from 37.7 percent for the 25- to 29-year-olds in 1985 (i.e. the cohort born in 1956 to 1960) to 82.4 percent for those aged 70-74 in 2010 (born 1936-1940).<sup>7</sup> For the period under consideration in this paper, however, I do not have access to data that would allow me to follow cohorts as they age. For most of the quantitative work, therefore, I rely upon cross-sectional data by age. The cross sections are a snapshot of the population at a point in time. There are, as is well known, pitfalls to avoid when interpreting cross sections by age as longitudinal data [Jianakoplos, Menchik, and Irvine 1989, Hurd 1997: 931-938]. Briefly put, these include confounding cohort effects, possibly-strong period effects, cohort-specific life-time shocks, a correlation between the characteristic of interest (in my case, home ownership) and mortality, and – a particular focus of this paper – the aggregation of heterogeneous groups displaying a diversity of behaviors. Bear with me. I will discuss each of these issues with the objective of raising confidence in my conclusions, but if I am allowed to generalize from the data displayed in Figure 1, the fact that each cohort's profile lies very close to all of the others means that a cross section taken at any date between 1985 and 2010 would lie on the same trajectory as that traced by the sequential cohorts. For modern data, at least, confounding cohort effects can be ignored.

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<sup>7</sup>That older group also showed a small decline from a rate of 82.8 percent recorded in 2005 to 82.4 in 2010, suggesting a slight tendency to withdraw from home ownership after age 64. Similar declines in the homeownership rate beyond 64 are evident in longitudinal data. Generally speaking, however, retirees rarely sell their primary residence even in advanced age, unless a drastic event such as illness or death of a spouse occurs [Venti and Wise 2004, Nakajima and Telyukova 2011]. I believe this is because the home provides a secure stream of housing services and at the same time serves as a "precautionary asset" [Poterba, Venti, and Wise 2011]. On the other hand, there is evidence that the elderly undermaintain their homes and thus remove equity value to finance consumption [Davidoff 2006].

This report investigates the state of knowledge about urban and non-farm home ownership by nativity before World War I employing data at the household or family level.<sup>8</sup> For 1900 and 1910 I rely on samples drawn from the manuscript enumeration schedules underlying those two U.S. censuses [Ruggles *et al* 2010 IPUMS]. For 1890 I reproduce data published in the U.S. Census Reports of that year [Volumes 1 and 13]. Approximations to homeownership rates can also be calculated from the response to questions about real estate ownership asked in conjunction with the federal census of 1870. The census of 1880 did not enquire about home ownership or real estate holdings.

### **Home ownership in 1890**

The first Federal census which explicitly inquired about home ownership was that of 1890. For illustrative purposes, it is convenient to start there.<sup>9</sup> According to the published returns approximately 48 percent of all “homes” were owner-occupied.<sup>10</sup> A comparison of cross sections for 1890 and 2010 is presented in Table 1 which displays the data for household heads arrayed by five-year age periods. It is not particularly surprising that homeownership rates are higher today than in 1890, but the fact that as early as 1890 home ownership was achieved by 69 percent of the household heads aged 60 and over is impressive. Real incomes, of course, were lower then. There were fewer two-earner households. And, 1890 was long before government-sponsored incentives to home-ownership and the introduction of long-term fully-amortized mortgages.<sup>11</sup> Before World War I the high rate of American home ownership was thanks to land abundance and the prominence of owner-operated farms.<sup>12</sup> In 1890 38 percent of

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<sup>8</sup> The distinction between the family and the household is important for the analysis. This issue is explored in what follows.

<sup>9</sup> Unfortunately, the household-level data from the 1890 census was not preserved. It was destroyed as a consequence of a damaging fire in the basement of the Commerce Building in 1921 [Blake 1996, O'mahony 1991].

<sup>10</sup> A “family home” in the census definition is synonymous with a census household. The 1890 U.S. Census asked the question “Is the home you live in hired, or is it owned by the head or by a member of the family? The instructions to the enumerators included the following: “A house is not necessarily to be considered as identical with a home and to be counted only once as a home. If it is occupied as a home by one or more tenants, or by owner and one or more tenants, it is to be regarded as a home for each family.” [U.S. Census 1890, Volume 13, p. 5].

<sup>11</sup> In 1890, mortgages typically matured in five years or less and required only the payment of interest while they were outstanding. It was not uncommon however for the borrower to renew the mortgage several times before accumulating enough saving to pay the principle owed. The encumbrance was generally between one-third and one-half of the property value [Snowden 1987 and 2006: 399, Eichengreen 1984].

<sup>12</sup> Home ownership was high among farmers throughout American history (leaving aside the cases of black slaves and of black sharecroppers). Ownership of farm land universally meant ownership of the farm operator’s residence. American land abundance and her tradition of small-scale owner-operated “family farms” implied a high ownership



households were farm homes. Farm versus non-farm differences were great, with 66 percent of farm families living in owner-occupied units contrasted to a 37-percent rate for non-farm families. Still, the ownership rate for non-farm households over 60 was 58 percent.

A progressive tendency toward ownership, with the rates advancing with age, is evident in both the 1890 and the modern data displayed in Table 1. This suggests that saving and acquiring a home was part of a life-course plan then as well as now. Table 2 indicates that in 1890 only 28 percent of the owned homes were mortgaged. The highest rate of indebtedness, 36 percent, was among non-farm household heads aged 30 to 34. The fraction of owner-occupied dwellings that had an outstanding mortgage falls off after age 34. I suggest this indicates that many families put home ownership a priority over remaining debt free and that many of these families were ultimately successful in extinguishing the debt. For non-farm household heads 60 and over the fraction remaining in debt was only 17 percent.

I present the only data available in the 1890 Census *Reports* on home ownership by immigrants in the third table. The homeownership rate for the non-farm population of immigrants is remarkably high, 37.4 percent. This should be compared to the rate for the native-born, 40.5 percent. However, as noted, homeownership rates will be correlated with the age of the household head. The “new” immigrants in 1890 would on average be younger than the natives or the older immigrant stocks. Unfortunately the homeownership rates of immigrants were not cross tabulated by age in 1890. In 1890 the median age of all foreign-born white males was 35.<sup>13</sup> But the median age would have differed by country of origin because of the different timing of immigrant flows [Barde, Carter, and Sutch 2006: Figure Ad-D, p. 534]. The low homeownership rates shown in Table 3 for Italians, Russians, and Austro-Hungarians most likely would be explained by their status as recent arrivals in 1890.<sup>14</sup> The very low rates for the Chinese and Japanese reflect segregation into ethnic ghettos, prohibitions on naturalization and ownership of real

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rate. Tenancy was for most farmers a stepping stone to eventual ownership as indicated by the rising rates of ownership across age groups for farmers recorded for 1890 in Table 1.

<sup>13</sup> Calculated by interpolation of the age distribution given in U.S. Census [1890: Volume I, Part 2, p. 110].

<sup>14</sup> The 1890 Census *Reports* do not present the age distributions for immigrants by country of ancestry. I estimate that the average age of Italian immigrants enumerated in 1890 was roughly 26 years. For those born in Great Britain the average would be 39 years. These estimates were made assuming all immigrants were age 18.5 in the year they arrived and that their mortality after arrival followed that reported in the American Standard Life Table calculated by Sheppard Homans and based on the pre-Civil War experience of the Mutual Life Insurance Company of New York [Clough 1946: Table 8, p. 62]. The annual flows of immigrants arriving from Great Britain and Italy are given in Carter *et al* [2006: Series Ad107 and Ad117].

estate, and racist hostility directed at Asians by many in the dominant white population.<sup>15</sup> The explanation of the high rate for Scandinavians would be their comparatively high propensity to become farmers in their adopted homeland.

### **The 1870 real-estate-age profile**

While the 1890 Census was the first to explicitly ask about home ownership, I can provide a glimpse on immigrant homeownership by age and national origin at an earlier date by exploiting the census of wealth conducted in 1870. The Census Office collected data from every adult enumerated as part of the decennial count of the population, asking the value of the real estate owned and the amount of personal property held.<sup>16</sup> The information collected has, as should be expected, some deficiencies, but with due attention to the quality of the data and the conceptual problems that confound its interpretation, I can exploit this data to produce an estimate of home ownership. I believe that when examined at the level of the consanguineal family the data reported for real estate holdings is nearly always indicative of home ownership.<sup>17</sup> Farmers who owned land almost universally owned the farm house in which they resided. It would be very unusual for someone who did not live on a farm to own land but not their home. As mentioned, the compilers of the 1890 census also thought that owning land but not a home would be rare.

I am interested in the 1870 data to provide a point of comparison with the data from the age of mass immigration. High volume migration (including a generous component of temporary migrants)

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<sup>15</sup> Racial discrimination directed against Asians was particularly virulent in the three Pacific coast states [Daniels 1988: Chapter 2]. Foreign-born Chinese and Japanese were prohibited from naturalizing by the 1790 Naturalization Act, its 1870 Amendment, and the Chinese Exclusion Act of 1882 [Kwong and Mišćević 2005: 58-60]. I think it is likely under the circumstances that many Asians of that period would not consider themselves to be permanent residents. The Washington State Constitution adopted in 1889 prohibited land ownership by Asian immigrants.

<sup>16</sup> The data on wealth was reported in columns 8 (for real estate) and 9 (for other personal property) of the same form used to record the population data for the 1870 census [U.S. National Archives, 1870 U.S. Census, population schedules]. The data employed in this paper is drawn from the one-percent public-use sample of the enumerators' manuscripts downloaded from the IPUMS-USA website [Ruggles *et al* 2010]. Screen images of the original manuscript returns are available from Ancestry.com [2009]. The 1870 census was not the first time that questions on wealth were asked in the decennial census, but it was the last. The same two questions about real estate and personal property were asked in 1860 and the real estate question was asked in 1850.

<sup>17</sup> Estimates of homeownership based on the real estate question in the 1870 census have also been made by William J. Collins and Robert A. Margo [2011]. However they examined only the real estate reported by the household head. I aggregate the real estate reported by all members of the household related to the household head by blood, marriage, or adoption. My estimates as well as those by Collins and Margo exclude unrelated individuals living as servants or boarders with the family of the household head as well as those living in institutions and group quarters.

began around 1880 after steamships eliminated the much slower and more uncomfortable sailing ships and steamship lines engaged in fare wars during economic recession of the 1870s [Keeling 2012].

Before delving into the definitions, difficulties, and disclaimers, I begin by displaying in Figure 2 the 1870 age profile of home ownership for a sample consisting of households headed by an individual born outside of the slave states.<sup>18</sup> Home ownership is indicated by a positive value for the reported dollar value of real estate owned by the household head plus any real property owned members of the householder's immediate family. There are two reasons for excluding households headed by someone who was born in one of the slave states.<sup>19</sup> This rule excludes former slaves who, as slaves, were unable to accumulate or even to own assets and who had been emancipated only five years before the census without a transfer of wealth from their former owners. These freedmen had no opportunity to accumulate a level of wealth appropriate to their age and income. Blacks also faced discrimination in the real estate market of the South that effectively restricted the ex-slaves' ability to own land or homes. Most became renters or sharecroppers after the Civil War and black ownership spread only slowly in the subsequent decades [Du Bois 1901, Ransom and Sutch 2001: 81-105, Collins and Margo 2011]. This racial hostility must have served as a crippling disincentive to save in the primarily agricultural south. The second reason to exclude southern-born household heads is to exclude former slave owners. Before the end of slavery the white owners could anticipate being supported and served by their slaves when they entered old age. Before the war, they had a considerable fraction of their wealth invested in slaves. When the slaves were freed and their owners not compensated, former slave owners were thrown into a wealth-income disequilibrium that prompted them to engage in heavy saving in the years immediately following the war in an effort to restore some of their lost wealth [Ransom and Sutch 1988]. These distortions to "normal" patterns of wealth holding and saving were specific to the era and the southern-born. Including households headed by someone born in the South (irrespective of where they lived in 1870) could distort the shape of the national real-estate age profile.

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<sup>18</sup> Note that this sample includes the foreign born wherever they resided in the United States and includes those born in the North and West who resided in a former slave state in 1870.

<sup>19</sup> Alabama, Arkansas, Delaware, the District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

Figure 2 displays the homeownership rate by single years of age and a polynomial curve fitted to the data.<sup>20</sup> For comparison the chart also displays the smoothed profile for all U.S. family households. The smoothed curve of the non-Southern-born sample reaches a peak rate of 74 percent at age 65. Taken at face value, this is an impressive achievement. Before turning to the very legitimate question of what conclusions I can draw about individual motives for home ownership from a cross section, I should explain the nature of the data and defend the choices made in preparing the raw numbers for presentation in Figure 2.

Political tensions were unusually high in anticipation of the census of 1870 and in the aftermath of the Civil War. Before the end of slavery, slaves counted only three-fifths of a person in establishing the size of each congressional district (Article I, Section 2, Clause 3 of the U.S. Constitution). After emancipation the freed slaves were to be accorded parity with everyone else in the reapportionment. The Republican Congressmen from the northern states were concerned about the additional seats that would, as a consequence, be granted to southern states and which were likely to elect members of the Democratic Party.<sup>21</sup> While a compromise was sought the bill authorizing the census was held in abeyance. With the compromise enacted by the Fifteenth Amendment to the Constitution in February of 1870 and Section 2 of the Fourteenth Amendment, Congress lost interest in reforms to improve the basic machinery of census taking. With so little time before the census date of June 1, the Census of 1870 was conducted employing the same procedures used in 1860, which in turn had been defined ten years before by the act to conduct the census of 1850 [Anderson 1988: 72-82].

The two questions on wealth were carried over from the 1860 Census. The instructions to the U.S. Assistant Marshalls who enumerated the 1870 census read:

*Property.* Column 8 will contain the value of all real estate owned by the person enumerated, without any deduction on account of mortgage or other incumbrance,

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<sup>20</sup> Figure 2 presents the age profile truncated at the right and left. There are very few household heads under 16 and the sample size thins out through the force of mortality at very high ages. Fifty-four observations for households less than 16 years of age and 51 households over the age of 85 are excluded. The remaining sample size is 48,883 households whose head was born outside of the slave south. A fifth-degree polynomial is fit to the observations for ages 16 to 80. The result is robust to alternative smoothing transformations, including locally weighted scatterplot smoothing (lowess).

<sup>21</sup> The political ideologies of the Republican and Democratic parties switched in the mid-twentieth century. In the nineteenth century Republicans championed civil rights, social safety nets (pensions), and the primacy of the federal government. The Democrats were the conservative party favoring states' rights and segregation of the races.

whether within or without the census subdivision or the country. The value meant is the full market value, known or estimated.

"Personal estate," column 9, is to be inclusive of all bonds, stocks, mortgages, notes, live stock, plate, jewels, or furniture, but exclusive of wearing apparel. No report will be made when the personal property is under \$100.<sup>22</sup>

The unit of analysis is the “**census family**,” which could either be a single individual or group of individuals living together in a dwelling unit. The members of the family need not be related. Boarders, lodgers, and servants were considered by the census as part of the census family if they slept in the dwelling place, regardless of their housekeeping arrangements. The dwelling unit was not necessarily a detached structure. Two or more families might reside in a single structure, provided they occupied separate parts of it and their housekeeping was separate [Ruggles et al 2010: Chapter 2, “Sample Design”].<sup>23</sup>

The homeownership variable I calculate is based on the total real estate wealth recorded in the census for all members of the immediate **consanguineal family** unit *living together in the same household*. I presume that these family members form a single economic unit with shared resources and non-conflicting economic goals and interests.<sup>24</sup> The immediate consanguineal family is defined to consist of the household head, his spouse, their unmarried children, and their resident (and presumably dependent) parents, whether these relationships are by blood, marriage, or adoption. Siblings, other relatives, non-relatives, domestic servants, and boarders are not included.

“**Household age**” is defined to be the age of the household head or the age of his wife if his wife is younger than he.<sup>25</sup> My logic is that when a couple is engaged in life-cycle planning for old age, the age

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<sup>22</sup> The wording of the instructions can be found most easily on the IPUMS website. They may also be found in the Census publication, *Twenty Censuses* [U.S. Bureau of the Census 1978]. The exclusion of personal estate under \$100 was not part of the instructions to enumerators of the 1860 Census.

<sup>23</sup> The definitions employed here make the 1870 results as comparable as possible with the published census statistics on homeownership defined in 1890 and used for subsequent censuses through 1930. Unfortunately, the sample of the census population in 1870 does not allow us to reliably define a life-cycle-relevant family. When I turn to the census data from 1900 I will explore differences between the ownership rates of households and those for life-cycle-relevant families.

<sup>24</sup> This unity of economic interests might be by choice or be imposed by the patriarch.

<sup>25</sup> A woman is head of the household, by the IPUMS definition, only when a spouse is absent either because she is widowed, divorced, abandoned, or never-married.

of the youngest member of the pair is relevant to determining the target wealth required on the date of the husband's retirement. The younger the wife, the longer would be her expected life remaining at the time of her husband's retirement.<sup>26</sup> Typically men married women younger than themselves. In 1870 the average age gap was 4.7 years. A histogram of the age gap is presented in Figure 3. The effect of using household age rather than the age of the household head shifts the age at which the homeownership rate begins to decline in the cross section from 68 to 65 (Figure 4).

**Immigrant Status** The distinction by nativity uses the IPUMS definition of the native-born population which includes those born in the territories of the United States. In the 1870 sample there are 41 other places of birth defined. The most numerous nationalities of origin were Germany, with 34 percent of the foreign-born household heads; Ireland, 33percent; England, 11 percent; and Canada, 6 percent. Table 4 compares the non-farm homeownership rates for household heads from several countries of birth in 1870 with those reported in the census for 1890. The 1870 figures are for non-farm households with a head born outside of the South. While homeownership rates of natives fell over the two decades, those for the foreign born rose. The age profiles of homeownership for natives and foreign-born are presented in Figure 5. Both populations exhibit a rise in rates as age increases in the cross section. While the foreign-born achieved an impressive 48 percent homeownership rate by age 60, they were less successful than the native born by this measure. It is worth considering however that immigrants were more likely to live in large cities than the native-born.

**“Urban and rural places”** are defined by the census and carried over to the IPUMS data sets. An urban place has a population of 2,500 or more. Households located in rural places are designated as either a farm home or otherwise. Figure 6 reproduces the age profile from Figure 2 to facilitate comparison with the real estate ownership rates for urban and rural non-farm housing. As expected, ownership was less common in urban areas than rural areas. Moreover, there is a strong general tendency for real-estate ownership by households to decline with city size. Figure 7 presents the results. The descending stair case at the left displays the average ownership rate for several size classes of cities. Note that the horizontal axis is a logarithmic scale. At the right the values for 12 large cities are shown separately. Only Buffalo, New York, appears to deviate from the downward sloping scatter of points.

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<sup>26</sup> In the nineteenth century few married women with a spouse present worked in the labor market.

Property values were higher in cities than in rural areas making home ownership less affordable. This is suggested by the increase in the median value of real-estate holdings as I move across city size as shown in Figure 8.<sup>27</sup> That high property values forestall purchases of homes is strongly suggested by the scatter diagram in Figure 9. The higher the median property value in a city the lower its ownership rate. Note that Buffalo, New York, falls into line, unlike the situation portrayed in Figure 7. This suggests that real estate values are more significant than city size *per se*.

When considering the data on value of real estate I should emphasize that the distribution of real estate values is highly skewed. See Figure 10. At the lower end are the single family homes, but at the upper end the owners of tenant buildings, hotels, grand mansions, and commercial real estate will report values that far exceed the value of a typical home. For this reason I report median values rather than average values, but even that metric may produce a distorted picture of the typical value of a home.<sup>28</sup>

**“Occupation not income”** Many city dwellers, as is suggested by Figure 6, had managed to acquire a home by the time the household had reached age 55. I do not have data on income for 1870, but occupation can give a rough indicator of the earning power of the household head. Table 6 presents the ownership rates for older workers for several broad occupation groups. Common laborers typically made less income than semi-skilled and skilled craftsmen and operatives. It is not surprising therefore that those who remained a common laborer until age 55 were less successful in achieving ownership.

### **Household heads and life-cycle-relevant families, 1870 and 1900**

The 1870 information on real-estate ownership was used to proxy homeownership rates for IPUMS-designated household heads. That procedure will generate ownership rates comparable to the standard published census figures for 1890, the twentieth century, and the last 12 years. However, the family unit relevant for a life-cycle analysis would include all individuals and families that were financially self-

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<sup>27</sup> Figure 8 displays the median value of real estate recorded for each individual. The values are not aggregates for all members of the consanguineal household. Southern states and most western states are omitted because the number of observations for each city is too small to yield precise measures of the median value of real-estate holdings. The states included are California, Connecticut, District of Columbia, Illinois, Indiana, Iowa, Kansas, Maine, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

<sup>28</sup> However, I suggest that the typical value of a low-end home is highly correlated with the median values shown. The 25<sup>th</sup> percentile of the values is highly correlated with the median. See the insert at the bottom of Figure 10.

reliant and independent regardless of their living arrangements. Boarders, servants, live-in friends, and other adults, some of whom may well have considered themselves financially independent, were included within the extended family of the census-designated household head. The base for the ownership rate should properly include these life-cycle-relevant families. I wish to define the life-cycle-relevant family to include these individuals and I assume that none of these additional families were home owners. Excluding family heads who were non-consanguineal members of the census household will bias the published homeownership rate upward.

Because the marital status of individuals and their relationship to the head of the household in 1870 was *not* recorded by the census takers, the IPUMS staff imputed these details employing a combination of logical inference and statistical imputation. I determined that these imputations are insufficient to distinguish with confidence the resident boarders, employees, and other adults who were likely to be heads of their own independent family from members of the consanguineal family. Many of the imputed relationships were based on probabilities estimated from relationships reported in the 1880 census.<sup>29</sup> Those based on inference from the information actually reported in 1870 run the danger of imposing the preconceptions of the researcher about marital status and family relations.

The IPUMS five-percent sample of the 1900 population, however, allows us to estimate the number of life-cycle-relevant family heads by relying on the enumerator's explicit reports of the individual's marital status and their relationship to the household head. When two or more census families lived in the same dwelling unit, each was assigned its own household head. So that is not the problem. The problem is confined to the inclusion within a household head's extended family of boarders, servants who lived on site, and other adults. I separate the life-cycle-relevant family heads living within each household into four groups. First, I included married males, spouse present, of whatever age.<sup>30</sup> For the next two groups I included never-married adults related to the household head. In doing so I faced the

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<sup>29</sup> The IPUMS variable recording these imputations for 1870 is named "imprel." The order in which names appeared on the census schedule, the similarity of surname, age, sex, occupation, and birthplace were used to determined approximately 75 percent of cases. For the remaining cases, the IPUMS employed a "hot deck allocation procedure" that probabilistically assigned the relationship to head of household. For details on the imputation procedure see Ruggles *et al* [2010: Chapter 5 of "IPUMS Design"].

<sup>30</sup> I do not need to consider married females, spouse present, since they would be part of the family of their husband. I have also excluded all individuals living in group quarters (since there is no homeownership information recorded for them), members of the clergy, the military, sailors who live at sea, and students who were recorded as household heads.



difficult issue of what should be considered the age of emancipation, since some single, but grown, children might consider themselves as financially independent while others still considered themselves a dependent member of their parents' (or employer's) family. The marriage of sons and daughters, of course, usually signals their independence. That is why I include all married sons, spouse present, living in the parents' home in group one. By age 24 over half of all women were married; at 27 over half of all males were married. Using those ages a rough guide, I included single, never married, male relatives aged 27 and older as life-cycle relevant family heads. I assume that younger single males who had not "struck out on their own" remained dependent members of the household head. The third group included single, never married, female relatives aged 24 and older.<sup>31</sup> The fourth group included all single servants and boarders over the age of 17, but excluding the relatives of servants and employees.

None of the additional family heads identified in this way, I assume, owned a home. After all, if they owned a home, they were unlikely to be living in the home of another. Table 7 presents a count of the additional family heads I identified. Figure 11 displays the age profile of home ownership for urban household heads (black lines) and for urban *family* heads (which includes, of course, the household heads).<sup>32</sup> Including the families of boarders, servants, and other adults lowers the overall homeownership rate from 31.1 percent to 20.0 percent, but the upward age gradient remains strong and the rate of home ownership at age 65-74 was an impressive 47.0 percent. Figure 11 also presents the fraction of family heads that were not household heads. As can be seen, these families were primarily headed by those under 35. Incidentally, the difference between census household and life-cycle family households has strong implications for the log-run trends in homeownership as is illustrated in Figure 12. Because of the decline in live-in servants and borders over time, the upward trend in homeownership is stronger for families than for census households which include servants and boarders as members of the household rather than financially as independent families.

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<sup>31</sup> Note that by including only the married, spouse present, and single, never married, relatives of the household head as life-cycle-relevant family heads I have excluded the once-married, but widowed, divorced, and abandoned, living in the household head's home. They are considered dependents of the head. Most of the individuals fitting this description were widowed women over 65. Modern data suggests that most elderly homeowners do not sell their homes unless they experience the death of a spouse or other major setback [Poterba, Venti, and Wise 2011]. I assume that widowed parents of advanced age living with one of their grown children have ended their independent economic status.

<sup>32</sup> Because I could not with certainty identify the spouse of the married males, spouse present, who were not household heads, I have set the household age for those individuals at the husband's age.

## Home ownership and immigrant status, 1900

The 1900 census provided information on place of birth and the year of immigration for the foreign born. That census has two advantages over the 1870 census. First, my information on home ownership that year comes from a direct question. I do not have to infer the incidence of home ownership from real-estate ownership. Second, the IPUMS sample for 1900 is a five-percent sample, rather than a one-percent sample, so I have greater precision when examining smaller subgroups of the population. Turning then to 1900, Figure 13 displays the age profile of home ownership for immigrant and native families. Only non-farm families living in urban places (over 2,500 in population) are included in the data used to generate the graph. The two profiles are essentially identical at young ages, but by the late 20s the ownership rates for immigrants overtake those for the natives. Overall, the immigrants living in urban areas have a homeownership rate of 22.6 percent compared to 18.2 for the natives.<sup>33</sup> Because immigrants tended to arrive as young adults and would require some time to settle on a location, save income, establish a family, and acquire a home, it is not surprising that it took a decade before the higher propensity of immigrants to become homeowners was manifested.

Figure 14 presents the ownership profiles defined for census households and the household head's age. In that picture the advantage of the foreign born almost disappears. At young ages the natives exhibit higher rates and their success is not overtaken by the immigrants until about age 50. Proportionately more natives than foreign-born were servants, boarders, emancipated relatives, and others left out of the census definition. Thus the upward bias inherent in the census definition is greater for the native-born than for immigrants, thus obscuring the relative success of the later.

A surprising proportion of immigrants were successful in achieving home ownership after residing in the United States for many years. Figure 15 displays the homeownership rate by length of residence in the country. Only those who immigrated as adults (aged 15 or over) are included.<sup>34</sup> The chart shows a slow but steady rise in the overall rate. The figure also provides a hint at how this assimilation and embourgeoisement was achieved. At first the household borrowed to finance the purchase and then over time saved to pay off the mortgage. I am inclined to be cautious, however, when

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<sup>33</sup> If the native-born are restricted to include only those born outside the South, the conclusion stands. Immigrant homeownership rates exceed those of the native born by their late 20s and remain higher until the mid-60s.

<sup>34</sup> Rachel Friedberg [1992: 4-5] reminds us that those who immigrated as children, presumably with their parents, are likely to experience higher rates of assimilation due to higher fluency in English and education in U.S. schools.

interpreting these cross sections. Return migration was common, particularly between 1890 and 1914 when return rates were over 40 percent of the annual inflow and perhaps higher [Carter *et al* 2006: Series AD23-AD24; Bandiera, Rasul, Viarengo 2010]. If return migration selected for those who were “unsuccessful” in the United States then some of the improvement by length of residence seen in the chart might be due to the thinning ranks of those who failed to thrive, save, and purchase homes [Abramitzky, Boustan, and Eriksson 2011]. On the other hand, returning migrants might be among the most successful, those who achieved a target level of wealth and returned to their native country to invest, marry, and/or retire. Those individuals would presumably have remained renters during their sojourn in the United States, thus their departure would also remove renters from the mix as years of residence or age increased. The profiles in the Figure 15 indicate the success of *permanent* immigrants in this country.<sup>35</sup>

### **The proportion of sojourners in the immigrant population<sup>36</sup>**

The extent of distortion in the cross sections shown in Figures 11, 13, 14 and 15 caused by the possible negative selection of return migrants will depend upon two factors. First, there is the issue of whether the return migrants left because they were failures. The second factor is the fraction of the population captured in the cross-sections who were individuals destined to return. The data on migration flows to the United States during the period under investigation probably understates the true magnitude. Bandiera, Rasul, and Viarengo (2010) estimate the inflows to have been twenty-percent higher than stated in official statistics for the 1900-1910 decade.<sup>37</sup> The official data on return migration is even less precise and annual numbers are only available for 1908 and after. Simon Kuznets and Ernest Rubin [1954] estimated departures of alien passengers which suggest that approximately 46 percent of the officially counted

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<sup>35</sup> The impact of return migration would also affect the homeownership profiles by age in Figures 11, 13, and 14.

<sup>36</sup> The term “sojourner” was not used by the Immigration Commission. The concept was introduced into the literature on immigration by Paul Siu [1954]. The sojourner is one “who spends many years of his lifetime in a foreign country without being assimilated by it. ... This characterization may be applied to a whole range of foreign residents in any country to the extent that they maintain sojourner attitudes.” And, Siu adds, “the intrinsic purpose of the sojourn is to do a job and do it in the shortest possible time.” “The hope and dream of an economic adventurer is, of course, to make a fortune, and the length of the sojourn depends upon his success or failure in the adventure” [Siu 1954: 34-35]. The only modification to this definition that I suggest is to take note of the fact that in the American case during the mass immigration the sojourn might be “many months” in duration, rather than many years, although the latter characterization would apply to some, the canonical case being the Chinese laundryman famously studied in Siu’s 1954 dissertation [Siu 1987].

<sup>37</sup> For a discussion of the official estimates see the documentation notes to Carter *et al* for Series Ad1-2 [2006, Volume 1, pp. 542-543]. The revised immigration estimates by Bandiera, Rasul, and Viarengo are sensitive to a number of underlying assumptions which render their findings suggestive rather than definitive; see their data appendix.

immigrants returned in the years including and immediately preceding 1900 [Carter *et al* 2006, Series Ad24].<sup>38</sup> Of course that decade was marked by high unemployment rates which undoubtedly discouraged many [Carter and Sutch 1992]. The official data suggests a return rate of about 32 percent during and immediately preceding 1910 [Carter *et al* 2006, Series Ad1-Ad2].

While many returned it is difficult to know what fraction had intended to return after a short stay and what fraction left after “failing” in the American labor market, I can make a rough guess though. According to the Kuznets and Rubin estimates, the number of alien departures was highly sensitive to economic conditions in the United States with peaks in 1885, 1894, 1903, and 1908 that corresponded to business-cycle troughs in May 1885, June 1894, October 1904, and June 1908 [Carter *et al* 2006: Table Cb5-8]. There were relatively low rates of departure in years of prosperity. I estimate from this cyclicity that about 3.5 percent of arriving immigrants over the 1880-1910 period had intended to become permanent residents but were sufficiently discouraged by business conditions to return. I consider this fraction to be low and that negative selectivity of return migration is unlikely to produce a major distraction when interpreting the cross-section results as synthetic cohorts. Approximately 33.4 percent of in-migrants returned either because they were intentionally-temporary residents in the United States or returned for other reasons than failure in the job market.<sup>39</sup> See Figure 16.

Despite return rates that averaged about 37 percent between 1880 and 1910, the number of foreign-born individuals counted in each census will be low, since most sojourners returned within a year or two. To construct an illustration I assumed that in each year between 1870 and 1890 one half of the estimated number of foreign-born departing left within one year of their arrival and the remaining one half left within two years. I then calculated that only 2.3 percent of the 1890 foreign-born population that arrived in the two preceding decades would be individuals who would ultimately return. If the departures are spread over six years, rather than two, and decline exponentially from forty percent, then 2.4 percent

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<sup>38</sup> Despite the probable undercount of the in-migration numbers which underlie the Kuznets and Rubin estimates, their rates of return would be accurate to the extent that alien departures were underestimated in the same proportion.

<sup>39</sup> These guestimates were calculated by fitting a lower envelope to the three-year centered moving average of return rates assuming an average of a one-year stay for returnees. The lower envelope can be thought of as a counter-factual return rate if all years were prosperous. That envelope is a piece-wise linear trend through the data points for 1873, 1882-1883, 1887-1888, 1893, 1899 and 1910. Coincidentally, these dates correspond to the business-cycle peaks dated October 1873, March 1882, March 1887, January 1893, June 1899, and January 1910.

of the foreign-born at the time of the census will return by 1906.<sup>40</sup> I conclude that the number of non-permanent residents in the data used to calculate the cross-section profiles is too small to vitiate the conclusions.<sup>41</sup>

I find additional support for my conclusion that immigrants were relatively more successful in acquiring homes than equally situated natives by exploring the geographical dimension of settlement. Immigrants were more likely than those born in the United States to settle in large cities and home ownership was increasing less common for both groups as city size rose. Figure 17 displays the homeownership rates for immigrant and native families aged 55 and over by city size. By concentrating attention on this older cohort, I capture homeownership near the end of the life-cycle accumulation phase and restrict attention to immigrants who were most likely to be permanent residents in the United States. For every size category the foreign born exhibited *higher* rates than the natives. The difference (excluding New York) is estimated at 11.7 percentage points!<sup>42</sup> New York, the largest city in 1900 and the port of entry for most new arrivals at the time, is an exception. In that city the homeownership rates of natives exceeded that of the immigrants, 21.8 percent versus 18.1 percent.<sup>43</sup>

I can conclude that immigrants living in urban areas were generally more successful at achieving home ownership than their native-born neighbors. Upon reflection, this result should not surprise us. Immigration selects for the ambitious and hard working. Immigrants were reported to be heavy savers with an unusually strong demand for real estate. With only the census returns to inform us it is not possible to determine whether this desire to become home owners was due to the landless status of their

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<sup>40</sup> These illustrative numbers will be upper bounds because the calculation ignores those who arrived before 1870 and survived as U.S. residents until 1890. Very few of that group are likely to return after 1890.

<sup>41</sup> I am puzzled by the contradictory results recently reported by Ran Abramitzky, Leah Platt Boustan, and Katherine Eriksson [2011: 3]. They examine a panel of foreign-born men with “uncommon names” who they were able to link between the 1900, 1910, and 1920 censuses. They included only men aged 18 and 35 in 1900 who had arrived in the US before 1900. Their match rate was 8.9 percent [2011: Table 1]. Their native comparison group includes only those residing in northern states. The match rate for that group was 19.2 percent.

<sup>42</sup> The estimate is based on a probit regression with homeownership (zero or one) as the dependent variable and the log of the city population, age and higher orders of age, dummy variables for married and ability to speak English, and a dummy variable for the foreign born (0 or 1) as independent variables. Only urban families – excepting those in New York City – whose head was age 55 or older were included. N=74,091. The results of a linear probability model were essentially the same. If New York is included the estimated difference is 9.5 percentage points.

<sup>43</sup> New York City was consolidated in 1898 joining all five Boroughs and abolishing the five existing county governments.

forbearers in Europe [Reimers 2011: 366; Bodnar, Simon, and Weber 1983: 153], their desire for status and a voice in their chosen community [Abbott 1936: 379-382, Thomas and Znaniecki 1918-1920: 162, Luria 1976, Simon 1976: 448, Kirk and Kirk 1981], their employer's preference for workers who were settled and less likely to quit [Fitch 1910: 193], or – as I believe – the importance of acquiring a life-cycle stock of wealth because of an inability to rely upon distant family members for protection in old age. Probably a mix of such motives weighed more heavily on immigrants than natives.

Ethnic histories of immigrants uniformly report that the desire for home ownership was strong in each immigrant stock examined [Kirk and Kirk 1981: 472 {citing Williams 1938: 6, 46; Nelli 1970: 34; Woods and Kennedy 1969: 39, 132; Byington 1910: 155-156, Conzen 1976: 79-80; Sutherland 1973: 196; Bodnar 1976: 49-50; Addams 1910: 243; and Barton 1975: 101-104}]. The census data confirms this. Figure 18 displays the success rates for the most prominent countries of origin (all those with over 100 observations from urban areas outside of New York City). There were some differences. China, Russia, Italy, and French Canada recorded lower success rates than the other countries of origin. The Chinese reported almost no home ownership, but this was during the era of Chinese exclusion. Most Chinese were single men (or married with their family remaining in China) who intended to return to China. They were excluded by law or discrimination from many occupations. They could not naturalize.<sup>44</sup> French Canadians (and perhaps Italians) were more like to be temporary sojourners than permanent residents. Although the chart depicts the rates only for those who had resided in the U.S. for ten years or more, it is still possible that those in the more recent flows from Russia and Italy had insufficient time to save for a down payment. The chart indicates with red bars the homeownership rates achieved for urban families outside of New York City and with blue bars for all cities for those national origins with a prominent presence in New York City. Russians and Italians were disproportionately residents of that city with its low incidence of home ownership.

### **Progress in achieving home ownership between 1900 and 1910**

Another way to address the possible cohort founding effects of relying on cross sections from a single census is to consider specific cohorts as reported in successive censuses. In Figure 19 I display the homeownership rates for foreign-born male family heads comparing the profiles from the 1900 and 1910 IPUMS. The two cross sections are very similar. The rates in 1910 are slightly lower than in 1900 for the

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<sup>44</sup> See Erica Lee [2003, 2006] and Susan Carter [2011] for discussions of the Chinese experience in America during the Exclusion Era.

ages up to the mid-50s, but they then rise to a slightly higher (65 versus 62 percent) and later peak (at age 71 versus 66). The similarity, however, does not mean that little progress in securing homes had been achieved over the decade. The 1910 data reflect the situation not only of those family-heads resident in 1900 (now ten years older), but also include men who were not family heads in 1900 but became so during the decade plus all of the recent immigrant arrivals who became family heads by 1910. In fact, many renters and dependents in 1900 were successful in achieving homeownership over the decade.<sup>45</sup> Their success is obscured in this figure by those who recently arrived and remained renters or dependents in 1910.

To display the advances made by immigrants I calculated the *rate* of net flow from the status of non-homeowner to owner by adapting the intercensal cohort-component method of measuring flows, also known as the census survival method.<sup>46</sup> As an illustration of the technique, consider the number of foreign-born males, say, 26 years of age in 1900 who did not report owning a home. Ten years later these individuals, if still alive and resident in the county, would be 36-years old. The actual number of 36-year old non-home-owners meeting this description in 1910 however, will, in general, be different. This is because some 26-year olds in 1900 would have died and some would have moved abroad in the intervening decade. I subtract out an estimate of the net losses from the 1900 homeowners due to death or return migration abroad to reach an estimate of the hypothetical number of non-home-owners to be found in 1910 had there been no net flow into or out of ownership during the intercensal period. The difference between this hypothetical expected number and the actual number reported in 1910 is an estimate of the number who became home owners.

To estimate the mortality and net migration rate I calculate a “survival rate” for each age cohort of foreign-born males.<sup>47</sup> The rate is defined as the number of foreign-born males of age X in 1910 less

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<sup>45</sup> Of course, some 1900 homeowners will have become a resident in the home of someone else, one of their grown children most likely, by the end of the decade. Thus both cross sections exhibit a decline in ownership rates at advanced ages.

<sup>46</sup> See United Nations [2002], and Shyrock, Siegel, and associates [1976: 357-358] for a description of the technique. The census rate of survival procedure was first introduced by Hamilton [1934, 1944]. Sutch [1975:199-210] gives an example of the method used to estimate geographical net migration. Carter and Sutch [1996] give an example used to estimate the flows into and out of employment. Sutch's appendix provides a detailed description of the procedure and discusses the accuracy and sensitivity of the method.

<sup>47</sup> The 1900 IPUMS is a five-percent representative sample of the enumerated population. The 1910 IPUMS is a one-percent representative sample.

those who resided in the U.S. for less than ten years, with the result then divided by the number of foreign-born males of age X-10 in 1900. The rates are plotted in Figure 20. Of course, no true survival rate defined this way could exceed one and it is unlikely that the 1910 30-year-olds were markedly more robust than their 29- and 31-year old colleagues. These distortions reflect the under numeration of young adults in 1900 (the 28- and 30-year olds in 1910 were 18 and 20 in 1900) and age heaping in the census reports. To the extent that the degree of under enumeration and age heaping at each age is uniform across the states under study, however, use of the census survival ratios will automatically correct for this bias. The use of life tables would introduce serious errors [Price 1950; Sutch 1975]. Note that for this purpose migration abroad is equivalent to death.

With the estimate of the net increase in the number of homeowners, it is easy to obtain the annual rate of net flow into ownership. The bottom panel of Figure 21 displays these rates.<sup>48</sup> We have centered the rates midway between the age of a cohort at the beginning and its age at the end of the decade. These rates indicate the annual rate at which the non-homeowners became owners. Alternatively, we might call this the "net ownership hazard." The age at which net flows are zero (at the average age of 67) represents the age at which the number obtaining a home exactly equals the number leaving homeownership. Negative values of the rate represent net flows out of ownership. We have expressed these negative flows as a percentage of the number owning homes. At advanced ages some families either chose or were forced to leave the home they owned and live elsewhere. This alternative residence is likely to be in the home of their grown children. These rates therefore indicate the "net dependency hazard." The top panel of Figure 21 presents the rates of transition from non-ownership to family headship, presumably a stepping stone to eventual home ownership.

### **Multivariate analysis**

Since, by definition, all of the life-cycle relevant families that resided with the census family of a household head were renters, I conceive of the decision to purchase a home as a two-step process. In the first step the family decides to become a household. In the second step the household decides to own or rent. Table 8 presents results for a series of probit regressions using data from 1900.<sup>49</sup> The top panel

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<sup>48</sup> The average annualized rate is computed as  $[(1 + m)^{0.1} - 1] * 100$ , where  $m$  is the difference between the actual and expected number of homeowners at a given age divided by the appropriate base value.

<sup>49</sup> The results for 1910 are similar.



reports regression coefficients on several dummy variables for as estimation of the probability of being a household head for all urban families. The dependent variable is a discrete indicator equal to one if the family head is also a household head. The discrete independent variables included are indicators for whether the family head is married and whether he (or she) speaks English. The place of birth is indicated in two variants. In equations 3, 5, and 6 a dummy variable indicates if the family head is foreign born. In equations 7 and 8 the foreign-born dummy is replaced by a set of twenty place-of-birth dummies. The places of birth are those portrayed in Figure 17. The second panel reports on the estimated probability that a household head is also a home owner. All the coefficients are economically and statistically significant. The coefficients (including those of the control variables) are stable across the several specifications. Particularly noteworthy is the result that at both stages the coefficient on foreign born is positive. Immigrants were successful at becoming household heads and, then, subsequently becoming home owners. The ability to speak English is taken to be an indicator of a desire to become a permanent resident. Marriage was a strong inducement to become a household head and ultimately a home owner.

Susan Carter, Roger Ransom, and Richard Sutch [2004] suggested that as young couples increasingly adopted the life-cycle strategy over the middle decades of the nineteenth century their desired family size fell since children were less necessary for old-age security. Consistent with that conjecture I find that married women aged 40 and over living in their own home reported about one fewer surviving children.<sup>50</sup>

## Conclusions

I conclude that home ownership was relatively common for all non-farm residents in the age of mass migration because an owned home was a good life-cycle asset. I also suggest that the life-cycle motive for saving was particularly strong for immigrants who intended to become permanent residents of the U.S. The official published statistics on homeownership rates are biased upwards by failure to include all life-cycle relevant families. Using my definitions, I reported that the incidence of home ownership rose with age for both the foreign- and native born in cross-sections drawn from the census samples. Homeownership rates calculated for immigrants exceeded those for the native born except at the youngest ages. I found little reason to be concerned that negative selection among returning migrants distorted the cross-section profiles. I propose that success in achieving home ownership by age 55 is a marker of a

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<sup>50</sup> This result is based on a regression predicting the log of the number of surviving children of urban households controlling for the log of the city population and whether the woman was an immigrant.

high degree of economic assimilation. I report ownership rates at older ages for both the foreign born and native born that exceeded 40 percent and reached 60 percent in smaller urban places. Ownership was less common in large cities than in smaller urban places. Foreign-born home ownership is highly correlated with other markers of immigrant assimilation such as the ability to speak English and residential desegregation.

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Table 1  
Homeownership rates by age of household head, 1890 and 2010

Age periods	1890			2010 total
	Total	Farm homes	Non-farm homes	
Under 25	20.1	32.6	13.5	22.8
25-29	27.5	43.4	19.5	36.8
30-34	36.8	54.9	27.3	51.6
35-39	42.4	60.5	32.3	61.9
40-44	48.7	67.9	37.6	67.9
45-49	52.6	70.3	41.6	72.0
50-54	56.8	74.6	45.1	75.0
55-59	62.8	79.6	50.2	77.7
60 and over	68.7	83.4	57.9	80.5
Total	47.8	65.9	36.9	66.9

Sources: 1890: U.S. Census [1890, Volume 13, Table 157, p. 617]. 2010: U.S. Census Bureau, Housing and Household Economic Statistics Division [2011, Historical Table 12].

Table 2  
Percentage of owned homes with mortgages by age of  
household head, 1890

<u>Age periods</u>	<u>Total</u>	<u>Farm</u>	<u>Non-farm</u>
Under 25	24.9	21.9	28.6
25-29	32.8	30.2	35.8
30-34	34.6	33.0	36.3
35-39	32.9	31.8	34.0
40-44	31.9	31.8	32.1
45-49	30.4	30.9	29.8
50-54	28.0	29.5	26.3
55-59	26.1	28.2	23.6
60 and over	18.5	20.1	16.8
Total	28.0	28.2	27.7

Source: U.S. Census [1890, Volume 13, Table 157, p. 617].

Table 3  
Homeownership rates by place of birth and race, 1890

Place of Birth	Homeownership rate			Percent non-farm
	Total	Farm homes	Non-farm homes	
Aggregate*	51.5	71.7	39.4	62.6
United States	53.0	69.4	40.5	56.7
Both parents native	54.7	69.2	42.1	53.7
One or both foreign born	43.3	70.9	33.8	74.3
All foreign born	47.7	82.4	37.4	77.0
Norway, Sweden, and Denmark	60.6	85.0	41.8	56.4
Germany	52.5	80.9	42.8	74.6
France	47.5	83.9	36.9	77.5
Canada [English]	46.7	80.3	34.7	73.6
England and Wales	45.8	82.1	36.7	79.9
Scotland	44.9	84.9	35.1	80.4
Ireland	43.5	86.9	36.4	85.9
Austria-Hungary	41.1	81.2	28.2	75.6
Canada [French]	31.4	82.8	23.0	86.0
Russia and Poland	31.4	84.0	21.7	84.5
Italy	14.5	67.6	12.1	95.7
Other Countries	47.4	74.9	37.7	73.8
<b>Race</b>				
Aggregate*	47.8	65.9	36.9	62.4
White	51.5	71.7	39.4	62.6
Black	17.5	20.8	15.4	60.5
Mixed	25.2	28.9	23.2	64.1
Indian	65.1	79.3	52.9	53.6
Chinese and Japanese	13.7	10.1	13.9	95.8

Source: U.S. Census [1890, Volume 13, Tables 142, 144, 149, 150, 152, and 153, pp. 558-602.

\* The aggregate numbers for place of birth exclude those who did not report their birth place. That is why the percentages do not agree with the aggregates reported for race or those in Table 1.

Table 4  
Non-farm homeownership rates by place of birth, 1870 and 1890

Place of Birth	1870	1890	Median household age in 1870
Aggregate	42.9	39.4	35
United States	48.9	40.5	35
Both parents native	49.7	42.1	36
One or both foreign born	37.7	33.8	28
All foreign born	35.7	37.4	35
Germany	41.5	42.8	35
England and Wales	40.9	36.7	38
Scotland	40.5	35.1	38
France	39.0	36.9	36
Canada	32.5	30.9	32
Norway, Sweden, and Denmark	30.8	41.8	34
Ireland	30.5	36.4	37
China	3.6	*	30
Other Countries	30.4	27.1	33

Source: The data for 1870 is based on the 1870 IPUMS [Ruggles 2010]. The data for 1890 is reproduced from Table 3 or calculated from the sources to Table 3.

Note: The data for 1870 excludes all households whose head was born in the South.

\* The homeownership rate for those of either Chinese or Japanese "race" in 1890 was 13.9 percent. See Table 3.

Table 5  
Real estate ownership rates by size of place, 1870  
Household heads born outside of the slave south

Size of Urban Place	All Homes	Native Born	Foreign Born	Percent Foreign Born
"Rural" Places	66.2	67.7	62.4	28.6
2,500 -- 3,999	59.2	61.5	56.4	44.7
4,000 -- 4,999	54.7	60.5	48.3	47.3
5,000 -- 9,999	52.9	53.8	51.8	45.1
10,000 -- 24,999	46.5	48.5	44.6	49.9
25,000 -- 49,999	39.0	42.5	36.1	54.6
50,000 -- 74,999	39.2	38.7	39.5	60.0
75,000 -- 99,999	38.1	33.5	40.2	68.6
Louisville KY 100,700	33.3	27.7	28.8	80.8
Newark NJ 105,000	35.4	29.7	31.7	65.8
Buffalo NY 117,700	37.0	51.9	48.5	77.0
Greater DC DC 120,400	36.3	33.7	34.7	60.6
San Francisco CA 149,400	40.7	25.8	30.0	72.1
Cincinnati OH 216,200	26.7	27.3	27.2	80.4
Baltimore MD 267,300	33.3	27.8	28.4	89.8
Chicago IL 298,900	34.9	31.0	31.9	77.1
Saint Louis MO 310,800	28.6	25.1	25.6	85.3
Greater Boston MA 336,900	34.5	12.1	22.6	52.9
Philadelphia PA 674,000	30.5	25.4	27.9	51.9
Greater New York NY 1,338,200	21.4	12.1	14.7	72.5
Total Urban	37.0	43.8	32.2	58.8

Source: One-Percent IPUMS sample from the 1870 US Census [Ruggles et al 2010].

Note: Greater DC [District of Columbia] includes Washington and Georgetown; Greater Boston includes Boston, Cambridge, Charlestown, and Chelsea; Greater New York includes New York City and Brooklyn.

Table 6

Real estate ownership rates by occupation of household head, 1870  
 Urban household heads, household age 55-69  
 Household heads born outside of the slave south

Occupation	Percent	Observations
Common Laborer	35.6	188
Manufacturing and Mechanical	50.2	263
Service and Professional	52.0	102
Trade and Transportation	57.1	205
Building Trades	63.1	103

Occupations are defined by the IPUMS variable <occ> and are consolidated as follows: Common Labor includes "laborers (not specified)" [occ=39] and "agricultural laborers" [occ=1]. Service and Professional includes all "professional and personal services" except "laborers (not specified)" [occ=13-38 & occ=40-58]. Trade and Transportation includes all of those so designated by IPUMS [occ=59-129]. Building Trades includes "carpenters and joiners" [occ=157], "masons (brick and stone)" [occ=200], "plasterers" [occ=220], "roofers and slaters" [occ=231], "painters and varnishers" [occ=214], "paperhangers" [occ=215], "cabinet makers" [occ=154], and "builders and contractors (not specified)" [occ=151]. Manufacturing and Mechanical Industries includes all of those so designated except those we have reassigned to the building trades or mining industries. Omitted from this table are the following categories: Mining [N=11] includes "miners" [occ=207], "quarrymen" [occ=227], "marble and stone cutters" [occ=199], and "oil-well operatives and laborers" [occ=212, however N=0]. Agricultural [N=60] includes all of those so designated except "agricultural laborers" [occ=2-12]. All those with a Non-Occupational Response (or blank) [occ>300, N=588 of which 83 were blank].

Table 7  
Estimating the number of urban family heads, 1900  
Age 18 and over

Relation to head of household	Family Head?		Sample Size	Percent Family Heads	Home-ownership Rate*
	No	Yes			
Head/Householder	0	322,903	322,903	100.0	31.1
Spouse of householder	247,061	0	247,061		
Child/child-in-law	119,522	55,017	174,539	31.5	0.0
Parent/parent-in-law	19,743	1,380	21,123	6.5	0.0
Sibling/sibling-in-law	14,166	16,892	31,058	54.4	0.0
Other relatives	7,363	3,526	10,889	32.4	0.0
Partner, friend, visitor	1,293	19	1,312	1.4	0.0
Boarders	3,485	75,276	78,761	95.6	0.0
Servants/employees	559	26,244	26,803	97.9	0.0
Total non-HH Heads	413,192	178,354	591,546	30.2	0.0
Total All	660,253	501,257	1,161,510	43.2	20.0

\*Homeownership rate for all family heads other than household heads is assumed to be zero.

### A. Probability of being a household head, urban families, 1900

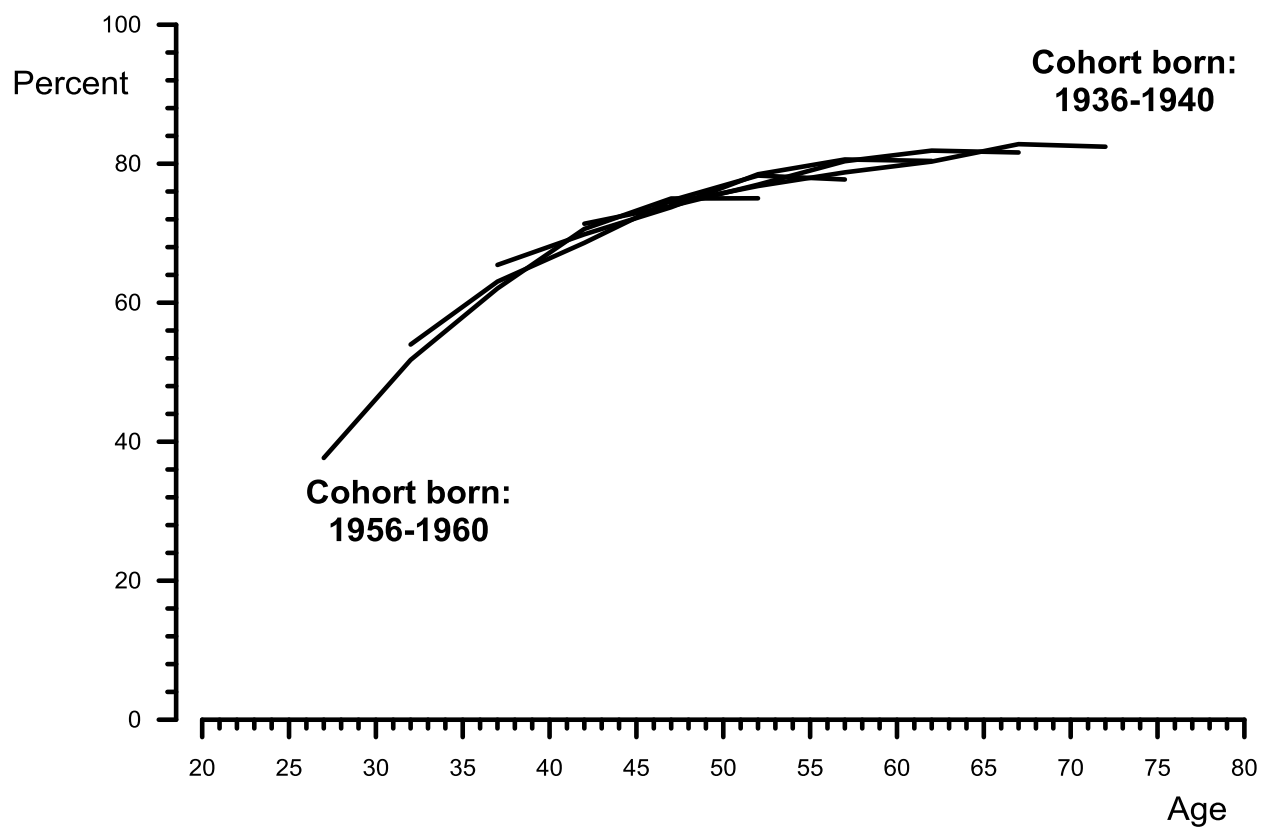
	Equation Number							
	1	2	3	4	5	6	7	8
<b>Impact of dummy variable(s) for a discrete change of the dummy from 0 to 1 (percent):</b>								
Married?	67.1			67.1	66.8	69.1	66.7	69.0
Speaks English?		10.4		4.9	8.1	9.7	9.8	10.9
Foreign born?			9.2		6.3	7.9		
<b>Controls:</b>								
Fifth-order polynomial in household age	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log of the city population	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-of-birth fixed effects							Yes	Yes
Occupational-score fixed effects						Yes		Yes

B. Probability of being a homeowner, urban households, 1900

	Equation Number							
	1	2	3	4	5	6	7	8
<b>Impact of dummy variable(s) for a discrete change of the dummy from 0 to 1 (percent):</b>								
Married?	12.0			12.0	11.7	11.4	11.3	10.9
Speaks English?		11.7		11.4	12.7	11.7	11.8	11.0
Foreign born?			3.9		4.2	5.2		
<b>Controls:</b>								
Fifth-order polynomial in household age	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log of the city population	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-of-birth fixed effects							Yes	Yes
Occupational-score fixed effects						Yes		Yes

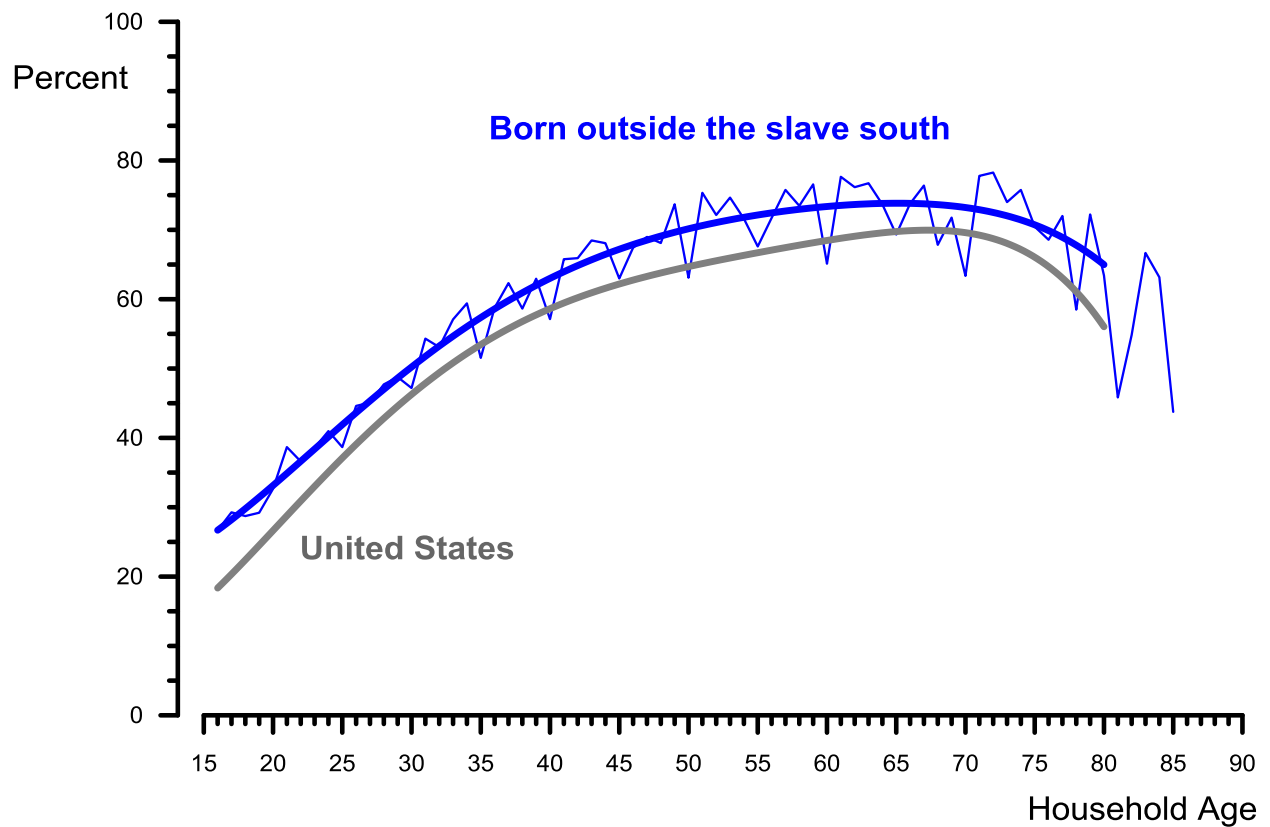


Figure 1. Homeownership rates by age of household head, selected birth cohorts born 1936-1960



Source: Based on data for census households for 1985-2010 [U.S. Census Bureau, Housing and Household Economic Statistics Division, 2011: Current Population Survey/Housing Vacancy Survey, Historical Table 12].

Figure 2. Homeownership rates by household age, 1870



Household age = MIN(head's age, spouse's age). Fifth-degree polynomial fit to ages from 15 to 80.

## Figure 3. Age of husband minus age of wife

Household heads born outside of the slave south, 1870

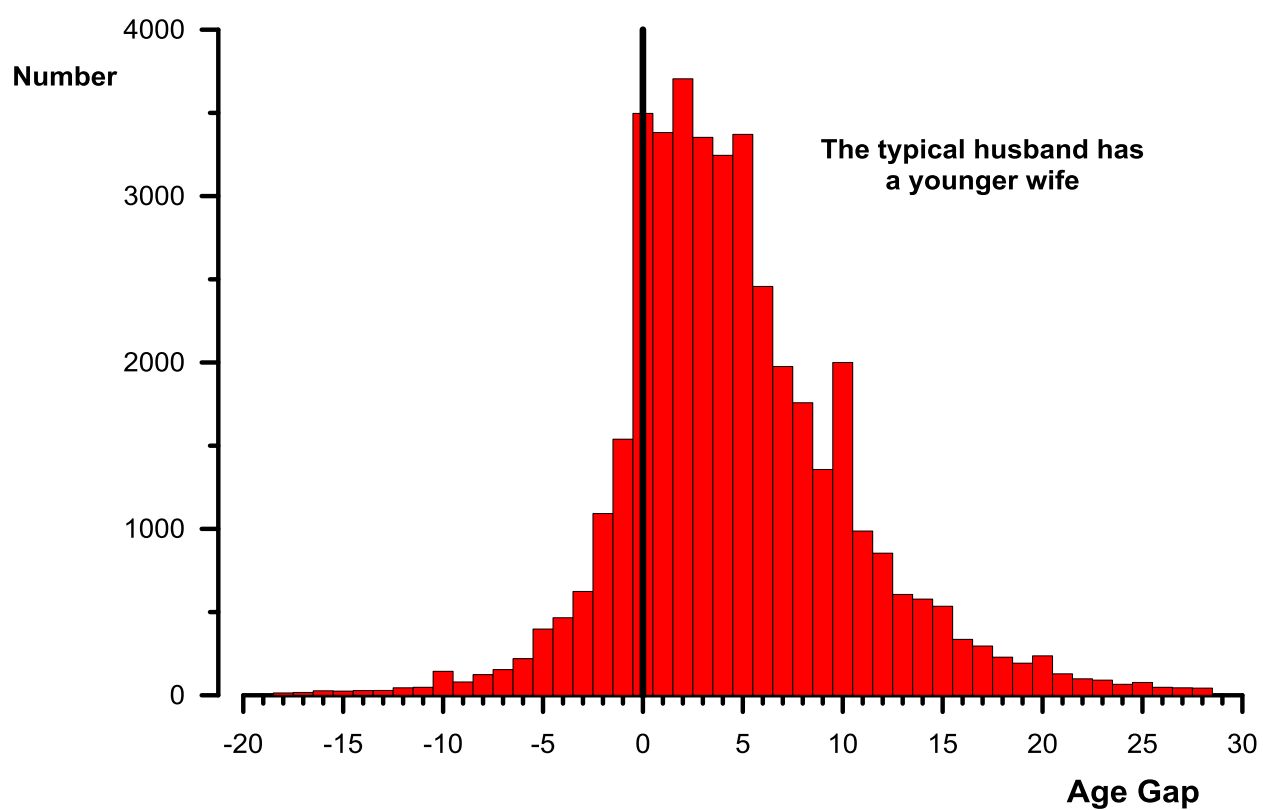


Figure 4. Impact of using household age rather than household head's age, 1870

Household heads born outside of the slave south

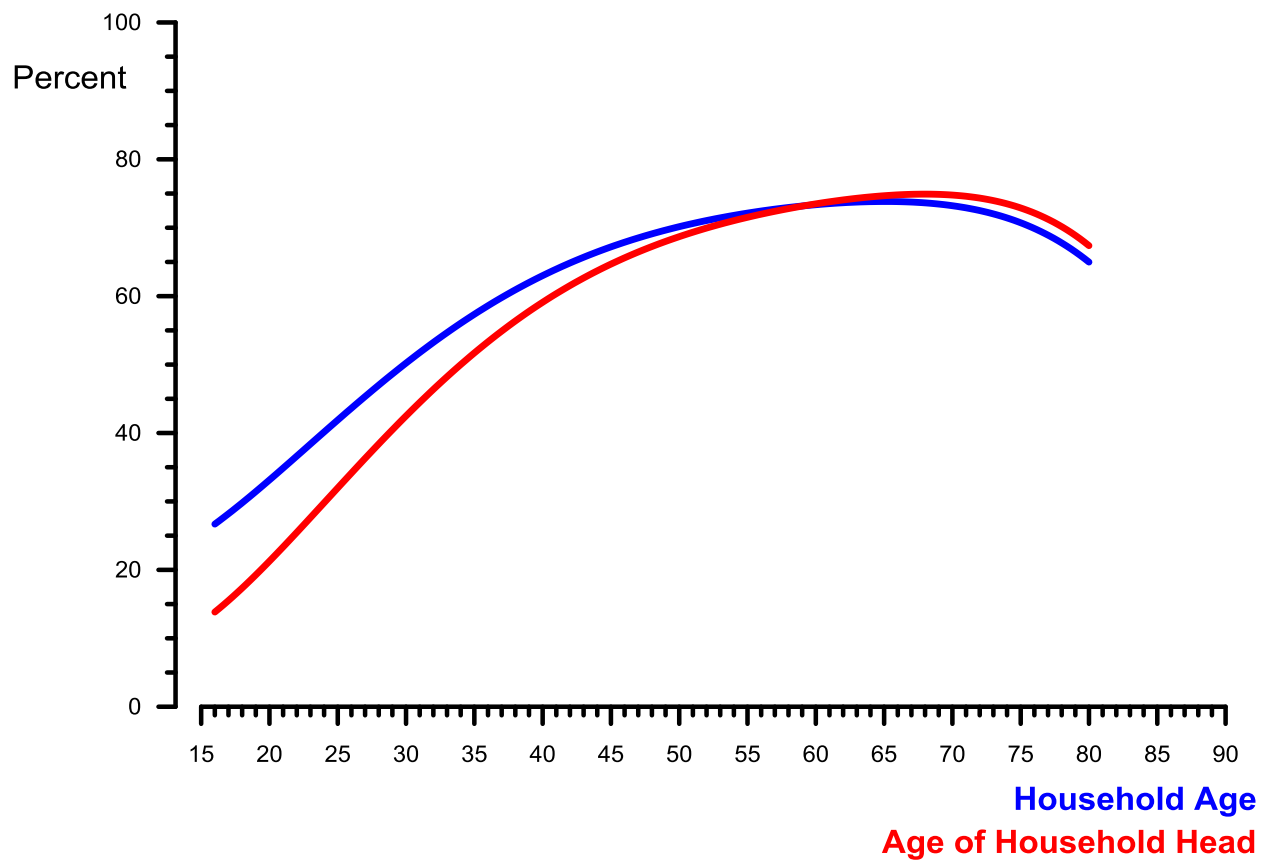


Figure 5. Homeownership rates by household age for native-born and foreign-born heads of households, 1870

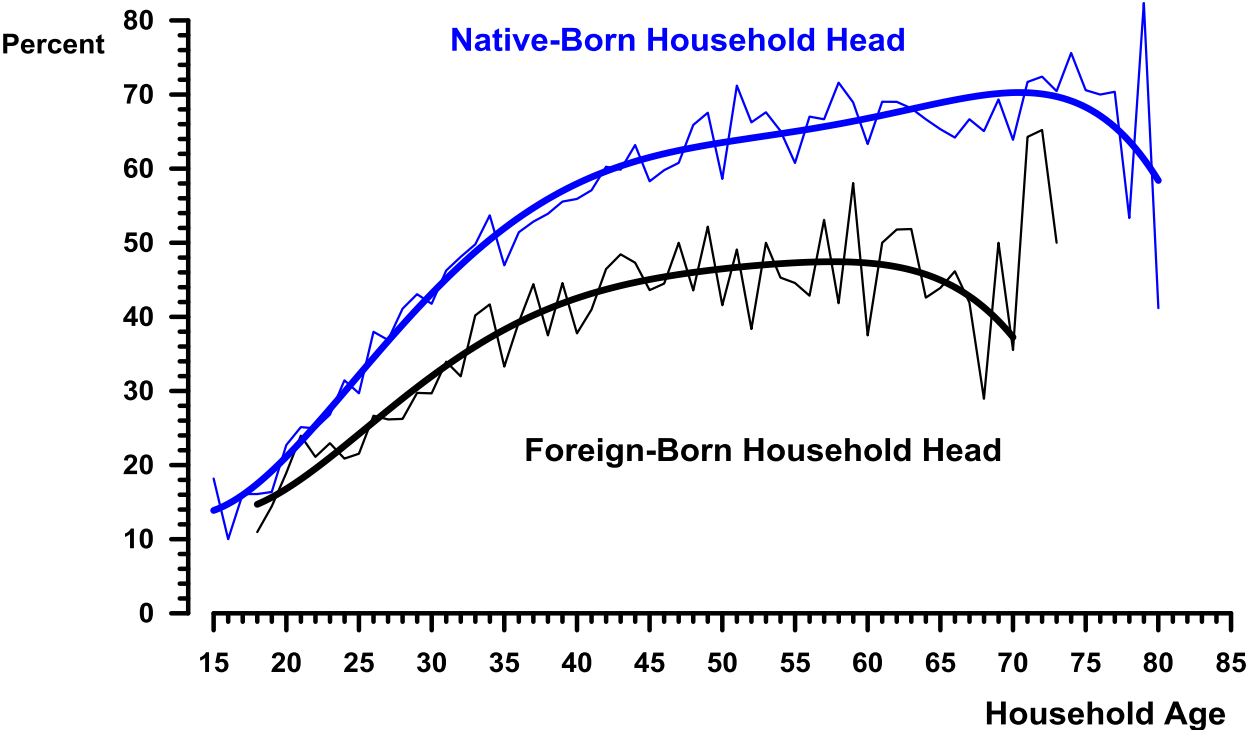


Figure 6. Homeownership rates by household age,  
urban and rural non-farm dwelling units, 1870  
Household heads born outside of the slave south, 1870

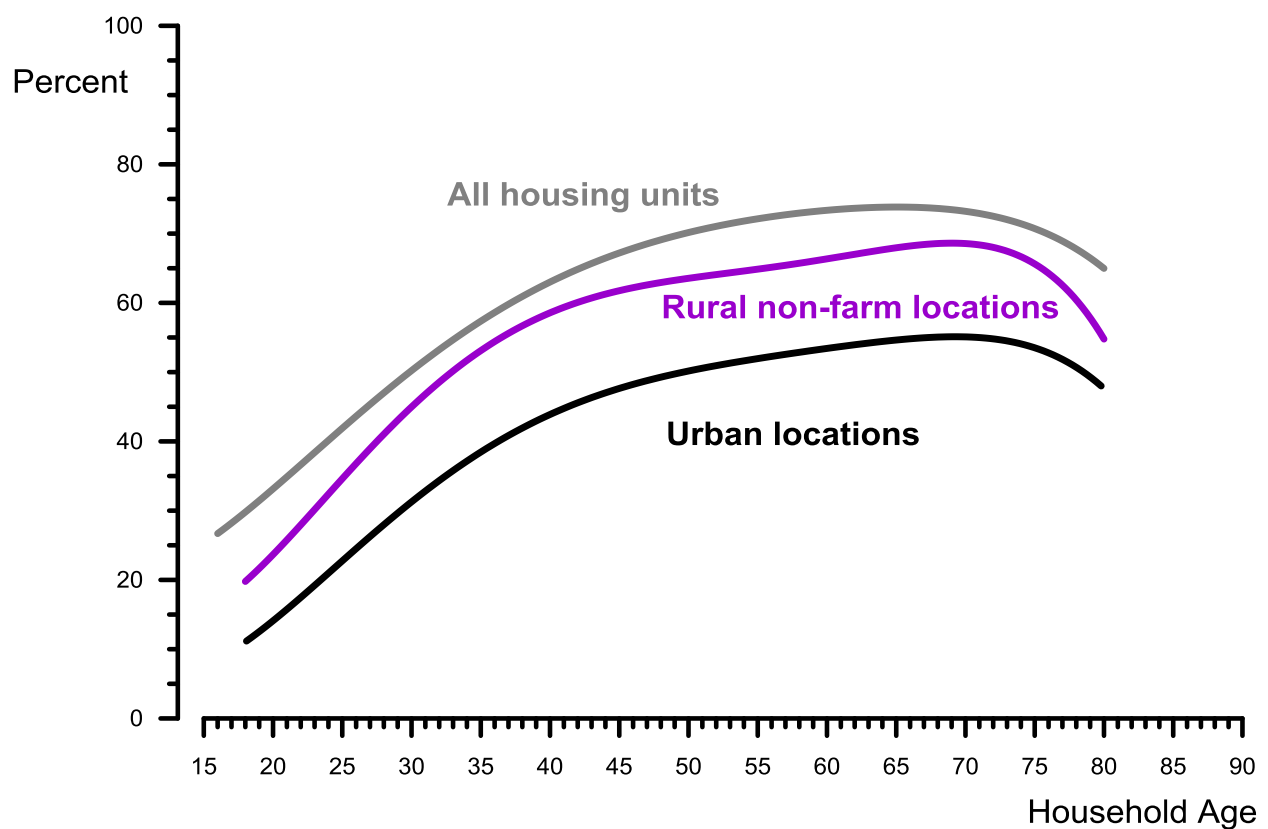
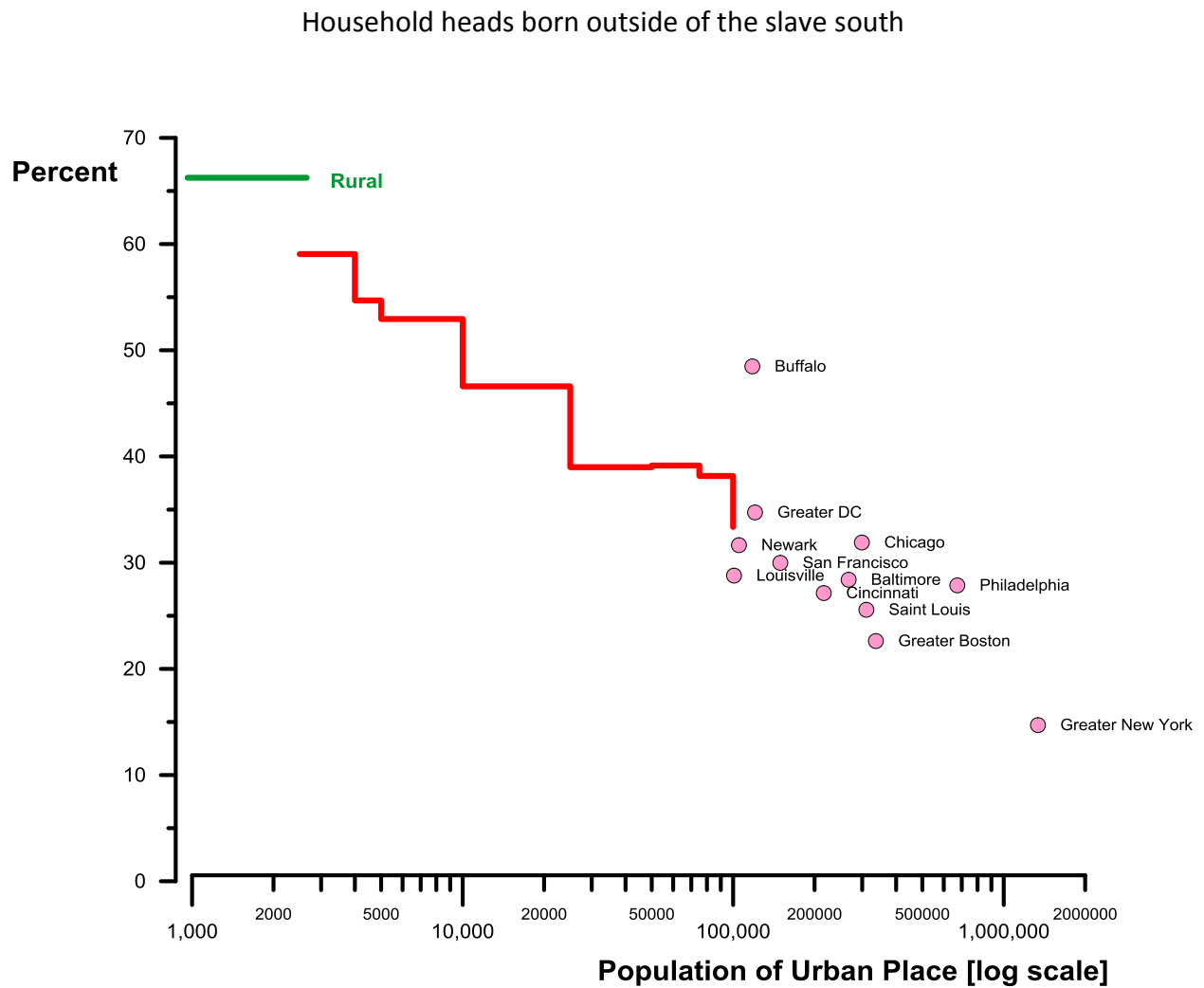


Figure 7. Average Real Estate Ownership Rates by City Size, 1870



Source: Table 5.

Figure 8. Median value of real-estate holdings by city size, 1870

Individuals living in urban areas of the states indicated

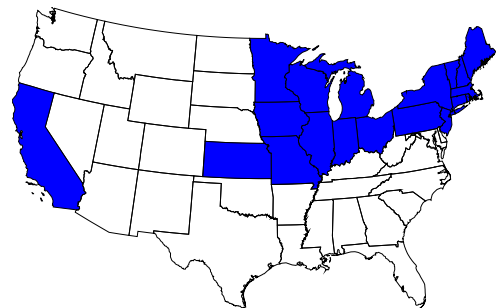
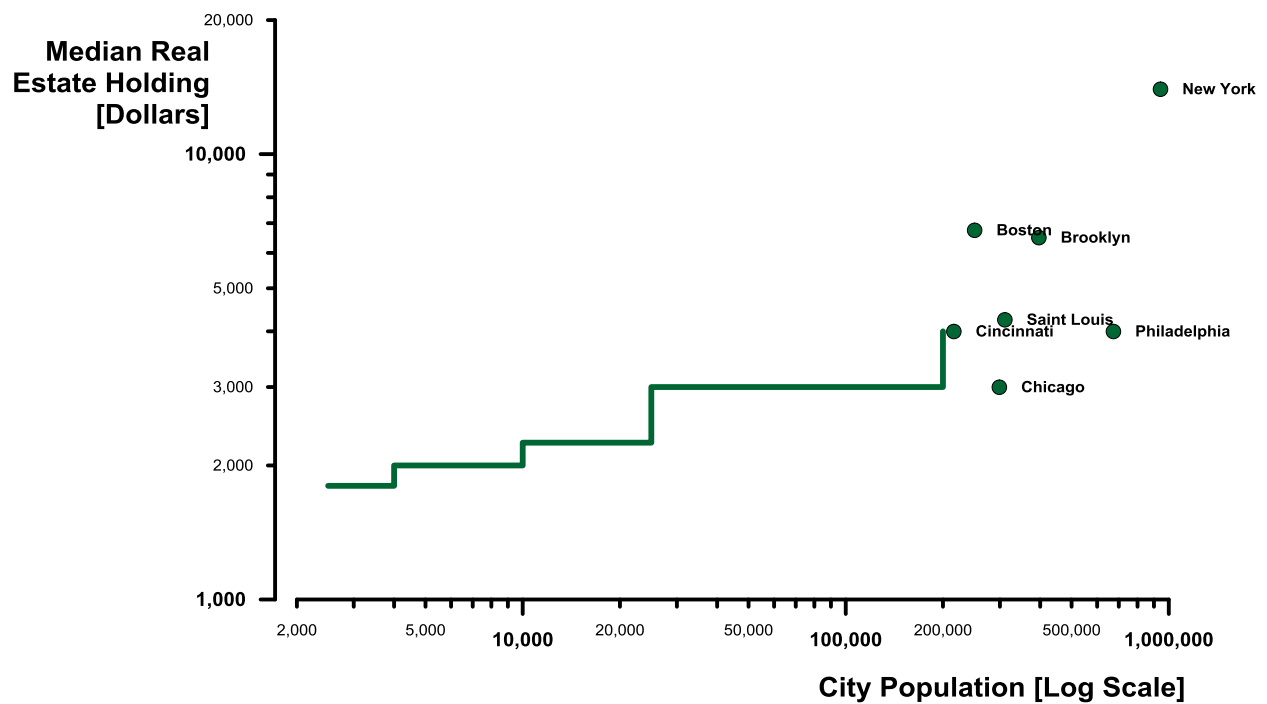
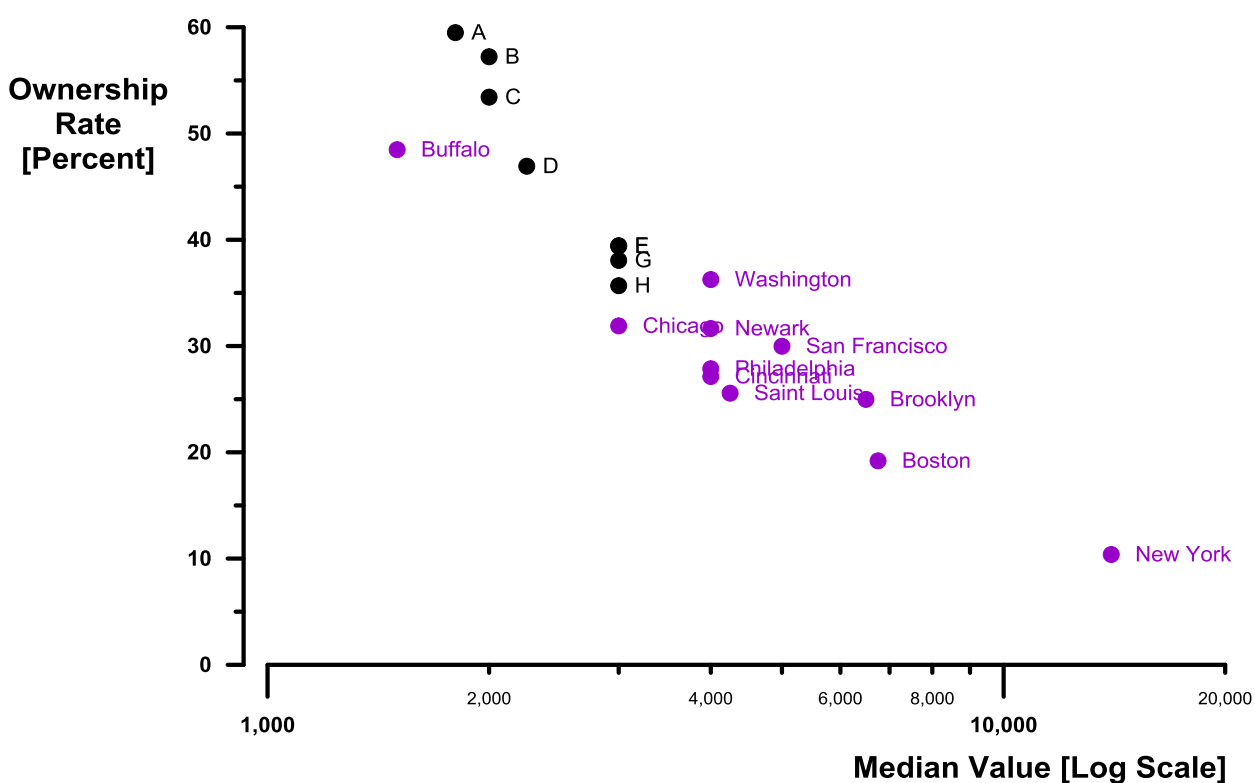




Figure 9. The correlation between ownership rate and median property value, 1870

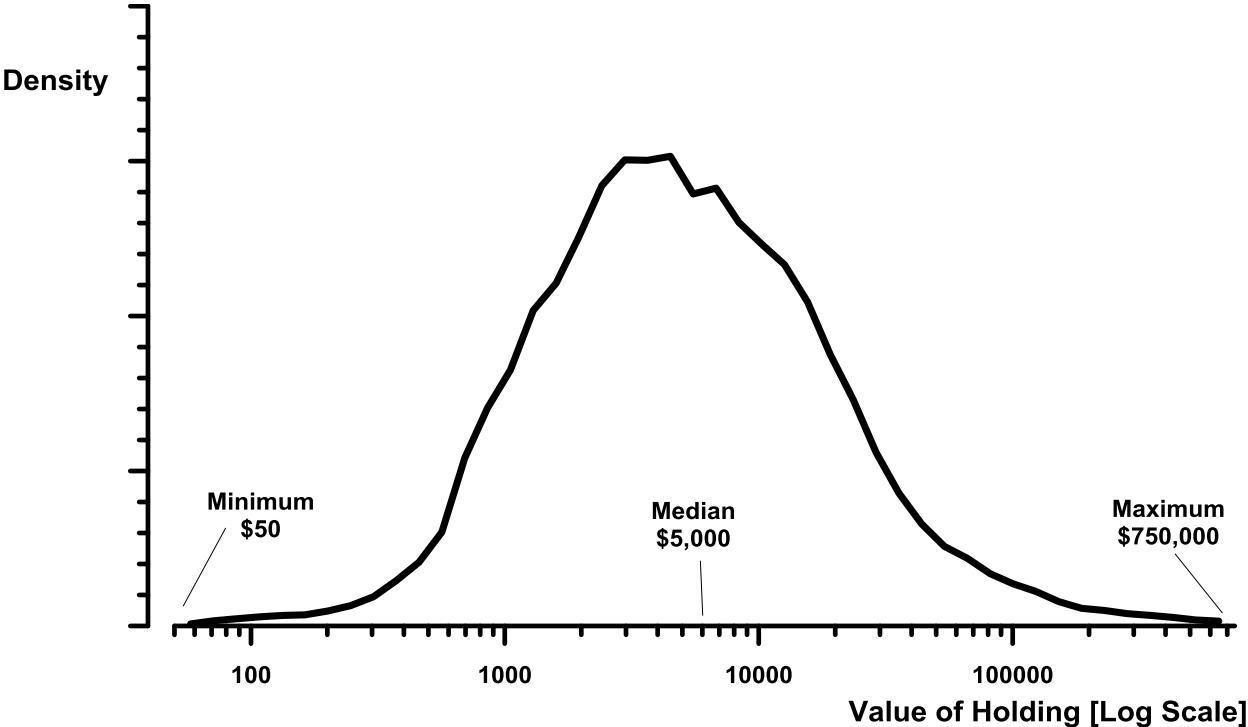
Individuals living in urban areas of the states indicated in Figure 8



Size Class	
A: 2,500-3,999	E&F: 25,000-74,999
B: 4,000-4,999	G: 75,000-99,999
C: 5,000-9,999	H: 100,000-199,999
D: 10,000-24,999	

Figure 10. Kernel density function of value of individual real-estate holdings, 1870

Cities over 100,000 in population



Epanechnikov kernel function with band width = 0.2678

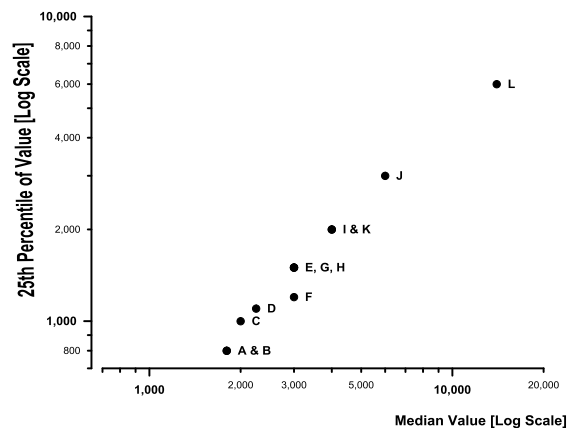


Figure 11. Homeownership rates by household age for household heads and life-cycle relevant family heads, 1900

Urban families and households

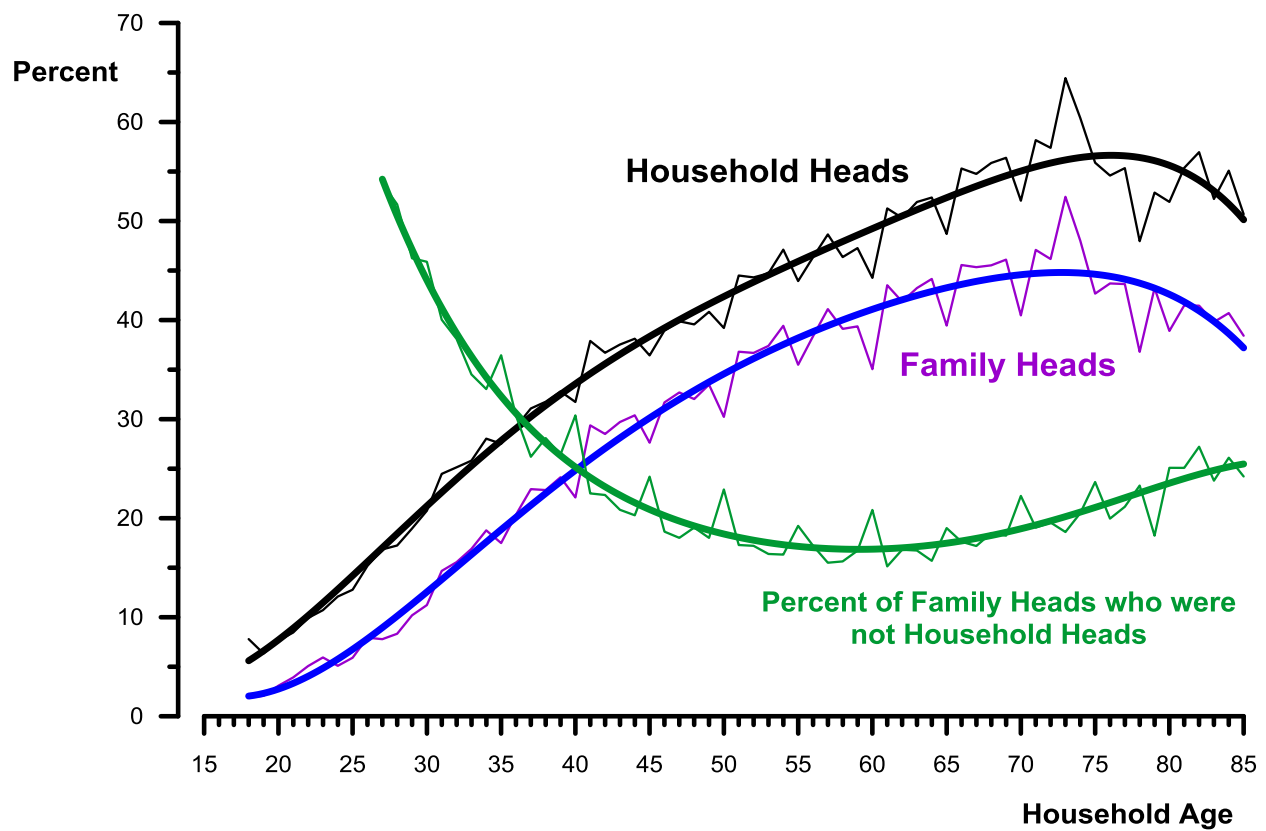


Figure 12. Homeownership trends for census households and life-cycle relevant families, 1900-1960

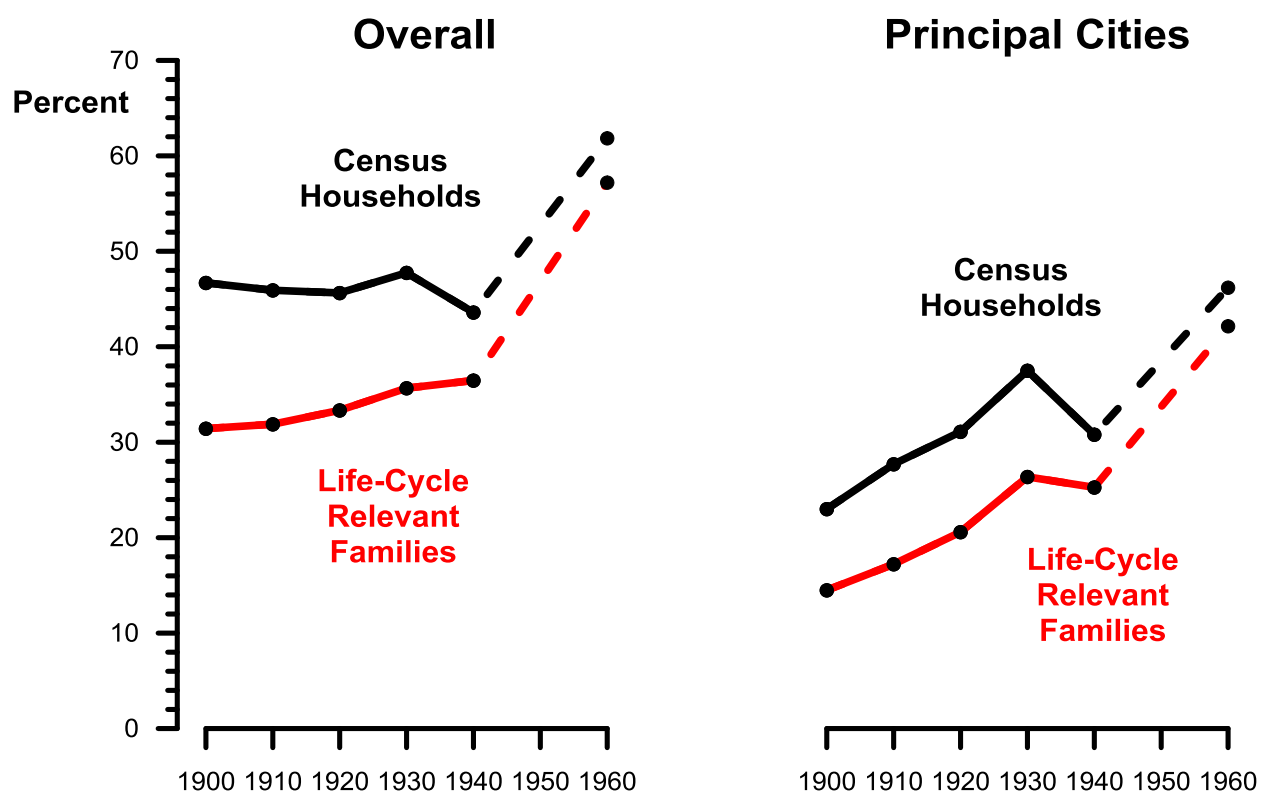


Figure 13. Homeownership rates, urban non-farm families, 1900

Native-born and foreign-born family heads, age 18 and over

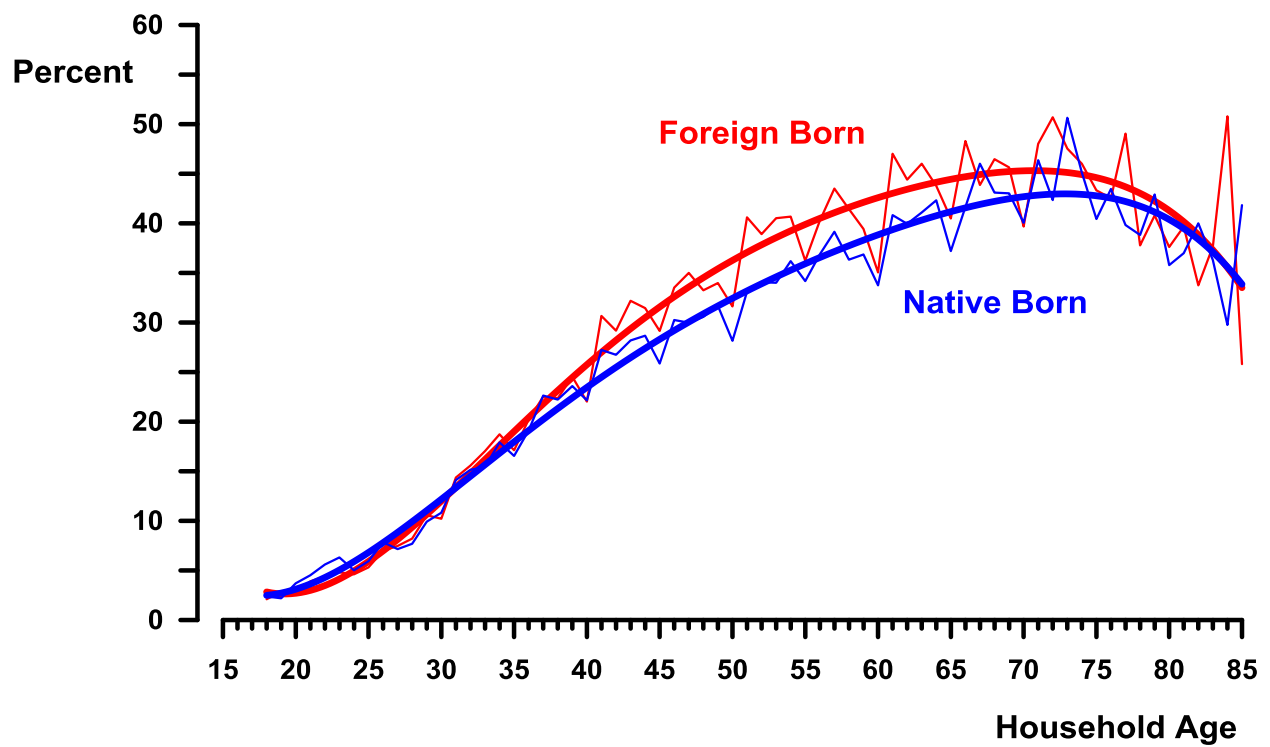


Figure 14. Homeownership rates, urban non-farm census-defined households, 1900

Native-born and foreign-born household heads, age 18 and over

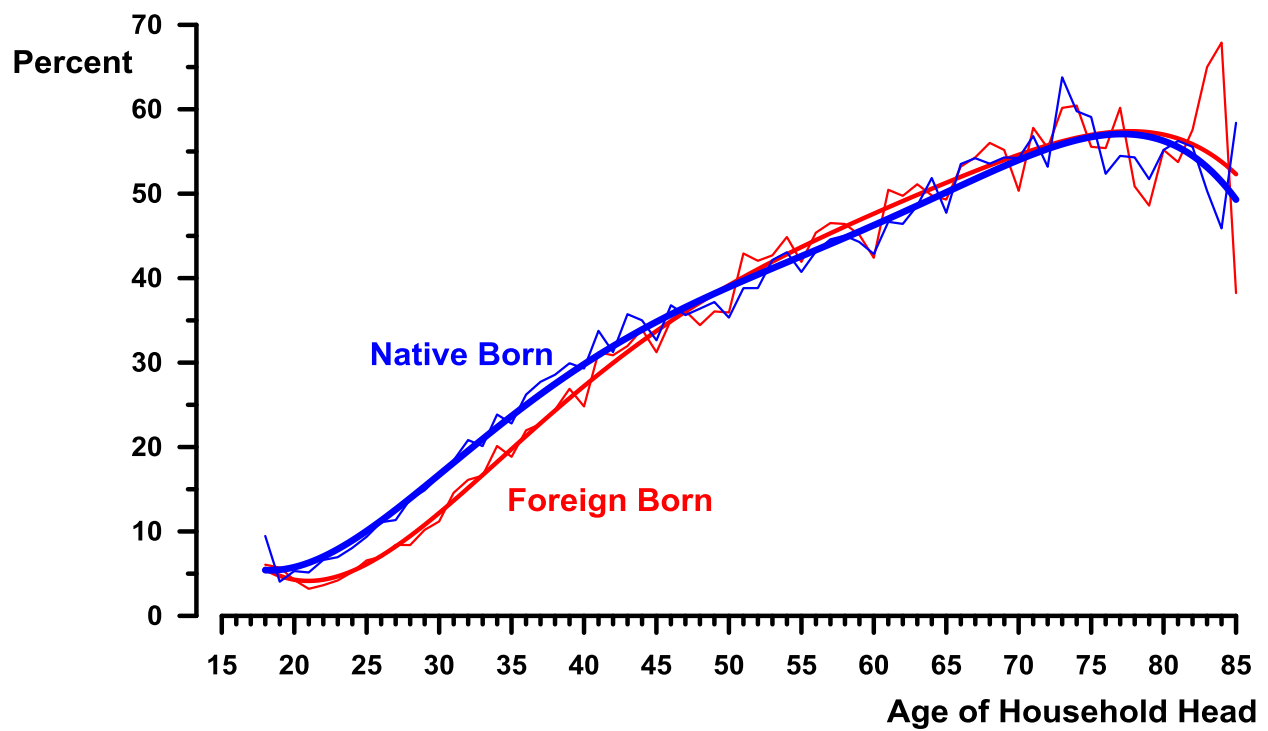


Figure 15. Homeownership rate for foreign-born family heads residing in urban areas by length of residence in the U.S., 1900

For those who immigrated at age 15 or older

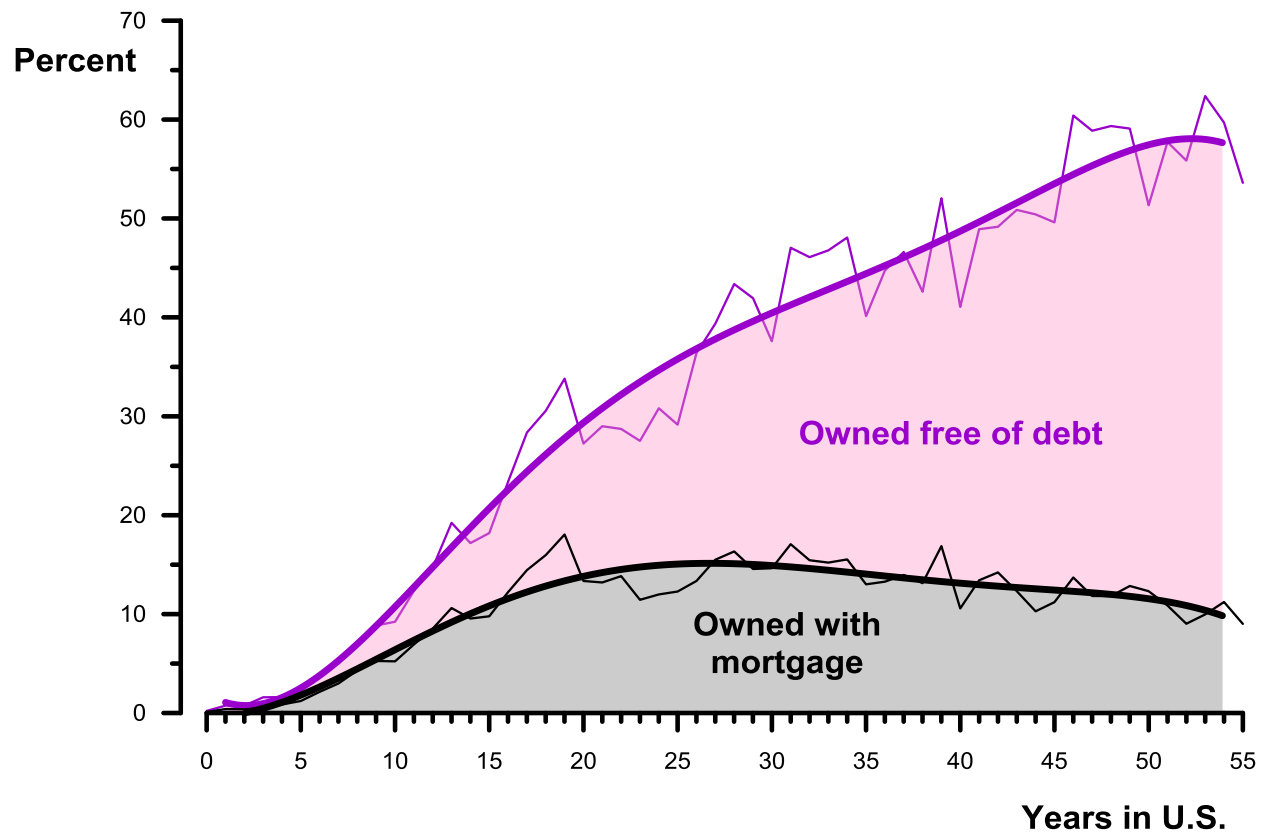
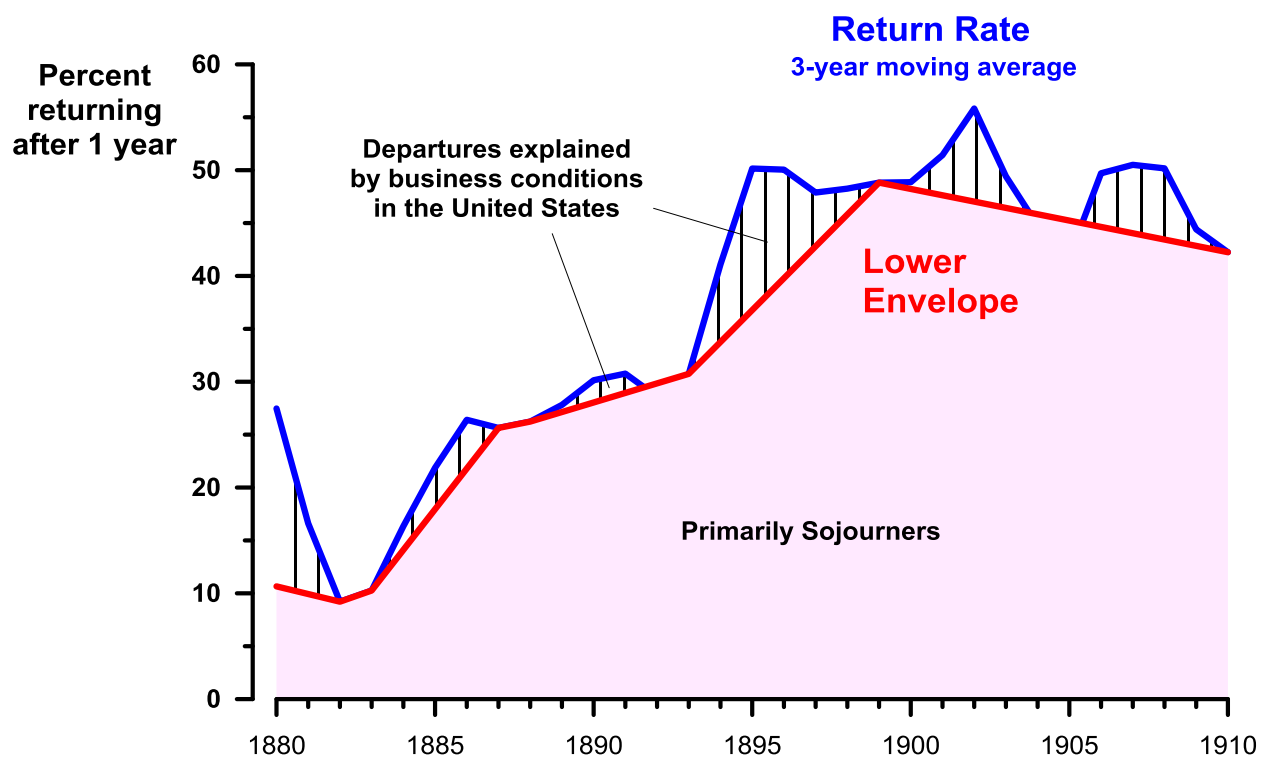


Figure 16. Estimating departures by sojourners and discouraged immigrants from the cyclicality of return rates, 1880-1910



Source: Return rates are defined as the departures of alien passengers as a percentage of the number of arrivals of alien passengers in the preceding year. The arrival and departure numbers are those estimated by Kuznets and Rubin [1954] which are reproduced in Carter *et al* [2006: Series Ad24-Ad25].



Figure 17. Homeownership rates by city size,  
native-born and foreign-born family heads, 1900

Age 55 and over

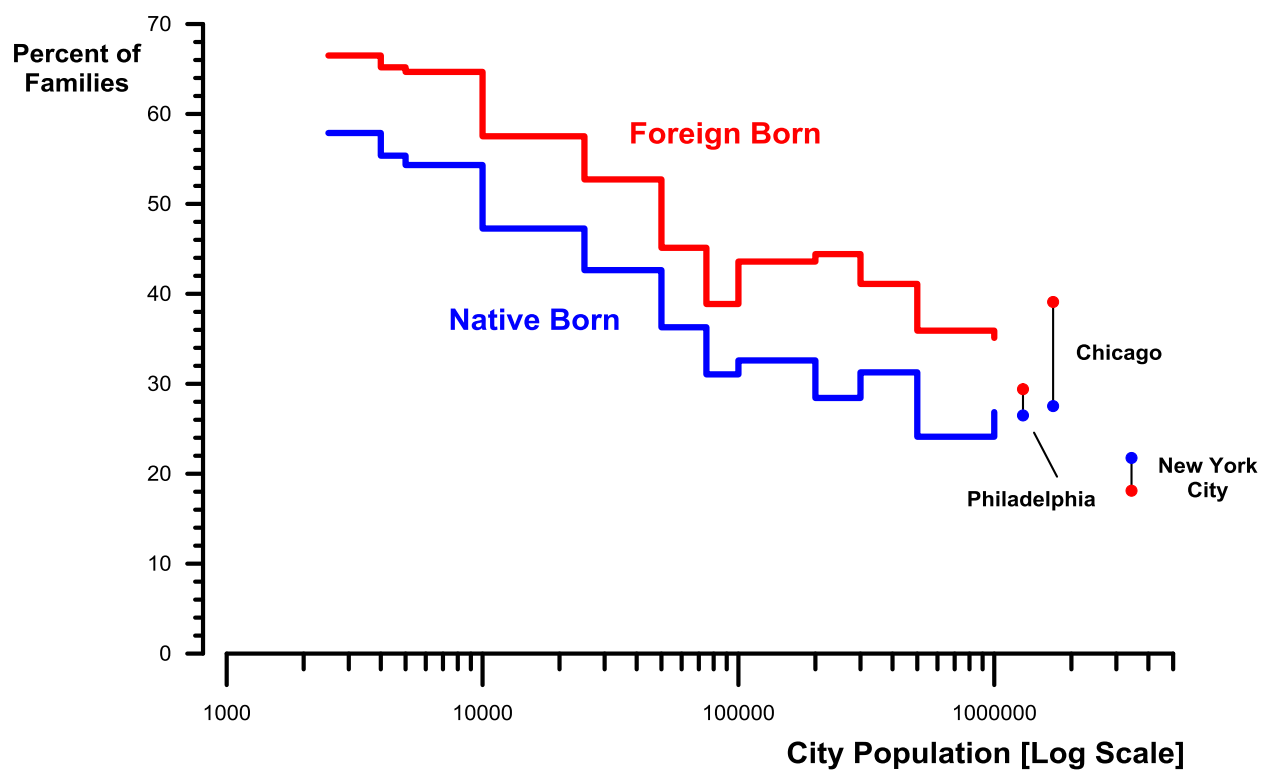


Figure 18. Homeownership rates by ethnicity,  
urban families, with and without New York City,  
1900

Family heads 55 or older who have resided in the U.S. for  
ten years or more

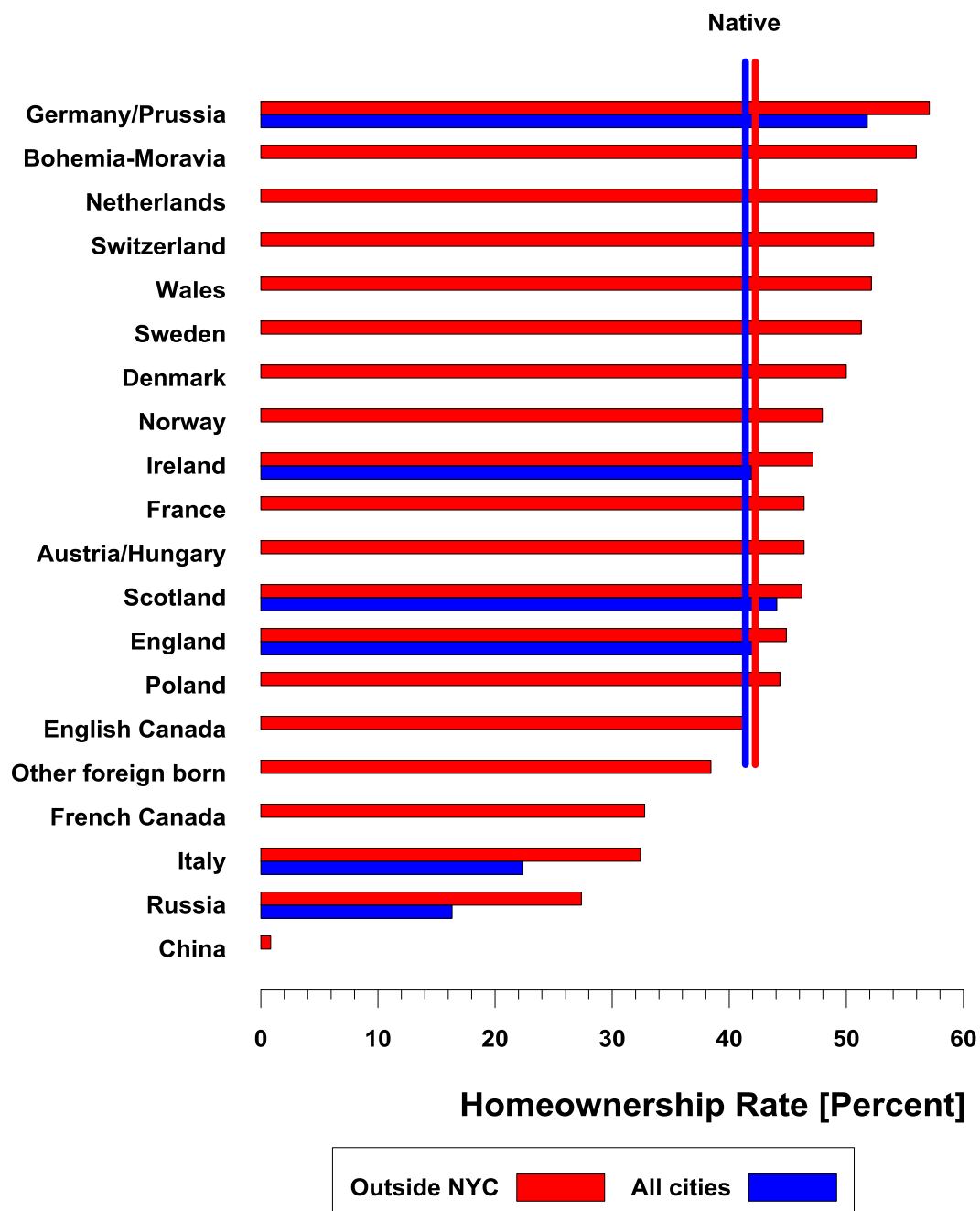


Figure 19. Homeownership rates of foreign-born male family heads by household age, 1900 and 1910

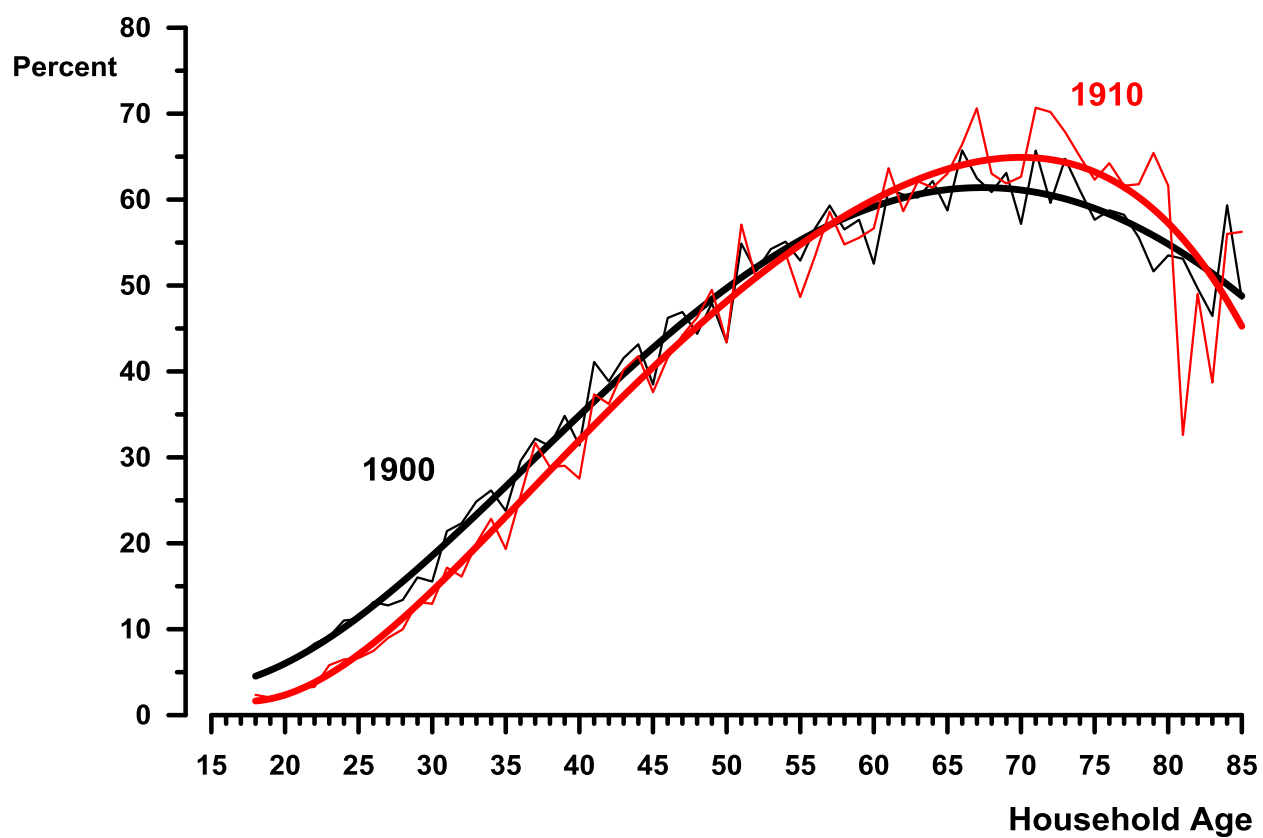


Figure 20. Census survival rates for foreign-born males,  
1900 to 1910

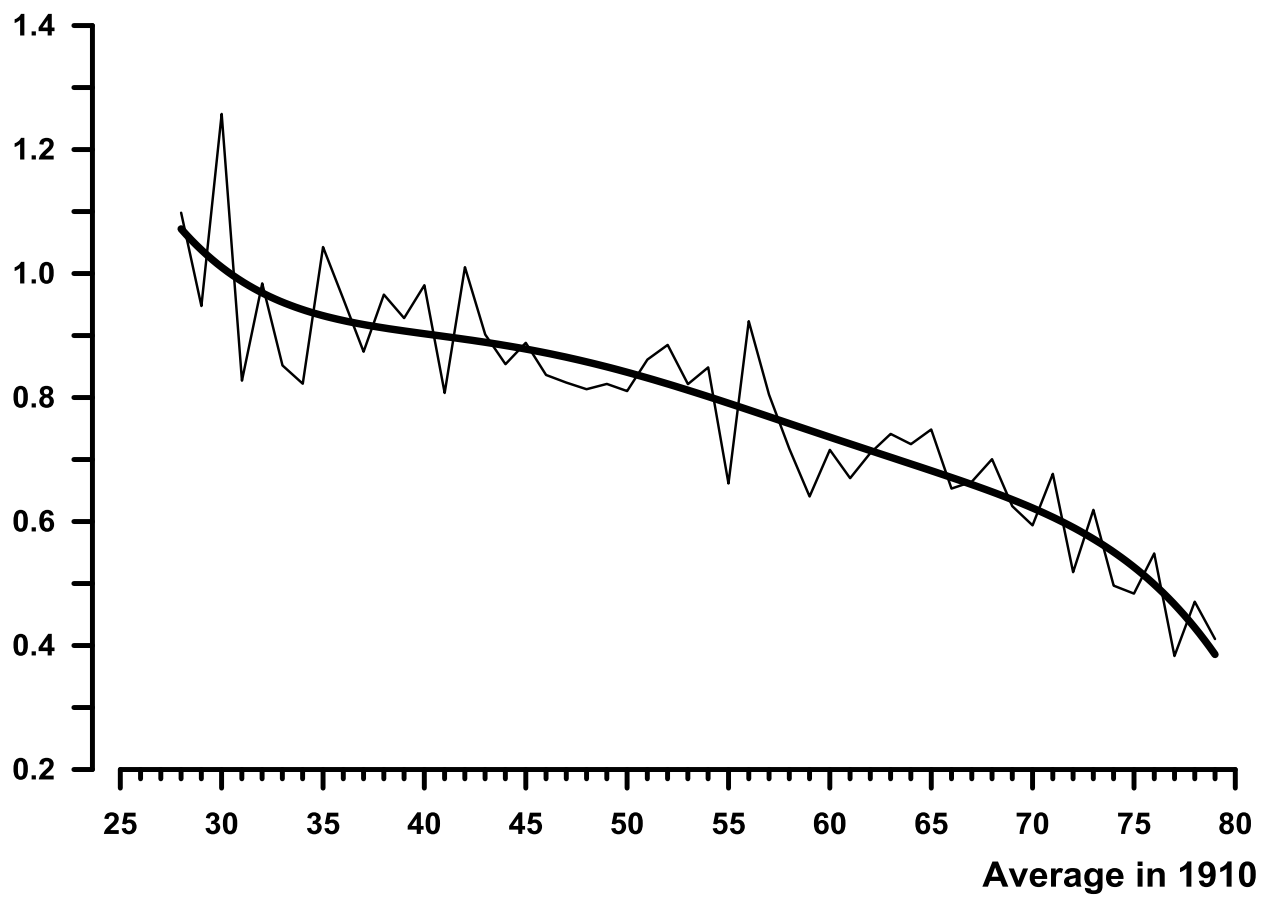


Figure 21. Transition of male immigrants into family headship and into homeownership, percentage annual rate of flow, 1900-1910

