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Immigrant Socioeconomic Mobility in the Age of Mass Migration

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by

Peter Catron

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ABSTRACT OF THE DISSERTATION

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Peter Catron

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Professor Roger Waldinger, Chair

This dissertation examines what mechanisms allowed for the economic success of immigrant populations who entered in the first half of the twentieth century. Sociologists have largely speculated about yesterday's immigrant progress, and then make claims about whether today's immigrants will follow a similar trajectory without testing their claims. However, data are currently being released as confidentiality requirements expire across the world, which allows me to recreate the entire immigrant experience during this time that was previously impossible. Thus, I create longitudinal datasets where I track individuals from their home country in Europe to when they are living in the US. Each of my substantive chapters (2-4) focuses on particular aspects of immigrants during this time that has been previously thought to facilitate or hinder economic mobility. Drawing on data from passenger records, complete count censuses, and personnel records from manufacturing companies, I tease out various mechanisms that allowed yesterday's immigrants to enter the working and middle class. This dissertation joins a burgeoning literature that analyzes immigrant socioeconomic mobility within and across generations in the first half of the twentieth century.

The dissertation of Peter Catron is approved.

Leah Boustan

Jennie Brand

Robert Mare

Roger Waldinger, Committee Chair

University of California, Los Angeles

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Vita

Education

M.A. 2011 University of New Mexico, Sociology

B.A. 2008 University of New Mexico, Psychology

Publications

Catron, Peter. 2016. "Made in America? Immigrant Occupational Mobility in the First Half of the Twentieth Century." *American Journal of Sociology* 122(2): 325-378. (lead article)

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Chapter 1: Introduction

Between 1850 and 1924, nearly thirty million individuals left Europe to live and work in the United States. The age of mass migration, as it soon would be called, became one of the most important migration periods in US history. The influx sparked concern from politicians, employers, institutions, and the native-born in general about incorporating this massive body of immigrants into American society. Similar to debates about today's immigrants, some actors sought to welcome and Americanize these newcomers while others sought to antagonize and increase difficulties for them. However, fears that Catholic immigration, first from Ireland and later from Southern, Central, and Eastern Europe, would increase economic competition and install Papal rule from Rome. Similarly, many believed that these "new" immigrants would be "unassimilable" and refuse to accept the US's customs and values. These concerns fueled debates that ultimately led to restriction at the territorial border in the 1920s and these responses would have important impacts on the economic lives of immigrants and their children.

Despite fears of Southern, Central, and Eastern Europeans being "unassimilable," however, these groups became indistinguishable from their western European predecessors on a number of socioeconomic indicators (Lieberson 1980). However, the conditions that allowed European immigrants to achieve upward social mobility have largely been misunderstood. Rather, a bootstrapping mythology has emerged in both historical scholarship and in the general population arguing that many immigrants achieved economic mobility through individual effort without help from the government or other groups. But little is actually known about whether it was individual effort or economic, political, and social conditions that allowed yesterday's immigrants to make it in America. Indeed, in their seminal book *Remaking the American Mainstream*, Richard Alba and Victor Nee note that research on these immigrants and their

children is "sketchy at best" and that scholars "can only speculate about how the bulk of…group[s] got from there to here" (p. 102). This dissertation, therefore, begins to fill this large lacuna in the literature. Using newly released data of company personnel files, passenger records, and full-count censuses, I track immigrants and their children over time to understand their socioeconomic progress during the age of mass migration.

Making it in America

The study of immigrant social mobility was largely inspired by a series of seminal studies in the 1960s in the fields of international migration and stratification. Whereas Gordon (1964) provided the assimilation framework by which modern assimilation theories build on (see, Alba and Nee 2003; Portes and Rumbaut 2001), Blau and Duncan (1967) provided understanding for status attainment research. The studies that followed equated assimilation with attainment of common indicators such as education, occupation, and income compared to a native-born group. As a result, much is known about immigrant labor market and economic outcomes, especially for post-1965 immigrants who were entering the US as this research emerged. Researchers now argue that assimilation and social mobility "are intimately and irrevocably linked" (Jasso 2011: 1292). While it is true that assimilation, the process by which immigrant groups and host societies come to resemble one another, cannot occur without some immigrant social mobility, how these two concepts have been interlinked throughout history is often misunderstood. However, as researchers continually draw comparisons of economic trajectories between yesterday's and today's immigrants, it is important to understand just how yesterday's immigrants made it in America.

The dominant accounts of how immigrants move through the stratification system use European success as their point of departure when drawing inferences over whether today's immigrants will follow similar trajectories (Alba and Nee 2003; Portes and Rumbaut 2001). Optimistically, the neo-assimilation approach suggests that the success of yesterday's immigrants provides a reliable guide to understanding today's immigrant trajectories (Alba and Nee 2003). Proponents argue that there is something about the American social order that leads to positive outcomes for immigrants and their children whether for yesterday's or today's immigrants. By contrast, the segmented assimilation approach casts a more pessimistic view suggesting that the conditions that allowed yesterday's immigrants to succeed are nonexistent for today's immigrants. As a result, the segmented assimilation approach suggests that there are populations of today's immigrants who are at risk of downward assimilation into a rainbow underclass that yesterday's immigrants were not at risk for. However, both the neo-assimilation and segmented assimilation frameworks treat history as relevant insofar as it is useful (Waldinger 2007). That is, both frameworks provide little detail about the socioeconomic progress of yesterday's immigrants and the information they do provide is often contradictory at times.

The conventional approach to understanding upward mobility among immigrant groups emphasizes that rational action of individuals leads to the improvement of material and social circumstances that produces assimilation among individuals and groups (Alba and Nee 2003). According to this view, the process of finding one's way inevitably and inexorably leads to changes that diminish ties and resemblances to co-ethnics and increasingly makes one like the 'mainstream.' However, neo-assimilationists also cite the importance of manufacturing for turn-of-the-twentieth-century migrants. In this view, there was a "brief historical period" that

"brought about a rough parity of average life chances among many ethnic groups" (Alba and Nee 2003: 134). The industrial economy allowed immigrants to "gain a foothold through steady employment, often in manufacturing sectors…" (Alba and Nee 2003: 135). Thus, through a historically contingent period of economic expansion, immigrants experienced upward socioeconomic mobility that allowed Southern and Eastern European immigrants to make it in America. This hypothesis, however, is only able to "speculate about how the bulk of…group[s] got from there to here" (Alba and Nee 2003: 103). We never learn whether it was the first or second generation that benefitted from this period effect.

By contrast, segmented assimilationists argue that the ladder of occupations made available by the factory-based economy and shared European ancestry created the potential for gradual upward mobility that is no longer available to today's immigrants (Portes and Rumbaut 2001; Portes and Zhou 1993). Similar to the neo-assimilationists, the segmented assimilation hypothesis suggests that through an historical accident Southern and Eastern European immigrants arrival corresponded with the buildup of high paying manufacturing jobs that required minimal education for advancement. Even though the first generation often had accents and other indicators of foreignness that marked them as outsiders, high wages helped create and sustain a level of prosperity among Southern and Eastern Europeans on par with other ethnic groups. Segmented assimilationists differ from the neo-assimilationists in that the hypothesis asserts that Southern and Eastern European immigrants and their descendants were able to hide behind their white European phenotype in order to move up the stratification ladder. Migrants' ability to mask their ethnic identities in the workplace allowed them to bypass extensive discrimination that existed even though the federal government continued to label them as

separate races (Portes and Rumbaut 2001). Thus through an ethnic effect that interacts with the period effect, European migrant groups were able to achieve assimilation.

While the assertions made by both neo-assimilationists and segmented assimilationists have been challenged in recent years (see, e.g., Perlmann 2005; Perlmann and Waldinger 1996; Waldinger 2007), these hypotheses have never explained the process by which the mechanisms they identified allowed Southern, Central, and Eastern European immigrants to get ahead. In fact, historical understandings of manufacturing suggest that the barriers faced by these groups should inhibit, rather than promote, socioeconomic mobility across generations (Bodner 1985; Bodner et al. 1982; Morawska 1985). Chapter 2 of this dissertation, therefore, hits these claims head-on: Did manufacturing allow for the upward advancement among Southern, Central, and Eastern European-origin groups? To answer this question, I rely on unique datasets that contain longitudinal worker histories from three manufacturing companies: A.M. Byers Company, Pullman-Standard Manufacturing, and Ford Motor Company over the 1900 to 1950 period. Specifically, I investigate occupational mobility among different European-origin immigrant groups vis-à-vis the native-born. These analyses are informed by theories of organizational sociology and in particular the role internal labor markets influenced mobility among European-origin groups. Second, I analyze the specific mechanisms that allowed Southern, Central, and Eastern European immigrants to move up (or down) the occupational hierarchy within manufacturing plants.

The primary argument of chapter 2 is that internal labor market structures did little to counter or prevent other forces that kept immigrants from achieving upward mobility. That is, opportunity within manufacturing plants during this time was horizontal and not vertical like assimilation research often asserts. The results of chapter 2 show that immigrants ended their

career within firms in the same broad occupational category they began – occupations at the bottom. These analyses challenge the above assimilation hypotheses that stress manufacturing as one key to Southern, Central, and Eastern European immigrant success in the first half of the twentieth century.

Because of the null result of chapter 2, it becomes necessary to understand the conditions that allowed yesterday's immigrants to move up the occupational hierarchy. After all, we know the outcome that yesterday's immigrants and their descendants achieved economic success – a result that we will not know the answer to for today's immigrants for some time. However, the conditions thought to influence first and second generation's economic outcomes of today's immigrants may also aid in understanding how yesterday's immigrants made it in the US. Chapters 3 and 4 begin to understand these processes by looking at political and economic factors that allowed for upward movement. They engage in understanding both the historical importance of various factors that would aid in upward mobility as well as enhance theoretical debates about immigrant economic progress.

Chapter 3 begins to understand these processes by addressing the role of premigration skill on economic trajectories of immigrants who entered between 1890 and 1899. Assimilation researchers note that premigration occupation often matters when determining social destinations of immigrants over time (Alba and Nee 2003). Indeed, it is often assumed that premigration skill is one of the greatest sources of within immigrant inequality in outcome. However, it is difficult to address how premigration skill influences mobility trajectories because it requires data to be available in the country of origin and in the country of destination on the same individuals. As a result, hypotheses of immigrant mobility point to premigration skill as important, but then focus

on US-specific sources of economic outcomes like US-specific human capital attainment, ethnic enclaves, social networks, and modes of incorporation in analyses.

Chapter 3, therefore, matches individual's passenger records to their census records in 1910 and 1920. Passenger files report the immigrant's occupation before coming to the US, which allows me to understand whether their occupation in the sending country influenced their economic trajectories. Specifically, I test differences within immigrant groups and also between immigrant groups. The results suggest that occupations held in the sending country often dictated where in the stratification system immigrants were sorted. These occupational differences persisted across time, but the gap between being an unskilled worker and white collar worker before arrival shrank after 40 years in the labor market. However, different sending groups performed differently where low ranked groups, namely Italians, performed worse at all occupational levels than higher ranked groups. While what immigrants did before they came to the US mattered in determining occupational outcomes, US-specific factors also likely mattered.

Chapter 4 addresses the role of citizenship acquisition and economic mobility in the first half of the twentieth century. A growing body of research on today's immigrants argues that citizenship and legal status for the first generation is a long-standing dimension of inequality in the US immigrant population (Bean et al. 2012; Dreby 2010; Menjivar and Abrego 2012). Laws are often targeted at certain political statuses (such as undocumented immigrants) that have intended and unintended consequences that ripple through households, families, and communities that often have measurable long-term effects on both the first generation and their US born children. While it is indeed reasonable to suspect that legal status has important impacts for today's immigrants, researchers have never questioned whether political statuses impacted yesterday's immigrants. Rather, most migration scholars have assumed that since the

US grants birthright citizenship, parental citizenship or lack thereof would have little impact on the destinies of their native-born children. But as rights and entitlements of citizens and noncitizens are unequal – a gap that widened during the first half of the twentieth century – there is good reason to hypothesize that parental citizenship mattered much more than most scholars suppose.

To tackle this question, I answer whether there was a citizenship advantage in economic outcomes for the first generation and whether that transferred to their children. The release of full-count censuses have made it possible to follow individuals across time using their name, age, and state of birth. I therefore follow second generation male children from their childhood household in 1920 to when they are participating in the labor force in 1940. This panel data allows me to understand how parental characteristics – including citizenship status – influenced second generation success. I show that Southern, Central, and Eastern European immigrants had particularly high economic outcomes once they gained citizenship. These benefits then transferred to their children where children of citizens had a greater educational attainment than children of noncitizens.

In all, the chapters in this dissertation begin to systematically address what allowed yesterday's immigrants and their children to make it in America. It also points to parts unique to the immigrant experience that allowed for upward occupational mobility previously thought to aid in mobility, but impossible to study until now.

Chapter 2

Made in America? Immigrant Occupational Mobility in the First Half of the Twentieth Century

Abstract:

Assimilation research largely assumes that Southern and Eastern European immigrants achieved assimilation due to job ladders within manufacturing firms in the first half of the twentieth century. But this literature has never tested these claims and often acknowledges that little is known about whether Italians and Slavs experienced upward mobility. Did manufacturing allow for the upward advancement among European-origin groups? Using unique datasets containing employment histories in three manufacturing companies – A.M. Byers Company, Pullman-Standard Manufacturing, and Ford Motor Company - between 1900 and 1950, this chapter is the *first* to analyze occupational mobility within factories among European-origin groups. Results suggest that organizational structures within firms through the formation of internal labor markets did little to counter or prevent other forces that kept migrants from achieving upward mobility. Migrants ended their careers within firms where they began – positions at the bottom of the occupational hierarchy – which runs contrary to assimilation research.

"In the thirties if you was an Irishman you would get the heating job…but if you were a Pollock or a Slovak you couldn't get the God damned job."

– Chester P., A.M. Byers Company (cited in Santos 1984: 78)

Before its postwar golden age of the 1950s and 60s, manufacturing was one of the largest and important sectors in the United States. In any given year between 1900 and 1950, thirty to forty percent of all nonfarm employees held jobs in manufacturing industries (Lebergott 1964). At the same time, a wave of immigrants from Southern, Central, and Eastern Europe descended on the industrialized North. These European migrants' rural origin, lack of previous experience and special skills, and weak attachment to the labor force helped fill the large demand for unskilled laborers that manufacturing required (Hutchinson 1956). The proliferation of highly paid skilled and managerial work in this sector offered a potential avenue for socioeconomic advancement among unskilled immigrants. However, organizational structures within firms did not favor upward mobility for unprivileged groups (Doeringer and Piore 1971). While Southern, Central, and Eastern European immigrants eventually 'made it' in America (Lieberson 1980; Waters 1990), surprisingly little is known about whether Italians and Slavs experienced upward mobility at the turn of the twentieth century and, if so, to what extent, how, and why (Waldinger 2007).

That still unexplored issue is the focus of this paper: Did manufacturing allow for the upward advancement among Southern and Eastern European-origin groups? To answer this question, I rely on unique datasets that contain longitudinal worker histories from three manufacturing companies: A.M. Byers Company, Pullman-Standard Manufacturing, and Ford Motor Company from 1900 to 1950. Unlike scholarship on the historical relationship between immigrants and manufacturing that relies on census data, I analyze occupational mobility over large portions of an individual's working history. First, I investigate occupational mobility

among different European-origin immigrant groups vis-à-vis the native-born. These analyses are informed by theories of organizational sociology and in particular the role internal labor markets influenced mobility among European-origin groups. Second, I analyze the specific mechanisms that allowed Southern and Eastern European immigrants to move up (or down) the occupational hierarchy in manufacturing plants. These analyses challenge assimilation hypotheses that stress manufacturing as the key to Southern and Eastern European immigrant success in the first half of the twentieth century (e.g., Alba and Nee 2003; Portes and Zhou 1993).

Immigrants, Manufacturing, and Upward Mobility

The onset of the 20th century proved inauspicious for immigrant populations in the United States. The influx of Southern, Central, and Eastern European immigrants (hereafter SCEE immigrants) provoked worries that a docile and vulnerable working population would have a balkanizing effect on the native working class. Unlike their protestant predecessors from Western Europe who were largely viewed as contributors to America's economic advantage and system of values (with the exception of the Irish), the Catholic, Eastern Orthodox, and Jewish migrants who came from rural areas were treated with suspicion by unionists and the native-born (Lane 1987). SCEE immigrants were generally poor and compelled to take low-skilled and seasonal jobs throughout industrialized cities. Even though the economy was expanding rapidly at the time, the large supply of manual workers increased competition for laborer jobs (Lane 1987). The crowding of unskilled workers led to labor and ethnic conflicts that erupted with the growth of an immigrant and black workforce in the industrialized North (Olzak 1989). However, employers preferred hiring newcomers since ethnic competition reduces worker solidarity and prevailing wage standards (Hatton and Williamson 1998; Lichtenstein 2002; but see Carter and

Sutch 1998; Hirschman and Mogford 2009). Consequently, native-born unionists in the American Federation of Labor (AFL) and other antiforeigner groups organized and lobbied at the federal level successfully to restrict future immigration flows (Tichenor 2002).

Despite their humble beginnings, however, SCEE immigrants became indistinguishable from their Western European predecessors over time (Lieberson and Waters 1988). The prevailing approaches to assimilation offer a deterministic view of the industrial structure in the first half of the twentieth century. In contending that job ladders in manufacturing allowed for upward mobility, proponents of both segmented and neo-assimilation theory invoke a period effect. In the segmented assimilation approach, the most dominant account, shared European ancestry allowed immigrants and their descendants to bypass discrimination and benefit from the buildup of craft and managerial work in manufacturing (Portes and Rumbaut 2001). The neo-assimilation approach argues that assimilation was "based on historically contingent periods of economic expansion that allowed immigrants of peasant origin with few work skills of relevance in an urban, industrial economy…to gain a foothold through steady employment, often in manufacturing sectors to begin with" (Alba and Nee 2003: 134-135). Although the most important period for this framework is between 1930 and 1970 when the second generation came of working age, and they admit that some migrant groups did not use manufacturing to achieve upward mobility, the starting positions of different groups depended on their sectoral distribution – whether more or less heavily represented in manufacturing and its different branches – and on their positions within the occupational hierarchy. Since SCEE immigrants were overrepresented in all manufacturing sectors and especially in heavy manufacturing (Hirschman and Mogford 2009), the first generation experience within manufacturing firms inevitably had to affect the

starting position of the second generation during the most critical period of the neo-assimilation approach.

While there are subtle differences between segmented and neo-assimilation regarding the specific mechanisms they emphasize (see Waldinger 2007), proponents of either framework have never tested their claims. Indeed, the centrality of manufacturing in producing assimilation runs contrary to historical evidence (e.g., Bodner 1985; Bodner et al. 1982; Morawska 1985; Perlmann 2005; Perlmann and Waldinger 1996; Waldinger 2007). Further, these frameworks do not consider how organizational structures patterned mobility for the first generation.

Migrants who came to the United States faced negative circumstances including a peasant origin, scientific racism, employer discrimination, and other barriers that would have limited prospects for upward movement. For upward mobility to occur within manufacturing firms as assimilationists contend, therefore, organizational structures would have to override these forces. However, structural arrangements of firm promotion policies pattern mobility by creating discontinuities in the rate of promotion among individuals and groups (Spilerman and Petersen 1999). They may do this at the point of hire, job ladders within the firm, and through departures. Indeed, there is a large literature that shows how organizational structures play a key role in generating and perpetuating inequality in employment outcomes among different groups (see, e.g., Baron and Bielby 1980; Castilla 2008; Fernandez and Sosa 2005; Petersen and Saporta 2004; Petersen and Spilerman 1990). In the first half of the twentieth century, internal labor market structures were developed that explicitly allowed for upward mobility within firms that would have counteracted the negative contexts experienced by SCEE groups (Doeringer and Piore 1971). However, access to favorable promotion lines within these organizational structures was often segmented that made upward mobility unlikely for unprivileged groups.

Organizational Perspectives to Socioeconomic Mobility and Immigration

Internal labor market structures (hereafter ILMs) provide definite occupation promotion lines within administrative units, such as a manufacturing plant (Doeringer and Piore 1971). Whereas firms without ILMs rarely promoted workers from within in the early twentieth century (Jacoby 1984), firms that developed ILMs provide the most favorable avenue for upward mobility within an individual plant. Within ILMs, senior-level jobs are filled from within the firm where employees move up job ladders to enter craft and managerial positions.

ILMs emerged in the early twentieth century as a result of both worker and personnel managerial responses to the 'drive system' that sought to increase production without considering worker rights (Elbaum 1984; Jacoby 1984). In some firms, the workers' response to the drive system was to organize into powerful craft unions that determined the rules and procedures of the plant (Elbaum 1984). Management had little choice but to accept the procedures implemented by craft unions because workers made claims based on their on-the-job skill and its relationship to product quality (Applebaum 1981; Kimeldorf 2013). Craft unions then implemented ladders for socioeconomic mobility that would favor some occupations while excluding others. Craft unions and occupational groups would hoard opportunities for their members, who were largely native-born WASPs, relegating nonunion workers to unprivileged, often laborer positions, within the firm. Personnel departments also favored ILMs as a response to the large number of quits associated with the drive system (Jacoby 1984, 1997). As the cost of replacing workers increased – especially during WWI - personnel departments were created to handle increased bureaucratization and to develop rewards for loyal workers who stayed in the firm by promoting them to higher positions. However, foremen maintained considerable power

in who entered their department and personnel departments often resorted to promoting native white workers who were viewed as acceptable for skilled work leaving SCEE migrants and black workers in departments with little opportunity for upward advancement (Jacoby 1984; Nelson 1975; Foote et al. 2003).

Examinations of ILMs indicate that occupations and careers are used as a form of social control (Fligstein and Fernandez 1988). Entry into an ILMs is controlled where different entry portals lead to distinct career paths within the firm. Some entry portals allow for upward mobility while others do not. Upward mobility on any ladder, however, often relies on obtaining firm-specific-forms-of-capital, such as on-the-job training and an understanding of networks that provide crucial information (Althauser 1989). This on-the-job learning is informal and depends on social interactions between workers over time (Bailey and Waldinger 1991). However, a core tenet of ILMs is their ability to segment the labor market within a firm (Doeringer and Piore 1971; Doeringer 1986). Submarkets are developed within a firm where rules of promotion and lay-off procedures favor certain occupational groups, while simultaneously harming other occupational groups. The unprivileged occupations held little possibility for occupational mobility, and were disproportionately held by ethnic minorities, women, and the recently unemployed (Stinchcombe 1990). Thus, while there were many craft and managerial positions in manufacturing, as assimilationists argue, SCEE immigrants lacked access to occupations at the median and above according to ILMs theories. Of course, ILMs made for greater inequality among workers pre-industrial unionization and lesser inequality post-industrial unionization.[1] These unionization effects, however, were most likely felt by the second generation who largely came of working age during or after the Wagner Act of 1935.

[1] Industrial unions organized the entire workplace as opposed to craft unions mentioned above that organized workers along a particular craft or trade.

The role of external labor markets is also important when determining occupational mobility within firms because it provides workers with employment opportunities outside of the internal labor market that may or may not provide better chances for advancement. Workers have the option to either remain within the firm and accept the prospects of future advancement or leave for employment (or potentially non-employment) elsewhere (Petersen and Spilerman 1990). That is, a voluntary departure (done for either career or non-career reasons as described below) depends on the structure of opportunity in an organization and the structure of opportunities in the local labor market. If individuals and groups find employment in the firm, but are queuing for better jobs outside the firm, their socioeconomic mobility in the firm may be limited. However, if no such queues exist, groups may be more likely to invest in their workplace capital to try and get ahead within the firm. That is, occupational mobility is not only structured by movement within the firm, but is also affected by the structuring of career opportunities outside the firm (Petersen and Spilerman 1990). Thus voluntary departures from a firm depends on the structure of opportunity faced in an organization and the structure of opportunities in the local labor market which is often defined by geography.

Geographical disparities in settlement patterns influenced job market opportunities at the turn of the twentieth century as the type of manufacturing occupations available differed from the Northeast to the Midwest. As Waldinger (2007) notes, Italians generally settled in the Mid-Atlantic and Northeast, with a concentration of employment in light manufacturing, services, and other jobs related to the highly diversified economies of cities like New York, Philadelphia, and Boston. Poles, on the other hand, generally settled in the Midwest, with its concentration of heavy manufacturing firms (and later, CIO strongholds), and where cities had much more specialized economies. Locational configurations are associated with different patterns of wage

determination and status attainment: e.g., living in the Midwest had a positive impact on earnings but a negative impact on socioeconomic status, reflecting the low status of occupations in heavy manufacturing in Waldinger's study. While large manufacturing firms developed internal labor markets, employers looked outside the firm to fill senior-level jobs in industries such as construction, services, and light manufacturing. The interlocking of ethnicity and institutions took a different form in these settings and may have allowed for Italians and other groups who settled in cities with diverse economies to find upward mobility without relying on the heavy factory sector (Abramitzky, Boustan, and Eriksson 2014; Waldinger 2007) (see Bailey and Waldinger 1991 for a discussion on the role of external labor markets and mobility). As organizational structures within the firm and local community defined mobility among SCEE migrants, other parts of the immigrant experience often interacted with these structures that enhanced or reduced mobility.

In the Age of Mass Migration, SCEE migrants often entered the United States as target earners who searched for wages that could allow them to invest in their homelands (Piore 1979).[2] With identities in their sending communities, immigrants often accepted menial jobs in unprivileged positions since they held a short time horizon. However, instability was often a defining feature of these occupations that made immigrants prone to lay-offs, dangerous working conditions, etc. that would lead to less work and therefore less money (Piore 1979). As consumption increased, and disposable income decreased, immigrants' time horizon became longer. With little to no human capital accumulation (either from the sending country or the receiving country), and a lack of social ties to the native-born to gain the necessary firm-specific capital, SCEE immigrants had little choice but to continue working in menial jobs within firms.

[2] Some immigrant groups such as the Macedonian Bulgarians, however, entered the United States due to political oppression in their homeland as opposed to improving their impoverished state (Bodner 1977).

The concentration of minorities in unprivileged occupations led many jobs to become stigmatized (such as "guido," "dago," "hunkie," or "bohunk" work) that made between-group interactions needed for informal training less likely for immigrant populations. That is, cultural understandings within firms allowed for a division of labor such that immigrants were thought to be the perfect workers for menial occupations that the native-born would not work (Fischer and Hout 2006).

Stigmatized work and stigmatized origin often overshadowed migrants' ability to find upward advancement in manufacturing (Morawska 1985). People who share common traits, such as a similar ethnic origin, will embed themselves into interlocking networks and activities with their co-ethnics that in turn shape aspirations and careers over time (Massey et al. 1987). Since newcomers often rely on their co-ethnic social networks to find employment, they will most likely concentrate in jobs where veteran migrants have already been established (Waldinger and Lichter 2003). This means that recent arrivals will likely find employment where long-tenure immigrants work, which were at the bottom of the social stratification system in departments and occupations that lacked avenues for upward mobility.

The context of origin of immigrant groups likely matters given the diversity of migration streams, cultural understandings, and the level of economic development in sending communities. In the first half of the twentieth century, there was large heterogeneity in the level of industrialization and state building throughout Europe. Whereas Western Europe industrialized early, Southern and Eastern Europe industrialized late and were in the process of "catching up" (Gerschenkron 1962). Within countries, different economic possibilities exist at different historical junctures, which in turn socializes individuals within these countries toward certain predispositions to the workforce (Inglehart and Baker 2000). Migrants import with them

these predispositions that may affect their ability to achieve upward social mobility. Immigrants who come from countries with little to no exposure to manufacturing jobs and life in urban areas may fare worse in manufacturing plants in the United States than individuals who come from industrialized urban communities. Indeed, this is corroborated in empirical research where immigrants who originated from industrialized countries entered the labor market at similar positions as native workers and immigrants from poorer countries performed worse during this period (Abramitzky et al. 2014).

The dominant accounts of internal labor market and assimilation theories lend themselves to different conclusions about the role manufacturing played for immigrants. Internal labor market theories predict that immigrants were hired at the bottom of the occupational hierarchy, were less likely to make upward occupational moves, and likely remained in the firm since employment prospects outside the firm were likely no better. Assimilation theories, however, have merely asserted that job ladders within firms allowed for upward advancement without detailing how this process occurs. However, they do predict that SCEE migrants eventually converge with native-born workers on employment outcomes. Although assimilation theories do not deny that immigrants likely started at the bottom of the occupational hierarchy, they do suggest that job ladders within firms allowed for equal or greater mobility. According to this view, immigrant workers will either be no less likely or more likely to experience upward occupational movements within the firm, all else equal. That is, if immigrants start at lower positions in the firm, they will be more likely to experience an upward move to achieve convergence with native white workers. On the other hand, if immigrants show no difference in starting position, then they will be neither more nor less likely to experience an upward move in the firm since they have already reached parity with native-born workers.

The remainder of this paper seeks to explore mobility at all points of workers' employment histories (job entry, upward and downward moves, quits) to understand whether immigrants experienced upward mobility. In addition to answering these hypotheses, this chapter analyzes specific mechanisms that allowed for upward advancement among European-origin groups within firms. In particular, it tests whether citizens are more likely to obtain better employment outcomes than non-citizens, whether immigrant groups who originate from less developed areas have worse employment outcomes than immigrant groups who originate from more developed areas, and how years in the US affect mobility.

The A.M Byers, Pullman-Standard, and Ford Motor Company Data

Data consist of longitudinal worker histories from three Northern manufacturing companies in the first half of the twentieth century: A.M. Byers Company, Pullman-Standard Car Manufacturing, and Ford Motor Company. The data were originally collected by Warren Whatley and Gavin Wright for a project on the racial policies of Northern employers before the Second World War. All files are publically available through the Inter-University Consortium for Political and Social Research (ICPSR). [3]

The A.M Byers Company, which began in 1863 and closed in 1969, manufactured high-quality wrought-iron pipe and galvanized tube (Santos 1984). Whereas production in the iron and steel industry switched from wrought iron to steel once the low-cost Bessemer process became available, Byers resisted this change, as did many similarly situated companies, and continued to rely on skilled workers to make high-quality wrought iron (Ingham 1991). Byers developed lucrative niche markets by selling their tube to oil and gas, mining, and irrigation firms in the Southwest (Ingham 1991). Before 1930, skilled workers in Byers enjoyed the

[3] The Byers files may be found at ICPSR 6359, Pullman at ICPSR 6351, and Ford at ICPSR 6352.

autonomous work that was afforded to them through craft union bargaining of the Sons of Vulcan and later the Amalgamated Association of Iron, Steel, and Tin Workers (Santos 1984). The company signed its first contract with the CIO-based Steel Workers Organizing Committee on May 5th, 1937. The data for A.M. Byers Company contain a stratified random sample of workers in Ambridge, Pennsylvania and the Southside of Pittsburgh between 1916 and 1952. The records, which are currently located in the Archive of Industrial Society at the University of Pittsburgh, were partitioned into consecutive strata of five records and one record was randomly selected from each stratum (Whatley and Wright 1995a). This produced a representative sample of 5,780 employees, which were then supplemented with an oversample of 1,218 black employees. The records contain histories of individual workers' employment with the company along with demographic information.

Pullman Palace Car Company, and much later Pullman-Standard Car Manufacturing Company, began in 1867 to build and operate sleeping cars for railways (Whatley and Wright 1995b). After the wildcat strike of 1894, which led to the creation of Labor Day as a federal holiday, Pullman split into several divisions of car works and repair shops (Hirsch 2003). So as to limit future labor unrest, Pullman sponsored the Great Migration of black workers from the South and later began experimenting with welfare capitalism (Hirsch 2003; Jacoby 1997). In the late 1930s, however, it became unionized by the United Steelworkers and in 1948 the company held a monopoly and was forced to split into separate companies. Pullman officially closed in 1981. The Pullman files, which are housed at the South Suburban Genealogical and Historical Society in South Holland, Illinois, contain a stratified random sample on workers in Calumet, Illinois between the years 1902 and 1948. Every other box was selected from the Pullman archives and then the records were partitioned into consecutive strata of 40 records with one

randomly selected personnel file pulled from each stratum. The sampling was then augmented with a black oversample, and another oversample of records after 1937, when education was recorded (Whatley and Wright 1995b). The final dataset includes the employment histories of 4,147 workers and contains similar worker histories as the Byers data.

Ford Motor Company, of course, is the car manufacturer that exists today. Ford placed a strong emphasis on the Americanization of its foreign-born workers – especially among Southern and Eastern Europeans. At the time, Henry Ford established a Sociology Department to remake the lives of immigrant workers. Only *after* immigrants could demonstrate proper home environments and middle class values would they qualify for the famous Five Dollar Day plan (Barrett 1992; Loizides 2007). This led to unique ethnic tensions between migrant groups and management in the company. The files from Ford contain worker histories of those who were employed after 1918 and who had left by 1947. Since the files are sorted alphabetically, the sampling procedure began with a one-in-eight selection of boxes. Then every first and thirtieth record was chosen to provide a representative sample. A supplementary sample of black employees and two more supplementary samples of records with education information were then added. This led to 4,144 workers in the files. Workers in these files come from four major plants: the Rouge Plant (America's largest manufacturing plant), Highland Park (where Fordism began), Lincoln Motor Company (which was acquired in 1922), and the Willow Run plant located in Ypsilanti, Michigan. Willow Run began production in 1942 to build bombers during World War II (Whatley and Wright 1995c). There are also employee records for mine workers in northern Michigan and other workers employed by Ford operations throughout the state, which are omitted in the analyses below. All Ford operations were unionized in 1941.

The three companies kept detailed records of both demographic and job characteristics of individual workers over time. The demographic information includes age, gender, marital status, number of dependents, years of education, and race. It also includes variables that allow us to discriminate whether the worker was born in the US or another country. Further demographic information about immigrant workers was recorded such as descent, date of arrival in the US, country of citizenship, and English language ability at the time of hire. The job characteristics include the start and end date of each job, wage, occupation, department, and the reason for leaving.

To make the data more concrete, I present worker profiles from each dataset. The employee profiles present varying trajectories. For instance, the Polish worker in Byers entered the firm as a laborer and worked for less than a year before he quit for a "better job." He then returned at a laborer position five years later and worked until 1927 when he quit due to small wages.[4] The Norwegian worker in Pullman experienced upward mobility, moving from a metal cleaner to a riveter, but his employment was short-lived since he entered the Marine Corp during WWII. Similarly the Maltese migrant in Ford started as a light press operator and then moved to a hydraulic press operator before he was laid off. He also experienced considerable wage mobility during his employment.

[4] The 1939 Dictionary of Occupational Titles labels fagot makers, scale wheelers, and sand wheelers as laborer positions.

Table 2.1: Sample of Worker Employment Histories from Byers, Pullman, and Ford

A.M. Byers Company

Employee #: 10670	*Birthday*: 19 April 1890	*Hire Age*: 30	*Sex*: Male	*Marital Status*: Married	*Dependents*: 3
Education: -	*Descent*: Polish	*Citizenship*: American	*Birth State*: Poland	*Race*: White	*Plant*: South
Start	*Finish*	*Occupation*	*Department*	*Wage*	*Exit Reason*
24 June 1920	6 July 1920	Laborer	#4 Finish	.46/hour	-
6 July 1920	2 Sept. 1920	Laborer	#4 Weld	.47/hour	-
2 Sept. 1920	21 Sept. 1920	Fagot Maker	Fagot	.40/hour	Quit - Better Job
20 July 1925	4 Jan. 1926	Laborer	Scrap Hammer	.40/hour	Promoted*
4 Jan. 1926	27 Sept. 1926	Scale Whlr	Muck Mill	.41/hour	Promoted*
27 Sept. 1926	18 Feb. 1927	Sand Whlr	Bar	.37/hour	Quit - Small Wages

*Does not refer to promotion in occupational status as defined in my analyses below

Pullman-Standard Manufacturing

Employee #: 21356	*Birthday*: 1 March 1922	*Hire Age*: 20	*Sex*: Male	*Marital Status*: Married	*Dependents*: 2
Education: 12	*Descent*: Norwegian	*Citizenship*: American	*Birth State*: Oslo, Norway	*Race*: White	*Years in the US*: 11
Start	*Finish*	*Occupation*	*Department*	*Wage*	*Exit Reason*
1 May 1942	1 May 1942	Metal Cleaner	Assembly	-	-
6 July 1942	10 Sept. 1942	Student	Assembly	60	Transferred
11 Sept. 1942	29 Sept. 1942	Riveter	Assembly	63	Changed Rate
30 Sept. 1942	31 Oct. 1942	Riveter	Assembly	75	-
1 Nov. 1942	26 April 1943	Riveter	Assembly	75	Went into Marine Corps

Ford Motor Company

Employee #: 3456	*Birthday*: 10 March 1898	*Hire Age*: 45	*Sex*: Male	*Marital Status*: Single	*Dependents*: 0
Education: 4	*Descent*: Maltese	*Citizenship*: American	*Birth State*: Malta	*Years in Detroit*: .8333	*Plant*: Willow Run
Start	*Finish*	*Occupation*	*Department*	*Wage*	*Exit Reason*
28 April 1943	28 April 1943	PRS OP TR	930	.85/hour	-
28 April 1943	4 June 1943	Light PRS OP	930	1.00/hour	-
4 June 1943	2 July 1943	Light PRS OP	930	1.05/hour	-
2 July 1943	5 Nov. 1943	Light PRS OP	930	1.10/hour	-
5 Nov. 1943	9 Oct. 1944	Light PRS OP	930	1.15/hour	-
9 Oct. 1944	18 May 1945	HY PRS OP	927	1.20/hour	Laid Off

Note: Employee did a good job

Case Selection

While the preservation of these records makes examination of the employment profiles worthwhile in and of itself, the three case studies raise the question not only of how they compare to one another, but also to heavy manufacturing as a whole. Ford was an innovative giant in American industry that has continued to exist; Byers was a small, regionally based firm

that was never at the cutting edge; and Pullman grew through acquiring smaller firms, eventually leading to a monopoly in railcar manufacturing. The factories controlled by these companies were also different sizes. Byers employed roughly 1,000 to 2,000 employees each year during this time (Santos 1984), while Pullman employed between 4,000 and 6,000 employees in 1900 (Nelson 1975). These factories, however, pale in comparison to the gargantuan factories of Ford where Rouge alone is estimated to have employed between 68,000 and 100,000 workers and Highland Park employed over 40,000 workers (Nelson 1975).

Nevertheless, ILMs were "invariably" set up in iron and steel industries through the bargaining of the Sons of Vulcan and the Amalgamated Association of Iron, Steel, and Tin Workers (Elbaum 1984). By association with these craft unions and industry, Byers was forced to adopt these bureaucratic structures. Indeed, job vacancies at higher level positions in the firm were filled by existing personnel (Santos 1984), which is consistent with ILMs. The job hierarchy within Byers also shows that native white workers and old-stock migrants were disproportionately working in skilled jobs while southern and eastern European immigrants worked in laborer positions. Due to the pressures of craft union workers described above, A.M. Byers allowed for promotion schemes set up by skilled workers that favored the native-born and old-stock migrants the most (Santos 1984).

The rapid expansion rapid expansion of Ford and Pullman factories, on the other hand, created numerous administrative difficulties that led to bureaucratization. Ford's personnel managers implemented many of the rules and procedures defined by internal labor markets around 1914 that promoted internal mobility within the firm (Jacoby 1984), and Pullman adopted similar structures in the late nineteenth century as a response to the wildcat strike in 1894 (Hirsch 2003). Both companies developed ILMs in order to undermine labor activity. For instance,

managers in Pullman used "separate and unequal job ladders to pit workers against each other" and used racial/ethnic categories to place people into privileged and unprivileged ladders (Hirsch 2003: 15). All supervisors and managers in the company came up through the ranks. Pullman was one of the first companies to develop ILMs that afforded workers long careers with the company (Hirsch 2003). Ford developed a similar system using the same management practice of separating workers based on race/ethnicity that ultimately favored native-born white workers (Bonacich 1976). These three companies are therefore likely representative of firms that developed ILMs, but are not representative of firms without these structures. Manufacturing firms without ILMs, however, often did not have definite promotion lines within their firms (Jacoby 1984), which would make upward mobility of immigrants less likely in those types of firms than with firms with ILMs.

Variables and Methods

The personnel records described above are used for individuals who were in the companies as of the beginning dates of the data collection (1916 for Byers, 1902 for Pullman, and 1918 for Ford) or entered after the beginning date but before the ending date (1952 for Byers, 1948 for Pullman, and 1947 for Ford). Data are limited to men working in manufacturing plants described above. While women appear in the files, nearly two-thirds of their employment spells in each company corresponds to WWII. The war period was the only time heavy manufacturing had use for female labor (Milkman 1987). I also exclude the mine workers in the Ford files since the ethnic composition and structure of jobs likely differed than those in the factories.

The primary objective of this paper is to understand occupational mobility among immigrant workers within firms. Because these companies did not organize occupations into any hierarchy, nor, for that matter, use any standardized occupational coding system, it becomes necessary to match occupations to Census categories. To do this, I aggregated the detailed occupations in the files into four major occupational groups: laborers, operatives, craft workers, and managerial/professional.[5] A hierarchy among these major occupational classifications emerges with laborers at the bottom and managerial/professional work at the top. A detailed explanation of how these jobs and occupations were coded into the major occupational groups is in Appendix 2.A.

As shown in Table 2.1, the employment records also provide further information about the individual that were recorded at the time of hire. This includes race (black-white), age, marital status, and the number of dependents. Other variables were coded using information from the employment files and matching those to census data (e.g., the Duncan socioeconomic index) as noted in Appendix 2.A.[6]

The analyses are described in three parts. First, I describe the workforce in each of the companies. Up to this point, Southern and Eastern European immigrants have been discussed as one category, which ignores significant inter-ethnic differences. I therefore provide detailed descriptions on the composition of the workforce in these factories, paying particular attention to changes in the ethnic composition and socioeconomic changes over time. These descriptions not only show the heterogeneity among Southern and Eastern European immigrants, they also

[5] There are clerical and sales occupations in the manufacturing plants. However, there are few to no transitions between clerical/sales occupations and the other production occupations in all three companies.

[6] Educational attainment is also included in the samples; however, it was only recorded in these files during distinct periods within the samples. While A.M. Byers has the most complete records of educational attainment, Pullman started recording education only after 1937 and nearly sixty percent of employment records are missing education in the Ford sample. Moreover, few of the foreign-born workers in the files have recorded educational attainment. This seemingly important variable, therefore, is omitted in the analyses described below.

highlight labor market trajectories of different ethnic groups that would be lost in quantitative analyses.

Second, because occupational mobility within firms will depend on the occupation that an individual begins, I develop a model predicting the odds of being in different broad occupational classifications upon first occupation. Because few immigrant employment spells are in the managerial/professional category in every company, I run a multinomial logistic regression predicting workers first broad occupational category in the firm for three categories (being a laborer, operative, or craft/managerial/professional worker) with being a laborer in first occupation as the baseline. I use the control variables listed in Appendix A and predict first occupation for a pooled sample and for an immigrant-only sample. In the pooled sample, the reference category for the ethnic/immigrant categories is native-born white workers. These analyses allow us to determine whether immigrants entered the firm through different portals than native white workers. In the immigrant-only samples, I use ethnic groups that originate from Western Europe as the reference group. In the immigrant-only analyses, I also add variables based on country of citizenship and years in the United States in Byers and Pullman. Unfortunately, Ford did not keep records on these characteristics making analyses of these variables impossible.

Third, I develop a model for understanding occupational mobility within firms.[7] I use a competing-risk Cox proportional-hazards model to analyze upward moves, downward moves, and exits. Employment spells must be chronologically correct and with complete date

[7] There are practical reasons for not analyzing wage mobility due to missing wage data in Byers and Pullman. Byers did not keep accurate wage data after 1934 (although they still noted occupational changes) and data only exist for those who earned an hourly wage. Since many of the managers and professionals were on salary, we don't know the wages of this theoretically important category. Pullman paid workers by a combination of hourly and piece rate (with piece rates being more important in the departments that made the railroad cars). Since piece rates varied with every order that the company received, we don't know how much these workers actually made. Thus analyses for Byers and Pullman would be for select occupational groups and miss some of the theoretically important occupations.

information to be included in the Cox model. Those without correct start and end dates are likely due to transcription errors. These occupational moves are defined by ranking each occupation with laborers at the bottom and managerial/professional at the top as shown in Table 2.2. While the types of moves made possible by this ranking system are not equal (e.g., moving from a laborer to an operative is of less significance than moving from a laborer to a managerial position), all moves are treated equally.[8] Treating all movements the same is done for practical reasons in that movement from a laborer position to a craft work (or higher) position is extremely rare making analyses unreliable. In Ford, occupational moves are clustered within individuals (i.e., a few migrants make most of the moves witnessed for their group). The proportional-hazards models are therefore not run for the Ford sample since few individuals are doing the movement.

Table 2.2: Occupational Moves as Events

Rank	Types of Moves
1 – Laborer	**Internal Moves** (rank change in employment of any size)
2 – Operative	Laborer ⇔ Operative
3 – Craft worker	Operative ⇔ Craft Worker
4 – Managerial and professional	Craft Worker ⇔Managerial and Professional
	Laborer ⇔ Craft Worker
Clerical and sales occupations excluded	Laborer ⇔Managerial and Professional
	Operative ⇔ Managerial and Professional
	Exits (employee leaves the firm)
	Quit
	Other (layoff, fired, gone to war, retired, etc.)

As mentioned earlier, leaving a firm also helps determine mobility within the firm. I therefore distinguish between voluntary departures (quits) and other forms of exiting (e.g., fired, lay-offs, going to war, dying, retiring). Quitting may occur for career or personal reasons. If

[8] As a robustness check, the type of moves are separated (e.g., small moves count as a one rank change and big moves count as a two or more rank change in occupation). The results, available upon request, are similar to the analyses that combine the types of movements.

groups are more likely to quit for career reasons, they may not have used internal labor markets as a mechanism for upward advancement. For many of the quits that occur in the data files, reasons for quitting are given. The majority of quits appear to be because of better employment opportunities outside of the firm (e.g., "quit – better job"; or "quit – found another job at Chrysler"), however, other reasons are also given like "quit - returning to old country," because of unstable or hard work, or "quit – wanted for murder."[9] Since it is impossible to know the reason for all quits in the firms, however, I analyze the hazard of quitting and make a strong assumption that most are for career reasons.

A competing risk Cox proportional hazard model is used where on any given day an individual is at risk of making an upward occupational move, a downward occupational move, quitting, or exiting the firm involuntarily. Spells are measured in duration time that occurs at different calendar times, although there is no censoring on duration. An individual becomes at risk of making an upward move, downward move, or exit when they enter the firm and the clock resets once any of the events occur. However, there is a ceiling effect when analyzing upward movement within firms (i.e. managers cannot make an upward move) and a floor effect on downward movement (i.e. laborers cannot make a downward move). Thus, once an individual becomes a manager/professional, he falls out of the risk set analyzing upward moves. However, if at a later (or earlier) time he takes an occupation other than a managerial/professional position, he becomes at risk of making an upward move again. The reverse is done when analyzing downward moves: employment spells of individuals in a laborer position are omitted from the

[9] In Byers, there were 64 quits where the reason given was because of an "A.F. of L. Strike" or "man was on a mission to uplift working class – thought he was mentally ill." This suggests that the companies did not track 'quits' versus 'dismissals' very well. This may introduce measurement error in the analysis that looks at quits as opposed to other forms of leaving. However, because not all quits in the firms have information as to why the individual left, it is impossible to separate the dismissals that were coded as quits in the files. Of the workers for which exit reasons are given, I code strikers as an involuntary exit rather than a voluntary exit since it seems more likely that management forced these workers to leave the firm.

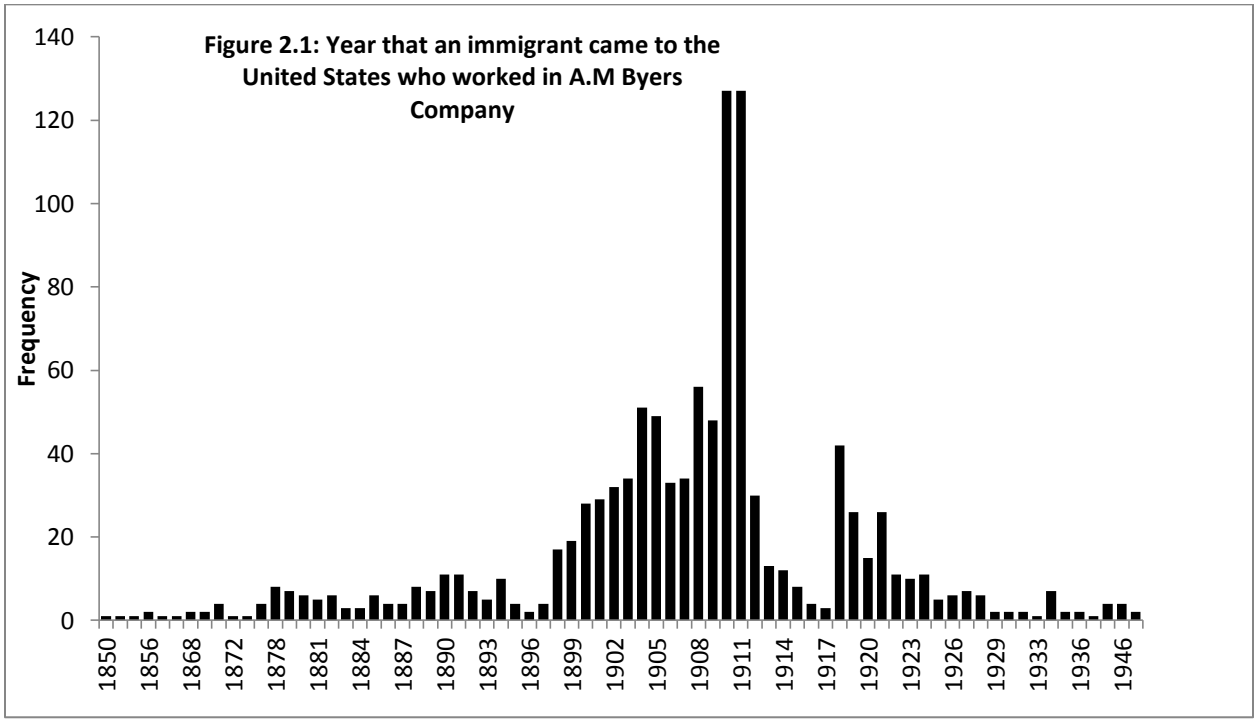
risk set. To handle the different risk sets, I analyzed separate Cox regressions for each destination (upward moves, downward moves, and departures) (Prentice et al. 1978). Since it is unreasonable to assume that each employment spell within each worker is independent, I adjust the standard errors of the estimated parameters to account for possible correlation. I also use the Efron method for handling ties and estimate separate models for each company.

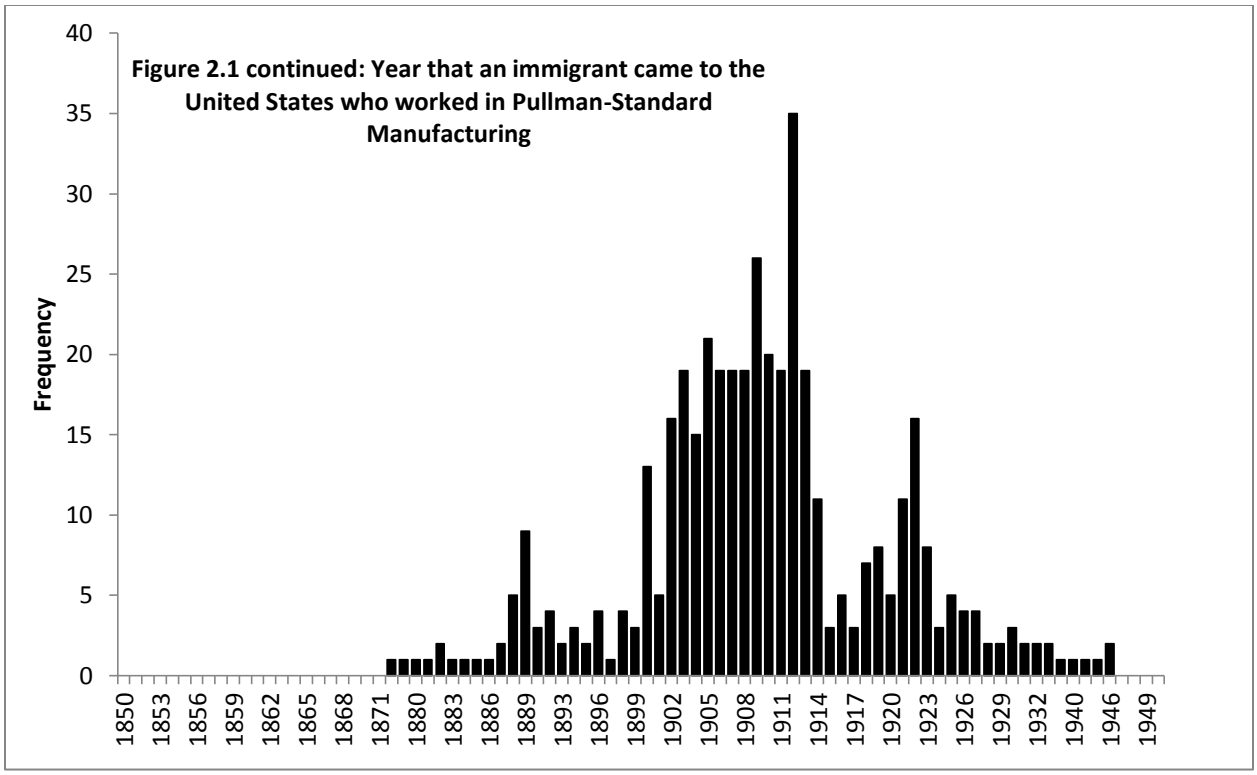
Immigrant Workers in Byers, Pullman, and Ford

During the years of mass immigration, Byers, Pullman, and Ford drew a large foreign-born population to their factories. In the Byers files, 37 percent of workers were born in another country, nearly 30 percent of workers were foreign-born in Pullman, and 20 percent were foreign-born in Ford. The vast majority of these workers came from Southern and Eastern Europe, but individuals from Western Europe, Latin America, and the West Indies were also in the mix. The ethnic composition of these factories was also diverse. The data files report 84 different ethnicities in Byers, 94 ethnicities in Pullman, and 92 ethnicities in Ford.[10] By far, Italians, Poles, and Slavs were the largest ethnic groups in the companies, but Western Europeans and Canadians also show up in large numbers in Ford. Within each group, however, there is significant heterogeneity in country of origin. For instance, Polish immigrants in Byers were born in Austria, Denmark, Germany, Poland, Prussia, and Russia. By contrast, Polish immigrants in Pullman were born in Austria, England, Hungary, Poland, and Russia. Ethnicities that originate from the Balkans had the greatest diversity in country of birth, while ethnicities that originate from Western Europe come from a singular country (e.g., English from England).

[10] These ethnicities include both the foreign-born and native-born. Not all ethnicities are mutually exclusive since some have been misspelled in the original employment cards and are thus coded as separate ethnicities. I correct for the misspelling in the following analyses.

The majority of immigrants came to the US at the same time. Figure 2.1 plots the year of arrival to the US by descent for the Byers and Pullman files. As shown, the majority of workers in each company came to the United States between 1900 and 1913. Each company reports a steep decline in entry during World War I, with a slight rebound in the early twenties. However, the migration flows virtually stopped after the 1924 Immigration Act which limited the annual number of immigrants that would be allowed to come to the United States. These entry patterns within the firms are consistent with the entry patterns for all immigrants at the national-level (Perlmann 2005).





Note: Data come from the A.M. Byers and Pullman-Standard files. Frequencies broken down by ethnicity are available upon request.

On average, immigrants took 20 years after arrival in the United States to find a job in Byers and 9 years in Pullman.[11] The companies, therefore, were not hiring recent arrivals. This means that most immigrants had some English-language capability. The companies recorded whether immigrant workers could speak, write, and/or read in English. In Pullman just 11 people could not speak in English, 29 could not write in English, and 26 could not read in English. Ford recorded whether an employee could speak English and only 7 individuals could not. The most variation occurs in Byers where 143 employees could not speak English, 769

[11] Because Ford does not have information on when an immigrant entered the United States, we cannot measure how long it took to find employment in its factories.

could not read in English, and 803 could not write in English.[12] Most workers appear to have attained the firm's minimum standards for English attainment (especially in Pullman and Ford).

After getting a job within the firm, we can begin to track socioeconomic status. As shown in Table 1, each individual had multiple jobs (e.g., the Byers and Ford workers have 6 jobs and the Pullman worker has 5). Figure 2.2 shows the average socioeconomic status of selected ethnic groups and native-born whites and blacks by their job number. First occupation refers to the first occupation that individuals held upon being hired. Each subsequent occupation refers to the next position that the worker had after any change in employment (e.g., wage change, department change, occupation change, etc.). A worker contributes one observation to each occupation number, although the later occupation numbers are weighted toward workers who stay in the firms longer.[13]

[12] Unfortunately, the English variables are missing from Byers in the ICPSR files making inclusion of this variable in the analyses below impossible. This information was taken from the code book. An independent check by Warren Whatley and Thomas Maloney in 2012 has confirmed that these variables are missing from ICPSR and they were unable to find an archived version of the dataset.

[13] Jobs in Figure 2 may be of any length. While this assumes that the native-born and immigrants experienced changes in jobs at a constant rate, these rates do vary in Byers and Ford. In Byers, immigrant workers changed jobs 1 to 2 months quicker than the native-born. By contrast, immigrants changed jobs 1 to 2 months slower in Ford. The median number of days in each job in Pullman, however, is similar for immigrants and nonimmigrants.

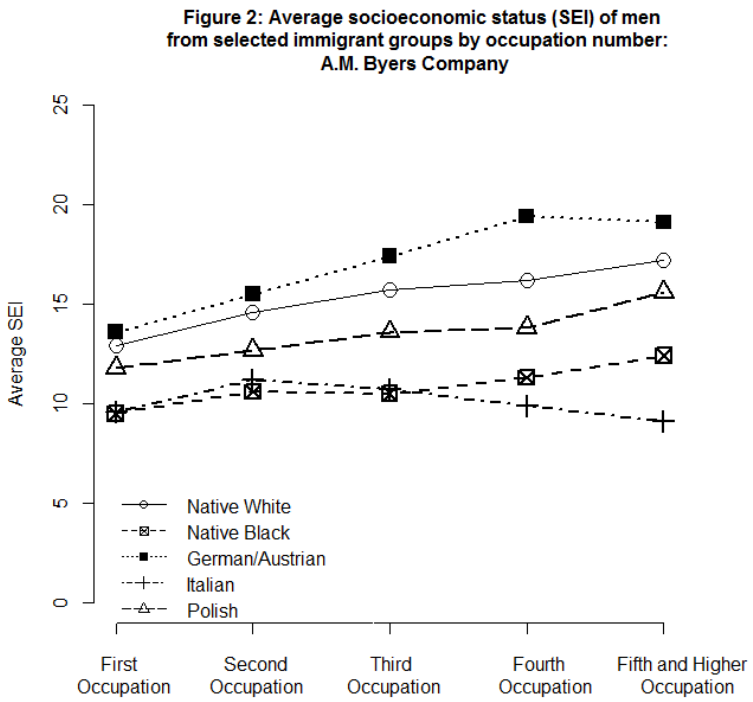


Figure 2.2 Average Socioeconomic Status (SEI) of Men from Selected Immigrant Groups by Occupation Number: A.M. Byers Company

With the exception of German/Austrian immigrants in Byers, all immigrant groups and US-born black workers had a lower average SEI in the first occupation held in the factory than US-born whites. While these differences may or may not be significant, the average age at the time of the first job for US-born whites was 26 years old in Byers, 29 years old in Pullman and 28 years old in Ford. The average age for foreign-born workers was 34 in Byers, 31 in Pullman, and 30 in Ford. Thus, *immigrants started working at lower positions than US-born whites despite being much older when initially hired*. Immigrants time horizon in the firm was therefore shorter than the native-born since workers were "old at forty" in most of these occupations.

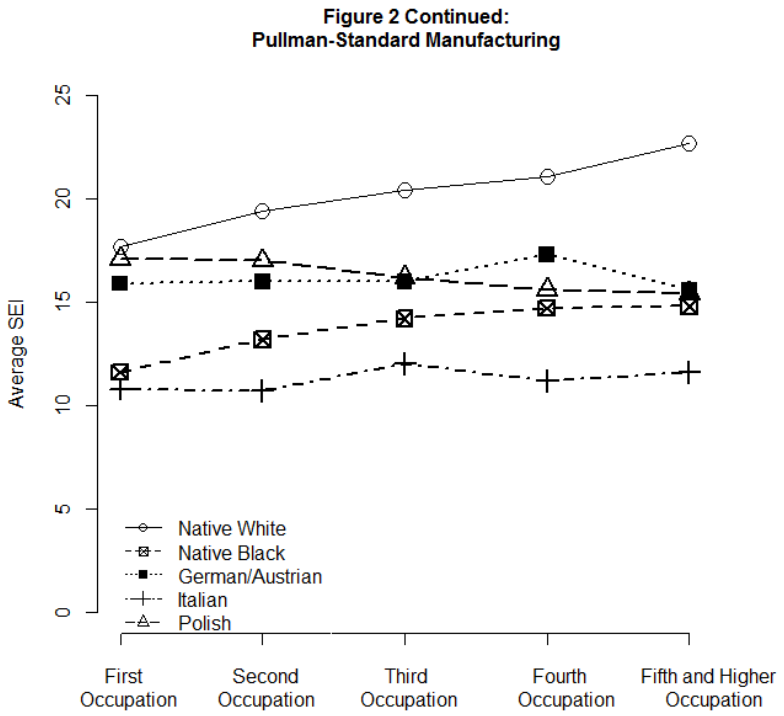


Figure 2.2 Continued: Pullman-Standard Manufacturing

Most notable in Figure 2.2, however, is the low SEI scores of Italian immigrants. Here, we may be seeing the impact of weaker, less dense social networks. Italians were much less likely to settle in the industrial heartland than were Poles and other Slavs (Perlmann 2005; Waldinger 2007). It may be that these workers were part of a circulatory labor migration (moving back and forth from Italy) or simply had few co-ethnic connections within the plants and therefore found it more difficult to gain any mobility within the internal labor market. Alternatively, it might be that in these areas Italians were more likely to be employed outside of manufacturing (e.g., construction) and therefore left manufacturing when they found better opportunities in Italian niches. These mechanisms may explain why Italians have lower SEI levels and progress than native Black workers in Pullman and Ford and the downward movement for Italians in Byers.

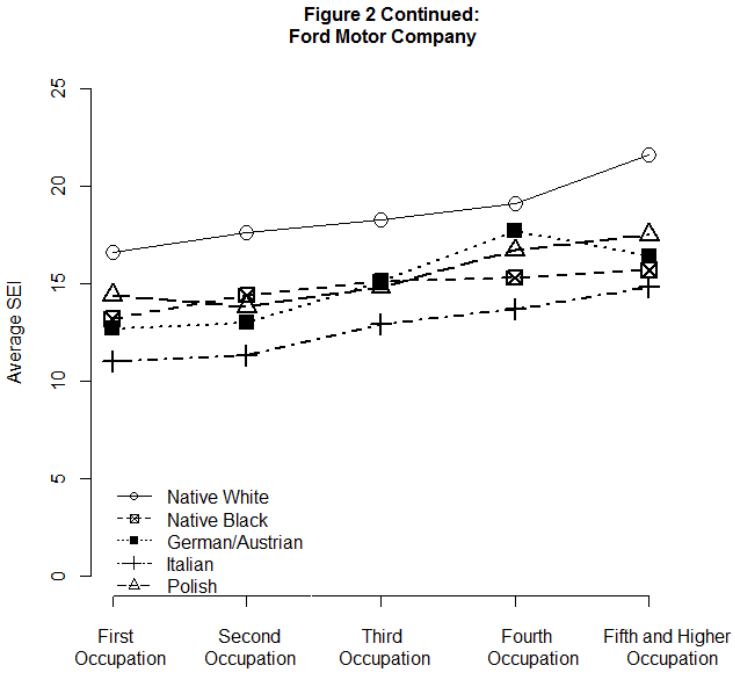


Figure 2.2 Continued: Ford Motor Company

Note: Data come from the A.M. Byers, Pullman-Standard, and Ford Motor Company files matched to corresponding census data. See Appendix A for more details. First occupation refers to the occupation an individual has at initial hire. Second occupation refers to the next occupation after initial hire and so forth.

Yet other groups show different mobility trajectories than Italians. In Byers, German/Austrians obtained skilled and managerial positions before it began hiring other immigrant groups (Santos 1984). The upward trajectory of German/Austrians may reflect ethnic ties where German foremen lifted the mobility prospects for the group as a whole. This also explains why German/Austrians have a higher SEI than native white workers in each job where the foremen, efficiency engineers, and industrial engineers lift the average SEI for the group as a whole. The positive impact of these occupations on the average SEI is greater for German/Austrians than for native whites because there are relatively fewer German/Austrians in the sample.

Similar to Figure 2.2, wages also present the same trend. While we do not have complete wage data for Byers and Pullman, Ford kept wage information for their workers.[14] Similar to Figure 2, Italians held lower nominal wages than all groups in every job (although all nominal wages increase as jobs change). For instance, in the first job, Italians earn an average of 68 cents per hour compared to a US-born white worker's 76 cents per hour. The average wage for Italians in the fifth and higher job was 85 cents per hour compared to 98 cents per hour for US-born white workers. The major difference between wages and status are for black workers who hold similar wages as US-born white workers despite the low status as shown in Figure 2.2. The high wages, but low status of black workers corroborates Foote, Whatley, and Wright's (2003) study that shows that there was no racial (black/white) wage variation in Ford, but black workers were given the undesirable "hot" foundry jobs characterized by low status and hazardous working conditions.

Yet the broader picture of Figure 2.2 shows upward mobility in Byers and Ford and lateral mobility in Pullman. However, these micro-movements in Byers and Ford are not great. For instance, Poles move up four SEI points from the first job to the fifth job in Byers and three SEI points in Ford. A one point move in SEI is equivalent to a laborer becoming a janitor (this would be an SEI 8 to a SEI 9). The small movement seen in Figure 2.2 keeps the average worker in the same broad occupational classification.

To show that immigrant populations rarely obtained higher occupations, Table 2.3 presents the number of occupational classifications by employment spell for each descent. With the exception of German/Austrians in Byers, who show 12 percent of their employment spells in

[14] Byers did not keep accurate wage data after 1934 (although they still noted occupational changes) and data only exist for those who earned an hourly wage. Pullman paid workers by a combination of hourly and piece rate (with piece rates being more important in the department that made the railroad cars). Thus, we don't know the average earnings of groups in these firms.

managerial/professional occupations thus reflecting the high SEI from Figure 2.2, few of the other ethnic groups have employment spells in this category. Moreover, few of employment spells for immigrants concentrate in craft work positions thus providing evidence that internal labor market structures prevented ethnic groups from moving into higher occupational categories.

Occupational Mobility in Byers, Pullman, and Ford

Job Entry

As just shown, Southern and Eastern European immigrants were hired at an older age, but started at a lower occupational prestige than US-born whites within the factories. As occupations changed over time, Southern and Eastern European immigrants failed to achieve parity with native white workers and rarely held occupations at the managerial/professional level. Craft work was also relatively uncommon, leaving Southern and Eastern European immigrants in laborer and operative positions. These results suggest that immigrant workers remained in the same broad occupational category that they were initially hired – positions at the bottom. Table 2.4 presents a multinomial logistic regression predicting worker's first occupation at initial hire with a laborer occupation as the baseline. Analyses on both a pooled-sample and immigrant-only sample are provided with odds ratios presented for ease of interpretation.

Table 2.3: Number of job spells in each major occupational category by ethnicity

Byers

	Laborer	Operative	Craft worker	Managerial/ professional	Total
US white	3,355	1,297	996	304	5,952
US black	3,757	902	256	19	4,934
German/Austrian	225	108	96	60	489
Italian	404	47	26	1	478
Lithuanian	215	121	33	9	378
Polish	1,400	841	423	58	2,722
Russian	260	69	20	0	349
Ruthanian	442	229	54	1	726
Other Slavic	595	311	140	7	1,053
Other Ethnicity	1,413	344	393	53	2,203
Total	12,066	4,269	2,437	512	19,284

Pullman

	Laborer	Operative	Craft worker	Managerial/ professional	Total
US White	853	2,088	1,036	546	4,523
US Black	1,692	786	238	29	2,745
Swedish	49	224	91	16	380
Italian	279	72	33	0	384
Polish	78	117	53	3	251
German/Austrian	126	186	70	0	382
Slavic	169	238	71	4	482
Other Ethnicity	590	650	378	63	1,681
Total	3,836	4,361	1,970	661	10,828

Ford

	Laborer	Operative	Craft worker	Managerial/ professional	Total
US-born White	1,799	3,301	1,289	539	6,928
US-born Black	3,015	2,774	1,123	89	7,001
Canadian	86	143	64	9	302
English	112	85	43	18	258
German/Austrian	48	45	38	0	131
Italian	220	115	52	2	389
Polish	211	219	86	0	516
Russian	73	34	21	0	128
Other ethnicity	701	657	253	65	1,676
Total	6,265	7,373	2,969	722	17,329

The pooled samples of each company show many significant differences between immigrant groups and native white workers. For instance, in *all* three companies, Italians have significantly lower odds of being an operative or craft/managerial/professional worker in their first occupation (as opposed to being a laborer) than their native white counterparts. More striking, *all* Slavic groups in *all* three companies hold lower odds of being a craft/managerial/professional worker in their first occupation and in some cases have lower odds of starting in operative positions vis-à-vis native whites. By contrast, groups who tend to originate from more advanced countries (e.g., English in Ford, Swedish in Pullman) show no statistically discernible difference than native white workers in their first occupation. In fact, German/Austrians hold higher odds of beginning their career in the firm as an operative (as opposed to a laborer) than native whites in A.M. Byers. [15] This does not reflect disparities in time of arrival, such that English, Swedish, or German/Austrian workers in these firms had arrived earlier than the SCEE coworkers and therefore benefited from more exposure to US customs and values, which in turn would allow them to start in higher positions. As shown in Figure 2.1, almost all of the immigrants arrived in the US at the same time. Those who arrived before 1900 (i.e. those with more time to assimilate) were from the "other ethnicity" category who hold lower odds of starting in operative and craft work in these firms. In unreported results, there are no substantive interaction effects between the ethnic categories and control variables in the pooled samples. Nevertheless, the pooled samples of Table 4 suggest that immigrants and native white workers entered these firms through very different hiring portals.

[15] However, German/Austrians hold lower odds of being a craft/managerial/professional worker at initial hire than similarly situated native white workers.

Table 2.4: Multinomial logistic regression predicting first occupation in the firm (laborer position is the baseline)

A.M. Byers Company

	Pooled Sample		Immigrant-only sample					
			Without immigrant specific variables		With immigrant specific variables			
	Operative position	Craft/ managerial/ professional	Operative position	Craft/ managerial/ professional	Operative position	Craft/ managerial/ professional	Operative position	Craft/ managerial/ professional
Ethnicity (US-born white reference)								
US-born black	.372	.071						
	(-8.17)***	(-12.82)***						
German/ Austrian	2.083	.397			Reference category			
	(3.20)**	(-2.92)**						
Italian	.437	.150	.185	.342	.183	.339	.278	.333
	(-3.02)**	(-5.54)***	(-4.87)***	(-2.30)*	(-4.88)***	(-2.31)*	(-3.01)**	(-1.95)+
Lithuanian	1.034	.191	.506	.472	.558	.501	.640	.477
	(.13)	(-4.04)***	(-2.13)*	(-1.48)	(-1.81)+	(-1.35)	(-1.08)	(-1.15)
Polish	.996	.325	.459	.808	.485	.839	.481	.653
	(-.03)	(-6.24)***	(-3.17)**	(.541)	(-2.93)**	(-.50)	(-2.30)*	(-1.01)
Russian	.721	.207	.329	.507	.366	.539	.412	.602
	(-1.10)	(-3.86)***	(-3.09)**	(-1.34)	(-2.77)**	(-1.21)	(-2.04)*	(-.89)
Ruthanian	.797	.101	.368	.267	.425	.293	.449	.145
	(-.92)	(-4.39)***	(-3.14)**	(-2.20)*	(-2.64)**	(-2.02)*	(-1.77)	(-1.77)
Other Slavic	.826	.373	.374	.907	.399	.941	.445	.744
	(-.94)	(-4.66)***	(-3.43)**	(-.26)	(-3.18)**	(-.16)	(-2.28)*	(-.66)
Other Ethnicity	.646	.634	.299	1.606	.255	1.483	.369	2.551
	(-3.17)**	(-3.33)**	(-4.96)***	(1.45)	(-5.37)***	(1.17)	(-2.44)*	(2.23)*
Immigrant variables								
US citizen					1.403	1.211	1.692	1.833
					(2.16)*	(.99)	(2.36)*	(2.30)*
Years in the US							1.002	1.009
							(.12)	(.71)
Age at hire	.983	1.039	.967	1.035	.967	1.035	.966	1.012
	(-3.88)***	(9.52)***	(-4.91)***	(5.46)***	(-4.93)***	(5.42)***	(-2.70)**	(.85)
Married	1.315	1.607	1.239	1.204	1.228	1.196	1.564	1.419
	(3.17)**	(4.93)***	(1.62)	(1.24)	(1.54)	(1.19)	(2.14)*	(1.41)
Previous training	3.068	7.001	3.521	11.284	3.453	11.185	5.402	10.589
	(7.55)***	(15.99)***	(5.21)***	(11.75)***	(5.12)	(11.70)***	(4.08)***	(6.22)***
Ambridge factory	.326	.439	.269	.256	.249	.248	.231	.148
	(-8.28)***	(-6.08)***	(-4.07)***	(-4.09)***	(-4.25)***	(-4.16)***	(-3.43)**	(-4.19)***

Table 2.4 continued

A.M. Byers continued

	Pooled Sample		Immigrant-only sample					
			Without immigrant specific variables		With immigrant specific variables			
	Operative position	Craft/ managerial/ professional	Operative position	Craft/ managerial/ professional	Operative position	Craft/ managerial/ professional	Operative position	Craft/ managerial/ professional
Unemployment rate in year of hire	1.009	1.006	1.045	1.039	1.045	1.039	1.024	1.039
	(1.31)	(.99)	(3.35)**	(2.67)**	(3.33)**	(2.66)**	(1.33)	(1.97)*
Hired during WWI	.586	.695	.569	.574	.567	.571	1.361	1.769
	(-4.52)***	(-2.61)**	(-3.90)***	(-3.33)**	(-3.91)***	(-3.36)**	(.97)	(1.39)
Hired during WWII	.411	.435	.432	.534	.401	.517	.170	.794
	(5.86)***	(-5.73)***	(-1.88)+	(-1.69)+	(-2.04)*	(-1.76)+	(-2.65)**	(-.50)
N	6,559		2,465		2,465		1,034	
Log-likelihood	-4,119		-1,671		-1,668		-686	
BIC	8,536		3,576		3,587		1608	
McFadden's R2	.13		.12		.12		.15	

Table 2.4: continued: Pullman-Standard Manufacturing

	Pooled Sample		Immigrant-only sample					
			Without immigrant specific variables		With immigrant specific variables			
	Operative position	Craft/ managerial/ professional	Operative position	Craft/ managerial/ professional	Operative position	Craft/ managerial/ professional	Operative position	Craft/ managerial/ professional
US-born white (reference)								
US-born black	.192	.109						
	(-12.09)***	(-12.50)***						
Swedish	1.719	1.197			Reference category			
	(1.36)	(.40)						
Italian	.111	.065	.064	.058	.045	.036	.038	.023
	(-6.87)***	(-5.72)***	(-5.50)***	(-4.33)***	(-5.09)***	(-4.12)***	(-4.52)***	(-3.78)***
Polish	.897	.611	.553	.578	.597	.928	.463	.875
	(-.33)	(-1.26)	(-1.17)	(-.93)	(-.77)	(-.10)	(-.91)	(-.14)
German/ Austrian	.533	.505	.299	.463	.243	.311	.145	.197
	(-2.16)*	(-2.07)*	(-2.51)*	(-1.40)	(-2.51)*	(-1.80)	(-2.82)**	(-2.08)*
Slavic	.322	.355	.198	.349	.166	.197	.123	.122
	(-4.45)***	(-3.63)***	(-3.53)***	(-2.01)*	(-3.34)**	(-2.59)*	(-3.20)**	(-2.70)**
Other Ethnicity	.368	.422	.212	.389	.132	.421	.078	.277
	(-6.58)***	(-5.15)***	(-3.77)***	(-2.01)*	(-3.89)***	(-1.53)	(-3.95)***	(-1.82)+
US citizen					2.029	1.784	1.172	1.059
					(2.33)*	(1.78)+	(.42)	(.14)
Years in the US							1.054	1.056
							(2.23)*	(2.17)*
Age at hire	1.018	1.028	1.027	1.033	1.027	1.028	.996	.998
	(2.81)**	(3.90)***	(2.30)*	(2.53)*	(1.70)+	(1.68)+	(-.17)	(-.07)
Married	1.182	1.175	1.219	1.175	1.586	1.882	2.292	2.911
	(1.47)	(1.21)	(1.01)	(.71)	(1.57)	(1.94)+	(2.46)*	(2.73)**
Previous training	1.759	2.382	1.569	3.712	1.577	4.598	2.852	8.575
	(3.32)**	(4.68)***	(1.20)	(32.54)***	(1.04)	(3.60)***	(1.85)+	(3.74)***
Relative in the factory	.683	.886	1.181	1.959	1.599	1.604	1.225	1.150
	(-2.04)*	(-.59)	(.44)	(1.74)+	(.96)	(.92)	(.39)	(.25)
Unemployment rate at time of	1.007	1.016	1.051	1.053	1.041	1.037	1.044	1.044
hire	(.59)	(1.33)	(2.13)*	(2.19)*	(1.59)	(1.34)	(1.36)	(1.24)
WWI	.160	.748	2.949	2.006	2.509	2.579	2.967	3.317
	(-5.39)***	(-1.04)	(1.75)+	(.91)	(1.10)	(1.11)	(1.19)	(1.29)
WWII	1.094	1.038	3.334	4.132	2.636	2.394	1.622	.816
	(.57)	(.20)	(2.31)*	(2.64)**	(1.70)	(1.50)	(.71)	(-.28)
N	2,413		784		415		323	
Log-likelihood	-2201		-743		-368		-283	
BIC	4637		1659		904		739	
McFadden's R2	.12		.10		.17		.18	

Table 2.4 continued: Ford Motor Company

	Pooled sample		Immigrant-only sample	
	Operative position	Craft/ managerial/ professional	Operative position	Craft/ managerial/ professional
US-born white (reference)				
US-born black	.424	.495		
	(-7.67)***	(-4.87)***		
Canadian	1.555	1.748	Reference category	
	(1.20)	(1.26)		
English	.766	1.001	.451	.591
	(-.63)	(.00)	(-1.41)	(-.80)
German/Austrian	.735	1.402	.433	.833
	(-.72)	(.75)	(-1.48)	(-.30)
Italian	.347	.398	.226	.257
	(-3.16)**	(-2.18)*	(-3.00)**	(-2.26)*
Polish	.629	.705	.318	.427
	(-1.98)*	(-1.24)	(-2.58)*	(-1.63)
Russian	.343	.637	.218	.453
	(-2.38)*	(-1.00)	(-2.59)*	(-1.26)
Other Ethnicity	.604	.829	.374	.503
	(-3.11)**	(-.97)	(-2.47)*	(-1.47)
Age at hire	.981	1.018	.988	1.005
	(-2.86)**	(2.18)*	(-.67)	(.24)
Married	1.112	1.320	1.268	1.146
	(1.06)	(2.16)*	(1.06)	(.54)
Previous training	3.859	2.189	1.961	2.399
	(8.08)***	(3.55)***	(1.05)	(1.30)
Factory (Highland Park reference)				
Lincoln	8.999	4.299	11.978	6.661
	(14.00)***	(7.31)***	(8.37)***	(5.36)***
Rouge	3.219	2.759	1.748	2.439
	(9.17)***	(6.43)***	(2.37)*	(3.35)**
Willow Run (omitted from this analysis)				
Unemployment rate	1.028	1.003	1.069	1.003
	(4.14)***	(.31)	(2.69)**	(.09)
WWI	1.380	1.389	1.355	.959
	(1.10)	(.97)	(.65)	(-.08)
WWII	1.239	.684	2.038	1.129
	(1.53)	(-1.90)+	(.93)	(.14)
N	2850		641	
Log-likelihood	-2626		-566	
BIC	5524		1354	
McFadden's R2	.10		.11	

+.05<p<.1, *p<.05, **p<.01, ***p<.001 (two-tailed)

Note: Laborer position is the baseline. Odds ratio reported with z-statistic in the parentheses.

The immigrant-only samples provide differences between ethnic immigrant groups in initial hire. In Byers and Pullman, immigrant specific variables (American citizenship and years in the US) are added. As shown in Table 2.4, Italians continue to be disadvantaged in first occupation than more privileged ethnic groups in all companies. All Slavic groups in A.M. Byers also have lower odds of being an operative in their first occupation than German/Austrians and are less likely to be an operative or a craft/managerial/professional worker in Pullman than Swedish immigrants. Similarly, Poles and Russians hold lower odds of having their first occupation be an operative (as opposed to being a laborer) than Canadians in Ford. Germans and English, however, show no difference than Canadians in first occupation.

Having training in a trade upon time of hire for immigrants is significantly associated with starting in a higher occupation in Byers and Pullman, but not in Ford.[16] Similarly, having a relative in the factory in Pullman, while failing to achieve a conventional significance level, is also associated with holding higher odds of being a craft/managerial/professional worker in first occupation (as opposed to being a laborer). This variable may either capture occupational inheritance (e.g., fathers passing their status to their sons) or the strength of ties (e.g., relatives providing jobs). Nevertheless, nepotism provided a favorable entry portal for immigrants in Pullman.

The next models in the Byers and Pullman analyses add whether an immigrant was an American citizen. Here, citizenship increases the odds that an immigrant started in an operative position (as opposed to a laborer position) at initial hire than noncitizens in both companies. American citizenship also increased the odds of being a craft/managerial/professional worker in first occupation than noncitizens in Pullman (although this odds ratio fails to achieve a conventional significance level). These results are consistent with the idea that certain

[16] In unreported results, there is no significant interaction effect between the ethnic groups and previous training.

occupations were held for US citizens. But while citizenship matters, this may also reflect time in the US as the naturalization process usually took several years from time of migration to complete (Bloemraad 2006). The final model adds a continuous variable for number of years in the US. In Byers, there is no statistically discernible effect for years in the US, but US citizenship significantly increases the odds that an immigrant starts in the craft/managerial/professional level. By contrast, US citizenship fails to achieve significance once number of years in the US is controlled for in Pullman. Instead, a one year increase increases the odds that an immigrant starts as an operative (as opposed to a laborer) by 5.4 percent and increases the odds that an immigrant starts as a craft/managerial/professional worker (as opposed to a laborer) by 5.6 percent. However, in both Pullman and Byers, the correlation between citizenship and years in the US is high (r>.5). Teasing out the effects of citizenship versus years in the US should be looked at in further research.

Internal Occupational Movements and Exits

As just shown, SCEE migrants were more likely to begin their career in laborer positions than other race/ethnic groups. Mobility for these groups, therefore, was dependent on movement in and out of the broad occupational categories defined above. Table 2.5 reports the number of occupational moves for each ethnicity. Here, a job spell is not defined as any change in employment (e.g., change in wage or a change in department) as it was above. Rather job spells in Table 2.5 ignore micro-movements within broad occupational categories and end when a major occupational move occurs (upward moves, downward moves, and exits defined in Table 2.2).

Table 5 shows that over eleven percent of employment spells ended with an upward occupational move for US-born white workers in A.M. Byers. Similarly, over eleven percent of

job spells ended in an upward movement in Pullman and sixteen percent of job spells ended with an upward move in Ford for US-born white workers. The percent of job spells that end in an upward move for immigrants in all companies range between five and twenty-four percent. At the lower end were Poles and Slavs and the higher end Canadians and English. Because of the low power in these datasets (i.e., there few upward moves experienced by some groups), results from the following analyses should be interpreted with caution.

Most movements between the broad occupational categories also occur during specific time periods. Immigrant upward and downward movements occur during the mid-1910s and 1920s in all companies. The Great Depression in the 1930s nearly stopped upward moves for all workers (immigrants and native workers) and then there was a rebound during WWII. Although the Pullman data date back to the pre-immigration cutoff era, there does not appear to be a pre- and post-immigration cutoff effect. Immigrant workers also began to age out of the dataset since they were hired at older ages in occupations where workers were "old at 40." Thus, most of the migrants hired before 1924 made the majority of their occupational moves before the legislation that ended the open immigration era. The 1940s capture the unionization era for all companies. By this period, immigrants have begun to age out of the dataset since there was no replenishment after 1924 as shown in Figure 2.1. This explains why there was not a rebound in movement after the Great Depression for immigrants in all companies.

Table 2.5: Types of occupational movements by ethnicity

A.M. Byers Company

	No. of Individuals	No. Job Spells	No. of downward moves	No. of upward moves	No. of quits	No. of other exits
US-born White	2,450	4,082	197	463	1,569	1,853
US-born black	1,434	2,973	208	343	1,033	1,389
German/Austrian	121	210	10	29	72	99
Italian	197	289	6	23	109	151
Lithuanian	108	236	26	34	63	113
Polish	501	1,264	110	179	375	600
Russian	97	210	18	18	59	115
Ruthanian	123	303	18	43	110	132
Other Slavic	259	572	41	74	137	320
Other Ethnicity	931	1,471	49	86	533	803
Total	6,221	11,610	683	1,292	4,060	5,575

Pullman-Standard Manufacturing

	No. of Individuals	No. Job Spells	No. of downward moves	No. of upward moves	No. of quits	No. of other exits
US-born White	1,172	2255	120	262	648	1,225
US-born Black	955	1,577	46	126	483	922
Swedish	72	242	14	27	61	140
Italian	114	252	6	23	59	164
Polish	76	150	4	8	38	100
German/Austrian	93	239	8	14	51	166
Slavic	127	322	3	19	83	217
Other Ethnicity	491	1,055	52	72	238	693
Total	3,100	6,092	253	551	1,661	3,627

Ford Motor Company

	No. of Individuals	No. Job Spells	No. of downward moves	No. of upward moves	No. of quits	No. of other exits
US-born White	1,395	2,029	158	321	1,109	441
US-born Black	1,102	1,876	211	374	772	519
Canadian	47	75	9	13	37	16
English	36	78	9	19	25	15
German/Austrian	34	45	1	6	28	10
Italian	71	112	8	21	60	23
Polish	124	163	8	17	95	43
Russian	44	55	2	5	37	11
Other ethnicity	310	465	50	73	230	112
Total	3,163	4,898	456	849	2,393	1,190

Table 2.5a: Number of upward occupational moves by decade

	Immigrants	Native-born
A.M. Byers Company		
Before 1920	210	155
1921-1930	211	331
1931-1940	23	64
After 1940	42	256
Pullman-Standard Manufacturing		
Before 1920	92	67
1921-1930	25	31
1931-1940	14	26
After 1940	32	264
Ford Motor Company		
Before 1920	21	46
1921-1930	109	304
1931-1940	8	81
After 1940	16	264

Table 2.6 presents the results from the competing-risk Cox-proportional hazard model described above for Byers and Pullman.[17] Upward moves are reported with results from downward moves and exits available in Appendix B. Since upward moves cluster within individuals for the immigrant groups in Ford, the Cox models are not reported. Variation between immigrant groups is essentially zero in Ford and thus almost all immigrants remained in the same occupational classification that they were initially hired, which was at laborer position as shown in the previous section.

Model 1 shows that Italians and Russians hold lower hazards of making an upward move than US-born white workers in Byers. All other groups are neither more nor less likely to experience an upward move, all else equal. Since these same groups were less likely to start their career in higher positions in the firm, as shown in Table 2.4, fast paced movement is required for immigrants to reach parity with native white workers. The exception to this pattern

[17] The discrepancy between the reported number of events between Table 5 and Table 6 and Appendix B is due to missing data. In Byers, some employment spells occur before 1900. Because unemployment rates are unreliable before 1900, these individuals are left censored. The Byers analyses are run without the unemployment rate in unreported results. There are no substantive changes in the ethnic categories when unemployment is omitted. Birthdates are missing for some individuals in Pullman making age at hire unknown. Again, there are no substantive changes in the ethnic categories when hire age is omitted from the analyses.

is Lithuanians who show a higher hazard ratio of experiencing an upward move. Although this may provide evidence for upward advancement of this group, Lithuanians are also more likely to experience downward movement as shown in Table 2.B1. The employment profiles of Lithuanians show that many started as a laborer then moved to an operative position for a few weeks or months and then moved to a laborer position again. Most ended their career in a laborer position. Thus the upward and downward moves made by Lithuanians are likely explained by the zigzag mobility within the firm where migrants move up, then down again in the firm.

Model 1, however, does not explicitly control for starting position. Model 2 therefore limits the sample to only those who start their first occupation in a laborer position. This analysis allows us to understand whether certain groups who start at the same position enter favorable or unfavorable job ladders at the point of entry. Again, Italians and Russians hold lower hazards of making an upward move in Byers than native white workers. Interestingly, German/Austrians, who show no difference in making an upward move in Model 1, become less likely to make an upward move once controlling for starting position (although this hazard ratio fails to achieve a conventional significance level). This suggests that German/Austrians who entered at the bottom of the job hierarchy entered unfavorable ladders similar to those of their SCEE counterparts.

In the third model of Table 2.6 in the Byers analyses, there are no statistically discernible differences between immigrant groups and German/Austrians in making upward moves. In unreported results, there are also no differences between immigrant groups when controlling for starting position (similar to the tests reported in Model 2). This suggests that immigrant groups were likely hired in similar job ladders in the firm that did not allow for upward movement. Nevertheless, the mechanisms that allowed for upward mobility for immigrants are also

analyzed. In Model 4, citizenship status is added to the analyses. Here, US citizens are no more likely to experience an upward movement. This is likely a result of model specification. As shown in Table 4, US citizens were more likely to start their career in higher positions in the firm. Since movement in the firm is inversely related to one's occupational level in Model 4 of Table 6, the probability of moving up for those who started in higher positions is lower because of the ceiling effect mentioned above. This same issue explains the hazard ratio of previous training that reports significantly lower hazards of making an upward move. Since previous training had such a dramatic effect on starting position in the firm in Table 4, movement upwards is unlikely because they are already at the top.

The Pullman analyses show similar results to Byers in predicting upward moves. Italians and Slavs have lower hazards of making an upward move than native white workers in Model 1. Similarly, Italians also hold lower hazards of making an upward move once controlling for starting position. The Slavic category in Model 2 shows no difference, although the sign of the hazard ratio is in the direction as predicted by internal labor market hypotheses. Interestingly, having a family member in the factory at time of hire becomes statistically significant in Model 2, suggesting that familial ties raised the prospects of upward movement for those who started at the bottom, but not necessarily at the top. Italians and Slavs are also less likely to experience an upward movement than Swedish immigrants in Model 3 suggesting that sending country factors may inhibit upward mobility. Similar to Byers, citizenship and years in the US show no statistically discernible effect in Models 4 and 5. These effects are likely due to the same model specification issue raised above in the Byers analyses. Thus, the mediating effects of citizenship, previous training, and years in the US on occupational mobility operates through job entry rather than improving one's chances in job ladders within the internal labor market.

Table 2.6: Competing risk Cox-proportional hazard model predicting upward moves among non-managerial/professional occupations: A.M. Byers Company

	Pooled Sample		Immigrant Only Sample		
	Started at any occupation	Started as a laborer			
	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
US-born white (reference)					
US-born black	.798	.769			
	(-2.47)*	(-2.54)*			
German/Austrian	1.014	.509		Reference category	
	(.05)	(-1.71)+			
Italian	.605	.526	.616	.617	.567
	(-2.03)*	(-2.48)*	(-1.38)	(-1.38)	(-1.41)
Lithuanian	1.487	1.615	1.449	1.416	1.778
	(1.93)+	(1.74)+	(1.18)	(1.11)	(1.74)+
Polish	.893	.826	.891	.876	.845
	(-.93)	(-1.23)	(-.43)	(-.50)	(-.55)
Russian	.593	.466	.586	.571	.546
	(-2.12)*	(-3.09)**	(-1.56)	(-1.62)	(-1.57)
Ruthanian	.818	.709	.833	.809	.647
	(-1.04)	(-1.50)	(-.60)	(-.69)	(-1.18)
Other Slav	1.011	1.016	1.002	1.002	.884
	(.07)	(.08)	(.08)	(.01)	(-.37)
Other ethnicity	.766	.746	.762	.779	.810
	(-2.04)*	(-1.92)+	(-.99)	(-.90)	(-.57)
Immigrant variables					
US citizen				.941	.907
				(-.48)	(-.62)
Years in US					.986
					(-2.17)*
Hire age	.972	.969	.967	.968	.974
	(-8.23)***	(-7.92)***	(-6.13)***	(-6.10)***	(-4.13)***
Married	1.290	1.293	1.176	1.173	1.149
	(3.39)**	(2.95)**	(1.27)	(1.25)	(.89)
Hourly	1.752	1.522	2.512	2.506	2.090
	(6.98)***	(4.74)***	(5.42)***	(5.41)***	(3.71)***
Previous training	.973	1.026	.542	.543	.683
	(-.18)	(.14)	(-1.97)*	(-1.96)+	(-1.12)
SEI	.826	.811	.898	.898	1.011
	(-8.41)***	(-5.77)***	(-.93)	(-.92)	(.10)
SEI-squared	1.003	1.003	.999	.999	.995
	(3.96)***	(2.58)*	(-.12)	(-.12)	(-1.31)
Ambridge (factory)	.623	.579	.649	.656	.614
	(-5.71)***	(-5.90)***	(-2.27)*	(-2.21)*	(-2.35)*
Unemployment	.967	.969	.978	.978	.982
	(-7.24)***	(-6.01)***	(-2.85)**	(-2.85)**	(-2.14)*
WWI	.781	.743	.707	.707	.846
	(-2.36)*	(-2.44)*	(-2.66)**	(-2.66)**	(-.85)
WWII	.301	.267	.466	.469	.467
	(-9.75)***	(-9.68)***	(-2.51)*	(-2.48)*	(-2.15)*
Log pseudolikelihood	-10005	-7491	-3297	-3297	-2184
AIC	20,049	15,020	6,629	6,631	4,406
Number of failures	1286	995	479	479	341
Number of individuals	6,133	4,671	2,315	2,315	1,003

Table 2.6 continued: Pullman-Standard Manufacturing

	Pooled Sample		Immigrant Only Sample		
	Started at any occupation	Started as a laborer			
	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
US-born white (reference)					
US-born black	.432	.385			
	(-5.93)***	(-5.13)***			
Swedish	1.211	3.393		Reference category	
	(.62)	(2.44)*			
Italian	.239	.212	.184	.198	.262
	(-4.47)***	(-3.99)***	(-3.74)***	(-3.70)***	(-2.24)*
Slavic	.523	.581	.481	.493	.612
	(-2.62)**	(-1.48)	(-2.17)*	(-2.06)*	(-1.23)
Other ethnicity	.566	.499	.517	.508	.641
	(-3.44)**	(-2.51)*	(-2.32)*	(-2.39)*	(-1.35)
Immigrant variables					
US citizen				1.367	1.177
				(1.15)	(.50)
Years in the US					1.010
					(.63)
Hire age	.997	.995	1.014	1.013	1.0003
	(-.56)	(-.58)	(1.11)	(1.09)	(.02)
Married	1.426	1.692	1.613	1.523	1.681
	(3.05)**	(2.88)**	(2.13)*	(1.81)+	(1.94)+
Previous training	.727	.876	.946	.899	.758
	(-2.08)*	(-.53)	(-.14)	(-.29)	(-.66)
Relative in the factory	1.174	1.527	1.838	1.615	1.708
	(1.22)	(2.18)*	(2.54)*	(1.82)+	(1.79)+
SEI	.782	.776	.735	.737	.738
	(-6.29)***	(-2.99)**	(-3.81)***	(-3.74)***	(-3.66)***
SEI square	1.004	1.004	1.005	1.005	1.005
	(3.87)***	(1.58)	(2.44)*	(2.37)*	(2.37)*
Unemployment rate	.967	.959	.977	.976	.969
	(-3.36)**	(-3.01)**	(-1.37)	(-1.53)	(-1.40)
WWI	1.798	3.029	2.003	2.083	2.396
	(3.92)***	(5.55)***	(2.90)**	(3.05)**	(3.20)**
WWII	2.915	4.385	2.869	2.769	3.530
	(7.96)***	(7.57)***	(2.62)**	(2.63)**	(2.77)**
Log pseudolikelihood	-3006	-1258	-678	-669	-492
AIC	6039	2545	1378	1365	1012
Number of failures	427	203	116	110	84
Number of individuals	2,332	1,073	773	718	302

+.05<p<.1, *p<.05, **p<.01, ***p<.001 (two-tailed)
Note: Hazard ratios are reported with *z*-statistics in the parentheses.

Although SCEE immigrants were less likely to experience upward mobility than more advantaged groups, it is possible that SCEE migrants did not rely on these factories for upward mobility and instead found employment in the external labor market. However, as shown in Appendix B, many SCEE groups were less likely to quit their job than native white workers.

This suggests that the expected value from remaining in the factory, where perceived probabilities by workers of getting a promotion in the future, is greater than if they found employment in the external labor market (or chose non-employment). Moreover, all immigrant groups have lower hazards of quitting in Pullman. This firm attachment signals a preference for internal rather than external labor market structures. Nevertheless, these results suggest that immigrants did not make upward occupational moves within heavy manufacturing firms.

Conclusion/Discussion

My analyses provide the *first* tests of immigrant occupational mobility within firms in the first half of the twentieth century. The three case studies suggest that internal labor market structures did little to move immigrants into favorable job ladders that allowed for upward mobility. Much like the broader literature on organizations and stratification, these results speak to how organizational structures pattern mobility and create inequality in employment outcomes among different groups (Castilla 2008; Fernandez and Sosa 2005; Petersen and Saporta 2004). While the current literature on organizations and stratification use contemporary data and analyze differences in race (black/white) and gender, this paper provides a point of comparison by looking specifically at the immigrant experience in a different time period. The development of internal labor market structures, which are specifically designed to encourage promotions through job ladders in manufacturing firms (Jacoby 1984), did not counter or prevent other forces that kept European-origin immigrants from achieving upward mobility. This finding is contrary to the dominant accounts of assimilation (Alba and Nee 2003; Portes and Zhou 1993).

The above analyses focused on all parts of mobility within firms: job entry, upward and downward internal moves, and departures. Southern and Eastern European immigrants were less likely than native white workers to start their career in operative and craft/managerial positions

(as opposed to starting as a laborer) and they were less likely to experience upward movement once hired. In fact, the number of upward occupational moves were relatively rare for most Southern and Eastern European immigrants in Byers and Pullman as shown in Table 4 and immigrants rarely had job spells that were in the managerial/professional category as shown in Table 2.3. In Ford, most of the upward moves were clustered within few individuals making analyses impossible. Moreover, in all companies, immigrants were unable to find better employment prospects in the local labor market and held on to their employment within the firms until a non-voluntary departure was made. Immigrants were therefore more dependent on the companies to make upward occupational moves. These results are consistent with internal labor market hypotheses that predict that immigrants lacked access to favorable job ladders within firms.

While Southern and Eastern European immigrants followed occupational trajectories as predicted by internal labor market hypotheses, Western European (and North American) immigrant groups followed occupational trajectories as predicted by assimilationists (e.g., German/Austrians in Byers and Ford, Swedish in Pullman, Canadians and English in Ford). As mentioned above, the context of origin likely influences worker predispositions to the workforce where individuals and groups from industrialized countries perform better ceteris paribus those from developing (or non-developed) countries. This finding is consistent with recent research on the occupational mobility of immigrants in the first half of the twentieth century that uses census data (Abramitzky et al. 2014). Immigrants who arrive with low skill levels are unable to close their skill gap with native white workers over time.

Mobility mechanisms for immigrants that allowed for upward mobility within firms are associated with citizenship, years in the US, familial ties, and previous training in a trade. American citizenship allowed immigrants to start their careers within firms at higher positions

than non-citizens in Byers. This finding corroborates other research that suggests employers favored those who have naturalized in this time period (Bloemraad 2006). Years in the US, which is positively correlated with citizenship, played an important role in Pullman. Although these variables may reflect membership and exposure to the native-born, they may also proxy English attainment. As discussed above, the companies kept track of English attainment suggesting that almost all individuals in Pullman and Ford held some level of English competency making analyses on this variable impossible. Most of the immigrants analyzed in this study were not recent arrivals and would have been exposed to the English language. However, these measures do not indicate what level of competency was needed to be considered fluent by the firms. Citizenship and years in the US may be better measures to capture this variable.

Additionally, immigrants also relied on ties to family workers in the firm. Having a relative in the firm is associated with starting at a higher position in Pullman. This result is consistent with the large literature on social ties and getting a job (e.g., Waldinger and Lichter 2003; Tilly 1990). Moreover, having training in a trade dramatically increased the odds that a worker was in a craft/managerial/professional position. Structural characteristics, however, seem to have decreased the likelihood that immigrants would move up in the firm. High unemployment and having an employment spell during a world war decreased one's chances for upward advancement.

Of course, mobility mechanisms in manufacturing during this period may have taken two forms: individual upward mobility via job ladders or collective upward mobility via unionization. This chapter analyzes the first. The expansion of industrial unions standardized workplace dynamics and shaped cultural understandings of fairness that extended beyond its own membership that immigrant populations would have benefited from (Rosenfeld 2014). Industrial

unions also reduced the negative effects of internal labor market systems because unions sought greater authority over jobs (Cohen and Pfeffer 1986). The Byers, Pullman, and Ford data covers their unionization periods. The effects of unionization are not addressed in this paper, however, because of demography and history. As shown in Figure 2.1, most immigrants entered the US before WWI (with a median age at entry of 19 in Byers and 20 in Pullman). The three companies unionized relatively late (1937 in Byers, 1948 in Pullman, and 1941 in Ford). Because the 1924 Immigration Act virtually stopped all immigration flows, there is not enough replenishment of immigrant populations to make analyses on unionization possible. For the most part, immigrants have aged out of the data set by the unionization era. It was therefore the second and third generation that was likely the greatest beneficiary of these effects since they came of working age at the height of union membership. While unionization is correlated with manufacturing in this time, membership extended well beyond the factory walls. Thus, if industrial unions were the mechanism that produced upward assimilation, we cannot attribute all of its success to manufacturing.

This chapter focuses on an often cited, but never researched issue in assimilation research. Assimilation theories often point to manufacturing in the past and then make inferences about today's immigrants. Segmented assimilation suggests that job ladders in manufacturing allowed for upward mobility that is no longer available to today's immigrants. As a result, proponents of segmented assimilation suggest that the obstacles faced by yesterday's immigrants were of a significantly lesser sort. However, this paper clearly shows that access to favorable job ladders was segmented. Neo-assimilation theories point to the past and suggest that it is a reliable guide for today's immigrants where they argue that "…the rough uniformity of outcome is hard to overlook, and it suggests the possibility that forces promoting assimilation are well entrenched in the American social order…" (Alba and Nee 2003: 125). Continuity

derives from an underlying mechanism that should be temporally invariant: the rational action of individuals choosing the "optimum range of mobility chances" rather than "strong attachment to an ethnic community and culture" (Alba and Nee 2003: 125). However, there is tension in this framework since Alba and Nee (2003) also invoke period effects to explain the assimilation of SCEE migrants, albeit in somewhat contradictory ways. On the one hand they contend that assimilation of SCEE were "based on historical contingent periods of economic expansion that allowed *immigrants* of peasant origin with few working skills of relevance…to gain a foothold through steady employment, often in manufacturing sectors…" (Alba and Nee 2003: 135; emphasis added). On the other hand, they contend that the changes generated by the New Deal, the war economy, and the post-war prosperity powered second generation mobility (104-5). In any case, since parent's social position deeply influences children's social destinations, future research should analyze how the second generation made upward moves given their parent's low status in manufacturing firms uncovered in the above analyses.

This chapter does not argue that there was no period effect in producing rapid assimilation. Nor does it suggest that migrants did not experience mobility in other sectors such as light manufacturing, warehousing, construction, and self-employment. Rather, it suggests that upward mobility among SCEE groups was likely not the result of job ladders in manufacturing as proponents of assimilation theories assert. While the subfield of immigration and assimilation is plagued with presentism (Waldinger 2007), the release of once confidential data (full-count censuses, naturalization records, etc.) both in the US and abroad allows researchers to understand aspects of the immigrant experience previously difficult or impossible to explore, and thus making for ever productive debates (Abramitzky et al. 2012, 2013, 2014; Biavaschi et al. 2013; Conner 2015; Shertzer 2013).

Appendix 2.A: Detailed Variable Recodes

Major Occupational Groups: To classify the occupation titles in the data under the four major occupational groups (laborers, operatives, craft workers, managerial/professional), I used the 1950 *Classified Index of Occupations and Industries* (CIOI) and the 1939 *Dictionary of Occupational Titles* (DOT). The CIOI is designed for use in classifying occupations from the Population Censuses and other demographic surveys conducted by the Census Bureau. The DOT was created and published by the U.S. Department of Labor as a reference manual for the use of the U.S. Employment Service to match job applicants with jobs (Cain and Treiman 1981). Both make it possible to classify detailed occupations into major occupational groups defined above with the DOT providing more detailed information about each occupation.

First, occupations that are found in the CIOI were coded in respect to their major occupational group. The CIOI provides a list of many occupations that are found under larger occupational groups. In the event that the occupation from the data set was not in the CIOI, the DOT was consulted to identify what major occupational code the occupation belongs under. Unlike the CIOI, which classifies occupations based on craft work, operatives, laborers, etc., however, the DOT classifies occupations based on skill (skilled, semiskilled, and unskilled). The DOT provides a three-digit grouping system to identify skill as well as the definition of tasks performed by the occupation. If the occupation was identified as a skilled job, I coded these as craft workers. Semiskilled occupations were coded as operatives; and unskilled jobs were coded as laborers (most often, the definition of tasks also identified these occupations as a laborer). These codes are roughly analogous to the Census's classification system (Cain and Treiman 1981).

Although helpers "may be expected to learn the occupation or trade of the worker he assists" (DOT 1939: 450), they were coded as laborers because the skill required was often minimal and these positions rarely translated into workers entering occupation for which he was helping. Assistants, learners, and apprentices, however, were coded as the same occupation as the occupation assisted since they essentially performed the same tasks and duties as the worker assisted unlike helpers whose duties were clearly subordinated. In Pullman and Ford, many occupational titles correspond with what the person installed on the train cars (the job versus the occupation e.g., 'camshaft'). I coded these as subassemblers/installers (operatives). In some cases, the occupational title given in the data files could potentially mean that workers were either in production or clerical. For instance, checkers may either be clerical workers or an inspector on the production line. To separate clerical workers versus inspectors, I checked the department for which the employment spell occurred. If the checker worked in clerical departments like "accounting," they were coded as clerks, but if the checker worked in departments like the "finish line," I coded these as inspectors (which were coded as managerial/professional workers since these jobs often included similar tasks as foremen). Other occupations similar to checkers (e.g., filers, watchmen) were given the same consideration. Because departments in the Ford files are numbers as opposed to names, these occupations were assumed to be production unless the occupational title made it possible to determine otherwise (e.g., stock checkers and stock filers were clerical).

In some cases, occupations died before the DOT and CIOI were published. For instance, A.M. Byers was the last major company that hired puddlers. In 1930, Byers developed the Byers Process and opened the Ambridge plant that effectively killed puddling as an occupation. The DOT and CIOI label this occupation as an operative, but at the time, this was craft work as noted

in former U.S. Secretary of Labor James Davis's 1921 autobiography. Using this historical knowledge, puddlers were coded as craft workers rather than operatives. Of the 19,736 employment spells in the original dataset in A.M. Byers, I was unable to match a corresponding broad occupational classification to 275 employment spells (which includes 158 spells not identified in the original data collection). This represents 48 of the 983 production occupations in the files. In Pullman, I was unable to code 294 of the 1,892 production occupations. This comprises 1,373 of 12,986 employment spells of which 526 had no occupational information in the original data project. Similarly, in Ford, I was unable to code 42 production occupations, which comprises 848 of 15,215 employment spells.

Immigrant Status: To understand the social mobility among immigrants, it is important to separate the foreign-born from the native-born. As shown in Table 1, the companies provide information on a person's descent/ethnicity for those who were born outside the US and in a few cases individuals who were born in the US, presumably because they were second generation. The rest of the employees who were born in the US have missing ethnic labels or were identified as "American," which was common practice during this period (Fischer and Hout 2006). As noted in the text, immigrant status is obtained through a variety of variables in the Byers and Pullman data sets. First, if the worker's birth state was anywhere outside of the United States, the worker was coded as an immigrant. However, there are some employees who are missing state or country of birth, but are of European-origin descent. In order to determine whether these employees were born in another country, I used other information provided by the companies based on their country of citizenship and reported years in the US. If an individual was a citizen of a country other than the US or has been in the US for fewer years than he has been alive, I

coded the employee as an immigrant. Any remaining individuals without birthplace information (49 people in Byers and 39 people in Pullman) were dropped from the analysis.

The Ford files are set up differently than Byers and Pullman. The company kept records of individuals' nationality/citizenship/race in one variable and ethnicity for many US-born workers in another. The state (or country) of birth, however, was only coded for those born in the US (and in a couple of exceptions in Canada). Rather than coding immigrant status by birthplace, citizenship, ethnicity, and years in the US, immigrants in Ford are identified through their reported nationality (which also includes information on descent). Native-born workers are those with an "American" or "American colored" (black) nationality label.

American Citizenship: Byers and Pullman recorded citizenship status. This variable is coded as 1 if the worker is an American citizen and 0 otherwise.

Years in the US: In Byers, years in the US is found by taking the first year that an immigrant was employed in the firm minus the year that he entered the United States. Pullman recorded the years in the US. This is a continuous variable in the analyses.

Hire age: Hire age is the employee's age at the time of hire. This variable is a continuous variable in the multinomial logit predicting first occupation and fixed at its value when the individual entered the firm in the Cox model predicting occupational movements.

Married: This variable represents the employee's marital status at the time of hire. This variable is coded as 1 if the employee is married and 0 otherwise. This is fixed in the Cox model.

Employee's Relatives Work in Factory: Pullman kept records indicating whether an employee's relatives also worked at the time of hire. Sometimes the data indicate how many relatives work for the company and other times describe the type of relative and his/her department and occupation (e.g., Father/Foundry). In the Pullman analyses, this variable is coded as 1 if the employee has at least one relative in the company and 0 otherwise.

Previous Training: When the employee was hired, the trade for which the employee was trained was recorded. This variable is coded as 1 if the worker had training at the time of hire and 0 otherwise. This variable is fixed in the Cox models because we don't know whether he entered a training program after he was initially hired.

Wage Type: This variable represents the method of wage-payment for the current job in A.M. Byers. This variable is coded as 1 if the employee is paid hourly and 0 otherwise. In the files, there are many missing values. The range of available wages in Byers show that almost all of the missing values are greater than the range of available wages for those who are paid hourly. I therefore assume that the missing values are not hourly work, but rather some other form of wage type. In Pullman and Ford, virtually all workers were paid an hourly wage. This variable is therefore omitted in the Pullman and Ford analyses. Wage type is included as a time varying

covariate in the Cox model in Byers, but omitted from the multinomial logit predicting first occupation.

Duncan Socioeconomic Index (SEI): Because there is a potential floor and ceiling effect on occupational mobility, where the higher the prestige of the current occupation, the more difficult it is to find a job, SEI of the current occupation is controlled for as a time varying coefficient in the Cox model. SEI scores were assigned to each occupation in the companies. First, I assigned SEI scores to all occupations in the company files that appear in the 1950 census. These include occupations such as hammermen, heaters, and foremen. Next, I used the 1950 *Classified Index of Occupations and Industries* to code occupational titles and SEI scores that were not in the 1950 census, but fall under broader occupational categories defined by the Census Bureau. Examples of these occupations include the fagot maker, scale wheeler, and sand wheeler shown in the Byers employment profile from Table 1, which are laborer positions. In the rare event that the occupation titles in the data files were not located in the 1950 census or the Classified Index, I consulted the 1939 *Dictionary of Occupational Titles* to give a best guess estimate of the type of occupation and corresponding SEI. Most often, these were laborer positions and general operative occupations, not elsewhere classified. If I was able to classify the major occupation of each detailed occupation, but could not find a corresponding SEI, I assigned the SEI for the major occupational code, not elsewhere classified (e.g., operatives, n.e.c. were given a SEI score of 18; laborers, n.e.c. were given a SEI score of 8).

Factory: This variable represents a dummy variable for the factory that the employee worked in. The Pullman files only come from one factory while Byers has two and Ford has four. In the

Byers and Ford files, factory is included as a fixed effect where all workers share the same baseline hazard function and the effect of the factory multiplies this function up or down based on the sign of the estimated coefficients of the factory indicator variables. We cannot track movement between factories in Byers. However, in some cases, employees report working in multiple factories in Ford making this a time varying covariate in the Cox model.

Unemployment Rate: This variable represents the yearly non-farm unemployment rate in the United States to capture the effects of the business cycle. The data come from Lebergott (1964, Table A-3) and the Current Population Survey for the years after 1960. It is included as a time varying covariate.

World Wars: A dummy variable for each World War is included in the analyses that switch on in the war years and off in the non-war years.

Appendix 2.B

Table 2.B1: Competing risk Cox-proportional hazard model predicting downward moves among non-laborer occupations within firms

A.M. Byers Company

	Pooled Sample	Immigrant Only Sample		
	Model (1)	Model (2)	Model (3)	Model (4)
US-born white (reference)				
US-born black	2.192			
	(6.70)***			
German/Austrian	.622			
	(-1.58)			
Italian	1.086	2.051	2.068	2.307
	(.18)	(1.27)	(1.29)	(1.32)
Lithuanian	2.139	3.327	3.192	3.186
	(3.46)**	(3.44)**	(3.27)**	(3.00)**
Polish	1.168	1.984	1.926	1.904
	(1.07)	(2.17)*	(2.07)*	(1.87)+
Russian	2.189	3.577	3.395	3.592
	(3.05)**	(3.47)**	(3.24)**	(2.94)**
Ruthanian	.859	1.469	1.404	1.764
	(-.50)	(.94)	(.83)	(1.28)
Other Slav	1.202	1.966	1.890	1.803
	(.74)	(1.84)+	(1.71)+	(1.39)
Other ethnicity	1.009	1.739	1.806	.905
	(.05)	(1.63)	(1.73)	(-.18)
Immigrant variables				
American citizenship			.898	.814
			(-.61)	(-.96)
Years in US				.993
				(-.90)
Hire age	.999	1.010	1.009	1.011
	(-.08)	(1.45)	(1.44)	(1.05)
Married	.762	.697	.701	.639
	(-2.77)**	(-2.28)*	(-2.28)*	(-2.32)*
Hourly	2.218	3.282	3.271	2.394
	(7.12)***	(5.43)***	(5.41)***	(3.22)**
Previous training	.445	.424	.729	.686
	(-3.42)**	(-2.04)*	(-2.01)*	(-.62)
SEI	.982	.958	.958	.985
	(-.77)	(-1.21)	(-1.20)	(-.36)
SEI-squared	.999	1.001	1.001	1.000
	(-.04)	(1.18)	(1.19)	(.56)
Ambridge (factory)	.713	.658	.671	.476
	(-2.58)*	(-1.39)	(-1.32)	(-1.87)+
Unemployment	.977	.971	.971	.979
	(-4.01)***	(-3.03)**	(-3.01)**	(-2.02)*
WWI	.744	.701	.700	.421
	(-2.13)*	(-2.02)*	(-2.03)*	(-2.65)**
WWII	.319	.337	.342	.234
	(-4.67)***	(-2.40)*	(-2.36)*	(-2.44)*
Log pseudolikelihood	-4,030	-1,723	-1,693	-1151
AIC	9,709	3,481	3,482	2,339
Number of failures	683	276	276	201
Number of individuals	2,409	947	947	456

Table 2.B1 continued: Pullman-Standard Manufacturing

	Pooled Sample	Immigrant-only sample		
	Model (1)	Model (2)	Model (3)	Model (4)
US-born white (reference)				
US-born black	1.450			
	(1.80)+			
Swedish	1.542			
	(1.15)			
Italian	1.622	1.379	1.439	2.512
	(.85)	(.44)	(.50)	(.94)
Slavic	.477	.385	.348	.593
	(-1.58)	(-1.61)	(1.69)+	(-.78)
Other ethnicity	1.467	1.015	.997	1.495
	(1.74)+	(.04)	(-.01)	(1.16)
Immigrant variables				
US citizen			1.329	1.207
			(1.03)	(.69)
Years in the United				.988
States				(-.70)
Hire age	1.002	.997	.999	.986
	(.16)	(-.15)	(-.05)	(-.87)
Married	1.048	1.075	.958	.971
	(.25)	(.25)	(-.14)	(-.09)
Previous training	1.073	1.579	1.605	1.783
	(.41)	(1.34)	(1.34)	(1.32)
Relative in the factory	1.249	1.522	1.461	1.898
	(1.12)	(1.45)	(1.32)	(2.25)*
SEI	1.083	1.199	1.195	1.294
	(2.80)**	(2.79)**	(2.67)**	(3.45)**
SEI square	.999	.998	.998	.997
	(-2.40)*	(-2.27)*	(-2.67)*	(-2.79)**
Unemployment rate	.996	1.008	1.006	.998
	(-.35)	(.49)	(.37)	(-.12)
WWI	.805	.749	.790	.767
	(-.66)	(-.76)	(-.62)	(-.65)
WWII	2.393	2.622	2.486	4.761
	(4.43)***	(2.06)*	(1.91)+	(3.75)***
Log pseudolikelihood	-1288	-388	-1145	-284
AIC	2602	800	787	596
Number of failures	188	69	69	55
Number of individuals	1,502	478	478	408

+.05<p<.1, *p<.05, **p<.01, ***p<.001 (two-tailed)

Note: Hazard ratios are reported with *z*-statistics in the parentheses.

Table 2.B2: Competing risk Cox-proportional hazard model predicting voluntary exits (quits) from firms

A.M. Byers Company

	Pooled Sample	Immigrant Only Sample		
	Model (1)	Model (2)	Model (3)	Model (4)
US-born white (reference)				
US-born black	.979			
	(-.36)			
German/Austrian	.827			
	(-1.35)			
Italian	.938	1.427	1.422	1.579
	(-.61)	(2.00)*	(1.98)*	(2.00)*
Lithuanian	.850	1.002	.975	.705
	(-1.04)	(.01)	(-.12)	(-1.39)
Polish	.668	.779	.763	.809
	(-5.95)***	(-1.69)+	(-1.82)+	(-1.09)
Russian	.682	.822	.797	.964
	(-2.89)**	(-1.05)	(-1.19)	(-.16)
Ruthanian	.783	.870	.841	.951
	(-2.34)*	(-.84)	(-1.03)	(-.23)
Other Slav	.574	.744	.727	.791
	(5.52)***	(-1.75)+	(-1.86)+	(-1.07)
Other ethnicity	1.201	1.418	1.447	1.537
	(2.76)**	(2.37)*	(2.47)*	(1.95)+
Immigrant variables				
American citizenship			.938	.789
			(-.81)	(-2.20)*
Years in US				.981
				(-4.04)***
Hire age	.997	.994	.994	.997
	(-1.76)+	(-2.44)*	(-2.40)*	(-.62)
Married	.961	.999	.999	1.076
	(-.98)	(-.01)	(-.00)	(.84)
Hourly	1.174	1.452	1.449	1.568
	(3.80)***	(4.43)***	(4.41)***	(3.66)***
Previous training	1.276	1.321	1.325	1.559
	(3.68)***	(2.40)*	(-2.42)*	(2.61)**
SEI	.963	.968	.968	.967
	(-8.57)***	(-3.41)**	(-3.43)**	(-2.88)**
SEI-squared	1.0004	1.0002	1.0002	1.0003
	(6.04)***	(1.17)	(1.19)	(1.28)
Ambridge (factory)	.656	.443	.448	.429
	(-7.94)***	(-6.45)***	(-6.33)***	(-5.86)***
Unemployment	.975	.962	.962	.969
	(-10.46)***	(-7.20)***	(-7.20)***	(-5.10)***
WWI	1.094	1.137	1.137	.883
	(-1.87)+	(2.08)*	(-2.08)*	(-.97)
WWII	.958	.753	.759	.674
	(-.85)	(-2.04)*	(-1.97)*	(-2.42)*
Log pseudolikelihood	-34,138	-10,767	-11,767	-4,886
AIC	68,314	21,568	21,569	2423
Number of failures	4,050	1,451	1,451	714
Number of individuals	6,221	2,337	2,337	1,009

Table 2.B2 continued: Pullman-Standard Manufacturing

	Pooled Sample	Immigrant-only sample		
	Model (1)	Model (2)	Model (3)	Model (4)
US-born white (reference)				
US-born black	.850			
	(-1.78)+			
Swedish	.686			
	(-1.91)+			
Italian	.599	.803	.766	.933
	(-2.84)**	(-.84)	(-1.02)	(-.25)
Slavic	.673	.963	.949	.832
	(-2.79)**	(-.17)	(-.23)	(-.78)
Other ethnicity	.682	.952	.966	.960
	(-3.76)***	(-.24)	(-.17)	(-.20)
Immigrant variables				
US citizen			.726	.716
			(-1.96)*	(-1.94)+
Years in the United				1.022
States				(2.62)**
Hire age	.995	.993	.994	.989
	(-1.20)	(-1.05)	(-.95)	(-1.42)
Married	.839	.809	.859	.795
	(-2.42)*	(-1.66)+	(-1.18)	(1.67)+
Previous training	.811	.638	.656	.515
	(-2.05)*	(-1.82)+	(-1.78)+	(-2.56)*
Relative in the factory	.605	.463	.515	.488
	(-4.51)***	(-3.64)***	(-3.10)**	(-3.28)**
SEI	.976	.956	.959	.954
	(-3.19)**	(-3.48)**	(-3.20)**	(-3.51)***
SEI square	1.0002	1.001	1.001	1.001
	(2.01)*	(2.82)**	(2.72)**	(2.92)**
Unemployment rate	.956	.959	.960	.955
	(-8.69)***	(-5.35)***	(-5.24)***	(-5.26)***
WWI	1.546	.963	.959	1.009
	(5.59)***	(-.27)	(-.30)	(.06)
WWII	.841	1.138	1.264	1.018
	(-1.95)+	(.59)	(1.06)	(.08)
Log pseudolikelihood	-10496	-2926	-2923	-2,411
AIC	21020	5876	5872	4850
Number of failures	1395	452	452	385
Number of individuals	2383	773	773	639

+.05<p<.1, *p<.05, **p<.01, ***p<.001 (two-tailed)

Note: Hazard ratios are reported with *z*-statistics in the parentheses.

Table 2.B3: Competing risk Cox-proportional hazard model predicting other exits from firms

A.M. Byers Company

	Pooled Sample	Immigrant Only Sample		
	Model (1)	Model (2)	Model (3)	Model (4)
US-born white (reference)				
US-born black	1.180			
	(3.34)**			
German/Austrian	.848			
	(-1.56)			
Italian	.973	1.309	1.324	1.220
	(-.30)	(1.96)*	(2.03)*	(1.27)
Lithuanian	1.147	1.298	1.362	1.311
	(1.11)	(1.73)+	(2.03)*	(1.59)
Polish	.876	1.028	1.068	1.072
	(-2.28)*	(.25)	(.58)	(.54)
Russian	1.117	1.312	1.383	1.529
	(1.05)	(1.94)+	(2.28)*	(2.57)*
Ruthanian	.788	.909	.967	.952
	(-2.22)*	(-.67)	(-.23)	(-.27)
Other Slav	1.050	1.326	1.381	1.486
	(.64)	(2.28)*	(2.59)*	(2.75)**
Other ethnicity	1.734	2.055	2.000	1.333
	(10.24)***	(6.66)***	(6.26)***	(2.08)*
Immigrant variables				
American citizenship			1.113	.992
			(1.80)+	(-.10)
Years in US				.989
				(-3.13)**
Hire age	1.006	1.009	1.008	1.021
	(4.24)***	(4.39)***	(4.32)***	(6.77)***
Married	.824	.816	.814	.788
	(-5.74)***	(-4.14)***	(-4.32)***	(-3.52)***
Hourly	1.785	1.837	1.845	1.718
	(16.22)***	(10.16)***	(10.25)***	(7.20)***
Previous training	1.132	1.086	1.081	.943
	(2.19)*	(.95)	(.91)	(-.53)
SEI	.965	.955	.955	.962
	(-8.96)***	(-6.38)***	(-6.38)***	(-3.90)***
SEI-squared	1.0004	1.001	1.001	1.0004
	(6.63)***	(3.78)***	(3.77)***	(2.12)*
Ambridge (factory)	.824	.671	.655	.639
	(-4.35)***	(-5.24)***	(-5.56)***	(-4.82)***
Unemployment	.981	.975	.975	.992
	(-9.65)***	(-6.27)***	(-6.23)***	(-2.08)*
WWI	.926	.828	.827	.372
	(-1.74)+	(-3.48)**	(-3.51)***	(-6.19)***
WWII	.729	.515	.510	.565
	(-6.75)***	(-6.57)***	(-6.67)***	(-5.38)***
Log pseudolikelihood	-45,390	-16,622	-16,620	-7,969
AIC	90,820	33,279	33,277	15,976
Number of failures	5,547	2,314	2,314	1,218
Number of individuals	6,221	2,337	2,337	1,009

Table 2.B3 continued: Pullman-Standard Manufacturing

	Pooled Sample	Immigrant-only sample		
	Model (1)	Model (2)	Model (3)	Model (4)
US-born white (reference)				
US-born black	1.184			
	(2.89)**			
Swedish	.664			
	(-2.48)*			
Italian	1.017	1.555	1.499	1.445
	(.15)	(2.42)*	(2.15)*	(1.66)+
Slavic	1.001	1.609	1.588	1.497
	(.01)	(2.94)**	(2.72)**	(2.34)*
Other ethnicity	1.124	1.864	1.874	1.825
	(1.86)+	(4.31)***	(4.06)***	(3.80)***
Immigrant variables				
US citizen			.841	.816
			(-1.91)+	(-2.10)*
Years in the United				1.002
States				(.50)
Hire age	.997	.996	.996	.996
	(-1.37)	(-1.08)	(-.97)	(-.75)
Married	.869	.882	.915	.982
	(-2.91)**	(1.64)+	(-1.15)	(-.21)
Previous training	.932	1.107	1.132	1.216
	(-1.09)	(.76)	(.92)	(1.25)
Relative in the factory	.807	.772	.816	.807
	(-3.33)**	(-2.65)**	(-1.99)*	(-2.00)*
SEI	.994	.977	.979	.967
	(-.92)	(-1.96)*	(-1.76)+	(-3.05)**
SEI square	.999	.999	.999	1.0001
	(-1.45)	(-.13)	(-.23)	(.56)
Unemployment rate	1.006	1.014	1.015	1.019
	(1.93)+	(3.17)**	(3.37)**	(4.11)***
WWI	1.129	1.064	1.058	1.081
	(1.92)+	(.74)	(.68)	(.90)
WWII	1.193	1.384	1.458	1.381
	(3.05)**	(2.33)*	(2.49)*	(1.84)+
Log pseudolikelihood	-21562	-7446	-7444	-6159
AIC	43152	14917	14913	12345
Number of failures	2931	1167	1167	994
Number of individuals	2383	773	773	639

+.05<p<.1, *p<.05, **p<.01, ***p<.001 (two-tailed)

Note: Hazard ratios are reported with *z*-statistics in the parentheses.

Chapter 3

Brains versus Brawn: Premigration Skill and Economic Trajectories in the Age of Mass Migration

Abstract:

Most scholars point to premigration skill as an important component in predicting occupational outcomes for the first generation over time. However, data that is collected in both the sending country and the receiving country are difficult to find. This chapter links passenger records between 1890 and 1899, which provides occupations in the sending country, to immigrants' census records in 1910 and 1920. I analyze how premigration skill influenced mobility across immigrants' entire working career. This chapter shows that unskilled workers perform worse than their white collar counterparts for up to 40 years in the labor market. However, over time, there is considerable catch-up among the unskilled, although differences based on premigraiton skill remain.

Brains versus Brawn: Premigration Skill and Economic Trajectories in the Age of Mass Migration

From its inception to the mid-1920s, the United States had an open immigration policy with a few ethno-racial exceptions. Millions of immigrants entered the US and were subsequently absorbed into the labor market. The conventional understanding of immigrant occupational mobility suggests that these European immigrants entered with an occupational disadvantage compared to the native-born, but then improved their occupational standing the longer they remained in the US. This belief has resulted in one of the most enduring myths about immigration: that yesterday's immigrants achieved economic mobility through individual effort without help from the government and other groups. As data and methods have improved, however, this conventional wisdom has been challenged suggesting that occupational upgrading was unlikely within an immigrant's lifetime or their children's. Indeed, the cross-sectional data that was originally used to understand immigrant economic success has been shown to overstate the speed of earnings growth since it confounds arrival cohort effects and selective return migration effects (Abramitzky et al. 2014). As new longitudinal data is developed using US-specific sources, however, premigration experiences are invariably omitted. Yet, the level of skill obtained in the sending country often determines mobility trajectories of individuals since it has a strong influence on starting points and access to mobility ladders that lead to different outcomes (Borjas 2014; Bodner et al. 1985; Ferrie 2011).

This chapter seeks to understand how premigration skill affected mobility among different immigrant groups. To answer this question, I build a new panel dataset of individuals between 1890 and 1920. I link all passenger ship lists of individuals who arrived in the US from Germany, Italy, and Russia between 1890 and 1899 to their census data in 1910 and 1920. Passenger records provide a wealth of information on individuals including their occupation in

their sending country. The results show that there are persistent differences in occupational outcomes based on premigration skill for up to 40 years in the labor market. However, the gap between unskilled and skilled workers closes over time. Similarly, lower ranked groups, namely Italians, perform worse at different premigration skill levels than their higher ranked counterparts. This project will not only help fuel theoretical debates about immigrant economic progress, but will also have direct implications for policy-makers. Debates around immigration policy are often centered on whether countries should primarily admit high-skilled or low-skilled workers. This project will help us understand whether migration restrictions or selection policies are necessary to ensure strong migrants' performance in the labor market in a period of open borders.

Premigration skill and occupational mobility

Immigration scholars have been particularly adept in understanding why immigrants move to new countries. Some immigrants arrive as birds of passage, taking advantage of global wage inequalities to increase their savings and invest in their homeland after they return. Others arrive for permanent settlement seeking to enjoy a greater level of prosperity provided by richer countries. Still others arrive because they must due to war, natural disasters, and persecution. Despite varying motivations of migration, however, after arrival, all immigrants must either employ the skills learned in their home country or obtain new skills to find employment in their new society. The more skills immigrants bring with them, the more likely they are to perform well in the labor market after arrival. The role of premigration skill, therefore, finds itself at the heart of assimilation and immigrant stratification research – especially in discussion of today's immigrants (Alba and Nee 2003; Portes and Rumbaut 2001; Waldinger and Lichter 2002).

Researchers contend that skill both within and across immigrant groups affects individual-level and group-level mobility trends across time.

The key finding on how premigraiton skill influences mobility in receiving countries stems from research by economists. This research shows that immigrant occupational mobility follows a U-shaped pattern: there is a decline in occupational status from the last occupation in the sending country to the first occupation in the receiving country; however, as immigrants make implicit and explicit investments that complement the skills they bring with them, they are able to achieve an occupational status closer to what they left with. Thus, and accountant in the sending country may start out as a laborer, move on to become a bookkeeper and then perhaps become an accountant. The depth of the U is often deeper for white-collar immigrants and shallower for unskilled immigrants due to a floor effect at the bottom of the occupational structure. This trend has been shown to occur throughout different contexts and researchers have therefore measured the depth and width of the U using a variety of data sources (see Chiswick 2011 for an overview). Nevertheless, due to high skilled immigrants' ability to enter occupations similar to those they left behind, there are often persistent skill differences in outcome across time and generations (Borjas 1994). Indeed, it is often assumed that it took up to four generations for immigrant descendants to shed these initial skill differences at arrival for immigrants who arrived during the age of mass migration (Borjas 2014). Thus, premigration skill is one of the most important drivers of inequality within immigrant groups that has lasting effects across generations (Ferrie 1999, 2011; Bodner et al. 1985; Borjas 2014).

In analyzing why immigrants follow U-shaped mobility, the neo-assimilation approach provides the most straightforward understanding. In this framework, individuals seek to improve their social circumstances that lead to better socioeconomic outcomes, which are often

conditioned by premigration status and skill (Alba and Nee 2003; Nee and Sanders 2001). High skilled immigrants are able to climb out of the initial socioeconomic penalty at first arrival by leveraging their human capital and ethnic and non-ethnic networks. Because the intent of high skilled immigrants is often for settlement, as opposed to migrating as a sojourner, these immigrants seek to reestablish their class-based lifestyle by building their careers in the US through "optimizing their investments in human capital through individualist strategies" (Alba and Nee 2003: 41). High skilled immigrants move and work in places dominated by the native born, which exposes them to individuals and families with different backgrounds. This allows high skilled immigrants to learn and adapt to native-born customs and values that are likely rewarded in the labor market. Low skilled immigrants, on the other hand, are reliant on their social networks to find employment in the receiving country, which increases dependence on their ethnic community. Neo-assimilationists note that "reliance on ethnic ties [lead] to pathways of incorporation that are associated with low wage, low-skill labor, either in the ethnic economy or in the open economy" (Alba and Nee 2003: 49).

Premigration skill in the age of mass migration

Despite having an important role in theories about immigrant economic outcomes, however, researchers often dismiss this variable's position in producing within group inequalities for immigrants, with the exception of discussions about Jews, who entered at the turn of the twentieth century. This ahistoricism has led researchers to believe that yesterday's immigrants arrived with no capital, few skills, and limited levels of literacy (Alba and Nee 2003; Portes and Rumbaut 2001; Waldinger and Lichter 2002). Although these characteristics should limit mobility prospects of immigrants, researchers suggest that the industrial structure at the time promoted upward advancement into craft and managerial positions. While it is true that the

diversity of social backgrounds was smaller than for today's immigrants, some who arrive as computer engineers and others who arrive as farmers, what determines high versus low skill is the context of the time and technology in use that rewards certain occupations over others (Ferrie 2011). Thus, yesterday's highly skilled were merchants and artisans, which likely were rewarded in the US's labor market, and the processes mentioned above likely occurred for Italians, Slavs, and Jews in the first half of the twentieth century.

Indeed, historical scholarship points to premigration skill as one important factor that sorted immigrants into different parts of the stratification system in similar ways as discussed above (Bodner et al. 1985). For instance, in their study of Pittsburgh, Bodner et al. (1985) found that Italians largely concentrated in the construction industry because they learned skills such as bricklaying and stonecutting in Italy. Similarly, Italian immigrants with an agricultural background often supplemented their wages in Italy by working in construction, and then they were able to transfer those construction skills once they entered the US. One-fifth of all Italians in the Pittsburgh Survey of 1907 were able to secure craft positions throughout different industries because they were able to use their premigration skills (Bodner et al. 1985). Similarly, Poles who entered as unskilled laborers were only able to secure unskilled laborer positions and were often reliant solely on their ethnic networks to find work (Bodner et al. 1985). Thus, much of the occupational distribution of immigrants in cities in the US during this period reflected the occupational distribution of the flow of each immigrant group.

While skill differences between individuals based on premigration skill persisted, however, it is possible that lower-skilled immigrants were able to close the gap in occupational status with their higher skilled counterparts. A recent study by Abramitzky, Boustan, and Eriksson (2014) finds that initial gaps between immigrants and the native-born during this time

varied substantially by sending country. Immigrants from rich sending countries often held occupations ahead of natives upon arrival, while immigrants from poor sending countries started out behind. Although all immigrant groups experienced upward mobility over time, the initial gap between immigrants and natives did not change. While these analyses do not account for differences in premigration skill of individuals, it is suggestive that all members of groups were investing in US-specific human capital to find better employment over time. That is, the flows from the poorer countries were likely heavily unskilled while the flows from the richer countries were from a broader range of occupational classifications. Since all groups experienced upward occupational mobility at the same rate, it is suggestive that both the low skilled and high skilled engaged in behaviors that allowed them to enter better occupations. If enough low-skilled immigrants invested in human capital, this gap may have shrunk.

Indeed, in a three-generational analysis of Irish immigrants, Connor (2017) finds that there is a strong persistence of class once immigrants come to the United States, but these class differences between individuals wash out by the second generation, with the exception of white collar immigrants who remain in better occupational positions. Similarly, Ferrie (1999) reports that more that 55 percent of German and British and 40 percent of Irish white collar workers were in the same positions within a year of entering the United States between 1840 and 1860. However, the probability of moving up in occupational status with each additional year in the US was greater for unskilled worker than for white collar workers. After 10 years of residence, the probability that unskilled workers were in skilled and white collar positions was lower than the probability that an immigrant with a white collar background was in these positions, but the gap was severely reduced. Nevertheless, while economic adaptation was not subject to any one

overriding variable, what occupation an immigrant did before they came to the US had important consequences for where they ended up.

Data, Matching, and Methods

Ship Manifest Data

Premigration occupations come from passenger ship manifests available from the US National Archives and Records Administration (NARA).[18] The data come from the Italians to America, Germans to America, and Russians to America files that are described in detail below. Ship manifests during this era collected a wide range of information about individuals disembarking on US soil. Beginning with the Passenger Ship Act of 1819 and later the 1855 Passenger Act, captains were required to fill out these lists or face a $50 fine and up to six months in jail. Steamship companies were also required to pay for the individual's deportation if they were deemed ineligible for entry at arrival. The manifest data include the immigrant's name, age, sex, literacy, occupation, town of last residence, destination, country of origin, and travel compartment. In addition, the passenger lists contain information about the ship traveled on such as its name, the port of its departure, and date of arrival. This information was primarily used as a form of remote control where the information listed was used as character markers to gauge whether potential immigrants could make a living for themselves upon arrival. Filling out this information at the port of embarkation (as opposed to in the US) allowed steamship companies to prevent undesirable immigrants (those likely to come of public charge, anarchists, and polygamists) from entering the country. The manifests were also used to maintain official

[18] The data includes the master files from https://aad.archives.gov/aad/index.jsp.

statistics on immigrants and to provide proof of date of entry when immigrants began the naturalization process.[19]

The NARA data include nearly all passengers of Italian, German, and Russian origin who passed through the ports of New York, Baltimore, New Orleans, Philadelphia, and Boston from 1850 to 1899. The Italian data includes information on all individuals who report Italy, Lombardy, Piedmont, Sardinia, Sicily, or Tuscany as their place of birth. The German and Russian data include individuals from all parts of the Empires. Individuals in the German data come from Germany, Prussia, Bavaria, Wurttemberg, Hessen and other parts of the German and Prussian Empires. Similarly, the Russian data includes all individuals who identified their country of birth as Armenia, Finland, Galicia, Lithuania, Poland, Russia, or Ukraine. The representativeness of the passenger data is discussed in detail in Appendix A.

Despite the rich information provided in passenger lists of individuals before they came to the US, it is necessary to impute some variables relevant to the analyses below: namely, ethnicity and a hierarchical format of premigration occupation. To manage the over 1,800 occupations in the passenger lists, I match each occupation to the Historical International Social Class Scheme (HISCLASS) developed by van Leeuwen and Maas (2005). I then further group these codes into five categories: white-collar, skilled blue collar, farmers, semi-skilled blue-collar, and unskilled. HISCLASS was developed to make comparisons in occupations across different periods, countries, and languages. This measure follows the International Labour Organization's 1968 *International Standard Classification of Occupations* (ISCO) and the 1939-1991 *Dictionary of Occupational Titles* (DOT). The rubric breaks occupations into several main

[19] After the 1906 Naturalization Act, manifests were also required to include height, eye color, skin color, etc. This was to help naturalization officials confirm the identity of the immigrant when they began the naturalization process.

dimensions of social class (1) a manual-nonmanual divide, (2) skill level, (3) the degree of supervisory roles, and (4) the economic sector. Since most historical studies that use schemas based on historical intuition, HISCLASS provides more objective measures of what each occupation was (see van Leeuwen and Maas 2010 for an overview of this variable versus others). Thus, premigration occupations used in the analyses refer to their broader HISCLASS classification. Many Italians arrived with an occupation as a "peasant" or "country man." Since HISCLASS does not classify these occupations, I coded these as unskilled.

In addition, it is unknown about the ethnicity of each individual during this time. However, many sociologically distinct ethnic groups arrived with common national origins: namely, Jews and Slavs. Since passenger records do not identify the ethnicity of an individual before 1903, I use a Jewish index created by Abramitzky, Boustan, and Connor (2017). The Jewish index takes individuals in the complete count censuses between 1920 and 1940 and calculates the share of individuals with a given first or last name who spoke Yiddish or Hebrew before coming to the United States. This measure holds a value between 0 and 1 for every individual's first name and a value between 0 and 1 for every individual's last name. The first and last name index scores are added, and an individual is counted as a Jewish immigrant if the rate is at or above 1.4. The cutoff of 1.4 is used because when this index is applied to complete count censuses, the Jewish population estimates roughly match Kuznets (1975) estimates.

Table 3.1 presents descriptive statistics of the passenger data. For reasons discussed in the matching section below, the data are limited to men who entered after 1890 and were between the ages of 20 and 40 in 1900. As shown, immigrant men arrived when they were relatively young on average for all groups (29 years for Italians and 23-24 years for Russians and Germans). Similarly, the majority of immigrants arrived in steerage (or third cabin as they

would call it) and most arrived before 1895. Germans and Russians often embarked from similar ports, while Italians left from Naples and Genoa. Most of the immigrants disembarked on Ellis Island.

Table 3.1: Descriptive statistics of passenger lists

	Italians (1890-1899)	Russians (1890-1897)		Germans (1890-1897)	
		Jewish	Non-Jewish	Jewish	Non-Jewish
Observations	315,461	68,259	42,175	66,860	104,604
Age at arrival (median)	29	23	24	24	23
Occupation (percent)					
White collar	2.78	7.50	4.65	20.35	18.63
Skilled	10.82	15.05	9.57	16.17	17.35
Farmer	11.10	5.67	9.64	20.70	22.21
Semi-skilled	6.13	3.62	2.82	7.07	8.23
Unskilled	69.17	68.16	73.32	35.71	33.58
Literate					
Yes	18.35	11.36	13.14	21.73	22.39
No	21.75	8.41	9.05	3.06	2.53
Unknown	59.90	80.23	77.81	75.20	75.08
Travel compartment (percent)					
Steerage	95.77	93.24	93.40	67.47	70.69
Cabin	1.68	3.11	2.85	21.70	18.47
Stowaway/other	2.55	3.65	3.80	10.83	10.84
Year of entry					
1890-1894	52.30	72.72	73.16	86.13	82.96
1895+	47.70	27.28	26.84	13.87	17.04
Most common port of embarkation	Naples, Italy	Hamburg, Germany	Hamburg, Germany	Bremen, Germany	Bremen, Germany
Second most common port of embarkation	Genoa, Italy	Bremen, Germany	Bremen, Germany	Hamburg, Germany	Hamburg, Germany
Most common port of disembarkation	New York	New York	New York	New York	New York

Source: author's calculations of NARA data
Note: data are limited to men who are 25 to 45 in 1900 and arrived after 1890. Premigration occupations are classified according to the HISCLASS rubric: HISCLASS 1–5 white collar; HISCLASS 6–7 skilled blue-collar; HISCLASS 8 farmers; HISCLASS 9 semiskilled; HISCLASS 10–12 unskilled.

Despite similarities in age and mode of arrival, however, there are sharp differences in occupational background across ethnic groups. For instance, most Italians and non-Jewish Russian immigrants were unskilled in their sending country. Similarly, few were in white collar and skilled positions. By contrast, a larger percent of non-Jewish German immigrants had white collar and skilled occupations. The difference in skill across these groups is due to a number of reasons. Primarily, the German inflow during this decade was part of a much more mature

migration (see appendix A) where skilled Germans were able to enter occupational niches in the US that mirrored their background in Germany almost immediately. As a result, most Germans entered the US for permanent settlement, which is a migration strategy that often draws higher skilled immigrants (Alba and Nee 2003).

Jewish immigrants, however, report a large range in skill before arrival. Whereas there are large segments who arrived with a white collar and skilled background, there was also a sizable portion that arrived with few skills. Interestingly, however, there is a large percentage of German Jewish immigrants with a farming background. While this number is small in absolute terms (~14,000 individuals), the farming flow likely reflects the conditions of Germany during the time. Germany began to start its industrial revolution in the 1890s, was going through an agricultural reform, and had rural overpopulation. While most of the migration happening in Germany during this time was internal, people moving from rural to urban areas, some were pushed out to settle in the US. Those who left the German Empire from rural areas were likely individuals seeking to continue their more traditional lifestyle. On the other hand, Russians were just starting their mass migration in the 1890s. While there were many Jewish agricultural colonies within Russia, the 1882 May Laws in the Russian Empire pushed rural Jews to urban centers. However, recent analyses of the 1897 Russian Empire Census shows that Jews were dispersed uniformly across space and showed no preference for urban environments and many had a rural background (Spitzer 2017).

Matching and construction of panel data

To understand how premigration skill influences economic outcomes, I match individuals from the passenger lists to their census records in 1910 and 1920 using established record-

linkage techniques (Abramitzky, Boustan, and Eriksson 2012; Connor 2016; Catron 2017).[20] The iterative matching procedure links individuals from their passenger record to their decennial census records using their name, age, and country of birth.[21] This technique standardizes first and last names by correcting for nicknames and then uses a *soundex* program to address orthographic differences between phonetically equivalent names. Observations from the passenger lists are matched forward to the 1910 and 1920 census by first looking for exact matches based on first and last name, place of birth, and exact birth year. If there is one (and only one) match, the procedure stops and the individual is considered matched. If there is not a match, I try matching within a 1-year age band (older and younger) and then within a 2-year age band; if there is one (and only one) match, the individual is included in the final sample. However, if there are multiple matches, or there is no match, the observation is discarded as unmatched.

The data are limited to men who arrived after 1890 and are between the ages of 20 and 40 by 1900. Individuals who arrived as children are also omitted since the majority of immigrants who arrived as children do not have occupations listed (or in a few cases would have his father's occupation listed). In addition, the age restrictions are imposed to ensure that individuals who match are still in the labor market in 1920. To maintain consistency between the passenger files and census records, I combine larger regions of the German and Russian empires in the census files to ensure better matching. For instance, in 1910, census enumerators were explicitly told to code those born in Finland as separate from Russia. However, Finland belonged to Russia

[20] I do not match to the 1900 census because occupational data is currently unavailable in the complete-count census.

[21] The complete-count census data was provided by the IPUMS project at the Minnesota Population Center (Ruggles et al. 2015) and their collaborator Ancestry.com.

during this time and was not its own country until 1917. Similarly, the passenger files explicitly note that those born in Poland belong to Russia (as opposed to Germany). Thus, matching is done by assigning larger regions of birth rather than more specific places of birth as has been done in previous matching techniques (Abramitzky et al. 2012).

Table 3.2 presents match rates and final sample sizes for Italians, Germans, and Russians in the panel sample. The matching procedure generates a final sample of 8,907 Italians, 4,634 Russians, and 14,289 Germans. Few from the passenger lists match forward to both 1910 and 1920. This is largely because of the high return migration rates of both Italians and Russians. Between 1899 and 1924, over 55 percent of Italians who entered the US returned home as did 50 percent of Russians. Just 19.6 Germans returned to Germany during this same period since most arrived for settlement, which results in a higher match rate for this group. Since the likelihood of being in the 1910 and 1920 censuses is low for Italians and Russians, I also calculate a backwards match which changes the denominator to the number of immigrant men between the ages of 40 and 60 who report arriving between 1890 and 1899 in the full-count 1920 census. This results in a double match rate that is consistent with prior studies matching individuals across censuses (i.e. Abramitzky et al. 2012).

Table 3.2: Sample Sizes and Match Rates

	Passenger List Number in Universe (A)	1920 Number in Universe (B)	Number Matched (C)	Forward Match Rate (C/A)	Backward Match Rate (C/B)
Italian	315,416	75,184	9,740	.031	.130
Russian	110,434	98,558	6,028	.055	.061
German	171,464	82,947	22,340	.130	.269

Note: the passenger list number in universe includes men who entered the US between 1890 and 1899 (or 1897 in the case of Germany and Russia) that would be between the ages of 20 and 40 by 1900. The 1920 number in universe includes men between the ages of 40 and 60 who report arriving between 1890 and 1899 (or 1897 in the case of Germany and Russia) and were born in the respective regions/countries. The text describes the matching procedure. The number of matched cases refers to men from the passenger records who match to both the 1910 and 1920 censuses

Methods

I begin my analyses by testing differences in outcome among immigrants who arrived with different skills. I regress occupation income score on a set of control variables including the immigrant's premigration skill for each ethnic group separately in 1910 and 1920. The occupation income score (OCCSCORE) is calculated by IPUMS and reflects the median income of each occupation observed in the 1950 census in hundreds of dollars. For ease of interpretation, however, I convert this measure into 2010 dollars. Occupation-based earnings are the primary outcome variable used in historical census work since other information such as wages or income are not available until 1940 (Abramitzky et al. 2014; Goldstein and Stecklov 2016). This measure is often considered a reasonable proxy for "permanent" income, by which we can measure economic differences between occupations, but not within. By pegging occupational earnings to a single year, it is also possible to analyze occupational movement without confounders such as changes in the income distribution.

Since several groups arrived with common national origins, I separate Jewish immigrants from the other groups using the index noted above. I combine both Russian and German Jews into one dataset. This is because the Jews coming from the German empire were ethnically similar to those coming from the Russian empire. Thus, in the following discussion, I refer to non-Jewish Russians and non-Jewish Germans as Russians and Germans respectively. When I refer to Jews, I am referring to both Russian and German Jews.

The control variables in the analyses primarily come from the immigrant's passenger ship information. As already mentioned, premigration skill is coded from the person's occupation listed on the manifest and is coded according to the HISCLASS rubric. The occupational

classifications used in the analyses are: white collar, skilled, farmer, semi-skilled, unskilled, and unknown. These premigration occupational classifications are common categories used in the studies that analyze immigrants during this time (Ferrie 1999, 2011; Connor 2017). Table 3.3 provides the three most common occupations in the white collar, skilled, semi-skilled, and unskilled categories by ethnic group in the panel data.[22] The most common occupations for HISCLASS farmer is "farmer" and for HISCLASS unknown is "unknown." Most occupational categories are largely dominated by one occupation. For instance, about fifty percent of all white collar occupations are merchants and over 60 percent of the unskilled are laborers. Thus, differences between premigration skills will largely be driven by these single occupations.

Table 3.3: Most common premigration occupations in each HISCLASS classification from panel data

	HISCLASS			
	White Collar	*Skilled*	*Semi-skilled*	*Unskilled*
Italians	Merchant	Shoe maker	Barber	Laborer
	Sculptor	Tailor	Miner	Countryman
	Clerk	Mason	Porter	Peasant
Russians	Merchant	Tailor	Miner	Laborer
	Painter	Shoe maker	Locksmith	Sailor
	Clerk	Joiner	Weaver	Servant
Germans	Merchant	Baker	Locksmith	Laborer
	Clerk	Bucher	Brewer	Gardener
	Painter	Joiner	Barber	Waiter
Jewish	Merchant	Baker	Locksmith	Laborer
	Clerk	Bucher	Brewer	Gardener
	Painter	Shoe maker	Barber	Waiter

Note: Premigration occupations are classified according to the HISCLASS rubric: HISCLASS 1–5 white collar; HISCLASS 6–7 skilled blue-collar; HISCLASS 8 farmers; HISCLASS 9 semiskilled; HISCLASS 10–12 unskilled.

Other control variables are also measured in the passenger files. For instance, I control for the immigrant's premigration literacy, which includes dummies for "yes" and "unknown" compared to a reference category of "no." However, there are no instructions as to what level of competency immigrants needed to be considered literate. This is therefore a very rough measure

[22] These are also the most common occupations in the full passenger data before matching.

of premigration education. Since the place that immigrants came from also likely mattered (i.e. southern versus northern Italy), I also control for port of embarkation. Although many immigrants traveled long distances to get to a port city, most would leave from the nearest place. Thus, most southern Italians left from the port of Naples. Similarly, I control for a year of arrival fixed effect noted on the ship records. I also control for a state fixed effect described in each census year. Because of the port of embarkation, year of arrival, and state fixed effects in each analysis, I am implicitly comparing people who left from the same place, in the same year, and settled in the same place. The estimation strategy proceeds as follows.

Using the balanced panel dataset, which ensures that individuals are located in both the 1910 and 1920 censuses, I estimate differences between occupational earnings given the immigrant's occupation in their sending country. I regress occupational earnings in each census separately, which provides a snapshot of how well immigrants are doing at each point in time. The 1910 results report differences between individuals when they have been in the US for 10 to 20 years while the 1920 results report differences between individuals when they have been in the US for 20-30 years. By running the regressions in each census separately, we can see the differences between immigrant premigration groups as well as whether there was any catch-up between the different groups. Because the comparisons are for the same individuals over time, factors such as return migration will not bias the results.

While the regressions mentioned above test within group variation based on premigration skill, they do not test whether immigrants with different ethnic backgrounds, but who enter with the same skills, hold the same occupational trajectories. Therefore, I pool the datasets together to understand whether Italians, Russians, Germans, and Jews with the same occupational background have differences in occupational income. To do this, I limit each pooled sample by

premigration skill. Thus, I am comparing Italians, Russians, Germans, and Jews who enter with the same broad occupational classification to each other. The OLS regressions control for the same variables mentioned above. However, I also include dummy categories for whether the individual was a member to each ethnic group compared to a reference of being Italian. Also, I do not control for port of embarkation since Italians departed from different ports than their Russian and German counterparts.

The analyses conclude by analyzing differences within ethnic groups on alternative outcomes that may have aided in upward occupational mobility.

Results

The results begin by presenting the descriptive statistics of the average occupation-based income (in $2010) of each ethnic group by premigration occupation. The data for Figure 3.1 come from the panel dataset where each matched individual gives one observation in each census year. The dark bar refers to the OCCSCORE in 1910 in Figure 3.1, while the lighter bar refers to OCCSCORE in 1920. Premigration occupations, located at the bottom of the figure, come from the HISCLASS rubric applied to occupations from the individual's passenger record.

As shown in Figure 3.1, immigrants who held white collar occupations before coming to the US had an average occupation-based income that was higher than the lower occupations for all groups in 1910 and 1920. For instance, immigrants who held white collar occupations in Italy had an average occupation-based income of over $23,000 (in $2010) while the other occupation groups had between roughly $21,000 to $21,500 average occupation-based earnings in 1910. Similarly, immigrants with white collar occupations in Italy had a higher average occupation score in 1920. With the exception of the Italians, however, farmers had the lowest occupation-based income in both years for each ethnic group. Farmer's low occupation-based income in the

US is due to farmers in the home country becoming farmers after arrival and remaining in this occupation for the rest of their working lives. Indeed between 20 and 30 percent of all immigrants who were farmers in their home country became farmers in the US among Russians, Germans, and Jews. Italian farmers, however, appear to have shunned their prior occupation – just 2 percent of Italian farmers became farmers in the US by 1910. These immigrants were located in laborer positions after arrival.

While there appear to be slight differences in occupation-based income in the US given their prior occupation, when comparing adjacent bars in figure 1, there appears to be persistence in occupation over time. That is, there are few major rises and falls in occupational status between 1910 and 1920. The small decline between 1910 and 1920 for most groups likely reflects age-related processes in income, which often falls when individuals get older. Nevertheless, figure 1 provides some evidence that there are differences in outcome between premigration occupations, but persistence in outcome within premigration occupations. Thus, what immigrants did before they came to the US likely had strong impacts on their destinations corroborating the economics research noted above.

Figure 3.1, however, is descriptive and the differences in outcome given premigration occupations may reflect other processes. Figure 3.2, therefore, presents the results from OLS regressions predicting occupation-based income in both 1910 and 1920 from the panel data. The full results with all coefficients are reported in appendix 3.A. Each sample is limited to that ethnic group. Thus, the Italian skilled coefficient is in reference to an Italian who had a white collar occupation before arrival. Because these regressions include port of embarkation, year of arrival, and state fixed effects, these regressions report outcomes among individuals who left from the same place in the same year and settled in the same area.

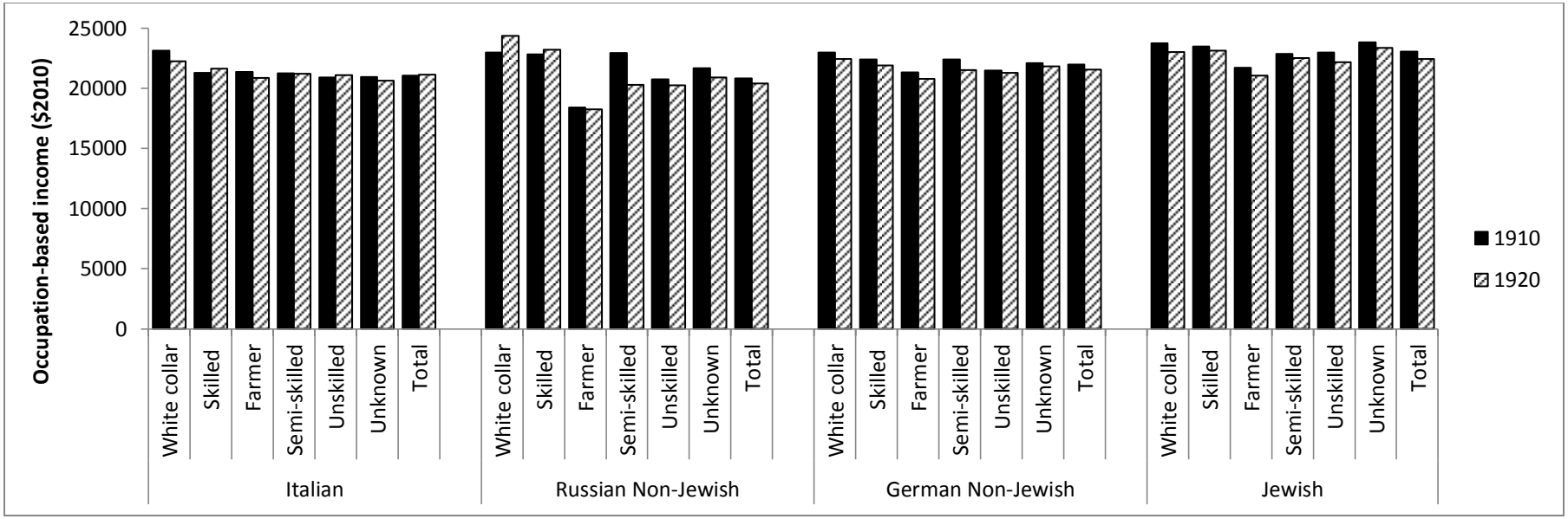


Figure 3.1: Average occupation-based earnings in 1910 and 1920 by premigration occupation

Note: Premigration occupations are classified by applying the HISCLASS rubric to occupations on the passenger records: HISCLASS 1–5 white collar; HISCLASS 6–7 skilled blue-collar; HISCLASS 8 farmers; HISCLASS 9 semiskilled; HISCLASS 10–12 unskilled.

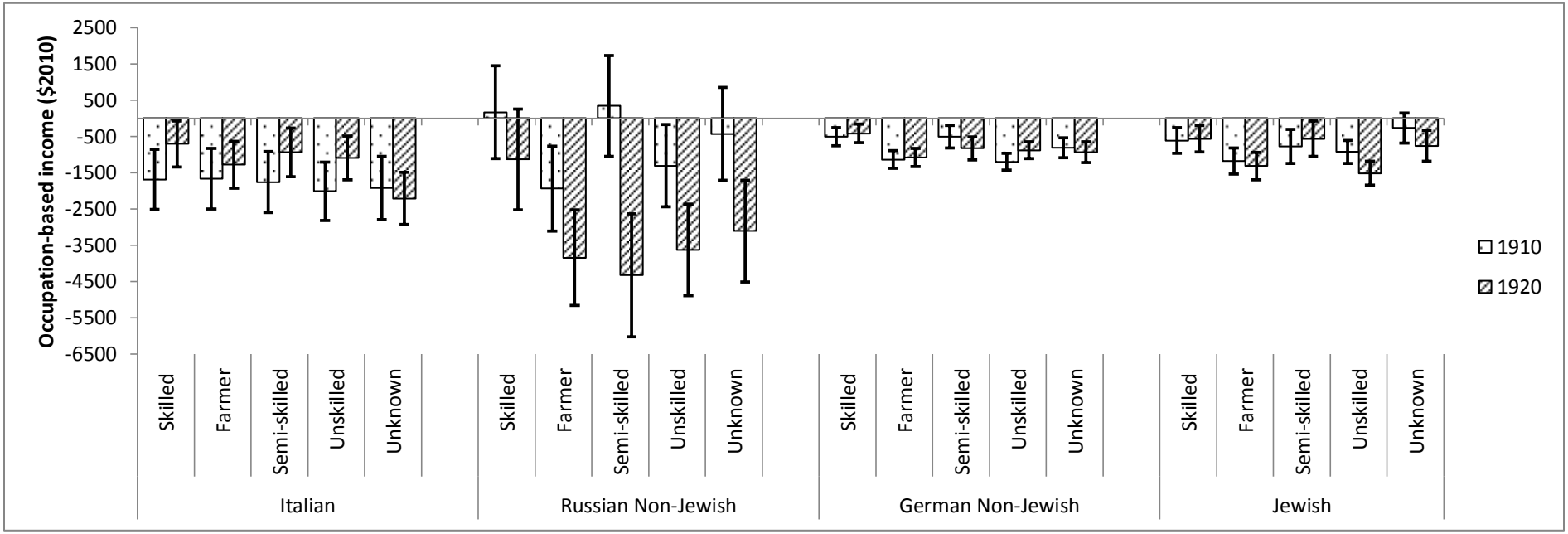


Figure 3.2: Ordinary least squares regressions predicting occupation-based income

Note: each regression is limited to the matched sample of each ethnic group. Results control for age in 1900, age in 1900 squared, premigration literacy, whether the immigrant arrived by traveling steerage, the port of embarkation, a year of arrival fixed effect, and state settled in for each census year. The Jewish analyses also include whether the individual was from Germany or Russia. OLS estimates are run separately for 1910 and 1920, but include the same individuals in each year.

As shown, nearly all groups perform worse vis-à-vis their white collar counterparts across ethnic groups in both 1910 and 1920. However, there are different sized effects depending on ethnic group. For instance, Italians in 1910 are located in occupations that pay $1,700 to $2,000 less than Italians who arrived with a white collar background while Germans were located in occupations that paid $500 to $1,200 less than their white collar counterparts. The large differences in occupational outcomes for these groups given their premigraiton skill likely reflect the mechanisms that allowed immigrants to find jobs. As mentioned, low skilled immigrants were more reliant on their ethnic ties to find employment while higher skilled workers could rely on their ethnic and non-ethnic ties in addition to their previous skill. This allowed skilled and white collar workers to move into better positions quicker. Unskilled workers, therefore, needed to close the gap if they were to achieve similar outcomes as their white collar counterparts. However, the significant and negative effects in 1910 filter across ethnic groups, which suggests that even after 10 to 20 years in the US, premigration skill differences persisted among these different ethnic groups.

Despite the persistence in occupational status, however, in many cases, the gap between white collar workers and the other skill groups lessened between 1910 and 1920. As mentioned, as of this writing, the 1900 full count census does not provide occupations of individuals, so it is impossible to know what the immigrants did right at arrival. However, skilled Italian workers had an occupational disadvantage of $1687 in 1910, but had an occupational disadvantage of $705 in 1920. Similarly, Jewish semi-skilled immigrants were located in occupations that earned $772 less vis-à-vis their white collar counterparts, but were located in occupations that earned $565 less by 1920. Since these are the same individuals in each analysis, these results are not driven by selective return migration where less successful immigrants returned to their

homeland. The results are also not driven by white collar workers entering early retirement due to their success since the panel data requires individuals to have an occupation in each census.

Immigrants who were farmers before they came to the US do not appear to achieve much occupational success. As mentioned, Italian farmers largely became laborers in the US. However, large percentages of Russian, German, and Jewish immigrants remained farmers after arrival. As a result, the farmer coefficients widen between 1910 and 1920 or remain similar since they are not experiencing upward occupational mobility. However, this result does not mean that the farmers were unsuccessful. Occupation score assigns the median income score to each occupation in the census. Thus, it is unable to report within occupation variability and farmers may have indeed become more successful over time while staying in the same occupation.

Occupational Differences between ethnic groups

The above analyses suggest that there were occupational differences across time based on an individual's premigraiton skill. Overtime, the gap between the highly skilled and unskilled lowered, although differences persisted for up to 40 years in the labor force. However, these results do not tell us about differences between groups. I therefore pool the ethnic groups together and test differences between groups based on their premigration skill. As shown in Table 4, with the exception of white collar workers, Russians, Germans, and Jews perform better than their Italian counterparts in 1910. For instance, skilled Jews were concentrated in occupations that were paid over $1,800 more than skilled Italians during this time. Similarly, unskilled Jews were in occupations that paid of $2,200 more than their Italian counterparts. Only semi-skilled Russians and Russian farmers hold statistically indistinguishable or negative results compared to their Italian counterparts in 1910.

Table 3.4: Ordinary least squares regression predicting occupation-based earnings by premigration skill

	1910	1920
	White-Collar	
Russian	888.19	2670.81+
	(1666.00)	(1584.93)
German	940.64	939.12
	(1018.49)	(768.97)
Jewish	1317.72	604.17
	(1045.13)	(800.65)
R-squared	.09	.05
Observations	3,680	
	Skilled	
Russian	2014.74*	2336.54*
	(882.69)	(941.36)
German	1880.59***	1057.08**
	(366.29)	(386.01)
Jewish	1821.99***	653.45
	(430.69)	(455.16)
R-squared	.07	.04
Observations	4,901	
	Farmers	
Russian	-1807.49**	-2482.02***
	(545.85)	(571.26)
German	1134.72**	398.92
	(354.26)	(366.46)
Jewish	1450.26***	407.99
	(411.01)	(431.47)
R-squared	.09	.05
Observations	5,607	
	Semi-skilled	
Russian	1671.90	-1177.57
	(1248.53)	(1401.89)
German	1757.88***	663.14
	(499.96)	(558.78)
Jewish	1700.03**	1090.62
	(624.72)	(701.41)
R-squared	.07	.03
Observations	2,191	
	Unskilled	
Russian	740.06**	-643.63*
	(265.19)	(271.54)
German	1754.90***	816.06***
	(201.33)	(218.61)
Jewish	2266.58***	511.71+
	(261.73)	(277.63)
R-squared	.05	.03
Observations	14,477	

+.05<p<.1, *p<.05, **p<.01, ***p<.001 (two-tailed)

Note: each regression is limited to the pooled dataset for each premigration occupation. Results control for age in 1900, age in 1900 squared, premigration literacy, whether the immigrant arrived by traveling steerage, a year of arrival fixed effect, and state settled in for each census year. OLS estimates are run separately for 1910 and 1920, but include the same individuals in each year.

The lower occupational earnings of Italians compared to the other groups may reflect discrimination in the labor market. However, the differences between ethnic groups at the different skill levels may also be due to imperfect matching of occupations. That is, a merchants in Southern Italy may not perform the same tasks as merchants from Germany. If German merchants perform the same tasks as those in the US and Italian merchants do not, then we would expect Germans to do better since their skill maps more closely to the US's demands. However, this mismatching hypothesis does not hold up when comparing unskilled workers. Most unskilled workers who entered the US during this time came from rural regions of Europe and they had little industrial skills required in the manufacturing-based economy. Most entered laborer positions within firms at the bottom of the occupational hierarchy. Given the likelihood that unskilled immigrants from all regions were located in similar positions at the bottom, the differences between ethnic groups may likely be due to discrimination among Italians compared to the other groups.

However, while Italians perform worse in the labor market than their Russian, German, and Jewish counterparts, they do appear to close the gap by 1920. In many cases, differences between groups based on premigration skill that were statistically significant in 1910 become statistically indistinguishable in 1920. However, the coefficients remain positive suggesting that Russians, Germans, and Jews perform slight better even after 40 years in the labor market. Politicians and activists seeking to justify for closed borders during this period would often point to Italians as evidence that immigrants would fail to assimilate compared to migrations from Germany and Western Europe. However, Italian's ability to close this gap at most skill-levels suggests that immigrants at all levels were able to achieve upward mobility. But the disadvantage in occupational standing faced by Italians throughout their life course likely meant

that Italians held lower economic success as a group. The greater earnings and associated wealth of Germans, Russians, and Jews likely compounded leading them to better overall standing over time than their Italian counterparts.

Alternative forms of occupational success

As shown, immigrants with different backgrounds had different occupational outcomes across time, but there is some convergence in outcome after 20 to 30 years. However, achieving upward occupational success is not the only path immigrants take to make it in America. Transfers of skill from one country to another are often imperfect and it is sometimes difficult for immigrants to recreate their class-based lifestyle in a new country. One strategy around this is through entrepreneurship since immigrants can take advantage of ethnic and non-ethnic markets (Aldrich and Waldinger 1990; Catron 2014). The 1910 and 1920 censuses report the class of worker for each individual by defining them as an employer, employee, or working on their own account. An employer is defined as someone who is not employed, but employs helpers to transact his own business. Individuals working on their own account are independent workers that do not receive salaries or regular wages. These often include farmers with no employed helpers, peddlers, hucksters, newsboys, etc. Figure 3.3, therefore, combines employers and those working on their own account to report the percent self-employed in 1910 and 1920.

In many cases, immigrants who arrived with a white collar, skilled, or farming background have higher self-employment rates than semi-skilled or unskilled workers. However, these differences are not particularly large. While there are more dramatic differences in premigration occupation and the rate of just being an employer, the difference in occupational-based income of working on one's own account and employers is roughly $1,000. While this is

a moderate difference, these results suggest that many immigrants during this time became self-employed to achieve economic success. In supplementary logistic analyses, however, there are significant differences between premigration skill in predicting the probability that an immigrant was self-employed in each census year. Namely, those with an unskilled or semi-skilled background held lower odds of being self-employed than their white collar backgrounds controlling for factors such as age, premigration literacy, year of arrival, port of embarkation, and region of settlement for all groups. Thus, though the gap in occupational status shrank over time in the analyses above, if white collar, skilled, and farming immigrants were more successful through entrepreneurship, there will still be large differences in inequality given one's premigration skill.

Another way to analyze occupational success is through understanding citizenship rates. As shown in Chapter 4, citizenship acquisition played an important role in producing occupational success during this era. If one group was more likely to naturalize than another, inequalities may have grown over time. Similar to self-employment rates, there are differences in citizenship rates between the premigration occupational classifications with the exception of Germans. In particular, unskilled immigrants have lower rates of becoming a citizen or drawing their first papers than the other skill groups. However, when comparing 1910 to 1920, unskilled workers have the largest gains in citizenship acquisition bringing them closer, but still below, the rates of the other groups. This is consistent with the idea that unskilled workers were able to somewhat close the gap with their more skilled counterparts.

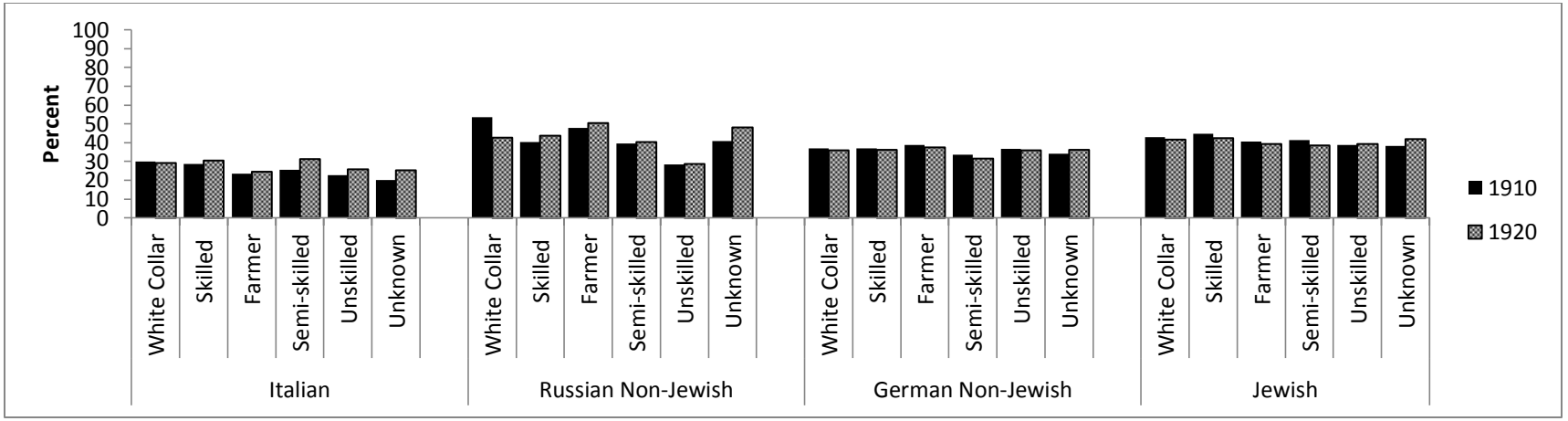


Figure 3.3: Percent of immigrants who are employers or work on their own account by year

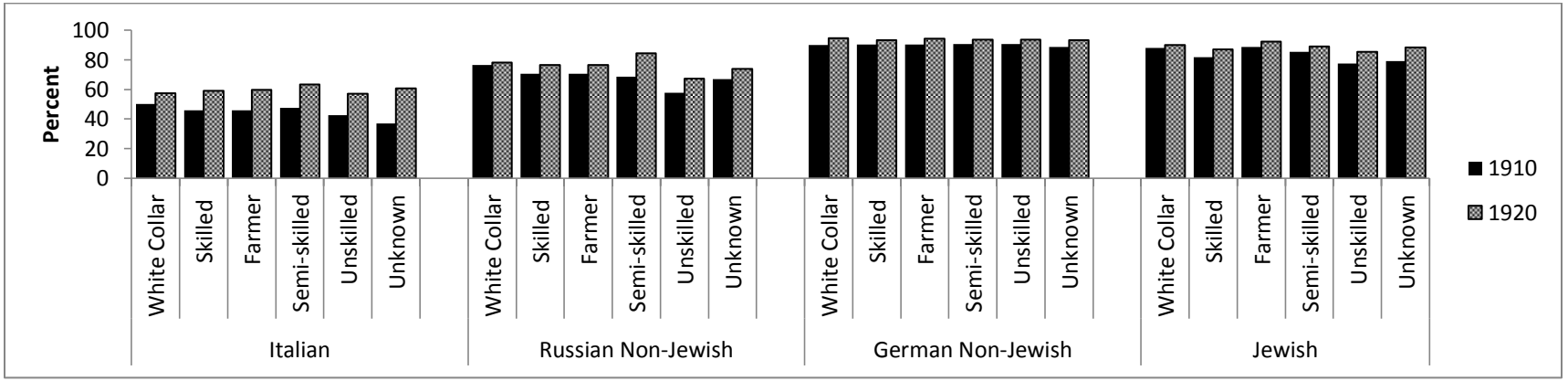


Figure 3.4: Percent of immigrants who are naturalized citizens or have drawn their first papers by year

Discussion/Conclusion

The above results analyze how premigration skill levels influence occupational trajectories over time. They show that there are persistent differences within immigrant groups depending on their skill level at arrival. Despite these persistent differences, however, the gap between unskilled immigrants and white collar immigrants lessened over time. These results suggest that white collar and skilled workers were able secure better paying jobs quickly since they were able to leverage both their previous human capital and ethnic and non-ethnic networks. Unskilled workers, however, were likely more dependent on their ethnic ties and it took longer to achieve upward economic success. However, by the end of their working career, unskilled workers were concentrated in occupations close to their white collar counterparts, although results remained statistically significant. As scholars and politicians debate about whether countries should admit primarily high-skilled immigrants or low-skilled immigrants, these results suggest that such selection policies may not be necessary to ensure strong migrants' performance since all groups experienced upward mobility in this period of open borders.

While there remain differences within immigrant groups, however, there are also differences across groups. Namely, Italians tended to perform worse than their German, Russian, and Jewish counterparts at all levels in 1910. However, they too were able to close the occupational gap by 1920. The lower performance of Italians may reflect discrimination in the labor market as well as greater reliance on ethnic ties to obtain a good job. As mentioned, immigrants who enter with skills may be able to transfer those skills to find employment in similar occupations. Italians in particular were very reliant on these kinship and ethnic ties to find employment (Bodner et al. 1985). Ethnic networks may have overridden some of the widespread discrimination Italians faced during this time allowing them to achieve greater

occupational success. However, the persistent disadvantages of Italians means that they had lower lifetime earnings and associated wealth, which would in turn make their children start from disadvantaged positions. Despite these disadvantaged positions, however, Italians in addition to Germans, Russians, and Jews became part of the American mainstream over time suggesting that these initial differences were eventually overridden (Lieberson 1980).

The mechanisms that allowed for upward mobility, however, are often assumed to be different for high skilled immigrants and low skilled immigrants. High skilled immigrants are assumed to be able to translate their human capital and ethnic and non-ethnic ties into high-paying occupations quickly after arrival. However, unskilled workers must rely on ethnic networks to find employment. Since unskilled workers' ethnic networks may be more homogenous, finding employment in high paying positions is more difficult since they lack the necessary skills and may not know enough people to find a position. This is because unskilled workers occupational success is often more embedded in the process of migration itself. Due to high costs of migration, unskilled workers often rely on kin and friends to help with the initial move to the US and to find employment. That is, unskilled immigrants often become completely reliant on their network for the entire migration process. Since jobs are often setup after arrival, unskilled immigrants often concentrate in occupations similar to those of their co-ethnics. It is only after time that unskilled workers begin to work their way out of enclaves and invest in necessary human capital required to find better positions. Thus, although unskilled workers experience upward mobility, the process often takes longer than their more skilled counterparts who often find employment outside the ethnic economy quickly.

Nevertheless, these results point to the persistence of class after migration. That is, the occupation immigrants did before they came to the US has a strong influence on where

immigrants end up. While researchers often point to premigration skill as one important factor in predicting occupational mobility, they often ignore this variable in analyses instead pointing to US-specific factors. Omission of these variables is due to data limitations since premigration skill requires one to collect data in the country of origin and in the country of destination. Thus, passenger records are one way to find occupational data in the country of origin during this period. Although scholars have suggested that premigration skill held limited importance in predicting occupational success (Alba and Nee 2003; Portes and Rumbaut 2001), the results suggest that differences in skill were persistent across time.

Appendix 3.A: Representativeness of the passenger lists

To understand how representative the passenger lists are, figure 3.A1 places the flows of each group into historical perspective using official US statistics. The data in the analyses above use only individuals who arrived between 1890 and 1899. This means that the 1890-99 German cohort are arriving in a period when the overall flow is in dramatic decline, while the Russian and Italian flows are just beginning to rise. Since flows that are less mature tend to be more highly selective, the Italians and Russians who entered between 1890 and 1899 may perform better in the labor market than if later cohorts were included in the data. Nevertheless, passenger lists do not necessarily track official statistics for a number of reasons.

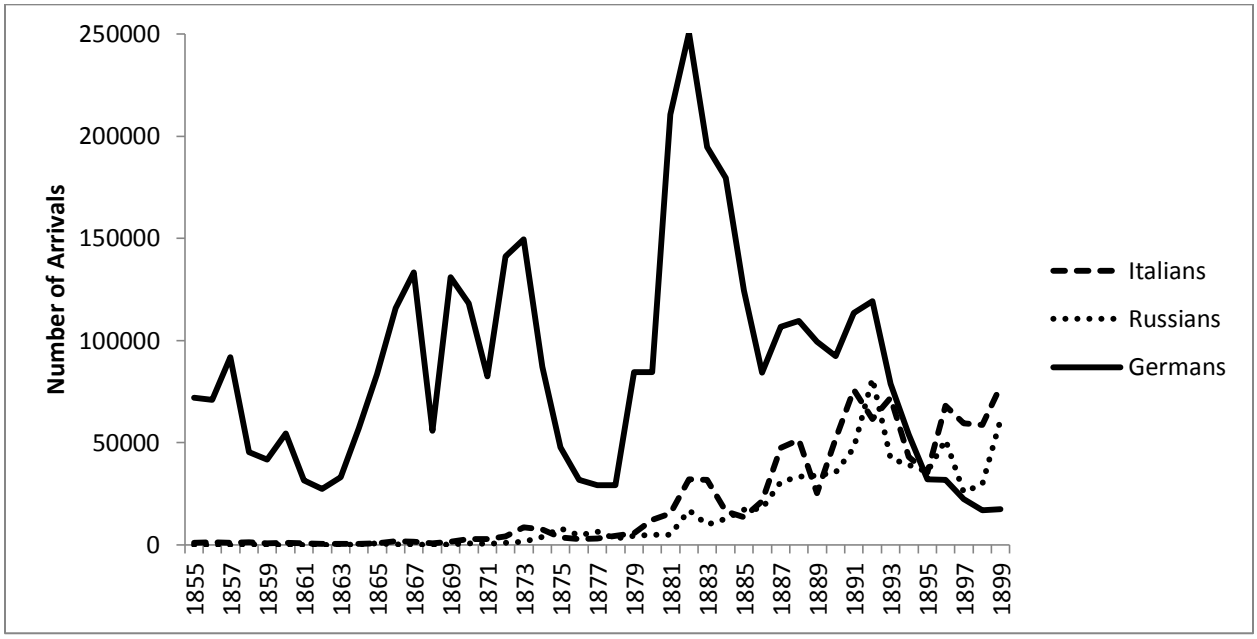


Figure 3.A1: Number of incoming immigrants by year
Source: 1920 US Statistical Abstract

A problem with using passenger lists, something that is not unique to using the NARA data in this article, is that some manifests are unable to be transcribed due to unreadable conditions. Similarly, a fire in 1897 at Ellis Island destroyed some of the records that were stored there (Spitzer and Zimran 2017) – although most passenger records were still stored in

Castle Garden. This may bias the manifest data in that missed data may misrepresent the true distribution of occupations and places of origin among immigrants (see Erickson 1981; Ferrie 1999). The figures below report the number of passengers by year in the NARA data and the official US statistics from 1890 to 1899 (or 1897 in the cases of Germany and Russia). The top panel in each figure represents all individuals who entered the US while the bottom panel of each figure limits the sample to only men. Annoyingly, the official US statistics do not separate out statistics by gender between the years 1893 and 1895. I do not know the reason why. As shown, the passenger files track official US statistics relatively well. However, the manifest counts are somewhat lower in many years than official statistics. For instance, in 1891, the Italian manifest data reports 58,762 individuals who entered the US compared to 76,055 in the official reports. There has been little evidence, however, that the undercounts in passenger data result in any meaningful biases when analyzing occupational outcomes over time (Ferrie 1999).

In addition to the undercounts, in a few years, there are overcounts for a few groups. For instance, the passenger files report 64,600 men who arrived in 1891 while the official statistics report 63,400 men. These overcounts are due to US-born citizens coming back from these countries and were subsequently thrown out of the above analyses since they are not immigrants.

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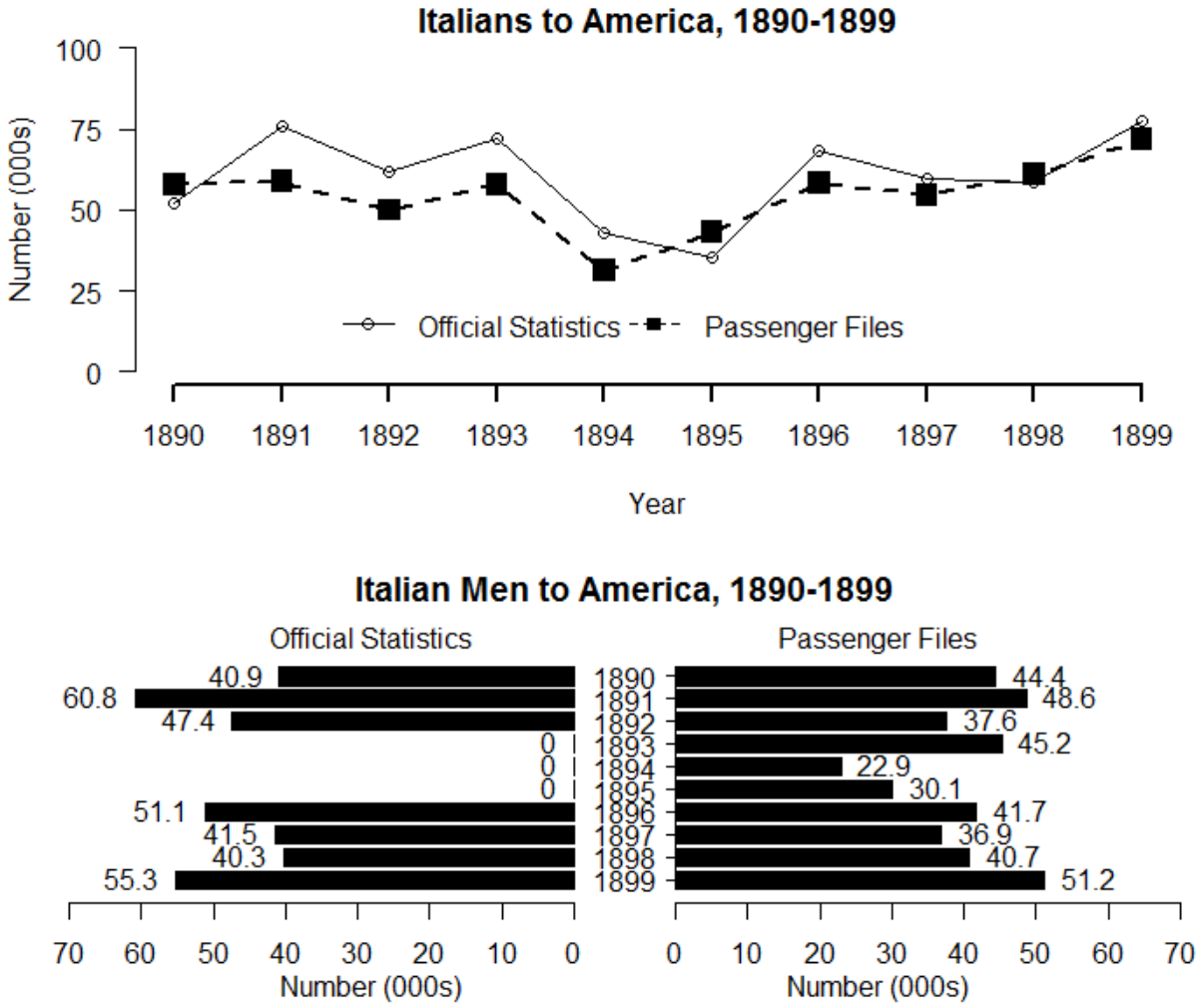

Figure 3.A2: Italians to America
Sources: NARA Passenger Records; Ferenczi and Wilcox (1929)

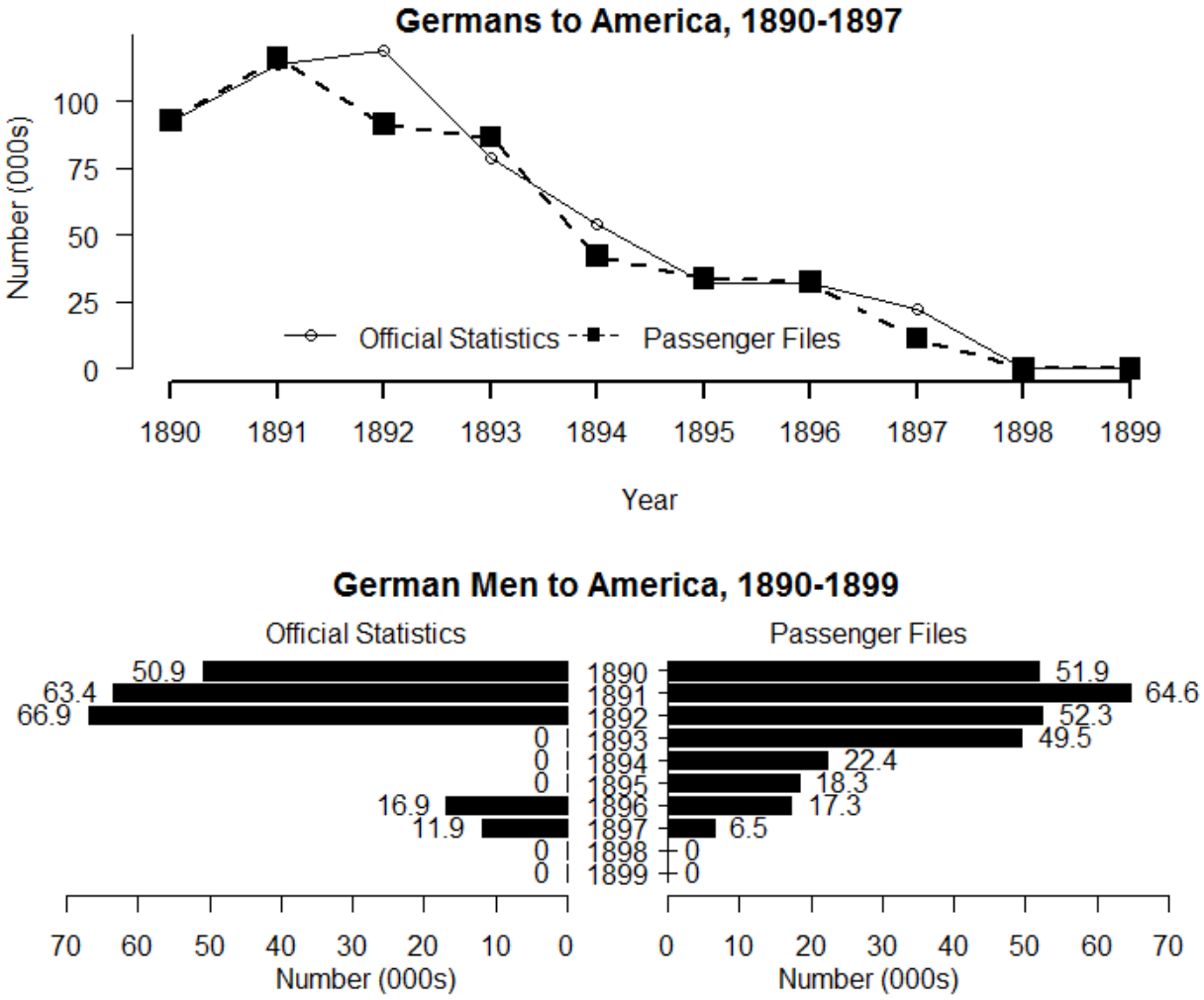

Figure 3.A3: Germans to America
Sources: NARA Passenger Records; Ferenczi and Wilcox (1929)

Figure 3.A3: Russians to America
Sources: NARA Passenger Records; Ferenczi and Wilcox (1929)

Chapter 4

The Citizenship Advantage: Immigrant Socioeconomic Attainment across Generations in the Age of Mass Migration

Abstract:

Scholars who study immigrant economic progress often point to the success of Southern and Eastern Europeans who entered in the early 20th century and draw inferences about whether today's immigrants will follow a similar trajectory. However, little is known about the mechanisms that allowed for European upward advancement. This article begins to fill this gap by analyzing how naturalization policies influenced economic success of immigrants across generations. Specifically, I create a new panel dataset that follows children in the 1920 census to when they were participating in the labor force in the 1940 census. I find that naturalization raised occupational attainment for the first generation that then allowed children to have greater educational attainment and labor market success. I argue that economic progress was conditioned by political statuses for European-origin groups during the first half of the twentieth century – a mechanism previously missed by contemporary research.

In the Age of Mass Migration (1850-1924), thirty million immigrants disembarked on America's shores. The inflow of "new" immigrants – Italians, Slavs, and Jews – became the largest migration period in US history where in 1907 alone 14.2 immigrants were admitted for every 1,000 Americans – the highest rate ever (Fischer and Hout 2006). Scholars who are concerned about immigrant economic progress often point to the success of these European-origin groups and then make claims about whether today's immigrants will follow similar paths. However, little is known about the sources of within-European immigrant group differences in socioeconomic attainment. While a small but growing number of studies have begun to fill this large lacuna in the literature (e.g., Abramitzky et al. 2014; Goldstein and Stecklov 2016; Biavaschi et al. 2013), the political dimension's effect (i.e. citizenship acquisition) on intragenerational and intergenerational economic attainment has largely gone unnoticed. The goal of this article, therefore, is to understand whether European immigrant economic success during this era was, in part, interlinked with macro-level political institutions and processes.

Specifically, this article examines a question that sociologists of migration and social mobility have largely ignored: namely, the impact of parental citizenship acquisition on intergenerational socioeconomic attainment in the first half of the twentieth century. There are several advantages to understanding the effects of citizenship acquisition during this time. First, earlier immigration took place in an era of relatively unrestricted migration when all European immigrants were eligible to naturalize once they had been in residence for five years. By contrast, today's immigrants enter with a large range of legal statuses, some of which do not allow for naturalization (Menjivar and Abrego 2012). Growing restrictions at the territorial border has led to the proliferation of undocumented immigrants, which means that the population of persons ineligible for citizenship has grown. Moreover, for the eligible, the barrier to

citizenship acquisition began to climb in the late 1980s, which has resulted in a large portion of the legally resident population forgoing naturalization. As a result, isolating the effects of citizenship acquisition is difficult for today's immigrants since starting points of immigrants are different and it is only after considerable time and expense that immigrants can obtain this status. Second, there are virtually no longitudinal datasets for today's immigrants that allow for the effects of naturalization on both the first and second generation to be understood. Up to this point, researchers have never been able to track individuals across time using census data. However, the release of digitized full-count censuses allows for the development of panel datasets through matching individuals with unique names. This study is the first in sociology to understand how parental political status influences their children over time.

Citizenship and Labor Market Outcomes

Migration policies at both the territorial border and within fundamentally shape the life chances and opportunity structures of immigrants. While there has been considerable focus on how territorial restrictions impede immigrant economic success (Menjivar and Abrego 2012; Bean et al. 2011), less attention focuses on the role of status citizenship in creating inequalities between individuals. Indeed, segmented assimilation and neo-assimilation hypotheses, the two most dominant accounts of how immigrants move through the stratification system, have entirely ignored the process of naturalization and instead focus solely on the social and economic aspects of ethnic inequality (Alba and Nee 2003; Portes and Rumbaut 2001).[23] However, immigrants enter as aliens, lacking citizenship and full rights. As a result, immigrant destinies and those of their children will be inherently affected by the rights they enjoy as noncitizens and their access

[23] Indeed, the only time both frameworks mention the naturalization process is in discussion of dual citizenship.

to formal and status citizenship. Citizenship policies, therefore, produce civic stratification within immigrant groups since rights and entitlements vary dramatically depending on political status. Rights and privileges for these groups are defined by state and local policies, and further acted out by employers' discriminatory practices. During the age of mass migration, legal and societal forces influenced public and private employer hiring practices that favored citizens over noncitizens. These hiring practices shifted just as citizenship acquisition became harder to obtain that likely had long lasting effects. Indeed, this subject had considerable sociological interest on intergenerational processes during the time (see, e.g., Gavit 1922; Gosness 1929; Bernard 1936; Rich 1940; Fields 1933, 1935).

The Citizenship Advantage in Economic Outcomes

To understand why citizenship policies will create inequalities between individuals, it is important to understand citizenship in light of the long term evolution of the US. The US began as a settler colony needing a population in order to seize control of the territory from indigenous groups, maintain control, and then build a viable, self-sustaining economy and independent state (Fitzgerald and Cook-Martin 2014). It needed to do this while the costs to migration were incredibly large. As a result, the US created policies such as open borders and liberal access to citizenship that were designed to induce more migration. The US sold itself to potential migrants as a land of opportunity where free white men could achieve upward mobility and membership. However, as the costs to migration declined due to changes in steamship technology, the lifting of poverty constraints in sending countries, and chain migration, the US no longer needed to provide noncitizens with a strong inducement package and began shifting towards restrictions both at the territorial border and within.

The fundamental shift away from immigration inducement for naturalization policies occurred in 1906. Prior to 1906, states controlled the naturalization process, which allowed for inconsistent and fraudulent naturalization procedures allowing political machines to gain tremendous power throughout cities (Bloemraad 2006; Gavit 1922). However, the Naturalization Act of 1906 codified the requirements of naturalization and established the Bureau of Immigration and Naturalization to administer the new law uniformly. Officials created a standard application form and scrutinized documents attesting to immigrants' length of residence. The law also added the need to demonstrate a command of English by answering basic civics questions and imposed a fee to pay for administrative costs. The standardization and new requirements forced some immigrants to delay naturalization (Schneider 2001; Bloemraad 2006).

The naturalization procedure during this time consisted of a two-step procedure. First, noncitizens wanting to naturalize had to declare their intention. Declaring intent to naturalize involved a $1 fee (roughly $25 today) and at least two years residence in the US. Court clerks would review the applicant to ensure they would likely qualify for full citizenship (Motomura 2006). Second, after at least five years of residence in the US and 2 years after declaring intent, intending citizens could petition for naturalization. This step involved a $4 fee (roughly $100 today), proof that they can speak English, have two character witness statements by citizens, and taking an oath of allegiance. Individuals who petitioned for citizenship were rarely denied (Biavaschi et al. 2013). Similarly, most intending citizens would obtain full citizenship within two to seven years (Motomura 2006). As the naturalization procedure became more difficult, however, states, cities, and private practices began amplifying differences between noncitizens and citizens creating unequal life chances between groups.

States and cities during this era enacted several employment restriction laws that barred noncitizens from certain occupations and public works projects. As societal resentments toward alien workers deepened throughout the country, many citizens sought to block all alien labor from occupations and projects believed to belong to American citizens (Schneider 2001). Thus, every state had at least one occupation restriction for noncitizens (Konvitz 1946) and the number of restrictions were positively correlated with the number of aliens in a given area (Fields 1933). Restricted occupations, however, were largely skewed towards white collar occupations such as lawyers and accountants that would have had little impact on poor, recently arrived immigrants. However, over time, these laws would have a larger impact as immigrants sought to improve their occupational standing.

More important than occupation restriction laws, however, were public works restrictions since these would comprise a larger number of potential jobs for immigrants. In most states in the US, noncitizens were ineligible to work on projects that were financed by government money. These laws were often challenged in the courts under the Fourteenth Amendment's equal protection clause, however, most were deemed constitutional where it was argued that the presence of unemployed American citizens was enough to justify exclusion of aliens (Fields 1933). For instance, only citizens were allowed to build New York's subway system with court decisions ruling that "[publically funded jobs] do not belong to aliens" (People v. Crane 1915). Cities and states tied publically financed works to citizenship status during this era, which barred noncitizens from employment in these large public works projects. These laws would have a larger impact as America's infrastructure was expanded in this era. Noncitizens would then need to find employment in the private-sector where economic attainment was also often blocked.

Discrimination by private-sector employers generated differences between citizens and noncitizens. Citizens and noncitizens were sorted into different kinds of jobs through hiring, promotion, and termination that led to better life chances for citizens. Throughout this era, discrimination was embedded in societal and labor market institutions. Employers often implemented "all American" or "Americans First" campaigns where higher paying, higher status occupations were reserved for the native-born and naturalized citizens (Fields 1933; Schneider 2001).[24] Industrialists offered, and at times required, their immigrant workers to attend courses in English and citizenship (Barrett 1992). For instance, Detroit's industry leaders developed an "Americans First" campaign that encouraged immigrants to learn English and about American system of values (Loizoides 2007). In the case of Ford Motor Company, the largest employer in Detroit at the time, noncitizens were required to enroll in education programs designed to Americanize them. Further, it developed a sociology department designed to ensure that southern and eastern European immigrants shared the same values as natives before they would qualify for the Five Dollar Day Plan. These types of policies led to high rates of naturalization among Ford's workforce (Loizoides 2007). Although Ford was at the extreme end, industrialists across the country engaged in these practices of discriminating against noncitizens.

As a result of "all American" policies, noncitizens often held temporary and unskilled positions in firms – especially in manufacturing, warehousing, and other blue collar sectors (Gerstle and Mollenkopf 2001). Noncitizens were often the first in the queue to be laid off during slack periods and would often not be rehired by their employers once production increased resulting in high rates of unemployment (Fields 1933; Gavit 1922). Moreover, US

[24] These sentiments were particularly strong during WWI where aliens who claimed exemption from war were thought to be unfit for American employment. Similarly, the red scare provoked worries that immigrants would become sympathetic to Bolshevism and ruin American industry (Schneider 2001).

citizenship allowed immigrants to start in higher occupational positions and experience greater upward occupational mobility than noncitizens within some internal labor markets (Catron 2016). Thus, the link between employment and citizenship status was important for immigrant workers where citizens often had an advantage in obtaining better positions. Macro-level political processes thus made citizenship a requirement for improved life chances and opportunity structures for the first generation that may have transferred to their children.

The Citizenship Advantage and Intergenerational Attainment

While there were many economic benefits to citizenship acquisition among the first generation, this paper also seeks to understand citizenship's effect on second generation attainment. Citizenship acquisition allowed access to occupations and promotion lines that were otherwise unavailable. Because parent's social background has large effects on children's later outcomes, the positive effects of citizenship acquisition likely had lasting effects across generations. That is, parents obtaining citizenship sparks a path dependent process wherein children benefit from the wealth and capital associated with this status. Children of citizens then perform better in the labor market when they are adults than children whose parents do not have this status. By becoming citizens, the tangible and intangible resources associated with citizenship status benefit their children.

To date, research views citizenship acquisition as a binary outcome where the important measure is whether or not individuals are naturalized citizens (Bloemraad 2006; Fox and Bloemraad 2015; Shertzer 2014). This is largely because this research is not concerned with the consequences of citizenship attainment, but rather the causes of it by asking "who naturalizes and why" (see, e.g. Bloemraad 2006; Shertzer 2014; Ngai 2001; Fox and Bloemraad 2015 for

examples on early 20th century immigrants). However, one implication of this research for understanding intergenerational mobility is that citizenship matters insofar as it signals parent's membership that in turn affects the second generation's outcomes. That is, parent's membership confers formal rights and privileges such as access to certain jobs as well as informal components like a sense of belonging to community. The formal and informal aspects of citizenship allow parents to invest in their host-land human and social capital at greater levels and gives access to promotion lines within firms that allows for greater economic mobility. Children, who are already being socialized in the host society, benefit from their parent's capital due to increased wealth and they become more likely to be exposed to native-born customs and values thereby increasing chances of upward mobility. Thus, parent's citizenship status will affect children's later outcomes simply by virtue of parents being in one category or the other, net of other factors.

To make this reasoning more concrete, Figure 4.1 presents a diagram to describe the relationship between parental citizenship and intergenerational mobility. In agreement with the current literature, parental characteristics and community level characteristics are thought to influence both parental citizenship status and child's social destination. The individual level characteristics include English ability, literacy, occupation, years spent in the US, etc. These variables exert their influence in determining citizenship status as well as hold a direct influence on their children's social destination through increased education, wealth, ambition, and the like. Community characteristics also have an important impact on citizenship acquisition such as local political activity, the presence or absence of various economic opportunities, and the strength and structure of ethnic communities (Bloemraad 2002). These contextual variables also exert direct influence on second generation outcomes as has been shown throughout the assimilation

literature. However, there is likely a direct influence of parental citizenship attainment on child's later success. The mechanism by which citizenship leads to different outcomes is through the increased tangible (i.e. access to better occupations and associated wealth as mentioned above) and intangible resources (i.e. belonging to the community) for the first generation that is then transferred to the second generation. Because of this direct link, we expect children of citizens and noncitizens to have different outcomes later in life.

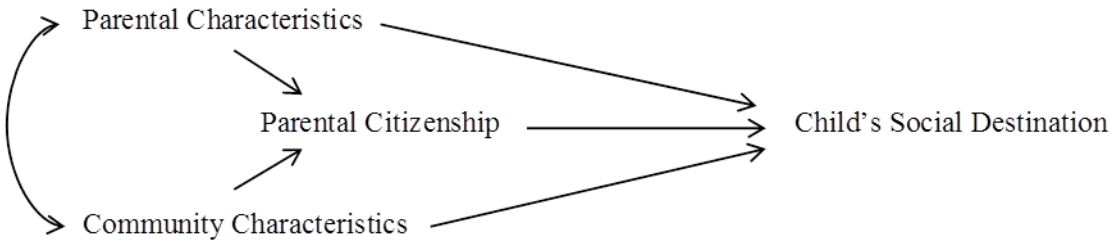

Figure 4.1: A model relating parental citizenship to second generation social destination

The effects of citizenship, however, may also depend on the timing in which parents obtain citizenship. That is, parental citizenship attainment may operate as an exposure variable where each additional year that a parent has citizenship (that may begin to accumulate before birth) has significant increases on children's later outcomes, net of parent's years spent in the US. The effects of citizenship over time will compound leading to unequal life chances depending on how long a parent has been a citizen. Because increased resources enhance parents' ability to provide more attractive home environments in material and nonmaterial ways, parents who naturalize when children are young may benefit more than parents who naturalize when children are older. Increased income and wealth associated with citizenship improves the family economy. During this era, children of low-income families were often required to drop out of school early and contribute to the family's finances (Bodner 1985). Thus, having a parent

who naturalizes may matter more when children are between the ages of 0 and 5 (early childhood) or 6 to 12 (early school years) but not for teenagers who are about to enter the labor force. Children who grow up with more family income may remain in school longer thus having better labor market outcomes when they are adults. Therefore, the timing of family resources may lead to different outcomes depending on the age of the child and the time of naturalization where children with more years of parental citizenship perform better than children with fewer years.

While the relationship between parental citizenship status and intergenerational mobility is relatively straightforward, citizenship attainment by parents is governed by issues of selection that in turn affect children's later outcomes. As noted above, the historical record suggests a correlation between citizenship status and occupational outcomes. Naturalization allowed entry into otherwise restricted jobs, and this was especially true for white-collar and public sector employment. Although laws and employer policies that favored citizens over noncitizens were not strictly enforced in all cases, citizens likely had an advantage when obtaining more preferred occupations. While this would suggest that citizenship status produces an economic advantage, the better occupational outcomes of citizens may reflect their commitment to remain in the US or unmeasured productivity where immigrants who happen to naturalize would do better in the labor market even if they were not naturalized. As noted in Bratsberg et al. (2002), naturalized immigrants often invest in human capital favored in the labor market because they expect to remain in the US. Those who naturalize will find employment in better occupations as a result of their human capital even if naturalization has no effect on occupational achievement. Similarly, immigrants who naturalize may have different productivity than those who do not naturalize given their demonstrated English ability, good moral character, and other standards that the US

uses to select its membership (Bratsberg et al. 2002). Because policy dictates the criteria by which citizenship can be obtained, those who anticipate rejection may not apply.

Data and Methods

First Generation Outcomes

The analyses begin by first understanding whether there was a citizenship advantage of the first generation. To address concerns about selectivity, I compare citizens and noncitizens to those who have declared intent. As mentioned, immigrants during this period were required to declare their intention (first papers) two years before they were allowed to naturalize. This declaration served as an administrative function that allowed early review of eligibility by a court clerk (Motomura 2006). Intending citizens are a useful comparison group because they likely hold characteristics and preferences similar to citizens given their interest in citizenship and ability to pay administrative fees, but they do not enjoy the benefits of full citizenship. Because most families who declared intent obtained citizenship (Motomura 2006), and few who petitioned for citizenship were denied their second papers (Biavaschi et al. 2013), this in-between group makes intending citizens more similar to citizens than to noncitizens allowing us to understand the effect of naturalized status on employment outcomes. That is, the difference between intending citizens and noncitizens will tell us about selection of who wants to be a citizen and the difference between intending citizens and citizens will tell us about the value of citizenship.

To test these differences, I use the restricted complete-count 1920 decennial census. Data are limited to men who were born in Europe and who have lived in the US for more than five years. The residency restriction is because immigrants who lived in the US for fewer than five

years were not at risk of naturalization due to US policy. Data are also restricted to individuals between the ages of 20 and 65. Immigrants who live in the South are also omitted because over 95 percent of European immigrants settled in the North, Midwest, and West. Inclusion of those living in the South in the below analyses, however, does not substantively change any results.

Using the cross-sectional data, I regress occupation income score on a set of control variables including the immigrant's citizenship status. The occupation income score (OCCSCORE) is calculated by IPUMS and reflects the median income of each occupation observed in the 1950 census in hundreds of dollars. The score is calculated by taking the median total income for each occupation published in a 1956 special report by the Census Bureau on occupational characteristics from a 3.33 percent sample of the population of both men and women. Occupations in the 1920 cross-section are assigned the corresponding 1950 value as a way to economically scale occupations on a continuous measure. The OCCSCORE is not a direct measure of income, but rather a measure of occupational attainment and is used in most research that analyzes economic outcomes of immigrants during this era (e.g., Abramitzky et al. 2014; Goldstein and Stecklov 2016; Biavaschi et al. 2013). Although the scale of occupations may have changed between 1920 and 1950 given the amount of time elapsed, income and other measures used to scale occupations are not available from representative samples prior to 1940. This is true for any other measure of occupational standing variables available in US censuses (e.g., SEI).

The 1920 census asked all individuals born in another country their naturalization status including whether they had declared intent. The control variables also come from the 1920 census and are relatively straight forward: age and age squared, whether the immigrant is married, and years spent in the US and its square. I also include dummies for the immigrant's

literacy coded as 1 if the immigrant can read and write in any language and 0 otherwise. Similarly, I control for whether the immigrant can speak English. Both literacy and English ability are rough proxies for other important variables like educational attainment that deeply influence what jobs individuals take. However, these measures are self-reported and enumerators were not required to determine the level of competency. Unfortunately, educational attainment is unavailable in all censuses prior to 1940 making the literacy and English variables the best, though imperfect, predictors for the analyses. All analyses also control for whether the individual lived in an urban area defined as whether the county lived in had more than 50,000 people and a state fixed effect. Because of these two variables, I am implicitly comparing immigrants who settled in the same places.

Because citizenship may matter more for some groups than others, I begin by regressing occupational score by citizenship status and control variables by different ethnicities separately. Ethnicity is defined in these analyses by birthplace and mother tongue since sociologically distinctive groups arrived from common national origins (i.e. Slavs and Jews). How each group is coded is presented in Appendix A and follows a similar definition of European groups as Pagnini and Morgan (1990). I estimate the following model for each ethnic group separately:

$$OCCSCORE_i = \alpha + \beta NONCIT_i + \beta CIT_i + \gamma X_i + e$$

where $OCCSCORE_i$ is the occupational income of person i; X_i is a vector of control variables noted above; $\beta NONCIT_i$ is a dummy variable (1,0) if the individual is a noncitizen and βCIT_i is a dummy variable (1,0) if the individual is a citizen. The reference category for $\beta NONCIT_i$ and βCIT_i is the group of individuals who have declared intent to naturalize. If $\beta NONCIT_i$ is negative, I interpret this finding as the evidence for positive selection into citizenship. If βCIT_i is positive, I interpret this as the relative value of citizenship for each ethnic group.

In addition to testing whether there was a citizenship advantage, I also test whether these effects were immediate or grew over time. In 1920, enumerators were instructed to ask all foreign-born citizens what year they naturalized. Thus, we can understand whether the citizenship advantage is immediate or gradual, which may have implications for the second generation. However, this variable has yet to be coded in the complete-count census. I therefore use the representative one-percent 1920 census available from IPUMS to understand these effects. To supplement the above model, therefore, I disaggregate citizens by how long they have been naturalized into four categories: 0 to 5 years; 6 to 10 years; 11 to 15 years; and over 16 years. The purpose of the broader categories is because some immigrants may misremember what year they naturalized (i.e. an immigrant remembers naturalizing in 1900 when he actually naturalized in 1902). Descriptive statistics of the dependent and independent variables for the complete-count census are described in Appendix 4.B.

Second Generation Outcomes

The above analyses establish whether there was a citizenship advantage in the labor market for the first generation, but it remains unknown whether this advantage transferred to their children. To assess the effects of parental citizenship on second generation outcomes, I use a new panel dataset that follows individuals from their childhood household in 1920 to when they were participating in the labor force in 1940. I match individuals between US censuses by first and last name, age, and state of birth; details on the matching procedure are provided in Appendix 4.C. Because year naturalized is missing from the complete-count census, as mentioned above, I create two matched datasets. The first matches second generation children in the complete-count 1920 census to the complete-count 1940 census. The second matches the

one-percent 1920 census to the complete-count 1940 census for analyses analyzing timing of naturalization.

I restrict my attention to second generation male children who had European-born parents and were between the ages of 5 and 18. The purpose of not matching those who are younger than 5 years old is because mortality is unequally distributed in these younger ages and this may bias estimates through matching by introducing selectivity at some levels but not others. These matched individuals are also young in 1940 (between the ages of 20 and 24) when the outcomes analyzed in this paper, years of education and labor market outcomes, are still in process. All matched children were born in the US.

The sample is restricted to those who are living with at least one parent in 1920. Keeping those who are living with at least one parent is because parent's citizenship status must be inferred from relationship variables in the household. Not living with a parent reflects class (see Bodner 1985) and this may have implications to the extent that citizenship reflects social class.[25] However, because we cannot infer citizenship status of children without parents, nor any other family variables, these children are omitted from the analyses. Thus, the second generation is defined as a child living with a foreign-born father. In single-mother households, however, a child is defined as second generation if his mother was born outside the US. The focus on children's father is because household citizenship status during this era was dependent on men. Before 1922, when the Cable Act was signed into law, women took their husband's citizenship

[25] Children who do not live with their parent, but were successfully matched in the dataset, have on average fewer years of education in 1940 than children of noncitizens, intending citizens, and citizens. The age distribution of those who did not live with at least one parent is skewed such that most were in their teens and 42 percent were between the ages of 16 and 18. Of the matched second generation children who were not living with their parents, fifteen percent had fathers born in Ireland, fourteen percent in Italy, and eighteen percent in Germany. The rest had parents born throughout the rest of Europe.

status even if they were born in the US. During this era, there were no mixed status families as there are today since parent's citizenship status was the same.

Table 1 presents the match rates along various dimensions in the panel dataset. My matching procedure generates a final sample size of 830,024 second generation children where I successfully match 34 percent of children forward from 1920 to 1940. This match rate is slightly higher than the standard for historical matched samples (e.g. Abramitzky et al. 2012).[26] More details on matching are found in Appendix 4.C.

Table 4.1: Sample Sizes and Match Rates by Selected Variables for full-count to full-count match

	Second Generation		
	1920 Number in Universe	Number Matched	Match Rate
Total	2,382,511	830,024	0.34
Age in 1920			
5-10	1,184,009	395,291	0.33
11-15	806,655	285,548	0.35
16-18	391,847	149,185	0.38
Parental Citizenship			
Noncitizen	518,542	143,263	0.28
First Papers	412,676	133,957	0.32
Citizen	1,451,293	552,804	0.38

Note: The data universe is comprised of all European second generation male children 5-18 who are living with at least one parent in the 1920 census.

While sons with uncommon names are more likely to match between census years, the matched sample is reasonably representative of the population. Sons in the matched sample in Table C1 in Appendix 4.C show that they are close to a representative sample in 1940 on educational attainment and income. Second generation children in the matched sample had an average of .11 more years of education and earned 323 1940 dollars more than those in the representative sample. However, the match rates in Table 4.1 suggest that the probability of being linked is likely correlated with parental citizenship status: 28 percent of children of

[26] Factors that contribute to higher match rates in the 1940 Census include better transcription, a more literate population who are better able to report their name and age more accurately over time, and improvements in life expectancy. Younger samples also tend to match better since there are lower mortality rates than in adult samples.

noncitizens matched while 38 percent of children of citizens matched. In part, the lower match rate of noncitizens reflects return migration where parents took their children back to Europe. This article, therefore, is about the second generation who stayed in the US. As a sensitivity check, I ran each analysis below for the pooled samples by reweighting the panel sample to reflect the actual distribution of father's country of origin in the 1940 population. Results change at the third decimal place, but do not substantively change any conclusions.

To analyze the intergenerational citizenship advantage, I focus on two outcome variables for second generation children separately. First, I focus on the number of years of education because it often explains labor market outcomes and is an important factor for immigrant incorporation (Bean et al. 2011). Second, I focus on income, measured as the respondent's pre-tax wage and salary income received in the previous year as an employee.

The control variables used to predict the second generation's social destination include a number of individual and family characteristics that are straightforward: child's age and age-squared, parent's age and age-squared, parent's years in the US and years in the US-squared, urban status, and state fixed effects. I also control for parent's English ability and literacy as rough proxies for parental education level as mentioned above. Since children come from different family structures that may influence their later attainment, I also include a dummy category for whether the child lived in a single father household and a dummy for whether the child lived with both parents compared to a reference category of living in a single mother household. Almost all of the parents in the both parents category report being married to each other. I do not control for parental occupation in these analyses because it is impossible to know

occupations prior to citizenship attainment.[27] All control variables are measured in the 1920 census. Descriptive statistics of the control variables are presented in Appendix 4.B.

Similar to the first generation analyses, child's outcomes are riddled with selection where parent's political status may correlate with other variables that will allow children to do better in life whether or not his parents have naturalized. Above, this was corrected for by comparing citizens with intending citizens since both categories were likely similar with the exception of political status. Thus, the gap between these two groups provided the citizenship advantage in occupational outcomes for the first generation. However, the difference between children of citizens and children of intending citizens may not represent the intergenerational citizenship advantage. This is because there is no guarantee that children of those who declared intent had no parent citizenship years in their life course. Analogous to an event history setup, parental political status is right censored in 1920 (i.e. we do not know about political status after this year). Since many intending citizens naturalized, children may have grown up with a citizen parent, which is unknown in the analyses. For instance, if an intending citizen had a five year old child in 1920 and then naturalized after their citizenship status was recorded in the census, the child grew up with a citizen parent and thus would have benefited from the citizenship advantage.[28] Because of the likelihood of children of intending citizens growing up as children of citizens, I change the reference category to children of noncitizens. This comparison gives the total effect of the intergenerational citizenship advantage.

To analyze children's social destinations, therefore, I fit the following model:

[27] Inclusion of parents' occupation in the models does not substantively change any results.

[28] In a separate matched sample of foreign-born men over the age of 25 using the same methods described in this paper, I find that nearly 80 percent of intending citizens in the 1920 census have become naturalized by 1940. This sample is not representative of parents in the children's sample, but it suggests that most followed through to citizenship.

$$Y_i = \alpha + \beta INTENT_i + \beta CIT_i + \gamma X_i + e$$

where Y_i represents the outcome variable (either years of education or the natural log of income) for individual i, X_i is a vector of control variables noted above; $\beta INTENT_i$ is a dummy variable (1,0) if the child's parent has declared intent in 1920 and βCIT_i is a dummy variable (1,0) if the child's parent is a citizen in 1920 compared to a reference category of if the child's parent is a noncitizen. As with the first generation analyses, I estimate the above model separately for each ethnic group defined in Appendix 4.A and a pooled sample of all ethnicities.

In addition to understanding the intergenerational citizenship advantage, I also test the timing of citizenship acquisition based on when the parent naturalized and when the child was born using the matched one-percent 1920 to complete-count 1940 census. To do this, I limit the matched sample to children of citizens and generate three dummy categories: parent naturalized when the child was 0 to 5; parent naturalized when the child was 6 to 12; parent naturalized when the child was a teenager; compared to a reference category of parent naturalized before the child was born. Controlling for the above variables, these analyses will point to whether growing up with a citizen parent matters compared to having a parent naturalize late.

Results

First Generation Outcomes

My analyses begin by providing estimates of the relative citizenship advantage for the first generation by ethnicity. Each analysis is restricted by ethnic group. Thus, the British noncitizen coefficient in Figure 4.2 reports the difference in occupation-based income between noncitizens and those who declared intent among individuals who were born in Britain. The pooled sample in the last row includes all immigrants from Europe, controlling for ethnicity. As

mentioned, I interpret a negative coefficient of noncitizens as evidence for positive selection into citizenship and a positive coefficient of citizenship as evidence for the citizenship advantage. The results are presented in 2010 dollars for ease of interpretation.

Figure 4.2 reports that in all cases, noncitizens had a lower occupation-based income compared to intending citizen counterparts, all else equal. This suggests positive selection into citizenship for all groups. However, not all groups show behaviors equally. British, Italians and Eastern Jews betray the lowest, albeit statistically significant, gap between noncitizens and intending citizens. Noncitizen Italians had $798 lower occupation-based income than Italian intending citizens. Similarly, noncitizen Eastern Jews had $982 lower occupation-based income ceteris paribus intending citizens. Irish and Russians report the largest gap between noncitizens and intending citizens: Irish noncitizens had roughly $1,264 occupation-based income lower than Irish intending citizens and Russian noncitizens had $1,594 lower occupation-based income. Thus, part of the citizenship advantage is due to selection where immigrants who happen to naturalize also likely perform better in the labor market even if they do not naturalize.

While there was positive selection into citizenship, there is also evidence for a citizenship advantage in occupational income. All groups show a positive and significant coefficient comparing citizens with those who declared intent. At the low end, Italian citizens had an occupation-based income of $597 more than Italian intending citizens. This may reflect Italian concentration in sectors like construction that were often less affected by the policies mentioned above. Similarly, the Italian enclave may have fostered better mobility for noncitizens leading to smaller differences between different political statuses. That is, the occupational niching and ethnic enclave among Italians may have protected noncitizens from discriminatory practices and

aided in upward occupational mobility without the need to obtain citizenship. Future research should analyze the role of the composition of the local population and citizenship.

Other groups that often concentrated in sectors that were more susceptible to the above policies and likely experienced greater discrimination in the workforce, such as Slavs, held a high citizenship advantage. For instance, non-Jewish Russian citizens had an occupation-based income of $1,885 more than Russian intending citizens. This effect likely reflects signaling where groups that were heavily discriminated against due to their perceived unassimilability are able to show that they are becoming similar to their American countrymen. Given the societal reception of these groups and their industrial concentration, the value of citizenship was greater for these Eastern Europeans. Public and private employers would reward citizenship for members of these groups due to the social forces mentioned above and this is reflected in the Eastern European citizenship advantage among Jews and Russians in Figure 4.2. By contrast, groups that may have been treated as members without the need for formal citizenship, such as the British, do not report a high citizenship advantage. British immigrants likely did not need to prove their membership to employers and thus experienced better occupations without formal citizenship.

Other groups, such as the Irish, also report a large citizenship advantage. Here, we may be seeing the economic impact of political mobilization. The importance of government as an important historical lever of upward attainment for Irish immigrants during this time was famous: government was a chief locus of employment for Irish immigrants, who, along with their descendants, carved up its functions into a series of ethnic strongholds; it steered contracts, and through contracts jobs, to its ethnic political backers; and it provided services for those ethnics whom it could not furnish with jobs. Irish immigrants who became citizens likely

benefited disproportionately from this process since they could vote and hold public jobs. Although it is impossible to know the specific reasons individuals in the census became citizens, future research should understand the role of different avenues into citizenship that would lead to different outcomes. Nevertheless, the gap between citizens and those who have declared intent suggests that there was a citizenship premium over and above the positive selection into this variable mentioned above. The pooled sample suggests that the citizenship advantage was roughly $1,160 during this period.

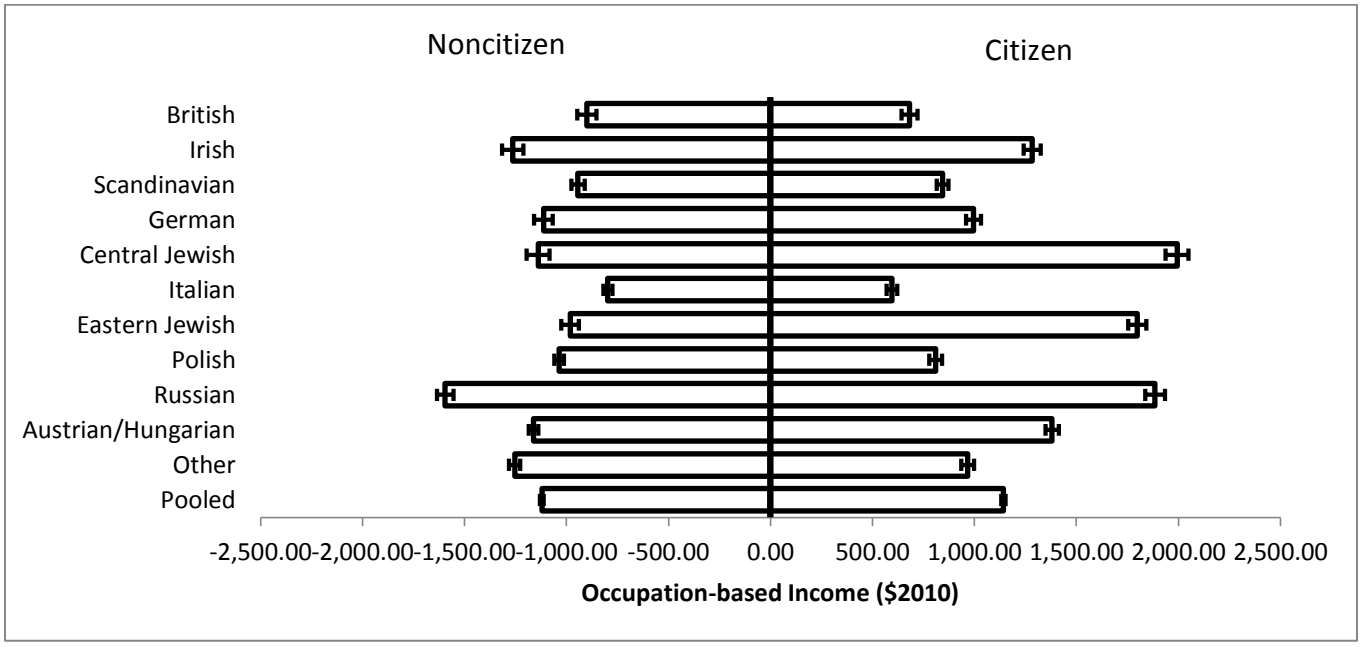

Figure 4.2: Ordinary least squares estimates predicting occupation-based income (in $2010) of men ages 20 to 65 by ethnicity

Note: Regressions are run separately for each ethnic group. The reference category for the citizenship variables is those who declared intent to naturalize. Control variables used in each regression are age and age-squared, English ability, literacy, years in the US and years in the US squared, urban status, and state. Whether the immigrant speaks English is omitted from the British and Irish samples as very few report speaking another language (the other language spoken by these immigrants was Celtic). Inclusion of English ability does not substantively change any results. In the pooled sample, I also control for ethnicity. Results from the omitted variables are available upon request. The number of observations in each analysis are: 364,435 British, 310,046 Irish, 510,697 Scandinavian, 491,383 German, 192,020 Central Jewish, 692,270 Italian, 316,399 Eastern Jewish, 361,394 Polish, 277,374 Russian, 411,282 Austrian/Hungarian, 582,919 Other, and 4,510,470 Pooled.

Although the analyses in Figure 4.2 control for years in the US, however, intending citizens who have been in the US for many years may be fundamentally different than those who declared intent earlier. Intending citizens who declared late may have had financial considerations, problems learning English, or any other feature that may have limited their ability to obtain this status. This may positively bias the citizenship advantage by comparing citizens to immigrants who intended late. Figure 4.3 reports the average occupation-based income of the three political categories by years in the US. The years in the US past 40 are not reported since few intending citizens and noncitizens had been in the US for this long. As shown, intending citizens remain a steady middle group as the number of years in the US increases. However, there is a growing gap between intending citizens and citizens the longer immigrants have remained in the US. In part, this reflects the differences in individuals who intend late and in part the advantages citizenship accrues over time as discussed below. As a sensitivity test, I also ran each regression for only those who have been in the US for fewer than 20 years and again for fewer than 10 years. Results of the pooled sample report that the citizenship advantage is lower (approximately $950 occupation-based income) than in Figure 4.2 when limiting the sample to those who have been in the US for 5 to 20 years, and roughly $161 when limiting the sample to those who have been in the US for 5 to 10 years.

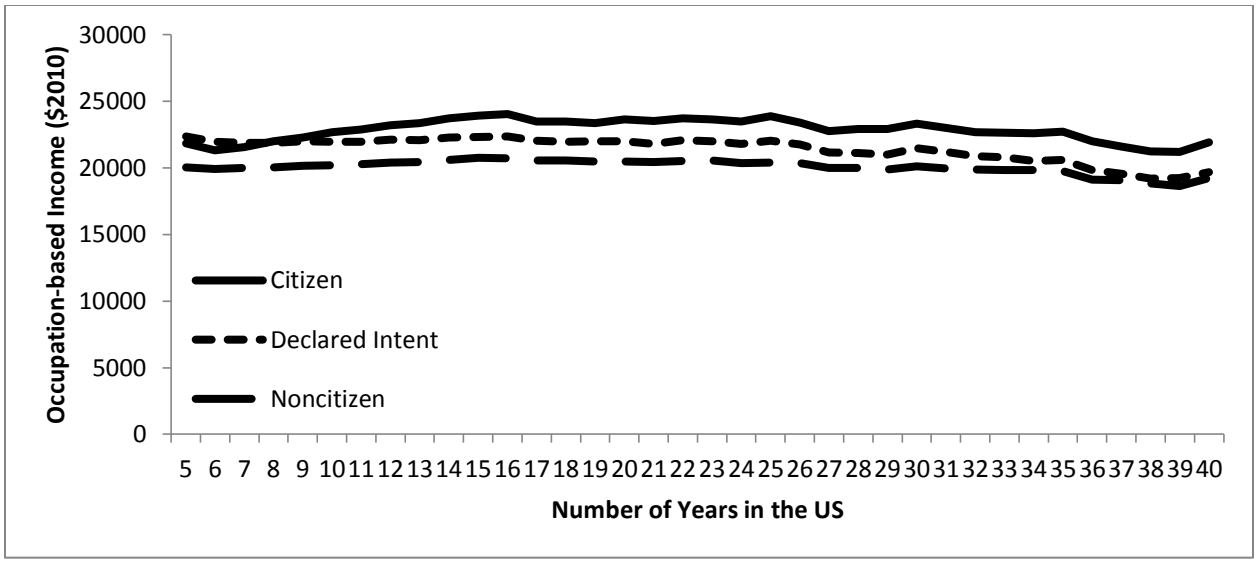

Figure 4.3: Average occupation-based income by number of years in the US
Note: Descriptive statistics include all ethnicities. Similar trajectories occur by groups.

The citizenship advantage may not have been instantaneous, however, but rather gradual. The 1920 census is unique in that it is the only census during this period to ask citizens when they naturalized. I therefore supplement the above analyses by analyzing the citizenship advantage based on the number of years since naturalization. This analysis reports the immediate and near immediate effects of citizenship as well as whether the citizenship advantage increases the longer an individual has been naturalized. The results report each ethnicity separately and for a pooled sample. As with the above analysis, the four citizenship categories are compared to an intending citizen reference.

As shown in Table 4.2, there is no statistically substantive effect of citizenship for those who have recently naturalized (0-5 years) vis-à-vis intending citizens in all ethnic samples with the exception of the Polish. By contrast, in all samples, immigrants who have been naturalized for more than sixteen years report large economic advantages compared to their intending citizen counterparts: British immigrants had an occupational income score of just over $1,000 while

Austrian/Hungarian immigrants had an occupational income score of over $3200. In some cases, the earnings advantage for citizens falls for those who naturalized between 11 and 15 years prior to 1920. This likely reflects the impact of 1906 legislation that made it harder for immigrants to obtain citizenship (Bloemraad 2006). Nevertheless, the growing earnings advantage suggests that citizenship allowed for access to promotion lines that moved them into higher occupational positions over time. When understanding the consequences of citizenship, therefore, it is important to understand the accrual of the citizenship advantage and not only whether an immigrant is a citizen. Because of this, the timing between when immigrants naturalize and when their children are born may have important consequences on second generation outcomes.

Table 4.2: Ordinary least squares estimates predicting occupational income score ($2010) of men ages 25-64

	Number of years immigrant has been naturalized				
	Noncitizen	0-5	6-10	11-15	16+
Pooled sample	-1517.55***	512.28***	1427.05***	1506.92***	1954.81***
	(103.67)	(139.07)	(16.34)	(202.55)	(158.87)
British	-1636.25***	561.33	1086.09+	-38.08	1058.92*
	(464.25)	(431.12)	(563.34)	(641.08)	(533.35)
Irish	-1845.62**	775.23	1320.54+	2030.76**	1625.54**
	(566.53)	(544.31)	(676.83)	(680.26)	(576.16)
Scandinavian	-1502.00***	497.74	625.83	1139.64*	2085.89***
	(383.34)	(444.22)	(450.08)	(500.08)	(433.45)
German	-1603.19**	232.38	931.08+	1506.53*	1112.81**
	(484.85)	(583.57)	(549.14)	(595.08)	(424.49)
Central Jewish	-2451.19*	1027.33	1832.49	315	4814.72*
	(1068.95)	(1451.64)	(1226.73)	(1637.84)	(2275.35)
Italian	-1011.49***	127.46	1857.99***	700.12	2011.62***
	(240.97)	(325.87)	(455.18)	(593.65)	(517.67)
Eastern Jewish	-1323.98**	754.64	2025.55**	2467.57**	3098.28***
	(420.45)	(531.06)	(614.28)	(887.02)	(839.99)
Polish	-1368.17***	914.42*	1345.60*	1464.72+	2516.11***
	(233.51)	(385.85)	(608.26)	(763.05)	(571.81)
Russian	-1750.79***	717.97	2392.14**	2126.67**	2937.84***
	(404.45)	(582.58)	(723.93)	(925.27)	(841.75)
Austrian/Hungarian	-1560.23***	586.99	1899.59**	2819.55***	3200.47***
	(302.47)	(482.50)	(586.95)	(703.32)	(670.79)
Other	-1544.66***	683.13*	1053.31*	2157.92***	1813.99***
	(233.15)	(342.19)	(412.12)	(513.81)	(395.90)

+.05<p<.1, *p<.05, **p<.01, ***p<.001 (two-tailed)

Note: The number of observations in this analysis is 49,807. The reference category for citizenship is intending citizens and the analysis controls for the same controls as in Table 4.

Second Generation Outcomes

As shown, naturalized immigrants enjoyed better occupational outcomes than their noncitizen counterparts. The following analyses seek to understand whether this advantage transferred to their children once they enter the labor market. I begin by first reporting the differences between children of citizens and intending citizens versus children of noncitizens for a pooled sample. These analyses allow us to understand how children fared in the labor market compared to one another based on parental political status as well as other factors that influence intergenerational mobility. Model 1 of Table 4.3 reports that children of citizens had over eight months more education compared to their noncitizen counterparts without any other control variables. By contrast, children of intending citizens had over three months more education compared to the same reference group. These initial results suggest that second generation outcomes were linked to parents' political status. However, the gap between second generation groups slightly shrinks as relevant control variables are added. Children of citizens have over seven months more education than their noncitizen counterparts while children of intending citizens have over a month. These results point to an intergenerational citizenship advantage where children with citizen parents remained in school longer than their noncitizen counterparts.

While the first two models of Table 4.3 test differences in educational attainment, models 3 through 5 test differences in labor market outcomes. Model 3 reports that children of citizens have 12 percent higher income in 1940 dollars than children of noncitizens without controlling for any other variables. The intergenerational citizenship advantage continues where children of citizens hold over six percent higher earnings once more control variables are added including parent's literacy and parent's English ability. These income differences are important to note because the 1940s, when income is measured, was a period of great wage compression (Goldin and Margo 1992). Indeed, the compressed wage structure has been cited as one component that

produced assimilation among the second generation and the native-born during this era (Alba and Nee 2001). Thus, any statistical differences in income between groups are important since they represent unequal outcomes based on different political statuses.

Model 5 in Table 4.3, however, reports that the citizenship advantage has little substantive effect on income once educational attainment is added to the analyses. This suggests that the intergenerational citizenship advantage does not operate over and above its influence on educational attainment. However, the return to one year of education on income for the second generation during this time is over seven percent. As shown in model 2, having a citizen parent raises children's educational attainment by about seven months. Thus, through its impact on educational attainment, the citizenship advantage raises individual income by a little over four percent. The additional income received by the second generation each year through its influence from educational attainment will have a cumulative effect allowing for greater wealth attainment over time. Thus, the intergenerational citizenship advantage has an important influence through educational attainment that then has an important influence on children's later labor market experiences.

Table 4.3: Ordinary least squares estimates predicting second generation outcomes.

	Years of Education		Income		
	Model 1	Model 2	Model 3	Model 4	Model 5
Declared Intent	.327***	.152***	.036***	.027***	.016***
	(.011)	(.011)	(.003)	(.003)	(.003)
Citizen	.681***	.608***	.119***	.066***	.021***
	(.009)	(.009)	(.003)	(.003)	(.003)
Child's Characteristics					
Highest Grade Attained					.077***
					(.000)
Age		-.025***		.095***	.097***
		(.005)		(.002)	(.002)
Age-squared		-.003***		-.003***	-.002***
		(.000)		(.000)	(.000)
Family Characteristics					
Single father household		-.036		-.033***	-.030***
		(.023)		(.007)	(.007)
Both parents		.225***		-.002	-.017***
		(.015)		(.004)	(.005)
Parent's characteristics					
Age		-.011		-.002***	-.001***
		(.001)***		(.000)	(.000)
Age-squared		.000***		.000***	.000***
		(.000)		(.000)	(.000)
Literacy		.437***		.049***	.018***
		(.012)		(.004)	(.003)
English Ability		.258***		.034***	.019***
		(.014)		(.004)	(.004)
Years in the US		-.001		-.002***	-.002***
		(.001)		(.000)	(.000)
Years in the US squared		.000***		.000**	.000
		(.000)		(.000)	(.000)
Parent's Ethnicity					
Irish		-.082***		-.032***	-.028***
		(.016)		(.004)	(.005)
Scandinavian		-.089***		-.021***	-.015***
		(.015)		(.005)	(.004)
German		-.616***		-.028***	.015**
		(.015)		(.004)	(.004)
Central Jewish		.509***		.039***	.008
		(.020)		(.006)	(.005)
Italian		-.965***		-.139***	-.063***
		(.015)		(.004)	(.004)
Eastern Jewish		1.211***		.096***	.014***
		(.018)		(.005)	(.005)
Polish		-1.328***		-.149***	-.047***
		(.017)		(.004)	(.005)
Russian		-.162***		-.041***	-.026***
		(.019)		(.006)	(.005)
Austrian/Hungarian		-.823***		-.084***	-.018***
		(.016)		(.005)	(.005)
Other		-.707***		-.066***	-.013**
		(.016)		(.004)	(.004)
Urban		.499***		.186***	.159***
		(.010)		(.003)	(.003)
State	No	Yes	No	Yes	Yes
Constant	9.529***	11.132***	6.845***	6.351***	5.500***
	(.008)	(.118)	(.002)	(.035)	(.034)
N	765,188	765,188	594,254	594,254	585,445
R-squared	.01	.10	.00	.08	.15

+.05<p<.1, *p<.05, **p<.01, ***p<.001 (two-tailed)

Figure 4.4 presents differences between children of citizens and noncitizens by ethnicity. For the remaining analyses, I focus on educational attainment given large effect citizenship exerts on this outcome. Each analysis in Figure 4.4 is run by restricting the sample to each ethnic subgroup. Thus, as in the first generation analyses, the British coefficients report the difference between children of citizens and noncitizens among those of British descent. Every analysis controls for the same variables as reported in model 2 of Table 4.3.

Figure 4.4 reports that the intergenerational citizenship advantage has different effects depending on child's ethnicity. Children with parents born in Western Europe report small differences between parental political statuses. These groups, however, also held the lowest citizenship advantage in the first generation analyses reported in Figure 4.2. While the first generation analyses in Figure 4.2 are not representative of the parental sample in Figure 4 since fertility rates differ across individuals and groups (Duncan 1966), the low impact of citizenship on later outcomes likely reflects Western Europeans being treated as members since they were often viewed as contributors to America's system of values and economy.[29] However, the eastern European and Jewish groups report strong intergenerational citizenship effects. Children of Russian immigrants enjoy over one year of education if their parent had naturalized compared to if their parent had not naturalized, all else equal. Similarly, children of Italians have over six months education than their noncitizen counterparts. These results suggest that citizenship was particularly important for eastern European and Jewish groups.

[29] For instance, some individuals have no children and they are thus not included in the model, while others have many children and have a higher chance of being included multiple times.

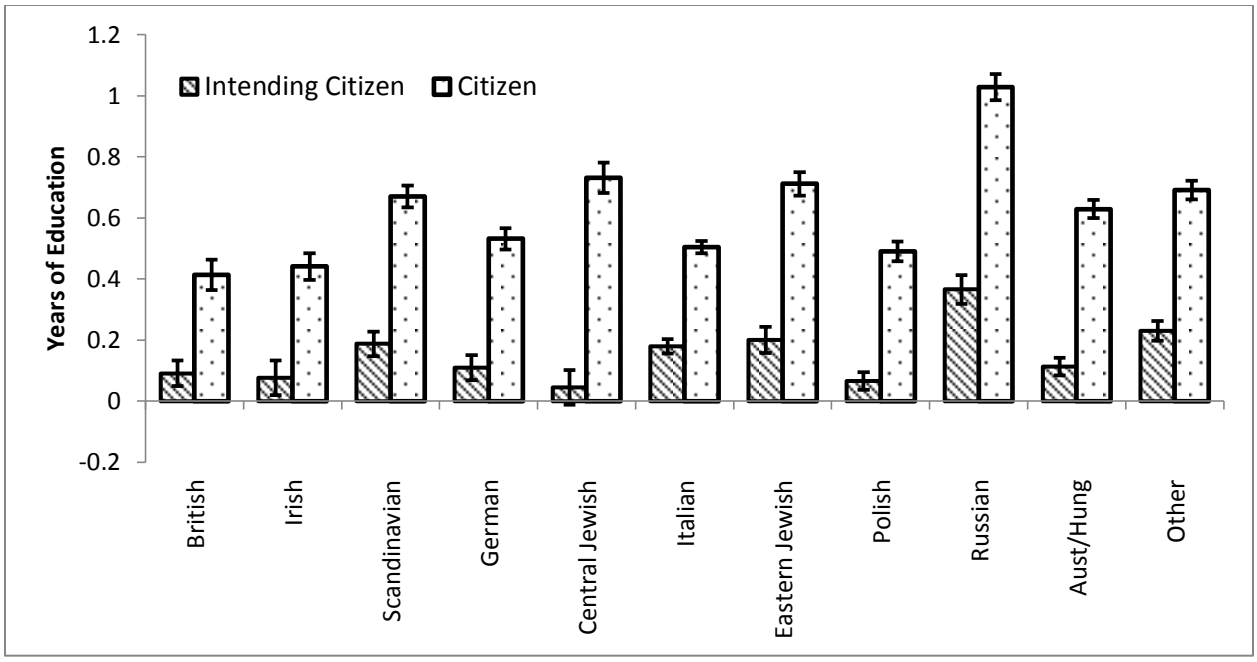

Figure 4.4: Ordinary least squares predicting highest grade attained by ethnicity
Note: The number of observations in each sample are: 61,838 British, 56,148 Irish, 99,940 Scandinavian, 113,194 German, 36,601 Central Jewish, 111,187 Italian, 50,982 Eastern Jewish, 55,394 Polish, 40,892 Russian, 63,189 Austrian/Hungarian, and 75,844 Other. Each analysis controls for the same control variables as Model 2 in Table 3 with the exception of parent's ethnicity since each sample is limited by this variable.

The final analyses seek to test whether the intergenerational citizenship advantage should be understood as a binary or continuous measure. As shown above, the citizenship advantage allowed for greater wage growth the longer an individual had been naturalized. This suggests that the citizenship advantage is not immediate, but rather gradual. The growth of the citizenship advantage likely strengthens the family economy, which then allows children to stay in school longer instead of entering the workforce early. Thus, the timing of parental citizenship based on when the child was born likely matters where we would expect children who grow up with a citizen parent to do better in educational attainment than a child with a parent who naturalized when he was older. The following analysis limits the pooled sample to children with a citizen parent in the matched 1 percent 1920 census to full-count 1940 census (as opposed to full-count

to full-count above). I separate children based on when their parent naturalized and predict years of education controlling for the variables mentioned above. I do not report the effects by ethnicity due to low cell counts in some categories.

As shown in Table 4.4, there is no statistically substantive difference between children with parents who naturalized before they were born and children with parents who naturalized when they were young. However, children with parents who naturalized as a teenage have over seven months less education compared to children who have parents who naturalized before they were born. This result suggests that early naturalization allowed for greater investments in children, which allowed them to remain in school longer. These investments may include early childhood health investments or early schooling investments that allowed children to obtain more schooling. Children of parents who naturalized when they were teenagers had fewer citizenship years and likely dropped out of school early to help support the family economy. Given the large effect of education on income for this group, however, those with fewer years of education performed worse in the labor market when they were adults. Nevertheless, this effect suggests that the consequences of citizenship are not only a binary measure, but also a continuous one.

Table 4.4: Timing of parental citizenship predicting educational attainment

	Model 1
Citizenship timing (before son born ref)	
Parent Naturalized When Child was 0-5	-.043
	(.098)
Parent Naturalized When Child was 6-12	.019
	(.132)
Parent Naturalized When Child was a Teenager (13-18)	-.605*
	(.303)
Observations	7,878

+.05<p<.1, *p<.05, **p<.01, ***p<.001 (two-tailed)
Note: models control for the same control variables as in Model 2 of Table 3.

Discussion/Conclusion

This article examined a question that has been ignored until now: did parental citizenship acquisition affect intergenerational attainment? Avoidance of this question reflects a perspectival blinder that citizenship acquisition had few if any subsequent effects outside of the right to vote. However, citizenship is an institution of exclusion, not just inclusion, giving unequal rights and entitlements to citizens and noncitizens. This gap widened in the first half of the twentieth century through state, local, and employer policies that produced different outcomes for both the first and second generation depending on political status. This article, therefore, is the first to uncover this relationship by being the first sociological research to track individuals across US censuses. While the dominant accounts of assimilation do not take into consideration the role of parental citizenship attainment during this era (Alba and Nee 2003; Portes and Rumbaut 2001), this article suggests that immigrant intergenerational attainment was linked to macro-level political processes.

Laws and employer practices barred noncitizens from certain occupations and public employment. These practices had long term consequences for immigrant populations and their children. Citizens' occupation-based income was $500 to $2,000 greater than intending citizens in 1920 pointing to a strong citizenship advantage in occupation outcomes. However, the citizenship advantage was not immediate for the first generation, but rather accrued over time. The first generation who had been naturalized between zero and five years had an occupation-based income of roughly $500 more than their intending citizen counterparts while immigrants who have been naturalized for over 16 years had an occupation-based income of over $1,800. These results are the first to uncover the occupational advantage in citizenship acquisition during this era and they suggest that citizenship was a requirement to achieve greater wage growth and occupational attainment.

The citizenship advantage, however, also had an intergenerational effect. While there was steady upgrading of second generation educational and occupational outcomes during this era (Lieberson 1980), there were also important differences based on first generation political statuses. Parents who became citizens had more resources to invest in their children, which allowed for higher educational attainment. For some immigrant groups, namely those from eastern Europe and Jewish immigrants, had an intergenerational citizenship advantage of over a year more education. Through the strong influence of education on income, children performed better in the labor market as a result of their parent being a citizen. However, the positive benefits of parental citizenship depended on the timing of citizenship acquisition and child's birth. Children who grew up with citizen parents were more likely to have greater educational attainment than children with parents who naturalized when they were teenagers net of parents years spent in the US. The increased resources associated with citizenship acquisition likely allowed parents to provide a more attractive home environment that was not available to children with parents who naturalized late or never naturalized.

The effects of citizenship, however, were not uniform across groups: Russians and Jews benefited the most from citizenship acquisition. The influence of citizenship likely interacts with the context of reception in the receiving society, the endogenous contextual influences deriving from the society of origin, and the size and type of migration flow. Thus, the policies that promoted citizens to better occupations were often targeted at southern and eastern European immigrant groups as opposed to Western Europeans. However, the groups who gained most from citizenship acquisition were also the groups least likely to naturalize (Bloemraad 2006). While this article focuses on the aggregate effect of citizenship for immigrant groups in the country, the salience of citizenship may have been greater in some areas given other contextual

features. These features may occur at the state, county, or firm level. Future research should test mechanisms leading to varying economic benefits for citizenship acquisition by geography.

Nevertheless, understanding the citizenship advantage of immigrants in the past also helps us understand current events. Present day trends are a continuation of a pattern put in place in the early 20th century, both impeding access to citizenship and widening formal inequalities between citizens and noncitizens. As noted, the growing restriction at the border had led to both the proliferation of undocumented immigration, which means that the population of persons ineligible for citizenship has grown. Moreover, for the eligible, the barriers to citizenship acquisition began to climb in the late 1980s, with the result that a large portion of the legally resident population eligible to naturalize does not. As a result – especially due to 1990s legislation – noncitizens, regardless of legal status, are increasingly vulnerable to deportation, with numbers rising in recent years. Although researchers have largely ignored citizenship's role in producing occupational attainment, its effect is likely larger for today's immigrants who must undergo many statuses and expense to achieve this outcome (Bean, Brown, Bachmeier 2015). This article argues that there are important effects of citizenship acquisition for both the first and second generations. Researchers often point to the past and then determine whether today's immigrants will follow a similar trajectory. However, little is known about how yesterday's immigrants achieved upward attainment. This paper argues that citizenship was one way immigrants made it in America. While more research is needed to understand the sources of within-immigrant group differences, the availability of newly research digitized data of full-count censuses, naturalization records, and passenger files allow researchers to understand these processes in depth. Although sociologists have neglected these rich data sources, the availability

of longitudinal data that is not available for today's immigrants will provide important insight into the immigrant experience.

Appendix 4.A: Coding for Ethnicity

As described in the text, different groups that are of sociological interest came from the same national origins during this era. It is therefore necessary to separate groups based on their birthplace and mother tongue. In the first generation analyses, I use the individual's birthplace and mother tongue coded in Table 4.A1. However, in the second generation analyses, I code each ethnicity based on his parent's birthplace and mother tongue. The codes are presented in Table 4.A1.

Table 4.A1: Ethnicity of parent

Ethnicity	Description
Irish, Italian	Born in respective countries
British	Born in England, Scotland, or Wales
Scandinavian	Born in Iceland, Norway, Sweden, or Denmark
German	Born in Germany or Germany-Poland and mother tongue is German
Central European Jewish	Born in Central Europe and mother tongue is Yiddish
Eastern Jewish	Born in Eastern Europe and mother tongue is Yiddish
Polish	Born in Eastern or Central Europe and mother tongue is Polish
Other	Those not described above

Appendix 4.B: Descriptive Statistics

Table 4.B1: Means and proportions of variables used in first generation analyses by political status

	Noncitizen	Declared Intent	Citizen	Pooled
Noncitizen				31.93
Declared Intent				19.22
Citizen				48.84
Occupation Score ($2010)	20,207.33	21,843.27	22,665.20	21,644.84
Age	37.06	37.31	44.53	40.74
Speaks English (%)	79.37	92.48	97.75	90.95
Literate (%)	72.79	89.09	95.32	86.92
Married (%)	65.41	75.52	76.12	72.34
Years in the US	13.55	15.54	27.27	20.65
Urban (%)	82.52	77.94	88.76	82.52
Ethnicity (%)				
British	3.57	6.75	11.41	8.11
Irish	2.52	4.35	10.51	6.79
Scandinavian	5.08	10.23	15.55	11.16
German	3.36	8.22	16.82	10.89
Central Jewish	3.24	4.49	4.86	4.26
Italian	23.84	15.61	9.88	15.39
Eastern Jewish	6.69	7.79	6.82	7.01
Polish	12.50	10.54	4.25	8.01
Russian	8.68	6.01	4.62	6.17
Austrian/Hungarian	13.40	12.06	5.21	9.11
Other	16.85	13.95	10.04	13.08
Total	1,501,289	899,769	2,277,953	4,605,264

Note: Percentages and proportions do not add to 100 due to rounding.

Table 4.B2: Means and proportions of variables used in second generation analyses by parental political status

	Noncitizen	Declared Intent	Citizen	Pooled
Child's characteristics				
Years of education	9.52	9.84	10.20	10.06
Income ($1940)	1,158.78	1,202.60	1,334.42	1,285.13
Age	9.79	9.76	11.67	11.13
Family Characteristics				
Single mother household	6.67	1.74	4.75	4.99
Single father household	3.00	2.07	3.43	3.23
Both parents	90.38	96.18	91.81	91.76
Parent's characteristics				
Noncitizen				17.26
Declared intent				16.14
Citizen				66.60
Age	42.15	41.64	46.37	44.91
Literacy	70.96	88.65	96.02	90.74
English Ability	82.25	92.23	97.39	94.09
Years in the US	19.35	20.22	29.46	26.25
Parent's Ethnicity				
British	4.06	5.82	9.68	8.42
Irish	3.44	3.89	9.21	7.47
Scandinavian	4.73	9.18	15.94	12.96
German	4.55	9.48	18.73	15.08
Central Jewish	4.10	4.86	4.94	4.75
Italian	29.78	17.38	9.94	14.25
Eastern Jewish	7.84	7.86	6.07	6.52
Polish	12.01	11.96	4.89	7.09
Russian	6.23	5.99	5.02	5.34
Austrian/Hungarian	12.68	12.89	5.98	8.14
Other	10.56	10.68	9.58	9.97
Urban	88.17	83.19	71.67	75.78
Total	143,263	133,957	552,804	830,024

Appendix 4.C: Matching across censuses

The matching technique relies on two census sources: the newly assembled full-count 1920 and 1940 census. The iterative matching technique, first used by Ferrie (1996) and more recently by Ferrie and Long (2013), Abramitzky et al. (2014), Connor (2016) merges data of second generation children in their childhood households in 1920 to when they were participating in the labor force in 1940. My attention is restricted to boys in 1920 (ages 5-18) who are unique by first and last name, birth year, and state of birth. Women are omitted from the analyses because they often changed their last name at marriage, making matching impossible. Second generation men also informally changed their name to its English equivalent (Lieberson 1998) as did men in certain occupations, such as politicians and actors like Issur Danielovitch Demsky (Kirk Douglas) or athletes like Giuseppe Paolo DiMaggio (Joe DiMaggio). These processes are nonrandom and would potentially lead to improved economic benefits especially in more publically visible occupations (see Biavaschi et al. 2013; Goldstein and Stecklov 2016 for analysis on name Americanization and economic returns during this era). However, it is impossible to assess to what extent name changes existed among men. Nevertheless, the matching technique proceeds as follows:

- First and last names are standardized using a *soundex* program and corrected for nicknames (e.g., "Pete" v. "Peter"). The *soundex* program addresses orthographic differences between phonetically equivalent names using the NYSIIS algorithm (see Atack and Bateman 1992) and is a standard method used in record linkage because it accounts for alternate and misspelling of names by converting names into a phonetic form.

- Observations are matched forward from 1920 to the full population in 1940. The iterative matching technique starts by looking for a match by first and last name, place of birth and exact birth year. If there is one (and only one) unique match, the procedure stops and the individual is considered "matched." If there is not a match, I try matching within a 1-year band (older and younger) and then within a 2-year band around the reported birth year; if there is one (and only one) unique match, the individual is included in the final sample. However, if there are multiple matches, or there is no match, the observation is discarded as unmatched.

The match rates reported in Table 4.2 are consistent with prior research using the same matching algorithm and indeed are slightly higher (Abramitzky et al. 2012; 2014; 2016, Ferrie 1996). Because this procedure makes matching of individuals with unique names more likely, and names are correlated with socioeconomic status, the matched sample may not be fully representative. Table 4.C1 therefore compares the mean years of education and income of men in the matched sample and the full-count 1940 census. While Table 4.C1 shows how the matched sample relates to a representative sample, these averages are not directly comparable. First, in 1940, parent's birthplace was limited to sample-line persons (5% of the sample). Therefore, the comparison is to a sub-sample of the 1940 census. Second, the matched-sample is limited to children who were living with at least one parent in 1920. It is impossible to infer when a person moved out of his house in the 1940 representative sample. Because of this, the second generation is defined as having a father who was born in another country in the 1940 representative sample. Despite these caveats, the differences between the matched-sample and the representative sample are not large.

Table 4.C1: Comparing matched-sample with representative 1940 census

	Matched	1940	Difference
Years of education	10.05	9.94	.11
Income ($1940)	1285.13	962.10	323.03

Note: data in the 1940 census are limited to men between the ages of 25 and 38

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