Is immigrant social mobility driven by the people or the place? The case of Irish Americans in the early twentieth century

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Abstract

Proponents of restrictive immigration policies often claim that families arriving with fewer skills and resources will be less socially mobile. This claim is challenging to test as pre-migration characteristics are not easily separated from post-migration experiences. This article uses unique multigenerational data on Irish Americans in the early twentieth century, before and after migration, to study how source country background and settlement context affect the occupational and schooling attainment of the children of immigrants. These results show modest effects of pre-migration origins on second generation outcomes. The reception context, in contrast, as it relates to educational acquisition and labor market opportunity appear to be more important for intergenerational economic progress. These findings suggest that childhood environments may be of greater priority than the selectivity of immigration for second generation attainment.

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1. Introduction

During the Age of Mass Migration (1850-1913), thirty million people moved from Europe to the United States. The belief that this diverse population of Europeans 'made it in America' has shaped how we understand immigrant social mobility today. In conventional interpretations of immigrant and second generation progress, European families overcame low levels of education and income, and reached parity with natives within two generations (Alba & Nee, 2003; Gordon, 1964).[1] This historical claim has been challenged, however, by findings that the trace of poor European origins persisted for more than four generations (Borjas, 1994; Glazer & Moynihan, 1963; Ward, 2017). This is a highly contentious issue as it reflects on the long-run effects of mass migration on American society.

Opportunities to study immigrant intergenerational mobility are severely constrained by the limited availability of data on families before and after international migration. A common approach to overcome the shortfall of information on source country origin is to use aggregate differences in education by national-origin or ancestry (e.g. Borjas, 1994). Results generated from these data are challenging to interpret, however, as they conflate ethnicity with pre-migration class background, and may mechanically overestimate socioeconomic persistence (Alba, Lutz, & Vesselinov, 2001; Luthra & Soehl, 2015). Moreover, recent evidence suggests that educations obtained across different source country contexts may not be comparable for these purposes (Feliciano & Lanuza, 2017).

This article gains new traction on the persistence of source country origins by using novel data on Irish Americans in the early twentieth century to examine how pre-migration background and the American reception context affected second generation outcomes. In this new sample, I observe the sons of Irish immigrants in 1940 ("second generation"), their immigrant parents in 1920 and

their grandparents in Ireland in 1901. By exploiting the heterogeneous settlement patterns of Irish families in the United States, I examine how reception context affected second generation schooling and occupational attainment. Comparing outcomes *within* a single population in this way helps separate the effect of pre-migration background from Irish-specific interactions with the American economy and society.

My findings suggest that the effect of pre-migration origins on second generation outcomes may be overstated. After 40 years in the US, only the grandsons of Irish white-collar workers held any observable occupational advantage in the second generation, and there are no significant differences by class background in schooling outcomes ($p < 0.05$). Possessing a higher status Irish surname – a new measure of pre-migration background – is positively associated with income and schooling, but this effect halves from the immigrant to the second generation.[2] This multigenerational analysis suggests limited, or at most only "elite", persistence in status from immigrant parents to the second generation. These findings suggest that the US reception context may be of higher priority for second generation attainment than selectivity in the immigrant generation.

The Irish second generation were more upwardly mobile in counties with higher average incomes and higher levels of schooling attainment. Controlling for grandfathers' occupation in Ireland, the second generation in Pacific states held higher earning occupations and attained 1-2 years more schooling than their counterparts in the Middle Atlantic. Second generation schooling and earnings outcomes were stronger in counties with smaller but more economically prosperous Irish communities, and with higher average incomes and educational attainment. Taken together, these results suggest economic penalties for children growing up in large enclaves (Beaman, 2012;

Borjas, 2014) but highlight the importance of local schooling and economic contexts in shaping second generation trajectories (Goodwin-White, 2016; Vigdor, 2002; Xie & Greenman, 2011).

The lack of cohesion in the historical Irish-American experience underscores both the need and the opportunities for studying the interplay of context and intergenerational trajectories. The social science of international migration has benefited from the expansion of research beyond gateway cities and major immigrant receiving countries (Ellis & Almgren, 2009; Ellis & Goodwin-White, 2006; Winders, 2014). This Irish American analysis and other recent studies add to this focus by pursuing similar question with historical data sources (e.g. Abramitzky, Boustan, & Eriksson, 2014; Catron, 2016; Shertzer, 2016). In addition to studying important migration episodes, the use of new historical data and techniques provides a key opportunity for scholars to move beyond national-origin or ancestry based comparisons, and toward capturing the mechanisms underlying immigrant incorporation (Luthra, Soehl, & Waldinger, 2017).

In this article, I use unique data linking the children of Irish immigrants in the US back to their grandparents in the source country. This work complements a broader wave of historical research concerned with context and socio-demographic outcomes (Catron, 2017; Connor, 2017; Gutmann et al., 2016; Logan & Shin, 2016). Using record linkage techniques, I find individuals in the Irish census of 1901 and the US censuses of 1920 and 1940 with unique name, age and birth place combinations (Abramitzky, Boustan, & Eriksson, 2012; Connor, 2016; Ferrie, 1996). While these techniques have provided significant opportunities for immigration scholarship, considerable care is required to ensure linkage accuracy (Massey, 2017). I investigate the validity of my data by creating a second highly conservative linked sample and my results are consistent across both approaches (see below).

2. Irish immigration in the Age of Mass Migration

Across the nineteenth and early twentieth century, more than four million people moved from Ireland to the US. In 1860, Irish immigrants comprised 39 percent (1.6 million) of the foreign-born population and these early immigrants mainly settled in Northeastern cities and experienced sluggish economic progress in the first and second generation (Clark, 1982; Handlin, 1941; Thernstrom, 1973). The Irish immigration flow remained high up to the early twentieth century, even though heightened immigration from Southern and Eastern Europe attenuated the Irish share of the foreign-born population to 10 percent by 1910. These later Irish arrivals and their children experienced greater economic mobility than their counterparts earlier: Irish immigrants were the eleventh highest earning foreign born population in 1910 (of thirty two groups), and their position improved with time spent in the US and into the second generation (Abramitzky et al., 2014; Borjas, 1994). Improving fortunes among these later arrivals coincided with increases in the educational selectivity of Irish immigrants and also the development of a more favorable reception context to white, English speaking immigrants (Roediger, 2005; Stolz & Baten, 2012).[3]

Explanations based on context and immigrant selectivity both feature in accounts of geographical and temporal variation in Irish American attainment. Small sample and cross sectional evidence from many different periods suggest that Irish families made greater economic progress in more Western states and in smaller settlements (Dolan, 2010; Erie, 1978; Ferrie, 1999). The benefit of expanding opportunities in Western states over time is suggested by the growth of the share of Irish people living in Pacific states from two to six percent over the 1860-1920 period. The flipside of the opportunity hypothesis is that Irish concentration in Northeastern cities may have constrained Irish upward mobility (Casey, 1996; Cirenza, 2016). Beneath each of these

explanations, however, is the possibility that families better equipped to achieve upward mobility may have also settled in different regions of the United States (Burchell, 1979; Campbell, 2002).

An initial overview of this new data confirms that the Irish second generation made substantial occupational progress on their parents from 1920 to 1940, and that upward mobility was more pronounced in Western US states. This can be inferred from the occupational score of fathers ("Father's Occ.") and sons ("Son's Occ.") in Table 1: despite being an average of fourteen years younger at year of observation, sons in 1940 held occupations which paid 10 percent more than those of their fathers in 1920.[4]

Table 1. Description of variables

These differences are decomposed in Figure 1 by census division of residence in 1920.[5] Immigrant fathers in the East North Central (contains Chicago) and the Middle Atlantic (contains New York) divisions earned around 3 percent more than their Pacific and New England counterparts. By 1940, however, this pattern had reversed for the second generation. Relative to Middle Atlantic states, the children of immigrants held similarly earning occupations in New England but earned 4 percent more in Pacific states. This is a striking improvement, as Irish immigrants in Pacific states were the third lowest earners in 1920 but their children had risen to being the top earners by 1940. The remainder of this article focuses on trying to account for these intergenerational patterns.

Figure 1. First and second generation economic outcomes by census division

3. Construction of data and analytical approach

I tailored these data to study the effect of reception context and pre-migration background on second generation outcomes. To examine the effect of Irish class background on later outcomes, I linked immigrants back to their childhood homes in Ireland, where I observe their fathers'

occupations when the migrants were in childhood, and their American-born sons forward in the US in 1940.[6] These data allow me to study intergenerational persistence within families. Record linkage is costly in terms of sample size and as a result, I supplement these linked data with a new measure of pre-migration class derived from the average occupational status of the surnames of household heads in Ireland in 1901. This surname measure provides a novel means of studying changing economic outcomes between Ireland and the US while minimizing sample attrition.

3.1. Linked samples

I built these samples by linking immigrants in the US in 1920 to their childhood homes in Ireland in 1901 and their co-resident sons (in 1920) forward to the 1940 census ("Full Match"). The second generation sons observed from 1920 to 1940 belonged to the 1900 to 1915 birth cohorts and were aged 25 to 40 in 1940. These sons were linked by iteratively matching individuals across censuses using unique combinations of names, ages and birth places (Abramitzky et al., 2012, 2014).[7] Individual ages were allowed to vary by up to two years and the full names were standardized using the *NYSIIS* algorithm to allow for differences in reporting. Individuals who could not be uniquely identified due to name commonness were dropped from the sample.

Recent evidence from Bailey et al. (2016) suggests that this iterative approach may be particularly sensitive to false linkages. This is a challenging issue to resolve as increasing matching accuracy will reduce sample representativeness. To investigate whether false linkages seriously distorted my results, I created a new multigenerational sample using a matching criterion of full names, with no phonetic standardization, and where individual's name, age and birthplace combinations were unique within a five-year age band in 1901, 1920 and in 1940 ("Strict Match"). This approach provides a high degree of confidence in linkage quality but resulted in a 75 percent loss in observation count.

The linkage rate for the Full Match is on par with what is typically found in the literature. In total, 35,976 people were successfully matched from the US back to Ireland, which corresponds to a match rate of 27 percent. Due to their age of observation, less than half of these people were co-resident with their fathers in Ireland. I then matched approximately 65,443 children of Irish immigrant sons between the 1920 and 1940 US census with a match rate of around 36 percent. The complement number of cases from the two samples, where full information is observed on the immigrant (father), their fathers (grandfather) and their sons (grandson) is 1,789. As in most work to date in this area, the sample is male-only as females are exceedingly difficult to link due to name changes after marriage.

3.2. Inferring pre-migration background from surname data

Sample attrition is one of the major costs imposed by using linked panel data, as it can weaken a sample in its statistical power and lead to less generalizable conclusions. Thus, I also employ an alternate surname-based approach to study the effect of class background. This approach is motivated by recent studies showing that surnames can provide stable measures of socioeconomic status within a population over time (Clark, 2014). This approach has not previously been applied to the study of immigrant social mobility.

Surnames provide economic and geographical information on Irish family background.[8] Recent studies by Greg Clark and his collaborators show strong intergenerational persistence in wealth, income and physical characteristics for surnames across decades and even centuries. Although this work has come under considerable critique (Torche & Corvalan, 2016), the technique has value in circumstances where data resources are limited. This is because linking surname groups across countries is easier than following individuals. Further, unlike first names, which may be endogenous to economic outcomes due to changing parental tastes or "Americanization",

surnames are less likely to change in response to economic conditions (see Boustan, Abramitzky, & Eriksson, 2016; Stecklov & Goldstein, 2016).

I measured the economic status of surnames in Ireland by restricting the Irish census of 1901 to male heads of household, who were aged from 24 to 54 and employed outside of farming.[9] I scored the occupations of these men using to the Irish adaptation of the Historical Cambridge Social Interaction and Stratification Scale ("HISCAM") (Fernihough, Ó Gráda, & Walsh, 2015; Lambert, Zijdeman, Van Leeuwen, Maas, & Prandy, 2013). I excluded non-farming occupations as there is no intuitive way to rank farmers' income or occupation in the Irish census.[10] With this sample, I estimate occupational status for every surname held by at least ten household heads and de-trend for age.

The Irish context provides a reasonable case to use surnames to study class persistence. Historical Ireland was stratified by class and religion, and intermarriage was uncommon (Fernihough et al., 2015). Thus, surname fluidity was low in Ireland, and the transfer of surnames from parents to their immigrant children and second generation grandchildren provides an interesting opportunity to analyze changes in economic status over time. Table 2 lists the twenty highest and lowest ranking common surnames. It is notable that highly ranking surnames tend to be more Anglican in origin and remain uncommon in the Irish working-class today (e.g. Malley, Gilmartin, Joyce).

Table 2. Highest and lowest ranking surnames

3.3. Measuring how context matters

I exploit the settlement patterns of Irish immigrants to estimate how second generation outcomes vary across different contexts. I begin by examining broad differences in occupational and schooling outcomes across the seven major census divisions of residence for Irish immigrants.

These census divisions are inferred based on the childhood homes of the second generation in 1920 and are pre-determined by their parents' settlement decisions. While one might argue that census divisions are a broad aggregation, Appendix Table 1 shows that major cities within these census division exhibit quite similar patterns in terms of Irish upward mobility.

An additional advantage to using census divisions is the greater coverage they provide to more confidently estimate the effect of reception context. Almost all research on context and immigrant outcomes, however, is exposed to bias from the correlation of settlement patterns with unobserved economic potential or pre-migration background. It is possible, for example, that the second generation may be more upwardly mobile in Pacific states because higher status families were more likely to settle there. I gain traction on this problem by studying the robustness of census division effects to grandfathers' occupation in Ireland and by estimating differences *within* divisions based on surname ranking.

Following these analyses, I estimate differences in second generation attainment across counties, within census divisions to better identify *how* context matters. I focus on county-level determinants that may be described by Portes & Rumbaut's (2006) "context of reception". This concept refers to the factors affecting the incorporation of immigrant groups into American society, which usually focus on dimensions of government policy, labor market conditions and the characteristics of ethnic groups. I adapt this concept to predict second generation outcomes using differences in local childhood context.

I describe local contexts using the characteristics of childhood counties or states in which the second generation grew up. For the characteristics of ethnic groups, I use the total share and average occupational score of the Irish population of each county. To examine basic labor market differences, I use the average occupational income ("occscore") of each county. For policy, I

exploit state level differences in compulsory schooling laws (Goldin & Katz, 2011; Lleras-Muney & Shertzer, 2015). The introduction of compulsory schooling laws in the early twentieth century coincided with a five-fold increase in high school graduation. However, the effectiveness of these laws is questionable, as Goldin and Katz note that average schooling levels were already rising across most states. Thus, I complement the compulsory schooling measure with the high school graduation rate for the 1890 to 1899 birth cohorts, which preceded my sample. These variables are described in Table 1.

4. Persistence of pre-migration status on US outcomes

The section uses the three-generation samples and the Irish surname ranking to study how pre-migration background and settlement context affect the economic outcomes of immigrants and their children. I estimate these models with the following equation:

$$(1)\ Economic\_outcome_t = \beta_0 + \beta_1[Grandfather\_class]_1 + \beta_2[Catholic]_2 + \beta_3[YoB]_3 + \beta_3[CensusDiv\_1920]_3$$

where the outcome variable refers to natural log of the occupational score of an Irish immigrant or second generation son in 1920 or 1940, or the completed years of schooling for the son in 1940. *Grandfather_class* and *Catholic* are observed in the 1901 census of Ireland and *YoB* refers to a set of year of birth fixed effects. *CensusDiv_1920* refers to the census division where the household was resident in 1920.

The results from these models in Table 3 test for class persistence and the robustness of census division effects to pre-migration background. Models 1-3 refer to estimates from the sample using the Irish surname rankings while Columns 4-6 and 7-9 estimate differences by grandfathers' occupation in Ireland for the Full Match and Strict Match, respectively. If class background had a

strong and enduring influence on subsequent outcomes, one would expect the children and grandchildren of white-collar and skilled workers to earn more than low skill workers, and for individuals from wealthier farming backgrounds to earn more than their poorer farming counterparts.

Table 3. Irish background and outcomes for fathers and sons

In Columns 1-3, higher ranking Irish surnames are associated with higher, albeit attenuating, occupational and educational outcomes in the US. In Column 1, an increase in the natural log of the surname rank of grandfathers in Ireland is associated with a significant 0.19 log point increase in the occupational score of immigrant fathers in the United States. This effect, however, halves in Column 2: second generation grandchildren with high ranking surnames earn around 0.09 log points more than their low-ranking counterparts. In addition, holding a very high-ranking surname is associated with an increase of 0.8 extra years of schooling for the second generation.

This occupational persistence appears to be concentrated mainly in families from the highest class backgrounds in Ireland. The estimates from the Full Match in Columns 4 and 5 suggest that the children and grandchildren of white-collar workers both earn 3-7 percent more than the children of lower skilled workers. There are no other significant differences by grandfather's class background. These results are consistent across the Strict Match and Full Match for the immigrant generation (Columns 4 & 7) but to a lesser extent for their sons (Columns 5 & 8). Disagreement between the samples likely reflects sample size, as the grandchildren of white-collar workers comprise less than 10 percent of the already small second generation Strict Match sample (n = 373). In either case, these results suggest modest, or at most, elite, intergenerational persistence in class.

Differences in economic outcomes across census divisions appear to be highly robust to controls for class origin, surname ranking and religion. In each of the nine models, variation across the 1920 census divisions of residence are estimated relative to the Middle Atlantic. These models indicate only minor differences in occupation between the Middle Atlantic and New England in 1920 and 1940. Although there are some differences in significance levels, economic and schooling outcomes appear to be stronger in the East North Central division across both generations: earnings are from 1-6 percent higher for fathers and sons, and sons complete significantly more years of schooling.

The upward mobility of sons in the Pacific states is also highly robust to pre-migration controls. Across all samples in Table 3, the immigrant father generation earn around 5 percent less in the Pacific in 1920. By 1940, however, the second generation growing up in Pacific states have either caught up with or overtaken their counterparts in the Middle Atlantic and New England. In addition, the second generation in Pacific states have completed 1.5-2 extra years of schooling. The stability of these effects across the three samples suggest that these disparities are not driven by selective settlement by pre-migration background across census divisions.

Overall, these results indicate weak persistence in pre-migration background but a strong influence of regional context on second generation outcomes. While there is evidence that the children and grandchildren of higher status Irish men held better paying occupations and completed more years of schooling in the US, these differences are weaker and less consistent than the patterns observed across census divisions. This suggests that the reception context may have been particularly influential in shaping second generation attainment. In addition, the relative change in outcomes across census divisions by generation suggests that experiences in the immigrant generation may not have been determinative of second generation outcomes.

5. Reception context and second generation attainment

5.1. Parental attainment and 1940 outcomes

The differences observed in immigrant and second generation attainment by census division confound individual- and group-level outcomes. It is not clear, for example, whether second generation progress in the Pacific reflects extreme economic gains among a small and select population, or if these outcomes represent more widely experienced improvements for both high and low attaining families in the immigrant generation. I examine this by estimating differences by parental attainment and census division. This model is specified as:

$$(2)\ Economic\_outcome\_1940 = \beta_0 + \beta_1[Parents\_income\_1920]_1 + \beta_2[YoB_i]_2 + \beta_3[CensusDiv\_1920]_3 + \beta_1[Parents\_income\_1920]_1\ x\ \beta_3[CensusDiv\_1920]_3$$

where the response $Economic\_outcome\_1940$ is either a binary variable predicting whether a second generation son reached the top fifth of the income distribution by 1940, or a continuous variable for self-reported years of schooling. $Parental\_attainment\_1920$ is a dummy variable indicating whether or not a father held a farming or unskilled urban occupation in 1920 ("low income").[11] This measure of immigrant attainment is interacted with the household census division of residence in 1920. YoB refers to a set of birth cohort fixed effects.

These results are presented in Figure 2. Panel A plots the probability of a son reaching the top fifth of the income distribution by 1940, by census division and father's income as of 1920. Similarly, Panel B plots the total years of schooling for the second generation. The dashed vertical lines in both panels represent the respective national Irish American averages for each outcome.

Figure 2. Children of immigrants: childhood census division and later outcomes

Panel A of Figure 2 suggests that second generation sons whose fathers held higher paying occupations also had higher average earnings. The probability of low- and high-income sons reaching the top fifth of the income distribution is 0.21 and 0.25, respectively. The higher probability of upward mobility for high-income sons also tends to be significant within census division and above the nationwide average for the Irish second generation (0.23). This suggests that second generation outcomes are linked to both childhood location *and* parental attainment.

The strength of the father-son relationship, however, varies by census division. The degree to which the sons of higher income men held higher earning occupations is stable across New England, the Middle Atlantic and the East North Central divisions. In contrast, the gap is larger in the West North Central division: the probability of upward mobility for low income sons is 0.16 and only half the level experienced by high income sons in the same division (0.29). Second generation outcomes are higher and more ubiquitous by fathers' income in the Pacific and Mountain divisions. The probability of reaching the top fifth of the income distribution for low- and high-income sons is relatively high in the Pacific and ranges from 0.26 to 0.31. Moreover, the attainment of low-income sons in the Pacific is higher than that of high income sons in the Middle Atlantic.

Occupational outcomes are also correlated with educational attainment across census divisions. This is evident from comparisons of New England, the Pacific and the West North Central division in terms of income and average years of schooling in Panel B. Low-income sons in the Pacific have 11.3 years of schooling on average and high-income sons have 11.9 years. These sons have upward mobility probabilities of 0.26 and 0.31, respectively. Co-variation in these measures is comparable in New England: low income sons have 10.7 years of schooling and an upward mobility probability of 0.20, while high income sons have a probability that is 0.05 higher and

spent almost half a year more in school on average. This co-variation is even consistent in the West North Central division, where income differences are highly unequal.

These results provide further evidence that while family background influenced second generation attainment, there appears to be sizeable differences across census divisions. In addition, the correlation of schooling outcomes and income by census division suggests that these regional differences reflect experiences earlier in life rather than solely favorable labor market conditions after sons came of age.

5.2. Second generation outcomes by surname ranking

A more direct way to identify how context interacts with pre-migration background is to compare differences in second generation attainment by grandfathers' status within and across census divisions. Unfortunately, the linked sample does not contain sufficient observations for this purpose. As an alternative, I study differences by surname rank within census divisions. One would expect that if pre-migration background was determinative of second generation outcomes, there should be observable differences by surname rank within the same census division. To the contrary, the following results show region of settlement rather than pre-migration background to be the primary axis of second generation stratification.

Figure 3 shows individuals with high ranking surnames to be more upwardly mobility than their low-ranking counterparts. These estimates refer to the probability of a second generation son reaching the top fifth of the income distribution by 1940 for sons with surnames ranking one standard deviation above ("High Ranking") and below ("Low Ranking") the mean. Although individuals with high ranking surnames tend to be more upwardly mobile, the difference is rarely significant within census divisions. Only in the Pacific, where upward mobility is unusually high, is the gap between high and low-ranking names significant. Second generation sons with high

ranking surnames in the Pacific are five percentage points (or 19 percent) more likely to reach the top fifth than their low-ranking counterparts. These results suggest that Pacific states provided unusual levels of opportunity for advancement in this period.

Figure 3. Surname ranking and occupational outcomes by childhood census division

The estimates presented so far support the claim that regional contexts fostered significant differences in second generation outcomes. Despite the slight variation by surname rank *within* census divisions, there are large differences *across* divisions for men with similar ranking names. Men with low ranking surnames in the Pacific, for example, are from three to five percentage points (or 17-22 percent overall) more likely to reach the top fifth of the income distribution by 1940 than men with low ranking names in New England or the Middle Atlantic. Further, differences across divisions are even more pronounced for men with high ranking names.

Figure 4. Surname ranking and educational outcomes by childhood census division

Differences between census divisions are more striking for educational attainment. The estimates presented in Figure 4 have an identical interpretation to Figure 3 but for the outcome variable, which represents completed years of schooling. While there are no significant differences in schooling outcomes by surname rank within census divisions, there are substantial differences across divisions. Figure 3 and Figure 4 lead to similar conclusions: schooling and occupational outcomes were lowest in the Middle Atlantic and the South, at intermediate levels in New England and the East North Central states, and highest in the Mountain and Pacific states. These patterns provide further evidence for the link between intergenerational progress, and regional schooling and labor market differences.

5.3. County- and state-level effects on second generation outcomes

In an effort to better identify why regional contexts matter, this section scales down the analysis to examine proximate determinants of second generation attainment. Specifically, I estimate childhood county- and state-level effects on occupational and schooling outcomes. These models include census division fixed effects, which provide two analytical opportunities. First, by controlling for underlying differences in contextual characteristics, I can attempt to explain the variation in outcomes across census divisions. Second, settlement patterns may have been selective on observable and unobservable characteristics, and naïve estimates of county and state level effects may be poorly estimated. For example, occupational outcomes may be poorer in Northeastern cities with large Irish populations because families with fewer resources were more likely to settle there. By controlling for census division fixed effects, however, the county- and state-level estimates can be interpreted as a *within* census division comparison that helps control for the selectivity of settlement.

The results from these models are presented in Table 4. Columns 1-3 were estimated from the following equation:

$$(3)\ son's\_school\_attainment_{1940} = \beta_0 + \beta_1[Parents\_income\_1920]_1 + \beta_2[YoB_i]_2 + \beta_3[CensusDiv\_1920]_3 + \beta_k[contextual\_effects]_k$$

where schooling attainment is predicted by k contextual effects based on an individual's county or state of childhood and these models include a set of standard control variables. The results predicting whether a son held an occupation in the top fifth of the income distribution are presented in Columns 4-6 and were estimated from the equation:

$$(4)\ top\_fifth\_occupation_{1940} = \beta_0 + \beta_1[Parents\_income\_1920]_1 + \beta_2[YoB_i]_2 + \beta_3[CensusDiv\_1920]_3 + \beta_4[son's\_school\_attainment_{1940}]_4 + \beta_k[context\_effects]_k$$

where the predictor variables are identical to Equation 4, but for the variable referencing son's schooling attainment, which instead refers to the probability of holding a highly skilled occupation. One concern may be that this strategy of estimating aggregate effects on micro-level units may violate the assumption of independence and downwardly bias standard errors (Moulton, 1990). This does not appear to be a serious issue, however, as Appendix Tables 2 and 3 show that these estimates are consistent with models estimated with cluster-robust standard errors (Cameron & Miller, 2015).[12]

Table 4. Explaining regional differences in outcomes of sons

Table 4 suggests that up to half the difference in schooling attainment across census divisions can be explained by county- and state-level characteristics. Column 1 predicts the baseline differences in school years completed before contextual control variables are added in Columns 2-3. The schooling advantage of growing up in Pacific states relative to the Middle Atlantic, for example, declines from 1.3 years in the baseline model to 0.75 years in Column 3, or by 42 percent. The gaps in schooling between the Middle Atlantic, and New England and the East North Central division also decline by 53 and 25 percent, respectively. Most of this attenuation stems from controlling for local Irish population characteristics and the general schooling context (Column 2). This suggests that much of the effect of regional context appears to have been channeled through factors related to Irish concentration, and wider processes shaping educational attainment.

Column 3 explicitly highlights the effect of ethnic and educational context on schooling attainment. A10 percent reduction in the overall size of the within county Irish population, or a 10 point increase in their average occupational score, are both associated with around a tenth of a year more of schooling. Thus, second generation schooling outcomes were higher in areas with smaller and more affluent Irish communities. These effects are relatively weaker than those related to local schooling context. While compulsory school attendance laws appear to have had no effect on school outcomes (Column 3), an increase in the high school graduation rate of earlier birth cohorts has a large significant effect on Irish second generation attainment. Growing up in a county where everyone in the 1890-1899 birth cohorts had completed high school is associated with a four year improvement in the schooling attainment of the 1900-1915 Irish second generation cohorts. This indicates that the local and institutional processes driving inequality in education heavily shaped the trajectories of the Irish second generation.

Second generation occupational attainment was higher in locales with higher average incomes and where sons obtained more years of schooling. Despite initially being associated with occupational attainment in Column 5, the effect of Irish community characteristics weaken and become non-significant once controls are added for local labor force characteristics and own schooling in Column 6. A one year increase in the grade attainment of a son or a ten point increase in the average occupational score of a county are associated with a 4-5 percentage point increase in the share of sons reaching the top fifth of the occupational distribution. These results suggest that schooling attainment was the main pathway through which Irish community affected occupational attainment, and further, occupational progress was stronger in more dynamic labor markets.

Moreover, the variables capturing son's schooling attainment and the average occupational score of the county explain almost all of the variation in upward mobility across census divisions. The

baseline model in Column 4 shows higher upward mobility in the East North Central, New England, Mountain and Pacific census divisions relative to the Middle Atlantic. Once these controls are introduced in Column 6, however, these regional effects disappear but for those in the Pacific, which halves from 7.6 percentage points to 4.1 percentage points. In summary, these findings and the evidence presented previously point to the interaction of (Irish) communities with wider labor market and educational opportunities in shaping Irish second generation trajectories.

6. Discussion and conclusion

The question of whether immigrant families in the late nineteenth and early twentieth overcame poor origins to 'make it in America' remains highly contentious. The Age of Mass Migration was a formative period in US history and continues to serve as a reference point for discussions of immigration policy today. By analyzing differences in skills across national-origin groups, several studies have found highly persistent effects of source country background on later outcomes. Studying differences by ethnicity, however, conflates pre-migration skill with different ethnic experiences in the United States. I gain traction on this issue using new multigenerational data to analyze economic outcomes among Irish American families who differed in their class backgrounds in Ireland and their settlement patterns in the US.

From this multigenerational sample, I find persistence only among elite Irish grandparents to their American-born grandchildren, but significant differences in schooling and occupational outcomes based on reception context within the United States. Specifically, second generation attainment was higher in areas with expanding educational and economic opportunities, and where the Irish population was relatively small and more affluent. I conclude that Irish communities and their interaction with the general reception context appear to be of greater significance for future outcomes than pre-migration class or skill backgrounds.

We do not know how unique these patterns are to the Irish experience or to what degree they represent wider processes of immigrant intergenerational mobility. Ascertaining this requires further analyses of different ethnic groups across a variety of historical and geographical contexts. If these effects are representative of wider intergenerational processes, this suggests that policy concerned with immigrant assimilation may be better directed toward improving the environments in which the second generation grow up and come of age, rather than attempting to increase the selectivity of immigration.

Further, these sharp geographical differences in Irish intergenerational outcomes suggest that there is no single Irish American historical experience. The fact that Irish American adaptation played out very differently across cities and regions points to the need for further work focused on the proximate processes underpinning immigrant intergenerational mobility, as well as wider interactions with societal change. In the case of Irish immigrants, much of the existing scholarship has focused on Northeastern cities in the nineteenth century (Meagher, 2009). Due to recent developments in historical data access and techniques, there are now many new possibilities to study heterogeneity in intergenerational outcomes across time and place.

High levels of occupational and educational attainment for the Irish second generation in western US states appears to have emerged in a favorable development context. The industrial bases and public education systems of western cities rapidly expanded in this period (Goldin, 1998; Rhode, 2001) and the population of California grew sevenfold from 1900 to 1950. In addition to these developments, qualitative evidence suggests that Irish people may have benefited from holding favorable positions in the ethnic hierarchies of these regions. More specifically, Irish attainment may have been impeded by the religiously segregated schooling systems of Northeastern cities, and fared more favorably in western cities by being perceived as "whiter" than their counterparts

of non-European ancestry (Burchell, 1979; Campbell, 2002). Greater schooling and occupational inclusivity of Western cities for the Irish would be consistent with ethnoracial biases toward redistribution and public expenditure which favored people of western European decent (Costa & Kahn, 2003; Goldin & Katz, 1999). This could be explored in further research by examining whether the trends observed in this analysis were specific to the Irish second generation or of a more general nature.

7. Tables and figures

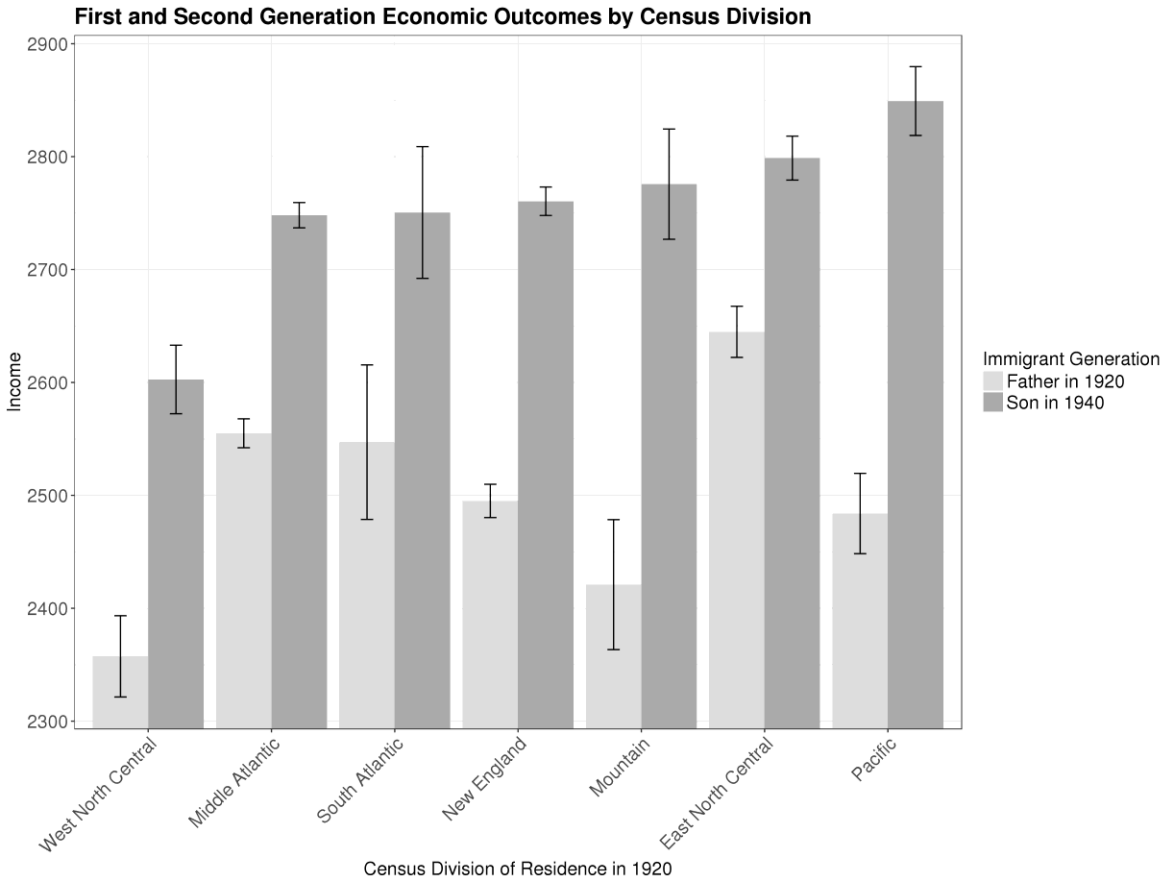

Figure 1. First and second generation economic outcomes by census division

Note: The measure of income refers to the 1950 median earnings for each occupation. Confidence intervals are constructed at the 95% level.

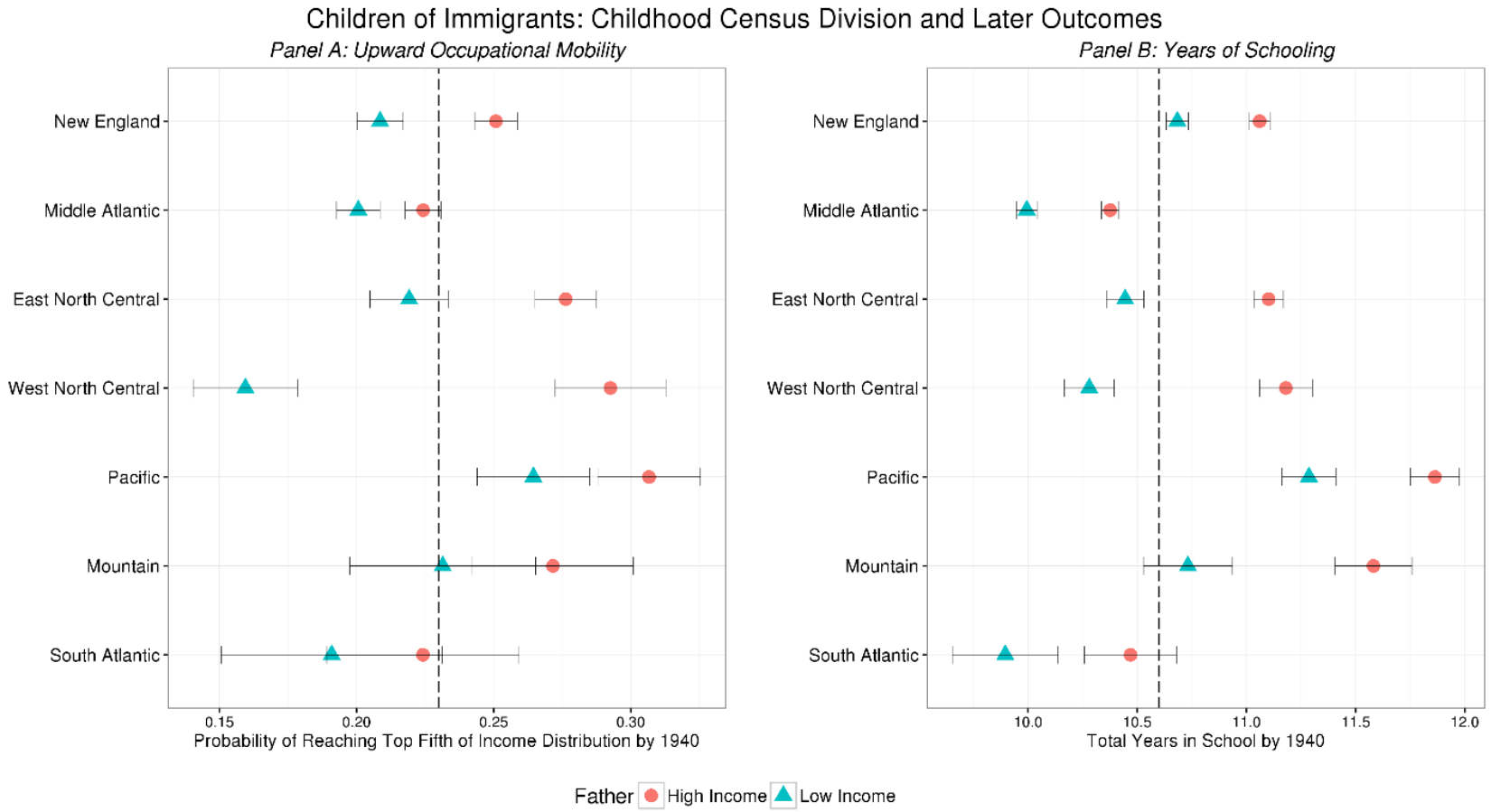

Figure 2. Children of immigrants: childhood census division and later outcomes

Note: The dashed lines correspond to the national averages for individuals across all census divisions. Confidence intervals are constructed at the 95% level

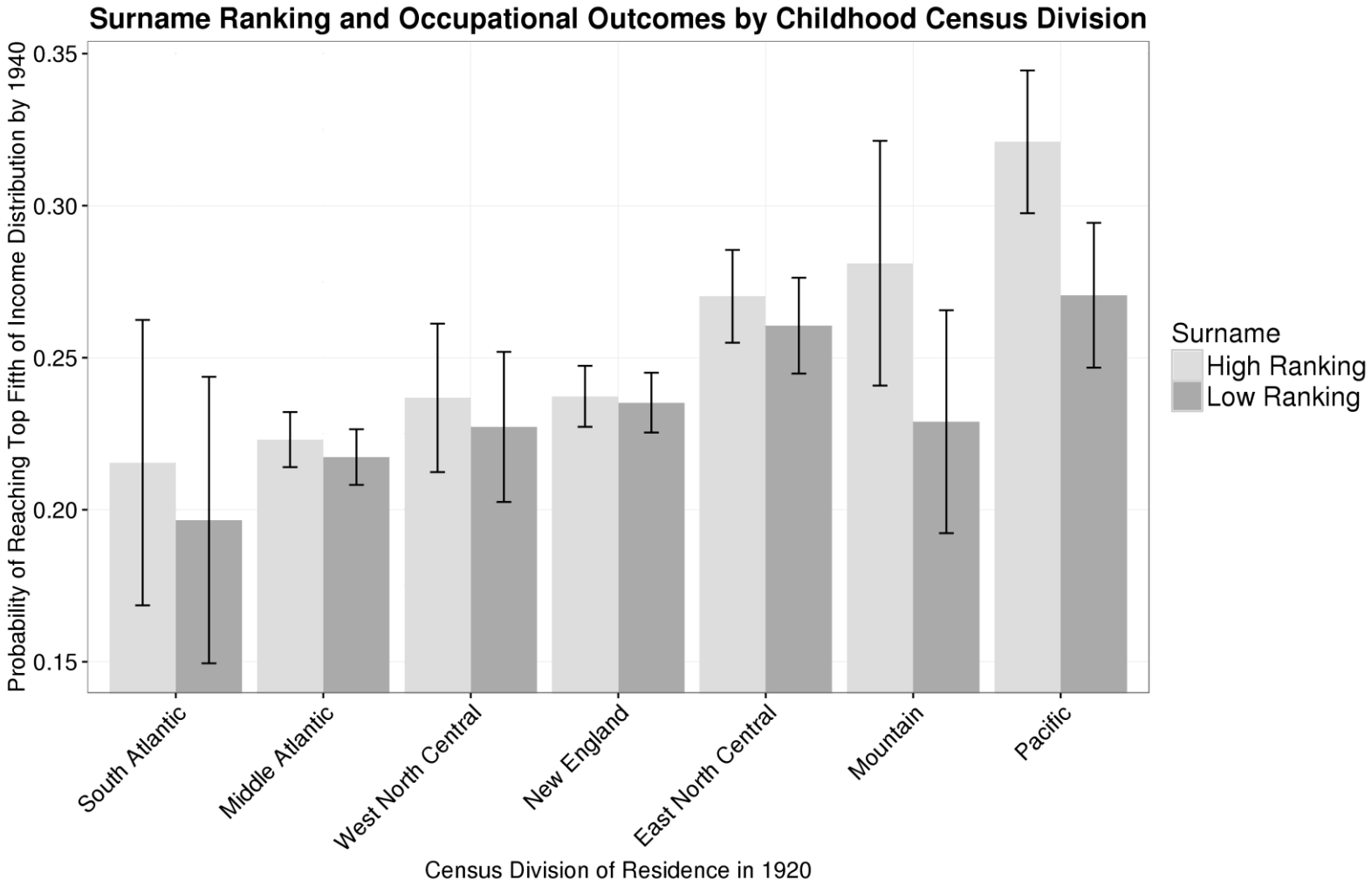

Figure 3. Surname ranking and occupational outcomes by childhood census division

Note: High Ranking and Low-Ranking surnames refer to predicted outcomes which one standard deviations above and below the mean. Confidence intervals are constructed at the 95% level.

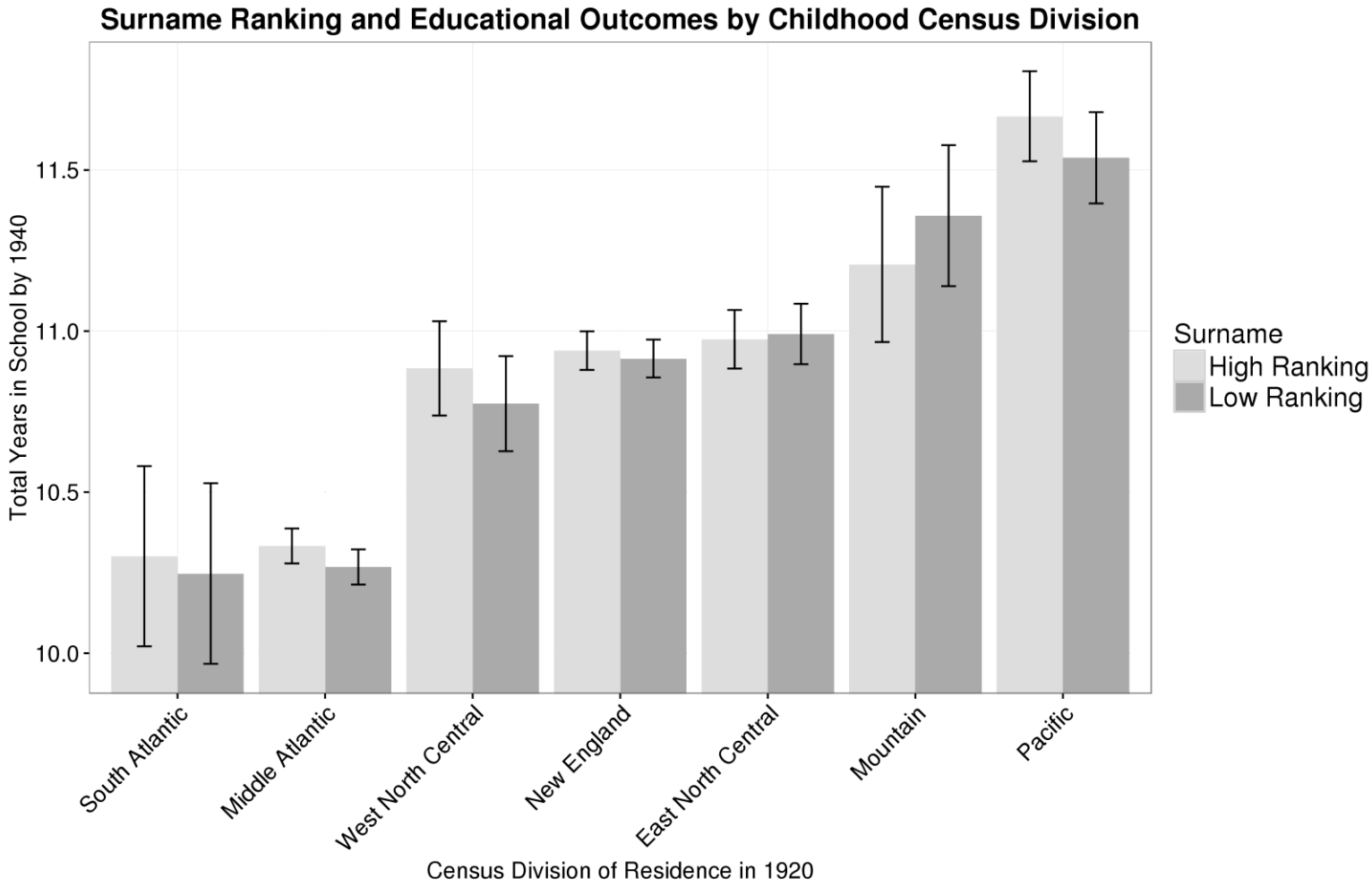

Figure 4. Surname ranking and educational outcomes by childhood census division

Note: High Ranking and Low-Ranking surnames refer to predicted outcomes which one standard deviations above and below the mean. Confidence intervals are constructed at the 95% level.

Table 1. Description of variables

Variable	Year of Meas.	Categories	Obs.	Mean	SD	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Grandfather's Occupation in Ireland	1901	Low skill worker	3,763				
		Poorer farmer	2,874				
		Skilled worker	1,249				
		Wealthier farmer	7,833				
		White-collar	1,527				
Father is Catholic	1901	Yes	15,732				
		No	4,585				
Surname Ranking	1901			48.76	8.65	28.28	84.08
Son's age	1940			33	5	25	40
Father's age	1920			47	7	18	60
Father's Occ.	1920			2536	971	300	8000
Son's Occ.	1940			2781	946	300	8000
Son's years of schooling	1940			10.64	2.56	8	16
Son in top fifth of national occ. distrib.	1940			0.24	0.43	0	1
Census division of residence	1920	East North Central	8732				
		Middle Atlantic	26322				
		Mountain	1380				
		New England	20738				
		Pacific	3559				
		South Atlantic	972				
		West North Central	3549				
Irish average occscore (county)	1920			0.11	0.06	0.00	0.50
Irish population shr. (county)	1920			27.20	3.63	7.33	62.00
High school grad. shr. 1890-99 (county)	1920			0.31	0.07	0.05	0.83
Average occscore (county)	1920			26.60	2.28	12.5	42
Population total (county)				150,677	153,867	279	615,841
Compulsory years of schooling (state)	1900-40			8.18	1.03	0	11

Table 2. Highest and lowest ranking surnames

Least Prestigious Names	Name	Obs.	HISCAM Index	Most Prestigious Names	Name	Obs.	HISCAM Index
1	Bryan	103	48.31	1	Malley	160	56.22
2	Lawlor	239	48.33	2	Gilmartin	125	56
3	Cairns	124	48.51	3	McHale	133	56
4	Hayden	172	48.54	4	Ruane	113	55.66
5	Lavery	177	48.57	5	Noone	117	55.55
6	Mason	128	48.66	6	Lavelle	114	55.3
7	McCartney	146	48.84	7	Deane	102	55.27
8	Brien	704	48.85	8	Folan	115	55.16
9	O'Toole	157	48.86	9	Coneely	228	55.16
10	Redmond	351	48.92	10	McDonagh	410	55.15
11	Keogh	323	48.93	11	Lydon	118	55.05
12	McVeigh	152	48.94	12	Mannion	224	55.05
13	McDowell	335	49.06	13	Joyce	438	54.94
14	Hart	107	49.08	14	McGovern	363	54.88
15	Byrne	2392	49.09	15	Gallagher	1520	54.78
16	Mcilroy	120	49.18	16	Cawley	100	54.77
17	Hoey	157	49.21	17	McHugh	461	54.76
18	Kinsella	264	49.21	18	Flannery	133	54.71
19	Desmond	132	49.28	19	Faherty	107	54.7
20	Ferris	161	49.29	20	Cosgrove	154	54.68

Note: These names are drawn from the 660 surnames held by at least one hundred household heads

Table 3. Irish background and outcomes for fathers and sons

	Surname			Full Match			Strict Match		
	(1) Father's Occ. (1920)	(2) Son's Occ. (1940)	(3) Son's Schooling (1940)	(4) Father's Occ. (1920)	(5) Son's Occ. (1940)	(6) Son's Schooling (1940)	(7) Father's Occ. (1920)	(8) Son's Occ. (1940)	(9) Son's Schooling (1940)
Surname ranking (ln)	0.19**	0.098*	0.78*						
	(0.06)	(0.04)	(0.30)						
Grandfather's class (ref = low skill worker)									
Poorer farmer				0.0069	-0.0050	-0.045	0.00032	0.046	-0.11
				(0.01)	(0.02)	(0.17)	(0.02)	(0.05)	(0.37)
Skilled worker				0.0022	0.025	-0.23	-0.019	-0.055	0.25
				(0.01)	(0.03)	(0.24)	(0.02)	(0.08)	(0.56)
Wealthier farmer				0.013	0.020	0.010	0.0097	0.057	0.20
				(0.01)	(0.02)	(0.14)	(0.01)	(0.04)	(0.31)
White-collar				0.032**	0.068*	0.35	0.073***	0.00051	0.069
				(0.01)	(0.03)	(0.23)	(0.02)	(0.08)	(0.53)
Grandfather Catholic	0.04	0.02***	0.10*	-0.0041	-0.0099	-0.16	0.029*	0.0032	-0.20
	(0.01)	(0.01)	(0.04)	(0.01)	(0.02)	(0.14)	(0.01)	(0.04)	(0.30)
Census division (ref = Middle Atlantic)									
East North Central	0.04***	0.01**	0.66***	0.062***	0.020	0.78***	0.044**	0.024	0.60
	(0.01)	(0.01)	(0.04)	(0.01)	(0.02)	(0.16)	(0.02)	(0.05)	(0.40)
East South Central	0.02	-0.04	0.20	0.038	0.027	1.93*	0.067	-0.080	0.99
	(0.04)	(0.02)	(0.19)	(0.05)	(0.12)	(0.79)	(0.11)	(0.22)	(1.68)
Mountain	-0.11***	-0.02	0.97***	-0.059***	-0.039	1.17**	-0.041	-0.073	1.69
	(0.02)	(0.01)	(0.08)	(0.02)	(0.06)	(0.42)	(0.03)	(0.22)	(1.67)
New England	-0.01	0.01	0.63***	-0.016*	0.016	0.70***	-0.022	0.0032	0.32
	(0.01)	(0.00)	(0.03)	(0.01)	(0.02)	(0.13)	(0.01)	(0.04)	(0.27)
Pacific	-0.05***	0.02***	1.31***	-0.063***	0.036	1.55***	-0.045*	0.036	1.91***
	(0.01)	(0.01)	(0.06)	(0.01)	(0.04)	(0.25)	(0.02)	(0.07)	(0.47)
South Atlantic	0.02	0.02	0.37***	-0.11***	0.080	0.35	-0.054	0.45*	2.89
	(0.02)	(0.01)	(0.09)	(0.02)	(0.09)	(0.64)	(0.05)	(0.22)	(1.68)
West North Central	-0.11***	-0.10***	0.53***	-0.065***	-0.076	0.90**	-0.037	-0.18	-1.82*
	(0.01)	(0.01)	(0.05)	(0.02)	(0.05)	(0.34)	(0.03)	(0.12)	(0.93)
West South Central	0.07	-0.03	0.79***	-0.14**	0.11	3.02*	-0.25***	-	-
	(0.04)	(0.02)	(0.19)	(0.04)	(0.31)	(1.37)	(0.07)		
Constant	2.36***	2.06***	6.66***	3.14***	3.05***	10.7***	3.08***	3.04***	9.83***
	(0.26)	(0.18)	(1.41)	(0.01)	(0.06)	(0.42)	(0.02)	(0.15)	(1.03)
Observations	35208	42027	42027	16373	1789	2051	4372	373	415
Adjusted R2	0.009	0.019	0.038	0.015	0.031	0.041	0.019	0.043	0.060
Controls	YoB	YoB	YoB	YoB	YoB	YoB	YoB	YoB	YoB

Standard errors in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

Table 4. Explaining regional differences in outcomes of sons

	(1) son's school attainment (1940)	(2) son's school attainment (1940)	(3) son's school attainment (1940)	(4) top fifth occupation (1940)	(5) top fifth occupation (1940)	(6) top fifth occupation (1940)
Census division (ref = Middle Atlantic						
East North Central	0.68***	0.57***	0.51***	0.044***	0.036***	0.012
	(0.04)	(0.04)	(0.04)	(0.01)	(0.01)	(0.01)
East South Central	0.22	0.22	0.17	0.027	0.022	0.012
	(0.20)	(0.20)	(0.20)	(0.03)	(0.03)	(0.03)
Mountain	1.00***	0.81***	0.53***	0.031*	0.031*	0.0037
	(0.08)	(0.08)	(0.09)	(0.01)	(0.01)	(0.02)
New England	0.63***	0.40***	0.29***	0.015**	0.018**	0.0075
	(0.03)	(0.04)	(0.04)	(0.00)	(0.01)	(0.01)
Pacific	1.30***	0.89***	0.75***	0.076***	0.070***	0.041***
	(0.05)	(0.07)	(0.07)	(0.01)	(0.01)	(0.01)
South Atlantic	-0.018	-0.014	-0.10	-0.013	-0.012	-0.014
	(0.10)	(0.11)	(0.11)	(0.02)	(0.02)	(0.02)
West North Central	0.53***	0.54***	0.39***	0.012	0.015	0.0023
	(0.06)	(0.06)	(0.06)	(0.01)	(0.01)	(0.01)
West South Central	0.58**	0.44	0.37	0.048	0.043	0.022
	(0.21)	(0.22)	(0.22)	(0.04)	(0.04)	(0.04)
surname rank (ln)		0.47	0.49		0.097	0.078
		(0.30)	(0.30)		(0.05)	(0.05)
catholic surname		0.089*	0.10*		-0.0066	-0.011
		(0.04)	(0.04)		(0.01)	(0.01)
father's occscore 1920 (ln)		0.54***	0.55***		0.046***	0.021***
		(0.03)	(0.03)		(0.00)	(0.00)
state: required years of schooling		-0.028	-0.029		0.00063	0.00077
		(0.01)	(0.02)		(0.00)	(0.00)
county: high school grad. shr (1890-1899)		3.46***	3.98***		0.073	-0.14**
		(0.27)	(0.29)		(0.05)	(0.05)
county: irish population shr		-1.39***	-0.90**		-0.11*	-0.089
		(0.32)	(0.33)		(0.05)	(0.05)
county: irish average occscore		0.0030	0.0092*		0.0015**	0.001
		(0.00)	(0.00)		(0.00)	(0.00)
county: population total (ln)			-0.082***			-0.0022
			(0.02)			(0.00)
county: average occscore			-0.00056			0.0056***
			(0.01)			(0.00)
son's school attainment (1940)						0.043***
						(0.00)
Constant	10.8***	6.57***	7.08***	0.21***	-0.36	-0.70***
	(0.06)	(1.17)	(1.18)	(0.01)	(0.20)	(0.19)
Observations	42934	42934	42934	42934	42934	42934
Adjusted R2	0.003	0.006	0.069	0.039	0.053	0.054
Controls	YoB	YoB	YoB	YoB	YoB	YoB

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

8. Appendix

Appendix Table 1. Share reaching top fifth in five largest counties of each census division

Share Reaching Top Fifth of National Income Distribution in Five Largest Counties of each Census Division

State	County	Irish share	Total share	School Gap in years	State	County	Irish share	Total share	School Gap in years
Middle Atlantic					***New England***				
NY	NEW YORK	0.21	0.28	-0.6	MA	SUFFOLK	0.22	0.28	-0.3
PA	PHILADELPHIA	0.20	0.26	-0.4	MA	MIDDLESEX	0.23	0.26	-0.1
NY	KINGS	0.22	0.29	-0.5	RI	PROVIDENCE	0.22	0.23	+0.2
NJ	HUDSON	0.21	0.25	-0.2	CT	NEW HAVEN	0.26	0.28	0.0
PA	ALLEGHENY	0.20	0.21	0.0	MA	ESSEX	0.21	0.24	0.0
Total		0.21	0.23	-0.1	Total		0.23	0.24	+0.2
Pacific					***Mountain***				
CA	SAN FRANCISCO	0.30	0.30	+0.1	MA	SILVERBOW	0.24	0.26	+0.2
CA	ALAMEDA	0.30	0.32	+0.2	CO	DENVER	0.24	0.32	+0.7
CA	LOS ANGELES	0.30	0.32	+0.2	MA	DEER LODGE	0.23	0.25	+0.1
WA	KING	0.30	0.28	+0.2	CO	PUEBLO	0.23	0.24	+0.1
OR	MULTNOMAH	0.27	0.28	+0.4	CO	LAKE	0.26	0.24	+0.8
Total		0.29	0.25	+0.4	Total		0.25	0.21	+0.5
East North Central					***West North Central***				
Il	COOK	0.26	0.28	+0.5	MO	ST LOUIS	0.23	0.26	+0.1
OH	CUYAHOGA	0.25	0.29	-0.23	MN	RAMSEY	0.25	0.28	-0.3
MI	WAYNE	0.24	0.28	+0.4	NE	DOUGLAS	0.28	0.26	+0.3
OH	HAMILTON	0.25	0.29	-0.1	MO	JACKSON	0.26	0.29	+0.1
IN	MARION	0.30	0.28	+0.2	MN	HENNEPIN	0.27	0.28	0.0
Total		0.25	0.22	+0.4	Total		0.22	0.18	+0.5
South Atlantic									
MD	BALTIMORE	0.21	0.27	+0.1					
DE	NEWCASTLE	0.18	0.25	-0.2					
WV	OHIO	0.27	0.23	-0.4					
GA	CHATHAM	0.34	0.32	+0.1					
MD	ALLEGANY	0.10	0.17	+0.2					
Total		0.21	0.18	+0.4					

Note: "Irish share" refers to share of Irish second generation in top fifth of national income distribution; "total share" refers to share of the county population in the top fifth of the national income distribution; "school gap" refers to the average difference in schooling years between the Irish and count population.

Appendix Table 2. Robust census division estimates

	(1) son's occscore 1940	(2) top fifth occupation (1940)	(3) son's school attainment (1940)
East North Central	0.013***	0.042***	0.66***
	(0.00)	(0.00)	(0.00)
East South Central	-0.020***	0.026***	0.20***
	(0.00)	(0.00)	(0.01)
Mountain	-0.0081***	0.036***	1.05***
	(0.00)	(0.00)	(0.01)
New England	0.0018***	0.016***	0.63***
	(0.00)	(0.00)	(0.00)
Pacific	0.030***	0.079***	1.34***
	(0.00)	(0.00)	(0.01)
South Atlantic	-0.0069***	-0.012***	-0.0046
	(0.00)	(0.00)	(0.00)
West North Central	-0.082***	0.017***	0.59***
	(0.00)	(0.00)	(0.01)
West South Central	-0.027***	0.044***	0.54***
	(0.00)	(0.00)	(0.00)
father's occscore 1920	0.054**	0.047***	0.56***
	(0.01)	(0.01)	(0.06)
Constant	3.02***	0.062	9.02***
	(0.05)	(0.03)	(0.25)
Observations	42934	42934	42934
Adjusted R^2	0.022	0.006	0.049
Controls	YoB	YoB	YoB

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: These three regression models are estimated with clustered standard errors at the census division level.

Appendix Table 3. Robust county estimates

	(1) son's occscore 1940	(2) top fifth occupation (1940)	(3) son's school attainment (1940)
East North Central	0.015*	0.034***	0.51***
	(0.01)	(0.01)	(0.06)
East South Central	-0.015	0.019	0.17
	(0.04)	(0.04)	(0.29)
Mountain	0.016	0.026	0.53***
	(0.01)	(0.01)	(0.11)
New England	0.021***	0.020**	0.29***
	(0.01)	(0.01)	(0.07)
Pacific	0.056***	0.073***	0.75***
	(0.01)	(0.01)	(0.08)
South Atlantic	0.0074	-0.019	-0.10
	(0.03)	(0.02)	(0.14)
West North Central	-0.038**	0.019	0.39**
	(0.01)	(0.01)	(0.13)
West South Central	-0.014	0.037	0.37
	(0.03)	(0.04)	(0.34)
surname rank (ln)	0.083*	0.099*	0.49
	(0.04)	(0.05)	(0.30)
catholic surname	0.011	-0.0072	0.10
	(0.01)	(0.01)	(0.05)
father's occscore 1920	0.046***	0.044***	0.55***
	(0.00)	(0.01)	(0.04)
state: required years of schooling	-0.00099	-0.00045	-0.029
	(0.00)	(0.00)	(0.02)
county: high school grad. shr (1890-1899)	-0.085	0.031	3.98***
	(0.05)	(0.05)	(0.43)
county: share irish	-0.13	-0.13*	-0.90
	(0.07)	(0.06)	(0.53)
county: average occscore irish	0.00031	0.00041	0.0092
	(0.00)	(0.00)	(0.00)
county: population total	-0.00050	-0.0057*	-0.082**
	(0.00)	(0.00)	(0.03)
county: average occscore	0.014***	0.0056***	-0.00056
	(0.00)	(0.00)	(0.01)
Constant	2.38***	-0.39*	7.08***
	(0.14)	(0.19)	(1.18)
Observations	42934	42934	42934
Adjusted R^2	0.029	0.006	0.054
Controls	YoB	YoB	YoB

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix Table 4. Census division estimates with surname fixed effects

	(1) son's occscore 1940	(2) top fifth occupation (1940)	(3) son's school attainment (1940)
East North Central	0.012*	0.045***	0.63***
	(0.01)	(0.01)	(0.04)
East South Central	-0.025	0.038	0.13
	(0.03)	(0.04)	(0.22)
Mountain	-0.00093	0.040**	1.04***
	(0.01)	(0.01)	(0.09)
New England	0.00044	0.014**	0.60***
	(0.00)	(0.01)	(0.03)
Pacific	0.034***	0.082***	1.33***
	(0.01)	(0.01)	(0.06)
South Atlantic	-0.0041	-0.014	0.030
	(0.01)	(0.02)	(0.11)
West North Central	-0.080***	0.019	0.61***
	(0.01)	(0.01)	(0.06)
West South Central	-0.032	0.050	0.59**
	(0.03)	(0.04)	(0.23)
father's occscore 1920	0.051***	0.045***	0.55***
	(0.00)	(0.00)	(0.03)
Constant	3.03***	0.071***	9.05***
	(0.01)	(0.02)	(0.11)
Observations	42934	42934	42934
Adjusted R^2	0.030	0.009	0.061
Controls	YoB	YoB	YoB

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix Table 5. County estimates with surname fixed effects

	(1)	(2)	(3)
	son's occscore 1940	top fifth occupation (1940)	son's school attainment (1940)
East North Central	0.015*	0.034***	0.51***
	(0.01)	(0.01)	(0.06)
East South Central	-0.015	0.019	0.17
	(0.04)	(0.04)	(0.29)
Mountain	0.016	0.026	0.53***
	(0.01)	(0.01)	(0.11)
New England	0.021***	0.020**	0.29***
	(0.01)	(0.01)	(0.07)
Pacific	0.056***	0.073***	0.75***
	(0.01)	(0.01)	(0.08)
South Atlantic	0.0074	-0.019	-0.10
	(0.03)	(0.02)	(0.14)
West North Central	-0.038**	0.019	0.39**
	(0.01)	(0.01)	(0.13)
West South Central	-0.014	0.037	0.37
	(0.03)	(0.04)	(0.34)
surname rank (ln)	0.083*	0.099*	0.49
	(0.04)	(0.05)	(0.30)
catholic surname	0.011	-0.0072	0.10
	(0.01)	(0.01)	(0.05)
father's occscore 1920	0.046***	0.044***	0.55***
	(0.00)	(0.01)	(0.04)
state: required years of schooling	-0.00099	-0.00045	-0.029
	(0.00)	(0.00)	(0.02)
county: high school grad. shr (1890-1899)	-0.085	0.031	3.98***
	(0.05)	(0.05)	(0.43)
county: share irish	-0.13	-0.13*	-0.90
	(0.07)	(0.06)	(0.53)
county: average occscore irish	0.00031	0.00041	0.0092
	(0.00)	(0.00)	(0.00)
county: population total	-0.00050	-0.0057*	-0.082**
	(0.00)	(0.00)	(0.03)
county: average occscore	0.014***	0.0056***	-0.00056
	(0.00)	(0.00)	(0.01)
Constant	2.38***	-0.39*	7.08***
	(0.14)	(0.19)	(1.18)
Observations	42934	42934	42934
Adjusted R^2	0.029	0.006	0.054
Controls	YoB	YoB	YoB

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

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[1] See Alba & Nee (1997) for historical and contemporary debates on assimilation.

[2] While the average surname effect is weak, the attenuation of the surname effect from grandfather to grandson is consistent with standard estimates of grandfather-grandson income elasticities (see Solon, 2014).

[3] See Guinnane, Moehling, & Ó Gráda (2006) for other work examining persistence in Irish demographic outcomes in the United States.

[4] These estimates are derived from the OCCSCORE measure and are adjusted to a common 1950 scale. The OCCSCORE is based on the median occupational based earnings of reported occupations as of 1950 (Ruggles, Genadek, Goeken, Grover, & Sobek, 2015)

[5] The seven census divisions with large second generation Irish populations were New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont), Middle Atlantic (New Jersey, New York, Pennsylvania), East North Central (Illinois, Indiana, Michigan, Ohio, Wisconsin), West North Central (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota), South Atlantic (Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, DC, West Virginia), Mountain (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming), Pacific (Alaska, California, Hawaii, Oregon, Washington).

[6] Individuals are more likely to emigrate immediately following a "dip" in employment or earnings. Further, in the receiving country, immigrants often hold occupations below their true underlying skill level (Fernández-Huertas Moraga, 2013).

[7] 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. The Irish census data was provided by the National Archives of Ireland at: http://www.census.nationalarchives.ie/

[8] In a recent work, O'Grada (2016) has illustrated this for a particular Irish surname group.

[9] I use this upper age bound as there may be concerns over age misreporting at older ages in the Irish census related to eligibility for the Old Age Pension.

[10] This sectoral exclusion should not be of major concern, as earlier evidence suggests that sons from higher status or wealthier backgrounds also tended to take higher ranking occupations outside of farming (Connor, 2016).

[11] This dummy variable is coded as "1" if a father held an occupation in the bottom 60 percent of the income distribution. More than 50 percent of the fathers of the 1900 to 1915 cohorts were engaged in low paying occupations such as urban unskilled workers, agricultural laborers and farmers. Thus, the bottom 60 percent reasonably captures low income households.

[12] Appendix Tables 4 and 5 shows these place-based estimates are also robust to surname fixed effects which help account for other unobserved intergenerational transmissions (see Güell, Mora, & Telmer, 2015).