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ABSTRACT

The Occupational Status of Jews in the United States on the Eve of the US Civil War*

The Public Use Microdata Sample (PUMS) from the 1860 Census of Population (one percent sample of free people) is used to study the occupational distribution and the determinants of socio-economic status of Jewish men (age 16 to 60) compared to other free men. Jews cannot be identified directly, but two versions of the Distinctive Jewish Name (DJN) technique are used to identify men with a higher probability of being Jewish. The men identified as likely to be Jewish are more likely to be in managerial, clerical, machine operator, and sales (especially as peddlers) occupations. They are less likely to be in farm related occupations as owners, tenants, managers, or laborers. Using multiple regression analysis to study the Duncan Socio-Economic Index (SEI), it is found that the index increases with age (at a decreasing rate), literacy, being married, and living in the South. It is lower among (free) non-whites, among the foreign-born, those with more children, and those living in rural areas (especially on farms). Other variables the same, US-born Jews do not differ significantly in SEI from other free, native-born men, but foreign-born Jews have a significantly higher SEI than other immigrants or even US-born non-Jews.

JEL Classification: N31, J62, J15

Keywords: 1860 US Census, occupational status, Jews, foreign born, labor history

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I. Introduction

The Jewish population of the United States has been estimated at between 1,000 and 2,500 at the time of the Declaration of Independence, and it was predominantly of Sephardic origin. The Jewish population increased to about 15,000 by 1840. It increased rapidly to about 50,000 to 100,000 by 1850, and about 150,000 to 200,000 on the eve of the Civil War in 1860 (Table 1). Jews then constituted about one-half of one percent of the 27 million free people in the US.

The relatively large increase in US Jewry was part of the rapid increase in immigration in the 1840s and 1850s. Of more than 4.2 million immigrants in these two decades (Table 2), 4.0 million came from Europe. Most of these European immigrants came from the German states (1.4 million were from German states of whom 1.0 million arrived in the 1850s), Ireland (1.7 million), and the United Kingdom (England, Scotland, and Wales, 664 thousand). Very few came from Russia or Poland (about 1,000), which became major source countries in the late 19th and early 20th centuries. The spike in immigration from Ireland and Germany in these two decades was due to different push factors, namely the Irish potato famine and the revolutions and civil turmoil that engulfed the German states.

There were very few Jews in Ireland or the United Kingdom at that time. Most of the Jewish immigrants would have come from the German states[1]. Thus, the adult Jewish population of the United States on the eve of the Civil War (1860) would have been composed

[1] The Billings Report (1890, Table II), based on a survey which had a direct Jewish identifier, presented data by age on the country of birth of the mother of the Jews surveyed who had lived in the US for at least five years as of December 31, 1889. The mother's country of birth was Germany for 72 percent of the Jews age 45-55 (age 15-25 in 1860), 77 percent for those age 55-65, and 77 percent for ages 65 and over. Thus, about three quarters of the Jews of working age in 1860 would have a German-born mother. The US was the mother's country of birth for about 3 percent of those age 45 and over. (Chiswick, 2001, Table 1, and Billings, 1890, Table II).

disproportionately of fairly recent immigrants from the German states, to be referred to here as German Jews.

II. The 1860 Census of Population

Although the first decennial US Census of Population, as mandated by the Constitution, was taken in 1790, it was not until the 1850 Census that there were extensive questions on demographic and labor market characteristics.[2] This continued in the 1860 Census. The original census responses from 1860 were preserved and the census data, including the name of the respondent, were recently digitalized and made available as a one-percent Public Use Microdata Sample (PUMS file) by the Minnesota Population Center at the University of Minnesota. The 1860 Census of Population was conducted from June to October of 1860, before the election of 1860 and the start of the Civil War.[3]

The 1860 Census questionnaire for free people[4] asked name, age, gender, place of residence, employment status, occupation, whether illiterate, marital status, children in the household, and country of birth (but not year of immigration for the foreign born), among other questions, with the census enumerator recording his impression of the person's race.[5] The variables used in the analysis in this paper are described in the Statistical Appendix A.

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[2] Occupation was first asked in the 1850 Census but there were no questions on income or earnings until the 1940 Census.

[3] A fascinating report prepared for the observance of the centennial of the Civil War, "The United States on the Eve of the Civil War: As Described in the 1860 Census," is a condensed version of the "Preliminary Report of the Eighth Census" submitted in May 1862 to the US Senate by Joseph Kennedy, Superintendent of the Census. The Centennial edition notes: "The text of this little book is condensed from that report and is in Kennedy's own words" (US Civil War Centennial Commission, 1863, pp. iii, vii, 1).

[4] There was a separate schedule with only a few demographic questions on slaves.

[5] Ferrie (1999) analyzes geographic mobility, occupation, and wealth of "a new sample of more than two thousand European immigrants who came to the United States during the 1840s"

III. Who is (Probably) a Jew?

The decennial census has never asked for the religion of a respondent. The Census Office / Census Bureau has asked religion only twice, in an 1890 survey of 10,000 Jewish households (Billings, 1890) and in the March 1957 Current Population Survey (CPS) (US Bureau of the Census, no date and 1958). Microdata files are not available from these two surveys. When the Census Bureau started asking the respondent's ancestry, all responses indicating a person's religion were combined into one category (code) to prevent the identification of a particular religion. Indirect techniques used to identify Jews in Census data, with various degrees of reliability, include whether the person speaks a distinctively Jewish language (Yiddish, Hebrew, or Ladino), has a distinctively Jewish surname, or is of Russian origin.[6] Each of these techniques is subject to classification error, which varies across time.[7] Of these, only the Distinctive Jewish Name (DJN) technique can be applied to the 1860 Census.

For the purposes of this study, two variants of the Distinctive Jewish Name technique are employed:

(Ferrie, 1999, p.5). He constructed a sample of immigrants from passenger ship lists arriving in the port of New York during the 1840s and found them in the manuscript schedules of the 1850 and 1860 Censuses. This was combined with a sample of 4,900 natives and immigrants present in the 1850 Census who were traced to the 1860 Census. He did not seek to identify Jews in his sample. Even if he sought to identify Jews, given the small proportion of Jews in the population, the number of Jewish observations would have been very small.

[6] For a discussion of alternative techniques for identifying Jews in the absence of direct data or questions on religion or ethnicity, including the DJN method, see Sheskin (1998), Chiswick (2009), and Hartman and Sheskin (2013), and the references therein.

[7] The classification errors include missing Jews that do not satisfy these criteria and incorrectly including as Jews those who are not Jewish but satisfy these criteria.

(1) DJN Jews – Individuals with distinctive Jewish surnames (DJN) as reported in Sheskin (1998).[8]

(2) Union Jews – Civil War Veterans of the Union Army eligible for pensions were asked at one point where and by whom they were married (Fogel, 2000).[9] Those reporting a Jewish wedding (by a rabbi or in a synagogue), or otherwise were reported as Jewish, were coded as Jewish. Those with similar surnames in the 1860 Census are referred to as Union Jews, except for those with the surname Brown or Davis.

The list of names identified as "distinctively Jewish" is reported in Statistical Appendix A.

Either technique is subject to measurement error in estimating the difference in the characteristics between Jews and others. Given the very small proportion of Jews in the population, the measurement error in estimating the characteristics for non-Jews is likely to be very small. The measurement error in estimating the size of the Jewish population is likely to be large because of the large proportion of Jews whose surnames are not on a DJN list. If there is little difference in the characteristics of Jews depending on whether or not they have a DJN, the measurement error in their characteristics would be much smaller. If it is assumed that surname per se has no effect on one's socio-economic status, the measured difference between Jews and others is biased downward (toward zero), with the downward bias being smaller the smaller the proportion of Jews in the population.

[8] In an e-mail correspondence, Sheskin indicated: "The short list of names that was in the article in 1998 was developed at UJA (United Jewish Appeal) New York by looking at their mailing lists" (e-mail January 15, 2017 from Ira M. Sheskin to Barry R. Chiswick).

[9] Email from Christopher Roudize (Friday, April 21, 2017), Union Army Veterans Project, to Barry R. Chiswick discussing religion in the Union Army Veterans data.

Using these identifiers in the one-percent sample of the 1860 Census, there were 229 free Jewish men age 16 to 60 who reported an occupation, in contrast to the total sample of 67,503 men. They constituted about 0.3 percent of the sample. This procedure misses the unknown number of Jews who did not have a distinctively Jewish name (either from the DJN or Union Army list) and includes as Jews those non-Jews with such a name.

IV. Occupational Distribution

The Minnesota Population Center coded the occupations reported in the 1860 Census manuscript records using occupational labels relevant for 1950. These occupations were then coded into the ten major occupation categories, as reported in Table 3, for free men age 16 to 60 years who reported an occupation in 1860. Table 3 reports the occupational distribution (and sample size) for all men, DJN Jews, Union Jews, and All Jews (surnames identified by either technique for identifying Jews).[10]

Table 3 reports DJN Jews have a greater representation in non-farm managerial, sales, and machine operator (operative) occupations than do Union Jews. All Jews have a greater representation in managerial, sales, craft, and non-farm laborer occupations than do all free men. Jews show a lower representation in farm occupations (as either farm owners, tenants, managers or farm laborers).

The sample sizes shrink considerably when the data are limited to German immigrants – by 91.7 percent for all men and by 68.1 percent for all Jews (Table 4). The German immigrant

[10] These occupational distributions for Jews and all men in the 1860 Census can be compared with occupational distributions for nearly every decade from 1890 to 2000 using a variety of Census and survey data, and a variety of techniques for identifying Jews (see Chiswick 1999, 2001, 2007). The proportion of Jews in the population reached a peak of just under 4 percent in the late 1930s, declining to 2 percent by 2000.

Jews show a greater representation in non-farm managerial and sales occupations and a lower proportion as farmers, farm workers, and laborers.

The detailed coding of occupations permits an examination of the Jewish presence in more narrowly defined occupations. Of the men under study, for all men, 15 percent of the PTK workers were in the Clergymen and Religious Worker occupations (333 out of 2,168 in PTK). Although the sample size is very small for PTK Jews, none of the six was in those occupations. This is consistent with a relative scarcity of rabbis and other religious workers in mid-19th century Jewish communities. On the other hand, among those in the sales occupations, the proportion reported as Hucksters and Peddlers among all men was 10.5 percent (201 out of 1,920 in Sales). Jews in Sales were more heavily represented in Huckster and Peddler jobs (20 percent, 3 out of 15 in Sales).[11]

Thus, the men identified as Jews by their surname were, compared to other free men, more heavily represented in white collar jobs, namely, non-farm managers and sales occupations, and in craft occupations, and as non-farm laborers. They were under-represented as farmers and farm workers. The Jewish proportion was about the same as for all men in operative, service, and professional occupations. Note that the Jewish men were disproportionately foreign born, and were primarily recent immigrants.[12] As the Jewish men had experienced less time in the US labor

[11] In her historical analysis of Jewish peddlers in the 19th century, Diner emphasizes that itinerant peddling was largely an initial phase in the social, cultural, and economic integration into the economy for young Jewish immigrant men (Diner, 2015).

[12] Of the men identified as Jews with an occupation, 44.1 percent were foreign born compared to 26.3 percent for all free men with an occupation. Although there are no direct data in the Census of 1860 on their duration in the US, data on immigration flows from the German states suggests they were fairly recent immigrants.

market, it would be expected that their proportions in the least skilled occupations (especially as peddlers and laborers) would be higher compared to all free men.

Thus, the occupational patterns observed among Jews compared to all men in 1860 were quite similar to those found toward the end of the nineteenth and early twentieth centuries (Chiswick, 2001, 2007).

V. Analysis of Occupational Status

This section presents the model used for the multiple regression analysis of the occupational status of the free men, age 16 to 60 years, who reported an occupation in the 1860 Census. The variables are described in more detail in Statistical Appendix A.

The Model:

The dependent variable is the natural logarithm of the Socio-Economic Index (SEI). The detailed occupational responses recorded by the census enumerators were coded by the Minnesota Population Center (MPC) into the equivalent detailed 1950 occupational categories, and then assigned an SEI value (see Appendix A). The SEI is a measure of the status of the occupation based on the income level and educational attainment associated with each occupation in 1950. The natural logarithm is taken to adjust for the positive skewness in the SEI values.

The explanatory variables (with their hypothesized signs in parentheses) include:

Age (+) and Age-Squared (-), where age is a proxy measure for years of labor market experience. Occupational status is expected to increase more rapidly at first and then more gradually with additional labor market experience.

Illiterate (-) is used as the measure of labor market skills from education in the absence of direct data on schooling. An illiterate is defined as someone who cannot read or write in any language. This dichotomous variable takes the value of one for those who are illiterate.

Race was classified based on the enumerator's assessment. Non-whites (-) (free Blacks, Chinese, etc.) are hypothesized to have a lower SEI, other variables the same.

Number of children (+) of the respondent living in the household is expected to be positively related to SEI. It includes own, step, and adopted children.

Married (+) men living with their spouse are hypothesized to have a higher SEI than men in other marital statuses for several reasons. These include the positive effect of a higher SEI on marital prospects, a greater specialization in labor market compared to household activities among married men, and the greater motivation for economic success among men supporting a wife given the very low labor force participation rate among married women. Only about 16 percent of all women, and 4 percent of married women, reported having an occupation in 1860.[13]

[13] Occupational Distribution of Free Women, Age 16-60, 1860 Census (Percent)

	All Women	All Jewish Women	Married Women	Married Jewish Women
Occupation, Non-Farm	14.5	15.7	3.8	2.0
Farm Occupation	1.4	0.8	0.5	0
Housewife and other no Occupation	84.0	83.5	95.7	98.0
Total	100.0	100.0	100.0	100.0
Sample Size	72,005	236	43,178	149

A woman with a response of "housekeeper" is counted as "housewife" if she is related to the head of the household.

Source: 1860 Census of Population, one-in-a-hundred, PUMS, Minnesota Population Center, University of Minnesota

The Foreign Born (-) dichotomous variable is unity for men born outside a state or territory of the US. There are no data on when the immigrant came to the US, but the data on immigration flows (Table 2) suggests that most Jews were fairly recent arrivals and less likely to have been born in an English-speaking country. As they presumably have fewer skills relevant for the US labor market, including English proficiency, immigrants are expected to have a lower SEI.

Based on the location of the household and whether there was a farmer (owner, tenant, manager or laborer) in the household, respondents were classified as being Rural-Farm (-) or Rural-Non-Farm (-), compared to being urban. Two dichotomous variables are created. The rural residents are hypothesized to have a lower SEI, with those living on farms having a lower SEI than those who were non-farm residents.

South (?) is a dichotomous variable that distinguishes slave holding states from other parts of the US. While during the post-bellum period, until recent decades, earnings and socio-economic status were significantly lower in the south than for comparable men living in other regions of the country, it is not obvious that this would have been the situation in the ante-bellum period.

Descriptive Statistics

Table 5 reports the descriptive statistics (means and standard deviation) for the variables used in the regression analysis.

The Duncan Socioeconomic Index (defined in Statistical Appendix A) is higher for Jews than for all free men age 16 to 60 years, Jews 24.8 compared to 20.3. Among Jews it is higher for DJN Jews (26.8) than for Union Jews (24.4). To provide a perspective on these SEI values, SEI has values of 19 for bartenders and carpenters, 20 for farm foremen, 21 for marshals and

constables, 22 for shipping and receiving clerks and bakers, 23 for tailors, and 27 for blacksmiths and stonemasons (see Appendix Table A-2).

The men identified as Jews were about one-third of one percent of the free men (0.3 percent). They had about the same age (33 years), proportion married (60 percent), and number of own children living in the household (1.7 children). Among the men in these data, 2.1 percent of all free men were enumerated by the census taker as non-white, as were 1.3 percent of the Jews. The Jews were slightly less likely to be illiterate (3.9 percent illiterate compared to 6.3 percent illiterate for all free men), and less likely (by 11.5 percentage points) to be living on a farm and less likely to be living in a rural non-farm household (by 1.5 percentage points). Overall, 63 percent of the Jews lived in rural areas compared to 76 percent of all men. The Jews were far more likely to be immigrants – 44 percent were foreign-born compared to 26 percent for all free men.

The main differences between the Union Jews and the DJN Jews were the lower proportion of foreign born among the Union Jews (40 percent compared to 52 percent of the DJN Jews), the higher proportion of the Union Jews living on farms (34 percent compared to 31 percent) and especially in rural non-farm households (39 percent compared to 19 percent). Thus, 73 percent of Union Jews lived in rural areas compared to 50 percent of DJN Jews.

Regression Results:

Table 6 reports the regression results when the natural logarithm of the socio-economic index is regressed on the explanatory variables for all men, all Jews, DJN Jews, and Union Jews.[14] The sample size for Jews is only 229 observations.

[14] The natural logarithm of the SEI is used because of the positive skewness in the distribution of SEI scores.

The statistical power of the equation is roughly the same for all men and for Jews, but because of the smaller sample size, the t-ratios of the explanatory variable are much lower among the Jews. The directions of the partial effects are the same for both groups, except for the foreign-born variable for Jews.

Standard partial effects are found. The socio-economic status for all free men and for Jews, among those 16 to 60 years, increases with age but at a decreasing rate, is greater among married men but is substantially lower for the illiterate and the small proportion non-white, lower for rural non-farm and especially lower for men in rural farm households. Two surprising results emerge. There is a small negative effect on the SEI score of the number of own children living in the household. And, other variables the same, the socio-economic index is greater among those, both Jews and all men, in the Southern states.

The foreign born coefficient is very small and positive (0.04) and not statistically significant (t= 0.37) among Jews, but it is much larger, negative (-0.28) and highly significant (t= -46.6) among all men, indicating a lower economic status, other variables the same, among the foreign born compared to the native-born free men. That is, being foreign born conveys a significant disadvantage among men in general, but this is not the situation among Jews.

Other variables the same, the dichotomous variable for those identified as Jews is small, positive and not statistically significant (coefficient 0.06 and t=1.18), however, the Jewish-foreign born interaction variable is positive and statistically significant (coefficient 0.19 and t=2.91).[15]

[15] When the interaction term is deleted from the equation, the coefficient on the Jewish variable is 0.19 with a t-ratio of 4.2. Thus, other variables the same, overall Jews have a higher SEI score.

That is, other variables the same, US-born Jews do not differ significantly in socio-economic index from US-born non-Jews, but Jewish immigrants have a statistically significant higher socio-economic index than white native-born non-Jews.

VI. Summary and Conclusions

Estimates indicate that the Jewish population of the US in 1860 number about 150,000 to 200,000, about one-half of one percent of the 27 million free people. Immigration, as well as Jewish immigration, had increased sharply in the 1840s and 1850s so that by 1860 about one-quarter of free men, but nearly half of Jewish men, were immigrants. The foreign-born Jewish men's origins were primarily from the German states.

This paper has used the Public Use Microdata Sample (PUMS) from the 1860 US Census of Population, one percent sample of free people, to study the occupational distribution and the determinants of the socio-economic status (Duncan index) of Jewish men (age 16 to 60 years) compared to other free men. Earnings and year of immigration of the foreign-born were not asked in the 1860 Census. Jews cannot be identified directly, but since the PUMS file includes the respondent's surname, two versions of the Distinctive Jewish Name (DJN) technique are used to identify men with a higher probability of being Jewish.

The men identified as likely to be Jewish are more likely than other free men to be in non-farm managerial, craft, sales (especially as peddlers), and non-farm laborer occupations. They are less likely to be in farm related occupations (farm owners, managers, tenants, foremen or laborers) or work as clergy/religious workers.

Multiple regression analysis is used to study the Duncan Socio-Economic Index (SEI) of free men. Other variables the same, the SEI increases, at a decreasing rate, with age. It is also

higher for free men who are literate, married, and living in the South. The SEI is lower among free non-whites (primarily free blacks) and among the foreign born, men with more children, those living in rural areas, and lower still among those living on farms.

Other variables the same, those identified as US-born Jews do not differ significantly in their SEI from other native-born white men. On the other hand, foreign-born Jews have a significantly higher SEI than even US-born white non-Jews. Thus, a higher economic status is found among Jewish men compared to white men who were not Jewish living in the US in 1860.

Table 1

Estimated Jewish Population of the United States, 1776-1900[(a)]

Year	Jewish Population
1776	1000-2000
1800	2000-2500
1820	2650-5000
1830	4000-6000
1840	15,000
1850	50,000-100,000
1860	150,000-200,000
1870	200,000
1880	230,000-280,000
1890	400,000-475,000
1900	937,800-1,058,135

(a) Estimated number of persons born to Jewish parents or of Jewish parentage or converted to Judaism.

Source: http://www.jewishvirtuallibrary.org/jsource/US-Israel/usjewpop1.html

Table 2

Admission of Permanent Resident Aliens by Country of Birth, 1820-1859[(a)]

(in thousands)

	1820-29	**1830-39**	**1840-49**	**1850-59**
Total	128.5	538.4	1427.3	2814.6
Europe	99.6	422.9	1369.4	2622.6
Germany	5.8	124.7	385.4	976.0
Ireland	51.6	170.7	656.2	1029.5
United Kingdom [(b)]	26.3	74.4	218.6	445.3
Russia	0.1	0.3	0.5	0.4

(a) No data prior to 1820. Rounded to nearest hundred. Russia refers to Russian Empire, including Russian occupied Poland. Land arrivals not completely enumerated in these years.

(b) England, Scotland, and Wales

Source: 2013 Yearbook of Immigration Statistics, U.S. Department of Homeland Security, Office of Immigration Statistics, Washington, D.C., August 2014, Table 2.

Table 3

Occupational Distribution of Men, Age 16 to 60, 1860 Census[(a)]
(Percent)

Occupation	All	All Jews	DJN Jews	Union Jews
PTK	3.2	2.6	1.7	3.2
Farmers	34.3	25.3	20.5	28.0
Managers	5.6	12.2	14.5	12.0
Clerical	0.6	0.9	0.9	0.8
Sales	2.8	6.6	11.1	3.2
Craft	17.7	21.0	20.5	21.6
Operatives	9.6	9.2	12.8	7.2
Service	1.5	0.9	0.9	0.8
Farm Workers	12.7	5.7	6.0	4.8
Laborers	11.8	15.7	11.1	18.4
Total	100.0	100.0	100.0	100.0
Sample Size	67,503	229	117	125

(a) Men who reported an occupation. Excludes slaves. Excludes "Brown" and "Davis" from Union Jews. PTK is Professional, Technical and Kindred occupations, Farmers includes farm owners, farm tenants, and farm managers, Managers is limited to non-farm managers, Laborers is limited to non-farm laborers. Detail may not add to total due to rounding.

Source: 1860 Census of Population, one-in-a-hundred, PUMS, Minnesota Population Center, University of Minnesota

Table 4

Occupational Distribution of German-Born Men, Age 16 to 60, 1860 Census[(a)]
(Percent)

Occupation	All	All Jews	DJN Jews	Union Jews
PTK	1.9	4.1	4.2	3.1
Farmers	20.1	8.2	6.3	12.5
Managers	7.5	21.9	20.8	25.0
Clerical	0.4	1.4	2.1	0.0
Sales	3.6	9.6	12.5	6.3
Craft	28.0	23.3	22.9	25.0
Operatives	13.6	13.7	16.7	9.4
Service	2.3	2.7	2.1	3.1
Farm Workers	7.5	1.4	2.1	0.0
Laborers	15.2	13.7	10.4	15.6
Total	100.0	100.0	100.0	100.0
Sample Size	5610	73	48	32

(a) Men born in Germany who reported an occupation. Excludes slaves. Excludes "Brown" and "Davis" from Union Jews. Detail may not add to total due to rounding.

Source: 1860 Census of Population, one-in-a-hundred, PUMS, Minnesota Population Center, University of Minnesota

Table 5

Means and Standard Deviations of the Variables in the Regression Analysis, 1860 Census[(a)]

Variable	All	Jews		
		All	DJN Jews	Union Jews
Socio-Economic Index	20.25723 (18.53789)	24.83406 (20.58888)	26.76068 (21.34069)	24.416 (20.45892)
Ln SEI	2.728545 (0.6952777)	2.91931 (0.7465524)	2.999067 (0.7563221)	2.899612 (0.7469547)
Age	33.25891 (11.50826)	32.78603 (11.00887)	32.88889 (10.96293)	33.024 (11.00034)
Age Squared	1238.593 (843.7918)	1195.59 (791.2955)	1200.838 (796.7066)	1210.624 (789.8448)
Illiterate	0.063049 (0.243053)	0.0393013 (0.1947365)	0.034188 (0.1824935)	0.04 (0.1967478)
Non-white	0.0205324 (0.1418137)	0.0131004 (0.113954)	0.025641 (0.1587417)	0 (0)
Married (spouse)	0.5984178 (0.4902219)	0.6026201 (0.4904278)	0.5982906 (0.4923524)	0.616 (0.4883151)
Number of Children	1.744471 (2.202758)	1.707424 (2.207838)	1.752137 (2.212449)	1.728 (2.230203)
Foreign Born	0.2627587 (0.4401357)	0.441048 (0.4976002)	0.5213675 (0.5016918)	0.4 (0.4918694)
Rural Farm	0.4516392 (0.4976594)	0.3362445 (0.4734586)	0.3076923 (0.4635236)	0.336 (0.4742396)
Rural Non-Farm	0.3069938 (0.4612502)	0.2925764 (0.4559422)	0.1880342 (0.3924201)	0.392 (0.4901613)
South	0.2659734 (0.4418534)	0.279476 (0.4497248)	0.2905983 (0.4559913)	0.272 (0.4467806)
Jews	0.0033924 (0.0581462)	1 (0)	1 (0)	1 (0)
Jews Foreign Born	0.0020147 (0.0448408)	0.441048 (0.4976002)	0.5213675 (0.5016918)	0.4 (0.4918694)
Sample Size	67,503	229	117	125

(a) Men with an occupation, age 16-60. Excludes slaves. Union Jews excludes “Brown” and “Davis” surnames. Standard deviations in parentheses.

Source: 1860 Census of Population, one-in-a-hundred, PUMS, Minnesota Population Center, University of Minnesota

Table 6

Regression Analysis of LnSEI for Men Age 16 to 60, 1860 Census[a]

Variable	All	Jews		
		All	DJN Jews	Union Jews
Age	0.0429972 (29.23)	0.0052805 (0.18)	0.0046278 (0.11)	0.0082971 (0.21)
Age Squared	-0.0004801 (-24.97)	0.0001128 (0.30)	0.0001916 (0.35)	-5.28e-06 (-0.01)
Illiterate	-0.3613149 (-35.78)	-0.1968142 (-0.84)	-0.0312692 (-0.09)	-0.3402819 (-1.03)
Non-white	-0.4010848 (-23.31)	-0.4651944 (-1.13)	-0.5444337 (-1.30)	(b)
Married (spouse)	0.0932089 (14.13)	-0.2018224 (-1.52)	-0.1583462 (-0.83)	-0.2559029 (-1.37)
Number of Children	-0.0095609 (-6.52)	-0.0022305 (-0.08)	0.0046936 (0.12)	-0.0022527 (-0.06)
Foreign Born	-0.2770919 (-46.69)	0.04137 (0.37)	0.0553578 (0.33)	0.0088793 (0.06)
Rural Farm	-0.6745308 (-102.95)	-0.601496 (-4.63)	-0.6717658 (-3.54)	-0.5953887 (-3.16)
Rural Non-Farm	-0.3672536 (-54.68)	-0.3539355 (-2.87)	-0.1301542 (-0.68)	-0.463995 (-2.63)
South	0.1006349 (17.95)	0.2406437 (2.32)	0.2927189 (2.06)	0.208535 (1.41)
Jews	0.0596462 (1.18)	(b)	(b)	(b)
Jews Foreign Born	0.1905774 (2.91)	(b)	(b)	(b)
Constant	2.347891 (95.05)	2.97084 (6.15)	2.835593 (3.98)	3.128806 (4.62)
Sample Size	67,473	229	117	125
Adjusted R^2	0.1921	0.1509	0.2136	0.0782

(a) Men with a socio-economic status score. Excludes slaves. Union Jews excludes "Brown" and "Davis" surnames. T-ratios in parentheses.

(b) Variable not entered.

Source: 1860 Census of Population, one-in-a-hundred, PUMS, Minnesota Population Center, University of Minnesota

Statistical Appendix A: Analysis of 1860 Census of Population

Definitions of Variables

The variables used in the statistical analyses are defined below.

Data source: 1860 Census of Population, Public Use Microdata Sample, 1 percent free people sample, PUMS, Minnesota Population Center (MPC), University of Minnesota

Definition of population: 16-60 year old free males with an occupation according to the 1860 Census.

Dependent Variable

Duncan Socioeconomic Index (SEI): This is a measure constructed by the Minnesota Population Center (MPC) that assigns an SEI score to each occupation using the 1950 occupational classification scheme (Duncan, 1961). The SEI is a measure of occupational status based upon the income level and educational attainment associated with each occupation in 1950. The SEI variable is constructed using the individual responses to occupation, 1950 basis, from the 1860 Census data. The 1950 Census Bureau occupational classification system is applied to the occupational data, to enhance comparability across years. For pre-1940 samples created at MPC, the alphabetic responses supplied by enumerators were directly coded into the 1950 classification. See Appendix Table A-2 for a list of selected occupations with their SEI values. Any laborer with no specified industry living in a household with a farmer is recoded into farm labor.

In the regression analysis, because of the positive skewness in the SEI distribution, the natural logarithm of the SEI is the dependent variables.

Explanatory Variables

Age: This is the self-reported age of the respondent in years as of his last birthday.

Illiterate: This is a dichotomous variable that distinguishes individuals who are illiterate (cannot read or write in any language) from those who can read and write.

Non-white: This is a dichotomous variable that distinguishes individuals based on their racial origin, as categorized by the census enumerator. All individuals who were categorized as a racial origin other than "white" have been coded as "non-white" for this variable. Non-whites include Black/Negro, Mulatto, American Indian/Alaska Native, and Chinese.

Spouse: This is a dichotomous variable that distinguishes men who were married with their spouse present from all others.

Number of Children: This variable counts the number of own children (of any age or marital status) residing with each individual. It includes step-children and adopted children as well as biological children.

Foreign Born: This is a dichotomous variable that was constructed to distinguish those with a birthplace outside the United States from individuals born in the United States. Birthplace was considered to be the United States if the respondent was born in a state or territory of the United States; all others were considered foreign born. Additional dichotomous variables were created for specific countries of birth.

Rural-Farm: This is a dichotomous variable that distinguishes individuals living in a rural and farm household from all others. The "rural" definition was applied ex-post by the 1940 Census Bureau, in which cities and incorporated places of 2500 inhabitants or more and

townships or other subdivisions having a total population of 10,000 or more as well as a population density of 1000 or more per square mile were coded as “urban”; all other areas were considered rural. Any household that contained a person with the occupation “farmer” was coded as a farm household.

Rural-Non-Farm: This is a dichotomous variable that distinguished individuals living in a rural and non-farm household from all others. The “rural” definition was applied ex-post by the 1940 Census Bureau, in which cities and incorporated places of 2500 inhabitants or more and townships or other subdivisions having a total population of 10,000 or more as well as a population density of 1000 or more per square mile were coded as “urban”; all other areas were considered rural. Any household that contained a person with the occupation “farmer” was coded as a farm household; all others were considered non-farm.

South: This is a dichotomous variable that distinguishes all slave-holding states in 1860 from all other states. This list of states considered slave-holding in this distinction is: Delaware, Missouri, Virginia, Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Texas, Kentucky, Maryland, Tennessee, and the District of Columbia.

Union Jews: This is a dichotomous variable that distinguishes individuals whose surname was included on the list of individuals who were likely Jewish (based on reported religion whether they were married by a Rabbi or in a Synagogue) in the Union Army data (University of Chicago) from all others (Fogel, 2000). “Religion is only recorded in the Union Army data with marriage info. This can be a marriage certificate, a widow’s pension application, or the family circular (a long form about the soldier’s family filled out in 1898 or 1912…). It also allowed me to add some soldiers married by rabbis that weren’t explicitly labeled as Jewish” (E-mail from

Christopher Roudiez, Center for Population Economics, to Barry R. Chiswick, Friday, April 21, 2017). The marriage records occasionally included the officiant's name and title. Although the surnames Brown and Davis were included on this list of Jews in the Union Army data, for this paper individuals with these surnames were not coded as part of the Union Jews variable. Surnames that were included are: Asch, Basch, Berwin, Bloomenthal, Blumenthal, Blumingthal, Bowers, Breslaum, Burgheim, Cahen, Cohen, Cohn, Cowan, Cowen, Dessan, Dessau, Dessaw, Desson, Hersch, Hess, Hirch, Hirish, Hirsch, Hirsh, Hurch, Hursh, Jessel, Kohn, Koff, Kopf, Lasalle, Levin, Lewin, Moses, Neuman, Newman, Newmann, Rosenthal, Rothschild, Stahl, Steinhard, Steinhart, Strauss, Uhlfeld, Vohlfeld, Walberg, Zoellner, Zollmer, and Zollner. For some individuals, the spelling of the surname varied over time and these various spellings were used.

DJN Jews: This is a dichotomous variable that distinguishes individuals with a surname that is considered a "distinctive Jewish name" from all others. For this variable, Jews are identified as individuals having a surname that is on a list of 36 DJNs in Sheskin (1998). These names are Berman, Caplan, Cohen, Epstein, Feldman, Freedman, Friedman, Goldberg, Goldman, Goldstein, Goodman, Greenberg, Gross, Grossman, Jacobs, Jaffe, Kahn, Kaplan, Katz, Kohn, Levin, Levine, Levinson, Levy, Lieberman, Rosen, Rosenberg, Rosenthal, Rubin, Schwartz, Shapiro, Siegel, Silverman, Stern, Weinstein, and Weiss.

Jewish: This is a dichotomous variable that distinguishes individuals who were likely Jewish from all others. Individuals were considered to be likely Jewish if they fell into either the DJN or Union Jews categories.

Jewish Foreign Born: This is a dichotomous variable that distinguishes foreign born individuals who were likely Jewish from all others. This variable uses the definitions of Jewish and foreign born as described above.

Occupational Category: This variable was constructed based on the occupation data, 1950 basis. The occupational categories used are as follows: PTK (Professional, Technical, and Kindred); Farmers (owners, tenants, and managers); Managers (non-farm); Clerical; Sales; Craft (including military and apprentices); Operatives; Service; Farm Workers for wages and farm laborers and fishermen; Laborers (non-farm); No Occupation; and, Not Applicable. Any laborer with no specified industry living in a household with a farmer is recoded into farm labor.

Table A-1

Descriptive Statistics for the Variables Used in the Regression Analysis

Variable	No. Observations	Mean	Standard Deviation	Minimum	Maximum
SEI	77,040	17.74953	18.59091	4	96
LnSEI	67,473	2.728545	0.6952777	1.386294	4.564348
Age	77,040	32.13564	11.74934	16	60
Illiterate	77,040	0.0588136	0.235277	0	1
Non-white	77,040	0.0213266	0.1444716	0	1
Spouse	77,040	0.5438474	0.4980769	0	1
Number of Children	77,040	1.573079	2.148526	0	9
Foreign Born	77,040	0.2484034	0.4320898	0	1
Rural Farm	77,040	0.455932	0.4980575	0	1
Rural Non-Farm	77,040	0.3122015	0.4633945	0	1
South	77,040	0.272352	0.445173	0	1
Union Jews	77,040	0.0018951	0.043492	0	1
DJN Jews	77,040	0.0017523	0.0418245	0	1
Jewish	77,040	0.0034398	0.058549	0	1
Jewish Foreign Born	77,040	0.00196	0.044229	0	1

Source: 1860 Census of Population, one-in-a-hundred, PUMS, Minnesota Population Center, University of Minnesota

Table A-2

Socio-Economic Index (SEI) Scores for Selected Occupations

Occupation[(a)]	SEI	Ln SEI
PTK		
Physicians & Surgeons (075)	92	4.52
Lawyers & Judges (055)	93	4.53
Clergymen (009)	52	3.95
Farmers		
Farmers (owners & tenants) (100)	14	2.64
Farm laborers (wage workers) (820)	6	1.79
Managers		
Managers (buildings) (230)	32	3.47
Officers, ships (240)	54	3.99
Officers & Administrators (nec), Public Administration (250)	66	4.19
Postmasters (270)	60	4.09
Clerical		
Bank Tellers (305)	52	3.95
Shipping and Receiving Clerks (342)	22	3.09
Clerical & Kindred Workers (nec) (390)	44	3.78
Sales		
Hucksters & Peddlers (430)	8	2.08
Real Estate Agents (470)	62	4.13
Salesmen & Sales Clerks (nec) (490)	47	3.85
Craft		
Bakers (500)	22	3.09
Carpenters (510)	19	2.94
Jewelers, Watchmakers (534)	36	3.58
Plumbers & Pipe Fitters (574)	34	3.53
Shoemakers & Repairers (except factory) (582)	12	2.48
Tailors (590)	23	3.14
Operatives		
Sailors & Deck Hands (673)	16	2.77
Boatmen, Canalmen, & Lock Keepers (623)	24	3.18
Deliverymen & Routemen (632)	32	3.47
Switchmen, Railroad (681)	44	3.78
Furnacemen (641)	18	2.89
Services		
Bartenders (750)	19	2.94
Janitors & Sextons (770)	9	2.20
Policemen & Detectives (773)	39	3.66
Cooks (except private household) (754)	15	2.71
Laborers		
Gardeners, except farm and groundskeepers (930)	11	2.40

Longshoremen & Stevedores (940)	11	2.40
Laborers (nec) (970)	8	2.08
Range:		
Highest SEI: Dentists (032)	96	4.56
Lowest SEI: Lumbermen, Raftsmen, & Woodchoppers (950) Porters (780)	4	1.39

[a] nec means not elsewhere classified. Occupation code number in parentheses.

Source: 1860 Census of Population, one-in-a-hundred, PUMS, Minnesota Population Center, University of Minnesota

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