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Appendix for: “Jewish Occupational Attainment in the Antebellum United States:

Filling a Gap in the Literature”

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**Statistical Appendix: Definitions of Variables Used in the Regression Analysis of the 1850 Census of Population and Analysis for Socioeconomic Index (SEI)**

The variables used in the statistical analyses are defined below.

Data source: 1850 Census of Population, Public Use Microdata Sample, full count free people sample, Version 7.3, IPUMS International, Minnesota Population Center (MPC), University of Minnesota, Accessed August 2, 2023.

Definition of population: 16–60-year-old free males with an occupation according to the 1850 Census. Where the person is employed in multiple occupations, the principal one is listed.

*Dependent Variables*

Occupational Income Score (OccInc): This is a measure constructed by the Minnesota Population Center (MPC) that assigns a score to each occupation using the 1950 occupational classification scheme. According to the IPUMS codebook, OccInc assigns each occupation a value representing the median total annual income (in hundreds of 1950 dollars) of all persons with that particular occupation in 1950 (IPUMS-USA, n.d., b). That is, it provides a continuous measure of occupations according to the economic rewards enjoyed by people working at them in 1950. See Appendix Table A-2 for a list of selected occupations with their OccInc values. The range of OccInc is from a low of 3 for Newsboys to a high of 80 for Physicians and Surgeons.

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 on the occupation’s prestige predicted from a regression of the prestige score on the annual income level and years of schooling associated with each occupation in 1950. The occupational prestige ratings are from a 1947 National Opinion Research Study. The SEI variable is constructed using the individual responses to occupation, 1950 basis, from the 1850 Census data (IPUMS-USA, n.d., b). See Appendix Table A-2 for a list of selected occupations with their SEI values. The range of the SEI is from a low of 4 for Lumbermen and Woodchoppers and Porters to a high of 96 for Dentists.

The two measures are interrelated as they both include occupational income in their construction. When the SEI is regressed on OccInc and its square, the adjusted R-square is 0.71 for all free men and 0.73 for the men in the Jewish groups.

In the regression analysis, because of the positive skewness in the OccInc and SEI distributions, the natural logarithm of these indices are the dependent variables.

*Explanatory Variables*

* Age: This is the self-reported age of the respondent in years as of his last birthday. Age squared is also included in the analysis.
* Illiterate: This is a dichotomous variable that takes the value of 1 if the individual is recorded as “cannot read and write” in any language (English or their native language). However, the degree of literacy was not defined; therefore, it is unknown whether being able to read/write one’s own name qualified them as literate or how individuals who could read but not write were classified. Further, this question was only asked of individuals 20 years of age and older. Therefore, for this study, a predicted literacy value was computed for individuals age 16-19 based on their race, nativity, rural-farm status, region, and whether they reported an occupation. The model for predicting literacy was correct for 92.5 percent of individuals age 20-25.
* 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.” Non-Whites include Black/Negro, Mulatto, and American Indian.
* Married: This is a dichotomous variable that indicates the individual is presumed to be married with their spouse present (in the same household). Marital status was not asked in the 1850 Census. Therefore, this variable is constructed using the IPUMS pointer variable for spouse, which identifies the imputed relationships between household members with an estimated 99 percent accuracy rate (IPUMS-USA, n.d., a)
* 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 distinguishes those with a birthplace outside the United States from individuals born in a state or territory of the United States, with all others considered foreign born. There is no question on when the foreign-born person came to the United States.
* Urban, Rural-Non-Farm, and Rural-Farm: These are dichotomous variables that distinguishes individuals living in an urban, rural farm, and rural non-farm household. The “urban” 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 rural household that contained a person with the occupation “farmer” was coded as a rural farm household.
* South: This is a dichotomous variable that distinguishes all slave-holding states in 1850 from all other states: Delaware, Missouri, Virginia (includes West Virginia), Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Texas, Kentucky, Maryland, Tennessee, and the District of Columbia.
* AJS Jews (See Table A-1): Antebellum Jewish Surnames. This includes Union Jewish surnames and surnames with Jewish religion indicated on their occupational string variables in the 1850 full count census microdata files. It is a dichotomous variable that distinguishes individuals whose surname was included on either of those lists.

The Union Jewish surnames is 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 Author 1, Friday, April 21, 2017). The marriage records occasionally included the officiant’s name and title. Although the surnames Bowers, Brown, Davis, and Newman were included on this list of Jews in the Union Army data, for this paper individuals with these Anglo surnames were not coded as part of the Union Jews variable. Surnames that were included are: Asch, Basch, Berwin, Bloomenthal, Blumenthal, Blumingthal, 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, 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.

The AJS Jews also includes surnames of individuals in the 1850 census microdata files whose occupational string data, as it was recorded by the census enumerator, listed a Jewish affiliation. This was primarily Jewish religious practitioners – rabbis, “Jewish clergymen,” “Jew ministers,” or some variation of the same – but also included the surname of an individual whose occupation was listed as a “Jewish trader.” The surnames included are: Barrett, Carless, Casellon, Catcenbouth, Cohen, Danzinger, Davidson, Emanuel, Feine, Fnid, Gotthelf, Gunsburg, Guthien, Hockemer, Isaacs, Jacobs, Judah, Kalisck, Landrin, Leeser, Leo, Lilienthal, Lyons, Manzbacker, Michelbacker, Poppy, Pursly, Raphall, Samuelson, Strams, Strapir, Zeidlinger, and Zunder.

* DJN Jews (See Table A-1): Distinctive Jewish Names. This is a dichotomous variable that distinguishes individuals with a surname that is considered a “distinctive Jewish name” in the late 20th century 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: Individuals were considered to be more likely Jewish if they fell into either the DJN Jews or AJS Jews categories, regardless of their own (but unknown) religion.
* Occupational Category: This variable used for Table 3 was constructed based on the occupation data, 1950 basis. The occupational categories are: 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 as a farm laborer.

**Table A-1**

List of Surnames for the DJN and AJS Groups in the Regression Analysis

(Number in parentheses if more than one observation)

|  |  |
| --- | --- |
| DJN Jews | AJS Jews |
| Berman (51) | Asch (3) |
| Caplan (4) | Barrett (2,114) |
| Cohen (362) \* | Basch (9) |
| Epstein (6) | Berwin |
| Feldman (14) | Blumenthal (7) |
| Freedman (20) | Cahen (3) |
| Friedman (39) | Carless (10) |
| Goldberg (7) | Casellon |
| Goldman (64) | Catcenbouth |
| Goldstein (29) | Cohen (362) \* |
| Goodman (1,319) | Cohn (66) |
| Greenberg (3) | Cowan (755) |
| Gross (1,046) | Cowen (523) |
| Grossman (60) | Danzinger (3) |
| Jacobs (2,423) \* | Davidson (2,846) |
| Jaffe (2) | Dessan (2) |
| Kahn (64) | Dessau |
| Kaplan (2) | Emanuel (63) |
| Katz (46) | Feine (8) |
| Kohn (82) \* | Fnid |
| Levin (56) \* | Gotthelf |
| Levine (47) | Gunsburg |
| Levinson (9) | Guthien |
| Levy (354) | Hersch (18) |
| Lieberman (3) | Hess (1,356) |
| Rosen (39) | Hirch (4) |
| Rosenberg (58) | Hirsch (41) |
| Rosenthal (31) \* | Hirsh (38) |
| Rubin (10) | Hockemer |
| Schwartz (296) | Hurch (2) |
| Siegel (12) | Hursh (67) |
| Silverman (24) | Isaacs (253) |
| Stern (255) | Jacobs (2,423) \* |
| Weinstein (2) | Jessel (4) |
| Weiss (174) | Judah (47) |
|  | Kalisck |
|  | Koff (5) |
|  | Kohn (82) \* |
|  | Kopf (9) |
|  | Landrin (3) |

**Table A-1 continued**

|  |  |
| --- | --- |
| DJN Jews | AJS Jews |
|  | Lasalle (15) |
|  | Leeser (14) |
|  | Leo (69) |
|  | Levin (59) \* |
|  | Lewin (65) |
|  | Lilienthal (7) |
|  | Lyons (1,840) |
|  | Manzbacker |
|  | Michelbacker |
|  | Moses (767) |
|  | Neuman (99) |
|  | Newmann (5) |
|  | Poppy (13) |
|  | Pursly (8) |
|  | Raphall (2) |
|  | Rosenthal (31) \* |
|  | Rothschild (10) |
|  | Samuelson (14) |
|  | Stahl (268) |
|  | Steinhard (2) |
|  | Steinhart (4) |
|  | Strams (7) |
|  | Strapir |
|  | Strauss (93) |
|  | Walberg |
|  | Zeidlinger |
|  | Zunder |

\* Designates names that were on both lists (2,954 men) out of the 15,794 total observations

Source: Minnesota Population Center (2020)

**Table A-2**

1. Occupational Income Scores (OccInc) and Socio-Economic Index (SEI) Scores for Selected Occupations

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Occupation(a)** | **SEI** | **Ln SEI** | **OccInc** | **Ln OccInc** |
| PTK |  | | | |
| Physicians & Surgeons (075) | 92 | 4.52 | 80 | 4.38 |
| Lawyers & Judges (055) | 93 | 4.53 | 62 | 4.13 |
| Clergymen (009) | 52 | 3.95 | 24 | 3.18 |
| Farmers |  | | | |
| Farmers (owners & tenants) (100) | 14 | 2.64 | 14 | 2.64 |
| Farm laborers (wage workers) (820) | 6 | 1.79 | 9 | 2.20 |
| Managers |  | | | |
| Managers (buildings) (230) | 32 | 3.47 | 20 | 3.00 |
| Officers, ships (240) | 54 | 3.99 | 42 | 3.74 |
| Officers & Administrators (nec), Public Administration (250) | 66 | 4.19 | 36 | 3.58 |
| Postmasters (270) | 60 | 4.09 | 29 | 3.37 |
| Clerical |  | | | |
| Bank Tellers (305) | 52 | 3.95 | 26 | 3.26 |
| Shipping and Receiving Clerks (342) | 22 | 3.09 | 26 | 3.26 |
| Clerical & Kindred Workers (nec) (390) | 44 | 3.78 | 25 | 3.22 |
| Sales |  | | | |
| Hucksters & Peddlers (430) | 8 | 2.08 | 13 | 2.56 |
| Real Estate Agents (470) | 62 | 4.13 | 35 | 3.56 |
| Salesmen & Sales Clerks (nec) (490) | 47 | 3.85 | 24 | 3.18 |
| Craft |  | | | |
| Bakers (500) | 22 | 3.09 | 28 | 3.33 |
| Carpenters (510) | 19 | 2.94 | 24 | 3.18 |
| Jewelers, Watchmakers (534) | 36 | 3.58 | 27 | 3.30 |
| Plumbers & Pipe Fitters (574) | 34 | 3.53 | 33 | 3.50 |
| Shoemakers & Repairers (except factory) (582) | 12 | 2.48 | 20 | 3.00 |
| Tailors (590) | 23 | 3.14 | 26 | 3.26 |
| Operatives |  | | | |
| Sailors & Deck Hands (673) | 16 | 2.77 | 23 | 3.24 |
| Boatmen, Canalmen, & Lock Keepers (623) | 24 | 3.18 | 30 | 3.40 |
| Deliverymen & Routemen (632) | 32 | 3.47 | 27 | 3.30 |
| Switchmen, Railroad (681) | 44 | 3.78 | 36 | 3.58 |
| Furnacemen (641) | 18 | 2.89 | 29 | 3.37 |
| Services |  | | | |
| Bartenders (750) | 19 | 2.94 | 25 | 3.22 |
| Janitors & Sextons (770) | 9 | 2.20 | 19 | 2.94 |
| Policemen & Detectives (773) | 39 | 3.66 | 32 | 3.47 |
| Cooks (except private household) (754) | 15 | 2.71 | 16 | 2.77 |

**Table A-2 continued**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Occupation(a)** | **SEI** | **Ln SEI** | **OccInc** | **Ln OccInc** |
| Laborers (non-farm) |  | | | |
| Gardeners, except farm and groundskeepers (930) | 11 | 2.40 | 17 | 2.83 |
| Longshoremen & Stevedores (940) | 11 | 2.40 | 25 | 3.22 |
| Laborers (nec) (970) | 8 | 2.08 | 20 | 3.00 |
|  | | | | |
| Range: |  | | | |
| Highest SEI: Dentists (032) | 96 | 4.56 | 63 | 4.14 |
| Lowest SEI: Lumbermen, Raftsmen, & Woodchoppers (950)  Porters (780) | 4 | 1.39 | 12  18 | 2.48  2.89 |
| Highest OccInc: Physicians and Surgeons (075) | 92 | 4.52 | 80 | 4.38 |
| Lowest OccInc: Newsboys (460) | 27 | 3.30 | 3 | 1.10 |

1. nec means not elsewhere classified. Occupation code number in parentheses.
2. The “Mismatching” of Scores for Selected Occupations for OccInc and SEI among White Men, Age 20 and Over, with a Reported Occupation, 1850

|  |  |  |  |
| --- | --- | --- | --- |
| Occupation | OccInc | SEI | Difference |
| Weavers, Textiles | 23 | 6 | 17 |
| Mine Operatives and Laborers | 24 | 10 | 14 |
| Laborers (nec) | 22 | 10 | 12 |
| Porters | 18 | 4 | 14 |
| Teachers (nec) | 27 | 72 | -45 |
| Pharmacists | 40 | 82 | -42 |
| Musicians and Music Teachers | 15 | 56 | -41 |
| Clergymen | 24 | 52 | -28 |

Notes: nec means “not elsewhere classified”

Source: Minnesota Population Center (2020)

**Table A-3**

Regression Analysis of the Logarithm of the Duncan Socioeconomic Index (LnSEI) for Free Men Age 16 to 60, 1850 Census(a)

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **All - 1** | **All-2** | **Jews** |
| Age | 0.0257491\*\*\* | 0.0257491\*\*\* | 0.0251530\*\*\* |
|  | (179.14) | (179.15) | (9.51) |
| Age Squared | -0.000294204\*\*\* | -0.000294205\*\*\* | -0.000277846\*\*\* |
|  | (-153.44) | (-153.44) | (-7.85) |
| Illiterate | -0.276244\*\*\* | -0.276245\*\*\* | -0.268383\*\*\* |
|  | (-284.41) | (-284.41) | (-14.49) |
| Non-White | -0.495913\*\*\* | -0.495962\*\*\* | -0.562505\*\*\* |
|  | (-282.33) | (-282.36) | (-19.64) |
| Married | 0.0479235\*\*\* | 0.0479207\*\*\* | 0.0397319\*\* |
|  | (71.01) | (71.01) | (3.27) |
| Number of Children | -0.00709020\*\*\* | -0.00708957\*\*\* | -0.00790004\*\* |
| (-47.73) | (-47.73) | (-2.95) |
| Foreign Born | -0.292931\*\*\* | -0.292945\*\*\* | -0.158236\*\*\* |
|  | (-435.72) | (-435.74) | (-13.79) |
| Rural Farm | -0.594114\*\*\* | -0.594094\*\*\* | -0.653826\*\*\* |
|  | (-811.38) | (-811.35) | (-51.35) |
| Rural Non-Farm | -0.316249\*\*\* | -0.316231\*\*\* | -0.335702\*\*\* |
|  | (-426.85) | (-426.82) | (-26.54) |
| South | 0.0738752\*\*\* | 0.0738678\*\*\* | 0.119452\*\*\* |
|  | (136.58) | (136.57) | (12.36) |
| Jews | 0.0474201\*\*\* | (b) | (b) |
|  | (11.56) |  |  |
| DJN-Only Jews | (b) | 0.0794501\*\*\* | (b) |
|  | (9.07) |  |
| AJS-Only Jews | (b) | 0.0284554\*\*\* | -0.0307278\*\* |
|  |  | (5.48) | (-2.82) |
| Both DJN & AJS Jews | (b) | 0.0777345\*\*\* | 0.0156374 |
|  | (7.57) | (1.09) |
| Constant | 2.725877\*\*\* | 2.725868\*\*\* | 2.782817\*\*\* |
|  | (1130.48) | (1130.48) | (62.45) |
| Sample Size | 5,365,332 | 5,365,332 | 18,588 |
| Adjusted R2 | 0.160 | 0.160 | 0.175 |

1. Free men with a socio-economic status score. t-ratios in parentheses. \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001
2. Variable not entered.

Source: Minnesota Population Center (2020)

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