

The Measurement and Coding of Occupations and Industries

This memo reviews the coding of the occupation and industry questions. This memo will address the following: 1) a quick overview on the coding of occupation and industry questions, 2) a review of the occupation and industry survey items included the various UWBHS surveys, and 3) recap of the summary variables based upon the survey items.

Overview of Coding Occupation and Industry Survey Items:

Data on occupations, industries, and other aspects of work are exceeding difficult to collect in surveys and even more difficult to code into meaningful classifications. Respondents are generally asked to describe their jobs in several “census style” open-ended questions. The text responses to these questions are then coded by highly trained clerical staff into hundreds of detailed categories that describe the nature of work, the status of the worker, and the type of work establishment. In addition to the complexities of measurement and coding, there are problems of temporal comparability as the nature of work changes with innovations in technology, authority relations, and institutional arrangements. The major innovation in sociological research on occupations has been the development of socioeconomic indexes (SEI) and other scales that attempt to capture the hierarchical dimension in occupational status, skills, and rewards.

The UW-BHS project responded to these challenges with careful measurement of work and occupations with: 1) replication of standard census questions in our surveys, 2) intensive training of coders to classify occupations and industries into 1990 census (3 digit) classifications, and 3) adding several occupational SEI measures. We have addressed the comparability problem by exclusive reliance on 1990 Census occupational and industry classifications. All of the original text responses were assigned by two highly trained research assistants working independently of each other. If there was a discrepancy in the assigned codes, a third coder (usually one of the original coders) reread the original survey responses and reconciled them. These summary occupational socioeconomic indexes are based on the occupational socioeconomic status scores developed by Hauser and Warren (1997) and subsequently updated by Frederick and Hauser (2008). These documents are reproduced at the end of this memo.

Occupation and Industry Survey Items in the UWBHS:

Data on work, occupation, and industry information were gathered in slightly varied formats for:

- A. The respondent when s/he was a high school senior from the baseline senior survey
- B. The respondent, one year after high school, from the one-year follow up survey
- C. The respondent aspired occupation at age 30 from the baseline senior survey
- D. The respondent's father and mother (or father- and mother-figure) as reported by the respondent in the baseline high school survey
- E. The respondent's parent (or guardian) and her/his partner from the parental survey

The exact wording of the survey questions for each of these measures is reported below.

A. Student's High School Job

The UWBHS senior survey included the following questions about students' jobs while in high school.

138) a) Are you currently employed or have you ever been employed?

Please include work that you have done for pay. However, do not include work that you do around your own home (like mowing your lawn, taking care of younger brothers or sisters, or other chores) or volunteer work.

(CIRCLE ONLY ONE)

I have never been employed.....1 ▶ **SKIP TO QUESTION
.... ON PAGE 34**

I have been employed, but I am not employed now2▶ **GO TO QUESTION
139 ON PAGE 32**

I am currently employed3

b) What are your plans for your current job?

I will continue to work at this job after high school.....1▶ **GO TO QUESTION
139 ON PAGE 32**

I plan to stop working at this job2

When do you plan to stop working at this job?

c) _____ d) _____
Month Year

141) For whom do/did you work?

_____ (Name of Company or Business)

142) What kind of business or industry is/was this? Describe the activity at location where employed. (For example: renovate homes, child care, lawn maintenance, makes fast-food)

142_a) Is/was this mainly –

(CIRCLE ONLY ONE)

Manufacturing?1

Wholesale trade?2

Retail trade?3

Other (agriculture, construction, service, government, etc.)4

143) What kind of work are/were you doing? (For example: construction worker, baby-sitter, landscaper, hamburger cook)

144) **What are/were your most important activities or duties?** (For example: install aluminum siding, change diapers, mow lawns, clean grill)

145) **Are/were you –**

(CIRCLE ONE)

- Employee of a private company or business?1
- Government employee?2
- Self-Employed?3
- Working without pay in a family business or farm?4

B. Student's Aspired Occupation at Age 30

113) **What kind of job or occupation would you LIKE to have when you are 30 years old? Even if you are not sure, please write in your best guess.**

For example, accountant, engineer, secretary, janitor, college teacher, truck driver, priest, gardener, electrician, high school teacher, restaurant manager, homemaker, actor or actress, etc.

C. Student's Job One Year After High School

4) **During the last month, did you do any work for pay or profit?**

[Work includes any employment for pay or profit but does not include work around your own home (like mowing your lawn, taking care of younger brothers or sisters, or other chores) or volunteer work]

(CIRCLE ONE)

- Yes, I have been/was working1
- No, I am not employed2 → **SKIP TO QUESTION 12**

5) **How many hours do you USUALLY work per week on this job?**

_____ hours per week

6) **Who do you work for?**

_____ (Name of Company or Business)

7) **What kind of business or industry is this?**

(For example: renovate homes, child care, lawn maintenance, makes fast-food)

9) **What kind of work are you doing?** (For example: construction worker, baby-sitter, landscaper, hamburger cook)

10) **What are your most important activities or duties?** (For example: install aluminum siding, change diapers, mow lawns, clean grill)

11) **Are you employed by a private company or business, by the government or are you self-employed or working without pay in a family business or farm?**

(CIRCLE ONE)

Employee of a private company or business? 1

Government employee? 2

Self-Employed? 3

Working without pay in a family business or farm? 4

D. Father's (or father figure) and Mother's (of mother figure) job as reported by respondent

We are interested in finding out about the kind of work that he (your FATHER or the person most like a father to you) does.

123) IN THE LAST MONTH, did he (your father or father figure) do any work for either pay or profit?

(CIRCLE ONLY ONE)

Yes1

Not applicable (no male parent/father figure).....2

No3

} **SKIP TO QUESTION 129_a ON PAGE 28**

If he (your father or the person most like a father to you) had more than one job, describe the one at which he worked the most hours. If he had no job or business in the last month, give the information for his last job or business.

124) For whom did he (your father or father figure) work? If now on active duty in the Armed Forces, print the branch of the Armed Forces.

_____ (Name of Company or Business)

125) What kind of business or industry was this? Describe the activity at location where employed. (For example: hospital, newspaper publishing, mail order house, auto repair shop, bank)

126) Is this mainly –

Manufacturing?1

Wholesale trade?2

Retail trade?3

Other (agriculture, construction, service, government, etc.)?4

127) What kind of work was he (your father or father figure) doing? (For example: registered nurse, personnel manager, supervisor of order department, auto mechanic, accountant)

128) What were his most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, repairing automobiles, reconciling financial records)

129) Was he (your father or father figure)-

- Employee of a private company or business?1
- Government employee?2
- Self-Employed?3
- Working without pay in a family business or farm?4

E. Parent's (or guardian) and Parent's spouse/partner's job as reported by parent:

12. IN THE LAST MONTH, did you do any work for either pay or profit?

- Yes 1
- No 2

If you had more than one job, describe the one at which you worked the most hours. If you had no job or business in the last month, give the information for your last job or business.

13. For whom do/did you work? If now on active duty in the Armed Forces, print the branch of the Armed Forces.

_____ (Name of Company or Business)

14. What kind of business or industry is/was this? Describe the activity at location where employed. (For example: hospital, newspaper publishing, mail order house, auto repair shop, bank)

15. Is/was this mainly -

(CIRCLE ONLY ONE)

- Manufacturing? 1
- Wholesale trade? 2
- Retail trade? 3
- Other (agriculture, construction, service, government, etc.)? 4

16. What kind of work are/were you doing? (For example: registered nurse, personnel manager, supervisor of order department, auto mechanic, accountant)

17. What are/were your most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, repairing automobiles, reconciling financial records)

18. Are/were you -

(CIRCLE ONLY ONE)

- Employee of a private company or business? 1
- Government employee? 2
- Self-Employed? 3
- Working without pay in a family business or farm? 4

E (continued)Parent Survey: Questions about parent's spouse's job:

29. IN THE LAST MONTH, did your spouse/partner do any work for either pay or profit?

- Yes 1
- No 2

If he/she had more than one job, describe the one at which he/she worked the most hours. If he/she had no job or business in the last month, give the information for his/her last job or business.

30. For whom do/did he/she work? If now on active duty in the Armed Forces, print the branch of the Armed Forces.

_____ (Name of Company or Business)

31. What kind of business or industry is/was this? Describe the activity at location where employed. (For example: hospital, newspaper publishing, mail order house, auto repair shop, bank)

32. Is/was this mainly –

(CIRCLE ONLY ONE)

- Manufacturing?..... 1
- Wholesale trade?2
- Retail trade?3
- Other (agriculture, construction, service, government, etc.)?4

33. What kind of work is/was he/she doing? (For example: registered nurse, personnel manager, supervisor of order department, auto mechanic, accountant)

34. What are/were his/her most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, repairing automobiles, reconciling financial records)

34_a) Is/was he/she–

(CIRCLE ONLY ONE)

- Employee of a private company or business? 1
- Government employee?2
- Self-Employed?3
- Working without pay in a family business or farm?4

Summary Occupation and Industry Measures in the UWBHS Data File:

Following the completion of data collection of each survey, graduate and undergraduate students, as well as project staff were trained to code occupational and industrial data. Key references are a) "A manual for coding survey information about occupations" (pp. 59 -80 of Robert M. Hauser and David Featherman. 1977. *The Process of Stratification; Trends and Analyses*. Academic Press; The Standard Occupational and Industrial Classification Manual) and b) Alphabetical Indexes of Industries of Industries and Occupations (1990 census manuals). Two staff members independently coded each set of responses of class of worker/industry/occupation. All differences in coding were reconciled by the two experienced coders. In the few instances that the coders were unable to reach an agreement on a specific case, the coders' work and findings were reviewed by a third coder (often the team leader) to allow for an additional opinion.

The UWBHS data archive includes the three digit occupation and industry codes for each set of questions. In addition to the raw occupational industry codes, the data archive also contains three summary Occupational SEI variables for each occupation: Educational SEI, Income SEI, and Total SEI. These three socioeconomic status scores are based on the research by Hauser and Warren (1997), which extended Otis Dudley Duncan's research. Hauser and Warren created several SEI scores for all occupations in the 1990 census by regressing the occupational prestige from the 1989 General Social Survey on the educational and earnings of occupational incumbents from the 1990 Census. The SEI scores are the predicted occupational prestige scores for each occupation based on different independent variables.

1. The **Educational SEI** scores are the predicted occupational prestige based on the proportion of individuals in the employed civilian labor force in that occupation who had completed at least some college as of 1990.
2. The **Income SEI** scores are the predicted occupational prestige based on the proportion of individuals in the employed civilian labor force in that occupation who earned \$14.30 or more per hour in 1989
3. The **Total SEI** scores are the predicted occupational prestige based on a weighted average of both the proportion with some college and the proportion earning more than \$14.30 an hour in 1989

The work of Hauser and Warren (1997) has been updated by Frederick and Hauser (2008) to create comparable measures for 2000 Census occupations. Since some of our initial occupational coding was to 2000 categories, we used the Frederick and Hauser crosswalk from 2000 occupations to 1990 occupations to create consistent 1990 occupational codes and SEI scores.

The table below displays all of the summary occupation and industry measures included in the UWBHS data file.

Table 1. Occupation and Industry Summary Measures included in the UWBHS Data File

Variable	Type of Variable	Description	Source	Type of Code	Valid Cases ^D
SSIND	Student HS Job	Student High School Industry Code	Senior Survey	Census Industry Code	6,856
SSOCC	Student HS Job	Student High School Occupational Code	Senior Survey	Census Occ Code	6,911
SSocced	Student HS Job	Student Occupation: Education SEI for 1997	Senior Survey	SEI: Hauser & Warren	6,889
SSoccinc	Student HS Job	Student Occupation: Income SEI for 1997	Senior Survey	SEI: Hauser & Warren	6,889
SStsei	Student HS Job	Student Occupation" Total SEI for 1997	Senior Survey	SEI: Hauser & Warren	6,889
SASPocc	Stdnt Occ Aspirations	Occupation code for Student Aspiration S113	Senior Survey	Census Industry Code	8,029
SASPind	Stdnt Occ Aspirations	Industry code for Student Aspiration S113	Senior Survey	Census Occ Code	4,957
SASPOced	Stdnt Occ Aspirations	Education SEI--1997--for Student Aspiration, s113	Senior Survey	SEI: Hauser & Warren	8,029
SASPocin	Stdnt Occ Aspirations	Income SEI--1997--for Student Aspiration, s113	Senior Survey	SEI: Hauser & Warren	8,029
SASPsei	Stdnt Occ Aspirations	Total SEI--1997--for Student Aspiration, s113	Senior Survey	SEI: Hauser & Warren	8,029
follocc	Stdnt Job at Follow-up	Student FollowUp Occupation Code	Student Follow-up ^C	SEI: Hauser & Warren	4,934
folind	Stdnt Job at Follow-up	Student FollowUp Industry Code	Student Follow-up ^C	SEI: Hauser & Warren	5,160
FLocced	Stdnt Job at Follow-up	FollowUp Occupation: Education SEI for 1997	Student Follow-up ^C	SEI: Hauser & Warren	4,934
FLoccinc	Stdnt Job at Follow-up	FollowUp Occupation: Income SEI for 1997	Student Follow-up ^C	SEI: Hauser & Warren	4,934
FLtsei	Stdnt Job at Follow-up	FollowUp Occupation: Total SEI for 1997	Student Follow-up ^C	SEI: Hauser & Warren	4,934
SFocc	Stdnt report of parent job	Student Report of Father Occupation (2000 code except 2003=1990Code)	Senior Survey	Census Occ Code	6,613
SFind	Stdnt report of parent job	Student Report of Father Industry (2000 code except 2003=1990Code)	Senior Survey	Census Industry Code	7,285
SMocc	Stdnt report of parent job	Student Report of Mother Occupation, Code=2000, exc code=1990 for 2003	Senior Survey	Census Occ Code	6,265
SMind	Stdnt report of parent job	Student Report of Mother Industry, Code=2000, exc code=1990 for 2003	Senior Survey	Census Industry Code	6,243
SFOcced	Stdnt report of parent job	Student Report of Father Occupation: Education SEI for 1997	Senior Survey	SEI: Hauser & Warren	6,525
SFOccinc	Stdnt report of parent job	Student Report of Father Occupation: Income SEI for 1997	Senior Survey	SEI: Hauser & Warren	6,525
SFtsei	Stdnt report of parent job	Student Report of Father Occupation: Total SEI for 1997	Senior Survey	SEI: Hauser & Warren	6,525
SMocced	Stdnt report of parent job	Student report of Mother Occupation: Education SEI for 1997	Senior Survey	SEI: Hauser & Warren	6,258
SMoccinc	Stdnt report of parent job	Student report of Mother Occupation: Income SEI for 1997	Senior Survey	SEI: Hauser & Warren	6,258
SMtsei	Stdnt report of parent job	Student report of Mother Occupation: Total SEI for 1997	Senior Survey	SEI: Hauser & Warren	6,258
pFocc	Parent and Spouse job ^A	Parental Survey, Female, 2000 Occupation Code Code	Parental Survey ^B	SEI: Hauser & Warren	1,853
pFind	Parent and Spouse job ^A	Parental Survey, Female, 2000 Industry Code	Parental Survey ^B	SEI: Hauser & Warren	1,816
pFOcced97	Parent and Spouse job ^A	Parental Survey, Female, 1997 Educ SEI for Occupation	Parental Survey ^B	SEI: Hauser & Warren	1,853
pFOccin97	Parent and Spouse job ^A	Parental Survey, Female, 1997 Income SEI for Occupation	Parental Survey ^B	SEI: Hauser & Warren	1,853
pFsei97	Parent and Spouse job ^A	Parental Survey, Female, 1997 Total SEI for Occupation	Parental Survey ^B	SEI: Hauser & Warren	1,853
pMocc	Parent and Spouse job ^A	Parental Survey, Male, 2000 Occupation Code Code	Parental Survey ^B	SEI: Hauser & Warren	1,646
pMind	Parent and Spouse job ^A	Parental Survey, Male, 2000 Industry Code	Parental Survey ^B	SEI: Hauser & Warren	1,632
pMOcced97	Parent and Spouse job ^A	Parental Survey, Male, 1997 Educ SEI for Occupation	Parental Survey ^B	SEI: Hauser & Warren	1,646
pMOccin97	Parent and Spouse job ^A	Parental Survey, Male, 1997 Income SEI for Occupation	Parental Survey ^B	SEI: Hauser & Warren	1,646
pMsei97	Parent and Spouse job ^A	Parental Survey, Male, 1997 Total SEI for Occupation	Parental SurveyB	SEI: Hauser & Warren	1,646

Notes:

^A: The UWBHS includes the occupation and industry for each parent's job, as reported by the parent. The occupation code variable is PFocc for the male guardian and PMocc for the female guardian. The industry code variable is PFind for the male guardian and PMind for the female guardian. The UWBHS data file also includes occupational socioeconomic status scores for male guardian's and guardian's job calculated in the three different ways outlined above. These are pfocced97, pfocin97, and pfsei97 for the male guardian and pmoced97, pmocin97, and pmsei97 for the female guardian.

^B: The parental survey was not administered for all cohorts. It was only administered for the 2000, 2002, and 2003 cohorts. The response rate was roughly 50%.

^C: The follow up survey was conducted roughly one year after the seniors were scheduled to graduate from high school. The response rate for the follow up was 92%.

^D: There are numerous reasons that a case could be missing data for one of the occupation or industry codes. It is possible that the student or parent did not answer the question as it did not pertain to them in that the student did not have a parental figure or the parent did not have a spouse/partner. Also, it is possible that the questions were not answered as the questions did not apply in that the individual (or the student's parent) was not working, so they skipped the question. Additionally, it is possible that the respondent provided an answer but it was illegible or it did not provide sufficient enough information to allow for an accurate occupation or industry code. Lastly, it is possible that the respondent accidentally missed a few questions while completing the survey.