

# Data Analysis of Socio-Economic Status (SES)

The purpose of this assignment is to apply what you have learned in this course regarding the consequences of marginalization to an analysis of actual Census data for the United States in the year 2000. For this assignment, we will explore the impact of racial affiliation and sex on social class, as represented by socio-economic status (SES): level of education, occupation and income.

## Learning Objectives:

### *Skill*

There will be some indirect benefits to completing the assignment:

- To appreciate the sociological importance of collecting data on demographic variables such as race and sex.
- To gain exposure to working with numerical data.
- To learn how to read and interpret univariate, bivariate, and multivariate tables.

### *Substance*

Some of our learning objectives focus on the content of this course:

- To recognize the social class consequences of other forms of marginalization, specifically race and sex.
- To recognize the social class impact of having “multiple strikes” against you (such as being Hispanic *and* female, etc.).

## Data:

The data you will be using comes from the 2000 Census and includes five variables: race (RaceLat), sex (Gender), family type (Famtype—note: we will not be using this variable), income (Earning), level of education (Educ), and occupation (Occup).

## The Variables:

Race (RaceLat)	Sex (Gender)	Income (Earning)	Education (Educ)	Occupation (Occup) <sup>1</sup>
NLWhite = White (non Latino)	Male	<25K = less than \$25,000	LTHS = less than high school	TopWC = top white collar
Black	Female	25 - 35K = \$25,000 - \$34,999	HS Grad = high school graduate	OtrWC = other white collar
Latino		35 - 50K = \$35,000 - \$49,999	SomeColl = some college, no degree	Service = Service
Asian		50 - 70K = \$50,000 - \$69,999	CollGrad = college graduate	TopBC = top blue collar
AmIndian = American Indian		70 - 100K = \$70,000 - \$99,999		OtrBC = other blue collar
		100K+ = \$100,000 or more		Farm = Farm

We will focus on the interrelationships between race and sex and income, level of education, and occupation. Because the data is limited to those old enough to have data on income, level of education, and occupation, it includes only full-time workers between the ages of 25 and 64.

In 1999 (one year earlier, so this data will be slightly off as compared to the 2000 data), the total U.S. population was 271,742,836. Of these, 52.1% (n = 141,578,018) are between the ages of 25 and 64. Here are the frequency distributions for sex and race in 1999:

### Gender

Male	Female
48.9%	51.1%

### Racelat

NLwhite	Black	Latino	Asian	AmIndian
71.1%	12.9%	4.0%	11.1%	0.9%

Also in 1999, roughly 36.2% of the total U.S. population worked full time. If you subtract those under 25 years of age and 65 and older (those not included in the 2000 data set), that means that approximately 15.9% of those between the ages of 25 and 64 work *less than full time*.

<sup>1</sup> *Top White Collar*: professional workers, executives, administrators, and managers.

*Other White Collar*: administrative support, clerical and sales workers, technicians, and related support.

*Service*: private household, protective service, and other service workers (waiter, beautician, janitor, etc.)

*Top Blue Collar*: "skilled blue collar" jobs such as precision production, craft (including plumbers, electricians, etc.), & repair workers.

*Other Blue Collar*: workers in less skilled blue collar job (i.e. day laborers, warehouse stockers, helpers, etc.)

*Farm*: workers in farm, ranch, forestry, and fishery occupations.

## DATA ANALYSIS OF SOCIO-ECONOMIC STATUS (SES)—THE TABLES

2000 Personal Earning BY Occupation, Education & Family Type for full-time workers Aged 25-64

RaceLat   Gender   Famtype   Earning   Educ   Occup   N = 98436674  
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**Table 1: Frequency Distributions**

RaceLat						
	NLWhite	Black	Latino	Asian	AmIndian	
	73.4%	11.9%	9.8%	4.1%	0.8%	
Gender						
	Male	Female				
	57.7%	42.3%				
Famtype						
	MrrdCpl	MaleFam	FemIFam	MaleNonF	FemINonF	
	65.8%	4.7%	10.6%	10.8%	8.1%	
Earning						
	<25K	25-35K	35-50K	50-70K	70-100K	100K+
	35.1%	20.3%	20.4%	12.9%	6.4%	4.7%
Educ						
	LTHS	HSGrad	SomeColl	CollGrad		
	9.5%	31.6%	27.7%	31.2%		
Occup						
	TopWC	OtrWC	Service	TopBC	OtrBC	Farm
	33.8%	27.2%	10.4%	12.5%	13.9%	2.2%

**Table 2: Earning Distribution by Race**

	NLWhite	Black	Latino	Asian	AmIndian	Total
<25K	30.0% (21,698,600)	46.2% (5,408,840)	59.0% (5,695,934)	33.7% (1,364,948)	51.1% (408,323)	35.1%
25-35K	20.4% (14,763,888)	22.5% (2,633,023)	17.7% (1,707,476)	18.8% (763,238)	20.4% (162,920)	20.3%
35-50K	21.9% (15,847,444)	17.5% (2,048,907)	13.5% (1,306,614)	18.8% (759,969)	17.3% (138,015)	20.4%
50-70K	14.5% (10,449,852)	9.1% (1,063,261)	6.3% (603,894)	14.0% (567,992)	7.8% (62,253)	12.9%
70-100K	7.5% (5,382,828)	3.0% (354,079)	2.3% (223,521)	8.3% (337,096)	2.5% (20,014)	6.4%
100K+	5.7% (4,099,705)	1.6% (189,481)	1.1% (109,826)	6.4% (257,264)	0.9% (7,468)	4.7%
All	72,242,312	11,697,591	9,647,265	4,050,507	798,993	N = 98,436,768

**Table 3: Earning Distribution by Race, Controlling for Gender**

**Gender = Male**

	NLWhite	Black	Latino	Asian	AmIndian	
<25K	21.7% (9,216,469)	38.9% (2,176,406)	54.1% (3,246,980)	27.3% (618,914)	44.1% (199,653)	27.2%
25-35K	18.3% (7,776,767)	22.4% (1,253,389)	18.9% (1,131,337)	18.0% (409,037)	19.1% (86,298)	18.8%
35-50K	23.6% (10,013,152)	19.7% (1,103,455)	15.0% (900,845)	18.6% (421,177)	20.8% (94,165)	22.1%
50-70K	18.2% (7,719,217)	12.5% (697,290)	7.5% (449,650)	15.7% (354,968)	11.3% (51,375)	16.3%
70-100K	10.0% (4,262,512)	4.4% (245,657)	3.1% (184,120)	10.5% (237,868)	3.2% (14,600)	8.7%
100K+	8.3% (3,522,478)	2.2% (120,919)	1.4% (86,195)	9.9% (225,444)	1.5% (6,808)	7.0%
All	42,510,592	5,597,116	5,999,127	2,267,408	452,899	N = 56,827,268

**Gender = Female**

	NLWhite	Black	Latino	Asian	AmIndian	
<25K	42.0% (12,482,132)	53.0% (3,232,434)	67.1% (2,448,954)	41.8% (746,034)	60.3% (208,670)	45.9%
25-35K	23.5% (6,987,121)	22.6% (1,379,634)	15.8% (576,139)	19.9% (354,201)	22.1% (76,622)	22.5%
35-50K	19.6% (5,834,292)	15.5% (945,452)	11.1% (405,769)	19.0% (338,792)	12.7% (43,850)	18.2%
50-70K	9.2% (2,730,635)	6.0% (365,971)	4.2% (154,244)	11.9% (213,024)	3.1% (10,878)	8.4%
70-100K	3.8% (1,120,316)	1.8% (108,422)	1.1% (39,401)	5.6% (99,228)	1.6% (5,414)	3.3%
100K+	1.9% (577,227)	1.1% (68,562)	0.6% (23,631)	1.8% (31,820)	0.2% (660)	1.7%
All	29,731,724	6,100,475	3,648,138	1,783,099	346,094	N = 41,609,544

**Table 4: Educational Attainment by Race**

	NLWhite	Black	Latino	Asian	AmIndian	
LTHS	5.7% (4,109,801)	10.5% (1,229,677)	36.9% (3,555,844)	7.9% (320,183)	20.9% (166,777)	9.5%
HSGrad	31.8% (22,994,000)	35.8% (4,192,081)	29.6% (2,857,497)	20.7% (839,032)	29.3% (234,185)	31.6%
SomeColl	28.3% (20,428,248)	31.7% (3,707,970)	20.8% (2,002,393)	20.6% (834,739)	32.9% (263,093)	27.7%
CollGrad	34.2% (24,710,266)	22.0% (2,567,863)	12.8% (1,231,531)	50.8% (2,056,553)	16.9% (134,938)	31.2%
All	72,242,312	11,697,591	9,647,265	4,050,507	798,993	N = 98,436,768

**Table 5: Educational Attainment by Race, Controlling for Gender**

**Gender = Male**

	NLWhite	Black	Latino	Asian	AmIndian	
LTHS	6.4% (2,706,666)	11.7% (657,476)	41.1% (2,468,254)	7.3% (166,054)	25.2% (114,002)	10.8%
HSGrad	31.9% (13,571,819)	38.4% (2,150,340)	29.4% (1,765,968)	19.8% (447,845)	28.0% (126,926)	31.8%
SomeColl	27.1% (11,536,737)	29.1% (1,631,430)	18.1% (1,085,252)	20.6% (466,103)	30.7% (139,234)	26.1%
CollGrad	34.6% (14,695,373)	20.7% (1,157,870)	11.3% (679,653)	52.4% (1,187,406)	16.1% (72,737)	31.3%
All	42,510,596	5,597,116	5,999,127	2,267,408	452,899	N = 56,827,268

**Gender = Female**

	NLWhite	Black	Latino	Asian	AmIndian	
LTHS	4.7% (1,403,135)	9.4% (572,201)	29.8% (1,087,590)	8.6% (154,129)	15.2% (52,775)	7.9%
HSGrad	31.7% (9,422,191)	33.5% (2,041,741)	29.9% (1,091,529)	21.9% (391,187)	31.0% (107,259)	31.4%
SomeColl	29.9% (8,891,512)	34.0% (2,076,540)	25.1% (917,141)	20.7% (368,636)	35.8% (123,859)	29.7%
CollGrad	33.7% (10,014,885)	23.1% (1,409,993)	15.1% (551,878)	48.7% (869,147)	18.0% (62,201)	31.0%
All	29,731,724	6,100,475	3,648,138	1,783,099	346,094	N = 41,609,544

**Table 6: Occupation by Race**

	NLWhite	Black	Latino	Asian	AmIndian	
TopWC	37.3% (26,934,968)	24.7% (2,892,172)	15.8% (1,521,955)	43.2% (1,750,822)	23.0% (183,665)	33.8%
OtrWC	28.1% (20,327,030)	27.3% (3,189,804)	21.5% (2,073,299)	24.7% (999,826)	25.1% (200,794)	27.2%
Service	8.1% (5,820,949)	19.5% (2,281,487)	16.1% (1,549,443)	12.5% (505,098)	13.6% (108,366)	10.4%
TopBC	12.9% (9,308,045)	9.0% (1,047,407)	16.6% (1,599,281)	6.5% (263,860)	14.1% (112,507)	12.5%
OtrBC	11.8% (8,492,663)	18.9% (2,210,369)	23.5% (2,269,505)	12.5% (504,972)	20.9% (167,071)	13.9%
Farm	1.9% (1,358,650)	0.7% (76,352)	6.6% (633,782)	0.6% (25,929)	3.3% (26,590)	2.2%
All	72,242,304	11,697,591	9,647,265	4,050,507	798,993	N = 98,436,768



**Table 7: Occupation by Race, Controlling for Gender**

**Gender = Male**

	NLWhite	Black	Latino	Asian	AmIndian	
TopWC	35.2% (14,945,879)	19.7% (1,103,934)	12.9% (772,468)	43.7% (990,838)	17.7% (80,316)	31.5%
OtrWC	19.8% (8,433,369)	17.9% (1,003,825)	13.3% (797,244)	21.7% (491,422)	14.3% (64,643)	19.0%
Service	6.5% (2,764,267)	15.9% (889,708)	12.5% (748,245)	10.9% (246,708)	12.0% (54,411)	8.3%
TopBC	20.1% (8,539,821)	16.4% (920,115)	24.3% (1,455,381)	9.0% (203,649)	21.4% (97,134)	19.7%
OtrBC	15.8% (6,718,916)	28.7% (1,608,506)	28.1% (1,686,410)	14.0% (317,679)	29.6% (134,001)	18.4%
Farm	2.6% (1,108,343)	1.3% (71,028)	9.0% (539,379)	0.8% (17,112)	4.9% (22,394)	3.1%
All	42,510,596	5,597,116	5,999,127	2,267,408	452,899	N = 56,827,268

**Gender = Female**

	NLWhite	Black	Latino	Asian	AmIndian	
TopWC	40.3% (11,989,103)	29.3% (1,788,238)	20.5% (749,487)	42.6% (759,984)	29.9% (103,349)	37.0%
OtrWC	40.0% (11,893,660)	35.8% (2,185,979)	35.0% (1,276,055)	28.5% (508,404)	39.3% (136,151)	38.5%
Service	10.3% (3,056,682)	22.8% (1,391,779)	22.0% (801,198)	14.5% (258,390)	15.6% (53,955)	13.4%
TopBC	2.6% (768,224)	2.1% (127,292)	3.9% (143,900)	3.4% (60,211)	4.4% (15,373)	2.7%
OtrBC	6.0% (1,773,747)	9.9% (601,863)	16.0% (583,095)	10.5% (187,293)	9.6% (33,070)	7.6%
Farm	0.8% (250,307)	0.1% (5,324)	2.6% (94,403)	0.5% (8,817)	1.2% (4,196)	0.9%
All	29,731,724	6,100,475	3,648,138	1,783,099	346,094	N = 41,609,544

## ANALYSIS OF SES WORKSHEET

The class will be divided into groups and each group will be assigned a different dependent variable on which to focus when answering the questions. The dependent variables are income, education, and occupation, all of which represent different dimensions of socio-economic status (SES). For this exercise, we will look at the impact of race and sex (which will be used as independent variables) on SES as represented by the three dependent variables. **Be prepared to present your findings to the rest of the class.**

1. Recall that the data set we are using includes only full-time workers between the ages of 25 and 64. What are the strengths and weaknesses of restricting the data to this population?
2. First look at Table 1 above. How do the numbers for sex and race compare with the frequency distributions for all individuals in that age group (as identified on the second page of this assignment)? How might you explain the discrepancies between these figures?
3. **At this point, begin focusing on those tables that represent the dependent variable your group has been assigned: income, education, or occupation.** Find the table representing the SES distribution (as represented by income, level of education, or occupation) within each *racial* category. Draw comparisons between whites and the other racial categories. In addition, pick two non-white groups for comparison. How do the different races compare in terms of their socio-economic status as represented by your assigned dependent variable?
4. Find the table representing the SES distribution (as represented by income, level of education, or occupation) within each racial category *controlled by gender*. Describe the racial distribution *for women* within your assigned dependent variable (income, level of education, or occupation). Then describe the racial distribution *for men* within your assigned dependent variable (income, level of education, or occupation). How do men and women compare with each other?

5. Draw comparisons between the tables controlling for gender in question four and the table you used in question three. Start by comparing male and female whites with each other *and* with whites as a whole. Then compare males and females of another race with each other *and* with their racial category as a whole *and* with whites as a whole. Finally, choose two *non-white* groups for comparison and compare the males and females of one group with the males and females of another group.
  
6. Summarize your findings in response to these three questions:
  - a. What are the SES consequences of race and gender? What might explain your findings?
  - b. What is the impact on SES of having “multiple strikes” against you? What might explain your findings?
  - c. What are the statistical limitations of this analysis?
  
7. **On your own**, review the tables you have analyzed in this assignment and locate where, in each table, you would be (assuming you finish your college degree). On a separate piece of paper, write a reflection on your life chances given your sex and race. How does stratification based on race and gender affect your own life chances? What have you learned about your position in society and how it compares with others? Bring this written reflection with you to the next class and be prepared to discuss it with your group members.