

# Exploring Educational Attainment of U.S. Native-born and Foreign-born

## Module

**By: Elhum Haghighat-Sordellini, CUNY-Lehman**

### LEARNING OBJECTIVES

Throughout the semester we have been exploring the relationship between individual's social characteristics and their educational attainment. We have read several articles on this topic and will continue to explore it further. We watched the film "U.S. Schools," read Jonathan Kozol's books and read several articles on stratification within and between schools; racial segregation and resource inequality; tracking; the relationship between social class, race, ethnicity, immigration status, gender, and educational attainment of students.

#### *Skill*

- To introduce you to some basic analysis software (WebCHIP)
- To develop some familiarity with working with data from the 2000 U.S. Census
- Identifying independent and dependent variables
- Employing control variables
- Forming testable hypotheses using quantitative data
- Quantitative writing
- Learning how to construct, read, and interpret bivariate tables displaying frequencies and percentages
- Creating visual tools representing quantitative data in the form of charts or graphs
- Using real world data to enhance and support key course concepts

#### *Substance*

- To apply what you have learned in this course and try to explain the relationship between race, ethnicity, nativity, gender of the U.S. population and their educational attainment by using actual data
- To understand the complexity of the relationship between individual social characteristics and their educational attainment

### STEPS TO COMPLETING THE DATA ANALYSIS PROJECT

Hypotheses are generally testable statements of relations. They are thought as predications, which if affirmed, will support a theory.

The **hypotheses** you are testing is as follows:

**First generation U.S. immigrants in the U.S. are more likely to have lower educational attainment than native-born Americans.**

**Minorities are more likely to have lower educational attainment than non-minorities in the U.S.**

Your **dependent variable** is: **educational attainment of the individual**

Your **independent** variable is: **nativity status of the individual**  
&  
**Race/ethnic background of the individual**

Therefore: **independent variables**      **dependent variable**

<b>Nativity</b>	→	<b>educational attainment</b>
<b>Race/ethnicity</b>	→	<b>educational attainment</b>

A **variable** is a concept that can either take on different values or that has two or more categories (can **vary** from one to another). Income is an example of a variable. A person's income could be \$100,000 per year, or it could be \$10,000.

In a **hypothesis** or research project, a variable that the researcher thinks is a cause is called an **independent variable** (or sometimes a predictor variable). The **dependent variable** is the presumed effect in a study; it "depends" on another variable.

## ACCESSING THE DATA

The software we are using for this particular project is called WebCHIP. We are utilizing Census 2000 data for this exercise.

- You can access WebCHIP through the following link:  
<http://ssdan.net/datacounts/webchip>
- In the left sidebar to choose the collection "**acs2010**"
- Next, select the dataset "**EducImm**"
- Click "Compute Marginals" to see all the marginals in the dataset

*Display the dataset Info to answer the following questions:*

1. What does N=182,147,117 mean?

The variables we are utilizing are:  
Immentry= immigration status/nativity  
AgeEduc= educational achievement at age 25+  
RaceEth= racial and/or ethnic identification  
Gender= sex of the respondent

2. What are the attributes of each of the above variables?

Immentry?

AgeEduc?

RaceEth?

Gender?

Display a bar chart and run a cross tabulation of variables "imm by educ." Then fill out the table below with corresponding percentages.

**Helpful hints:**

To simplify, round your numbers

**ANALYZING THE DATA**

**Table 1:** Nativity of 2000 U.S. Population, age 25+ and their educational attainment

Nativity	Educational attainment							Total 100%
	0-9Yrs	10-12Yrs (not a HS graduate)	HSGrad	Some Coll	Coll Grad	Masters	PhD-Prof	
<b>Native</b>	7	9		29		6	3	100
<b>FB &lt; 1980</b>	24	11		22		6	4	100
<b>FB 80-89</b>	29	12		19		5	4	100
<b>FB 90-99</b>	26	11		16		7	5	100
<b>All</b>	10	10		27		6	3	100

[Cross tabulation: percent across, Immentry/AgeEduc, wgt'd 5% PUMS, Frey/U-Mich for SSDAN]

3. Compare the native born with the foreign-born. Which group has the highest educational attainment?

	Native born	foreign born
0-12 years of education with a HS diploma	—	_____
with a college degree	_____	_____
with a masters, Ph.D., Prof. degree	—	_____

4. What is your general conclusion of the table?

To investigate our hypotheses further, we can take gender into account as a control variable.

**Control variable**                      **independent variable**                      **dependent variable**

**gender → nativity → educational attainment**

**Table 2:** Nativity of 2000 **Male Population**, age 25+ and their educational attainment

Nativity	Educational attainment							
	0-9Yrs	10-12Yrs (not a HS graduate)	HSGrad	Some Coll.	Coll. Grad	Masters	PhD-Prof	Total 100%
<b>Native</b>	7	9		28	17		4	100
<b>FB &lt; 1980</b>	24	11		21	14		6	100
<b>FB 80-89</b>	29	13		18	12		4	100
<b>FB 90-99</b>	26	11		15	15		6	100
<b>All</b>	10	10		26	16		4	100

[Cross tabulation: percent across, Immentry/AgeEduc, control for gender, wgted 5% PUMS, Frey/U-Mich. for SSDAN]

**Table 3:** Nativity of 2000 **Female Population**, age 25+ and their educational attainment

Nativity	Educational attainment							
	0-9Yrs	10-12Yrs (not a HS graduate)	HSGrad	Some Coll.	Coll. Grad	Masters	PhD-Prof	Total 100%
<b>Native</b>	7		31	30	15	6	2	100
<b>FB &lt; 1980</b>	24		22	23	13	5	3	100
<b>FB 80-89</b>	29		20	20	13	4	3	100
<b>FB 90-99</b>	27		20	17	16	6	4	100
<b>All</b>	10		30	28	15	6	2	100

[Cross tabulation: percent across, Immentry/AgeEduc control for gender, wgted 5% PUMS, Frey/U-Mich. for SSDAN]

5. Compare the native born with the foreign born with respect to males and females. Which group has the highest educational attainment?

	Male native born foreign born	Male
0-12 years of education	—	_____
with a HS diploma	_____	_____
with a college degree	_____	_____
with a masters, Ph.D., Prof. degree	—	_____
		_____
	Female native born foreign born	Female
0-12 years of education	—	=====
with a HS diploma	_____	_____
with a college degree	_____	_____
with a masters, Ph.D., Prof. degree	—	_____



6. What is your general conclusion of the last two tables with regard to the relationship between nativity, gender and educational attainment?

7. Pay close attention to 0-9 years category. What difference do you see between the native- born and foreign-born?

In this section, we will replace nativity with race/ethnicity to have a broader understanding of the relationship between the variables.

**Control variable**                      **independent variable**                      **dependent variable**

**gender → race/ethnic identity → educational attainment**

Display a cross tabulation of variables imm/educ and control for race. Then fill out the table below with corresponding percentages.

**Table 4:** Race/ethnic identification of 2000 U.S., age 25+ and their educational attainment

<b>Racial/ethnic identification</b>	<b>Educational attainment</b>							<b>Total 100%</b>
	<b>0-9Yrs</b>	<b>10-12Yrs</b>	<b>HSGrad</b>	<b>Some Coll</b>	<b>Coll Grad</b>	<b>Master s</b>	<b>PhD-Prof</b>	
<b>NH WHITE</b>	7	8	30	29		7		100
<b>BLACK</b>	11	17	30	28		4		100
<b>ASIAN</b>	12	7	16	21		11		100
<b>HISPANIC</b>	34	14	22	20		2		100
<b>AM IND</b>	15	14	30	30		3		100
<b>NH OTHER</b>	11	11	23	27		8		100
<b>NH MULTI</b>	10	10	26	31		6		100
<b>ALL</b>	10	10	29	27		6		100

[Cross tabulation: percent across, RaceEth/AgeEduc, wgted 5% PUMS, Frey/U-Mich for SSDAN]

8. Which racial/ethnic group has the highest percentage of

0-12 years of education (no high school diploma)? \_\_\_\_\_

high school graduate? \_\_\_\_\_

college graduate? \_\_\_\_\_

Masters, Ph.D. professional degrees? \_\_\_\_\_

**Table 5:** Race/ethnic identification of 2000 U.S. **male population**, age 25+ and their educational attainment

Racial/ethnic identification	Educational attainment							Total 100%
	0-9Yrs	10-12Yrs	HSGrad	Some Coll.	Coll. Grad	Masters	PhD-Prof	
<b>NH WHITE</b>	7	8		28	18	7	4	100
<b>BLACK</b>	11	18		27	9	3	1	100
<b>ASIAN</b>	9	7		21	26	13	9	100
<b>HISPANIC</b>	35	15		19	6	2	2	100
<b>AM IND</b>	15	15		28	8	3	1	100
<b>NH OTHER</b>	11	11		27	16	8	4	100
<b>NH MULTI</b>	9	10		30	16	6	4	100
<b>ALL</b>	10	10		26	16	6	4	100

[Cross tabulation: percent across, Immentry/AgeEduc control for race, wgted 5% PUMS, Frey/U-Mich. for SSDAN]

(Row variable: RaceEth, column variable: educ, control by: gender, cross-tab, bar chart)

**Table 6:** Race/ethnic identification of 2000 U.S. **female population**, age 25+ and their educational attainment

<b>Racial/ethnic identification</b>	<b>Educational attainment</b>							
	<b>0-9Yrs</b>	<b>10-12Yrs</b>	<b>HSGrad</b>	<b>Some Coll.</b>	<b>Coll. Grad</b>	<b>Masters</b>	<b>PhD-Prof</b>	<b>Total 100%</b>
<b>NH WHITE</b>	6	8		29	16		2	100
<b>BLACK</b>	11	16		30	10		1	100
<b>ASIAN</b>	14	7		21	27		4	100
<b>HISPANIC</b>	33	13		21	7		1	100
<b>AM IND</b>	15	13		31	8		1	100
<b>NH OTHER</b>	11	11		27	17		3	100
<b>NL MULTI</b>	10	10		32	13		3	100
<b>ALL</b>	10	10		28	15		2	100

[Cross tabulation: percent across, Immentry/AgeEduc control for race, wgt 5% PUMS, Frey/U-Mich. for SSDAN]

9. Which racial/ethnic group has the highest percentage of

	Males	Females
0-12 years of education (no high school diploma)?	_____	_____
high school graduate?	_____	_____
college graduate?	_____	_____
Masters, Ph.D. professional degrees?	_____	_____

**10. To conclude the assignment, read through your findings and review your tables once more. Write a short two-page essay about your findings. The format should be similar to the way I have organized this project; state your research objective, hypotheses, variables, source of data, interpretation and analysis of the data, conclusion of your findings (use the back of this page if you need more space).**

**Extra Credit:**

Transfer data from three tables of your choice into an excel sheet. Create one bar chart or diagram or pie chart for each table.