APPLIED DEMOGRAPHY

RACE AND ETHNIC INQUALITY

Learning Objectives:

Skill
- Using software to access and analyze census data
- Identifying independent and dependent variables
- Learning how to construct, read, and interpret bivariate tables displaying frequencies and percentages
- Identifying population trends over time
- Creating visual tools representing quantitative data in the form of charts or graphs
- Employing control variables
- Translating data findings to inform decision making

Substance
- To use different datasets to look at :

    o Education and Race/Ethnicity
    o Occupation and Race/Ethnicity
    o Earning Inequalities

PART A. Education and Race/Ethnicity

Exercise 1
Using data (**centrend/educ502k.dat**) from 1950 to 2000, draw a line graph showing changes in the percentage of blacks and non-blacks, ages 25-34, with no high school diploma.

1. Go to http://www.ssdan.net/datacounts
2. Click on the "Data" in the menu bar
3. From there, click "Browse" on the left sidebar. Find **"centrend"** in the drop-down box and select it.
4. Scroll down through the list of data sets until you find **"educ502k.dat"** Highlight and click "submit."
5. You can also click here to launch the dataset in WebCHIP.

As the WebCHIP analysis involves the use of a control variable it requires two steps:
1. Select "Command" > "Crosstab" and make "Educ" the row variable and "Year" the column variable.
2. Select "Table" > "Control" and select "race" and "age"
3. Select "Table" > "Percent Down". This will give you a WebCHIP table of trends in educational attainment for blacks and non-blacks for age groups 25-34, 35-44, 45-54, 55-64, 65+. Copy (CRTL+C) and paste the WebCHIP table in EXCEL. Please note that this is a large table so take care to copy everything.

Creating Line Charts for Population without High School Diplomas

1. In Excel, create two tables - with percentage data showing the educational attainment for non-blacks 25-34 and blacks 25-34. Delete all data except those for non-blacks 25-34 and blacks 25-34. Delete the columns with data on the total percentages. Leave only data showing the percentage of 25-34 years olds at each level of educational attainment for 1950 through 2000 for blacks and non-blacks.

2. Create a chart from nonadjacent selections:

   a. Select the row containing the LTHS percentage data for Non-blacks. Only select the percentage data. Do not select the row label. Do not include blank cells or spaces.

   b. While holding down the CTRL key, select the LTHS percentage data for Blacks. Only select the percentage data. Do not select the row label. The nonadjacent selections must form a rectangle.

   c. Under Insert, select Chart to move to step 1 of the chart wizard.

3. Step 1 of Chart Wizard - From the chart type, select the line chart and the subtype "line chart" (first graph type in second row)". Click NEXT to move to step 2 of the chart wizard.

4. Step 2 of Chart Wizard - Click on the SERIES tab:

   d. Give your legend names - click on "Series1" in the SERIES box and then click in the NAME box and then click on cell the containing "Race = NonBlack" in your EXCEL table. This will change "Series1" to "Race = NonBlack". Repeat the same for "Series2" in the SERIES box to change "Series2" to "Race = Black".

   e. Now label your x-axis - Click in the CATEGORY (X) LABELS box. Then highlight the row in your EXCEL table containing the years 1950 through 2000 for your data (DO NOT HIGHLIGHT BLANK SPACES). This will change your x-axis labels to years. Then click NEXT to move to step 3.

5. Step 3 of the Chart Wizard - Click on the TITLES tab. Provide a short meaningful chart title eg. "Population 25-34 Without High School Diplomas by Racial Groups" (Remember to include your name or initials). Provide a name for the CATEGORY X AXIS eg. "% of population" and for the VALUE Y AXIS eg. "Years". Click NEXT to move to step 4 of the wizard.

6. Step 4 of Chart Wizard - check "AS NEW SHEET" and click FINISH.

7. Print

Briefly Answer Questions:
1. Describe the overall trends in the proportion of 25-34 with no high school diploma.
2. How have differences between the two racial groups changed over time?
3. Is it is useful to focus on the 25-34 year old group for this trend? Why or Why not?

Exercise 2
Using data (**centrend/educ502k.dat**) from 1950 to 2000, draw a line graph showing changes in the percentage of blacks and non-blacks, ages 25-34, who have graduated from college.

Follow the instructions for Exercise 1 but makes changes where appropriate. For instance, select the rows containing college graduates (CollGrad) for your table and make the chart title "Population 25-34 with College Degrees by Racial Groups."

Briefly Answer Questions
1. How do the overall trends for college graduation compare with the trends for high school?
2. How do the trends in racial differences in college graduation compare with similar findings for high school?
3. Give one explanation for the racial gaps in college graduation.

Exercise 3
Focusing on 2000 data (**cen2000/educimm2k.dat**), use stacked column charts to examine the educational attainment of people ages 25-34 in each racial-ethnic group.

1. Go to http://www.ssdan.net/datacounts
2. Click on the "Data" in the menu bar
3. From there, click "Browse" on the left sidebar. Find **"cen2000"** in the drop-down box and select it.
4. Scroll down through the list of data sets until you find **"educimm2k.dat"** Highlight and click "submit."
5. You can also click here to launch the dataset in WebCHIP.

In WebCHIP, make "educ" the row variable, "age" the column variable and "racelat" the control variable. Copy (CRTL+C) and paste the WebCHIP table in EXCEL.

Creating Stacked Column Charts
1. Create a table with data on the percentage educational attainment of people ages 25-34 for each of the major race-ethnic groups. For this assignment use data only for NLWhite, Black, Asian, Latino, AmIndian. Do not use data for Nlother and Nlmulti. Delete all other irrelevant stuff. The row labels of your table should contain levels of educational attainment - <9yrs, 10-12yrs, HSGrad, SomeColl, CollGrad, Masters, PhD-Prof. The column labels should be names of race-ethnic groups.

2. Select by highlighting your data. Do not include the row labels or column labels. (ALSO DO NOT INCLUDE ANY BLANK ROWS OR COLUMNS). Under Insert in the EXCEL toolbar menu, select Chart to get to Step 1 of the Chart Wizard.

3. Step 1 of Chart Wizard - From the chart type, select column chart and the subtype "100% stacked column (third graph in first row)" and click NEXT to get to step two of the chart wizard.

4. Step 2 of Chart Wizard - Make sure "rows" is checked (Not Columns). Click on the Series tab.

   a. A). Give your legend names - click on "Series1" inside the SERIES box and then click inside the NAME box and then click on the <9yrs row label in your EXCEL table. This will change "Series1" to <9yrs. Repeat the same to change "Series2" to 10-12yrs. Repeat the same for Series3 to change it to HSGrad. Keep going until you have changed all the items in the SERIES box to row labels.

   b. B) Label your x-axis - Click inside the CATEGORY (X) LABELS box. Then highlight the row in your EXCEL table containing the race-ethnic group names for your data (DO NOT HIGHLIGHT BLANK CELLS OR SPACES). This will change your x-axis labels to race-ethnic group names. Then click NEXT to move to step 3.

5. Step 3 of Chart Wizard - Click on the TITLES tab and provide a title say "Educational Attainment of 25-35-year-olds by Race-ethnic Group 2000" (include initials); names for the CATEGORY X AXIS "Race-ethnic Group" and for the VALUE Y AXIS "% of Population". .

6. Step 4 of Chart Wizard - click NEXT to get to step 4 and make sure the " AS NEW SHEET OPTION" is checked. Click FINISH.

7. Print chart.

Briefly Answer Questions
1. Describe the major differences in educational attainment between the groups.
2. Can you think of any factors that have reduced certain race/ethnic groups' educational opportunities?
3. Can you think of any factors that have increased certain race/ethnic groups' educational opportunities?

PART B. Occupation and Race/Ethnicity

Exercise 1
Using data from 1950 to 2000 (**centrend/edoc502k.dat**), construct two stacked column charts, one for men and one for women, showing trends in the percentages of the labor force in each occupational category. In each chart, for each year, stack by occupational categories.

1. Go to http://www.ssdan.net/datacounts
2. Click on the "Data" in the menu bar
3. From there, click "Browse" on the left sidebar. Find **"centrend"** in the drop-down box and select it.
4. Scroll down through the list of data sets until you find **"edoc502k.dat"** Highlight and click "submit."
5. You can also click here to launch the dataset in WebCHIP.

In WebCHIP, make "Occ" the row variable and "year" the column variable. And "Gender" the control variable. Copy(CRTL+C) and paste the WebCHIP table in EXCEL.

Creating Stacked Column Charts
1. Create two tables (one for men and one for women) with the percentages of each sex in the different

2. occupational categories. The rows of the table should have the occupational labels - TopWC, OtrWC, Service, BC. The columns should contain the years.

3. Select by highlighting data for men. Do not include the row labels or the column labels. Also do NOT include blank rows or columns. Under Insert in the EXCEL toolbar menu, select Chart to get to Step 1 of the Chart Wizard.

4. Step 1 of Chart Wizard - From the chart type, select column chart and the subtype "100% stacked column (third graph in first row)" and click NEXT to get to step two of the chart wizard.

5. Step 2 of Chart Wizard - Make sure "rows" is checked (Not Columns). Click on the Series tab.

a. Give your legend names - click on "Series1" inside the SERIES box and then click inside the NAME box and then click on the cell containing TopWC row label in your EXCEL table. This will change the label "Series1" to TopWC in your graph. Repeat the same for "Series2" in the SERIES box to change "Series2" to OtrWC. Repeat the same for Series3 to change it to Service. Keep going until you have changed all the items in the SERIES box to row labels.

b. Give your x-axis labels - Click inside the CATEGORY (X) LABELS box. Then highlight the row in your EXCEL table containing the years for your data (DO NOT HIGHLIGHT BLANK CELLS OR SPACES). This will change your x-axis labels to years. Then click NEXT to move to step 3.

6. Step 3 of Chart Wizard - Click on the TITLES tab and provide a title eg. "Trends in Men's Occupations

7. 1950-2000" (include initials); names for the CATEGORY X AXIS eg. "Years" and for the VALUE Y AXIS eg. "% of Population." Click NEXT to get to step four.

8. Step 4 of Chart Wizard - and make sure the "AS NEW SHEET OPTION" is checked. Click FINISH.

9. Print chart.

10. Follow the same steps to create the chart for women.

Briefly Answer Questions.
1. What kind of trends do you see in the occupational positions held by men?
2. How are the trends in the positions held by men different from those held by women?
3. Can you explain the sex differences in the trends in men and women's occupations?

Exercise 2
Using data from 1950 to 2000(**centrend/edoc502k.dat**), create four line graphs, one for each occupational category. Draw two lines in each chart, one for black men and one for non-black men between the ages of 35 and 44. The graph should indicate the percentage of each racial group employed in the specific occupational category for years 1950 through 2000.

In WebCHIP, make "Occ" the row variable, "year" the column variable and "race" the control variable. Copy (CRTL+C) and paste the WebCHIP table in EXCEL.

Creating Line Charts

1. Copy and paste the WebCHIP table in EXCEL. Create two tables with the percentages of each racial group in the different occupational categories in each year. The rows of each table should have the occupational labels - TopWC, OtrWC, Service, BC . The columns should contain the years.

1. 2.. Create a chart from nonadjacent selections

a. Select the row containing the TopWC percentage data for Non-blacks. Only select the percentage data. Do not select the row label. Do not include blank cells or spaces.

b. While holding down the CTRL key, select the TopWC percentage data for Blacks. Only select the percentage data. Do not select the row label. Note that the nonadjacent

selections must form a rectangle. Under Insert, select Chart to move to step 1 of the chart wizard.

2. Step 1 of Chart Wizard - From the chart type, select the line chart and the subtype "line chart" (first graph type in second row)". Click NEXT to move to step 2 of the chart wizard.

3. Step 2 of Chart Wizard - Make sure rows (NOT COLUMNS) is checked. Click on the Series tab. Convert the SERIES names to "Non-Black" and "Black" using the techniques you have learnt. Convert the CATEGORY (X) LABELS to "years". (BE SURE NOT TO HIGHLIGHT BLANK SPACES). Then click NEXT to move to step 3.

4. Step 3 of the Chart Wizard - Click on the TITLES tab. Provide a short meaningful chart title eg. "% of Men in TopWC Occupations By Race 1950-2000" (Remember to include your name or initials). Provide a name for the CATEGORY X AXIS eg. "Years"; and for the VALUE Y AXIS eg. "% of population". Click NEXT to move to step 4 of the wizard.

5. Step 4 of Chart Wizard - check as new sheet and click FINISH.

6. Print.

7. Repeat steps to create line charts for OtrWC, Service, BC. Remember to change the titles for each Chart.'

Briefly Answer Questions:
1. How do the occupational distributions of the two racial groups compare with each other?
2. How do the occupational distributions of the two racial groups compare with the overall trends in occupational trends found in the previous exercise?
3. What is the connection between a person's educational attainment and occupation? Do you think that
4. race/ethnicity affects the relationship between education and occupation? In other words, is the relationship different for different race and ethnic groups. Explain briefly.
5. How do you think the historical events of this century have affected the overall occupational distribution? Think about changes in the percentage of people in blue collar jobs between 1950 and 1990. What trend do you see in this category? Why do you think that there have been changes in the types of jobs people have?

PART C. Earnings Inequalities

Exercise 1
Using 2000 data (**cen2000/doctors2k.dat**) , create a stacked column chart for doctors aged 25-34 showing the race-ethnic distribution of doctor's earnings.

1. Go to http://www.ssdan.net/datacounts
2. Click on the "Data" in the menu bar
3. From there, click "Browse" on the left sidebar. Find **"cen2000"** in the drop-down box and select it.
4. Scroll down through the list of data sets until you find **"doctors2k.dat"** Highlight and click "submit."
5. You can also click here to launch the dataset in WebCHIP.

In WebCHIP make "earning" the row variable and "racelat" the column variable and age the control variable. Copy (CRTL+C) and paste the WebCHIP table in EXCEL.

Creating Stacked Column Charts

1. Create a table showing the % of each race-ethnic group in the 25-34 age group in the different earnings

1. Categories. Use data only for the major race-ethnic groups - NLwhite, Black, Asian, Latino, AmIndian. Delete all other irrelevant material.

2. Select by highlighting your data. Do not include the row labels or the column labels. Also do NOT include blank rows or columns. Under Insert in the EXCEL toolbar menu, select Chart to get to Step 1 of the Chart Wizard.

3. Step 1 of Chart Wizard - From the chart type, select column chart and the subtype "100% stacked column (third graph in first row)" and click NEXT to get to step two of the chart wizard.

4. Step 2 of Chart Wizard - Make sure "rows" is checked (Not Columns). Click on the Series tab. Convert the series names to <40K, 40-55K, 55-70K etc using the techniques you have learnt. Convert the "category (X) labels" to race-ethnic group names. (BE SURE NOT TO HIGHLIGHT BLANK SPACES). Then click NEXT to move to step 3.

5. Step 3 of Chart Wizard - Click on the Titles tab and provide a title "Earnings of 25-34 Year Old Doctor's

6. Earnings in 2000 By Race-Ethnic Group" (include initials); names for the category x axis "Race-ethnic Group" and for the value Y axis % of Population".

7. Step 4 of Chart Wizard - click NEXT to get to step four and make sure the " as new sheet option" is checked. Click FINISH.

8. Print chart.

Briefly Answer Questions:
    1. What percentage of 25-34 year old non-Latino whites doctors making $200,000 or more?
    2. What percentage of 25-34 year old blacks doctors making $200, 000 or more?
    3. What percentage of 25-34 year old Latino doctors making $200,000 or more?
    4. What percentage of 25-34 year old Asian doctors making $200,000 or more?
    5. What percentage of 25-34 year old American Indian doctors making $200, 000 or more?
    6. What is one explanation for the race-ethnic differences?

Exercise 2
Using 2000 data (**cen2000/doctors2k.dat**), create a stacked column chart for doctors aged 55-64 showing the race-ethnic distribution of doctor's earnings.

In WebCHIP make "earning" the row variable and "racelat" the column variable and age the control variable. Copy (CRTL+C) and paste the WebCHIP table in EXCEL. Create a table showing the % of each race-ethnic group in the 55-64 age group in the different earnings categories. Use data only for the major race-ethnic groups - NLwhite, Black, Asian, Latino, AmIndian. Delete all other irrelevant material. Then follow the steps for constructing stacked column charts.

Brief Answers to Questions
1. What percentage of 55-64 Year old non-Latino whites doctors making $200,000 or more?
2. What percentage of 55-64 Year old blacks doctors making $200, 000 or more?
3. What percentage of 55-64 Year old Latino doctors making $200,000 or more?
4. What percentage of 55-64 Year old Asian doctors making $200,000 or more?
5. What percentage of 55-64 year old American Indian doctors making $200, 000 or more?
6. What if any difference is there between the earnings of the 25-34 year olds and the 55-64 year olds?
7. What might account for the age differences in doctor's earnings?
8. Is there any difference between the race-ethnic differences in earnings among 55-64 year olds and the 25-34 year olds?

Part D. Concluding Questions
1. In order to better understand race-ethnicity and social inequality in the U.S., we have examined some of the relationships between education, occupation, and earnings. Has this module has expanded, supported, or changed your understanding of this relationship in any way.
2. Do the trends observed support the optimistic view that race is a factor of declining significance, or do your results indicate that further gains have to be made before such optimism is justified? Explain.
3. Based on your analyses would you say that affirmative action policies have outlived their usefulness?
4. What additional analyses would you be interested in doing to further expand your understanding of race-ethnic inequality in the U.S.?