SOC 255: Social Organization and Criminal Justice
Integrated Data Analysis (IDA) Assignment

A STUDY OF DEMOGRAPHIC AND ECONOMIC-BASED EXPLANATIONS FOR VARIATION IN STREET ROBBERY RATES IN U.S. CITIES

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Introduction

Researchers studying crime suggest that there is substantial variation in the amount of serious crime across large urban jurisdictions such as central cities. There have been many attempts to account for crime variation. The following raises questions about how populations may be linked with crime variation. One key component of serious crimes involves those that are conceptualized as being instrumental crimes. The following exercises focus on one category of instrumental crimes, street robberies. In this exercise we will attempt to address the following question: Do population features influence the rate of robbery in the largest U.S. cities? We will also begin to assess economic conditions to see if these alter the original relationships.

Learning Objectives

1. Describe the conditions necessary for causation and evaluate relationships based on the criteria for causation.
2. Develop logical (plausible) arguments about causation (causes and their effects); Develop and test hypotheses; Identify independent and dependent variables, and Identify the direction of the relationship.
3. Read a table of frequency distributions for variables included in the study and describe the distribution of the observations for each of the indicators.
4. Read and understand to contents of a table of cross-tabulated data, learn to identify and describe the relationship between two variables.
5. Become familiar with how the introduction of controls can help to clarify empirical relationships and perhaps reduce the risk of supporting faulty causal claims (storks bring babies!).

Some Introductory Questions About Cities and Instrumental Crimes such as Robbery

Before looking at the empirical data respond to the following: Sociologists hypothesize that population variables can help to explain crime variation.

1. Think about why population factors might be associated with robbery rate variation. For example, think about big v. smaller communities. Discuss why you think larger communities (cities) might be expected to differ in their experiences with street robbery? Are there simply better opportunities for getting away with crime in big cities?

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2. Maybe criminal opportunity isn't enough to motivate most people to take the risks associated with robbery. Do you believe that economic considerations also affect robbery decisions? Discuss your ideas concerning how poverty conditions might influence individual level choices about doing robbery.

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3. Do you believe that race may also influence the amount of street robbery? Why? Or why not? Are there any potential explanations that would link race and poverty to robbery rates?

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4. Are there other social factors that may also influence the amount of street robbery in any community? Briefly discuss your ideas about other conditions that may cause robbery rates to vary across cities.

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5. Empirical research is often guided by a research hypothesis. Develop a causal hypothesis using one of the following indicators (population size, percent black population, poverty rate) along with the robbery rate. Specify the independent and dependent variable.

Logic: I expect X to exhibit a *positive association* with Y, in other words across cities where X is larger (or reduced), Y should be larger (or reduced).

I expect X to exhibit an *inverse (negative) association* with Y, in other words across cities where X is greater (or reduced), Y should be reduced (or greater).

Your hypothesis:

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_____

What is the independent variable? _____

What is the dependent variable? _____

What is the direction of the relationship?
Is the hypothesized relationship positive or negative (inverse)? _____

Data Analysis Exercise:

Step 1: ***Describing the Data***

The data used in this assignment is made up of 154 U.S. cities with a population greater than 100,000 in 1990. The unit of analysis, then, is cities.

Data are from the Federal Bureau of Investigation's Uniform Crime Report for 1993 and from the U.S. Census for 1990.

All variables are coded to indicate low v. high levels of respective conditions (0, 1) or else are coded as simple count variables to reflect graded conditions such as low, medium, and high (1, 2, 3…). Following is an overview of indicators used in the data assignment.

Step 2: ***Describing the Variables Used in the Analysis***

Robbery (the mean city robbery rate is: ; Robbery is recoded as a 0-1 dummy variable. 0 = low robbery rates, that is robbery rates below the mean for the sample of cities, 1 = cities with robbery rates at or above the mean for the sample of cities)

Population Size (coded 1 through 4 with 1 representing the smallest cities and 4 representing the largest cities)

Poverty Rate (the mean city poverty rate is: ; Poverty is recoded as a 0-1 dummy variable. 0 = low poverty rates, that is poverty rates below the mean for the sample of cities, 1 = cities with poverty rates at or above the mean for the sample of cities)

Black Population Size (the mean city black population size is: ; Black population size is recoded as a 0-1 dummy variable. 0 = small black populations, that is cities with black populations below the mean for the sample of cities, 1 = large black populations, that is cities with black population size equal to or above the mean for the sample of cities.)

Step 3. ***Describe the frequency distribution for the respective variables***

3a. For robbery, the indicator has two categories, representing low and high rates.

What percentage of the cities experienced low robbery rates? _____

What percentage of the cities experienced high robbery rates? _____

3b. Regarding cities in the sample, what percentage are small, small-med, med-large, and large in terms of population size?

1. (Small) _____

2. (Small-med) _____

3. (Med-large) _____

4. (Large) _____

3c. What percentage of cities are characterized by low poverty levels? _____

What percentage of cities are characterized by high poverty levels? _____

3d. What percentage of cities are characterized by low % black population? _____

What percentage of cities are characterized by high % black population? _____

4. ***Compare Cities experiences with Robbery through the use of Crosstabs***
A cross-tabulation lets you investigate the relationship between the two variables

4a. *Assessing the sources of variation in Robberies across cities: small v. large populations*
In this instance we are focusing on two indicators: 1) city robbery rates, and 2) city population size.

Crosstabulated data: *Pop size and robbery rates*

Discuss what you observe about the effects of city size on robbery rates? What type of explanation does this seem to support?

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4b. *Assessing the sources of variation in Robberies across cities: small v. large populations*
In this instance we are focusing on two indicators: 1) city robbery rates, and 2) city population size, controlling for a third indicator, 3) poverty rates.

Crosstabulated data: *Pop size and robbery rates controlling for poverty rates*

Among cities with high v. low levels of poverty, what is the observed relationship between pop size and robbery rates? Does the relationship hold up? Is there evidence that poverty also is a factor. Discuss the findings you observe in the table.

4c. *Assessing the sources of variation in Robberies across cities: small v. large populations*
In this instance we are focusing on two indicators: 1) city robbery rates, and 2) city population size, controlling for an alternative third indicator, 3) % Black Population.

Crosstabulated data: *Pop size and robbery rates controlling for % Black Population*

Among cities with high v. low rates of black population, what is the observed relationship between pop size and robbery rates? Does the initial relationship between city size and robbery rates persist? How is the relationship conditioned by the presence of black populations? Are the patterns of robbery similar for cities with small v. large black populations? Why do you think this occurs for this sample of large U.S. cities? Discuss.

5. Summary and Conclusions

Write a summary of what you learned in this analysis. What does the empirical evidence seem to support? Why do larger cities experience higher rates of robbery? Is population size all that seems to matter? Do other factors appear to condition the initial relationship between city size and city robbery rates? Finally, do you believe that any of these relationships are causal? Why or why not?