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Determinants of Crime in Micropolitan Areas

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RESEARCH COLLIQUOUM 2017

PITTSBURG STATE UNIVERSITY



INTRODUCTION

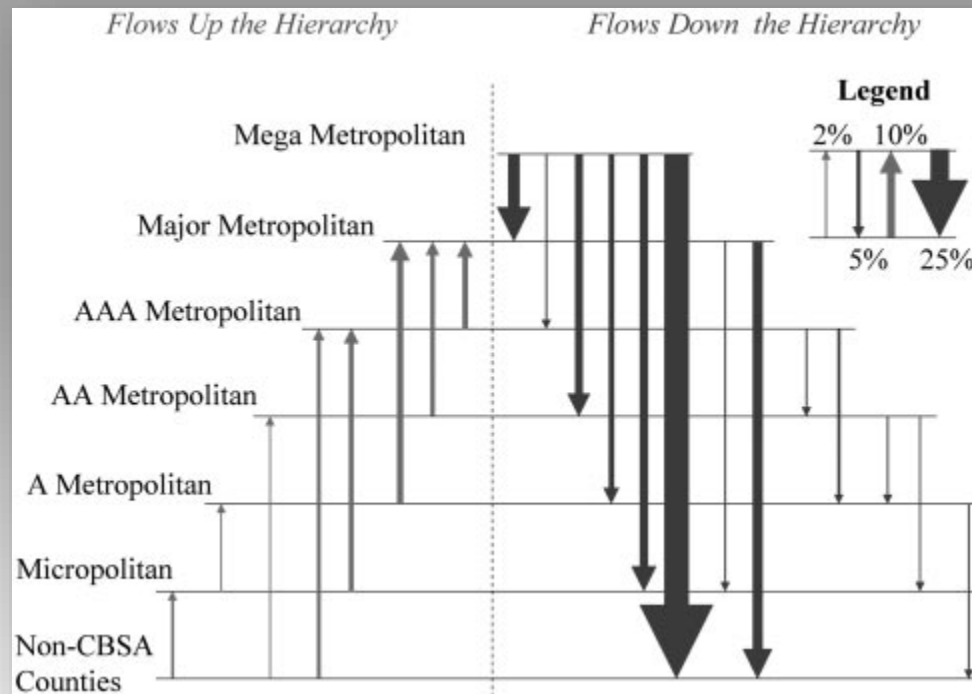
- Crime generates substantial costs to society at individual, community, and national levels
- Multiple studies completed on crimes in metropolitan areas
- Very few studies of crimes in micropolitan areas have been undertaken

MIGRATION TRENDS

Demographic Effectiveness

Migration up and down the urban hierarchy and
across the life course

D. A. Planea,^b C. J. Henrie^c, and M. J. Perry^d



PURPOSE AND CONTRIBUTION OF THE STUDY

- Micropolitan Areas Were First Defined in 2003
- A micropolitan area contains an urban core of at least 10,000 but less than 50,000 population
- Poverty, Government Spending on public safety are all affected by determinants of crime
- Contribution to economic literature helps bridge the knowledge gap between crimes in micropolitan and metropolitan areas

LITERATURE REVIEW

- Christens and Speer (2005)
- Determined relationship between population density and violent crimes
- Tested two direct opposite theories
- 1st is that population density and crime rate were inversely related
- 2nd was population density and crime rate were directly related
- Discovered population density was significant to crime rate.

LITERATURE REVIEW

- Jesse Brush (2007)
- Assessed the relationship between income inequality and crime
- Used cross sectional and time series analyses of US counties
- Assume the lower the income, inequality in neighborhoods can be impacted severely by crime

THE EMPIRICAL MODEL

- $[\text{Total Crime 2000}] = [\text{Vector of Social Variables 2000}] + [\text{Vector of Economic and Productivity Variables in 2000}] + [\text{Vector of Fixed Effects and Other Control Variables in 2000}]$

DATA

- 2000 Census and Subsequent Census Estimates
- 48 Contiguous US States
- 554 Micropolitan Areas
- 668 Counties



Least Square Regression

- 19 significant variables
- At 5% error margin
- All variables come from 2000 census

Significant Variables That Affect Crime

- 2000 Population (+)
- County Spending on Public Safety 2002 (+)
- % of Family households - married couple 2000 (-)
- Homes built 1939 or earlier (+)
- Homes built from 1950-1959 (+)
- Homes built from 1960-1969 (+)
- Homes built from 1970-1979 (+)
- Homes built from 1980-1989 (+)
- Homes built from 1995- 1998 (+)
- Natural amenity Scale 2000 (-)
- Births per 1000 people (+)
- Housing & Environment Expenditures at State Level 2000 (-)
- D2, D4, D5, D6, D7, D8, D9 (+)

Significant Variables

- D2 region Middle Atlantic- New Jersey, New York, Pennsylvania
- D4 region West North Central- Iowa, Kansas, Minnesota, Missouri, Nebraska, North & South Dakota
- D5 region South Atlantic- Delaware, D.C, Florida, Georgia, Maryland, North & South Carolina, Virginia, West Virginia
- D6 region East South Central- Alabama, Kentucky, Mississippi, Tennessee
- D7 region West South Central- Arkansas, Louisiana, Oklahoma, Texas
- D8 region Mountain- Arizona, Colorado, Idaho, New Mexico, Montana, Utah, Nevada, Wyoming
- D9 region Pacific- Alaska, California, Hawaii, Oregon, Washington

Findings

- Cities that have a high rate of crime need to spend more funds fighting crime
- Fewer crimes occur as the percentage of older people increase
- Older houses bring more crime to micropolitan areas
- Married people commit fewer crimes
- Natural Amenity scale is negative which shows that physical characteristics in counties can affect crime

Compared to Pittsburgh

- Cities that have larger populations have more crimes and the Pittsburgh micropolitan area has a smaller population than the average micropolitan area
- Pittsburgh spends less on public safety than the average micropolitan area
- Ranked very low on natural amenities scale
- Has lower migration and higher birth rates
- 50 % of housing industry is from 1960 or earlier

Conclusion

- Overall there are plenty of significant variables we can use to lower crimes
- Pittsburgh needs to upkeep it's housing units further prevent crime.
- Older the housing results in more crime
- Spend the money on solutions proven to lower crime

Conclusion

- Given determinants of crime and the Pittsburgh micropolitan area data should have higher crime per capita
- THEY DO NOT
- Pittsburgh is doing something right considering that determinates of crime would suggest more incidents of crime