Which Governments Cooperate on Public Safety? Lessons From Michigan

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Why Study Cooperation on Public Safety?

- Local units devote significant resources to public safety
- Cost savings difficult to achieve without including public safety
- Public safety is highly visible and important to the public
- Public safety collaborations are enmeshed in “politics of place.”
Research Questions

• What role do political, demographic, and fiscal factors play in explaining the frequency and extent of interlocal cooperation on public safety?

• Do these effects differ across municipal, village, and township governments?

• Do these effects differ across police and fire services?
Interlocal Services Collaborations Data

- **Citizens Research Council Survey**
  - Survey conducted Spring - Summer 2005
  - Catalog of services provided by each unit and contracting arrangements for each
  - All 670 local general purpose units surveyed in 24 counties
  - Responses received from 464 governments (69% response)
Interlocal Services
Collaborations Data--Continued

• Data permit examination of public safety in terms of several key component functions
  – Police Services: 12 different functions
  – Fire Services: 7 different functions

• Data Limitations
  – Data capture only one side of collaboration
  – Do not indicate the nature of the agreement
Police Services
Component Functions

- 9/11 Radio Communications
- Officer Training
- Street Patrol /Emergency Response
- Bike Patrol /Emergency Response
- Foot Patrol /Emergency Response
- Horse Patrol /Emergency Response
- Marine Patrol /Emergency Response
- Helicopter Patrol /Emergency Response
- Detectives/Crime Unit
- Emergency & Disaster Response Planning
- Crime Laboratory
Fire Services
Component Functions

- Inspection
- Training
- Fire Hydrant Maintenance
- Investigations

- Fire Fighting/Rescue
- Ambulance/EMS
- Hazardous Materials Handling and Response
Analysis

• Measures of Cooperation:
  – Frequency: Unit cooperates with other local units on one or more of the functions identified
  – Extent: Number of functions unit cooperates on with other local units

Police and fire are estimated as separate models
Methods of Analysis

• Methods examine effect of each variable on likelihood of outcome, independent of effects from other variables
• Frequency Models:
  – Logistic Regression, Clustered by County
• Extent Models:
  – Negative Binomial Regression, County Clustering
Independent Variables

• Measures of Local Governments Organization, Powers:
  – Numbers of cities, townships
  – Form of government
  – Number of functions not provided by unit

• Measures of Community Composition, Change:
  – Pop, pop change, pop density of unit
  – Median pop of cities, townships in county
  – Percent of nonwhite and older pop in unit
Independent Variables--Continued

• Measures of Unit Fiscal Capacity:
  – Total unit tax levy
  – Unit total millage
  – Unit extra voted millage
  – Level of state shared revenues received by unit
Hypotheses

- General expectation that these factors make cooperation *more* likely:
  - Large numbers of local governments in area
  - Fiscal stress of local unit
  - Lower per capita income of residents
  - Higher population densities
  - Substantial population change (growth or decline)
  - Council-Manager government
  - Home Rule charters
Hypotheses-Continued

• General expectation that other factors make cooperation *less* likely:
  – Unit provides relatively few functions
  – Unit has small population
  – Unit has heterogeneous population
  – County has large numbers of small townships
  – County has small numbers of populous cities
  – Greater levels of state shared revenues
Findings: Brief Summary

• Increased Frequency of Cooperation:
  – Many differences in factors across different service areas and types of governments.
  – All units: More cities in county make police and fire cooperation more likely
  – Cities: More likely to cooperate when pop growth is low or declining
  – Townships: More likely to cooperate when pop growth is high
Findings--Continued

- All units: Smaller pop townships in county, more services provided, and lowers levels of state shared revenues make cooperation on police and fire more likely
- Cities: Units without city manager are more likely to cooperate on police; no effect on fire
- Townships: Charter townships do not cooperate more often than general law on police or fire
Findings--Continued

• The following variables had no effect on the frequency of cooperation on police and fire
  – All units: pop, pop change, density, income
  – Total taxes and unit millage, no effect in most models
  – Cities only: Levels of shared revenues did not effect cooperation on police, but higher levels make fire cooperation less likely
  – More services had no effect on police and fire coop for cities, but increased coop for tships
Findings--Continued

• Increased Extent of Cooperation:
  – All units: More cities in county, smaller pop
townships, older population, and more services
  provided increase extent of cooperation on
  police and fire
  – Cities: Number of services had no effect on
    extent of coop on police or fire
  – Cities: Lower shared revenues increase extent
    of coop for police and fire
Findings--Continued

– Townships: Pop growth increase extent of coop on police, but no effect on fire
– Townships: Pop density increase extent of coop on fire, but no effect on police
– Townships: Charter units cooperate more extensively on fire, but no effect on police

• No Effect on Extent of Cooperation:
  – All units: income, tax levy, and millage levels had no effect on extent of police or fire coop
Findings: Final Comments

• Fiscal capacity measures were largely unimportant in explaining the frequency and extent of cooperation. Shared revenues the sole exception
• The effect of pop and pop change varied across the models. Not as consistent as we expected
• The number of cities in county, services provided, and level of state shared revenues more consistent predictors of frequency and extent of cooperation on public safety
Thank You!

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Appendix

Expanded Discussion of Findings
Frequency of Cooperation on Police Services—All Units

- Factors Increasing Likelihood of Cooperation
  - Larger numbers of cities in county
  - High population growth

- Factors Decreasing Likelihood of Cooperation
  - Higher pop townships in county
  - Relatively fewer services provided by unit
  - Higher levels of state shared revenues

- Factors with No Effect on Cooperation
  - Unit pop, pop density, income, tax and millage levels
Frequency of Cooperation on Police Services—Cities Only

• Key Differences from All Units
  – Larger numbers on Tships in county, less coop
  – Higher pop cities in county, less coop
  – Pop decline, more coop
  – Younger and less diverse pop, more coop
  – Higher pop density, more coop
  – Level of shared revenues, no effect on coop
  – Higher millage, taxes, less coop
  – Number of services, no effect on coop
Frequency of Cooperation on Police Services—TShips Only

- Key Differences from Cities
  - Tax, millage levels, no effect on coop for tships, but lower levels increase coop for cities
  - Higher shared revs; less coop for tships, but no effect for cities
  - Pop diversity; less coop for cities, more for tships
  - Pop growth; less coop for cities, more for tships (Alternative interp: pop decline leads to more coop for cities)
  - Pop density; more coop for cities, less for tships
  - Neither city manager or charter tship effect coop
  - Tship model very similar to all units model
Frequency of Cooperation on Fire Services—All Units

- Factors Increasing Likelihood of Cooperation
  - Larger numbers of cities in county
  - Higher population diversity
- Factors Decreasing Likelihood of Cooperation
  - Greater numbers of tships in county
  - Higher pop tships in county
  - Relatively fewer services provided by unit
  - Higher levels of state shared revenues
- Factors with No Effect on Cooperation
  - Unit pop, pop change, pop density, income, tax and millage levels
Frequency of Cooperation on Fire Services—Cities Only

• Key Differences from All Units
  – Larger numbers on Tships in county, no effect on coop
  – Pop decline, more coop
  – Less diverse pop, more coop (Opposite of finding for police services)
  – Higher pop density, less coop (Opposite of finding for police services)
  – City manager, less coop (No effect for police)
**Frequency of Cooperation on Fire Services—TShips Only**

- **Key Differences from Cities**
  - Fewer functions; less coop for tships, no effect on cities
  - Greater pop; less coop for tships, no effect for cities
  - Pop diversity; no effect for tships, more coop for cities
  - Pop density; no effect for tships, less coop for cities
  - Pop growth; no effect for tships, less coop for cities
    (Alternative: pop decline leads to more coop for cities)
  - Charter tship, no effect on coop
  - Tship model very similar to all units model
Extent of Cooperation on Police Services—All Units
*Indicates same as Frequency Model

• Factors Increasing Extent of Cooperation
  – Larger numbers of cities in county*
  – High population growth*

• Factors Decreasing Extent of Cooperation
  – Relatively fewer services provided by unit*
  – Higher pop townships in county*
  – Higher levels of older population

• Factors with No Effect on Extent of Cooperation
  – Unit pop, pop density, income, tax and millage levels*
  – Level of shared revenues, and nonwhite pop
Extent of Cooperation on Police Services—Cities Only
*Indicates same as Frequency Model

• Key Differences from All Units
  – Pop decline, no effect
  – Younger pop, no effect
  – Higher shared revenues, less coop*
  – Number of services, no effect on coop

This model differs greatly from frequency model. Factors far better predictors of the frequency of coop
Extent of Cooperation on Police Services—TShips Only
*Indicates same as Frequency Model

• Key Differences from Cities
  – Greater number of cities in county; more coop for tships, no effect for cities
  – Greater number of townships in county; less coop for tships, no effect for cities*
  – Fewer functions; less coop for tships, no effect cities*
  – Larger pop tships; less coop for tships, no effect cities
  – Pop growth; more coop for tships, no effect for cities*
  – Charter tship, no effect on coop*
  – Tship model somewhat similar to all units model
Extent of Cooperation on Fire Services—All Units

*Indicates same as Frequency Model

- Factors Increasing Extent of Cooperation
  - Larger numbers of cities in county

- Factors Decreasing Extent of Cooperation
  - Greater numbers of tships in county
  - Higher pop tships in county
  - Higher unit pop
  - Relatively fewer services provided by unit
  - Higher levels of state shared revenues
  - Higher percentage of older population

- Factors with No Effect on Cooperation
  - Pop change, pop density, income, tax and millage levels
Extent of Cooperation on Fire Services—Cities Only
*Indicates same as Frequency Model

- Key Differences from All Units
  - Pop decline, more coop*
  - Higher pop density, less coop*
  - Younger pop, no effect
  - More diversity, more coop*
  - Higher per capita income, less coop
  - Number of services, no effect on coop*
  - Number of cities in county, no effect*
  - Number of tships in county, no effect*
  - Higher millage, less coop
  - *City manager, less coop*

This model differs somewhat from frequency model. Factors better predictors of extent of coop
Extent of Cooperation on Fire Services—TShips Only

*Indicates same as Frequency Model

- Key Differences from Cities
  - Fewer functions; less coop for tships, no effect cities*
  - Pop decline; no effect for tships, increase coop for cities*
  - Pop density; increase coop for tships, less coop for cities
  - Charter tship, increase coop*
  - Tship model very similar to all units model