

Understanding Disparity Data: An Application to Traffic Stops and Citizen Complaints about Police in Columbia

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Many Sources of Disparity

- Differences in observed outcomes by race or ethnicity are commonplace
 - e.g., education, family structure, income, health, crime rates and crime victimization rates, etc.
- Policy researchers try to disentangle the extent to which disparities are the product of unequal treatment versus underlying social conditions.
 - This is not a simple task, but it is crucial to rational policymaking. The key question to always ask with disparity data is “compared to what?”

Important Caveats

- Race and ethnicity are associated with large and important differences in social conditions; these differences reverberate “downstream”...
- Consequently, equal treatment within a particular process or organization may nevertheless yield large disparities in outcomes
 - E.g. education, crime, politics

Example: Traffic Stops

- Racial disparities in traffic stops are ubiquitous in the US, but to what extent does this reflect disparate treatment by police or underlying social conditions associated with individual behavior?
- Researchers do not simply examine differences in stops by race or ethnicity because such differences are ***expected*** to arise because of underlying disparities in social conditions.

Recent Advances in the Analysis of Racial Disparities in Traffic Stops

- Grogger and Ridgeway (2006). “Testing for Racial Bias Behind a veil of Darkness,” *Journal of the American Statistical Association*, 101(475): 878-898.
- Knowles and Persico (2001). “Racial Bias in Motor Vehicle Searches”, *Journal of Political Economy*, 109(1): 203-229
- Hernandez-Murillo and Knowles (2004). “Racial Profiling or Racist Policing? Bounds Tests in Aggregate Data,” *International Economic Review*, 45(3): 959-989.

Comparing “Hit Rates” in Traffic Stops and Searches

- Key insight: Racial bias in traffic stops and searches will result in *lower* “hit rates” for disfavored groups
- 2006 hit rates for whites versus blacks:

Columbia:	21.7% v. 23.4%
Jefferson City:	15.3% v. 11.1%
Kansas City:	20.8% v. 18.2%
St Louis City:	15.5% v. 27.6%
All Missouri:	22.6% v. 18.7%

By this measure, the CPD compares very favorably to the rest of the state...(caveat: more sophisticated analysis can be done than is shown here)

Example: Complaints about Police

- Complaints are an ambiguous measure of police conduct; transaction cost, saliency and trust all affect the number and quality of complaints
- The frequency and quality of complaints is strongly associated with contact with police
 - i.e., disparities are *expected*; the relevant question is whether such disparities are attributable to differential treatment or not.

Columbia Complaint Data (2005-2007)

- Citizen complaints with race identified:
 - 81 complaints
 - 76 complainants (57% black)
 - 60 incidents
- Sustain rate by complainant:
Black = 5%; White = 18%

Complaints by Charge and Race (sustained/complaints)

- Excessive or Unnecessary Force

- Black: 0/17; White: 0/11; Both: 1/4*

*One incident accounts for all four complaints

- Unjustified Arrest or Search

- Black: 0/7; White: 0/1

- Discourtesy

- Black: 1/12; White: 1/4

- All Other Charges

- Black 0/15; White: 5/10**

**Two incidents account for 4 sustained complaints

Comparing Complaints and Sustain Rates by Race, 2005-2007

Columbia, MO (11% black pop.)

- 76 citizen complainants (57% black)
- 81 complaints; sustain rate = 10%

Berkeley, CA (13% black pop.)

- 123 citizen complainants (43% black)
- 606 complaints; sustain rate = 8% (05-06 only*)

*Berkeley has closed less than 10% of its 2007 complaint cases despite a full-time staff and an annual budget of \$550,000.

Other cities with CRBs exhibit similar disparities in complaints by race and similarly low sustain rates for complaints.

Conclusion

- Columbia traffic stop and complaint data reveal disparities by race, as expected.
- To this point, Columbia traffic stop and complaint data do **not** indicate disparate *treatment* of blacks relative to whites.
- More detailed analysis is possible.