The Impact of New York City's Stop and Frisk Program on Crime: The Case of Police Commanders

Andrew Bacher-Hicks and Elijah de la Campa

Introduction

What was the question?

- What effect do civilian street stops have on public safety?

What do they do?

- Teacher value-added approach to estimate a commander's impact on stops
- Switcher quasi-experiment in the spirit of Chetty, Friedman, and Rockoff (2014)

What do they find?

- NYPD commanders have strong effect on the number of civilians stops
- Modest effects on misdemeanors, but no effect on felony crimes
- Evidence of crime spillovers into adjacent precincts

Data & Institutional Background

Data Sources

- *Civilian stops*: 4.2 million stops conducted by NYPD between 2006 and 2018
- *Crime*: All incident reports filed by NYPD police officers during this period
- *Neighborhoods*: Police complaints reports collected by the CCRB

NYPD Precinct Commanders

Commanders identify crime patterns and implement appropriate responses. They command multiple precincts over their career.

Empirical Strategy

Teacher Value Added

$$\text{Stop}_{pmt} = \delta SQF_{p,t-1} + \alpha \text{ Crime}_{p,t-1} + \phi X_p + \Gamma_m + \varepsilon_{pmt}$$

- Stop_{pmt} : Stops in precinct p, in year-month m, during commander tenure t
- $SQF_{p,t-1}$: Stops in precinct p during last year of previous commander's tenure
- X_p and Γ_m: Time invariant controls and year and month fixed effects

$$\text{Var}(\varepsilon_{pmt}) = \sigma_\mu^2 + \sigma_\theta^2 + \sigma_e^2$$

- Commander variance $\left(\sigma_\mu^2\right)$, precinct variance $\left(\sigma_\theta^2\right)$, and idiosyncratic within-precinct variance $\left(\sigma_e^2\right)$
- In the pre-2013 period, the share of variance in ε_{pmt} attributable to commanders is around 15 percent.

Empirical Strategy

Reduced Form

$$Y_{pm} = \beta_{RF}\hat{\mu}_{jt} + \delta SQF_{p,t-1} + \alpha \text{Crime}_{p,t-1} + \Psi_p + \Gamma_m + \varepsilon_{pm}$$

- Y_{pm}: monthly outcomes in precinct p, in year-month m.
- $\hat{\mu}_{jt}$: Leave-out estimated commander effect.
- Ψ_p and Γ_m: Precinct fixed effects and year-month fixed effects

Leave-out estimated commander effect

Let $\bar{\varepsilon}_{jt}$ denote the mean residual of monthly stops in tenure t for commander j. The leave out estimator is equal to $\hat{\mu}_{jt} = \gamma\bar{\varepsilon}_{j,t-1}$ where γ is equivalent to the coefficient of an OLS regression of $\bar{\varepsilon}_{jt}$ on $\bar{\varepsilon}_{j,t-1}$

Results

Table 7: Impact of Commander Stop Effects on Crime

	All Crime	Violation	Misdem.	Felony
	(1)	(2)	(3)	(4)
Commander Effect on Stops	−3.386	−0.151	−4.100**	0.864
	(2.716)	(0.529)	(2.033)	(0.719)
	[488.33]	[59.05]	[321.80]	[107.48]
N Precinct-Year-Months	7,140	7,140	7,140	7,140

Results

Table 9: Spillover Impact of Commander Stop Effects on Crime in Adjacent Precincts

	All Crime	Violation	Misdem.	Felony	Stops
	(1)	(2)	(3)	(4)	(5)
Commander Effect on Stops	3.408*	0.407	2.552*	0.450	2.359
	(1.920)	(0.327)	(1.505)	(0.479)	(6.562)
	[523.20]	[60.75]	[340.02]	[122.44]	[502.19]
N Precinct-Adjacent Neighbor-Year-Months	26,460	26,460	26,460	26,460	26,460

Conclusion

- High-stop strategies reduce misdemeanor crimes but have no effect on felony crimes.
- Stop and frisk does not deter serious crime, contradicting broken windows theory.
- Crime displacement occurs to adjacent neighborhoods, partially offsetting within-precinct crime reduction.