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PERCSPECTIVES ON RESEARCH

DOES RACE MATTER FOR POLICE USE OF FORCE? EVIDENCE FROM 911 CALLS

Widespread concerns regarding how police officers treat minorities are rooted in a long history of police mistreatment of black Americans, a strong lack of confidence by blacks of local police, and more recently, media coverage of the protests over race in police shootings of unarmed black civilians.

Distrust of police is perhaps strongest with respect to police use of force, as only 33 percent of blacks believe officers use the right amount of force for the situation, and only 35 percent believe police treat racial and ethnic groups equally (Pew Research Center, 2016). Importantly, this distrust has important efficiency implications in that reduced civilian cooperation likely leads to less effective policing and higher social costs of crime.

However, documenting whether race is important in matters of police use of force is difficult. This is in part because researchers often do not observe interactions where force was not used. As a result, researchers must make assumptions regarding the appropriate “benchmark,” such as violent crime rates or arrests. It is also difficult for researchers to observe whether the underlying risk of situations involving white and minority civilians, or white and minority officers, is similar in terms of whether force was merited. It is also unclear whether controlling for observed contextual factors is sufficient to overcome bias due to selection.

In this working paper, PERC Rex B. Grey Professor Mark Hoekstra and Graduate Student Fellow Carly Will Sloan use conditionally-random 911 calls from two cities to investigate two scenarios. The first is whether white officers use force at higher rates than minority officers when responding to 911 calls. The second scenario is whether officers are more likely to use force on civilians who are a different

race than the officer responding to the call.

The authors observe settings in which white and minority officers are as-good-as-randomly sent to otherwise similar situations, and where the same black and white officers are observed responding to situations in white and minority neighborhoods. Administrative data is used on over two million 911 calls to observe police use of force for a defined set of interactions, independent of whether the interaction involved use of force.

To study whether officers are more likely to use force on opposite-race civilians, the paper investigates whether white officers increase their use of force more than minority officers when they are dispatched to higher-minority neighborhoods.

Importantly, the data come from two cities in which the dispatch protocols allow for no discretion on the part of the officer or the operator with respect to which officer is dispatched. Rather, officers are dispatched based on immediate availability and who are observed to be closest to the call’s location. These protocols imply that conditional on police beat-by-time fixed effects, the variation in the race of the officer dispatched is as good as random. Interviews

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conducted with dispatchers indicate they follow the protocol. Officer race in both cities is also shown to be uncorrelated with other call characteristics and with predicted use of force based on those covariates conditional on the beat-by-time fixed effect.

The 911 calls come from two separate cities, one with has a population of over 240,000 and primarily composed of white and black residents. This larger city's homicide rate ranks among the top 20 among the nation's 100 largest cities. The second city has a population of over 150,000 residents and is composed of mostly white and Hispanic civilians and police officers.

Each 911 call records the time and date, priority assigned to the call by the operator, a short description, the first officer dispatched to the scene, and whether or not force was used at the scene. The authors then assign race to the civilian caller by matching Census Block Group geodata with the address of the initial call.

In the first city, results indicate that white officers use force 60 percent more often than black officers on average, and use gun force more than twice as often. In both cases, estimates are highly significant and demonstrate the difference in propensity to use force between black and white officers.

Strikingly, while white and black officers use gun force at approximately the same rate in white and racially mixed neighborhoods, white officers use gun force five times as often in neighborhoods that are over 80 percent black. In addition, a similar pattern

was found for the level of force used. Results indicate that dispatching an opposite-race officer increases use of force by 30 to 60 percent. While black officers use gun force at most modestly more when they are dispatched to calls in more black neighborhoods, white officers use gun force much more often when they are dispatched to predominantly black neighborhoods.

In the second city, results indicate that even though white and Hispanic officers use force at the same rate overall, the use of force is disproportionately concentrated in different-race neighborhoods. Specifically, white officers increase their use of force more when dispatched to predominantly Hispanic neighborhoods, compared to Hispanic officers. Estimates indicate that dispatching an officer of a different race roughly doubles the likelihood that force will be used.

These results have important implications for policing in the United States. Perhaps most importantly, they provide rigorous evidence in support of the common civilian perception of that race is an important determinant of police use of force. The results of this paper suggest that at least in the contexts studied here, this belief is warranted, especially with respect to the level of force used.

In addition, this study demonstrates that race matters even in a time and context during which police departments generally, and white officers in particular, know they are under close scrutiny by the media and the public.

HAS THE INFORMATION CHANNEL OF MONETARY POLICY DISAPPEARED? REVISITING THE EMPIRICAL EVIDENCE

In response to unexpected increases in interest rates, survey-based estimates of expected output growth rise while those of inflation decline. This is contrary to common New Keynesian wisdom that contractionary monetary policy causes a decline in output growth and inflation and, consequently, their expectations. An explanation for this puzzling fact is the existence of the so-called "information channel." According to the information channel, agents update their beliefs after an unexpected monetary policy announcement not only because they learn about

the current and future path of monetary policy, but also because they learn new information about economic fundamentals.

In the U.S., agents believe that the Federal Reserve communicates not only the future path of monetary policy, but also how optimistic it is about the current and future state of the economy: if the Federal Reserve's expectation of future fundamentals is different from the state of the economy perceived by market participants, market participants will update their expectations accordingly. However, these

“Both the Federal Reserve and market participants periodically and systematically over- and under-predict macroeconomic variables, depending on the period of time.”

updated expectations may not accurately estimate the results following a monetary policy shock.

According to the “information channel” theory, central bank communications can have a policy effect because they reveal private information to market participants. An important assumption behind this theory is that the central bank has (useful) private information about the state of the economy that could potentially be conveyed to market participants via its announcements.

In working paper 2002, PERC Fellow Tatevik Sekhposyan, along with co-authors Luka Hoesch and Barbara Rossi investigate whether the information channel of the Federal Reserve played a role in the transmission of monetary policy in the U.S., and whether its importance has evolved over time.

When investigating the presence of an information channel, it is important to verify this necessary assumption empirically by addressing the following two questions. First, are the forecasts made by central banks useful for market participants, i.e. are their forecasts unbiased and efficient? And, second, is there empirical evidence that forecasts of macroeconomic fundamentals made by central banks add any useful information to those made by private forecasters?

An important issue that must be taken into account is the fact that the forecasts are unstable. By inspecting the forecasts and forecast errors, it is evident that there are periods of time when the forecasts systematically under- or over-predict the target. Hence, there are periods in time when the forecasts are biased and misspecified. Second, even when biased, one forecast might have an advantage relative to another forecast.

This analysis adds to previous research literature on monetary policy shocks, central bank forecasts,

and forecast rationality. Where prior work has shown that survey expectations following unexpected monetary tightenings contradict standard economic models and have found the effects of a signaling channel at work, this paper takes into account informational effects over time. Other studies show that Federal Reserve’s forecasting performance have deteriorated across all forecast horizons, and only survived at short-horizons. Even at short-horizons, this paper shows that the Federal Reserve’s forecasting advantage has largely disappeared in the last fifteen years.

To investigate the relationship between the signaling channel of monetary policy and the information advantage of the Federal Reserve staff, the authors analyze the properties of several key macroeconomic forecasts made by the Federal Reserve and the private sector. Specifically, these include forecasts for inflation, GDP growth, the unemployment rate and the interest rate.

Federal Reserve forecasts are taken from a comprehensive list of Federal Open Market Committee announcements between February 1984 and July 2013. For private sector forecasts, the authors use forecasts taken from the Blue Chip Economic Indicators, a monthly commercial survey-based forecast dataset that presents the consensus forecasts from a large group of business economists.

The authors first test whether the importance of the Federal Reserve’s information has changed over time by analyzing the properties of the forecasts, then testing them by employing a Fluctuation Rationality test. This test assesses forecasting optimality in a way that accounts for instabilities. The analysis also allows the transmission mechanism of monetary policy shocks to vary over time, depending on whether the information advantage is present in the data.

Results show that information-robust methods provide substantially different results when applied to the 1990s-early 2000s relative to the period afterwards, thus confirming the existence of an information channel of monetary policy. However, these results disappeared in mid-2000s. The authors document that such a disappearance happens at the same time as the decrease in the information advantage of the central bank relative to private sector’s forecasts. These empirical results may be linked to several factors – including an improvement in the Fed’s communication and transparency.



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