Come hell or high water: An investigation of the effects of a natural disaster on a local election

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ABSTRACT

How is electoral support for incumbent candidates shaped by natural disasters? Do voters in districts newly recovering from a national disaster punish or reward incumbents for their response to the disaster when compared to their counterparts in unaffected districts? The City of Calgary is used here as a case study. On 20 June 2013, the Bow and Elbow rivers flooded in the Calgary, devastating 26 neighborhoods and displacing approximately 75,000 people, or 7 per cent of the city's population. Four months later, a municipal election was held. When analyzed as a natural experiment, results suggest that support for the incumbent mayor increased city-wide between the 2010 and the 2013 elections, but at a lower rate in areas that experienced residential flooding. However, the flood did not produce equivalent treatment and control groups, as flooded areas differ systematically from areas that were not flooded in ways key to the election outcome. When analyzed more conservatively, results show that the flood had no effect on incumbent support or voter turnout. Thus, this disaster introduces a note of caution into the literature examining the effects of natural disasters on electoral behavior.

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1. Introduction

It is a rare day when a politician is labelled as a superhero; it is even rarer when that label is applied without sarcasm. Yet, superhero status was bestowed on Calgary's mayor, Naheed Nenshi, as a result of his reaction catastrophic flooding that hit the city in June 2013. The flood displaced 75 000 residents (approximately 7% of the city's population), and devastated 26 communities within the city limits (Bowman, 2013). Throughout, Mayor Nenshi was seen as the voice of calm, competent leadership. Credited with providing "a voice for all Calgarians", many in the city viewed the mayor as Superman guiding them through the crisis (Bennett, 2013). This perception underpins the popular view that Nenshis leadership through disaster secured both his re-election to the mayor's office four months after the flood in October 2013 (The Canadian Press, 2013), as well as his 2014 World Mayor Award (Mayor, 2014).

Research provides mixed conclusions regarding the impact of exogenous shocks such as natural disasters on electoral outcomes. While some influential research concludes that the impact on political behavior is small and even non-existent (Abney and Hill,

1966), others find strong (Sinclair et al., 2011; Arceneaux and Stein, 2006) or even spectacular effects (Achen and Bartels, 2004a). Despite this debate, there are still few empirical studies on the subject; those that have been conducted are almost exclusively focused on the United States. We consequently know surprisingly little in a comparative context.

We use the 2013 Calgary flood, as well as the 2010 and 2013 municipal election results, to assess how incumbent vote share and voter turnout vary across districts that have, and have not been affected by a natural disaster. Two approaches are used. The first treats the natural disaster as a natural experiment. This suggests the flood is an exogenous shock that hit certain parts of the city at random, and assesses its effects on the municipal election with these assumptions in mind. This approach suggests that, as found in some of the most cited studies on the topic, the incumbent was penalized by voters for the flood. Though the incumbent mayor's support increased citywide between 2010 and 2013, this increase was smaller in areas that experienced residential flooding in 2013. The second approach assesses rather than assumes that the natural disaster affected voters as-if random. Results show the flood was not, in fact, random and did not, in fact, produce equivalent treatment and control groups. When assessed using a more conservative and appropriate research design matching techniques where

flooded districts are paired with equivalent, non-flooded districts results show that the flood had no substantial effect on electoral support for the incumbent. Moreover, both approaches show the flood did not meaningfully affect voter turnout in parts of the city affected by the flood.

We proceed by outlining the existing literature on the effects of natural disasters on electoral behavior. Then, we present our empirical analysis and results. We conclude by reflecting on the generalizability of Calgary's experience, assessing how our results help build a theory of how exogenous factors such as natural disasters affect democratic elections.

2. Natural disasters and elections

One way to probe the political consequences of natural disasters is to ask if voters blame incumbents for exogenous shocks, or if voters reward incumbents for their reaction to disasters that are entirely out of their control. A second common question is to ask how natural disasters affect voter turnout. Each is addressed in turn.

2.1. Support for the incumbent candidate

Research provides some clues as to how natural disasters might affect incumbent support. The most compelling theories discuss retrospective voting and blame apportionment. Studies suggest that voters retrospectively evaluate incumbents, such that incumbents who are perceived to have performed well in the past are re-elected while those who are judged as poor performers may lose to a challenger (see Key, 1966; Fiorina, 1981). Research investigating these processes characterizes voters are biased, emotional, and myopic. In other words, it is not plausible to expect or suggest that most retrospective evaluations of elected officials are objective or accurate. Rather, emotions (Bower, 1981), ideology (Bartels, 2002; Anderson et al., 2004), and partisanship (Marsh and Tilley, 2010; Brown, 2010) all prevent voters from objectively or accurately attributing responsibility for events and actions to specific incumbents. These effects are not constant over time, as studies show that voters give more weight to more recent events in their retrospective evaluations than to those that occurred well before the election (Nannestad and Paldam, 2000; Bartels, 2008).

Given these issues, what matters about retrospective voting is less about how accurately voters assign blame or reward for past performance, but more simply that they attribute responsibility and judge responsiveness for something to the incumbent, and then act on it. Thus, retrospective voting often leads to voters punishing or rewarding elected officials for things that are well outside their control (Achen and Bartels, 2004b; Arceneaux and Stein, 2006; Healy and Malhotra, 2010; Chang and Berdiev, 2015). For example, Achen and Bartels show how the incumbent president (Woodrow Wilson in their case) was punished for a series of shark attacks in 1916. They conclude that this kind of blind retrospection seriously hampers elections as a form of meaningful democratic accountability (Achen and Bartels, 2004a). By contrast, Abney and Hill (1966) argue instead that the mayor of New Orleans, Victor Schiro, manages to avoid harsh punishment from the voters after his vigorous and active response to Hurricane Betsey in 1965.

Other studies suggest that though voters might take the consequences of natural disasters into account (Healy and Malhotra, 2010; Gasper and Reeves, 2011; Cole et al., 2012), this is neither automatic nor always attributed to the correct elected official or incumbent (Arceneaux and Stein, 2006). This seems especially plausible in a federal context, such as Canada or the United States. Moreover, voters sometimes reward politicians if they conclude the incumbent reacted to the disaster in a satisfactory fashion (Gasper

and Reeves, 2011). For the Calgary case, this suggests that the elected officials that might be most likely to experience reward are members of the provincial Legislative Assembly, as the provincial government remains responsible for the bulk of relief payments that came immediately after the flood (see Government of Alberta (2014)), rather than any municipal politician in Calgary.

Still, on balance, the literature suggests that incumbents are penalized by voters for natural disasters outside their control. The 2013 municipal election in Calgary is an important test of this generalization for three reasons. First, this case is very similar to New Orleans experience mobilized in a seminal article on the topic of blame attribution (Abney and Hill, 1966). This makes Calgary's 2013 flood important not only for general replication of these results, but also for replication in a non-American context. Second, the positive narrative surrounding Mayor Nenshis leadership during the 2013 flood suggests that voters may not have penalized him for the flood.

Third, 2013 marks Nenshis first campaign for re-election, as he was elected mayor in 2010 in an open contest. Since the late 1980s, incumbent mayors seeking re-election in Calgary win with large majorities of the popular vote. For example, the past two mayors prior to Nenshi — Al Duerr and David Bronconnier — were both first elected with 28% of the popular vote. Duerr was subsequently re-elected with 90% of the popular vote in his first re-election bid, while Bronconnier was re-elected with 79% of the popular vote. Nenshi was initially elected with a higher proportion of the popular vote in his first election (40%) than his predecessors. This suggests that it is possible, though unlikely that Nenshis support would actually decrease between 2010 and 2013. Instead, it is more plausible that the flood may affect the rate of increase in his support in 2013 from their 2010 levels.

2.2. Turnout

A second factor related to incumbent support, but also important in its own right is voter turnout. Rational choice theory suggests that voting itself is an irrational act, as the benefits of voting are disproportionately low when compared to the probability that one will cast the decisive ballot in an election (Downs, 1957; Barry, 1978; Gelman et al., 2004; Blais, 2000). In fact, the benefits of the vote are so low, even small increase of the costs can lead to considerable variations in turnout (Aldrich, 1993). The logical extension of this argument is that natural disasters increase the costs associated with learning about candidates and most importantly voting per se. This should lead a rational citizen in that area to further disengage from the electoral process (for a similar argument regarding cold weather, see Shachar and Nalebuff, 1999).

However, other studies examining voter turnout highlight civic duty as an important factor. Citizens who feel it is their duty to vote feel satisfaction in the act itself quite apart from whatever effect their vote might have on the outcome of the election. This is enough to trump the otherwise powerful arguments suggesting that the most rational thing to do is abstain from the process (Riker and Ordeshook, 1968; Blais and Young, 1999; Blais, 2000). Field experiments confirm that when social pressure is applied to voters, the probability they will vote increases considerably (Gerber et al., 2008; Green and Gerber, 2010). Importantly, duty can also be a social or collective property, leading a voter to the ballot box out of a sense of duty for others (Uhlaner, 1999). Framed this way, a natural disaster such as a flood might actually increase voter turnout, particular amongst those who feel a sense of duty to cast a ballot. Studies suggest that evidence supports both approaches to voter turnout in post-disaster elections. For example, in the aftermath of Hurricane Katrina, turnout decreased on average, but increased in the most affected areas (Sinclair et al., 2011).