

# Do Voters Prefer Local Leaders from the Ruling Parties after Natural Disasters?

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## Abstract

This paper aims to offer one of counterarguments to Achen and Bartels' Shark Attack argument that people blame their governments after natural disasters. They argue that unexpected natural disasters like flood, hurricane, tornado, and drought will reduce incumbent's vote share in coming election. We aim to verify these arguments in a new context and, against the natural disaster hypothesis, argue that people may be rational to choose their leaders in coming elections. Specifically, this paper focusses on whether people realize the importance of the alignment of national and local governments to make governments operate smoothly after disasters. Our hypothesis is that contingencies make people realize their preferences for local leaders from the ruling parties at the national level. To test this hypothesis, we conducted a mail-in survey in Joso City, Ibaraki Prefecture, Japan in May 2016. The area was severely flooded in September 2015 after the heavy rain brought by Typhoon No. 16. One of our findings is that people who got more damaged are likely to prefer local leaders from the ruling parties at the national level.<sup>1</sup>

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<sup>1</sup>Paper presented at the 2017 meeting of the Midwest Political Science Association.

# 1. Introduction

This paper aims to offer one of counterarguments to Achen and Bartels' Shark Attack argument that people blame their governments after natural disasters. They argue that unexpected natural disasters like flood, hurricane, tornado, and drought will reduce incumbent's vote share in coming elections. We aim to verify these arguments in a new context and, against the natural disaster hypothesis, argue that people are rational to choose their leaders. Specifically, this paper focusses on whether people realize the importance of the alignment of national and local governments to make governments operate smoothly after disasters.

The data come from our own survey conducted in Joso City, Japan. The city suffered from the severe flood in September 2015 after the heavy rain triggered by Typhoon No. 16. One of our findings is that people who got more damaged are likely to prefer local leaders from the ruling parties at the national level.

# 2. Literature Review

In their pioneering article, two prominent political scientists, Christopher Achen and Larry Bartels (2002), argue that unexpected natural disasters like flood, tornado, and drought reduce incumbent's vote share in upcoming elections (Achen and Bartels, 2002). Why would natural disasters be related to incumbents' vote share? The underlying logic behind this hypothesis stems from retrospective voting. The public is known to respond the incumbent's performance by rewarding or punishing her in an election with their votes (Key, 1966). Focusing on economic issues, most studies of retrospective voting have demonstrated that a bad economy reduces the chance of the incumbents to be re-elected (Fiorina, 1981, for example). Furthermore, voters are also known to respond in similar fashion in noneconomic issues, including national security (Karol and Miguel, 2007) and educational issues (Berry and Howell, 2007). These are all sound and reasonable findings for democratic accountability, if the government does well with major

political, economic, social issues, it will be rewarded accordingly; otherwise, by the same token, it will be punished.

While the literature on natural disaster shares the same premise about retrospective voting, it departs from those traditional views on retrospective voting in a crucial way: the reward or the punishment by voters can be arbitrary and even irrational. It argues that people do not care about whether government is really responsible for events. Obviously, the government is not attributable for the occurrences of natural disasters. However, the literature contends that people will punish the government in elections whether a mishap occurs to them regardless of whether the government is responsible for it. If true, this would be a blow to democratic accountability. Up to now, the literature on democratic accountability has mainly focused on how to make the elusive politicians responsible for their decisions. One important implication of the literature on the natural disasters is that we need to worry about people's irrationality to make politicians responsible for events outside their control.

Yet, most recent studies provide a counter argument (Ashworth and Bueno de Mesquita, 2014) and a counter example (Velez and Martin, 2013), casting doubts on the natural disaster hypothesis. Furthermore, some recent findings (Healy and Malhorta, 2009; Gasper and Reeves, 2011; Reeves, 2011) suggest that the natural disaster hypothesis does not hold if the incumbent can provide financial aid to help the damaged, adding a new twist to the existing findings.

### **3. Are People Irrational?**

We aim to contribute to the above debate by verifying all these argument in a new context. Against the natural disaster hypothesis, we argue that people are rational to choose their leaders after disasters. Specifically when people clearly realize that they could have an alternative leader, they just choose the candidate who is expected to give them more benefits than the incumbent leader is. To put it in another way, against the retrospective voting which underlies people's

irrationality depicted in the natural disaster hypothesis, prospective voting may work strongly after the unexpected natural disasters.

Thus, against the Achen and Bartels, we hypothesize that people rationally choose their leader who will benefit them in coming elections instead of punishing the incumbent irrationally. To test this hypothesis, we focus on the alignment of national and local governments to make governments operate smoothly after disasters and people's attitude toward the incumbent mayor's party affiliation. If the incumbent mayor comes from the opposite parties in national politics, people may prefer a possible alternative mayor from the ruling parties after natural disasters because it is reasonable that people think the performance of a mayor from the ruling parties should be better than the incumbent from the opposite parties, in the face of unprecedented natural disasters.

## **4. Background, Data and Model**

### **Background**

On September 19th in 2015, a big typhoon hit the mid of Japan island and brought heavy rain. Tochigi Prefecture saw 551 mm of precipitation over a 24- hour period. Because of the heavy rain in the Kinugawa River, which runs through Tochigi, Ibaraki, and Chiba prefectures, the flood-swollen river overflowed its banks in Joso City, Ibaraki Prefecture. A third of Joso City, 40 square km, was flooded for days. Two people were lost in Joso City, and thousands of houses and structures are soaked. More than 6,000 residents had to evacuate to dozens of shelters in Joso City for a few days. According to the Land Ministry, up to 6,900 houses were damaged from the flood and about 22,000 residents were affected.

When Kinugawa River was flooded in September 2015, Joso City had a leader who was not from the ruling party in national politics. Under the Liberal Democratic Party of Japan (LDP)

government at the national level, then mayor of Joso City, Mr. Takasugi, was from the opposite party. He won another candidate from LDP in the 2012 mayoral election by only 500 votes out of 30,000 (See Appendix A). How the political twist between Joso City and Japan's national politics affect people's attitude toward their local leaders when faced with the disaster? To answer to this question, we employed the following data from the mail-in survey conducted in Joso City in May 2016.

## **Data**

The data for this analysis come from our mail and web-based online survey that we conducted in May 2016, 7 months after the disaster. We choose two precincts from the flooded area and one precinct from the un-flooded area of Joso City and randomly selected 1,500 voters from these three precincts on the Joso City voter registration list which has 50,000 registered voters. The response rates are 17.0% and 20.1% in the flooded precincts and 14.2% in the un-flooded precinct.

## **Variables**

We use preference on local leaders' partisanship as our dependent variable. The question is "To what extent do you agree with the following opinion? – Local leaders from the ruling parties in national politics is preferred at times of natural disaster. "

The independent variable is how much financial hardship people experiences from the damages. Respondents answer the amount of their total financial damages. If my hypothesis is correct, the individual financial damage should affect their preference on local leaders' partisanship. Those who severely suffered from the flood are more likely to prefer a local leader from the ruling parties at the national level.

The model should include several controls. Because we want the genuine effect of the damage amount on people's preference on local leaders' partisanship, we need to control

evaluations for both local and national leaders' performance and respondents' party identifications. These factors are expected to affect our dependent variable, the preference on local leaders' partisanship. We also include demographic variables, such as gender, age, education, and home ownership (see Appendix B).

**Model** With these variables, we employ a Tobit regression model. This technique allows us to estimate the effect of the independent variables on the zero and positive values of the dependent variable separately.

## 5. Findings

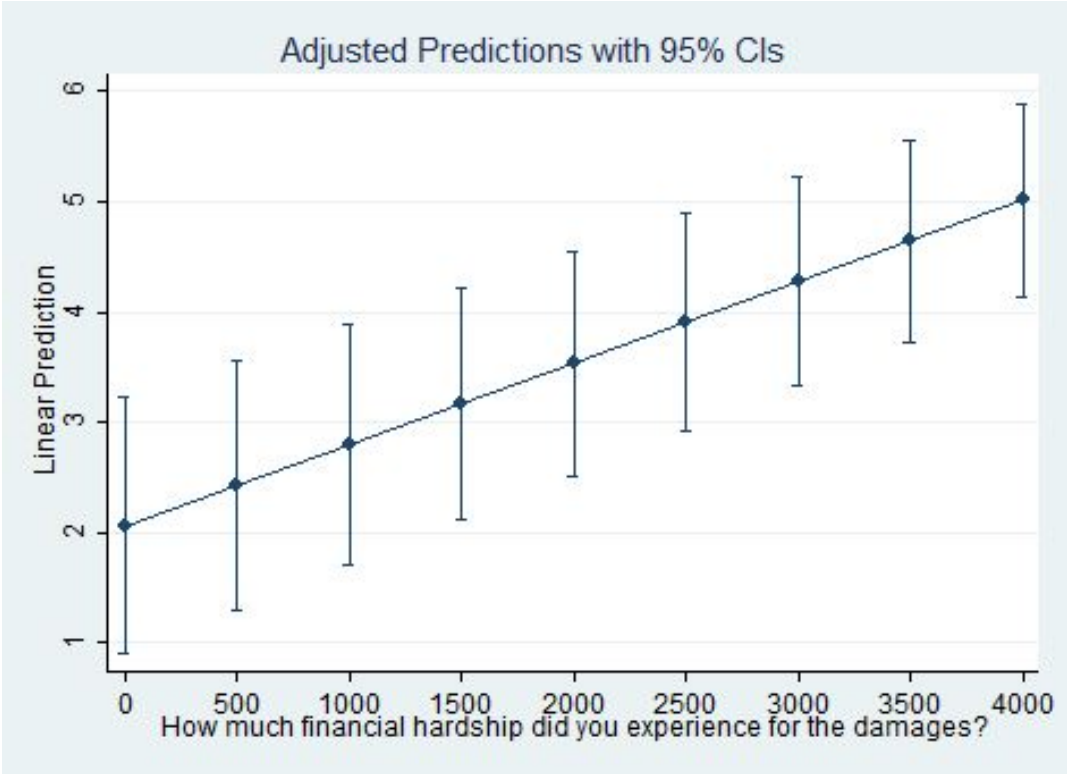
Table 1 shows the result of the Tobit regression model. The results clearly indicates the individual damage amount has a positive effect on their preferences on local leaders' partisanship. Those who got more damaged from the flood are more likely to prefer local leaders from the ruling parties in national level regardless of individual party identifications. Figure 1 shows the adjusted prediction of the dependent variable by the damage amount. These results support the expectation about the effects of the damage amount on preference on local leaders' partisanship.

Another important finding is that there is no effect of the evaluation of the incumbent mayor's performance on people's preference of the mayor's partisanship. This means that people prefer local leaders from the ruling parties in national politics not because they want to punish then incumbent mayor from the opposite party. This does not support people's irrationality argued in the literature on the natural disasters led by Achen and Bartels.

Table 1: Effect of Disaster Amounts on Preference on Local Leaders from Ruling Parties

	Coefficient	SE	t	p
Damage Amount	0.001	0.000	18.110	0.000
Eval of Mayor	0.020	0.024	0.850	0.399
Eval of PM	0.080	0.030	2.690	0.008
PID_LDP	0.567	0.317	1.790	0.076
PID_DP	-1.438	0.162	-8.870	0.000
PID_Komei	0.488	0.562	0.870	0.387
PID_JCP	-0.504	0.238	-2.120	0.036
PID_Ishin	-0.198	0.213	-0.930	0.353
PID_Others	-1.061	0.100	-10.570	0.000
<i>Demographics</i>				
Gender_Male	0.263	0.117	2.260	0.026
Age	0.205	0.074	2.760	0.007
Homeownership	0.314	0.309	1.020	0.311
Education	-0.094	0.068	-1.390	0.168
Constant	1.629	0.613	2.660	0.009
Number of Obs	126			
Pseudo R2	0.157			

Figure 1: Predicts of Preference on Local Leaders from Ruling Parties



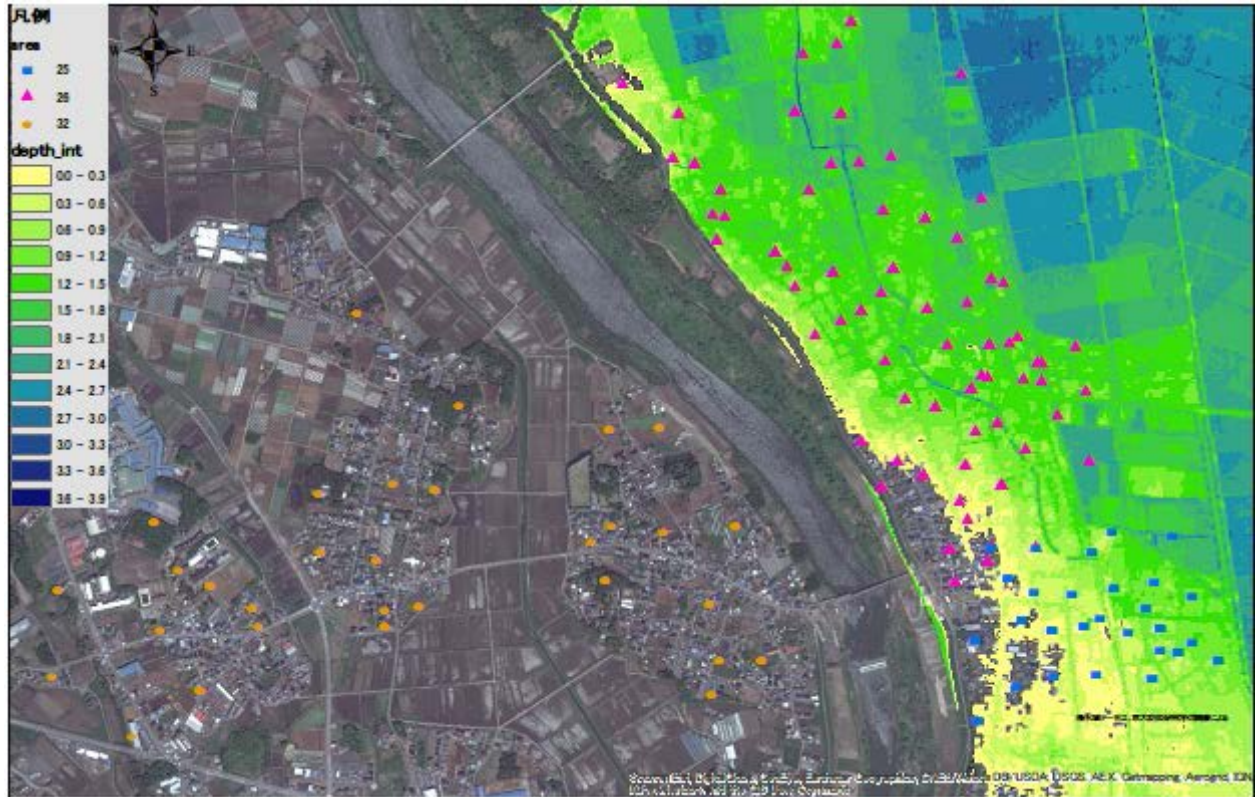


## **6. Discussions**

We are primarily interested in the effect of unexpected natural disasters on people's attitude toward the government. Achen and Bartels (2002) argue that unexpected natural disasters reduce incumbents' vote share in upcoming elections. If people punish the government regardless of whether the government is responsible for it, this would be a blow to democratic accountability and also mean that voters are irrational. This paper, however, suggests that voters are not irrational. Those who severely suffered from the flood in Joso City are more likely to prefer the local leader from the ruling parties in national politics and would choose such a candidate in the upcoming mayoral election. When they know they could have alternatives, they rationally choose a reasonable leader, regardless of their party identifications, in accordance with their disaster financial hardships.

# Appendix A

Figure 2: Flood Depth and Respondents



Flood Depth Data from Disaster Prevention Research Institute, Kyoto University  
(<http://www.dpri.kyoto-u.ac.jp/news/5693/>)

## Appendix B

**Preference on Local Leader from Ruling Parties:** To what extent do you agree with the following opinion? “Local leaders from the ruling parties in national political is preferred at times of natural disaster.” [Strongly agree=5, Agree=4, Neither=3, Disagree=2, Strongly disagree=1]

**Damage Amounts:** How much is your total financial damage on your houses, vehicles, furniture and household goods caused by the flood in September 2015? [Yen]

**Evaluation of Mayor:** I’d like you to rate how you approve of the way Takasugi Toru is handling his job as Joso Mayor on a scale of 0 (disapprove) to 10 (approve). You can pick any number between 0 and 10. [A scale of 0 (disapprove) to 10 (approve)]

**Evaluation of PM:** I’d like you to rate how you approve of the way Abe Shinzo is handling his job as Prime Minister on a scale of 0 (disapprove) to 10 (approve). You can pick any number between 0 and 10. [A scale of 0 (disapprove) to 10 (approve)]

**PID:** Which political party do you support? Dummy variables of each party except for independent.

**Gender:** A dummy variable was used to denote gender. [Female=0, Male=1]

**Age:** What is your age? [20s=1, 30s=2, 40s=3, 50s=4, 60s=5, more than 70s=6]

**Homeownership:** Do you or your family own the place where you are living now, or do you rent? [Rent=0, Own=1]

**Education:** What is the highest grade of school or year of college you have completed? [Less than high school=1, High school diploma=2, Some college=3, Associate degree or specialized technical training=4, Bachelor’s degree or higher education=5]

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