Trial by water? The impact of the 2013 Amur flood on the outcomes of subnational elections in Russia

Sokolov Boris (LCSR),
Shcherbak Andrey (LCSR),
Ukhvatova Maria (HSE SPb)

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Introduction

- Natural disasters as an exogenous shock for government and population
  - Hurricanes Katrina and Betsy (Gomes and Wilson 2008; Healy and Malhotra 2009); shark attacks on the East Coast of the USA (Bartels and Achen 2004); floods in Germany (Bechtel and Hainmuller 2011) and Pakistan (Fair et al. 2013); Russian wildfires (Szakonyi 2011; Lazarev et al. 2014)
- Whether voters blindly punish governments for irrelevant events, such as disasters, or retrospectively assess governmental performance in times ‘when wild winds blow’.

Theoretical framework

- Blame attribution theory
  - Blaming government for a disaster makes people feel safer by ‘regaining a sense of control’ and believing in chance to avoid of any further disasters
- Theory of retrospective voting
  - People blindly punish government for suffering losses from disaster
  - People reward government for relief spending
  - People decide whether punish or reward government relying on evaluation of government performance in preventing and managing of a disaster.
- Political support in non-democracies
  - Whether people’s support for government in authoritarian and semi-authoritarian regimes follows the same logic as in developed democracies?
  - Under the conditions of semi-authoritarian rule, elections may be considered as not a form of political competition but instead as a referendum on support for government
  - *The 2010 Pakistani flood*:
  - higher voter turnout (in 2013),
  - higher incumbent support
  - less support for militant groups and niche-oriented parties.
  - Voters in affected electoral districts demanded for higher quality of government services and accountability; and had higher level of political awareness

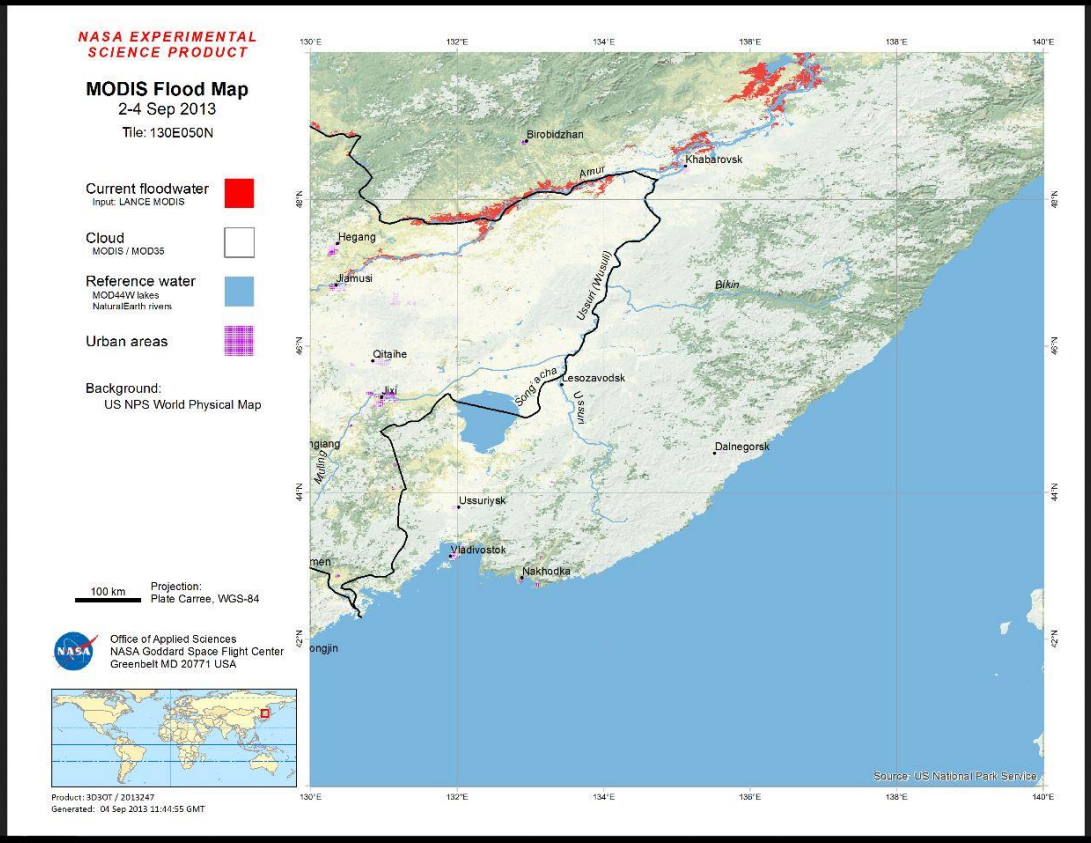
Amur flood comparing to previous cases analyzed in literature

- In Khabarovsk Krai, the flood peaked occurred around the Election day (in some districts few days before, and in some others – slightly after)
- This allows for isolating the effect of disaster itself from the effect of post-flood governmental aid (which was not the case in all previous studies) and therefore distinguish between ‘voter gratitude’ and ‘blind attribution’ theoretical mechanisms

The 2013 Amur River Flood

- Since the end of July 2013 - an unprecedented flood in the Far East
- The water level - daily growth reached 15 cm
- August 8 – the state of emergency declared
- No victims!

The 2013 Amur River Flood



The Khabarovsk Krai governor's election

Candidate (party)	Votes	% of votes of registered voters	% votes from real voter turnout
Shport (United Russia)	223 542	21.66	63.92
Furgal (LDPR)	66 920	6.47	19.14
Postnikov (CPRF)	34 020	3.29	9.73
Yashchuk (Justice Russia)	13 943	1.35	3.99

Turnout was 33,88 %

Hypotheses

- H1. Growth of political activism:
  - Voter turnout increases in affected areas
- H2. Voters' gratitude:
  - Voters do reward authorities in affected areas

On the one hand, the immediate government reaction – the rescue operation and disaster management – can be treated as an example of government effectiveness. The flood caused no victims. One may expect that Khabarovsk Krai residents would appreciate it and would not punish the authorities too much.

- H3. Blind retrospection:
  - Voters do punish authorities in affected areas

On the other hand, voters had to make their choice before they would have received financial aid, compensations and new rebuilt houses.

Data and Variables

- **Dependent variables** (at the level of polling station, 806 observations):
  - *Incumbent Vote*, share of votes gained by the incumbent, in a given polling station, according to Central Election Commission of Russia.
  - *Voter turnout* , voter turnout, in per cents, in a given polling station
- **"Treatment"**:
  - Affected , exposure of a given polling station area to the flood (0 – No exposure, 1 – Yes exposure). Of 806 polling station areas, 157 ones were affected by the flood
  - Assignment is based on NASA satellite images; satellite maps were matched with CECR data on the borders of polling station areas by hands.
- ***Social-economic controls*** (RFSSS data for 2012; all available only on the municipal level):
  - *Urban/rural* , type of settlement, for a given polling station area (1 – urban, 0 – rural)
  - *Log pop_density*, logarithm of population density in a given municipality
  - *Transfers*, transfers from higher level budgets to the budget of a given municipality, in RUR
  - *Budget deficit*, budget deficit in a given municipality, in RUR
  - *Income_pc*, income per capita in a given municipality, in RUR
  - *Mobile 3 G*, the coverage of mobile 3G and 4G networks in a given polling station area. 3G network is used as a proxy for accessibility of high-speed internet and control for a spillover effect.
  - *Share of votes for V. Putin* on the 2012 Presidential Election
- **Spillovers:**
  - Because all polling station are nested within municipalities which, in turn, nested within districts, it is likely that exposure of one polling station may also affect voter decisions in neighborhood stations within the same higher-level administrative units. To control for potential spillover effect we include two additional dummies
  - *Spillover 1*, exposure of a given municipality to the flood (0 – No exposure, 1 – Yes exposure).
  - *Spillover 2*, exposure of a given rayon to the flood (0 – No exposure, 1 – Yes exposure).

Controlling for Election Fraud

- It is widely believed that Russian elections are very fraudulent.
- Whether inferences on manually corrected electoral data reflect true dynamic of political support?
- Inference using Rubin's Causal Model is still valid, if the probability of fraud is balanced across affected and unaffected areas, that is, if fraud, when occurred, does not affect differences in outcomes between groups. We check this assumption using 2D histograms.
- We also control for possibility of fraud using several relevant indicators revealed in recent studies on the subject:
  - Last digit in the number of ballots for winning candidate (incumbent)
  - Proportion of ballots for distant voting in the total number of ballots used
- We exclude all observations with 100% turnout (there was no polling stations with 100% voting for incumbent or any other candidate)

Figure 1. Incumbent's VoteShare in Unaffected and Affecteded Polling Stations

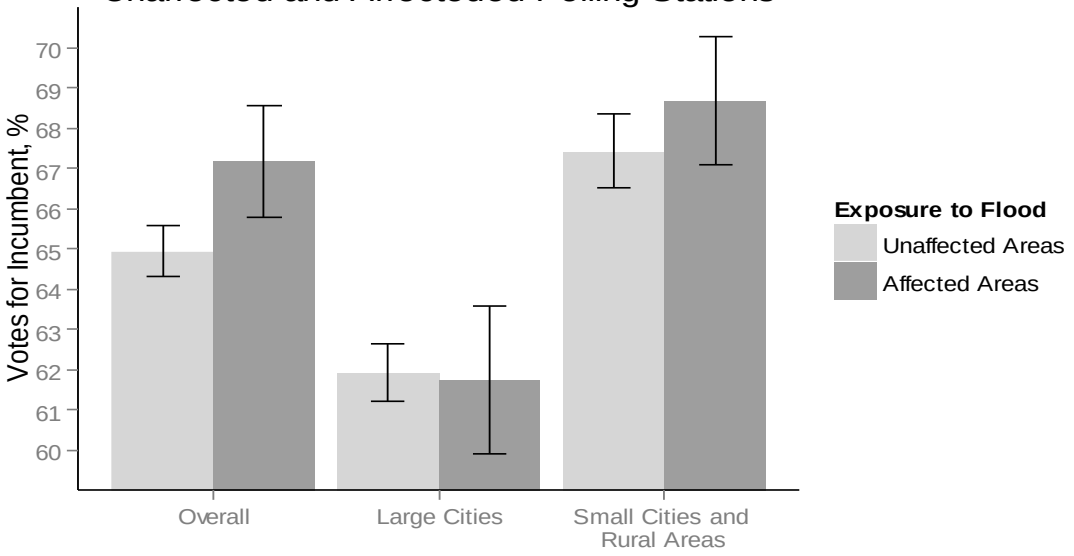
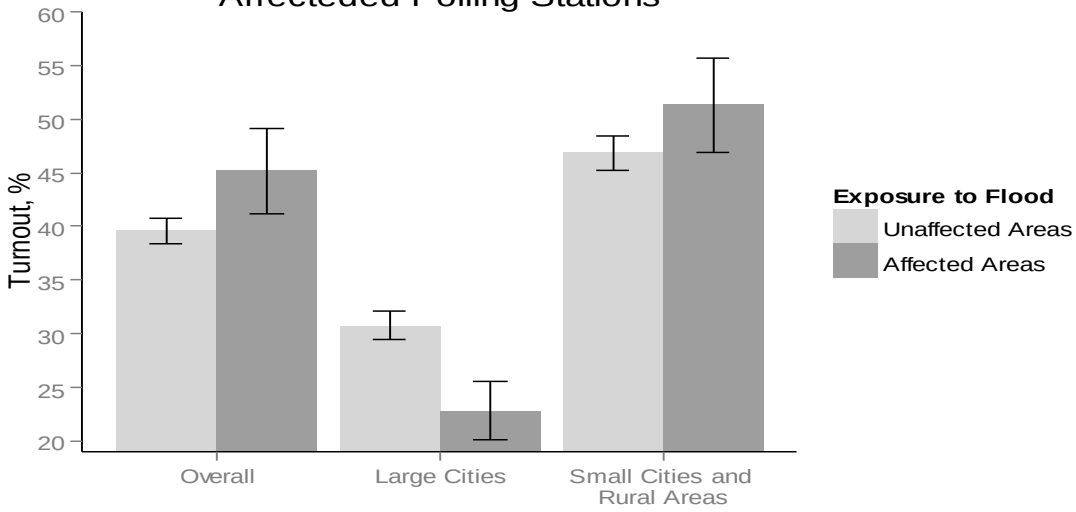


Figure 2. Turnout in Unaffected and Affecteded Polling Stations



Identification strategy

- Clustered data: electoral precincts are clustered within municipalities, which are in turn clustered within *rayons* (districts). Standard OLS estimates therefore are likely to be biased
- Highly unbalanced cluster sizes: cluster-robust SE estimator are also likely to provide biased results
- Probability of receiving treatment among units is not independent from the socio-demographic covariates
- We use propensity score matching instead standard OLS

Matching models

- Model 1: Habarovsk and Komsomolsk-na-Amure are included (matching only on precinct characteristics) 33 affected units + 33 control units
- Model 2: Only small cities and rural areas are included. 112 affected units + 112 control units
- Model 3: Affected units/Affected municipalities vs. unaffected units/unaffected municipalities. 145 affected units + 145 control units
- Covariates: last digit, transfers, budget deficit, number of ballots, proportion of ballots for distant voting, income per capita, 3G/4G covering, the voteshare for president Putin in 2012 Presidential election

Matching Results

Khabarovsk and Komsomolsk-na-Amure:

- Effect of flood on incumbent's voteshare is significant only at 0.1 level and insignificant for turnout

Small cities/rural areas

- Effect of flood on incumbent's voteshare and turnout is significant at conventional 0.05 level (analysis for turnout was not conducted) even after adding controls omitted in PS model, but not in all specifications.

Subsamples: b) affected/affected vs. unaffected/unaffected

- Effect of flood on incumbent's voteshare is significant at conventional 0.05 level
- After adding control variables which have not been included in propensity score model, the effect of flood on both outcomes disappears

Additional OLS (for affected areas only) using satellite map-based measure of 'flooding' for a given precinct:

- No effect of flood on both dependent variables.

Discussion

- Weak and unrobust evidence of positive effect of flood on vote for incumbent in affected areas
- When significant, the effect of flood on voting falls in interval from 1.5 to 3% (depending of specification), that two times less then the effect of 2002 Elbe Floods in Germany (Hainmueller and Bechtel 2011) and 2010-11 Pakistani floods (Fair et al. 2013).
- Strength and significance of the effect of flood on voting for incumbent turnout depend on method of estimation and model specification
- Flood did not cause decrease either in incumbent's voteshare or turnout: effective government response in the course of flood?
- Flood did not improve a lot percentage of votes for incumbent and turnout: voters had not received governmental aid before elections.

We interpret the absence of reasonable electoral effect of the flood as supporting the rational voter interpretation: flood is truly irrelevant for voter assessments of governmental performance. However we recognize the possible bias due to positive confounding or inappropriate modelling technique.

Thank you for your attention!

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