

# Real-time Vote Counting and Trust in Modern Elections

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## Gist of the argument

- real-time vote counting tempts some citizens to see it as a race in which one candidate may “pass” the others, as if the actual final result wasn't already contained in the ballots
- given the contemporary ability to follow the news and others opinions in real time during the vote counting, echo chamber effects and posting by paid bots, politicians can incite voters to believe their candidates are faring better than what the ballots hold

## We have seen it before...



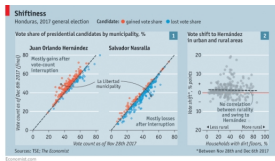
**Donald J. Trump** ✓

@realDonaldTrump

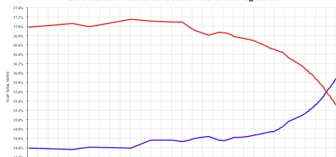
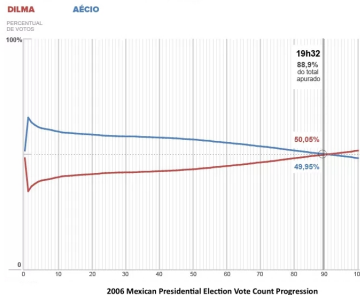


Last night I was leading, often solidly, in many key States, in almost all instances Democrat run & controlled. Then, one by one, they started to magically disappear as surprise ballot dumps were counted. VERY STRANGE, and the "pollsters" got it completely & historically wrong!

... and not only us

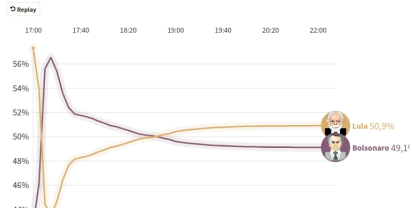


**POR PERCENTUAL DE VOTOS APURADOS**

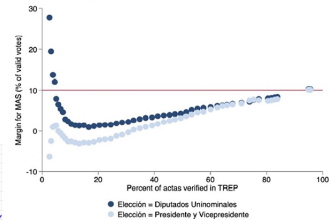


**CORRIDA DA APURAÇÃO**

Resultados em intervalos de 5min até 100% das urnas apuradas



The MAS-IPSP margin increased steadily through most of the quick count (TREP) as more tally sheets (*actas*) were verified



source: Órgano Electoral Plurinacional (2019b) and authors' calculations.

- Cantu and Garcia-Ponce (2015) used survey data from after the Mexican 2012 election to show that supporters of the incumbent discredited the integrity of the election only after learning their candidates defeat.
- We exploit Twitter data to investigate similar phenomena in other elections. In this draft of the paper, we focus on Brazil 2014.

# Brazil 2014

- **What:** second round of Presidential Election, won by Dilma Rousseff, with 51.64% of valid votes against Aécio Neves, 48.36%.
- **Election day:** 26 October 2014, votes allowed until 17h00m, local time (Brazil has 3 time zones)
- **Canvassing:** the electoral authority informed beforehand that they would only make the counting for the presidential race available after the last time zone voted.
- **Problem:** 94% of Brazilians would had to wait until 20h00m (UTC-3) to see the first partial vote counts.

# Brazil 2014 - opportunities

- **Expectation that Neves was winning:** it was widely reported that during the day, both candidates were informed (extra-officially) that Neves was leading the race. Neves even organizes an actual winning party, attended by celebrities and politicians.
- **Sharp cutoff:** there was an official cutoff for the release of information - the first report we could locate of official partial vote counts is timed at 20h04m.
- **No prior suspicion of fraud:** differently from Mexico 2006, the U.S 2020 or Brazil 2022, where fraud allegations were already being fabricated before the elections, in Brazil as of 2014, election fraud had not been even considered as a subject in decades.

# Setup

- **Running variable:** time intervals of 10 seconds (results are robust to different intervals)
- **Cutoff:** 20h04m, the time when first partial official vote counting was made public (we also quickly explore two other, 17h02m and 19h32m)
- **Outcome variable:** in each interval of 10 seconds,

$$\frac{\# \text{ tweets that contain election keywords \& negative election keywords}}{\# \text{ tweets that contain election keywords}}$$

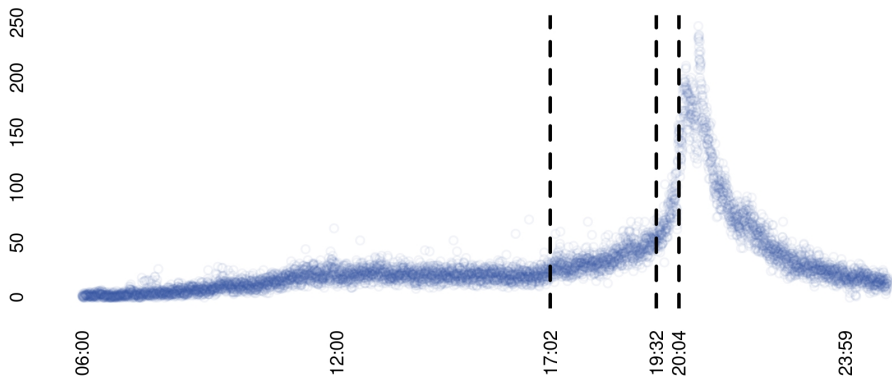
# Keywords to detect tweets talking about elections

eleio, eleicao, eleiao, eleico, eleies, eleicoes, eleioes, eleices, reeleio, reeleicao, reeleiao, reeleico, reeleies, reeleicoes, reeleioes, reeleices, re-eleio, re-eleicao, re-eleiao, re-eleico, re-eleies, re-eleicoes, re-eleioes, re-eleices, eleitoral, eleitorais, eleito, eleitos, eleita, eleitas, reeleito, reeleitos, reeleita, reeleitas, re-eleito, re-eleitos, re-eleita, re-eleitas, voto, votos, votao, votacao, votaco, votacao, votaes, votacoes, votaoes, votaces, votado, votados, votada, votadas, presidente, presidentes, presidenta, presidentas, contagem, contagens, apurao, apuracao, apuracao, apuraco, apuracoes, apuracoes, urnas, urnas, urna eletrnica, urna eletronica, urnas eletrnicas, urnas eletronicas, boca de urna, boca de urnas, bocas de urna, bocas de urnas, TSE, tse.jus.br, TRE, tribunal superior, boletim de urna, boletins de urna, seo eleitoral, seco eleitoral, seao eleitoral, sees eleitorais, zona eleitoral, zonas eleitorais, democracia, democracias, democrata, democratas, IBOPE, Datafolha, mandato, mandatos, Dilma, Rousseff, Rouseff, Rouseff, Rouseff, Lula, Lulo, Luladro, PT, Partido dos Trabalhadores, petralha, petralhas, Acio, Aecio, Neves, PSDB, Partido da Social Democracia Brasileira, tucano, tucanos, tucana, tucanas, tucanou, tucanaram, tucanar, tucanagem

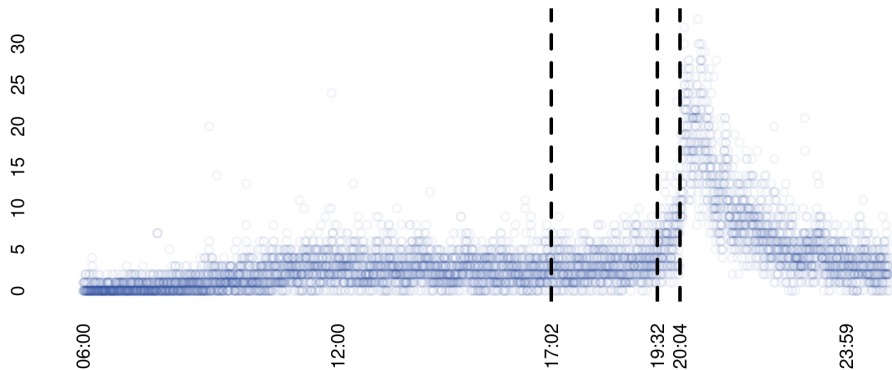
# Keywords to detect tweets talking suspiciously about the elections

fraude, fraudes, fraudado, fraudados, fraudada, fraudadas, falcatronia, falcatronias, roubado, roubados, roubada, roubadas, rouba-lheira, rouba-lheiras, suspeito, suspeitos, suspeita, suspeitas, manipula-o, manipula-cao, manipula-o, manipula-co, manipula-es, manipula-oes, manipula-oes, manipula-ces, manipulado, manipulados, manipulada, manipuladas, falsificado, falsificados, falsificada, falsificadas, palhaada, palhacada, absurdo, absurdos, absurda, absurdas, golpe, armao, arma-cao, arma-co, arma-o, armado, armados, armada, armadas, arranjado, arranjados, arranjada, arranjadas, estranho, estranhos, estranha, estranhas, esquisito, ridiculo, ridiculo, fara, farca, faixada, faxada, alterado, alterados, alterada, alteradas, sacanagem, sacanagens, pilantra, pilantras, pilantragem, pilantragens, garfado, garfados, garfada, garfadas, mo grande, mao grande

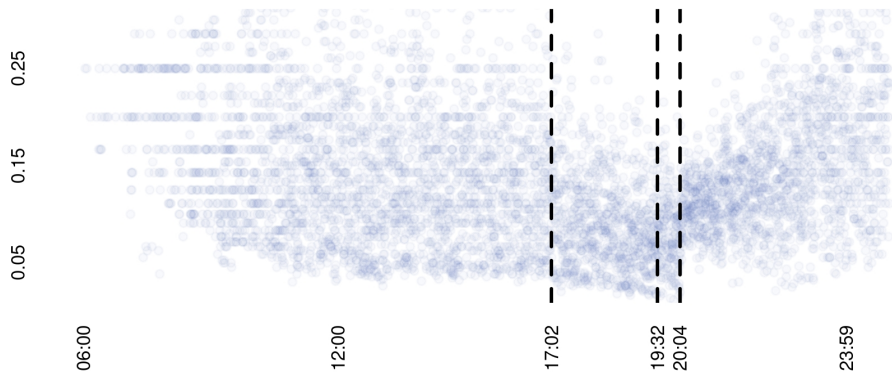
# N. of tweets with election keywords (per 10 sec intervals)



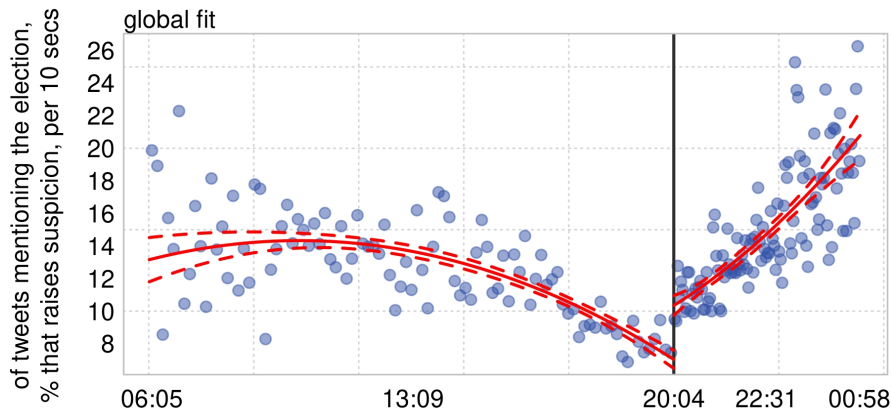
# N. of tweets with election keywords **and** negative election keywords (every 10 second intervals)



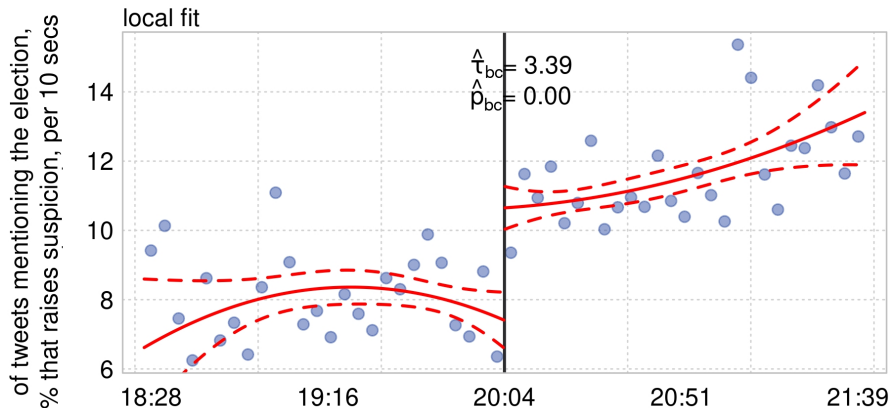
# Proportion of tweets with election keywords **and** negative election keywords (every 10 second intervals)



Cutoff: 20h04m, when partial vote counting result is made public, with Rouseff leading (contrary to expectations)

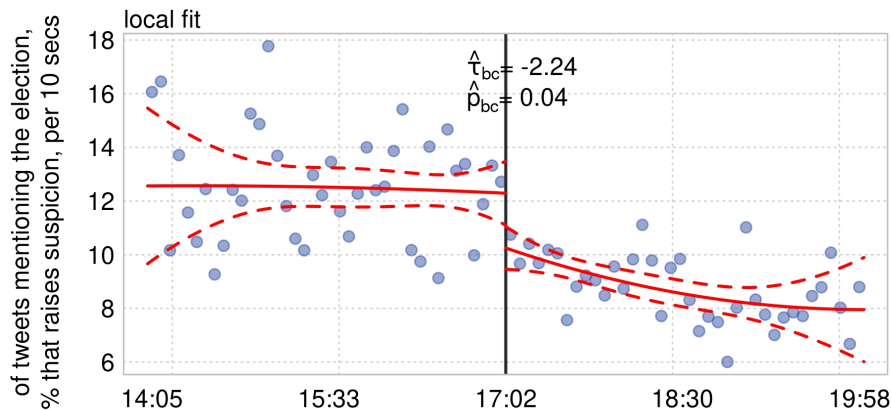


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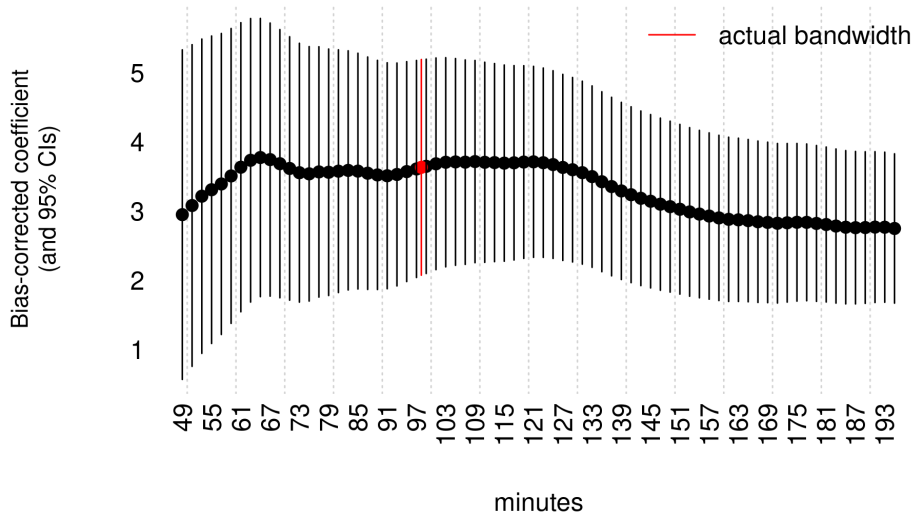




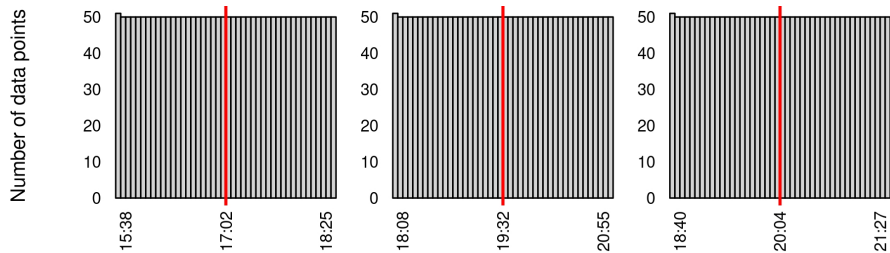
# Cutoff: 17h02m, when voting ends and counting begins



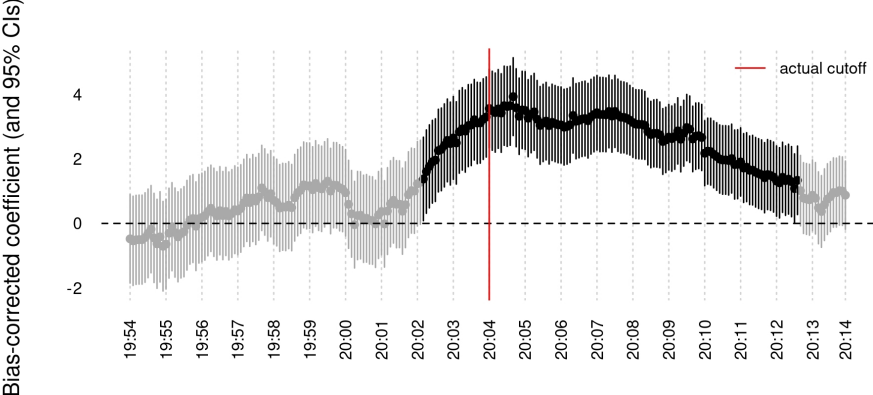
# Sensitivity to Bandwidth



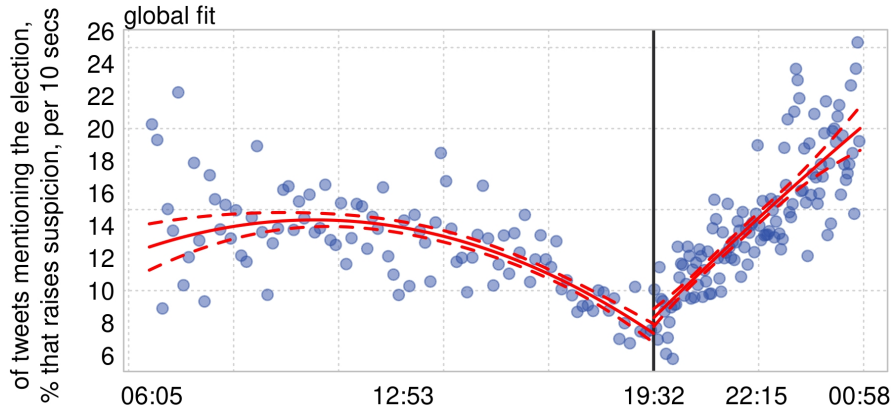
# Density of running variable



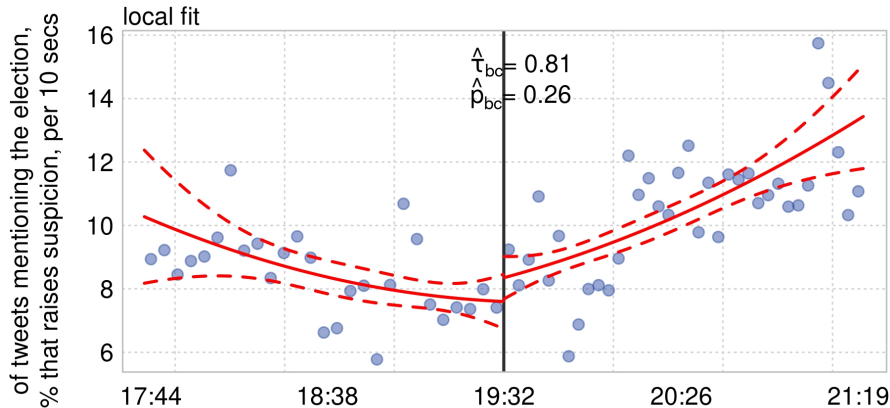
# Placebo cutoffs



Cutoff: 19h32m, when Rouseff overtakes Neves (but this was not made public yet)

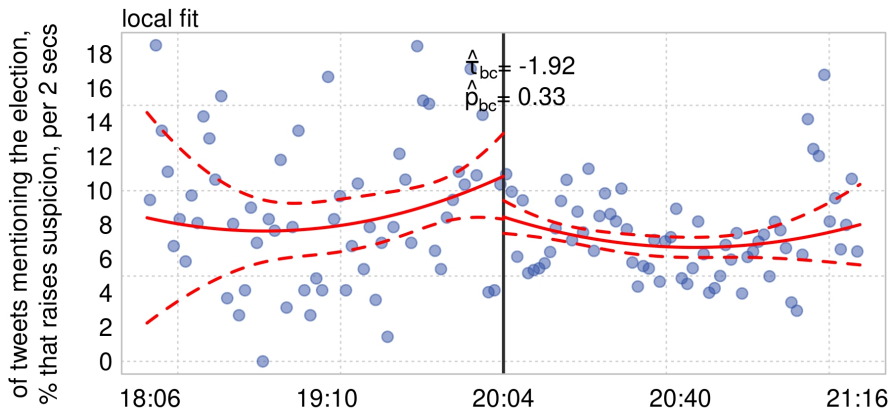


Cutoff: 19h32m, when Rousseff overtakes Neves (but this was not made public yet)



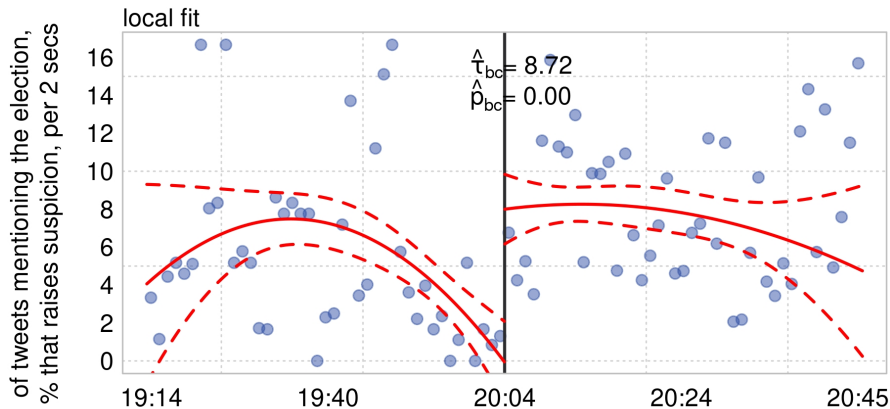
# Keep only tweets/users with positive words re. Rouseff

Local polynomial regression of 2nd order:



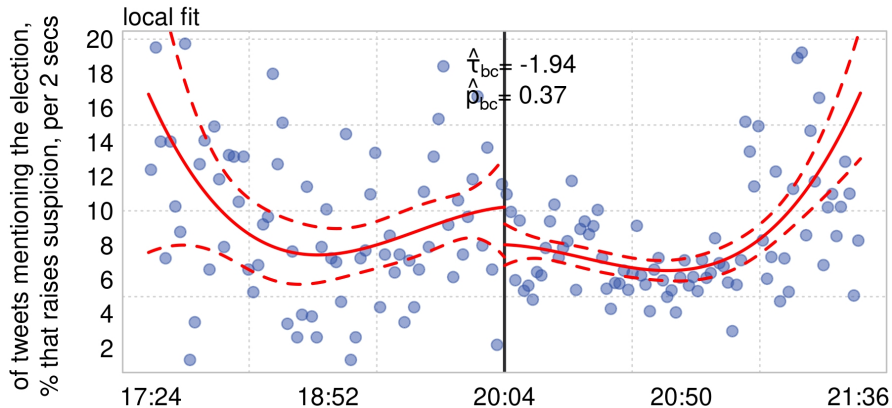
# Keep only tweets/users with positive words re. Neves

Local polynomial regression of 2nd order:



# Keep only tweets/users with positive words re. Rouseff

Local polynomial regression of 3rd order:



# Keep only tweets/users with positive words re. Neves

Local polynomial regression of 3rd order:

