Department of International Development and Department of Statistics public lecture

Fraud at polls: can journalists and statisticians check? The Mozambican experience

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LSE Public Lecture
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Citizen Kane, 1941
1975 – Mozambique Independence; one party state
1980-92 – War (Cold war proxy war; apartheid backed)
1992 peace accord – Multi-party elections;
Renamo guerrillas become main opposition party

**Presidential votes in 5 elections**

2 term limit = 3 different Frelimo presidents
Renamo guerrilla leader Afonso Dhlakama candidate in all 5 elections
Electoral process

• New registration each election
• Register & vote same place – school
• Register book = polling station = classroom (700 or 1000 voters)
• Paper ballots; 3 votes: president, national parliament, provincial parliament
• Count in polling station; post results on door
• Media, observers, party poll watchers present
Recenseamento aberto com muitos problemas

Muitos postos de recenseamento não conseguiram abrir no sábado por causa da chegada tardia dos equipamentos, e houve relatos generalizados de falhas de equipamentos onde os postos abriram. Uma mulher em Maputo twittou: "tomaram muito bem atendidos apenas as máquinas não estavam funcionando, amanhã tentaremos".

No entanto, em outros locais do registo correu sem problemas. A aderência foi mediada com longas filas em alguns lugares, filas curtiadas em outros lugares, e ninguém a registar em outros.

Em Marromeu, Malanje, Moxico, Cuanza Sul e Malange os postos de recenseamento abriram na hora e estavam funcionando, com filas de até 75 pessoas.

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FIR dispara gás lacrimogéneo num showmício do MDM na Beira e cria pânico

A Força de Intervenção Rápida (FIR) disparou gás lacrimogéneo, sábado (16) durante um showmício de encerramento da campanha eleitoral de Daviz Simango, no campo da Muitilua na Beira, e criou pânico. De acordo com a população, a população atacou a polícia e a sede do partido Freixo ao lado, em forma de retaliação.

Citing a porta-voz da polícia em Sofala, Feliciano Dique, a TVM noticiou que há 46 feridos que foram encaminhados ao Hospital Central da Beira e 21 detidos. A TVM e o Hospital Central de Beira afirmaram que os feridos foram encaminhados e não há mortes reportadas.
Invalid votes
Mozambique Presidential Elections 1994 - 2009
Study of potential election irregularities
Election Forensics

‘We do not trust Churow, we trust Gauss’

Picture is from a presentation provided by Peter Klimek (26.2.2013). See http://www.complex-systems.meduniwien.ac.uk. Origin unknown.
Turnout Distribution in Mozambique 1994-2009

Note: Graphs represent k-density plots of turnout distribution in Mozambican presidential elections 1994-2004, split between urban (blue) and rural (red) ballot stations. The upper graph is for the national level, while the lower graph is for Tete Province.
The Fingerprints of Fraud

The redder the colour in respective clusters indicate more observations. On the graph of Russia, the smear to the upper right is usually taken to show a group of polling stations with unusually high turnout.

Note: the graphs represent three-dimensional scatter plots of turnout and the winner’s vote share in Switzerland, Canada and Russia. Source: Klimek, et.al. 2012
Turnout and Winner’s vote share in Mozambique

Note: the graphs represent three-dimensional scatter plots of turnout and the winner’s vote share in Mozambican presidential elections 1994-2009. The data is split between urban (upper row) and rural (lower row) ballot stations.
Cumulative Percentage of Votes and Turnout in Mozambique

Note: the graphs represent the cumulative percentages of votes for the winning party as a function of turnout for Mozambican presidential elections 1994-2009. The data is split between urban (upper row) and rural (lower row) ballot stations.
Finite Mixture Model

Incremental Fraud Probabilities by Post-district

Note: The maps show the results of a finite mixture model (based Klimek et.al. 2012; Mebane 2014) for the Mozambican presidential elections 1994-2009. The maps provide average incremental fraud probabilities by post-district. The “redder” the colour, the higher the average incremental fraud probability.
Polling Centre Deviations

- Test whether considerable deviations within polling centres are random, or if there is a systematic bias.
- No bias detected for 1994; deviant ballot stations are essentially random.
- 1999: no data on ballot station level.
- In 2004 and 2009 there is a systematic and statistically significant bias; deviant ballot stations have on average 10-15% higher vote shares for Frelimo.
Intentional Invalidation of Votes in Mozambique

Note: The graphs represent scatter plots of the proportion invalid votes of all cast ballots and the share of valid votes awarded to the winner on district level. The red line represents the regression line between the two variables.
Summary

• The findings were largely in line with journalists and election observer reports

  – Overall, the 1994 and 1999 elections showed limited signs of irregularities

  – The 2004 and 2009 elections showed patterns consistent with both vote inflation and intentionally invalidated votes
    • These patterns were particularly visible in Tete and Gaza Provinces.

• Indicators, not evidence
  – Further research should seek to connect deviant ballot stations with other evidence of election irregularities.
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