Measuring Social Unrest

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Max Appendino, Philip Barrett, Kate Nguyen (IMF) and Jorge Miranda (IADB)
Social unrest is widely covered in the news media

Tens of thousands march in largest George Floyd protests so far in the US

By Nicole Chavez, Ray Sanchez and Madeline Holcombe, CNN

Updated 10:42 PM ET, Sat June 6, 2020

Colombia unrest: President Duque pledges police reform after protests

6 June

London and Dublin call for calm after fresh riots in Northern Ireland

Peter Foster in Brighton and Jim Brunsden in Brussels APRIL 8 2021
In this research, we...

- Constructed a timely, transparent, broad and consistent measure of social unrest
- Verified its internal and external validity
- Found unrest to be persistent and contagious, and not predictable by past unrest

Motivation – Construction – Verification - Properties
There are measures of unrest already, but they could be improved

<table>
<thead>
<tr>
<th></th>
<th>CNTSD</th>
<th>ICRG</th>
<th>ACLED</th>
<th>RSUI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Methodology</strong></td>
<td>Researchers collect reports “mostly” from the New York Times.</td>
<td>Surveys of subjective risk perceptions</td>
<td>Researchers collect reports from secondary sources each week</td>
<td>Derived from number of mentions of unrest from major English-language newspapers</td>
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<tr>
<td><strong>Frequent</strong></td>
<td>Annual</td>
<td>Monthly</td>
<td>As it happens</td>
<td>Monthly</td>
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<tr>
<td><strong>Transparent</strong></td>
<td>Methodology is not publicly available</td>
<td>Underlying data and methodology is not publicly available.</td>
<td>Underlying data is not publicly available. Methodology is publicly available.</td>
<td>Underlying data and methodology are publicly available.</td>
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<tr>
<td><strong>Consistent</strong></td>
<td>NA</td>
<td>Human coding</td>
<td>Consistent coding across countries</td>
<td>Same query across countries</td>
</tr>
</tbody>
</table>

Motivation – Construction – Verification - Properties
The Reported Social Unrest Index (RSUI)

We create an index from media reports of unrest
- Counts media mentions of relevant terms ("protest", "riot", "civil/social unrest" etc.)
- In 18 major English language newspapers and broadcasters (from US, Canada, UK).
- Covers 130 countries, monthly from 1986-present, updated ~5th of each month

Code large spikes in the index as events
- Check every one of ~700 events and keep ~600 (mis-usage of words)
- All labelled with a name
- Use events to compare with well-established timelines
Case study: Arab Spring 2011-2015

Bahrain
- 02/11: Day of rage demonstrations
- 06/11: Opposition protests
- 11/11: Anti-government protests
- 04/12: Anti-government protests, bombings
- 04/13: Protests over F1 race

Egypt
- 02/11: Mubarak resigns
- 11/11: Tahrir Square protests
- 01/12: Morsi elected
- 12/12: Morsi's decree of immunity
- 07/13: Morsi leaves office

Libya
- 02/11: Civil war starts
- 09/12: US ambassador killed

Syria
- 04/11: Arab Spring
- 06/11: Syrian Revolution
- 09/11: Syrian Civil War
- 11/11: Syrian Civil War

Tunisia
- 01/11: Tunisian Revolution
- 10/11: Parliamentary elections
- 02/13: Brahmi assassination
- 10/14: Parliamentary elections

Yemen
- 02/11: Yemeni uprising
- 11/11: Transition agreed
- 09/14: Houthi protests

Motivation – Construction – Verification - Properties
Discussion

Comparison to narrative source is the gold standard
- It is an end-run around many possible critiques: bias, omissions, etc.

Further checks
- Different sources, search terms, language
- Agrees with ACLED on a limited subset

Armchair theory of why this works
- Major protests/demonstrations etc. are very newsworthy
- “Even” in countries with little coverage normally, we see spikes
e.g. coups in Burkina Faso & Burundi 2015, protests in Togo 2017, Myanmar 2021

Rudimentary analysis of unrest events
- Unrest is rare (~1% of country-months) but more likely following a prior event in the same country (~4%) or a neighbor (~3%).
- Unrest events are sudden and prediction is difficult.
Recent applications

An emerging body of IMF work tackles two questions:

1. What drives social unrest?
   - Socio-economic determinants of unrest: Hlatshwayo & Redl (2021a)
   - Disasters (esp. pandemics): Barrett & Chen (2021)

2. What is the economic impact of social unrest?
   - Economic: Hadzi-Vaskov et al. (2021), Hlatshwayo & Redl (2021b)
   - Financial: Barrett et al. (2021)
Q&A