Social unrest, institutional fragility and trust: a model and an application to Chile

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Why this? Why in Chile? Why then?
The puzzle (2)

16 subway stations burned

11 subway stations vandalized
The puzzle (3)

Biggest street demonstrations since the end of the dictatorship
The conventional answer

“Inequality in ‘stable’ Chile ignites the fires of unrest.”

Financial Times

“Not all the protests are driven by economic complaints, but widening gulfs between the haves and have-nots are radicalising many young people in particular.

The Guardian

“2019 was a year of global unrest, spurred by anger at rising inequality – and 2020 is likely to be worse.”

The Conversation
Widening Gulf? Rising inequality?

Chile: Gini Coefficient
1990-2017

Source: World Bank
If the inequality story is to make sense...

- Focus on other kinds of inequality?
- Inequality of "treatment" (Araujo, 2013)

- Explain why the political "sensitivity" to income inequality changed
- The changing tolerance for income inequality in the course of economic development (Hirschman, 1973)
The other elephant in the room

Note: data stems from the Banks Cross-National Time Series Data Archive. Unrest is the summation of three variables: general strikes, riots and anti-government demonstrations.
So, one needs a story...

- Where there is scope for “contagion”
- Where the contagion operates through variables that “jump” at the time or shortly before the events to be explained
- Where “contagion” in turn reinforces the effects of that jump: self-fulfilling element
One candidate explanatory variable

Do you trust the following institution?
(percentage answering “very much” and “to some extent”)

![Graph showing trust in institutions over time](image)

**Figure 1**

Source: CERC-Mori
More on the same

Do you trust the following institution
(percentage answering “very much” and “to some extent”)

<table>
<thead>
<tr>
<th>Institution</th>
<th>July / August 2013</th>
<th>November 2018</th>
<th>December 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>National government</td>
<td>3.8 + 22.0 = 25.8</td>
<td>NA</td>
<td>0.7 + 4.0 = 4.7</td>
</tr>
<tr>
<td>Congress</td>
<td>1.5 + 10.1 = 11.6</td>
<td>0.9 + 3.6 = 4.5</td>
<td>0.5 + 2.2 = 2.7</td>
</tr>
<tr>
<td>Political parties</td>
<td>1.6 + 6.4 = 8.0</td>
<td>NA</td>
<td>0.3 + 1.8 = 2.1</td>
</tr>
<tr>
<td>Municipal governments</td>
<td>3.3 + 14.0 = 17.3</td>
<td>NA</td>
<td>1.7 + 14.9 = 16.6</td>
</tr>
<tr>
<td>Courts of justice</td>
<td>1.8 + 9.5 = 11.3</td>
<td>1.2 + 5.7 = 6.9</td>
<td>0.8 + 7.5 = 8.3</td>
</tr>
<tr>
<td>Armed forces</td>
<td>9.8 + 40.4 = 50.2</td>
<td>NA</td>
<td>7.5 + 16.6 = 24.1</td>
</tr>
<tr>
<td>Carabineros</td>
<td>10.9 + 37.5 = 48.4</td>
<td>NA</td>
<td>3.9 + 12.7 = 16.1</td>
</tr>
<tr>
<td>Ministerio Público</td>
<td>3.5 + 25.1 = 28.6</td>
<td>NA</td>
<td>0.9 + 5.3 = 6.2</td>
</tr>
<tr>
<td>Private businesses</td>
<td>3.5 + 14.0 = 17.5</td>
<td>2.3 + 9.5 = 11.7</td>
<td>2.2 + 6.0 = 8.2</td>
</tr>
<tr>
<td>Labor unions</td>
<td>3.3 + 17.1 = 20.4</td>
<td>NA</td>
<td>3.2 + 14.4 = 14.6</td>
</tr>
<tr>
<td>Catholic church</td>
<td>13.8 + 19.7 = 33.5</td>
<td>4.5 + 8.7 = 13.2</td>
<td>4.7 + 9.3 = 14.0</td>
</tr>
<tr>
<td>Newspapers</td>
<td>2.8 + 26.3 = 29.1</td>
<td>NA</td>
<td>1.5 + 9.8 = 11.3</td>
</tr>
<tr>
<td>TV channels</td>
<td>2.8 + 25.2 = 28.0</td>
<td>NA</td>
<td>0.7 + 7.4 = 8.1</td>
</tr>
<tr>
<td>Radio stations</td>
<td>7.3 + 39.5 = 46.8</td>
<td>NA</td>
<td>4.5 + 24.4 = 28.9</td>
</tr>
</tbody>
</table>

Table 1

Source: [www.cepchile.cl](http://www.cepchile.cl)
A paradox?

### World Bank Governance Indicators for Chile
*(Based on surveys / expert opinion)*

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Governance Index (-2.5 to 2.5)</td>
<td>Percentile Rank (1 to 100)</td>
</tr>
<tr>
<td>Voice &amp; accountability</td>
<td>1.11</td>
<td>84.5</td>
</tr>
<tr>
<td>Political stability</td>
<td>0.36</td>
<td>59.72</td>
</tr>
<tr>
<td>Government effectiveness</td>
<td>1.26</td>
<td>86.73</td>
</tr>
<tr>
<td>Regulatory quality</td>
<td>1.49</td>
<td>91.94</td>
</tr>
<tr>
<td>Rule of law</td>
<td>1.37</td>
<td>87.79</td>
</tr>
<tr>
<td>Control of corruption</td>
<td>1.54</td>
<td>90.52</td>
</tr>
</tbody>
</table>

**Table 2**

A very simple model (1)

- Consider a society where individuals come together to finance a collective good ...

- The most natural interpretation is that the payments are tax payments

- But the payments could also be interpreted as user fees (in a subway?)
A very simple model (2)

- People have a choice: they can pay taxes and contribute to the public good or evade taxes and not contribute.

- Quality of institutions has **exogenous** component: how good the government is in turning money into high-quality public services.

- Quality of institutions has **endogenous** component: the more people contribute, the better the service.
A very simple model (3)

- If an individual contributes, his/her welfare is increasing in the share of people who contribute

- Social sanction associated with not contributing, which is a function of how many people do contribute

- We have a kind of “herd moral effect”: it is less costly not to contribute when others also fail to contribute

- If an individual does not contribute, his/her welfare also is increasing in the share of people who contribute
If adjustment follows $\dot{p} = \phi (w^c - w^n)$, then equilibrium is unstable.
Effects of shocks (backward looking)

Shock: government becomes less efficient at public service delivery
Punchlines (1)

- Equilibria are fragile
- If initial institutional structure is strong (high-quality), then a virtuous cycle occurs
- Good institutions deliver good services, which in turn engender trust in these institutions, which prompts behavior (higher contributions) that allow institutions to get even better
- But if initial institutional structure is weak (low-quality), then a vicious cycle occurs
- Key: small changes in the exogenous component of institutional quality can have big and lasting effects on trust, contributions and quality of services.
Contagion (forward-looking)

Now \( \dot{q} + \frac{w^c - w^n}{q} = \delta \) and \( \dot{p} = \theta q \)
Punchlines (2)

- With forward-looking behavior, then equilibria can be even more fragile
- History versus expectations (Krugman 1991)
- For some parameter values, equilibrium uniquely pinned down: only history matters
- For other parameter values, there is a region of indeterminacy: expectations matter
- If initial conditions are in that “region of indeterminacy”, then self-fulfilling pessimism and/or contagion from abroad can occur
- Contagion easier in the age of social media?
Conclusions

- We need to be careful with too-simple accounts of the causes of unrest
- Need explanatory variables that move in the right direction
- In the case of Chile trust is one such variable. Others?
- Unrest seem to be global: we need an explanation that has a global element to it
- Common global causes? Or contagion?
- Contagion can be structural or expectational: we consider expectational contagion
Thank you!