“Site fights”: Opposition to oil and gas pipeline projects in the developing world

Collaboratory for Research on Global Projects
December 4, 2008
Agenda

- Research question
- Theory
- Oil and gas pipeline projects
- Fuzzy set/Qualitative Comparative Analysis (fs/QCA) method
- Results
Research question

What factors shape opposition to oil and gas pipeline projects in the developing world?
Theory – Social movements, facility siting

Facility siting proposal

Assessment of:
- Political opportunity
- Threat

Social appropriation

Mobilization:
- Legal
- Political

Socio-demographic factors:
- gender
- homeownership
- children/household
- party affiliation
- education
- income

Internal resources

External resources
11 projects across 16 countries

- BTC (Azerbaijan – Georgia – Turkey)
- Camisea (Peru)
- Chad-Cameroon
- Haoud El Hamra to Arzew Oil - OZ2 (Algeria)
- Khartoum Refinery to Port Sudan (Sudan)
- Manmad to Indore (India)
- Nacala to Liwonde (Malawi – Mozambique)
- Patagonia (Argentina)
- Sakhalin-II (Russia)
- West African Gas (Nigeria – Ghana)
- West-East China
fs/QCA allows research in a middle-N range of cases

Figure 1.1 Plot of Relative Number of Studies against N of Cases in Each Study
Causal conditions

Threats
- Size
- Environmental impact
- Indigenous peoples impact

Political opportunity
- Membership in IGOs
- Western funding
- Consultation
- Democratic country

Resources
- Developed country

Compensation
- Host country equity
- Oil and gas provision

Previous conflict
Causal conditions - Chad

Threats
- Size: 0.03
- Environmental impact: 0.4
- Indigenous peoples impact: 0

Political opportunity
- Membership in IGOs: 0.04
- Western funding: 1
- Consultation: 1
- Democratic country: 0.18

Resources
- Developed country: 0.02

Compensation
- Host country equity: 0.1
- Oil and gas provision: 0

Previous conflict: 0.05
# Outcome conditions

<table>
<thead>
<tr>
<th>Political Conflict</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No evidence</td>
</tr>
<tr>
<td>0.2</td>
<td>Evidence of opposition groups</td>
</tr>
<tr>
<td>0.4</td>
<td>Few peaceful strikes/rallies/demonstrations (&lt;5)</td>
</tr>
<tr>
<td>0.6</td>
<td>Moderate number of peaceful strikes/rallies/demonstrations (5-14) and/or a few arrests, injuries (&lt;5)</td>
</tr>
<tr>
<td>0.8</td>
<td>Moderate number of strikes/rallies/demonstrations (5-14) with more arrests, injuries (&gt;5) and damage to project OR Many peaceful strikes/rallies/demonstrations (&gt;15) with significant attendance</td>
</tr>
<tr>
<td>1.0</td>
<td>Deaths as a result of activities</td>
</tr>
</tbody>
</table>
**fs/QCA methodology overview**

**Case 1**
- Causal conditions
  - Threats
  - Political opportunities
  - Resources
  - Compensation
  - Previous conflict
- Outcome conditions
  - Political conflict
  - Legal conflict

**Case 2**

- Code each case individually across both causal and outcome conditions
- Enter all cases and scores in fs/QCA software
- Analyze for key “recipes” that explain outcomes of the cases
Results

- Political conflict
- Legal conflict
- Political and legal conflict
Political conflict - necessary conditions

- Little provision of oil and gas to host country
- Insignificant role for the host country as an equity partner
- Significant amount of proactive consultation

- 2 compensation conditions; 1 opportunity condition
- Relevant to the sufficiency recipes
- Generally shared by instances of the outcome
Political conflict – sufficient conditions

Some environmental impact AND Western funding

Developed AND Democratic host country
- Little previous conflict in host country
  - Georgia, Turkey

Undeveloped AND Undemocratic host country
- Somewhat big project AND Indigenous peoples
  - Russia, Peru
- Some connection to the international community
  - Chad
- Somewhat big project AND Indigenous peoples
  - Cameroon

Notes:
Solution coverage = 0.65
Solution consistency = 0.88
Azerbaijan not explained by these recipes
Legal conflict

• Necessary conditions

- Little provision of oil and gas to host country
- Funding from western sources
- Significant amount of proactive consultation

• Sufficient recipe

- Some environmental impact
- Provision of almost no equity to host country

Notes:
Solution coverage = 0.58
Solution consistency = 0.92
Azerbaijan, Nigeria, China not explained by this recipe
Political and legal conflict

• Necessary conditions
  - Little provision of oil and gas to host country
  - Provision of almost no equity to host country
  - Funding from western sources
  - Significant amount of proactive consultation

• Sufficient recipe
  - Some environmental impact
  - Large project
  - Impact on indigenous peoples

Notes:
Solution coverage = 0.40
Solution consistency = 0.90
Georgia and Turkey not explained by this recipe
Key drivers of opposition

- Marginal role played by previous conflict and resource conditions
- Lack of compensation important in generating conflict
- Public consultation as political opportunity for conflict, not deterrent
- Political opportunities necessary; threats sufficient