Polls, Publics and Pipelines:
Mapping Public Opinion toward the Keystone XL Pipeline in the United States and the Northern Gateway Pipeline in Canada

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AAPOR
May 16–19, 2013
Boston, MA
Proposed new crude oil pipelines are a current (and contentious) environmental policy issue in the United States and Canada.

- Keystone XL pipeline (US)
- Northern Gateway pipeline (Canada)

The politics of pipelines in North America are tied up in debates about energy self-sufficiency, economic development, environmental risks, climate change, and Canada–US relations.

Despite cultural similarities, the US and Canada have long maintained (and continue to maintain) distinct political cultures and social values (Lipset 1990; Adams 2003).
...but sometimes, we really don’t look that different from one another...
Research questions

• What factors shape Americans’ and Canadians’ attitudes toward new, high-profile oil pipelines?
  - *Political variables* (party identification, ideology)
  - Attitudes toward the *economy*
  - *Proximity* to the pipeline
  - How do these factors *interact*?
Hypotheses: Political factors

- Political debates about pipelines have taken on a partisan dimension in both the US and Canada (political right in favor; center and left opposed).
- Mass public opinion ought to mirror these cleavages in elite opinion (Zaller 1992).
Hypotheses: Economic attitudes

- A soft rational choice approach would argue that perceptions economic gains from the pipelines should increase support. Perceptions of potential economic harm should decrease support (cf. Downs 1957; Riker 1995).
Hypotheses: Proximity

- Different strands of social scientific inquiry suggest that proximity and distance will play a role in shaping attitudes.
  - NIMBYism and public attitudes toward environmental hazards (Ansolabehere and Konisky 2009; Kraft and Cleary 1991)
  - Proximity effects on attitudes in other policy areas – e.g., US immigration (Branton et al. 2007; Dunaway et al. 2010); attitudes toward the European Union (Berezin and Díez Medrano 2008; Kuhn 2011)
...but we still tend to treat public opinion as though it comes from here
Data: US

- Pew Research Center for the People and the Press
  - n = 1,501 (900 landline, 600 cell phone)
  - English and Spanish
  - 50 states (including Alaska and Hawaii)
  - Field period: 8–12 February 2012
Data: Canada

- EKOS Research Associates (for WWF–Canada)
  - n = 1,500 using a probability-recruited panel (landline and cell phone)
  - Multi-mode (online and phone); phone component is excluded due to key questions appearing in the online questionnaire only (n = 1,181)
  - English and French
  - 10 provinces and 3 territories
  - Field period: 20–27 November 2012
"How much, if anything, have you heard about the Keystone XL pipeline that would transport oil from Canada’s oil sands region through the Midwest to refineries in Texas? Have you heard..."
[If heard a lot/heard a little]: "Do you think the government should or should not approve the building of this pipeline?"

- Government should approve the pipeline: 66%
- Government should not approve the pipeline: 23%
- DK/Ref: 11%

n = 1,072
"The Enbridge Northern Gateway Pipelines Project is a proposed pipeline that would export crude oil from Alberta to the west. From what you know, do you support or oppose the building of this pipeline?"

![Bar chart showing support and opposition percentages.]

- Strongly support: 19%
- Somewhat support: 28%
- Somewhat oppose: 18%
- Strongly oppose: 23%
- DK/Ref: 12%

n = 1,181
Method
NGOs have plotted the pipeline routes in Google Earth using publicly-available geodetic data.
Geocoding and distance calculations

• US data: Performed using SAS PROC GEOCODE (ZIP code geocoding). Secondary matching on county FIPS code was done using Census Bureau 2010 TIGER/Line shapefiles (county centroids).

• Canadian data: Performed by matching the forward sortation area (FSA) to latitude–longitude coordinates created from Statistics Canada Census 2011 map shapefiles (FSA centroids). Secondary matching on area code was done using the AreaCodeWorld Gold database.

• Distances between respondents and pipeline latitude–longitude coordinates were calculated using the SAS GEODIST function.
Regression, diagnostics, multiple imputation, survey data analysis

- Binary logit (Pew) and ordinal logit (EKOS) models were fit.
- Controls for demographics and other attitudinal variables are included in the models.
- Regression diagnostics were performed to identify outlying, high-influence and high-leverage cases.
- Missing data were multiply imputed using IVEware version 0.1 for SAS (ISR, University of Michigan).
- Multiply imputed datasets were analyzed using SAS PROC SURVEYLOGISTIC with estimates then being combined using SAS PROC MIANALYZE.
Results
## Results: Pew Center (US)

<table>
<thead>
<tr>
<th>Model 1.1</th>
<th>Model 1.2</th>
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</thead>
<tbody>
<tr>
<td><strong>b (s.e.)</strong></td>
<td><strong>b (s.e.)</strong></td>
</tr>
<tr>
<td>Party: Republican</td>
<td>0.58 (0.32)</td>
</tr>
<tr>
<td>Party: Independent</td>
<td>0.27 (0.45)</td>
</tr>
<tr>
<td>Ideology (Liberal)</td>
<td>-0.83 (0.16) ***</td>
</tr>
<tr>
<td>Economy is fair</td>
<td>0.25 (0.32)</td>
</tr>
<tr>
<td>Economy is poor</td>
<td>0.70 (0.34) *</td>
</tr>
<tr>
<td>In Distance to Pipeline (km)</td>
<td>-0.29 (0.13) *</td>
</tr>
<tr>
<td>In Distance × Economy is fair</td>
<td></td>
</tr>
<tr>
<td>In Distance × Economy is poor</td>
<td></td>
</tr>
</tbody>
</table>

| n | 935 | 935 |
| d.f. | 18 | 20 |
| Nagelkerke pseudo-R² | 0.43 | 0.45 |
| Model X² | 317.38 *** | 330.36 *** |
| X² difference |  | 12.98 ** |

Note: Binary logit models with controls for sex, age (years logged), education, race/ethnicity, and attitude toward environmental protection and attitude toward regulation of the oil and gas industry.
Results: Pew Center (US)

Predicted Probability

Distance from Keystone XL Pipeline Route (km)

Economy is good
Economy is fair
Economy is poor
### Results: EKOS Research (Canada)

<table>
<thead>
<tr>
<th></th>
<th>Model 2.1</th>
<th>Model 2.2</th>
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<tbody>
<tr>
<td></td>
<td>b (s.e.)</td>
<td>Sig.</td>
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<tr>
<td>Party: Conservative</td>
<td>0.89 (0.22)</td>
<td>***</td>
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<tr>
<td>Party: NDP</td>
<td>-0.85 (0.20)</td>
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<tr>
<td>Party: Green</td>
<td>-1.50 (0.29)</td>
<td>***</td>
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<tr>
<td>Party: Bloc Québécois</td>
<td>-0.83 (0.36)</td>
<td>*</td>
</tr>
<tr>
<td>Ideology (Liberal)</td>
<td>-0.30 (0.05)</td>
<td>***</td>
</tr>
<tr>
<td>Economy (Index)</td>
<td>0.37 (0.07)</td>
<td>***</td>
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<tr>
<td>In Distance to Pipeline (km)</td>
<td>0.02 (0.06)</td>
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<td>In Distance × Economy (Index)</td>
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<tr>
<td>n</td>
<td>1,008</td>
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<tr>
<td>d.f.</td>
<td>14</td>
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<tr>
<td>Nagelkerke pseudo-$R^2$</td>
<td>0.38</td>
<td></td>
</tr>
<tr>
<td>Model $X^2$</td>
<td>442.02</td>
<td>***</td>
</tr>
<tr>
<td>$X^2$ difference</td>
<td>–</td>
<td></td>
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Note: Ordinal logit models with controls for sex, age (years logged), education, country of birth (born in Canada) and visible minority status.
Results: EKOS Research (Canada)

Economy = 2.333 (10\textsuperscript{th} percentile)

Economy = 4 (median)

Economy = 5.333 (90\textsuperscript{th} percentile)
Key Findings

- In both the US and Canada, attitudes toward oil pipelines are shaped by political factors and attitudes toward the economy.
- One does not consistently find direct effects of proximity to the pipeline (occurs in the US but not in Canada).
- Rather, one finds in both countries that the effects of attitudes toward the economy are contingent upon *(moderated by)* proximity to the pipeline.
- Survey data (and our respondents) come from somewhere. In studying public opinion and policy attitudes, we ignore this at our peril.
The politics of pipelines are sure to remain current for some time to come....

Alberta explores possibility of oil pipeline to Canada’s Arctic

Oilsands crude being sent north through a pipeline to the N.W.T. is the subject of a feasibility study funded by the Alberta government.

PROPOSED PIPELINES
1. Enbridge Northern Gateway line
2. Keystone XL Pipeline
3. Undetermined path to Tuktoyaktuk

Toronto Star online, 26 April 2013.
Thank you!

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References


Durkheim, Émile (1899) “Morphologie sociale.” *Année Sociologique.* 2: 520.


