EcoAnalytics

Shared intelligence for Canada's environment

Panoramic Survey 2017—Analytical Briefing

Pipeline Politics in Canada: A Closer Look

In the context of current controversies around pipelines, partner organizations asked for a "deep dive" into some of the factors that predict support and opposition to new pipeline construction in Canada. In the 2016 Climate of Change survey, the research team showed how the public safety frame – and in particular, arguments that pipelines are "safer than by train" or "risk contaminating water" – are most persuasive in terms of shifting attitudes of ordinary Canadians. We also showed how arguments about the risks of increased GHG emissions are less conducive to persuading average citizens to oppose pipelines in Canada. In this analytical brief, we further examine the pipeline issue, looking at the 2017 Panoramic Survey, which included a specific pipeline question in the regional modules for British Columbia, the Prairie provinces of Manitoba and Saskatchewan, and in the central Canadian provinces of Ontario and Quebec.

The question asked respondents how strongly they agreed or disagreed with the following statement, measured on a scale ranging from 0 (strongly disagree) to 10 (strongly agree):

"*The economic benefits of the proposed Energy East [Kinder Morgan] pipeline outweigh the environmental risks for my province.*"

This question was explicitly framed as a trade-off, making it less conducive to acquiescence bias, and can be conceptualized as a proxy for level of pipeline support (since a 10 corresponds to economic benefits outweighing environmental risks). The fact that the question made specific reference to Kinder Morgan (in British Columbia) and Energy East (in the Prairies and Central Canada) allows us to compare attitudes toward pipeline proposals that are most salient in the 4 regions examined. Moreover, making reference to a specific pipeline (like Kinder Morgan or Energy East) provides some context for respondents who might otherwise have difficulty recalling attitudes to "pipelines" in general. Most importantly, the similar question wording allows us to compare the relative direction, intensity and controversy over two of the most talked about pipelines in Canada.

Table 1: Sample Means, Dispersion, and Opinion Intensity across Regions

	Mean	Standard deviation	Strong opposition (0 & 1)	Soft opposition (2/4)	Indifferent (5)	Soft support (6/8)	Strong support (9 & 10)
BC	4.7	3.5	27%	19%	13%	23%	18%
PR	5.6	3.2	16%	14%	17%	32%	21%
ON	5.2	3.1	15%	20%	17%	34%	14%
QC	4.4	3.4	29%	17%	14%	28%	12%

Table 1 presents sample means, standard deviations and the opinion intensity of answers to the pipeline question, measuring whether or not individuals perceive greater economic benefits than environmental risks arising from the Energy East and Kinder Morgan pipelines. Since this question is consistently measured using similar wording on an identical 0 to 10 scale, a great deal of descriptive information can be gleaned by comparing the sample means, standard deviation, and dispersion of responses across regions. For instance, a mean score of below 5 among residents of British Columbia and Quebec indicates that, on average, people residing in these two provinces are less supportive of pipelines in their province. In contrast, residents of the Prairie Provinces (Saskatchewan and Manitoba) and those living in Ontario, are on average more likely to report perceptions that are consistent with greater pipeline support.

While these mean scores provide some indication of the central tendency of responses, however, they say little about how consistent, or variable, are responses to this question across regions. Looking at standard deviations is helpful, as this provides an indication of the variability (or dispersion) of responses within each region. For instance, a lower standard deviation for Ontario indicates that responses to this question are more concentrated around the mean, compared to a larger standard deviation in British Columbia, which indicates greater variability. Importantly, this dispersion may be interpreted as an indicator of the degree of public controversy (i.e. divided opinions) over pipelines in the four regions. In fact, we can see that the larger standard deviations found in British Columbia and Quebec correspond to a greater concentration of responses at extremes, indicating a more divided population with respect to the perceived benefits and risks of pipelines. In other words, Kinder Morgan in BC, and Energy East in Quebec, are currently the most controversial pipelines in Canada.

(Note that Table 5, in the Annex at the end of this document, looks specifically at the nature of opposition to the Energy East pipeline in Quebec.)

The final columns provide further detail on the frequency of responses (in percent) across the 0 to 10 scale, indicating the intensity of opinion as we move from a score of 0 through 1 (intense opposition), 3 through 4 (soft opposition), 5 (indifference), 6 through 8 (soft support) and 9 through 10 (strong support). As can be seen, responses in British Columbia and Quebec tend to

be concentrated at the extremes, with pluralities of respondents in British Columbia (27%) and Quebec (29%) selecting a score of 0 or 1 on the 0 to 10 scale, clearly rejecting the idea that the economic benefits of these pipelines outweigh the environmental risks for their province. In these two provinces, we also find relatively large proportions of soft support (scores of 6 through 8), which helps to explain the larger standard deviations observed in these regions, providing a further indication that these publics are relatively more divided on the perceived benefits and risks of pipelines for their province. Conversely, attitudes in Ontario and the Prairies are less dispersed, and are more concentrated above the mean, with large pluralities in both Ontario (34%) and the Prairies (32%) indicating soft support for the idea that the economic benefits of Energy East outweigh the environmental risks for their province. That opinions are less intense in Ontario, however, indicates that opinions have yet to crystalize in this province.

Table 2. Sample Means (with Standard Deviations) across Shades of Green Segments

Region	Total Sample	True Green	Potential Greens	Reluctant Greens	Skeptical Greens
BC	4.7 (3.5)	3.2 (3.5)	4.7 (3.2)	5.9 (2.5)	7.6 (3.1)
PR	5.6 (3.2)	3.7 (3.6)	5.7 (2.7)	6.3 (2.3)	7.8 (2.8)
ON	5.2 (3.1)	4.1 (3.5)	5.4 (2.5)	6.3 (2.3)	5.9 (3.4)
QC	4.4 (3.4)	3.6 (3.7)	4.8 (3.1)	5.2 (2.7)	6.0 (3.7)

Table 2 goes further in unpacking pipeline politics within regions. Specifically, it builds on the audience segmentation developed in the 2017 Panoramic Report, *Shades of Green,* and highlights how different segments *within* the four regions perceive the economic and environmental trade-off presented by pipelines for their region. As can be seen, while the Potential Greens are more or less aligned with the regional sample average, True Greens tend to be the least likely to perceive greater economic benefits than risks, and True Greens in British Columbia emerge as the least supportive of pipelines in the country. On the opposite end, Skeptical Greens are generally the most supportive, with those from the Prairies showing the highest level of support (mean=7.84) for the idea that a pipeline provides their province with more economic benefits than environmental risks, followed closely by Skeptical Greens in British Columbia, who demonstrate similar levels of support. Meanwhile, perceptions that Energy East provides net economic benefits among Skeptical Greens in Ontario and Quebec is comparatively low. All of this suggests that the Shades of Green segmentation, on its own, tells only part of the story, and that there are region-specific dynamics at play.

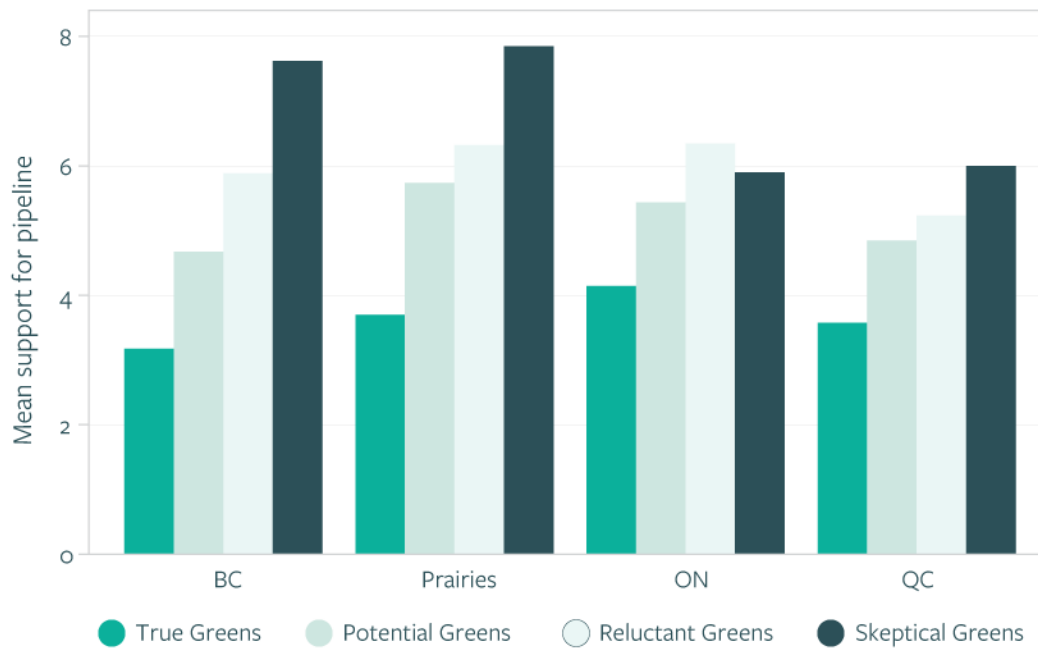## Figure 1. Support for Pipelines by Shade of Green

Figure 1 further unpacks the regional story. Multiple tests demonstrate that there are two 'groups' of regions. In the first group, British Columbia and Quebec are not statistically distinguishable from each other and are less supportive of pipelines. In the second group, the Prairies and Ontario have statistically similar means and show significantly more support towards pipelines than what we observe in Quebec and British Columbia.

Figure 1 also suggests the regional story changes when taking into account the values-based segmentation. Using the Shades of Green analytical lens (excluding the Eco-indifferent, due to a very low number of adherents in each region),[i] we can see how the structure of pipeline politics in BC is actually closer to the politics observed in the Prairies than it is to pipeline politics in Quebec. Indeed, when looking at how segments behave in each region, it is possible to see that Skeptical Greens in BC and the Prairies' show similar levels of support towards pipelines, averaging almost an 8 on the 0 to 10 scale, while True Greens in both regions have an average score falling between 3 and 4. On the other hand, the dynamics are substantially different in other regions of Canada. For instance, respondents from Quebec generally show much less support towards pipelines, with means hovering between 3.5 and 6. In other words, pipelines are more polarizing in the Western provinces (where the economic stakes are highest). Figure 1 also suggests that opinions across segments are conditioned by region, with substantially less support in places like Quebec, regardless of where one falls in the segmentation.

These regional differences in the way segments behave suggest attention should be paid to the local and regional politics of pipelines. For instance, one reason for the low level of support across segments in Quebec may be attributed to the way in which the pipeline question has been framed in this province, where pipeline opponents appear to have effectively marshalled Quebec nationalism using such slogans as "*Coule pas chez nous*" (literally, "Do not come home"). (See Annex I, for details about Quebec opposition.) Overall, these results suggest that the politics of pipelines are relatively distinct across regions, and that we should look at the role of other factors that might help explain pipeline perceptions in Canada while controlling for region. We pursue this line of analysis in the next section.

Pipeline Politics in Canada? A Statistical Model

To better ascertain the factors shaping regional attitudes toward pipelines in Canada, we ran an OLS regression model predicting the extent to which a respondent perceives that the economic benefits of the Energy East/Kinder Morgan pipeline outweigh the environmental risks for their province (measured on a 0 to 10 scale) conditional upon environmental values (Shades of Green), ideology (perceived economic and environmental compatibility, support for protecting jobs over species, and left-right self-placement), proximity to the pipeline (measured as distance in Km between a respondent and a pipeline route), trust (in ENGOs and industry), nationalism (Canadian pride and support for Quebec sovereignty), controlling for education, gender, age cohort, and survey mode. Summary statistics for all variables included in the model are provided in Table 3.

Table 3. Summary Statistics

	Mean	Standard deviation	Range	N
Shades of Green				
True (ref.)	0.32	0.46	[0,1]	950
Potential	0.38	0.48	[0,1]	1,118
Reluctant	0.19	0.39	[0,1]	583
Skeptical	0.10	0.30	[0,1]	304
Ideology				
Eco-Env comp. (0-10)	6.95	2.25	[0,10]	2,849
Jobs>species (0-10)	4.90	2.74	[0,10]	2,863
Ideology (0-10)	5.16	2.24	[0,10]	2,452
Proximity				
Distance in km	200.34	250.42	[0.03,1489]	2,772
Trust				
ENGOs (0-10)	6.32	2.58	[0,10]	2,944

Industry (0-10)	3.56	2.42	[0,10]	2,934
Nationalism				
Pride (Canada)	3.66	0.59	[1,4]	2,887
Sovereignty (Quebec)	0.37	0.48	[0,1]	429
Education				
University degree	0.38	0.48	[0,1]	2,981
Gender				
Men	0.48	0.5	[0,1]	3,005
Age				
18-34	0.24	0.43	[0,1]	742
35-54	0.33	0.47	[0,1]	1,006
54-75	0.36	0.48	[0,1]	1,094
75+	0.05	0.22	[0,1]	163

We included Shades of Green to see how one's position in this segmentation relates to attitudes toward pipelines. We further tested a number of variables related to values and ideology. These were chosen because the pipeline question was formulated around perceptions of net benefits/risks, which values and ideology should help predict. The first of these, labelled "*Eco-Env comp.*" asked respondents to indicate on a 0 to 10 scale the extent to which they believe environmental protection is compatible with economic growth. A second variable, labelled "*Jobs>species*" used a similar 10-point scale and asked respondents to indicate the extent to which they perceived protecting jobs to be more important than protecting species. A classic positional question asked respondents to place themselves on a 10-point scale measuring political ideology. All three variables were included in the models.

Based on prior research, we decided to include a variable that measures geographic proximity to the proposed pipeline route. This variable was generated using self-reported postal codes and meta data contained in the telephone sample files, which were used to geo-locate respondents. We then obtained data on the Energy East and Kinder Morgan pipeline routes, to compute the shortest distance between a respondent and either the Kinder Morgan pipeline (for BC residents) or Energy East pipeline (all other respondents). We then transformed this variable by taking its natural log to account for the non-linear effects of distance (i.e. moving between 10 and 20 km is not the same thing as moving from 100 to 110 km). Following the logic that pipelines may be more salient with proximity, and building on prior research (Gravelle and Lachapelle, 2015), we also interacted distance with ideology, expecting ideological polarization to be greater closer to the pipeline route.

Given the relatively intense public debate between pipeline proponents and opponents in Canada, questions relative to trust towards ENGOs and industry were also added in the models.

The expectation here is that greater trust in ENGOs will lead respondents to reject the idea that the economic benefits of pipelines outweigh the risks, while greater trust in industry will have the opposite effect. We also included questions measuring nationalist sentiment in Canada. For BC, the Prairies and Ontario, nationalism was measured using a question asking how proud of Canada respondents were. This variable was included for several reasons, not least of which is the "resource nationalism" rhetoric of former Prime Minister Stephen Harper, which suggested Canadians should be proud of their status as an "Energy Superpower," and that opposition to natural resource development was distinctly anti-Canadian. In Quebec, however, a different question was used, measuring whether a respondent would vote "yes" in a hypothetical referendum on Quebec sovereignty. The inclusion of this variable is based on prior research that documents a clear relationship between nationalist sentiment in Quebec and opposition toward Energy East. Finally, we include for a range of socio-demographics, as well as survey mode, to control for differences across respondent characteristics and whether they were interviewed by telephone or via the web.

Table 4. OLS Regression Model Predicting Support for view that Economic Benefits of Pipelines outweigh Environmental Risks

	BC	PR	ON	QC
Shades of Green				
True (ref.)				
Potential	0.52 (0.42)	1.20** (0.39)	0.79* (0.38)	0.22 (0.42)
Reluctant	1.01 (0.57)	1.28** (0.45)	1.56** (0.52)	0.09 (0.63)
Skeptical	1.56* (0.77)	2.41*** (0.63)	1.18 (0.73)	0.12 (1.50)
Ideology				
Eco-Env comp. (0-10)	-0.03 (0.08)	-0.24*** (0.07)	0.03 (0.08)	-0.02 (0.08)
Jobs>species (0-10)	0.21* (0.07)	0.28*** (0.06)	0.22*** (0.06)	0.39** (0.07)
Ideology (0-10)	0.49*** (0.14)	-0.07 (0.18)	0.41 (0.43)	-0.20 (0.27)
Proximity				
Log(distance km)	0.23 (0.20)	-0.44 (0.25)	0.09 (0.47)	-0.50 (0.45)
Ideo.*log(distance km)	-0.08* (0.04)	0.05 (0.04)	-0.04 (0.08)	0.10 (0.08)
Trust				
ENGOs	-0.30*** (0.09)	-0.11 (0.07)	-0.12 (0.08)	-0.06 (0.10)
Industry	0.32*** (0.08)	0.27*** (0.07)	0.20** (0.07)	0.06 (0.09)
Nationalism				
Pride/sovereignty	0.09 (0.33)	0.45 (0.31)	0.71* (0.33)	-0.95* (0.40)
Education				
University degree	0.58 (0.35)	-0.30 (0.30)	0.24 (0.31)	-0.74 (0.38)

Gender				
Men	0.45 (0.36)	0.30 (0.30)	0.82[*] (0.32)	0.00 (0.39)
Age				
18-34 (ref.)				
35-54	-0.11 (0.48)	0.28 (0.40)	-0.41 (0.44)	-0.42 (0.50)
54-75	0.42 (0.48)	0.71 (0.39)	0.28 (0.41)	-0.52 (0.49)
75+	-0.32 (0.79)	-0.15 (0.64)	0.99 (0.75)	0.63 (1.11)
Survey mode				
Telephone sample	0.37 (0.35)	0.50 (0.30)	-0.11 (0.31)	0.00 (0.38)
Constant	1.36 (1.67)	3.26 (1.66)	-1.60 (2.91)	4.94[*] (1.95)
N	310	332	309	307
R^2	0.357	0.382	0.284	0.213

Standard errors in parentheses

[*] $p < 0.05$, [**] $p < 0.01$, [***] $p < 0.001$

Table 4 presents model results. As can be seen, we ran separate models for each region, in order to allow for the possibility that pipelines attitudes are structured differently across regions. The left column of Table 4 indicates the predictors included in each model, while the columns summarize the nature of the relationship between each predictor and the dependent variable (pipeline support) in each region.

Looking at the results across models, we find that models do a fairly good job of explaining variation in perceptions that economic benefits from pipelines outweigh environmental risks. Moreover, as suggested by differences in the coefficients, the models also suggest that public attitudes toward pipelines are structured differently depending on location. In fact, as is consistent with Figure 1, the Shades of Green values-based segmentation is not a uniformly powerful predictor of pipeline opinion across regions. In the case of BC, only Skeptical Greens are distinct from True Greens, where the model predicts that, relative to True Greens, Skeptical Greens in BC should have on average a score of about 1.56 points higher on the perceived economic benefit scale (an increase of about 15%). In the Prairies, the Shades of Green segment is a much better predictor, as we observe a linear increase across segments. Relative to True Greens, we see significant increases of 1.2 points (Potential Greens), 1.28 points (Reluctant Greens) and 2.41 points (Skeptical Greens) on the 0 to 10 scale measuring whether respondents see more economic benefits than environmental risks from the Energy East pipeline. In Ontario, we find that only Potential (+0.79) and Reluctant (1.56) Greens are statistically distinguishable from True Greens, while in Quebec, there is not enough variation across subgroups (see Figure 1) to drive an effect of environmental values. Rather, it seems that the story in Quebec has more to do with ideology and nationalism (See Annex I).

In contrast to environmental values, the models summarized in Table 3 suggest that the ideology measures are more systematically related to regional opinion on pipelines. Across all four regions, the more individuals prioritize jobs over species protection, the higher are their predicted scores on the "pipeline produces net economic benefits" question. For instance, in BC, the Prairies and Ontario, each one-unit increase in prioritizing jobs over species (measured on a 0 to 10 scale) increases positive evaluations of the Kinder Morgan and Energy East pipelines by an average of 0.25 points (also measured on a 0 to 10 scale). This effect is strongest in Quebec, where each one-unit increase in prioritizing jobs increases support by nearly 0.4 points. In other words, moving from the extreme values representing strong disagreement (0) to strong support (10) increased positive perceptions of pipelines by about 4 points (or 40%).

The other ideological measures included in our models provide some additional explanatory power, but their effect is not systematic across regions. For instance, the more one perceives environmental protection to be compatible with economic growth, the less likely they are to perceive net economic benefits from Energy East, but this is only true in the Prairie Provinces of Manitoba and Saskatchewan. Similarly, the classic "left-right" measure of political ideology is only significant in BC, where more right-leaning individuals are predicted to have significantly higher scores in terms of their evaluation of net economic benefits from the Kinder Morgan pipeline. However, because ideology is included in an interaction term (Ideo.*log(distance km), the "main effect" of ideology independent of proximity needs to be interpreted as the effect of ideology when distance is set to 0. In other words, a one-unit increase in the ideology scale (moving from left to right ideology) increases support with the statement that the economic benefits of Kinder Morgan outweigh its environmental risks, but this is true only when people live exceptionally close to the Kinder Morgan pipeline route. Conversely, the insignificant coefficients on ideology in the Prairies, Ontario and Quebec do not indicate that ideology plays no role in shaping attitudes toward Energy East, but rather, that the effect of ideology in these provinces is not conditioned (or moderated) by distance to this pipeline.

Trust also plays a different role across regions. For instance, trust in environmental groups is only statistically significant in BC. Specifically, the regression model estimates that each one-unit increase in trust towards ENGOs (measured on a 0 to 10 scale) is associated with, on average, a decrease of about 0.3 on the measure of pipeline benefits. In other words, someone who would have answered a 10 on the ENGO trust question would have a predicted score that is 3 points higher than someone who completely distrusts environmental groups. Meanwhile, the predicted effect of trust in industry is more stable across models, and is associated with greater pipeline support in BC, the Prairie Provinces (Manitoba and Saskatchewan) and Ontario (though not in Quebec). Its strongest effect lies in BC, where a one-unit increase in trust towards industry leads to a 0.3 increase in support for pipelines measured on the 0 to 10 scale.

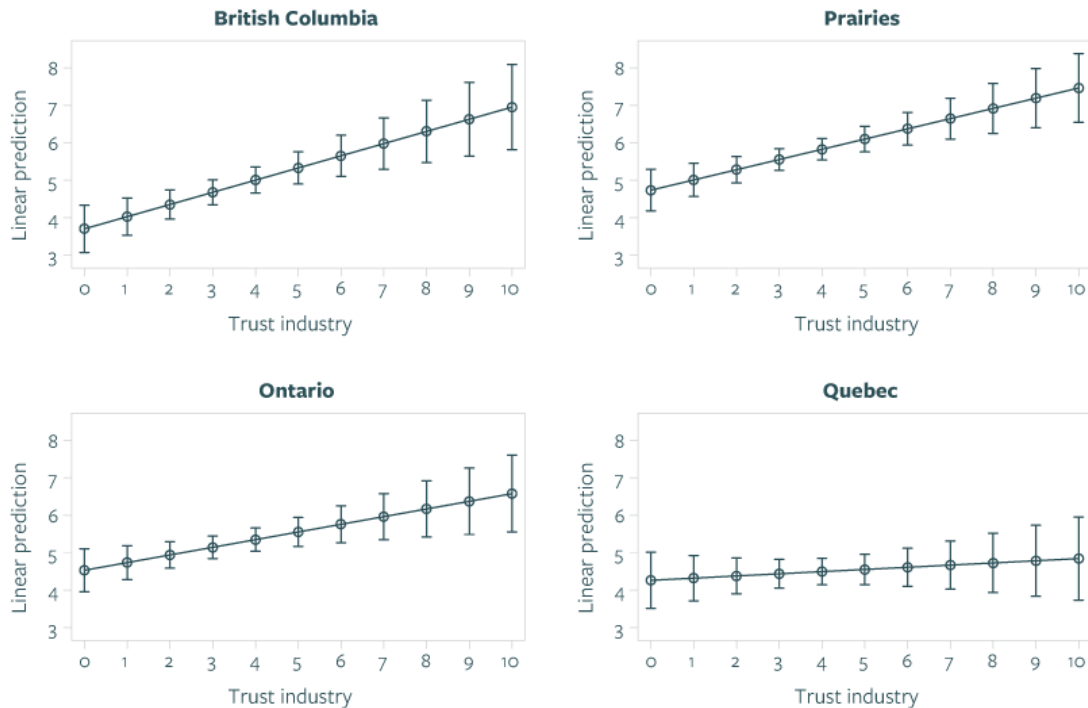## Figure 2. Trust in Industry and Support for Pipeline

Figure 2 presents the predicted values in support for the idea that pipelines carry greater economic benefits than risks, conditional on level of trust in industry, controlling for all other factors in the model. As can be seen, the slope is steeper in the case of BC, where values range from about 3.5 in support for pipelines to about 6.5. This 3-point increase reflects the fact that, with each one-unit increase in industry trust, the model predicts a corresponding increase in pipeline support of about 0.3 points (0.3 * 10 = 3). This suggests that in some regions (like BC), messaging around lack of industry credibility for preventing damage from pipeline spills (and other risks) may be a fruitful communication strategy. The effect is, however, insignificant in the case of Quebec, where such a communication strategy may be less effective (as people are already less likely to trust industry).

One of these alternative factors at play might be nationalism. As mentioned above, the Stephen Harper government, in power for nearly 10 years, built a narrative around Canada being an energy super power, while suggesting that to be against energy development is anti-Canadian. In contrast, discourse in the province of Quebec was often considerably more critical of Canada's oil and gas industry. We therefore included a variable measuring nationalism in each of our models. In BC, the Prairies and Ontario, Canadian pride was used as a proxy for nationalism, while in Quebec, we rely on a question measuring support for Quebec sovereignty. As shown in

Table 3, examining the role of nationalism across the four regions reveals some interesting findings. As might be expected from the campaign slogan used against Energy East, support for an independent Quebec decreases support for pipelines by almost one point (or 10 percent). In contrast, Canadian pride is only significant in Ontario, where it leads to an increase in support of 0.7 points.
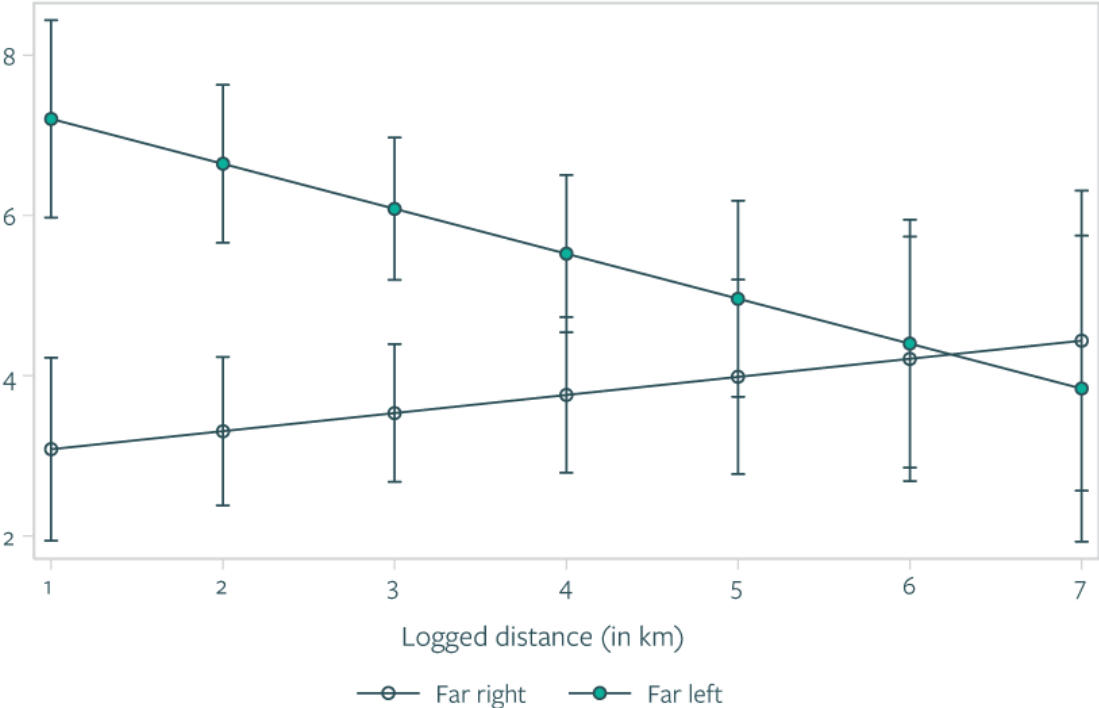
Interestingly, most of the socio-demographic controls included in the models turned up insignificant. Obtaining a university degree makes no difference in support for pipelines, and this is true across all regions. Similarly, age offers little in terms of added explanatory power. Gender is only significant in Ontario, where men are expected to have, on average, a .82 higher score than women. Finally, survey mode was not significant, indicating that answers from the phone interviews were not different than answers provided over the web.

The role of ideology and proximity

Lastly, we looked at the role of proximity to pipelines to examine how attitudes may vary depending on how close one lives to the pipeline route. We tested various specifications, with limited success — neither distance measured continuously in kilometers, nor distance set at specific thresholds, worked. This suggests that attitudes toward pipelines are, for the most part, not structured by proximity (i.e. there is limited evidence of a NIMBY-type effect). However, previous research on the Keystone XL pipeline has found that the effect of proximity is conditioned by political ideology.[ii] The logic here is that proximity is a proxy for issue salience, and as salience increases with proximity, we may expect people's ideology to play a greater role in forming stronger opinions that are consistent with their ideological worldview. To the extent that those on the left and those on the right weight economic and environmental considerations differently, we should expect greater ideological polarization with greater proximity to the pipeline route. Conversely, as distance increases, we might expect the role of ideology to be more muted.

We tested for such an effect in the models. This involved a multiplicative interaction term between the logged distance (in km) to the closest pipeline and ideology. To estimate this, we require three variables to be included in the model: logged distance, ideology and their multiplicative term, labelled *Ideo.*log(distance km)* in Table 4. Interpretation of all three coefficients is harder than for regular effects. For instance, the "main effect" of ideology, independent of distance, needs to be interpreted as the effect of ideology when distance is set at 0. Similarly, the "main effect" of distance, independent of ideology, must be interpreted as the effect of distance when ideology is set at 0 (extreme left). But the real coefficient of interest, and effect we are really testing, is the effect of proximity conditional on distance. Table 4 show the effect of this interaction is significant in British Columbia. But what does the coefficient mean? To better interpret this coefficient, Figure 3 plots the predicted values of support for the Kinder Morgan pipeline over this interactive effect.

Figure 3. Interaction between Ideology and Distance to Kinder Morgan Pipeline

As can be observed from Figure 3, the role of proximity to the pipeline is in fact conditioned by ideology. That is to say, proximity plays out differently for left-leaning and right-leaning individuals. To be specific, individuals on the far right show approximately double the support for the idea that the economic benefits of Kinder Morgan outweigh the environmental risks, compared to respondents on the far left, *when living in close proximity to the Kinder Morgan pipeline route* (i.e. at a distance of about 3 km, or logged distance of about 1). At a logged distance of around 3.5 (around 35 km), the ideological gap dampens, and ideology becomes non-significant. This means that political ideology is important for pipeline perceptions, especially among residents that live under a threshold of around 35km. Messaging seeking to mobilize opposition to the Kinder Morgan pipeline may want to focus on left-of-centre values (e.g. egalitarian-communitarian norms of environmental justice, fairness, and the right of local communities to decide) in areas of close proximity to the Kinder Morgan pipeline, and seek to counter arguments regarding economic benefits in these regions.

Conclusion

To summarize our findings, we find that geography conditions the way in which pipeline opinions are structured in Canada, both across regions, and within them. For instance, while descriptive statistics might suggest that environmental values, as measured by the Shades of Green segmentation, have a similar effect across regions, such is not the case. In British Columbia, trust in actors was very significant, as trust in ENGOs decreased support for pipelines, while trust in industry increased it. Within BC, proximity and political ideology also had an interactive effect, as ideology played a bigger role when respondents lived near Kinder Morgan, suggesting a more targeted communication strategy is warranted, depending on where audiences are located. In the Prairies, however, the story is the opposite. This is the region where Shades of Green better predicted support for pipelines, while trust in ENGOs did not play a role. Messaging in this context should therefore focus on environmental values. In Quebec, opposition is so low that Shades of Green offer limited explanatory power relative to ideas around economic ideology and nationalism. This may potentially help explain why the "*Coule pas chez nous*" slogan has been so effective in Quebec (see Annex I, below). Meanwhile, in Ontario, True and Potential Greens may be targeted to crystalize opposition, while dismantling arguments around industry credibility, jobs, and Canadian resource-nationalism might be fruitful strategies to pursue.

Annex I: Characteristics of Quebec opposition to pipeline

Table 5: Socio-demographic Characteristics of Extreme Pipeline Positions in Quebec

This table shows segmentation of strong opponents and supporters of this assertion: The economic benefits of the proposed Energy East pipeline outweigh the environmental risks for my province.

	Strong opposition	Strong support
Sociodemographic		
Gender		
Men	51%	62%
Women	49%	38%
Mother tongue		
French	91%	67%
English	5%	9%
Other	5%	24%
Age cohort		
Between 18 and 34 years old	20%	26%
Between 35 and 54 years old	41%	35%
Between 55 and 74 years old	36%	30%
75 years old or older	3%	9%
Education		
No university degree	66%	77%
University degree	34%	23%
Canadian identity		
Proud to be Canadian	79%	87%
Not proud to be Canadian	21%	13%
Geographic		
Urban	86%	91%
Rural	14%	9%
Proximity to pipeline		
Less than 1 km	2%	0%
Between 1 and 5 km	4%	9%

Between 5 and 10 km	10%	3%
Between 10 and 25 km	18%	14%
Between 25 and 100 km	59%	54%
100 km and more	7%	19%

Political
Quebec sovereignty

Sovereignist	56%	31%
No sovereignist	44%	69%

Vote choice

Liberal Party	13%	27%
Conservative Party	8%	21%
New Democratic Party	23%	4%
Bloc Québécois	19%	17%
Green Party	21%	3%
Undecided	16%	28%
Total number of respondents	127	53

---

[i] There are a total of 50 respondents we classify as « Eco-Indifferent » in our sample of 3000. This number is even smaller when we stratify by region. We therefore ignore this segment as it is very difficult to conduct statistical tests on such small sub-groups.

[ii] Gravelle, Timothy B. and Erick Lachapelle. 2015. "Politics, Proximity and the Pipeline: Mapping Public Attitudes Toward Keystone XL" Energy Policy 83: 99-108.