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Explaining Canadian Provincial Voting Behaviour: Nuance or Parsimony?

Jason Roy
Department of Political Science, Wilfrid Laurier University – Email address: jroy@wlu.ca

David McGrane
Department of Political Science, St. Thomas More College, University of Saskatchewan – Email address: david.mcgrane@usask.ca

Abstract: As one of the first empirical works to examine cross-provincial differences in vote behaviour, this study uses provincial election data drawn from eight provincial elections held between 2011 and 2012 to assess provincial vote choice. It applies two models of vote choice pioneered at the federal level, the "bloc-recursive" model and the valence model, to provincial elections. It is found that, despite that bloc recursive model encompassing several more variables, both models are similar in their ability to predict voter behaviour. However, the bloc recursive model is superior for understanding the unique political dynamics of each province. As such, the choice of which model to use comes down to a preference for nuance or parsimony.

Keywords: Provincial elections; vote choice; "bloc-recursive"; valence; voter behaviour

Résumé: Comme l'un des premiers travaux empiriques qui examine les différences du comportement des électeurs Canadiens provinciaux, cette étude utilise les données des élections provinciales tirées de huit élections provinciales qui ont eu lieu entre 2011 et 2012 pour évaluer le choix de vote au provincial. Elle applique deux modèles de choix de vote pionnier au niveau fédéral, le modèle de «bloc-récursive» et le modèle de valence aux élections provinciales. Il est constaté que, malgré que le modèle «bloc-recursive» englobe plusieurs variables, les deux modèles sont similaires dans leur capacité à prédire le comportement des électeurs. Cependant, le modèle «bloc-recursive» est supérieur pour la compréhension des dynamiques politiques uniques de chaque province. En tant que tel, le choix du modèle à utiliser revient à une préférence pour la nuance ou la parcimonie.

Mots-clés: Élections provincials; choix de vote; «bloc-récursive» ; valence ; comportement des électeurs

Theoretical Framework

Alongside the Charter of Rights and Freedoms and Quebec's place in Canada, vote choice in federal Canadian elections has been one of the most popular topics in Canadian political science. A recent edited book complied a twenty-eight page bibliography of all of the publications that have emanated from the Canadian Election Study (CES), a mass survey that has been administered in tandem with all federal elections since 1965 (Kanji et al., 2012).[1] Compared to voluminous literature on vote choice at the federal level, however, there has very little research on vote choice in provincial elections. This lack of research is unfortunate for the broader study of political science in Canada for three reasons. First, provincial elections provide an excellent opportunity to test the validity of models of vote choice that were pioneered through the analysis of Canadian federal elections. Second, through the inter-provincial comparison of vote choice, it is possible to discern the differences and similarities in how political power is won and lost throughout the country. Evidently, there may be lessons for political parties and politicians at all levels of politics in Canada. Third, considering the growth of power of provincial governments in recent decades, understanding the dynamics of vote choice in provincial elections provides key insights into how citizens choose the politicians responsible for many important decisions in Canadian politics ranging from the approval of pipelines to the reform of pension plans to the holding of referendums on succession from the country.

In this article, we apply two approaches to understanding vote choice developed at the Canadian federal level, the bloc recursive model and the valence model, to the eight provincial elections from 2011 to 2012 covered by the Comparative Provincial Elections Project (CPEP). In spite of the fact that the bloc recursive model has a much larger number of variables, we find that both approaches are similar in terms of their ability to predict voter behavior. Where we reveal important differences is in the ability of the two models to capture detail. Due to the larger number of variables that it entails, the bloc recursive model allows for a greater appreciation of the uniqueness of each province's politics. The valence model provides a much 'tighter' approach that is able to predict vote choice using a relatively small number of variables. Ultimately, the choice of which approach to use depends on the researcher's or political strategist's preference: nuance or parsimony. There may be cases where the researcher or political strategists want to quickly predict vote choice through the use of a minimum number of survey questions, while there may be other times when a greater appreciation of detail is required.

The primary obstacle to studying vote choice during provincial elections is the lack of mass surveys. Quebec is a clear exception, as political scientists in that province have administered surveys during provincial elections and have developed a substantial body of research. In their review of literature on voting behaviour in Quebec provincial elections since the 1960s, Bélanger and Nadeau outline how researchers have studied the effects of both short-term and long-term factors on vote choice (2009: 36-43). In terms of long-term factors, they outline how socio-demographic characteristics such as language, age, sex, education, and region along with beliefs concerning the national question and levels of

partisanship[2] shape vote choice in Quebec provincial elections. Short-term factors such as prevalent issues during the election campaign, perceptions of the strength/weakness of the economy, satisfaction with the incumbent government, and evaluations of leaders have also been found to impact vote choice in Quebec. Subsequent research has reinforced this work, adding several new variables to the bloc recursive model to help better-explain vote choice in Quebec: religiosity, dissatisfaction with the incumbent government, perceptions of government competence, and opinions on the national question (Belanger and Nadeau, 2009; Belanger an Gelineau, 2011).

Despite ample opportunity, only a handful of mass surveys during provincial elections outside of Quebec have been administered, most of them in the largest provinces of British Columbia, Ontario, and Alberta (Blake, 1985; Ornstein, 2003; Cutler, 2008; Sayers and Stewart, 2011; Cross et al., 2015). Rather than examining vote choice, these studies have focused on ideology and the relationship between federal and provincial politics. Further, these studies did not cover Manitoba or any of the provinces in Atlantic Canada. Given the increasing power of provincial governments in Canada and their impact on important public policies that touch the daily lives of citizens, it is imperative that Canadian political science comes to a better understanding of the dynamics of vote choice at the provincial level.

A natural starting point for an exploration of vote choice in provinces is to examine what political scientists have discovered about vote choice in Canadian federal elections. While a comprehensive review of federal Canadian vote choice literature is beyond the scope of this article [3], in general, two competing approaches have prevailed over the past two decades: the bloc-recursive model and the valence model.

The bloc recursive model is associated with the work of prominent members of the Canadian Election Study team such as André Blais, Patrick Fournier, Elisabeth Gidengil, Richard Johnston, and Neil Nevitte. Building on the work of Miller and Shanks (1996), they have approached the vote decision using a "Multistage Explanatory Model" that examines a wide range of considerations (Gidengil et al., 2012: 14). These considerations are organized into the following groups of variables (or "blocs"): social background, underlying values and beliefs, party identification, economic perspectives, issues opinions, and leader evaluations. In certain elections, evaluations of parties and considerations of strategic voting have also been added.

According to the bloc recursive model, vote choice is the result of the cumulative effect of these blocs of variables, some of which (like leader evaluation) are quite close to voting day while others (like social background) can pre-date voting day by many years. Given the complexity of voting, it is understood that not all voters pass through each stage of the model, and not all voters follow the exact order of the blocs. Nonetheless, the model is held to be good approximation of the various considerations influencing vote choice and useful instrument by which to explain electoral outcomes.

The valence model, associated with the research of Harold Clarke, Allan Kornberg, and others, takes a more parsimonious approach to vote choice that focuses on the explanatory power of three inter-related "valence politics variables (party identification, party

closest on most important issue, party leader effect)" (2012: 187). The foundation of the valence model is the distinction that there are two types of issues in election campaigns. Position issues (like same-sex marriage) polarize the electorate among competing and clear delineated positions. On the other hand, when it comes valence issues (like the economy and health care) nearly all voters have the same preference: everyone wants a strong economy and quality, accessible health care. As such, battles over valence issues become contests over which party and which leader can best "handle" these issues and "deliver the goods" (Clarke and Kornberg, 2012: 182). Simply put, citizens vote for parties to whom they feel closest on the issues that really matter to them, and the issues that really matter to citizens are usually valence issues. For Clarke and Kornberg, the concept of valence issues is inter-connected with the evaluation of party leaders and partisanship. Leaders come to play a large role in valence politics because citizens are constantly evaluating which leader can provide the safest "pair of hands" (ibid.) to manage complex valence issues like health care and the economy. Indeed, voters use leadership evaluation as a shortcut to evaluate how well certain parties will handle the issues of greatest importance to them. Finally, this model postulates that Canadians have "flexible partisan attachments" (ibid.: 181) that are constantly changing and evolving in response to evaluations of the ability of leaders and parties to handle important valence issues. As such, a voter can identify as a 'Liberal' partisan in one election but then identify as a 'Conservative' in subsequent elections as these parties change their leaders and policies. As such, partisanship can change in response to how voters perceive that political parties and their leaders are handling important valence issues (Stewart and Clarke, 1996).

In summary, the valence model strips away several elements of the bloc recursive model such as economic perceptions, underlying values and beliefs, opinions on hot button campaign issues, and socio-demographic background. We are left with a slimmer model that compresses vote choice into a tripartite consideration of the party closest to the voter on the voter's most important issue, party leader evaluations, and an evolving sense of attachment to the political parties in Canadian federal politics.

Proponents of both models have, at times, been critical of each other. Gidengil et al. (2012: 13) criticize the valence politics approach for being unable to discern *why* people chose to identify with one party over another and *why* people view the same leader's character and competence differently. They are also puzzled with findings that suggest the importance of the economy as a valence issue, but provide weak evidence of people voting based on economic perceptions in Canada. Their greatest concern with the valance model is its "risk of circularity", wherein party identification and leadership evaluations are held to affect a respondent's feelings towards a party's potential performance on valence issues, while a party's prowess on valence issues shapes party identification and leadership evaluations. A clear 'chicken and egg' problem emerges.

For their part, Clarke and Kornberg have never directly critiqued the bloc recursive method. However, their work has statistically compared their valence model to a "composite model" that includes the three sets of valence

variables in addition to variables concerning socio-demographics and positional issues (Clarke, Sanders, Stewart, and Whiteley, 2004; Clarke, Kornberg, and Scotto, 2009: 59, 90; Clarke and Kornberg, 2012: 187). They illustrate that the addition of these non-valence variables normally associated with the bloc recursive model does very little to improve our understanding of vote choice in Canadian federal elections.

Data from provincial election surveys can contribute to the debate over the effectiveness of the bloc recursive model versus the effectiveness of the valence model. Evaluating the effectiveness of these two models has theoretical significance for future studies of voter behavior as researchers decide how to best tackle the issue of vote choice in their own work. Beyond theoretical usefulness, such an evaluation has practical value for political strategists as they seek to understand the types of information that they need to predict and influence vote choice. Certainly, data from any election in Canada involving political parties can be used to test the validity of these two models of vote choice. However, using CPEP data allows us to assess the extent to which these models of understanding vote choice, formulated for federal Canadian elections, can be applied to provincial elections. Furthermore, we are able to evaluate the ability of each approach to explain provincial vote choice and examine whether a 'one-model-fits-all' explanation of vote choice is applicable to the Canadian provinces. Such an examination contributes to the ongoing debate about how much Canadian provinces are "small worlds" and how much Canadian provinces resemble one another in terms of their polities (Elkins and Simeon, 1980). As such, this chapter contributes to both the field of Canadian voting behaviour and to the field of Canadian provincial politics.

Methodology

The CPEP data set provided us with information on 6709 individuals across eight provinces. In all analyses, the models are run separately for each province. While this does not allow us to directly compare coefficients across models, it does allow us to consider what factors matter within each province and a broader comparison of how provinces differ in regards to the types of factors that affect vote choice. Furthermore, this approach allows us to directly compare the strength of the bloc and valence models within each province.

We employ binary logistic regression to model voting for the incumbent party versus voting for a non-incumbent party in each province. As such, our dependent variable is vote choice (incumbent vote = 1, non-incumbent vote = 0). We employ this approach for both practical and theoretical reasons. While multinomial logistic regression may be more suitable for multi-party systems, the low number of voters for some of the minor parties mixed with the large number of independent variables we assess in our models quickly depletes the number of cases in each cell. A second concern with employing a multinomial logistic regression is the challenge of comparing the results across provinces where the number of parties, ideological position of the parties, and so forth vary substantively. It is difficult, if not impossible, to compare voting for the British Columbia Conservatives to voting for the Newfoundland Progressive Conservatives or voting for the

Saskatchewan Party to voting for the Coalition Avenir Québec (CAQ). As such, we contend that a binary logistic regression model that compares voting for the incumbent party versus voting for all non-incumbent parties is a reasonable compromise that allows us to examine the difference across provinces in factors that influence vote choice while maintaining a sufficient number of cases to assess the latter stages of the bloc recursive model. Moreover, it reflects our view that provincial elections often come down to fundamental choice between continuing with the current government or voting for an alternative.

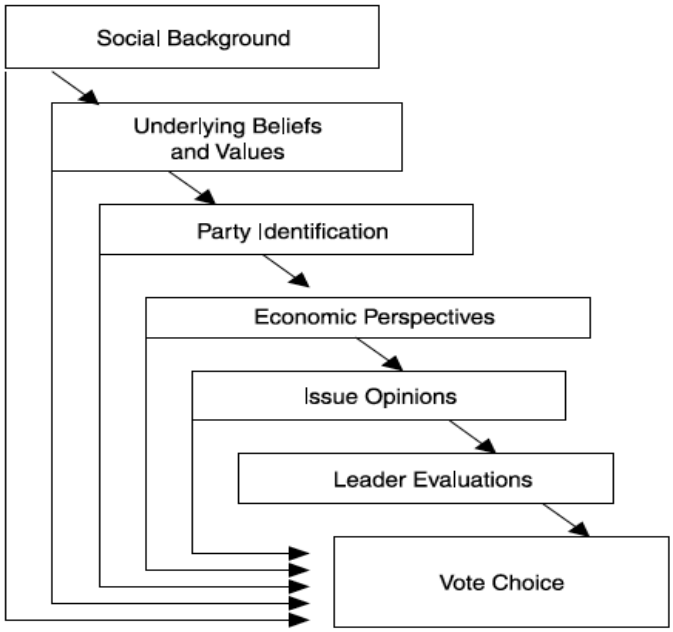
Following the work of Miller and Shanks (1996) and the Canadian Election Study team, we enter our variables in the following stages for the bloc-recursive model of each province: socio-demographic characteristics, underlying values and beliefs, provincial party identification, economic evaluations, issues opinions, and leader evaluations. Figure 1 provides a summary of the stages.

In order to populate each bloc of the model, we ran our preliminary analysis with all available variables for each stage. For example, in the case of our first bloc, socio-demographic characteristics, we initially included every variable available in the data set that measured socio-demographic characteristics. We then removed any variable that did not meet a level of statistical significance of P<.10 for at least one province.[4] This process was repeated for each subsequent stage of the model until only variables found to be statistically significant for at least one province were retained. A full list of the variables included in each bloc and how they were coded is listed in the Appendix.

For the valence model, we included provincial party identification, the party that the respondent is closest to on the individual's most important issue, and party leader evaluations. With the exception of the party that the respondent is closest to on the individual's most important issue, these variables are similar to those employed in the party identification and leader evaluation stages of the bloc recursive model.

Our approach to evaluating these provincial vote choice models is two-fold. We begin by summarizing which types of variables are found to have a statistically significant effect on vote choice within each province. We then consider the proportional reduction in errors (PRE) with the addition of each bloc of variables to the bloc-recursive model and the PRE that the fully elaborated valence model yields. PRE is a measurement of how much error is reduced when predicting the value of the dependent variable knowing information concerning the independent variables compared to trying to predict the value of the dependent variable when we know nothing about the independent variables (Menard, 2004). In effect, we are reporting how much better we can predict the probability of an individual voting for the incumbent party knowing the additional information added by each set of independent variables compared to how well we can predict their probability of the individual supporting the incumbent party without knowing anything about them. As such, we conclude by comparing the PRE of the full bloc recursive model with the PRE of the valence model to evaluate which approach to understanding vote choice performs better.

Figure 1. The Bloc Recursive Model



Source: Gidengil et al., 2006: 3

Findings

Our first set of results summarizes the findings of the bloc recursive model in each provincial election (Table 1). In order to simplify presentation, we have opted to present these results as a plus (+) or minus (-) symbol where the variable is found to be statistically significant ($p<.10$). For example, the plus symbol for "Over 54" in Manitoba indicates that individuals over the age of 54 were significantly more likely to support the incumbent (NDP) than the reference category, in this case individuals between the ages of 35-54. It is important to note that the direction and significance of each variable is reported based on the results observed when that set of bloc variables is first added to the model. For example, the values and beliefs criteria are based on the results obtained when we add this bloc of variables to the socio-demographic variables. We do not reassess the impact of values and beliefs after adding party identification or other blocs of the bloc-recursive model. Comparing across provinces on bloc of variables allows readers to see what factors were relevant in each of the provincial elections. As a means of grouping parties across provinces, we have arranged the columns along a "left-right" political ideology continuum according to our opinion on where the parties are best placed. While some may quibble with our placement of the parties, ordering the elections in this manner will allow the reader to discern if there are any differences in the support for right-wing incumbent parties compared to support for left-wing incumbent parties.

Referring to the results presented in Table 1, we find that in the case of socio-demographic characteristics,

Manitoba and Saskatchewan voters appear to be largely affected by sociological factors, with eight of the 16 variables indicating a significant influence on incumbent support. Conversely, voters in PEI, BC, and Alberta are least influenced by these factors (four out of 16). Overall, none of these variables affects voters in all provinces, and in a number of cases where the same factor does prove significant in more than a single province, the direction of the effect on voting for the incumbent party differs (e.g. Protestant, religiosity, high school dropout, couple, and union). It is likely that these differences reflect the distinct ideological space occupied by incumbent parties competing in each province and variations in electoral coalitions constructed by incumbent parties and their opponents across provinces.

In most instances, the findings fit with existing work. For instance, having a higher income increases one's chances of voting for a right-wing incumbent party (Quebec Liberals, Newfoundland and Labrador PCs, Saskatchewan Party, Alberta PCs, and the BC Liberals) and being in an union increased the chances that a person would vote for a left-of-centre incumbent party like the Manitoba NDP or Ontario Liberals. However, the bloc recursive model also captures interesting nuances when it comes to socio-demographics of provincial party support in Canada. For instance, the rural variable is significant in voting for the Saskatchewan Party, but not significant in voting for the PCs in Newfoundland and Labrador (NL) or Alberta. Being in a union and having an university education is important to understanding the vote of the Ontario Liberals and Manitoba NDP, but does not seem to help us to understand why voters supported the PEI Liberals. The lack of congruence among social backgrounds of supporters of the various right-wing incumbent parties and various left-wing incumbent parties is an indication that a single, bloc recursive model does not apply to all Canadian provincial elections.

In the values and beliefs bloc, our results once again vary across provinces. In Alberta and NL, only a single variable is found to be statistically significant: support for free enterprise in Alberta and support for traditional values in NL. Of the variables included in this bloc, support for free enterprise is most relevant across provinces. Opposition towards free enterprise is an important predictor of support for the Manitoba NDP, PEI Liberals, and Ontario Liberals, whereas strong support for free enterprise is co-related with supporting the BC Liberals and the Saskatchewan Party. However, once again, the bloc recursive model captures interesting nuances. Despite being regarded as the primary right-of-centre party in Newfoundland and Labrador, voting for the NL PCs is not affected by views on free enterprise. However, voting for the NL PCs is influenced by one's opinion on traditional values; individuals holding more traditional values are more likely to support the NL PCs relative to their less traditional counterparts. In Alberta we find a negative relationship between support for free enterprise and a vote for the incumbent PCs, likely a reflection of individuals who support free enterprise migrating to the Wildrose Party.

In fact, exploring the relationship further, we find that strong support for free enterprise resulted in a 17 percentage point boost in vote share for the Wild Rose Party, all else being equal.[5] In Quebec, a similar situation did not produce the same results. Despite a challenge from the right-wing CAQ, the

Table 1. Bloc-recursive Model for Canadian Provincial Elections (2011-2013)

Bloc	Variable	MB (NDP)	PE (LIB)	ON (LIB)	QC (LIB)	BC (LIB)	NL (PC)	SK (SKP)	AB (PC)
Social Background	Under 35			-					
	Over 54	+			+				+
	Female	+				-			
	Catholic						+	+	
	Protestant	-			+			+	
	Other	-							
	Religiosity	-					+		
	Dropout				-			-	+
	University	+		+	+			-	
	Visible Minority			+	+				
	Foreign		-	-					
	Couple	-	+						
	Union	+		+		-	-	-	
	Owner					+		+	
	High Quart				+	+	+	+	+
	Rural							+	
Beliefs and Values	Free Enterprise	-	-	-	+	+		+	-
	Trad Values						+		
	Equal Opp		-			-		-	
	Vismin Hard			+		-		-	
	Aboriginals	+			-				
Party Identification	Lib ID	-	+	+	+	+	-	N/A	+
	PC ID	-	-	-	N/A	N/A	+	N/A	+
	NDP ID	+	N/A	-	N/A	-	-	-	-
	PQ ID	N/A	N/A	N/A	-	N/A	N/A	N/A	N/A
	CAQ ID	N/A	N/A	N/A		N/A	N/A	N/A	N/A
	SK ID	N/A	N/A	N/A	N/A	N/A	N/A	+	N/A
	Wildrose ID	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-
Economic Perspectives	Retro Prov	+		+			+	+	
	Retro Pers							+	
Issue Opinions	Tax	-		-					
	Jobs		+						
Leader Evaluations	Incumbent Leader	+	+	+	+	+	+	+	+
	Leader 2 (opposition)	-	-	-	-	-	-		-
	Leader 3		N/A	-	-			N/A	-

"+" indicates a positive and statistically significant effect; "-" indicates a negative and statistically significant effect; empty cells indicate a non-significant coefficient; N/A = not applicable.

Quebec Liberals were able to maintain a base of voters dedicated to the promotion of free enterprise.

Turning to the other indicators added in the values in beliefs bloc, the particularities of each province's politics emerges. For example, voters who advocated for greater equality between men and women (Equal Opp) were less likely to support the incumbent parties in Saskatchewan, BC and PEI, but has no effect on vote choice in the other five provinces. In Ontario, Saskatchewan and BC we find vote choice influenced by whether or not one believes it is more difficult for visible minorities to succeed (Vismin Hard) albeit with opposite effects: in Ontario, the Liberals received a boost from individuals who felt it was more difficult for visible minorities to succeed (Vismin Hard) while the Saskatchewan Party and the BC Liberals lost votes. Attitudes towards aboriginals (Aboriginals) also produce alternate effects in Quebec and Manitoba where the Quebec Liberals lose support and the Manitoba NDP gain support from voters who express sympathy with the plight of Aboriginals. Taken together, the results further highlight the value of a more nuanced vote model that allows us to identify provincial differences in factors influencing the vote.

Moving to the next stage of the bloc model, we find that party identification clearly affects voters across all provinces. Without exception, individuals who identified with the incumbent party were significantly more likely to vote for the incumbent party. Conversely, supporters of the opposition parties were significantly less likely to vote for the incumbent. The one expectation is Liberal identifiers in Alberta, likely a reflection of strategic voting during the 2012 election to keep Wildrose out of power (Sayers and Stewart, 2013).

The role that perceptions of the strength or weakness of the provincial economy plays in provincial voter behaviour appears to vary across provinces. Our models illustrate that in four of the eight provinces (PEI, Quebec, BC, and Alberta are the exceptions), positive 'retrospective evaluations' of the provincial economy benefited the incumbent government. Put simply, voters who viewed the provincial economy as having improved in the past year were significantly more likely to vote for the incumbent party compared to those who claimed the economy stayed the same or worsened. What is referred to as 'egocentric retrospective' economic evaluations, that is how an individual's personal financial situation has improved or worsen over the last year, is relevant only in Saskatchewan where the incumbent Saskatchewan Party benefitted when individuals felt that their financial situation had improved. (For more on the impact of economic factors on provincial political attitudes, see McGrane, Clavelle, and Berdahl, this volume.)

The issues bloc of the model produced limited results. In no province do we find both of our issue measures to have a statistically significant effect on the propensity to support the incumbent government. In Manitoba and Ontario, voters supporting lower taxes over services are found to be less likely to support the left-of-centre incumbent parties (Manitoba NDP and Ontario Liberals). In PEI, support for job creation over environmental protection helped the incumbent Liberals. In all other provinces, issues did not significantly affect the probability of supporting the incumbent government. The lack of success of this

bloc may have something to do with the limitations of the CPEP data. Questions on the 'hot button' issues of each campaign that could have produced more interesting results were not included in all provinces. As such, we have employed more general indicators available for all cases.

Leader evaluations, the sixth and final stage of the bloc recursive model, were found to be relevant to voters in all provinces. As one might expect, individuals who rate the incumbent leader more positively were significantly more likely to support the incumbent government. Similarly, voters who rated leader of the main opposition party highly were less likely to support the incumbent party. The only exception was Saskatchewan, where NDP leader Dwain Lingenfelter proved deeply unpopular and did little to boost the electoral fortunes of his party. Overall, the evaluation of leaders of third place parties appeared to have less of an impact on vote choice than the evaluations of Premiers and main opposition party leaders. This finding concerning how third parties are less important to vote choice than evaluations of leaders of the governing party and official opposition is confirmed in the article by McGrane, Clavelle, and Berdahl in this volume.

Assessing the influence of the various stages of the bloc recursive model provides a nuanced picture of the various factors effecting Canadian provincial voting behaviour. It illustrates how the impact of these factors varies with the unique circumstances of these provincial elections and the peculiarities of the politics of each province.

Does the valence model perform any better? As discussed above, the valence model includes only three sets of variables (leader evaluations, party closest on most important issue, and party identification). Table 2 applies the valence model to CPEP data from the eight elections that we are examining. Once again, we present the results as a plus (+) or minus (-) symbol where the variable is found to be statistically significant ($p<.10$).

Table 2 illustrates that the valence model works much better as a 'one size fits all' approach to explaining provincial vote choice than the bloc recursive model. The impacts of three sets of variables in the valence model are relatively consistent across the eight elections examined.

With the notable exception of the Manitoba NDP, partisanship is a significant factor in voting for or against incumbent parties. Leadership is significant factor in voting for all of the incumbent parties and all but one of the main opposition parties. As with the bloc recursive model, third party leadership evaluations appear to be a less important factor for incumbent voting. The most striking feature of Table 2 is that incumbent party being closest to a respondent on his or her most important issue is a significant factor in voting for the incumbent party in each election studied. Clearly, knowing which party is closest to an individual on their 'top of mind' issue is a powerful predictor of voter behaviour in Canadian provincial elections.[6]

Having applied the valence model and the bloc recursive model to the CPEP data, we can now evaluate how well each model performs relative the other. To do so, we consider how much knowing the values of an individual's responses for each set of variables in the bloc recursive model improves our ability to predict a vote for the incumbent party compared to just guessing that individual voted for the

Table 2. Valence Model for Canadian Provincial Elections (2011-2013)

Variable	MB (NDP)	PE (LIB)	ON (LIB)	QC (LIB)	BC (LIB)	NL (PC)	SK (SKP)	AB (PC)
Lib ID	-	+	+	+	+	-	N/A	+
PC ID	-	-	-	N/A	N/A	+	+	+
NDP ID		N/A	-	N/A	-	-	-	-
PQ ID	N/A	N/A	N/A	-	N/A	N/A	N/A	N/A
SK ID	N/A	N/A	N/A	N/A	N/A	N/A	+	N/A
CAQ ID	N/A	N/A	N/A	-	N/A	N/A	N/A	N/A
Wildrose ID	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-
Incumbent Leader	+	+	+	+	+	+	+	+
Leader 2 (opposition)	-	-	-	-	-	-		-
Leader 3		N/A	-				N/A	-
Incumbent closest on most important issue	+	+	+	+	+	+	+	+

"+" indicates a positive and statistically significant effect; "-" indicates a negative and statistically significant effect; empty cells indicate a non-significant coefficient; N/A = not applicable.

incumbent party (the modal category) without any additional information.

We also consider whether or not the multiple stages of the bloc model offers a better PRE estimating an incumbent vote compared to the reduction in errors observed when applying the valence model. The results from these assessments are presented in Table 3.

Based on the results from Table 3, it is clear that socio-demographic factors are most relevant in Manitoba and Saskatchewan. In both provinces, knowing an individual's socio-demographic composition improves our ability to predict whether or not they voted for the incumbent by more than 20%. This is nearly three times greater than the improvement observed in the first bloc of the other provinces. A look at Table 1 reveals that support for the incumbent Manitoba NDP was particularly strong among older, female, university-educated, and unionized voters. Support for the incumbent Saskatchewan Party was strong among Catholic, Protestant, home owning, rural, and high-income earners. Similarly, the two Prairie Provinces are outliers when it comes to the addition of values and beliefs. Once again we find that the combined knowledge of socio-demographics and values and beliefs reduces our errors in predicting the probability of an incumbent vote by 38% in Manitoba and 43% Saskatchewan. The BC results for the values and beliefs bloc matches that of Manitoba and Saskatchewan, improving our ability to predict incumbent vote by 38%. The results from these three provinces are

more than three times greater than any other province. Another look at Table 1 illustrates that support for free enterprise combined with less sympathetic views towards gender equality and the disadvantages faced by visible minorities increases the probability of voting for the right-wing Saskatchewan Party and BC Liberals. In Manitoba, skepticism concerning the benefits of free enterprise and less generous opinions about the difficulties facing Aboriginals lead to voting NDP. The commonality among these three provinces is that all have a historically powerful NDP parties. As such, these results likely speak to the ideologically polarized political climate in these three provinces that comes with the presence of historically strong NDP.

The third stage of the bloc model, the addition of party identification, yields considerable improvement in all provinces while the economic evaluation bloc offers further improvement, albeit a relatively small change from the party identification bloc. The issues bloc is somewhat troubling, slightly reducing the ability of our model to improve our incumbent vote prediction in five of the eight provinces. Congruent with the limited results reported in Table 1 for this stage of the bloc model, it appears that issues were either relatively unimportant in these elections or we choose the wrong set of issues to ask about. The final stage of the bloc model, the addition of leader evaluations, further improves our ability to predict voting for the incumbent party, especially in Alberta where the addition of this bloc of

Table 3. Proportional Reduction in Error between Valence and Bloc Recursive Model, 2011 - 2013 Canadian Provincial Elections

	Socio Demo	Values	PID	Economic	Issues	Leaders	Valence
MB	20%	38%	61%	63%	65%	67%	**74%**
PE	8%	2%	49%	50%	47%	60%	**66%**
ON	4%	12%	51%	56%	55%	**61%**	**61%**
QC	8%	8%	58%	59%	58%	68%	**75%**
BC	9%	38%	56%	63%	62%	**70%**	69%
NL	6 %	11%	40%	43%	42%	**57%**	55%
SK	22%	43%	69%	73%	73%	**79%**	78%
AB	5%	8%	25%	27%	24%	54%	**61%**

In the case of the six blocs (columns 2-7) of the bloc recursive model, cells report the cumulative proportional reduction in error.

variables doubles our ability to correctly predict an incumbent vote.

Considering the results from the valence model relative to those obtained with the bloc approach, does one outperform the other in terms of ability to predict voter behaviour? The short answer is no. While the valence model does yield a large PRE in four of the eight provinces, the difference between the PRE results across models is marginal. In fact, in four of the eight provinces (Ontario, BC, NL, and Saskatchewan) PRE differences between the final stage of the

bloc model (including data from all of the six blocs) and the valence model is two percentage points or less. While the point difference between models in Manitoba, PEI, Quebec, and Alberta is notable (6 to 7 percentage point differences), the overall ability of either approach to reduce our errors in estimating incumbent vote probability is generally quite similar. As such, the predictive ability of the valence model that relies on the responses to only 5 of our survey questions is similar to the predictive ability of the bloc recursive model that included the responses to 28 questions.

Implications

This chapter assessed the relative effectiveness of the valence and the bloc recursive models in explaining provincial vote choice in Canada. Overall, the bloc recursive method provides researchers a more detailed understanding of what factors influenced the vote. Instead of assuming that socio-demographic factors or economic perceptions are unimportant to a particular election, the bloc recursive method tests that assumption in every case. It illustrates the unique socio-demographic basis of support of provincial political parties as well as the impact of the underlying values and beliefs on vote choice in certain provincial elections. Most importantly, the bloc recursive model provides this greater amount of detail without sacrificing explanatory power. On the other hand, the valence model provides a high degree of explanatory power with a minimal number of variables. It quickly cuts to the 'core' of vote choice in provincial elections: leadership, partisanship, and a respondent's most important issue. The ability to fairly accurately predict vote choice with a small number of survey questions could be useful to political strategists and researchers, depending on their specific goals. However, this parsimony comes at the cost of missing out on the nuances of the politics of each Canadian province. In the end, choosing between the two approaches may be a choice of nuance versus parsimony.

Appendix. Variables and coding used in models

Social Background	Under 35: Coded 1 if respondent is under the age of 35, 0 otherwise
	Over 54: Coded 1 if respondent is over the age of 54, 0 otherwise
	Female: Coded 1 if respondent is female, 0 if male
	Catholic: Coded 1 if respondent is Catholic, 0 otherwise
	Protestant: Coded 1 if respondent is Protestant, 0 otherwise
	Other: Coded 1 if respondent is religious, but not Catholic or Protestant, 0 otherwise
	Religiosity: Coded 1 if respondent considers his or her religion to be important or very important, 0 otherwise
	Dropout: Coded 1 if respondent did not complete high school, 0 otherwise
	University: Coded 1 if respondent has completed university, 0 otherwise
	Vis Min: Coded 1 if respondent is a visible minority, 0 otherwise
	Foreign: Coded 1 if respondent was not born in Canada, 0 otherwise
	Couple: Coded 1 if respondent is married or common-law, 0 otherwise
	Union: Coded 1 if respondent is a union member, 0 otherwise
	Owner: Coded 1 if respondent is a property owner, 0 otherwise
	High Quart: Coded 1 if respondent's income is in the highest quartile, 0 otherwise
	Rural: Coded 1 if respondent lives in a rural area, 0 otherwise
Not significant	*Low Quart: Coded 1 if respondent's income is in the lowest quartile, 0 otherwise*
	Any Kids: Coded 1 if respondent had children under 18 living at home, 0 otherwise
Beliefs and Values	Free Enterpr: a four item index ranging from 0-1 with 1=strong support for free market. Constructed by combining agreement with the following statements: Leave jobs to the private sector; Blame yourself for not getting ahead; Government regulation stifles personal drive; Government should see to it that everyone has a decent standard of living. Alpha = 0.57
	Trad Values: Coded 1 if respondent agrees or strongly agrees that society would have fewer problems if there was a greater emphasis on traditional values.
	Equal Opp: Coded 1 if respondent agrees or strongly agrees that men and women have equal opportunities, 0 otherwise
	Vismin Hard: Coded 1 if respondent agrees or strongly agrees that it is harder for non-whites to succeed, 0 otherwise
	Aboriginals: Coded 1 if respondent agrees or strongly agrees that it is harder for aboriginals to succeed, 0 otherwise
Party Identification	Lib ID: Coded 1 if respondent is a provincial partisan, 0 otherwise
	PC ID: Coded 1 if respondent is a provincial partisan, 0 otherwise
	NDP ID: Coded 1 if respondent is a provincial partisan, 0 otherwise
	PQ ID: Coded 1 if respondent is a provincial partisan, 0 otherwise
	CAQ ID: Coded 1 if respondent is a provincial partisan, 0 otherwise
	SK ID: Coded 1 if respondent is a provincial partisan, 0 otherwise
	Wildrose ID: Coded 1 if respondent is a provincial partisan, 0 otherwise

Economic Perspectives	Retro Prov: Coded 1 if respondent believes the provincial economy has improved in the past year, 0 otherwise
	Retro Pers: Coded 1 if respondent believes the his or her personal finances have improved in the past year, 0 otherwise
Issue Opinions	Tax: A 0-1 scale where 0 indicates support for public services even if it means increased taxes and 1 indicates support for lower taxes even if it means cutting public services
	Jobs: A 0-1 scale where 0 indicates support for environmental protection even if it may limit job growth and 1 indicates support for jobs even if it means decreased environmental protection
Leader Evaluations	Incumbent Leader: 0-1 incumbent party leader evaluation scale where 0 = really dislike the leader and 1 = really like the leader
	Leader 2 (opposition): 0-1 opposition leader evaluation scale where 0 = really dislike the leader and 1 = really like the leader
	Leader 3: 0-1 third leader evaluation scale where 0 = really dislike the leader and 1 = really like the leader
Valence model	Incumbent closest on most important issue: Coded 1 if the incumbent party is closet to the respondent on the respondent's most important issue, 0 otherwise

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Endnotes

[1] Note that the study was not administered during the 1972 Canadian federal election.

[2] When studying elections, political scientists use the term "partisanship" to denote a respondent's answer to the question of whether they feel close to a certain party or if they do not feel close to any party: i.e. do they consider themselves to be a Conservative, Liberal, NDPer, or none of the above. In this sense, partisanship is different from voting. A person can identify as none of the above and then vote for the Conservative Party. A person can also identify as being NDPer but decide to vote for the Liberal Party in certain elections due to considerations such as being enamored with the Liberal leader or wanting to vote strategically.

[3] For such a review, see Mebs Kanji, Antoine Bilodeau, and Thomas Scotto. 2012. *The Canadian Election Studies: Assessing Four Decades of Influence*. Vancouver: UBC Press and Cameron D. Anderson and Laura B. Stephenson. 2010. *Voting Behaviour in Canada*. Vancouver: UBC Press.

[4] See Gidengil et al. 2010 and Roy 2009, 2011 for a more detailed discussion of this approach.

[5] Results available from authors upon request.

[6] It is worth noting that the causal mechanism is untested; it could be that issue preferences explain party support or that partisanship influences issue preference.