Does candidates' ethnic minority background matter for voters in elections?

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Representation of ethnic minorities in the Legislative bodies have been paid less attention in voting behavior research, yet is empirically and normatively important. In Canada ethnic minorities have been numerically underrepresented compared to its population.[1] Why? While possible focus of answer can vary (i.e. institutional, cultural and historical, individual or aggregate-level, unintended rational), this paper examines its usual suspects: voters. If voters are reluctant to vote for ethnic minority candidates for some reason, numerical representation of ethnic minorities are hindered at the gate of election. If such bias exists, and if the supply side (potential candidates and parties) know or detect it, considering their possible strategic behaviors to win the election, political elites may suppress appointing or endorsing minority candidates. Alternatively, potential ethnic minority candidates themselves may become less engaged in politics, given the fact (or mistakenly assumed facts, if this is not true) that they would be discriminated against in the election. Thus, studying voters' reactions to ethnic minority candidate is crucial in answering the question of representation. More in general, do voters change their voting behavior by candidates' ethnic backgrounds? If so, in what direction? Who are more likely to be affected by the ethnic backgrounds? Which ethnicity, and why? The primary purpose of this paper is to examine whether voters support more or less a particular ethnic minority candidate, so called "visible minority candidate" (hereafter shortened as "VMCs") than other candidates, or ethnic "majority" candidates.

This study is still preliminary, yet brings an important contribution. In analyzing the individual-level vote choice of the 2008 Canadian Federal Election, I proposes three findings. First, contrary to the past studies, politically relevant information for voters, such as partisanship and ideological distance, does not "blow out" the tendency of voters' supporting VMCs less than non-VMCs. Nonetheless, this tendency is very weak and not stable. Second, in accord with previous findings, controlling for the viability of candidates vanishes the difference between VMCs and non-VMCs completely. Thirdly however, there

[1] For a review of the arguments and empirical descriptions on this issue in Canada, see a series of seminal studies by Black (most recently, 2008a; 2008b; 2011a; 2011b; Anderson and Black 2008). Although their works are rich in depths and important in its substance, the details are omitted in this paper due to the space limitation.

is an aggregation bias in this no-finding: Those who have negative racial/ethnic attitudes are significantly less likely to vote for VMCs, while others are not.

This paper is structured in the following manner: in the next section, I overview the recent literature on the minority representation concerning the effect of VMCs on vote choice. I draw three hypothesis from those literature in the following section, and point out several problems with the existing literature. In the third section, the research design and the data are described, followed by the results reported. Finally, the limitation and implication of this study will be discussed.

Literature review

While theories on choice homophily, social identity, and racial/ethnic prejudice predict that voters are reluctant to elect racial or ethnic minority candidates, empirical evidence is at least mixed. First, some studies that adopted experimental method report different kinds of effect: some studies argue that they receive lower evaluation (Terkildsen 1993; Dunning and Harrison 2010; Murakami 2011), while others suggest different ideological perception (Sigelman and others 1995; McDermott 1998), and some others suggest a more nuanced difference such as increasing refusal (Reeves 1997), different effects by skin color among VMCs (Weaver 2011) or different response by different social context of race relations (Aguilar-Pariente 2012). In Canada, two early studies adopted a field experiment (Kamin 1958 and Kamin 1963), and showed that English and French voters are significantly influenced by candidates' family names (English or French), favoring a co-linguistic/ethnic candidate. Yet all these studies have one common limitation: absence of partisan context. As Kam's study (2007) suggest, partisanship can offset the effect of ethnic background on voters' perceptions and preferences.

Turning to a few observational studies, results are further mixed, but the US studies are getting more productive by the "Obama effect." So far, observational studies generally suggest that race have little (if not no) effect on vote choice or percentage of

votes. Some studies using surveys (Gay 2002; Lewis-Beck and Tien 2009; Piston 2010) suggest that White voters' evaluation and support for African American candidates are lower, when they have negative stereotypes against African Americans. On the other hand, other studies report that candidates' ideological position and incumbency status blow out the possible effect of race and ethnicity (Abrajano, Nagler, and Alvarez's 2005; Highton 2004). Studies at the aggregate level using electoral results support no-effect findings: VMCs do not perform substantively worse than other candidates, when considering other candidate features that can strongly influence their electoral fate: party affiliation, viability, and incumbency status (Bullock III 1984; Livianna and Najem 2000; Black and Erickson 2006).

Accordingly, if we take a "conservative stance" in assessing the effect of candidates' ethnic minority, these findings in general suggests that voters would not be influenced by candidates' ethnic background, because for them, there are other more politically-relevant variables to consider. Otherwise whatever small influence of candidates' ethnic minority backgrounds fades away in the presence of crucial factors that determine electoral outcomes. But is this true?

Hypothesis

Drawing theoretical implications from the existing literature produces two hypothesis. First, if politically relevant variables wash out the effect of candidates' ethnic backgrounds, then we expect to observe that possible lower support for VMCs on average disappear, once partisanship or ideological proximity are taken into consideration at voters' level. Thus,

H1. Lower support for VMCs, if any, will not be observed, once candidates' party affiliation, voters' partisanship, and their ideological proximity are controlled for.

Further, following the findings of studies using aggregated data, candidates'

competitiveness is also expected to play the same role. This s because voters may want to choose a more viable candidate, while some VMCs are not, considering they are often challengers without political backgrounds and experiences. Accordingly,

H2. Lower support for VMCs will not be observed, once candidates' viability is controlled for.

These are hypothesis that support "negative findings." Turning to a "positive" side, a often implicit theoretical underpinning of expecting lower support for VMCs is centered around the theory of prejudice and racial/ethnic attitudes. To summarize the literature, they suggest that racial/ethnic "majority" voters are less likely to support VMCs, because of their negative views or attitudes to the racial/ethnic minority groups. Similar notions studying policy attitudes are proposed in theory of racial prejudice (Sears 1988, Kinder and Sanders 1996). If so, racial/ethnic attitudes should be a key variable. As Piston (2010) correctly put, no findings of disfavoring VMCs can be the result of failure to consider the interaction effect with racial attitude, or just an aggregation bias buried in voter heterogeneity. Even if the effect of visible minority background on vote choice is zero *on average*, a subset of voters with negative race/ethnic attitudes would be more influenced by it. Hence,

H3. Even after controlling for politically-relevant factors, lower support for VMCs will be observed among those who have negative race/ethnic attitudes.

Problems with existing studies

Although experimental studies have strength in controlling information and context that participants experience, they often have limitations in external validity (McDermott 2011). Most seriously, the reality of actual political dynamics may not be achieved effectively in

experimental setups. Even if there is a good reason to test hypothesis in a non-partisan context, there is no national-level election without parties. Asking respondents who live in a ethnically homogeneous area to chose from VMCs may be "irrelevant" or "unrealistic," because it is difficult for them to imagine a VMC running in their district. In addition, Hawthorne effect is a serious problem in experiments. Participants of experiments may change their behavior, knowing the intention of experimenter. Observational studies often have difficulties in identifying a causality (e.g. endogneity, which will be discussed more in the final section of this paper), but, it is important to have a "reality-check" of experimental results with observational data.

Existing observational data also have limitations. First, studies that draw inferences about individual voters' behavior from the aggregate election data can potentially suffer from ecological fallacy. Possibility of estimation bias *always* exists, even if a sophisticated method is adopted (Tam Cho and Manski 2008). As Black and Erickson (2006: 549) carefully interpret their results, no correlation between VMCs and their vote share at district level does not "necessarily rule out discrimination on the part of voters" against VMCs at micro level. To be sure, studies based on aggregate-level data provide important evidence, but individual-level analysis plays a pivotal role in making inferences about voters' choice and behavior facing VMCs. Second, observational studies without considering the racial attitudes can be missing important heterogeneity among voters. And finally, no studies have been conducted in Canada to examine the effect of VMCs on vote choice at individual level, using available Canadian election study data, as far as I could find. One possible exception is Cutler (2002), who demonstrated that voters use their sociodemographic proximity to major party leaders as an easy shortcut in deciding their vote. Although the purpose of this study is narrower than Cutler's, I made two refinements based on his study: a method (discussed more in the following section) and the data. Unlike voter-to-party leader combination in Cutler's study, I examine the voter-to-candidate combination, which has richer information in depth. Further, accommodating Quebec voters in the same model, this study tries to extend the scope nation-wide in breadth. Thus I believe that this is the first study that systematically examines the individual-level response

to VMCs using the nationally-sampled survey, and by showing some results that are contrary to and in line with the theoretical predictions, I hope the study can contribute to the broader understandings of the ethnic relations and voting behavior in Canada.

Research design and data

This study merges two types of data; an individual voter-level survey and candidate-level election and ethnic background data. For the survey part, I use Canadian Election Study 2008 (hereafter CES 2008)[2], and the candidate data is collected from various sources, including the websites of Election Canada[3], CBC news[4], Parliament of Canada,[5] major Federal parties, and some individual web pages.[6] To measure candidates' ethnic background, I followed Black and Lakhani (1997) and Tossutti and Najem (2002). I first code candidates' ethnic backgrounds based on candidates' surname and first name (when their surname does not tell much, or when the first name strongly suggests particular ethnic groups), then check their biography, if their information is available on the internet. In order to code ethnic background from surnames, I mainly relied on Hank's (2004) surname dictionariy, but whenever necessary, some multiethnic dictionaries were used.[7] While *any* attempt to classify ethnic groups can be potentially problematic, for the pragmatic purpose

[2] The CES 2008 was conducted by the Institute for Social Research (ISR) at York University, and the study was financed by Elections Canada. The principal investigators are Elisabeth Gidengil, Joanna Everitt, Patrick Fournier, and Neil Nevitte.
[3] Basic candidate information were obtained from Election Canada's webpage (2009), "40th General Election – Poll-by-Poll Results – Raw Data," at http://www.elections.ca/scripts/resval/ovr_40ge.asp?prov=&lang=e.
[4] CBC.ca (2012) "Canada votes 2008," http://www.cbc.ca/news/canadavotes/.
[5] Parliament of Canada (2012) "House of Commons – Members," http://www.parl.gc.ca/MembersOfParliament/MainMPsCompleteList.aspx.
[6] I will not list individual websites that I referred in detail here. They include for example, *Facebook*, *LinkedIn*, *Wikipedia*, local news paper page, and personal websites.
[7] This "double-check" process is still underway. These dictionaries include those for English (Reaney 1997), Americans (Robb and Chesler 1995), French (Morlet 1991), Italian (Francipane 2005), German (Rosa 2000) and Chinese (bibliography missing).

of analyzing the data, I adopt a static notion of ethnicity here, and coded their backgrounds according to the variables available in CES 2008.[8]

Among all 1601 candidates, 1537 candidates' background were identified (96%) with some degree of certainty, including those based on my "best guess" helped by website search.[9] Naturally, multiple origins are available for 541 cases, and whenever their "visible minority" status is obvious, candidates are coded as such. Following the official definition of "visible minority" in *the Employment Equity Act* (Statistics Canada 2012), I created a dummy variable for VMCs (1 if applicable) or not (0, including 64 cases whose background was not identified). At the end, I count 116 VMCs (7 percent).[10] The distribution of their partisan affiliation, and the relationship with important variables is shown in Table 1.

[Table 1 here]

Basic descriptive statistics in Table 1 underscore previous findings reported in Black and Erickson (2006) and Tossutti and Najem (2002). First, two columns on the left suggest that the distribution of VMCs are fairly proportional across major four parties.

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[8] Although the definitional issues of ethnic background (as well as normative argument surround it) is important in itself, I leave that argument side. See Chandra's review (2006) on this issue in political science. In this study *the public perception* of ethnicity is important. A classification is made inevitably arbitrarily, but for the purpose of answering the research question, it is reasonable to code ethnicity according to CES 2008 classification, and lump some ethnic minorities together into a "visible minority" category, as long as ordinal Canadian citizens recognize so.

[9] Whenever possible, I referred to the CBC's "Canada Vote 2008" websites, which often contain candidates' picture and sometimes birthplace information. Among those identified, 190 individuals (12 percent) are based on my "best guess."

[10] Double-checking the validity of this coding is in process, but compared to Black's (2011) counting of 107 VMCs *excluding* candidates of Green and other parties/independent, my counting of 91 individuals are conservative. If Black's number is correct and the number of my counting is conservative however, the direction of potential bias in the estimate is unknown, although I expect that the estimates of standard error would be larger (thus possibly more conservative estimate of a test), due to the small subsample size of VMCs.

Except for Green, about 10 percent of the candidates are VMCs for each party. Second, three middle columns demonstrate that VMCs performed as well as other candidates in the 2008 election. Their difference is in only 5% points. This coincides with the conclusion of the above-mentioned studies that visible minority background does not impair their electoral success. Finally, two columns on the right suggest that VMCs are much more likely to run in ethnically diverse districts.[11]

Statistical model

Although the focus of this study is to examine whether voters are more or less likely to vote for a VMC, a dummy variable of VMC or not itself cannot be a dependent variable of this analysis. First, in 232 out of 308 districts (75%) VMCs are absent. Respondents in these districts have *no choice* of choosing a VMC. One way of wiggling off this choice set problem is to drop 232 districts, and focus on 76 districts that had VMCs. Obviously, this is inefficient. Yet on the other hand, four candidates are VMCs in two ethnically diverse districts (Mississauga - Brampton South in Toronto, Ontario and Richmond in BC), which increases the base probability of voting for a VMC in these districts. So a solution to this problem is to examine which party voters choose in general (dependent variable), and test whether a candidate-specific characteristics increases or decreases the chance of voting for each party. Beside Block Québécois and a few exceptions, choices of four major parties (Conservative, Liberal, NDP and Green) are available almost everywhere in the 2008 Federal election. In this study, respondents' voting trend for each party in the 232 districts serves as a "baseline" probability in this study, compared to those in 76 districts where

[11] The district-level data of visible minority population is obtained from the Census Canada 2006 from Statistics Canada's web page (2006), "Ethnic origin and visible minority" at http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/rel/Lp-eng.cfm?LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GID=0&GK=0&GRP=1&PID=0&PRID=0&PTYPE=89103&S=0&SHOWALL=0&SUB=0&Temporal=2006&THEME=80&VID=0&VNAMEE=&VNAMEF=.

VMCs ran (see Highton 2004 for using a similar inference).

Hence the dependent variable in this study is a voter-specific variable of vote choice (more in concrete, party) reported in the Post-election study (hereafter "PES") in CES 2008, whereas a key independent variable is a candidate-specific dummy variable of visible minority status.[12] Still some problems remain. First, a choice of Block Québécois is available only in Quebec. Second, some voters faced more candidates in their district than others,[13] but many of them may be irrelevant to their vote choice, or can be substituted by the other candidate. In such situations, if the data is analyzed using a conditional logit or multinomial logit model, the estimates can be biased, because these models assume a so-called "independence of irrelevant alternatives" (IIA) assumption (Train 2009). Above two situations clearly violates the IIA assumption, because for some voters, two or three vote choices can share common unobserved characteristics which can influence their vote (Glasgow 2001).[14] Thus I use mixed logit model, which relaxes the IIA restriction, and allows more flexibility and efficiency than an alternative of multinomial probit model. Like conditional and multinomial logit model, mixed logit model can estimate effects of both alternative-specific (candidate or candidate relative to voter) and individual-specific (voter) characteristics on nominal multiple outcomes (party/candidate choice), with a random components which capture unobserved, varying "tastes" over specified variable for individuals. The utility that function of a mixed logit model, which suggests the utility individual *i* would gain by voting for a candidate among *j* number of candidates in can be expressed as:

$$U_{ij} = \beta_j X_{ij} + (Z_{ij}\eta_i + \varepsilon_{ij})$$

[12] Like Cutler's (2002), the CES 2008 data is expanded so that it makes multiple pairs of a respondent-candidate per respective district.

[13] In the 2008 election, one district had 10 candidates, whereas most districts had four (84 districts) or and five (125 districts) candidates.

[14] I had the seemingly unrelated estimation of two coefficients yielded by conditional logit between Quebec samples and the nation-wide sample. The results show that coefficients are significantly different, meaning that the IIA is violated.

where X_{ij} is a vector of independent variables in a format of *either* candidates' unique character, voter's attributes relative to each candidate, *or* voter's unique attributes. β_j is a vector of fixed coefficients for X_{ij}, and Z_{ij} is a vector of independent variables whose effect randomly varies over voters or candidates. Z_{ij} can overlap as some or all of X_{ij}, and η_i and ε_{ij} are both vectors of random terms whose mean is assumed to be zero. η_i is a specific random term that can vary over voters to capture varying voters' "taste" differences on independent variable Z_{ij}.[15]

In this study, the size of variance of random terms are not of interests, but voters' preferences for VMCs may vary, even after the fixed effect is captured by a dummy variable. Introducing ethnic minority characteristics both to X_{ij} and Z_{ij} allow us to examine such a possibility. Following Cutler (2002: 472), partisanship and absolute ideological distance are introduced as candidate vis-a-vis voter variables.[16] To measure candidates' viability, I used the actual vote percentage obtained by each candidate in the 2008 election. This measure may not be an ideal measure of competitiveness, but should simulate very closely as a proxy of competitiveness. Lastly as a racial attitude measure, I used the question asking how much more or less should be done for racial minorities in PES (5 point scale rescaled to range from 0 to 4, the higher value representing more favorable attitudes

[15] See Glasgow (2001: 119-120) and Train (2009: 137-141) for more details of this model. Note that this formula does not have a "constant" that in a OLS regression formula, $Y = \beta_0 + \beta_1 X$. In conditional logit or mixlogit model, dummy variables in a choice set can be manually introduced as independent variables to capture the average probability shift relative to the other choice. An omitted category (in the following analysis, Conservative party) is the base category.

[16] Partisanship is coded as 1, only if voters' partisanship matches with the major five parties of a candidate. Other minor partisans are excluded. Also, the partisan dummy includes those who feel "a little closer to" one of the parties in PES. This operationalization assumes that the effect of partisanship on vote choice is constant across parties. This is mainly in order to increase the efficiency in estimation as well as simplicity of presentation. I tried models with 4 partisanships introduced separately, by which I can examine its different effects by party, but the results were strikingly similar. Ideological distance is measured by subtracting each voters' self-reported left-right position (11 point scale) from the average placement of each party by top 13% of the knowledgeable respondents measured by 4 quizzes on politics. The rated position is very similar, if I use the average placement for each party by the tertiary educated respondents.

towards ethnic minorities). This variable is preferred to the feeling thermometer of racial minorities, because its more nuanced or "implicit" wordings.[17] To maximize the efficiency of producing the results and for the simplicity, other control variables are omitted.[18]

Results

Table 2 reports the result of four mixed logit models. First, Model 1 shows a raw relationship between candidates' visible minority background and vote choice. Only five constants, or the average level of support for four parties and others/independence are introduced as controls. Because I set the base category as Conservative, each constant can be interpreted as the relative change in support level to Conservative party. Drawing a meaningful inference from this simple model may be a little too naive, but it serves as a useful base for comparison, when other control variables are introduced. According to the result of Model 1, visible minority background is negatively related to vote choice, and this relationship is statistically significant at p=.02. Because the coefficient of -0.33 in a mixed logit model does not give an intuitive sense of the effect size, predicted marginal effects by party are reported for four models altogether in Figure 1.[19] According to them, VMCs are

[17] The feeling thermometer is more positively skewed, possibly as the result of the respondents' social desirability. The result was fairly similar but weaker, when using the thermometer.

[18] To be sure, I tested with more different control variables, including voters' socio demographic backgrounds, economic perceptions, policy positions other than ideology, etc, but the basic patterns were similar to those reported in the following section. On note of efficiency, I used Hole's (2007) mixed logit package in *Stata*, and found fewer independent variables are preferred to yield results with model convergence. In general, when a lot of random coefficients are introduced, and when independent variables have strongly correlated, the model failed to converge.

[19] Because the mixlogit package is not linked to a standard marginal effect calculation method with simulations in *Stata*, I calculated the predicted probabilities and marginal effects using nonlinear combination of estimators (nlcom) function. For simplicity and insignificant effect anyway, random components are not considered in this calculation (the mean is zero anyway). A fixed part of individual i's probability of voting for a party j was calculated using the following formula: $Prob(j) = exp(\beta_j X_{ij})/\Sigma^{k}_{j=1} exp(\beta_n X_{in})$, where n

less favored by about 0.1 (Independent) to 15% (Conservative) points than when they are not visible minority. More specifically, when a Conservative candidate is a VMC, and all the other candidates (Liberal, NDP, Block, Green and Independent) are all non-visible minority, respondents' probability of voting for a Conservative party is on average 15% points lower than when a Conservative party candidate is not a VMC. This difference is smaller, when the VMC is running from Liberal (-5% points), NDP (-4 % points) or Block (-8% points, but not statistically significant), and even smaller for Green (-2% points). The difference is statistically marginally significant (p=.05), but its size is negligible for Independent candidate (less than 0.1% point). Going back to Table 2, the random coefficient of 0.55 for visible minority suggests an individual-level variance or the "taste" over VMCs. The number is relatively large, but the p-value falls under the conventional significance level (p=.33). Thus, this variance can be neglected.[20]

[Table 2 here]

[Figure 1 here]

Model 2 and 3 test the hypothesis 1, which predicts vanishing effect of VMCs, after controlling for more politically-relevant variables of partisanship and ideological distance. Needless to say, both variables predict the vote choice well, when the model fit significantly improves. Model 2 has a surprising result. Contrary to the expectation of the hypothesis 1, the coefficient and significance level of the visible minority background does not change much, even after controlling for voters' partisanship (b=-.29, p=.03). On the other hand, its p-value exceeded the conventional threshold (p=.35), after controlling for the ideological distance. Turning to Figure 1 to see their marginal effects, their effect size and party variance shrank, but the effect themselves remained statistically significant for all

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represents a respective candidate choice of available k choices, and $n \in k$.

[20] This means that this taste variation can be assumed to be constant across individuals in this model. Because readers may be interested in the size (and significance) of this variance, I kept it in the random component. The model without this term does not substantively change the result.

five parties including Block (-7% points) for Model 2 (mid-left). When the ideological distance is introduced however (Model 3), the effect size further reduced, the area of 95% confidence interval increased, and all the marginal effects became statistically insignificant (for all, $p>.20$).

Upon this result, one may conclude that ideological distance, or policy attitude is a more important confounder. Yet this result must be interpreted carefully on a different account: compared to Model 1, Model 3 lost about 1350 observations (about 48 percent), thus the loss of statistical significance and change in the coefficient can be due to the loss of observations.[21] This issue is serious, if the loss occurs systematically. A mere fact of non-significant result of Model 3 itself implies a shaky effect of VMCs. Nonetheless, there is no guarantee that the samples dropped at MB stage are randomly distributed across their vote choice *and* their probability of favoring/disfavoring VMCs. In other words, if voters who are more likely to discriminate against VMCs are disproportionally dropped from the PES to MB samples, then this result is partly due to the systematic missing bias.

To check whether this is the case, some additional analyses were conducted by introducing 6 policy attitude variables available in PES one by one into Model 1 (immigration, Canada's sending troops to Afghanistan, increasing personal income or corporate tax, gay marriage, private medical services).[22] Out of 6 + 1 (with all policies) = 7 models, the coefficient of VMCs lost statistical significance ($p>.10$) only in 2 models (Afghanistan: $p=.42$ and all policies included $p=.25$). In addition, the direction of the effect is stably negative in *all* the models. In other words, even after controlling for voters' partisanship and major policy attitudes, a negative response to VMCs can be observed to some degree. At least, partisanship and policy-relevant controls do not "blow out" the relationship. Yet to take a conservative approach, the estimated effect of VMCs on vote

[21] This is because of the sample attrition in CES 2008, when I use ideological position question available only in MB. A separate analysis of the same model as Model 1 but restricting the number of respondents to the same as in Model 3 (2407) underscore this point: visible minority was not statistically significant in that model (b=-.22, p=21).

[22] The detailed results are not reported in this paper due to the space limitation, but available upon request.

choice is not always identified or robust either. Thus the hypothesis 1 is supported but only partially: when partisan or policy information is controlled for, voters are *less* affected candidate's visible minority status negatively.

Another variable reported to be a confounder of VMCs is candidates' competitiveness. Some voters may not have voted for a VMC, simply because he or she was not likely to win. Model 4 tests the hypothesis 2, and its result indeed suggests so. First, a positive and statistically significant coefficient of +0.03 of candidate's vote share suggests that respondents are more likely to vote for a viable candidate. After controlling for this, the coefficient of VMC is negligible (0.01), and distinguishable from zero (p=.90). Thus this single variable literally "blows out" the negative effect of VMCs. Turning back to Model 4 component in Figure 1 (right), all the estimated marginal effects are lined up on zero point. This means that for any parties, *no* difference exists in respondent's probability of choosing candidates between visible minority and other ethnic background in this model. Thus the hypothesis 2 is strongly supported.

Racial/ethnic attitude interaction

This is not an end of the story. As the hypothesis 3 posits, the effect of VMCs may be buried under voter heterogeneity, because some voters holding negative racial/ethnic attitudes may respond to VMCs quite differently from voters with positive attitudes. A crucial test of hypothesis 3 will be to examine the interaction effect of racial attitudes and VMCs, after controlling for voters' partisanship and candidates' vote share.[23]

[Table 3 here]

[Figure 2 here]

Table 3 contains two models, one of which examines the interaction effect (Model

[23] The model failed to converge, when ideology is introduced.

6), and the other is a base model without an interaction for comparison (Model 5). First, like Model 4, the coefficient for VMCs in Model 5 is not statistically significant (p=.73) after controlling for candidates' vote share. When interaction between visible minority background and the racial attitude is considered in Model 6, the coefficient of VMC turns to be substantively large (-.66), and is marginally but statistically significant (p=0.08). This means, when all the racial attitude variables take a value of zero (meaning "much less" for racial minority), the probability of voting for any party decreases, when a candidate has a visible minority background (for the interpretation of interaction effects, see Brambor, Clark, and Golder 2006). This means that the negative relationship between candidates' visible minority background and voters' vote choice is "back," but only among those who have negative racial attitudes, as the hypothesis 3 expects.

More visible and visual presentation is made in Figure 2, using marginal effects based on the results of Model 6. In general, a moderately upward trend from left to right, or changing from negative to positive point estimates are observed, as voters' racial attitudes change from negative ("much less") to positive ("much more"). More specifically, the negative marginal effect of VMCs are statistically significant (p<.05) for all but Conservative parties (p=.06), when voters prefer "much less" to be done for racial minorities (left clusters). Except for -16% point difference of Conservative and -3% for Green party, the marginal effects estimated in this attitude group are on average -7% points. In other words, this estimate suggests, when a Liberal, NDP or BQ candidate is a VMC, this candidate's vote share would be lower by about 7% points *among this racial attitude group* than when the candidate is not a VMC. Although this group of racial attitudes composes of only about 5 percent of all the sample used in Model 6, it is striking that candidates' visible minority background still matters for some voters, even after controlling for the effect of their party identification and candidates' viability.

At the next right cluster of racial attitudes is "somewhat less." Their negative marginal effects lose statistical significance except for NDP (-6% points, p=.01), but the direction of estimates are still negative. Again, although the size of this attitude cluster is relatively small (composed of 11 percent of this model sample), the stably negative

marginal effects for this group fits with the hypothesis 3. For the most respondents, who answered either "same as now" (44 percent), "somewhat more " (28 percent) or "more" (12 percent) to be done for racial minorities, VMCs does not seem to matter in their vote choice (one exception is the marginal effect of -6% points for NDP among "same as now" group, p=.01). All in all, the hypothesis 3 is moderately supported, suggesting that voters' response to VMCs are heterogeneous by racial attitudes. Voters who hold negative racial attitudes are less likely to vote for VMCs, while candidate's visible minority background does not influence for most voters who have moderate to positive racial attitudes.

Discussion

In this final section, I discuss the limitation of this study first, followed by the future research tasks and implications of the result. First, observational studies like this have a shortcoming in identifying the causality. The problem is serious, when self-selection is involved: candidates and parties may strategically choose, or allocate particular districts to run for the election. If this kind of endogeneity occurs, the estimated causal effect of VMCs reported in this paper can be biased. Assume that VMCs strategically choose their district, or some parties nominate VMCs, based on an unobserved factor *u*, which is related to both likelihood of their election and negative effect of VMCs. If this *u* is positively related with the likelihood of their winning but negatively associated with voters' discriminating against VMCs, the estimation bias is in a conservative direction. For example, VMCs may choose to run in an ethnically diverse districts, because voters in this area favor visible minority, and thus are more likely to vote for them. If so, the estimated effect of VMCs within thus selected electorates is biased towards zero, compared to the population. In short, VMCs may be more discriminated, if they ran in an ethnically homogeneous district.[24]

[24] Although Black and Erickson (2006) and Tosstti and Najem's (2002) studies suggest this is not the case, I disagree with their points for two reasons. First, any estimates we draw based on existing data can be *already biased* by this selection mechanism. In other words, we do not know what would happen, if VMCs ran in an ethnically homogeneous area.

Yet in an opposite example, *u* may be positively correlated both with the likelihood of winning *and* voters' discrimination against VMCs. In this case the causal effects of VMCs in this paper is overestimated. For example, imagine VMCs chose a district that provides better party resources and access to various human network, (thus contributing positively to their wining), *but* those voters are more likely to discriminate against VMCs. If VMCs select such districts *despite* the cost of accepting lower support among some voters, then the estimates are negatively biased. VMCs may not be as discriminated as is shown in this paper in other, not selected districts. I believe this case is much less likely than the former case, but the structure of unobserved factor *u* is unknown, and more studies are needed to figure this out.

Other limitation of this study includes possible fewer controls of confounders, model misspecification, measurement errors in coding ethnic background, and limits on generalization of this result based on a single election study in Canada. In general, more data, improvement of the measurement, and replications of studies help making better inferences and checking the robustness of these findings. The first two problems in particular, can be handled choosing different statistical model. Because a "controlling for everything" approach does not necessarily help better inference, other statistical estimation which does not rely on strong model assumption (such as matching method) can be used. Alternatively, experimental design, controlling for possible confounders helps assessing causal effect. This can be done in my future studies.

Future studies should also address different causality about the effect of VMCs. For example, the effect of co-ethnicity can be investigated more in detail. The effect of VMCs on voting may be more pronounced as the result of *positive* effect of co-ethnic voters, following the ingroup favorism dynamics as the social identity theory put (Tajfel 1982). Contrary to this expectation, my preliminary analysis suggests that visible minority voters do *not* significantly prefer VMCs, but this result can be the result of heterogeneity

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Second, their study, at least on the published part, does not test an interaction effect between VMCs and the percentage of ethnic minority population, which is the crucial variable to test this claim.

among visible minorities (i.e. a Punjabi origin VMC, for example, may not induce "ingroup" favorism among Chinese voters). The identification of co-ethnicity is a hard work, and the number of sample that can be used for this analysis is quite limited, yet this is the area of research worth investigation.

Lastly, I argue that the result of this paper has important implications for representation and electoral democracy. If VMCs are negatively judged by their ethnicity, not by what they claim, it can be undesirable, if one takes a position of individualistic liberal representation model. If *ideas* or tangible benefits and costs of policies matter for constituencies, in principle, who delivers policies should not matter. Yet the result does not suggest this is not be the case for some voters. As some theorists argue, a symbolic representation may compensate for the historically unequal group relationship or unfair political conditions of minorities (Williams 1998; Mansbridge 1999). But if the negative effect of VMCs exists among voters, it is a serious issue for theorists to consider in parallel with the normative desirability of symbolic representation. In any case, more empirical studies of the influence of candidates and voters' ethnicity in the election should be encouraged for its own sake and for political philosophical studies of politics of representation.

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Tables and Figures

Table 1. Distribution of VMCs across parties, their vote share and the district character

	Number of candidates		Vote share obtained (%)			Visible minority population (%) in candidates' district	
Party	VMC	Other	VMC	Other	CES 2008*	VMC	Other
Conservative	33	274	33.1	38.1	38.7	42.3	11.1
Liberal	27	280	25.6	26.8	26.0	32.8	12.7
NDP	26	282	14.3	19.3	18.6	39.3	12.1
Block Québécois	5	70	32.5	37.8	40.2	22.9	7.5
Green	10	293	7.1	6.7	6.6	38.3	13.7
Other/independent	15	286	0.5	1.4	0.9	43.5	17.0
All	116	1,485	20.7	19.1	(n/a)	38.4	13.1

* The percentage of Block Québécois in CES2008 is adjusted, showing the percentage only in Quebec. Other figures are the average including Quebec.

Table 2. Mixed logit estimates of vote choice of 2008 Canadian Federal Election 1.

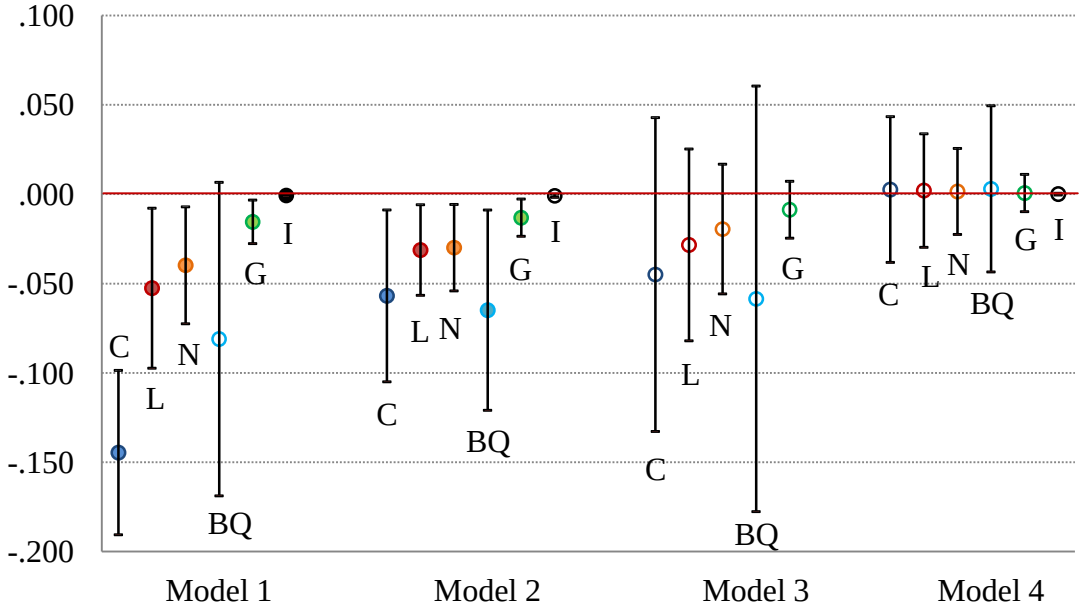
	Model 1			Model 2			Model 3			Model 4		
Variables	Coef	(s.e.)	*p*	Coef	(s.e.)	*p*	Coef	(s.e.)	*p*	Coef	(s.e.)	*p*
Fixed component												
Visible minority	-0.33	(0.14)	.020	-0.29	(0.13)	.030	-0.24	(0.26)	.350	0.01	(0.10)	.900
Party identification				2.39	(0.05)	.000	2.78	(0.36)	.000			
Ideological distance							-0.28	(0.05)	.000			
Candidate's vote share (%)										0.03	(0.00)	.000
Constant (base: Conservative)												
Liberal	-0.40	(0.05)	.000	-0.71	(0.07)	.000	-0.92	(0.14)	.000	0.04	(0.05)	.470
NDP	-0.74	(0.05)	.000	-0.36	(0.07)	.000	-0.61	(0.13)	.000	-0.09	(0.06)	.180
Green	-1.78	(0.08)	.000	-1.02	(0.09)	.000	-1.25	(0.16)	.000	-0.63	(0.10)	.000
Block	0.46	(0.08)	.000	0.18	(0.12)	.140	0.16	(0.21)	.450	0.24	(0.09)	.010
Other/independent	-4.86	(0.34)	.000	-3.68	(0.34)	.000				-3.57	(0.34)	.000
Random component (SD)												
Visible minority	0.55	(0.57)	.330	0.02	(0.63)	.980	0.48	(0.92)	.600	0.08	(0.58)	.880
Party identification				0.00	(0.38)	1.000	1.71	(0.62)	.010			
Ideological distance							0.00	(0.07)	.990			
Candidate's vote share (%)										0.00	(0.01)	.990
Model statistic												
N (individual voter)	2817			2786			1470			2817		
Log likelihood	-3640.3			-2247.1			-1110.7			-3380.4		
Correct prediction (%)	43.5			74.4			75.7			49.2		

Does candidate's ethnic minority background matter for voters in elections?

Table 3. Mixed logit estimates of vote choice of 2008 Canadian Federal Election 2

	Model 5			Model 6		
Variables	Coef	(s.e.)	*p*	Coef	(s.e.)	*p*
Fixed component						
Visible minority	-0.05	(0.14)	.730	-0.66	(0.37)	.080
Party identification	2.31	(0.06)	.000	2.32	(0.06)	.000
Candidate's vote share (%)	0.03	(0.00)	.000	0.03	(0.00)	.000
Do more for the racial minority (0-4)						
Conservative	0.64	(0.42)	.120	0.60	(0.42)	.150
Liberal	0.81	(0.42)	.050	0.78	(0.42)	.060
NDP	0.81	(0.42)	.050	0.81	(0.42)	.050
Block	1.13	(0.43)	.010	1.10	(0.43)	.010
Green	0.84	(0.42)	.050	0.83	(0.42)	.050
Interaction of visible minority X racial attitude						
Conservative				0.32	(0.16)	.050
Liberal				0.37	(0.16)	.020
NDP				0.06	(0.17)	.720
Block				0.19	(0.21)	.360
Green				0.18	(0.23)	.420
Constant (base: Conservative)						
Liberal	-0.70	(0.19)	.000	-0.72	(0.20)	.000
NDP	-0.15	(0.20)	.450	-0.19	(0.21)	.360
Green	-0.49	(0.27)	.080	-0.54	(0.27)	.050
Block	-1.23	(0.36)	.000	-1.23	(0.36)	.000
Other/independent	-1.62	(0.82)	.050	-1.67	(0.82)	.040
Random component (SD)						
Visible minority	-0.02	(0.88)	.980	0.01	(0.76)	.990
Party identification	0.12	(0.47)	.790	0.10	(0.44)	.810
Model statistic						
N (individual voter)	2661			2661		
Log likelihood	-2022.5			-2018.4		
Percentage of correct prediction	75.4			75.5		

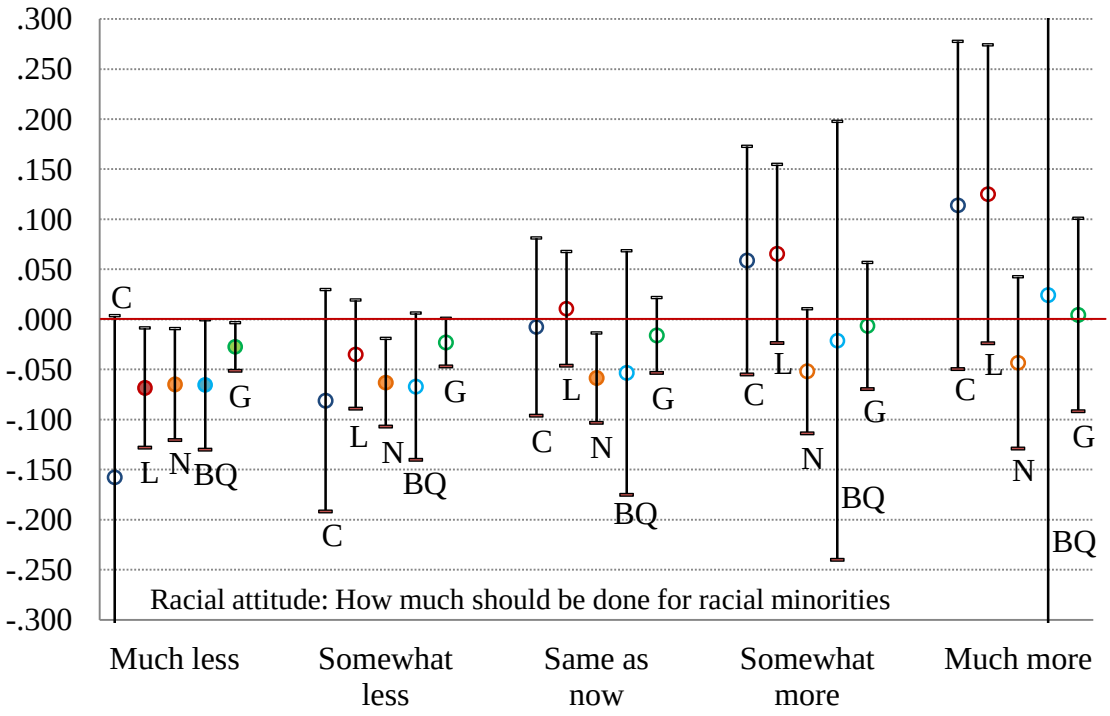
Figure 1. Marginal effects of visible minority candidate based on Table 1.



Note: Each dot represents a point estimate of marginal effect, and the whisker represents 95% confidence interval. When the estimated marginal effect reaches statistically significant level at $p<.05$, dots are filled by a typical partisan color. When it is not significant ($p>.05$), it is left blank white. A red solid line in the middle represents a zero point, meaning no difference between VMCs and candidates of other ethnicity. Finally, each letter in the figure identifies a respective party for each effect: C for Conservative, L for Liberal, N for NDP, BQ for Block Québécois, G for Green, and I for other party/Independent.

Does candidate's ethnic minority background matter for voters in elections?

Figure 2. Marginal effects of visible minority candidate based on Model 6 of Table 2.



Note: See notes in Figure 1 for the meaning of dots, whisker, lines, etc. The horizontal axis represents racial attitudes of respondents, which is answer to the question, " How much do you think should be done for RACIAL MINORITIES: much more, somewhat more, about the same as now, somewhat less, or much less?"