

# Long-term policymaking and politicians' beliefs about voters: Evidence from a 3-year panel study of politicians

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## Abstract

Politicians are required to make policy decisions that involve short-term and long-term tradeoffs, and existing theory largely expects election-driven myopic thinking to dominate their reasoning when they do so. Direct evidence on this is surprisingly absent, leaving open questions on whether and when politicians do support future-oriented policies, and what factors, beyond the shadow of elections, influence such choices. Responding to this gap, we report results of a multi-year survey of more than 1500 elected politicians who faced an original decision task involving short-term and long-term solutions to a local policy problem. First, we show that politicians' theories of voting behavior—specifically, their beliefs about whether voters focus on the short or the long term—strongly predict their decisions when facing inter-temporal policy tradeoffs. Second, we show that politicians are responsive to changes to short-run costs associated with long-term policy investments. Finally, we leverage the panel design of our study and find—in contrast to prevalent assumptions—no evidence that politicians' policy choices are related to their proximity to the next election. In doing so, we expand and refine the theoretical framework on inter-temporal choice

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by policymakers, and outline a comparative research agenda for studying how politicians think about the future.

## 1 | INTRODUCTION AND THEORETICAL BACKGROUND

Politicians are constantly required to make policy choices that “impose costs on constituents in the short run in order to produce long-run social gains” (Jacobs, 2011, p. 4). Their responses to these *inter-temporal dilemmas* are one of the most important factors affecting the substance and successful implementation of public policies. They are consequential not only for citizens, whose present and future interests and well-being are affected by such decisions, but also for politicians themselves, whose career prospects are directly affected by how voters judge their choices.

Political scientists have devoted considerable attention to the mechanisms that determine when policy makers choose long-term investments. In many theoretical accounts, effective long-term policy making in democratic societies is understood to be inherently difficult because of politicians' vulnerability to short-term electoral pressures, the uncertain consequences of long-term policies, and institutional structures that are vulnerable to interest group pressures (González-Ricoy & Gosseries, 2016; Jacobs, 2011; Streich & Levy, 2007). Much of this research emphasizes the role of myopic preferences among both voters and politicians when facing inter-temporal dilemmas. Voters are often described as strongly impatient and averse to bearing the short-run costs associated with longer term policy solutions (Healy & Malhotra, 2009), although others have questioned the pervasiveness of this myopic behavior (Christensen & Rapeli, 2021; Jacobs & Matthews, 2012; MacKenzie, 2016). Politicians, for their part, are also regularly suspected of severe short-term bias because they must stand for re-election and maximize votes by appeasing myopic constituents, creating incentives for short-term policy alternatives. The consequences of these incentives are explored most famously in the literature on electoral business cycles (Alesina, 1987; Alesina & Roubini, 1992; Nordhaus, 1975; Rogoff, 1987).

As Jacobs (2011) argues, however, policy theories that assume extreme short-term bias among policy makers struggle to explain why they *do* choose long-term policy investments even when those investments are accompanied by unappealing short-run costs for constituents. Moreover, variation in such choices across countries and time illustrates the role of electoral, institutional, and cognitive factors in politicians' responses to inter-temporal dilemmas. These findings suggest that politicians' approaches to inter-temporal dilemmas are likely to vary not only across institutional and electoral contexts, but also across individual politicians. However, while researchers have explored variation in voters' long-term policy preferences in recent years (Healy & Malhotra, 2009; Jacobs and Matthews, 2012, 2017), we are aware of just one direct individual-level study of politicians' future time discounting behavior when facing policy choices (Sheffer et al., 2018), and no study, to our knowledge, attempts to directly explore the factors that explain the choices that individual politicians make when facing inter-temporal dilemmas. Do politicians prefer to avoid the short-term costs even when they are associated with more efficient long-term policies? Is this logic truly driven by the looming shadow of upcoming elections? And if not, what other factors matter?

Here, we show that politicians do vary substantially in their approaches to inter-temporal policy dilemmas, even when the character of the policy choice and their institutional and electoral environments are very similar. We argue that these preferences are driven by politicians'

*theories of voters* (Ekengren & Oscarsson, 2011; Kingdon, 1967; Lucas et al., 2022; Strömbäck et al., 2013), and more specifically by whether politicians see voters as more oriented toward the short term or the long term in their voting behavior. In our view, politicians have beliefs about how voters behave and what voters expect them to do, which provide a backdrop for their own policy choices as representatives. We expect that politicians who see voters as more oriented to the long term will show a stronger and more stable preference for policy alternatives that carry long-term benefits, even when those policies impose substantial short-run costs. We expect politicians' theories of voting behavior to shape their own approaches to inter-temporal policy dilemmas because they imply distinct theories of what V.O. Key called "latent opinion." For Key and others, the public opinion that most concerns elected representatives is not the public's attitude on an issue today, but instead what the public's attitude *will be* at a salient point in the future, such as the next election (Arnold, 1990; Key, 1961; Zaller, 2003). The answer to this question about future public opinion depends on a politician's theory of voters themselves—a theory of the extent to which voters weigh the short term or the long term more heavily in their judgments. Distinct theories of voters imply distinct expectations about "latent" or future public opinion—and thus distinct expectations about a politician's own decision-making.<sup>1</sup>

We further expect politicians to be responsive to the *substance* of the policy choice they face—that is, we expect them to change their policy preference in response to changes to the short-run costs associated with a longer-term policy solution. We stress that inter-temporal dilemmas involve many moving parts that together shape the substance of choices faced by politicians (Jacobs, 2016), and by societies more broadly (Boston, 2017; Caney, 2018), and that in focusing on changes to the cost structure of choices we are not capturing politicians' responsiveness to all of these considerations. When making choices about policies whose consequences unfold over long periods of time, politicians face numerous uncertainties: these include information gaps (external factors influencing choices in the future may change in unpredictable ways); political commitment problems (realizing a future outcome often depends on future office holders, who may have different priorities and interests. This could be true even if they are the same politicians in office today); and uncertainty on the observability of long-term policy effects (meaning that decision makers have reduced ability to claim credit for policy benefits that materialize in the future, while still risking blame for its present costs). Together, these features influence whether, and to what extent, policies with different time horizons are seen as beneficial for policymakers.

Within this set of factors, the literature highlights the cost structure of policies as especially pertinent to how politicians respond to inter-temporal dilemmas (Jacobs, 2011; MacKenzie, 2016). Other things equal, then, increases in the short-run costs associated with longer-term policy solutions should make politicians more reluctant to opt for the longer-term option: short-term costs are immediate, predictable, and imposed on a clearly identifiable group of constituents, and as such they carry a potential impact on a politician's electoral fortunes. While this expectation will strike many readers as intuitive, even obvious, it has not been directly tested with elected officials, and there is mounting evidence that elected officials often do not act in line with what existing theories of elite behavior expect of them when they make decisions (Brockman & Skovron, 2018; Kertzer, 2020; Linde & Vis, 2017; Walgrave et al., 2022). Moreover, testing this expectation enables us to explore differences among politicians in their responsiveness to these short-run costs. Specifically, we expect that politicians' responsiveness to the costs associated with a particular inter-temporal dilemma are stronger for politicians who see voters as driven by short-term considerations; in contrast, politicians who see voters as more oriented to the long term will be less responsive to changes to the short-run costs associated with longer-term policy alternatives. Because the former group are more likely than the latter to expect voters to

be attentive (and reactive) to the short-run costs associated with long-term policy investments, they will be more motivated to adjust their own choices when evaluating these policy tradeoffs.

Finally, we are interested in testing the influential and widely held expectation that politicians' policymaking time horizons are deeply influenced by the proximity of the next election. While election proximity plays a strong role in the literature on electoral business cycles, and is an implicit feature of virtually all existing accounts of policymaking in democracies (Jacobs, 2011; Przeworski et al., 1999), the sole existing experimental test of the effect with politicians yielded a substantively small effect on future discounting rates (Sheffer & Loewen, 2019), and we are only aware of one other study that (indirectly) investigates whether politicians reason differently about the future as their actual re-election dates draw nearer (Vermassen et al., 2022). Does election proximity indeed reduce politicians' interest in policy solutions whose benefits will only emerge in the long run? If so, does this consideration completely dominate their behavior, as is often claimed?

Our results directly address these questions. We find that politicians whose theoretical outlook is that voters have a long-term orientation are significantly more willing to opt for long-term policy solutions that impose short-term costs relative to their colleagues who see voters as focused on the short-term. We further find that the choices politicians make are strongly conditioned by the present/future cost structure of the problems they are facing, but that responsiveness to such information is mostly found among politicians with a short-term theoretical outlook. And despite existing expectations, we fail to find a meaningful effect of election proximity on the preferences of politicians for short-term versus long-term policies. In what follows, we first describe our research design and data, followed by the results. The concluding section discusses implications of our findings for existing theory and outlines a comparative research agenda for the study of politicians' time horizons.

## 2 | RESEARCH DESIGN AND DATA

In this study, we use data from a recurring survey of elected politicians to investigate the three research questions that we outlined above. Our data come from the Canadian Municipal Barometer (CMB), an annual survey of elected local politicians in more than 400 Canadian local governments. We first developed a vignette for the 2020 CMB survey in which we asked politicians to choose between a short-term and long-term solution to a pressing policy issue in their community—a major bridge in need of immediate replacement or repair. We choose this policy issue because past research has shown that local politicians consider roads and bridges to be a major policy concern in local governments (Lucas & Smith, 2019) and because bridge construction projects offer a clear example of the tradeoffs we want to explore: major bridge replacement projects typically take several years to complete and cause serious traffic disruption during the construction phase, but well-constructed bridges last for many decades after they are completed. We provide the exact wording for this 2020 vignette in the left-hand column of Table 1.

After an initial review of politicians' responses to the 2020 survey, we revised the vignette to more vividly highlight the short-run "pain" that constituents would encounter—in the form of commute times and traffic congestion—if the politician selected the longer-term policy option in the vignette. We included this revised vignette, which we include in full in the right-hand column in Table 1—in the 2021 and 2022 CMB surveys. In both vignettes, the construction time and service life of the bridge in the longer-term policy alternative (Plan B) is identical, but the short-term costs associated with Plan B are more serious (both for commute times and congestion)

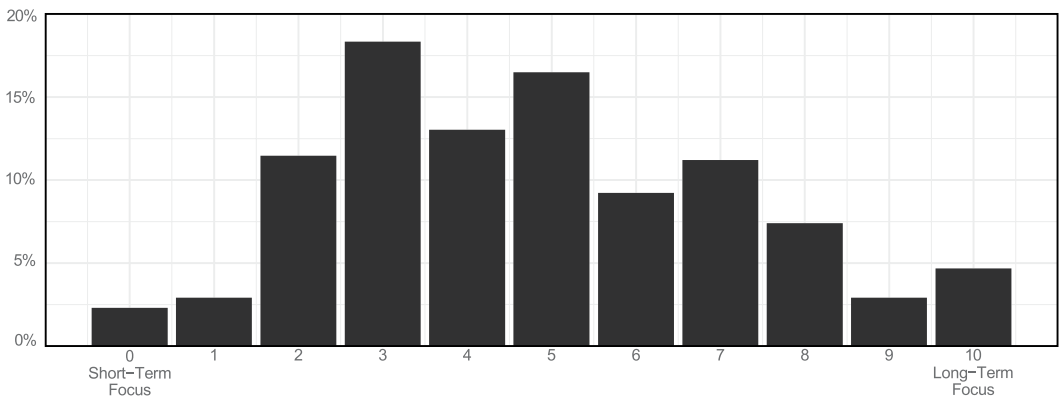
**TABLE 1** Variation in short-term cost of long-term policy option (Plan B): 2020 and 2021–2022 question wording.

2020 Vignette	2021–2022 Vignette
Imagine that a major bridge in your municipality, which is used daily by many of your constituents, is in a state of very poor repair. Council will soon vote on two options.	Imagine that a major bridge in your municipality, which is used daily by many of your constituents, is in a state of very poor repair. Council will soon vote on two options.
Plan A is to undertake a minimal package of emergency repairs, which will require night-time closures and lane reductions. These repairs will be completed in four months but will only extend the service life of the bridge for 10 years.	Plan A is to undertake a minimal package of emergency repairs, which will require night-time closures and lane reductions, with minimal effects on traffic congestion. These repairs will be completed in ten weeks and will extend the service life of the bridge for 10 years.
Plan B is to build a new higher-capacity bridge with a service life of at least 60 years. Traffic would need to be fully re-routed during the construction project, increasing congestion and commute times. The new bridge would be complete in five years.	Plan B is to build a new and higher-capacity bridge with a service life of at least 60 years. Under this plan the old bridge will need to be completely demolished, and traffic will be redirected to detour over a more distant bridge during construction. This detour will substantially increase commute times for residents and cause serious traffic congestion. During the construction period, this will likely mean considerable frustration for residents. The construction of the new bridge is currently estimated to take five years.
Because of the poor state of the bridge, work needs to begin immediately regardless of which plan is adopted. [Randomize: “ ”/You have been receiving frequent messages from your constituents about the bridge issue, many of whom have indicated that addressing this issue will be a consideration for them at the next election.]	Because of the poor state of the bridge, work needs to begin immediately regardless of which plan is adopted. [Randomize: “ ”/You have been receiving frequent messages from your constituents about the upcoming vote on the bridge, many of whom have indicated that your position on this issue will be a consideration for them at the next election.]
Which of the two alternatives do you vote for?	Which of the two alternatives do you vote for?

and are emphasized much more strongly in the second vignette.<sup>2</sup> This setup allows us to explore how politicians' preferences for the short term (Plan A) or long term (Plan B) policy alternatives change as we vary the salience of the short-run costs associated with the longer-term alternative. In all of our analyses, we code this outcome variable (0) for Plan A and (1) for Plan B; positive values thus reflect a politician's preference for the longer-term bridge replacement option rather than the shorter-term fix.

Across our three annual surveys, we have a total of 2456 responses to the bridge vignette: 764 for the first vignette, and 1692 for the second vignette.<sup>3</sup> Not only does this represent a very large sample of elected politicians, but the panel character of our data also allows us to assess the within-respondent effect of increasing the short-run costs associated with the Plan B policy alternative for the 629 politicians who completed both of the vignettes in Table 1. We provide in the Supporting Information S1, additional detail on the composition of our sample and its representativeness of the population on observable characteristics, including province, municipal population size, and gender.

To answer our second research question—how politicians' theories of voting behavior are related to their policy choices—we added the following question to the 2022 CMB survey: “Some



**FIGURE 1** Politicians' theories of voters' time orientations. Some say that voters are impatient and think about the short term when they vote. Others say that voters are able to ignore short-term distractions and focus on the long term. Where would you position yourself in this debate?

say that voters are impatient and think about the short term when they vote. Others say that voters are able to ignore short-term distractions and focus on the long term. Where would you position yourself in this debate?" Response options ranged from 0 (labeled "short term focus") to 10 (labeled "long term focus"). This question, which is part of a larger battery of questions we have developed to probe politicians' theories of democracy and voting behavior, was well understood by respondents, with just 11 respondents (1% of the total) selecting "don't know."<sup>4</sup> We summarize responses to this question in Figure 1; responses are widely distributed, with 48% selecting short term focus (0–4 on the scale), 17% choosing a mixed position (5 on the scale), and 35% selecting long term focus (6–10 on the scale). In the aggregate, then, politicians' beliefs about voters' short term or long term focus vary widely, with a slight overall lean toward the short-term perspective.

We include four additional variables in our analyses. First, we measure each respondent's proximity to the next election. As we noted above, many theories of politicians' time horizons assume that policy makers will make different choices when an election is more or less distant. Our data allow us to exploit variation in municipal election dates across Canadian provinces,<sup>5</sup> along with within-subject variance in election proximity for all politicians who completed multiple waves of the annual survey. Our vignette is constructed such that the short-term option deals with the bridge situation prior to the next election and the long-term option is completed only after the election, regardless of the election's proximity in a given year. Therefore what changes is how close each politician is to their next election when making their choice. We calculated the number of days between the politician's survey completion date and the next election in their municipality, and then converted this value to years to facilitate easier interpretation.

Finally, to probe the robustness of our results to alternative specifications and models, some models also include three socio-demographic characteristics (age, gender, and educational attainment) as well as each politician's ideological self-placement. These control variables are drawn from self-reported responses within the CMB surveys themselves.

The analyses that we carry out with these data are straightforward. To assess responsiveness to cost changes associated with the longer term (Plan B) policy option, we model the relationship between politicians' choices in the vignette and the question to which they were responding (i.e., the 2020 version vs. the 2021–2022 version) across a variety of specifications, including a within-respondent model. To assess politicians' beliefs, we regress their choices in the vignette on

TABLE 2 Glossary of key concepts and distinctions.

Concept	Distinction	Description
Policy choice	Short-term option versus long-term option	Politician's policy choice on bridge vignette between short-term solution and long-term solution.
Policy cost	Lower short-term cost versus higher short-term cost	Short-term consequences for voters (in terms of traffic disruption and frustration) associated with choosing the long-term policy solution rather than the short-term solution. Short-term consequences are more severe in 2021–2022 vignette than 2020 vignette.
Belief about voting behavior	Voters' orientation to short-term concerns versus long-term concerns	Politician's belief about voting behavior: Whether voters focus on the short term or the long term when making voting decisions.

their responses to the “short term versus long term” survey question described above. All models use ordinary least squares (OLS).<sup>6</sup>

Because we are exploring short-term and long-term considerations in three quite distinct senses—politicians' choices between short-term and long-term policy *solutions*; politicians' preferences for long-term policy solutions under varying short-run *costs*; and politicians' *beliefs* about the short-term or long-term orientations of voters—our analysis carries some risk of terminological confusion. For this reason, we have sought to discipline our vocabulary throughout the analysis to distinguish as clearly as possible among the three concepts we are exploring. We summarize each of these concepts in Table 2. We use *policy choice* to refer to our outcome variable, *short-term cost* to refer to the effect of the survey vignette wording on the outcome variable, and *beliefs* to refer to politicians' theories about voters' short-term or long-term orientations.

## 3 | RESULTS

### 3.1 | Policy choices and short-term costs

We begin with Figure 2, which summarizes the proportion of politicians who choose the long term option (plan B) in each of the annual surveys. In all surveys, a majority of politicians select the long term alternative. However, the figure also shows that politicians are, in the aggregate, responsive to the increased short-term costs described in the 2021 and 2022 survey vignettes; the percentage of politicians who make the long term policy choice drops by about 12 percentage points between 2020 and 2021, when we changed the wording of the survey vignette, and it remains at the same lower level in 2022.

The results in Figure 2 suggest that increasing the short-term costs associated with a long term policy choice does decrease support for the longer-term alternative. Table 3 confirms that this relationship is statistically robust, reporting the estimated shift in support for the long term policy choice associated with the increased costs in the second vignette across a variety of specifications: a bivariate model (model 1); a model with controls for politicians' demographic characteristics, ideological self-placement, and region (model 2); a model that isolates within-municipality

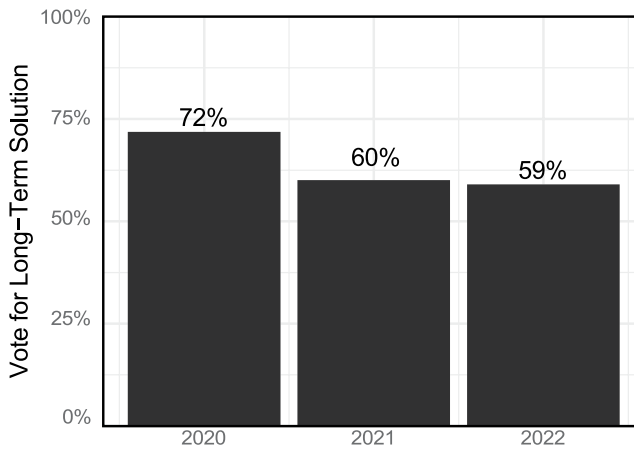


FIGURE 2 Proportion who select long-term policy option, by survey year.

TABLE 3 Effect of survey question on long-term choice.

	(1)	(2)	(3)	(4)
Increased short-term cost	-0.12*** (0.02)	-0.12*** (0.02)	-0.13*** (0.02)	-0.11*** (0.03)
Composition controls	No	Yes	No	No
Municipal fixed effects	No	No	Yes	No
Individual fixed effects	No	No	No	Yes
Observations	2456	2182	2456	2456
Adjusted $R^2$	0.01	0.02	0.08	0.31

Note: All models use OLS.

Abbreviation: OLS, ordinary least squares.

\* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ .

variation using municipal fixed effects (model 3); and a model that isolates within-respondent variation among politicians who answered both vignettes using individual fixed effects (model 4).<sup>7</sup>

Across all four models, the coefficient is very stable: the probability of choosing the long term policy declines by about 12 percentage points when we move from the vignette with lower short term costs to the vignette with higher short term costs. In short, most politicians prefer the longer-term policy solution, but this preference is sensitive to the short-run costs that are associated with that policy choice.

### 3.2 | Policy choices and theories of voter behavior

We now turn to the relationship between politicians' policy choices and their beliefs about voters. Table 4 summarizes this relationship; each model also adjusts for the short term costs in the vignette to which the politician was responding (i.e., the lower cost vignette in 2020 vs. the higher cost vignette in 2021–2022). The table reports models with socio-demographic and ideological controls (model 2), and municipality fixed effects (model 3). In the two remaining models, we subset the data into politicians who see voters as oriented to the short term (model 4) and those

TABLE 4 Effect of politicians' theory of voters on long-term policy choice.

	All data (1)	All data (2)	All data (3)	Short-term (4)	Long-term (5)
Belief about voters	0.16*** (0.05)	0.16*** (0.05)	0.15** (0.07)		
Increased short-term cost	-0.13*** (0.03)	-0.12*** (0.03)	-0.12*** (0.03)	-0.13*** (0.05)	-0.08 (0.06)
Years to next election		-0.01 (0.01)			
Age		-0.03 (0.07)			
Woman		-0.07*** (0.03)			
Education		-0.02** (0.01)			
Ideology		-0.01 (0.01)			
Constant	0.65*** (0.04)	0.87*** (0.10)	0.70*** (0.19)	0.13 (0.45)	0.75*** (0.26)
Municipal fixed effects	No	No	Yes	Yes	Yes
Observations	1473	1366	1473	708	522
Adjusted $R^2$	0.02	0.02	0.12	0.18	0.15

Note: All models use OLS.

Abbreviation: OLS, ordinary least squares.

\* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ .

who see voters as oriented to the long term (model 5); we will return to these two final models in more detail in a moment.

Across the first three models in Table 4, we can see that the relationship between politicians' theories of voting behavior and their policy choice in the bridge construction vignette is statistically significant, robust, and substantively large. Politicians who think voters focus on short term considerations are 16 percentage points less likely to select the long term policy choice than politicians who think voters focus on the long term. The magnitude of this relationship is consistently larger than the effect of increasing the short term costs associated with the long term choice, and as is clear in model 2, it is also much larger than the coefficients for gender and education, the two other statistically significant coefficients in the model.<sup>8</sup> In general, then, politicians' beliefs about voters' time horizons are strongly associated with their own time horizons when considering important but difficult policy choices.<sup>9</sup>

The results in Table 4 also provide no evidence to support the view that politicians' policy time horizons vary as an election draws nearer; the "years to next election" coefficient is substantively small and not statistically significant (a within-respondent model, comparing politicians' individual choices as they approach an election, confirms this null finding).<sup>10</sup> This null finding is notable in light of longstanding assumptions on the effect of electoral proximity on politicians' choices, and illustrates the need for considerably more research on the topic.<sup>11</sup>

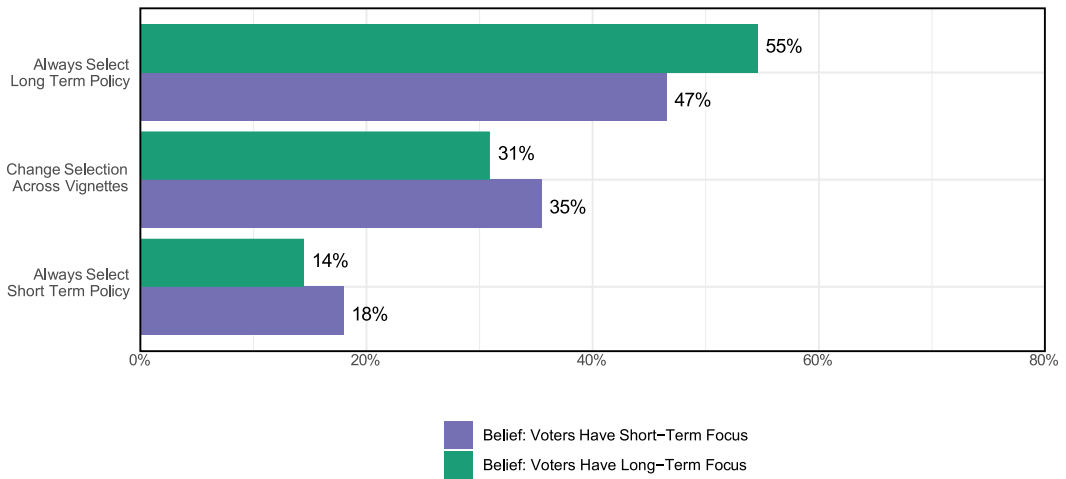


FIGURE 3 Policy question responses, by politician's theory of voters' short-term or long-term focus.

The two final models in Table 4 explore the possibility that the effect of the short-term costs in our vignette is different for politicians who see voters as short-term-focused (model 4) and politicians who see voters as long-term-focused (model 5).<sup>12</sup> Among the first set of politicians, the effect of the short term cost variable remains strong and significant; these politicians are clearly responsive to the costs involved in making the longer term policy choice. In the second group, in contrast, the magnitude of the coefficient shrinks by more than one third and is no longer statistically significant. This suggests that changes to the short term costs associated with long term policy choices may matter less to politicians who think voters are focused on the long term.<sup>13</sup>

Figure 3 provides an alternative perspective on the results in these two models. The figure focuses on politicians who answered both the 2020 bridge vignette and the 2021 or 2022 vignette and who also completed the democratic theory questions in the 2022 survey—a total of 441 politicians. We divide these politicians into those who believe voters focus on the short term (shaded purple) and those who believe voters focus on the long term (shaded green).<sup>14</sup> For each group, we summarize the proportion of politicians who fall into one of three possible choice combinations on the survey vignettes: those who choose the long term policy (plan B) in both vignettes, those who change their choice from the first vignette to the second, and those who choose the short term option in both vignettes. While Figure 2 showed that most politicians prefer the long-term policy choice, the results in Figure 3 confirm that politicians who see voters as focused on the short term are less likely to stick with the long term policy choice than politicians who see voters as focused on the long term: a difference of eight percentage points.<sup>15</sup> Not only are politicians' beliefs about voters related to the choices they make between short term and long term policy solutions, but those beliefs also shape politicians' responsiveness to the short-run costs associated with long term policy choices.

## 4 | DISCUSSION

In the past decade, comparative policy research has explored how ideas and institutions shape why some governments make long-term policy investments while others opt for short-term solutions (Jacobs, 2011). In this paper, we have used a large survey of elected politicians to extend

this analysis to the individual level, demonstrating that politicians' responses to inter-temporal policy dilemmas vary substantially, even when politicians are making policy choices within similar electoral, geographic, and institutional contexts. We have emphasized the role of politicians' theories of voters—their beliefs about how voters behave when making decisions at the ballot box—for politicians' own responses to inter-temporal dilemmas. We have found that there is no consensus among elected politicians about voters' time horizons—much like academic debates about the size and character of voters' myopia (Achen & Bartels, 2016; Ashworth, 2012; Fowler & Hall, 2018; Healy & Malhotra, 2009), politicians hold a variety of perspectives on the issue. These theoretical perspectives are strongly related to the choices that politicians make in our survey vignette: politicians who see voters as more oriented to the long-term are not only more likely to select the long-term policy option in the vignette, but they are also significantly less responsive to changes in the short-run costs associated with the long-term policy option. Our findings highlight the need for future work that explores the characteristics and sources of politicians' theories of voters' time horizons. Are these evaluations stable and formed before political careers begin, or do they change over politicians' tenure in response to events such as election outcomes and power status? And, assuming voters' own time horizons are themselves not fixed, are politicians' theoretical views responsive to changes in voters' horizons? Do politicians' theories correlate with demographic and ideological indicators in predictable ways? And to what extent are they shaped by the institutional features in which politicians operate? Finally, do these theories matter equally for politicians' reasoning across different policy issues? At this point, these questions remain unanswered.

In contrast to this substantively large and significant relationship between politicians' beliefs about voters and their choices in the policy vignette, we found no consistent effect of election proximity on politicians' choices. Politicians who face looming elections are no more likely to select the short-term option than politicians for whom the next election is far in the future. The fact that much indirect evidence on large-scale, national-level outcomes, such as budgeting decisions, suggests that politicians *are* responsive to electoral incentives, makes our results particularly interesting. While we cannot definitively adjudicate between competing reasons for the null impact of elections on inter-temporal tradeoffs in our results, we highlight several potential explanations. Given high rates of incumbent re-election among Canadian local politicians (Lucas, 2021), these findings may simply indicate that electoral proximity is unimportant in conditions of relative electoral safety, and if so, they may serve as an important caveat for existing expectations regarding the existence and drivers of myopic reasoning by politicians. Even if politicians are motivated to respond to citizens by prioritizing short-term concern around elections, they may have issue-specific beliefs, such as that voters are willing—or even prefer—to endure traffic disruption for the sake of long-term infrastructure investment. Politicians may also believe that citizens are entirely indifferent to this issue when making voting decisions. Under this interpretation, politicians could still respond differently to inter-temporal tradeoffs in other policy domains—especially those that the literature tends to associate most strongly with electoral business cycles, such as direct transfers and taxation (Franzese, 2002). Another interpretation is that we cannot identify the time span in which electoral proximity does matter for politicians' choices. We measure distance to elections in years, but politicians may only become responsive to their presence in the months or even weeks leading up to election day, requiring a more fine-grained research design. While our research design cannot adjudicate between these possible explanations, our findings demonstrate that electoral proximity is by no means a universal consideration for elected politicians, and outlines some potential boundary conditions for its presence. They problematize the link between the individual politicians who are making policy

choices and aggregate empirical patterns in research on electoral budgeting cycles and other government outcomes that are dependent on election timing. In doing so, they illustrate the need for researchers to test and refine longstanding assumptions about the role of electoral proximity in elite decision making.

Finally, our analysis contributes to the wider literature on the role of time in policy making, highlighting important mechanisms that drive politicians' policy decisions in a realistic decision-making scenario. In doing so, we also broaden this literature's traditional focus on voters and their assumed myopia (to which politicians are presumably responsive). We believe that scholars working toward finding practical solutions to inter-temporal policy dilemmas could benefit from engaging politicians themselves, and specifically, from understanding their *beliefs* about voters and how those can be changed. Relatedly, our use of a large panel study of elected politicians, using repeated measures across annual surveys, provides a "proof of concept" for the growing number of political scientists who are building panels of elected politicians in advanced democracies. Future work leveraging such panels could also track whether temporal outlooks and inter-temporal choices made by politicians change over their careers and whether they are associated with their actual electoral fortunes, above and beyond the looming prospect of elections. They can also be used to test politicians' prospective and retrospective reasoning regarding real inter-temporal choices they are required to make in office.

Our study also has several limitations that might be addressed in future research. First, while our analysis makes use of a very large sample of elected politicians, all of our respondents are local politicians in a single country. We expect that our findings are likely to generalize well to local politicians in other developed democracies, many of whom face similar inter-temporal dilemmas on policy choices related to local land use and infrastructure. Given increasing evidence of behavioral similarities between local politicians and politicians at other levels of government (Lee, 2021; Pereira, 2021; Sheffer & Loewen, 2019), and further evidence of similarities in their performance on policy responsiveness and representation (Lucas & Armstrong, 2021; Schaffner et al., 2020; Tausanovitch & Warshaw, 2014), we expect that our findings will be relevant to politicians at other levels of government. However, future work could extend our findings by undertaking similar research designs among politicians who face different institutional and electoral environments, including variation in office types and political careers, electoral competitiveness, the role of partisanship, and institutional features such as term limits. Politicians in other countries and other elected positions may also have different theories of voters than those we have found among Canadian local politicians; this, too, must be tested in a larger comparative context in future work.

Our study is also limited in its focus on a single policy domain: physical infrastructure investment. Many recent studies of elected politicians have found substantial variation in substantive representation and policy responsiveness across policy domains (Varone & Helfer, 2021; Walgrave et al., 2022), and politicians' responses to inter-temporal dilemmas are likely to vary across policy domains as well. Future research should explore how mechanisms from the inter-temporal dilemmas literature—such as electoral salience, institutional insulation, and uncertainty—help us understand individual-level variation in politicians' willingness to accept the short-run costs associated with longer-term policy investments.

Our measure of politicians' beliefs about the discount rates of voters relies on a single measurement item. A well-validated multiple-item measure of this belief will be an important next step in this research agenda. Moreover, it may well be the case that other, correlated beliefs are also driving some of our results. Accordingly, future studies of the relationship between politicians' beliefs about voters and their representational behavior should consider a wide array of

beliefs, concerning, for example, voters' information accuracy, their concern for issues of policy over identity, and their beliefs about whether voters are prospective or retrospective.

Finally, our manipulation across the 2020 and 2021/2022 surveys of the short-run costs and longer-term benefits associated with the long-term choice in our policy vignette, while useful, is limited. Future research should examine these cost-benefit tradeoffs more systematically in experimental treatments that manipulate the time horizons, short-run costs, and long-term benefits in the choice scenario, while also measuring politicians' own discount rates. Experimental studies across multiple waves of elite panel surveys, enabling both across-respondent and within-respondent estimates of these effects, would be especially valuable.

Overall, then, we see our analysis as taking several important first steps in a larger comparative research agenda that uses elite survey research to better understand the mechanisms involved in policy makers' choices when facing inter-temporal dilemmas. Valuable work in the past decade has already done much to clarify how the real world of inter-temporal policy choices exists between the extremes of total impatience and myopia on the one hand, and perfectly rational long-term policy making on the other—what matters, in this new literature, is to understand why policy choices *vary* for different policy decisions, in different countries, at different times (Jacobs, 2011, 2016). We see considerable opportunity for new research on elite political behavior to inform this literature with research that seeks to provide a comprehensive and realistic theoretical account of politicians' long-term preferences that is grounded in robust individual-level evidence on politicians' preferences and incentives.

## CONFLICT OF INTEREST STATEMENT

The authors have no conflict of interest to report with regard to this research.

## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are openly available in Harvard Dataverse at <https://doi.org/10.7910/DVN/NDFZKS>.

## ENDNOTES

- <sup>1</sup> We are grateful to an anonymous reviewer for alerting us to this connection to Key's concept of "latent opinion," which Arnold calls "potential preferences."
- <sup>2</sup> Readers will notice that both vignettes contain a randomized accountability treatment, which we will explore in a separate paper. As the treatment is randomized, it does not affect the estimates we report here; we show in the Supporting Information S1 that our results are substantively unchanged when we control for this treatment.
- <sup>3</sup> Responses rates for all three waves of the Canadian Municipal Barometer survey are well above 20%—very strong response rates for a survey of North American political elites. Each year's sample is very similar to the full population of mayors and councilors on observable characteristics including region, province, municipal population size, elected position, and gender.
- <sup>4</sup> As an additional test of the validity of this question, we summarize responses to the same question in a 2022 survey of American local officials in Supporting Information S1: Section 6, where we also show that respondents expressed no concerns or confusion about the question when provided an opportunity for feedback in an open-ended text box.
- <sup>5</sup> In most Canadian provinces, all municipalities in the province hold elections on the same date every 4 years. These dates vary across provinces, creating natural variance in electoral proximity in our sample. For example, the most recent elections in Nova Scotia took place in 2020; in Alberta and Quebec they took place in 2021; and British Columbia and Ontario held municipal elections in 2022.
- <sup>6</sup> We chose OLS for ease of interpretability, and because some argue that OLS models may perform more reliably than logit models when the model includes a large number of fixed effects (Gomila, 2021) We report a logit model in the appendix to show that the results are robust to alternative modelling choices.

- <sup>7</sup> We acknowledge that these models are not causally identified; even in the within-respondent model, our results could be confounded by an overall trend away from selecting the long-term plan. However, in Supporting Information S1: Section 3, we discuss this issue in more detail and show that the cost result is significant and negative in within-respondent models when we compare 2021–2020 and 2022–2020 responses.
- <sup>8</sup> In addition, the “theoretical position” variable is robust to municipality fixed effects, whereas both the gender and education variables are very close to zero and not statistically significant in models with municipality fixed effects.
- <sup>9</sup> One possible worry in these results could be that the result is driven by the perceived importance of the roads and bridges issue. Another possible worry is that the results are merely a reflection of politicians’ underlying policy preferences. In Supporting Information S1: Section 7, we show that the relationship is statistically significant and positive regardless of politicians’ perception of the importance of the roads and bridges issue and when controlling for their past policy choice in the 2020 and 2021 vignettes. We are grateful to an anonymous reviewer for suggesting these robustness tests.
- <sup>10</sup> The relationship remains small and is not statistically significant if we recode the election proximity variable to compare politicians in an election year to those who are not in an election year. We include this model, along with a full suite of additional models, in Supporting Information S1: Section 5.
- <sup>11</sup> We provide additional analysis of this relationship in the Supporting Information S1, where we find a small but statistically significant relationship between proximity and bridge vote in a bivariate model (2% point decrease in the probability of choosing the long-term option when the election is 1 year closer), but this relationship disappears completely in models with socio-demographic controls and within-respondent models.
- <sup>12</sup> Model 4 is restricted to politicians who chose values between zero and four on the question about voters’ short term and long term orientations. Model 5 is restricted to politicians who chose values between six and 10 on the same scale.
- <sup>13</sup> Given the small sample sizes involved in models four and five, the difference between the two coefficients is not statistically significant ( $p = 0.23$ ). Nevertheless the model 4 coefficient is statistically discernible from zero, while the model 5 coefficient is not.
- <sup>14</sup> Those who select responses from 0 to 4 are in the short term category (217 respondents), and those who select responses from 6 to 10 are in the long term category (152 respondents). For the purposes of the figure we exclude respondents who select 5, the middle position (72 respondents).
- <sup>15</sup> This difference is statistically significant. In a multinomial logit model of the three possible choice combinations, we find that politicians’ who believe voters are long-term-oriented are significantly more likely than politicians who believe voters are short-term-oriented to select the long term policy choice across both vignettes. This model is available in the Supporting Information S1.

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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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