Voters’ Preference for Candidates’ Attributes in Chile: Mediation and Interaction effects

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Version July, 2018

Abstract

Electoral accountability is a central condition for achieving representative democracy, and for the normative superior programmatic accountability, voters should hold legislators accountable for their legislative behavior. Several conditions are required to obtain such accountability, and have been studied in the literature. This paper builds from such research, and explores through an experimental survey if a key precondition holds: whether voters use the information on candidate’s legislative behavior in their choice. In particular, through a conjoint analysis, I estimate the effects of past legislative effort, presence in district office, party and gender on vote choice. Since both average treatment effect and heterogeneous effects are of substantive interests, this paper also explores conditional average marginal effects as well as causal interaction effects. Of particular interest is whether respondent’s beliefs on the influence of individual legislators in Congress mediate their responses. Based on data from an online experimental survey that conducted during June, 2018, with 1,609 respondents.

*I thank Andrés Cruz for his excelente research assistance. A first version of this research project was presented and discussed a Egap Learning Days 2016 in Chile, I thank comments and suggestions.
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respondents, results show that respondents value both legislative effort and district service, do not seem to consider them as substitute or complements in their candidate valuation. Party does have an impact on probability of selection, as expected, only among partisans, and the effect is greater than the other two attributes. The evidence is suggestive of the mediating effect of perceived influence for legislative effort, but further research is needed.

1 Introduction

Elections are the central institution of representative democracy (Manin 1997), and electoral accountability a necessary condition for ensuring representation (Ferejohn 1986, Przeworski, Stokes, and Manin 1999, Besley 2007). Indeed, electoral accountability plays a central role irrespective of the conceptualization of representation, either as standing for or acting for (Pitkin 1967), and irrespective of whether selection or incentives are the key mechanisms ensuring responsiveness 1. Besley’s definition of de jure accountability involves two elements: a) the understanding that the agent must act on behalf of the principal, and b) the principal has the power to reward or sanction the agent. Thus, in order for legislators to take into account voters’ wishes in their decision making, voters should evaluate legislators based on those actions. This implies that for programmatic representation, voters must hold legislators accountable on policy grounds. Of course, in order to achieve real accountability (Besley 2007) these are necessary but not sufficient conditions, as voters need also have the capacity to discern between representative and unrepresentative officeholders2.

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1Political agency models address delegation from principals (in this case voters) to agents (elected representatives), and hence provide insights into the relation between office holders and voters (Ashworth 2012, Besley 2007, Carey 2009, Fearon 1999

2Given the centrality of this condition, a vibrant research agenda has developed around the role of information and its mechanisms. See Pande 2011 for a review of the literature, as well as the discussion and results from Egap Metaketa I: Information and Accountability
In this paper, I explore if the conditions for programmatic accountability exist, that is, whether voters do in fact use policy attributes of candidates to the Lower House, in particular, party membership. I also explore voters’ preferences over constituency work and legislative effort, both actions legislators engage in favor of their districts. A related question refers to the relation between constituency work and legislative effort: do voters consider them in isolation, or do these attributes, specially, high levels, an interaction effect? Do they complement each other, or are they substitute? I focus on Chile, a middle income country, once a poster child of democratic transition (refs) but now, suffering from what many scholars claim is a crisis of representation (Siavelis 2016, Luna 2016). Recent work in Chile shows that for many voters, parties do not play an important role in their decision making, and indeed, candidates strategically downplay their party in their electoral campaigns (Giannini et al. 2011), and parties segmented electoral strategies, relying on non-programmatic linkages with lower income voters (Luna 2014). Despite these trends, party labels remain significant for voters. For example, as much as three quarters of voters are able to correctly place main parties in the ideological space (Calvo and Murillo 2013), and results from this research support this.

Political agency models derive that voters reward or punish legislators for their actions in Congress since these actions map into their welfare. Thus, a central assumption is that voters do link legislators actions with outcomes they value. This paper explores this assumption by evaluating if voters’ perceptions of legislators influence exerts a mediating effect on the relative valuation of legislators actions and attributes. A second mediating factor that I will explore in future work is respondent’s income level. Research on clientelism questions the preconditions for programmatic accountability as it has found a consistent association with socioeconomic status and relations based on discretionary and contingent distribution of private goods (see works on Kitschelt and Wilkinson 2007; Hicken 2011 for a review). Indeed, it is argued that low income voters value relatively more private goods than programmatic appeals. Weitz-Shapiro 2012 finds that valuations of clientelism vary according to their personal income: middle income voters punish clientelism...
Through an experimental survey, I estimate the relative preferences (or valuations) of different legislators’ attributes and actions. Conjoint analysis has been widely used in marketing research (P. Green and Srinivasan 1990, P.E. Green, Krieger, and Wind 2001, Raghavaraao, Wiley, and Chitturi. 2011), and has been increasingly incorporated in social science research (Hainmueller, Hopkins, and Yamamoto 2014; Hainmueller, Hopkins, 2014; Egami and Imai 2018 ) as they enable to obtain estimates of the marginal effect of levels of an attribute on candidate probability of selection or rating. Furthermore, causal interaction effect are also recovered from the data. Based on previous research, I focus on four attributes: past legislative effort, district work, party and gender. In particular, in addition to estimating marginal effects, this paper explores heterogeneous effect by perception of the influence of individual legislators.

Results suggest that respondents value both legislative effort and district service, and do not seem to consider them as substitute or complements in their candidate valuation. Against expectation, female candidates have a slightly higher probability of being selected, being more evident among non partisan voters. Party does have an impact on probability of selection, as expected, only among partisans. And the estimated conditional AMCE is greater than effort and presence in district. And although there is some evidence of a mediating effect of perceived influence, further research is needed.

2 Theoretical framework and context

Following Eulau and Karps (1977), it is possible to distinguish four spheres of representation: programmatic, constituency service, allocative, and symbolic. Based on this classification, Griffin and Flavin 2011 analyze how different socioeconomic and ethnic groups prioritized different aspect of representation based whereas low income voters are bound by such types of linkages.
on respondents stated priorities over three aspects: policy, allocation and constituency service. Lapinski et al. 2016 also evaluate what spheres do voters value based on surveys questions that required voters to grade how much those factors mattered to their vote. Based on stated preferences, these studies concluded that issue representation is still relevant, specially along more educated voters.

This research builds from this previous work, but assesses voters’ preferences over different dimensions through a revealed preferences approach using a conjoint survey experiment. There are several advantages of revealed versus stated preferences approaches. (refs and discussion). The included attributes in this study reflect two of the four dimensions discussed above: policy and constituency service. Legislators in Chile do not have legal authority to initiate or increase expenses, thus allocative dimension is not included. Indeed, all budgetary matters are of the President’s exclusive initiative, and legislators are only able to propose amendments in order to reduce expenditures, never to increase them (Soto Velasco 2016).4. Since two attributes reflect behaviors of incumbents, the candidates are explicitly presented as running for reelection in their districts.

In addition to understanding the preferences over such attributes, this research also seeks to understand whether preferences are mediated by perceptions on the influence of legislators on several outcomes. Following political agency model that derive that voters preferences over candidates’ attributes from how voter’s map them into their own welfare, we should expect that voters’ value such attributes in as much that they expect them to have an impact on their welfare. This paper explores this assumption by evaluating if voters’ perceptions of legislators influence on different dimensions and testing if these perceptions

4Legislators may also try to secure funds through other mechanisms from the Executive, such as PMU. ...
exert a conditional effect on the relative valuation of legislators actions and attributes. In particular, over aspects related to their policy dimensions, such as the laws that are approved in Congress; and those related to constituency service, such as the solving community or personal problems.

**Candidate’s attributes**

**Policy dimension: party and legislative behavior**

Political science scholars have long considered parties as essential for the functioning of representative democracy. Parties aggregate and articulate interests, and provide the linkage between citizens and governments, thus enabling citizens to hold government accountable (e.g. Mainwaring and Scully, 1995; Stokes, 1999; and Kitschelt et al, 2010, among others). Furthermore, and central do this research, parties work as a heuristic device for voters (Popper, 1994), who rely on them as informational shortcuts for determining candidates policy positions.

Therefore, the policy dimension is presented in the profile as the candidate’s party membership. The next paragraphs briefly reviews the Chilean party system and the presents the selection of parties to be included in the attribute.

Since the return of democracy and until very recently, two major coalitions have dominated the political landscape. These coalitions emerged from the transition and in addition to the economic cleavage, mapped into the authoritarian cleavage. Although the latter has waned over time (refs). The center-left coalition held the Presidency continuously since the first democratic election until 2010. This coalition was historically composed of four parties: the Socialist Party (Partido Socialista or PS), Christian Democratic Part (Partido Demócrata Cristiano or PDC), and Party for Democracy (Partido Por la Democracia or PPD), and the smaller Radical Social-Democratic Party (Partido Radical Social Demócrata or PRSD). After their defeat, party leaders formed
a new coalition formally incorporating the Communist party - plus other small parties under the name of Nueva Mayoría. Although it was able to regain the Presidency, this new center-left coalition was short-lived, and dissolved after their electoral failure in 2018.

On the other hand, the center-right coalition was originally composed by two main parties: Renovación Nacional (RN, National Renewal) and Unión Demócrata Independiente (UDI, Independent Democratic Union). In 2009, it achieved the Presidency, but was not able to secure the Presidency for a consecutive period. Following this defeat, a new coalition emerged which included two new parties, Evópoli and PRI (Partido Regionalista Independiente). Under this new coalition, the center-right won the Presidency for the 2018-2022 term.

In addition to these traditional, and up until recently, hegemonic actors, new political forces have began to gain relevance. Most notably, Frente Amplio a new left leaning coalition. The coalition’s presidential candidate obtained a very close third place in the presidential first round election, and their legislative candidates were able to secure 13% of the Lower House seats.

The two main coalitions and the parties which compose them are ideologically identifiable, and clearly recognized as such among the voters (Kitschelt, Hawkins, et al. 2010) For example, Calvo and Murillo 2013 find that almost three quarters of voters are able to correctly place main parties in the ideological space. Indeed, among the respondents of this surveys, only 5% of less was not able or willing to locate the parties in the left-right scale, and less than 15% in the case of the two newest parties. And among those that were able to locate them, less than 20% place them on the opposite side of their spectrum, and in most cases, less than 10%.  

That is, leftist parties were rarely placed on the right side of the scale, and rightist parties were rarely placed on the left side of the scale. Traditionally centrists parties, such as the PDC were located within +/2 of the center by 70% of the voters, and given the actual internal discrepancies within the parties, the spread is not unexpected.
The party attribute had 10 levels and included all main parties from the two traditional coalitions, plus the most known party from the new coalition. In addition, and to evaluate whether the respondents evaluate differently a left/right leaning party candidate than a left/right leaning independent candidate, two additional levels were added: independent left and independent right. Preferences over parties are determined by respondent’s own ideological leanings. Therefore, the effect of party can only be understood as conditional.

In addition to party, profiles also include candidate’s legislative effort. Legislative effort captures the policy dimension of representation, as well as a key component of the legislators work. But the design permits to evaluate whether respondents use it as valence issue: that is, if irrespective of candidate’s party, more legislative effort exerted is seen as better than less. Based on research on the impact of information provision (refs), the descriptors are provided in comparative terms: whether the candidate exerted more effort in his district than the majority of Lower House legislators, less effort or similar. Therefore, the attribute has three levels.

**Presence in district office**

American politics scholars analyze constituency service as another good provided by electorally driven legislators, devoid of any normative implications, and usually distinct from pork-barrel allocations. Constituency service is mostly considered as a good in itself, with different types of voters having different relative preferences for it (e.g. Dixit and Londregan, 1996; Herron and Shotts, 2006) although in some analyses, it is assumed that voters use it as a signal of the competence of legislators (Ashworth and Bueno de Mesquita 2006).

The comparative literature has mostly ignored constituency service as a source of democratic responsiveness and has centered on policy responsiveness. When analyzing the provision of particularized benefits or allocation of club
goods, the emphasis has been on the clientelistic nature of such types of linkages (Kitschelt, 2000; Kitschelt and Wilkinson, 2007) which is normatively inferior to policy representation. As many of the activities identified as constituency service can also correspond to clientelism, the distinction between both does not depend on the type of goods distributed, but is procedural. The key difference lies in the individualized and contingent nature of the distribution of the goods in exchange for political support under clientelism (Kitschelt, 2000; Hicken, 2011; Weitz-Shapiro, 2012). Contingent exchange on political support implies some essential conditions: first, voters are uncertain about the secrecy of their vote choice; and second, voters expect continued interaction (Stokes, 2005, 2009). As Weitz-Shapiro argues whereas constituency service seeks to gain votes through persuasion, clientelism involves the threat of retaliation.

In this paper, I begin to address these questions by estimating voters’ preference for provision of constituency service, proxied by presence in the district office. Although this descriptor does not specify the reasons or services provided, it taps at a necessary condition: presence. Based on research on the impact of information provision (refs), the descriptors are provided in comparative terms: whether the candidate was present in his district office less than the majority of legislators, more or similar. Therefore, the attribute has three levels.

**Gender**

There is a rich literature on the effect of gender stereotyping on the electoral success of women (Anderson, Lewis, and Baird 2011, Dolan 2014, Dolan and Lynch 2016, Bauer 2015), as well of implicit biases affecting women’s outcome on several areas (Eagly and Karau 2002, Goldin and Rouse 2000, Uhlmann and Cohen 2005, Carruthers 2018). Gender was perhaps particularly salient in the election since a new electoral reform introduced gender quotas and the recent election (held in November 2017) was the first under this new requirement. The
quota required that each party list included at most 60% of candidates from the same gender. Therefore, the profile included the candidate’s gender.

### Conditioning factors

Beliefs regarding legislator’s influence are expected to mediate respondents’ preference over candidate’s attributes. For example, for those who do not think that their elected legislators has any influence in the laws that are approved in Congress, the policy characteristics of the legislators would be less important than for those who do think he has a lot influence. Likewise, for those who believe that a legislator has no influence in solving community problems, presence in district office would be less important than for those who do think he has a lot of influence.

As a first approximation to understand this mechanism, I evaluate whether reported beliefs on legislators’ influence mediate preferences over attributes. Thus, this paper does not make a causal claim regarding the relation, and future work will include an additional experimental treatments to study legislators’ influence.

### 3 Methodology

This paper follows previous work on conjoint analysis based on the potential outcomes framework of causal inference (Rubin, DB 1974). In particular, the quantities and estimation strategies used are those proposed by Hainmueller, Hopkins, and Yamamoto 2014, which are based in the statistical solution to the fundamental problem of causal inference (Holland 1986).
3.1 Estimation strategy

Following the potential outcomes framework, quantities of interests are defined as the difference in the expectation of potential outcomes under different profiles. Under the following assumptions, these correspond to conditional expectations of the observed outcomes, and difference-in-means estimators provide unbiased non-parametric estimates. Furthermore, as Hainmueller, Hopkins, and Yamamoto 2014 show, these estimators may also be obtained from a simple regression of an intercept and set of dummy variables for \( L - 1 \) levels of each attribute. In order to take into account dependencies across profiles from the same respondents, standard errors are corrected for within-respondent clustering \(^7\).

The first assumption is that of stability and no carry over effects (Rubin 2005). This assumption allows to simplify the analysis since it implies that the only relevant information for the decision between the profiles in each choice task is the attributes of the profiles presented. Related, there are no profile order effects nor attribute order effects\(^8\). Two central assumptions that are met by the design of the experiment are randomized treatment assignment and independent treatment assignment.

Causal quantities of interest

AMCE or Average Marginal Component Effect

As proposed by Hainmueller, Hopkins, and Yamamoto 2014 this quantity summarizes the the overall effect of one attribute across all other attributes. Specifically, AMCE represents the marginal effect of attribute \( j \) averaged over

\(^7\)The clustering correction used in this paper is based on the formula presented in Hainmueller, Hopkins, and Yamamoto 2014.

\(^8\)Hainmueller, Hopkins, and Yamamoto 2014 discuss that it is possible to evaluate the first assumption by testing if the results considering only the first choice task are different from those obtaining from later tasks. In the setting of the paper, it would be possible to compare the results obtained when the analysis is restricted to the first choice task with those obtained when looking only at the fourth choice task, for example. The other two are also possible to evaluate. For the attribute order effect it is possible to evaluate by subsetting according to the order of the attribute is presented and test if the estimated effects vary.
the joint distribution of the other attributes. Following the statistical solution
to this problem, estimation is done through a linear probability model, in which
the outcome variable is the observed outcome of either choosing (value 1) or
not (value 0) that specific profile and a set of dummy variables per levels of the
attribute is included. It is important to note that the estimation presented rely
on the joint distribution of treatment assignments.

In particular, the following model is estimated by OLS, with standard errors
corrected for within-respondent clustering $^9$.

$$Choice_{ijk} = \beta_0 + \sum_{l=1}^{L-1} \beta_l D^l_{ijk} + \varepsilon_{ijk}$$

where $i \in (1, ..., N)$ corresponds to respondents, $j \in (1, ..., J)$ corresponds
to number of the competing profiles presented to the respondent - in this case,
$J = 2$, and $k \in (1, ..., K)$ corresponds to the number of the choice task, in this
case $K = 4$; $l \in (1, ..., L)$ corresponds to the levels of the attribute, and where
level $L$ is the base category; and $D^l$ corresponds to the dummy variable for
level $l = l$. It is also possible to estimate simultaneously all attributes, by adding
the corresponding dummy variables.

The estimated coefficients of each dummy are the estimated AMCEs for
that level with respect to the base level.

**CAMCE** or Conditional Average Marginal Component Effect:

In addition to the AMCE, I also explore the presence of heterogeneous
treatment effect by respondent’s characteristics. A first approximation following
Hainmueller, Hopkins, and Yamamoto 2014 is to estimate Conditional Average
Marginal Effects or CAME by estimating in the AMCE in the subgroup of
respondents with characteristic $X_i$.

$^9$The clustering correction used in this paper is based on the formula presented in Hain-
mueller, Hopkins, and Yamamoto 2014
AMIE or Average Marginal Interaction Effect:

A final quantity of interest is the Average Marginal Interaction Effect or AMIE proposed by Egami and Imai 2018. This causal interaction is defined as the impact of the specific combination of two or more attributes beyond the average marginal effect of each and the interactions between those attributes.

In particular, expressed as difference-in-means estimators, the AMIE of two attributes is defined as:

$$\hat{AMIE}_{jj'}(l, m; 0; 0) = \hat{ACE}_{jj'}(l, m; 0; 0) - \hat{AMCE}_j(l; 0) - \hat{AMCE}_{j'}(m; 0)$$

In this paper, AMIE’s are non parametrically estimated using ANOVA with weighted zero-sum constraints as proposed by Egami and Imai 2018 and implemented through their R package FindIt.

4 Data

The data corresponds to the answers to an online survey hosted by Qualtrics. Participants were recruited through a Facebook ad $^{10}$ that advertised the survey and motivated to complete it with participation in a draw for several prizes. $^{11}$ Given the recruitment strategy, the sample does not constitute a random sample from the population of interest. But research has shown that these recruitment strategy and subsequent non random sample does not invalidate results (Hainmueller, Hangartner, and Yamamoto 2015; Samuels and Zucco 2013). A total of 1,609 people completed the survey between June, 15th until June 26th, 2018 and the median time for completion was 16 minutes. As Table 1 shows, respondents from the survey are younger than the population, specifically

$^{10}$Four different ads were evaluated before deciding on the final one, which obtain responses from all demographic groups

$^{11}$Protocol 180308001 approved by Ethics Committee of P. Universidad Catolica de Chile Ethics Committee.
from the younger age group (18-24 years), which is not surprising given the recruitment strategy.

Table 1: Distribution: Survey vs Population

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Survey</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24 years</td>
<td>35%</td>
<td>14%</td>
</tr>
<tr>
<td>25-34 years</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>35-44 years</td>
<td>19%</td>
<td>18%</td>
</tr>
<tr>
<td>45 - 54 years</td>
<td>13%</td>
<td>18%</td>
</tr>
<tr>
<td>55 years or older</td>
<td>11%</td>
<td>29%</td>
</tr>
<tr>
<td>Female</td>
<td>47%</td>
<td>51%</td>
</tr>
</tbody>
</table>

Source: INE (www.ine.cl)

4.1 Survey design: conjoint experiment

Before the rounds of profiles, respondents were presented with an introductory page which explained the exercise. It explained to the respondent that she will be presented with two candidates running for reelection in their districts, and will be asked to choose between both. It also presented the four attributes of the candidates, and the number of scenarios. The next screen showed two pairs of candidates and their characteristics. Respondents are required to choose one of the two candidates; and second, evaluate each candidate on a scale from 1 to 7, where 1 indicates that the respondent will never vote for that candidate and 7 that the respondent will always vote for the candidate. For this research, I will restrict the analysis to the choice between both.

Table 2 shows the attributes and their levels. The levels of each attribute were independently drawn, and each level within attribute had the same probability of selection. Hence by design both the assumptions of randomized treatment assignment and independent treatment assignment are met.
Table 2: Attributes and levels

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presence in district office</td>
<td>1. More present than the majority of legislators</td>
</tr>
<tr>
<td></td>
<td>2. As present than the majority of legislators</td>
</tr>
<tr>
<td></td>
<td>3. Less present than the majority of legislators</td>
</tr>
<tr>
<td>Effort studying and</td>
<td>1. More effort than the majority of legislators</td>
</tr>
<tr>
<td>proposing changes to laws</td>
<td>2. Similar effort as the majority of legislators</td>
</tr>
<tr>
<td></td>
<td>3. Less effort than the majority of legislators</td>
</tr>
<tr>
<td>Party</td>
<td>1. Left leaning independent</td>
</tr>
<tr>
<td></td>
<td>2. Right leaning independent</td>
</tr>
<tr>
<td></td>
<td>3. Socialist Party</td>
</tr>
<tr>
<td></td>
<td>4. Christian Democratic Party</td>
</tr>
<tr>
<td></td>
<td>5. Communist Party</td>
</tr>
<tr>
<td></td>
<td>6. Evopoli</td>
</tr>
<tr>
<td></td>
<td>7. Democratic Revolution Party</td>
</tr>
<tr>
<td></td>
<td>8. National Renewal</td>
</tr>
<tr>
<td></td>
<td>9. Party for Democracy</td>
</tr>
<tr>
<td></td>
<td>10. Democratic Independent Union</td>
</tr>
<tr>
<td>Gender</td>
<td>1. Man</td>
</tr>
<tr>
<td></td>
<td>2. Woman</td>
</tr>
</tbody>
</table>
5 Results

The first results are the estimated AMCE on the whole sample of respondents. Figure 1 shows the point estimates and the 95% confidence interval, with clustered standard errors by respondent. Against the expectation, female candidates are slightly preferred over male candidates, with $\hat{AMCE}_{gender}(f;m) = 0.03$. Presence in district office has also a positive impact, $\hat{AMCE}_{presence}(more;less) = 0.14$, and $\hat{AMCE}_{presence}(similar;less) = 0.08$, all statistically significant at 0.001. Legislative effort has also a positive impact $\hat{AMCE}_{legeffort}(more;less) = 0.18$ and $\hat{AMCE}_{legeffort}(similar;less) = 0.12$. The AMCE of legislative effort across all respondent is higher than of district presence, a difference that is statistically significant at 0.001.

Figure 1: AMCE
Regarding the effect of party on the (linear) probability of selecting a candidate, it is important to take into account that valuation of parties are relative to respondents’ own partisan preferences. Therefore, party AMCE are estimated conditional on respondents declared partisan affiliation. In particular, and to facilitate interpretation, respondents are categorized according to the coalition to which their self-identified party belongs. In addition, there is a group of non-partisan respondents: declared that they did not feel close to any party. Figure 2 presents the estimated Conditional AMCE’s for each subgroup.

As Figure 2, candidate’s party has a substantive effect conditional on partisan identification. Among non partisans, candidate’s party does not have a systematic impact on probability of selection. But they still value effort and district work. Interestingly, the point estimate of effect of presence in district office is slightly larger among non partisan than partisans, although the difference is not statistically significant at conventional levels and hence the evidence does not support the idea that they replace partisan cues. It is within this groups of non partisan that gender has the relative greater impact, and positive for females. Finally, it is interesting to note that the effect of party on voters associated with the new coalition are as strong or in some case even stronger than those from traditional parties.
Figure 2: AMCE by party identification of respondents

(a) Center right coalition (N=433)
(b) Center left coalition (N=325)
(c) New left coalition (N=269)
(d) Non partisans (N=447)
Does the perceived influence of legislators mediate the valuation of the related candidate’ attribute? The following Figure 3 presents the AMCE of gender, presence in district office and legislative effort for sub-groups according to the perceived influence. That each area is dividing the population between those with a score between 4 and 5 in a 5 point scale where 5 is a lot of influence and 1 is no influence; and those with a score of 1 and 2, thus it excludes the middle group. Subfigure 3a shows the AMCE for those that consider that a legislator has a high level of influence on the laws that are approved in Congress; whereas a Subfigure 3d presents the results for the sub-group who consider that a legislator has little influence. Unexpectedly, the same pattern is evident with respect to presence in district office. Given that the subgroup of low influence on law approval includes respondents that perceive high and low influence for the influence of a legislator in solving community problems, and that it is disproportionately composed by those who perceive a low influence (58% low vs 23% high), further refinements are needed to disentangle both, and future work will incorporate some experimental treatment to tap into the mediating effect. Nevertheless, results are indicative of potential mediating effect.
Figure 3: AMCE by perception of influence

(a) High influence over law approval (N=1008)
(b) High influence over community problems (N=777)
(c) High influence over personal problems (N=330)
(d) Low influence over law approval (N=180)
(e) Low influence over community problems (N=911)
(f) Low influence over personal problems (N=330)
Finally, I explore whether there is an interaction effect between legislative effort and presence in district. Do respondents consider them both as an indicator of interest in the constituency and diligence, and thus, those who perform above average among both receive an additional boost beyond what each of the attributes contributes? Table presents the results for the 2-order AMIE of legislative effort and presence in district office. As can be seen in Table 3, none of the estimate AMIE’s is substantively nor statistically significant. Hence, there is not evidence of an interaction effect: these attributes may not be considered are complement or substitute in the valuation function of respondents.

Table 3: AMIE: Presence in district office and legislative effort

<table>
<thead>
<tr>
<th>Presence in district</th>
<th>Legislative effort</th>
<th>AMIE</th>
<th>Std. Err.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less</td>
<td>Less</td>
<td>0.0035</td>
<td>0.0100</td>
</tr>
<tr>
<td>Less</td>
<td>Similar</td>
<td>0.0177</td>
<td>0.010</td>
</tr>
<tr>
<td>Less</td>
<td>More</td>
<td>-0.0057</td>
<td>0.0147</td>
</tr>
<tr>
<td>Similar</td>
<td>Less</td>
<td>-0.0114</td>
<td>0.0102</td>
</tr>
<tr>
<td>Similar</td>
<td>Similar</td>
<td>0.0057</td>
<td>0.0103</td>
</tr>
<tr>
<td>Similar</td>
<td>More</td>
<td>0.0211</td>
<td>0.0147</td>
</tr>
<tr>
<td>More</td>
<td>Less</td>
<td>0.0234</td>
<td>0.0150</td>
</tr>
<tr>
<td>More</td>
<td>Similar</td>
<td>-0.0080</td>
<td>0.0146</td>
</tr>
<tr>
<td>More</td>
<td>More</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

6 Conclusions and further research

The results so far show that partisan Chilean voters do in fact respond to party cues, and that such effects are larger than the effect of legislative effort and district work. Among non-partisan, party cues do not have a systematic effect, and voters rely on the other attributes, but interestingly, the AMCE of these attributes do not experience a substantive increase. Non partisan voters do not value independents more than partisan, from either side of the political spectrum.
Regarding the mediating role of perceived influence, there is some suggestive evidence, but more research is needed to disentangle the relation, as there is some correlation between perceived influences on different aspects of legislators actions among respondents.

Gender, contrary to expectations and the literature on gender stereotypes, if there is any effect it is positive. I plan to assess the mediating effect of gender stereotypes - based on additional questions to this survey to explore this.

Finally, I will explore causal interaction between candidate’s party and preferences over legislative effort and district work in order to assess if legislative effort is evaluated as an independent attribute by voters or contingent on the candidate-respondent party match. Results provide some evidence that effort is evaluated independently from district work, and candidates that exert more effort and are more present in the district do not receive an additional increase in the probability of selection. I will explore whether this holds when measurement is done in ratings. Related to the above, all the analysis were based on the forced choice option, but respondents were also required to rank candidates. In some results by Hainmueller, Hopkins, and Yamamoto 2014 differences arose, and I will explore whether this holds in this sample. Furthermore, as ratings free the respondents from force choice ties between profiles are detected.
References


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