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THE POWER OF POLITICAL DISCUSSION: UNCOVERING THE INFLUENCE OF NETWORKS ON VOTE CHOICE AND ITS MECHANISMS. EVIDENCE FROM COLOMBIA

El poder de la discusión política: revelando la influencia de las redes en el voto y sus mecanismos. Evidencia de Colombia

O poder do debate político: Descobrindo a influência das redes na votação e seus mecanismos. Evidências da Colômbia

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Abstract
This paper explores the influence of political discussion networks on vote choice. We ask two questions: What type of discussion networks influence vote choice? And, what are the mechanisms through which discussion networks influence voting behavior? We argue that discussing politics with others affects electoral decisions when citizens are surrounded by discussants whose political views are homogeneous and that this influence can operate through two mechanisms: information and social pressure. Using data from a two-wave panel study conducted in Bogotá before and after the 2011 local elections, we find evidence of the effects of social networks on voter behavior. The homogeneity of discussion networks is correlated with a change in vote choice, and this link appears to be driven both by information and social pressure.

Palabras clave:
redes de discusión; decisión electoral; información; presión social; Colombia

Resumen
Este trabajo explora la influencia de las redes de discusión política en las decisiones electorales. Las siguientes preguntas guían nuestra investigación: ¿qué tipo de redes de discusión afectan las decisiones electorales?, y ¿a través de qué mecanismos se da esta influencia? Argumentamos que discutir de política con otros afecta las decisiones de voto cuando las personas están rodeadas por interlocutores cuyas visiones políticas son homogéneas. Esta influencia puede darse a través de dos mecanismos, uno de información, y otro de presión social. Usando datos de panel de un estudio llevado a cabo en Bogotá antes y después de las elecciones locales de 2011 encontramos evidencia sobre los efectos electorales de las redes de discusión. La homogeneidad de las redes de discusión está correlacionada con cambios en la decisión de voto y ese vínculo parece darse tanto a través de la provisión de información como vía la presión social.

Palavras-chave:
redes de discussão; decisões eleitorais; informação; pressão social; Colômbia

Resumo
Este artigo explora a influência das redes de discussão política nas decisões eleitorais. As seguintes questões orientam a nossa investigação: que tipo de redes de discussão afetam as decisões eleitorais e através de que mecanismos ocorre essa influência? Defendemos que discutir política com outros afeta as decisões de voto quando as pessoas estão rodeadas de interlocutores cujas opiniões políticas são homogéneas. Esta influência pode ocorrer através de dois mecanismos, um informativo e outro de pressão social. Utilizando dados de painel de um estudo realizado em Bogotá antes e depois das eleições locais de 2011, encontramos provas dos efeitos eleitorais das redes de discussão. A homogeneidade das redes de discussão está correlacionada com alterações nas decisões de voto, e esta ligação parece ocorrer tanto através do fornecimento de informação como através de pressão social.

INTRODUCTION*

Political choices rarely occur in a social vacuum. "Voting is essentially a group experience. People who work or live or play together are likely to vote for the same candidates" (Lazarsfeld *et al.*, 1948: 131). Despite the centrality of social influences on voting, traditional theories of electoral behavior have emphasized the explanatory power of variables such as personal traits, partisanship, or evaluations of the economy (Bartels, 2000; Lewis-Beck & Stegmaier, 2007). Research

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focused on the Global South has indicated that, on average, there is both partisan-ideological and economic voting in regions such as Latin America, and Africa (Carlin, Singer, and Zechmeister, 2015; Ishiyama and Fox, 2006). However, there is also evidence of tremendous variation in the influence of partisanship and evaluations of the economy on vote choice (Gélineau and Singer, 2015). For instance, while 80 % of Uruguayans who identify with a party voted for their party, this percentage is less than 40 % in Colombia (Lupu, 2015). On the other hand, the influence of citizen perceptions of the economy on voting behavior are strong in countries such as the Dominican Republic, El Salvador and Uruguay while they are quite weak in Brazil, Colombia and Ecuador (Gélineau & Singer, 2015).

The Latin American literature on the effects of social networks has reinforced the idea that individual level factors such as partisanship, social identities, and evaluations of the economy, do not fully explain electoral decisions, particularly in contexts of low partisanship (Ames, García-Sánchez & Smith, 2012; Baker, Ames & Renno, 2020), and where economic issues are superseded by other concerns, such as public safety. However, such conclusions are derived from the study of only two cases: Brazil and Mexico. Therefore, expanding the study of the electoral effects of discussion networks to other cases is much needed if we want to make claims about the social logic of voting in a region so politically diverse as Latin America. In addition, there is weak evidence on the mechanism that drive the effect of discussing politics with others on the electoral decisions of Latin-Americans. Baker, Ames and Renno (2020) suggest that in the region such mechanism is informational; unfortunately, they support their conclusion using anecdotal evidence.

Thus, using evidence from Colombia –a case never studied by scholars devoted to exploring the sociological logic of voting–, we ask the following two questions. What type of discussion networks influence voting choice? And, what are the mechanisms through which such discussion networks influence voting behavior? We argue that discussing politics with others affects electoral decisions when citizens are surrounded by discussants whose political views are homogeneous. In other words, people are more likely to vote for a given candidate when most of their discussion network favors that candidate. We are agnostic as to the mechanism through which networks may influence electoral decisions, so we explore two alternatives: information and social pressure.

To test our claims, we use a two-wave panel study conducted in Bogotá, Colombia, before and after the 2011 local election. This data allows us to test the influence of discussion networks on vote choice by modeling two outcome variables: vote decisions reported in wave two and changes in electoral choice from wave one to wave two. Our data show that people were more likely to report having voted for the winning candidate when a high percentage of the discussants they reported in the first wave had favored that candidate. We also provide evidence that discussion networks influence changes in voting preferences. More

specifically, as the percentage of discussants in a voter's network who support a particular candidate increases, so does the likelihood of the voter changing their vote from wave one to wave two, away from other candidates and towards the candidate supported by most discussants in their network. Therefore, discussion networks may persuade people to change their electoral preference during the last weeks of the electoral campaign. Finally, we find consistent evidence that the influence of political discussion networks on vote choice is driven by information. We also find that there is a social pressure mechanism operating. However, compared to the informational mechanism, the role of the social pressure is modest.

Consequently, this paper adds to the existing Latin American literature by expanding the analysis of the of social logic of voting to a novel case, and by conducting a rigorous test of the mechanisms behind the electoral effects of social networks.

Our paper proceeds as follows. The first section presents our analytical framework and expectations. The second section describes our case selection. Then, the third section presents the data and analytical strategy we employ. In the fourth section, we lay out our analysis and present results. Finally, we discuss the implications of our findings.

CONTEXTS, POLITICAL DISCUSSION NETWORKS, AND VOTE CHOICE

One of the most important contributions of the sociological approach to the analysis of electoral behavior, dating back to the seminal work of Lazarsfeld, Berelson and Gaudet (1948), is that citizens form their political attitudes and make their electoral decisions under the influence of social contexts that expose them to social and political structures, political events, and interpersonal interactions (Rosenstone & Hansen, 1993). In other words, individual characteristics such as partisanship, social identity, or evaluations of the economy cannot fully elucidate people's political actions and opinions (Huckfeldt & Sprague, 1987; Zuckerman, 2005; Sinclair, 2012; Baker, Ames & Renno, 2020).

Social contexts affect electoral behavior through various routes. First, social and political events and institutions may influence electoral behavior by structuring and limiting people's experiences and choices (Huckfeldt, 1986). Second, social networks may influence electoral behavior (Huckfeldt & Sprague, 1987) insofar as interactions with other individuals shape the context in which they make political decisions (Burt 2000). The contextual influence in this case depends primarily on the existence of interpersonal communication and contacts (Verba, Schlozman, & Brady, 1995; Campbell, 2013). In this paper we focus on the second route of contextual influence, in particular on political discussion networks.

Previous research has offered evidence that political discussion networks have different political effects. They contribute to the diffusion of political information (Kitts, 2000), motivate people's participation in social movements (Passy, 2003), and political networks also model electoral behavior (Zuckerman, 2005; Sinclair, 2012; Campbell, 2013). Concretely, discussing politics with others increases the chance of voting (Kotler-Berkowitz, 2005; Knoke, 1990; Huckfeldt Mendez & Osborn, 2004; Nir, 2011; Sinclair, 2012) and it influences electoral decisions (Beck *et al.*, 2002; Huckfeldt, Mendez, & Osborn, 2004; Kenny, 1998; Levine, 2005; Sinclair, 2012).

In Latin America, the political effects of discussion networks have been studied mainly for the cases of Brazil and Mexico. This research demonstrated that social networks contributed to the diffusion of information that allowed citizens to learn about candidates (Ames, Baker & Smith, 2016), and that helped the political coordination of voters (Arias *et al.*, 2019). In terms of electoral decisions, research focused on the case of Brazil showed that political discussion networks are a major force promoting stability and change in voting decisions (Ames, García-Sánchez & Smith, 2012). More specifically, a recent work by Baker, Ames & Renno (2020) offered evidence that the propensity to switch vote intentions during a campaign is a positive function of network disagreement. Specifically, the likelihood of changing vote preference between the early stages of the campaign and the election was higher among those surrounded by disagreeing political discussion partners.

Following prior research on the behavioral effects of political discussion networks in Latin America, we argue that discussion networks exert an influence on people's vote choices when such networks are politically homogeneous (Baker, Ames & Renno, 2020). This is when most or all political discussion partners share the same political or electoral preferences. In this type of discussion networks citizens are more likely to be exposed to a single political view, so individuals will align their electoral decisions with the dominant political preference in their discussion network. Such alignment may imply changing preferences, when there is divergence between one's (ego) preference and the preference of the discussion partners (alters) (Baker, Ames & Renno, 2020). On the other hand, there will be a reinforcing of an existing political view when there is preference convergence within the network. In contrast, people surrounded by politically heterogeneous discussants are exposed to contrasting political views or "cross-pressures" (Mutz, 2002). So, discussion networks may have no influence on vote choices given the lack of a dominant political preference with which to align.

Unlike those works that focus on modeling the impact of social networks on the change in electoral decisions, regardless of the direction of this change (Baker, Ames &Renno, 2020), the aim of this paper is to incorporate the role of discussion partners into an electoral choice model. Consequently, we formulate our argument in relation to a specific electoral decision. Thus, we claim that *when most or all of an individual's discussion partners express a preference for candidate A, or as the*

homogeneity of the discussion network increases, there is also an increase in the probability that such a person will vote for candidate A (Hypothesis 1).

What is the process through which politically homogenous networks affect electoral decisions? First, we must consider that political conversation is an easy and effective way to obtain information about politics because people believe in their peers more than other sources (Ross & Nisbett, 2011). By discussing politics with others, individuals may acquire relevant information about the political system, the competing candidates, and their proposals (Burt, 2000). Such information can be very valuable when making an electoral decision. Furthermore, political discussion networks also inform people about the political tendencies, opinions, and possible electoral decisions of their peers. Consequently, by talking politics with others, people get to know the prevailing social and political norms within the group of discussants.

Then, we explore two routes through which homogeneous networks affect electoral decisions. The first one is based on the idea that political networks are avenues of information. The second one relies on the notion that discussion networks channel social pressure (Sinclair, 2012). The informational mechanism assumes that an electoral decision is a time-consuming process that requires gathering and sorting information about the candidates and their proposals. Political discussion networks facilitate this process because people can aggregate information through conversations, as an efficient substitute for individually gathering information about the candidates and the electoral process to make an informed decision. Thus, political networks are important in reducing the informational costs associated with voting.

If this is the mechanism by which discussions networks exert their influence, then "individuals who experience higher cost of cognition should have larger social network effects" (Sinclair, 2012: 105). This is the case, for instance, of less sophisticated voters. Our hypothesis here will be that *the effect of homogeneous discussion networks on vote choice should be stronger among those individuals who have lower levels of political information* (Hypothesis 2), as they are more likely to benefit from the information that is aggregated through the network of political discussants.[1]

On the other hand, the social pressure mechanism relies on the idea that individuals are strongly motivated to conform to social norms existing in their immediate contexts (Cialdini, 2007; Ross & Nisbett, 2011). Political behaviors tend

1. Alternatively, politically informed citizens may be driven to obtain information due to factors such as their interest in politics or access to resources like time and education. As a result, these individuals may be more susceptible to the impact of political discussion networks. However, our data shows no significant relationship between political interest and sophistication, and those with lower levels of political sophistication tend to have lower levels of education. Therefore, we consider it unlikely that this is the driving force behind the relationship between political information and voting behavior.

to be very contagious within discussion networks as individuals want to maintain their social identity with their peers. For this social contagion to occur, discussants must express a political preference that turns into a political norm when most of the discussants share such point of view. However, exposure to a social norm may not be sufficient for this mechanism to materialize, as it is also necessary that some social pressure be exerted. Following Sinclair (2012), individuals are exposed to social pressure through repeated interactions with peers or intimate network ties. In other words, individuals are more susceptible to social pressure when people interact frequently with others or when such interactions occur with close peers (i.e., close friends or family members) rather than when they talk to strangers. We hypothesize that *among those who have repeated interactions or intimate ties with their political peers, the effect of a homogeneous political discussion network on their vote decisions is expected to increase* (Hypothesis 3).

Which of these two mechanisms is expected to be dominant? Evidence from the United States suggests that social pressure is the mechanism driving the political networks effect (Sinclair, 2012). However, Ames, Baker & Renno (2020) argue that the mechanism of peer influence is informational, because social pressure to conform is often implicit, so it does not necessarily involve the intentional exchange of relevant content through conversation. However, they offer only anecdotal evidence to support such a claim. Therefore, due to the large political and social differences between our case and the United States, and the lack of strong empirical evidence to support one mechanism over the other in the context of Latin America, we remail agnostic about the dominant mechanism.

CASE SELECTION

Bogotá is an interesting case in which to explore the role of discussion networks on electoral behavior for a few reasons. First, in 2011 only 26.4 % of Bogotanos identified themselves with a political party, and political identities seem to be very volatile. Furthermore, in Bogotá there seems to be a stronger influence of candidate preference on party preference than the other way around (Angulo, 2016). Second, one of the candidates with the greatest chances of winning, Gustavo Petro, ran with no partisan support.[2] Third, according to our survey, in 2011 the economy was not the main concern for people in the city. Most citizens considered public safety to

2. Prior to running for mayor of Bogotá, Gustavo Petro was a member of Congress (representative and senator) from 1991 until 2010. In the 2011 local election Petro ran on a leftist platform with no official support from *Polo Democrático*, the most prominent leftist party by that time. On the other hand, Enrique Peñalosa was running for a second term as mayor of Bogotá, as he held this position from 1998 to 2000. Peñalosa a center-right politician, ran with the support of the Green Party in 2011.

be the city's main problem, followed by basic services and the economy.[3] Fourth, unlike previous races, the 2011 election was extremely competitive as it featured several candidates with strong chances to win. It was a true toss-up and the winner, Gustavo Petro, claimed victory with just 32 % of the vote, seven percentage points more than Enrique Peñalosa, the runner-up (Resultados Finales Alcaldía, 2011). Fifth, during the last weeks of the campaign one of the four candidates with the most support in the polls (Antanas Mockus) resigned his candidacy. Therefore, the political dynamics of the election led many voters to readjust their preferences during the last part of the race. In summary, the 2011 mayoral election in Bogotá was volatile, highly competitive, and took place in a context in which partisan identities were weak and evaluations of the economy had a relatively minor influence on voter preferences. Considering these conditions, we believe that the case of Bogotá offers a likely scenario in which citizens looked to their discussion networks for guidance when deciding who to vote for. This type of electoral context is common in the region, so results from this paper may be applicable to cases, local or national, that share the political characteristics of Bogotá.

In addition, this analysis of Bogotá may offer a window into understanding the political behavior of Colombians and Latin Americans more broadly –in particular those who live in large cities. First, by sheer size Bogotá is a microcosm of the whole country. Inhabitants of the capital city comprise about 16 % of the country's total population. Second, Bogotá, similarly to other large Latin American cities such as Lima, Mexico City or São Paulo, constantly receives an influx of migrants from every corner of the country; and people of different social strata frequently relocate to the capital to seek economic opportunities and to access better public services. In sum, our case offers a valuable opportunity to explore the role of discussion networks on vote decisions in a politically and socially diverse context.

DATA AND ANALYTICAL STRATEGY

To test our hypotheses, we use data from a two-wave panel study of voters conducted during the 2011 local elections in Bogotá. In the first wave, we asked participants about their vote intention in the local election, whether they discussed politics with other people, and about the characteristics of their discussion networks. In the second wave, we gathered data on whether they participated in local elections and about their vote decisions. The first wave took place about

Given the prior political trajectories of both candidates and that they represented opposite political projects, these candidates enjoyed of a high visibility among voters.

3. Forty-six percent of respondents were concern about public safety, 20 % about basic services and 13 % about the economy.

four weeks before the election, and the second set of surveys was administered a week following the election. We were able to interview 713 individuals in the first wave and 601 in the second one; the mortality rate was therefore about 15 %.[4] Information was gathered using a self-weighted stratified probability sample, representative of adults residing in the city. All interviews were face-to-face.[5]

In order to explore the effects of discussion networks on individual decisions, we included a network generator in the first wave of the panel. We asked interviewees the number of people with whom they frequently talked about politics. We also asked them to give us the first names or initials of up to four of said discussants.[6] For each of the people in their network, we included a series of questions about the political views of their peers, the frequency of contacts with each member of the network, if discussants were friends or family members, and the level of agreement they had when discussing politics. We were thus able to measure different aspects of the individuals' discussion networks.[7] Many studies on the influence of social networks use network generators that measure conversation partners with whom people discuss important matters (Small, 2017). However, since our objective is to capture the influence of discussing politics with others on political behavior, we think a network generator of political discussion partners is preferable to a more generic one.

The network generator indicated that 60.1 % of participants reported discussing politics with others and that the average number of discussants is two. But this mean value may be misleading in the sense that the number of discussants declines considerably. While almost a quarter of respondents confirmed that they talk about politics with one other person, the percentage of people talking about politics with two people is 11.4 %, 7 % for those talking with three people and 10.1 % for those talking with four peers. We observe a deep decline between talking to just one other person and talking with more than one person, but the

4. We imputed missing data on the independent variables and only gained about 25-30 observations which did not affect the results of our estimations. Thus, we decided to keep the simpler, unimputed data.
5. See appendix for a discussion of the representativeness of the sample, descriptive statistics, and more details about the survey.
6. We asked for up to four discussants because there is evidence that political discussion networks tend not to be very large. Only 18 % of survey respondents in the US could name four political discussants (Sinclair, 2012). By gathering up to four political interlocutors we go deep enough into the discussion network to pick up discussants with weaker ties (Granovetter, 1978).
7. Although this is a common form of measuring discussion networks (Klofstad, McClurg & Rolfe, 2009), it is not free of limitations, one being its reliance on people's recollection about their discussants and their opinions. However, prior evidence indicates that approximately 80 % of all respondents were able to correctly identify the political preferences of their discussants (Fowler *et al.*, 2011), and that people tend to discuss politics with individuals with whom they have strong social ties and talk about "important matters" (family and very close friends) (Klofstad, McClurg & Rolfe, 2009; Sinclair, 2012). These are individuals available in people's memory. Therefore, there are reasons to think that there should be an important coincidence between memory recall of peer networks and the actual peer networks.

percentages remain relatively stable for the other number of discussants. In turn, 47.2 % of all participants discuss politics exclusively with family members, 42.8 % of the sample only discuss politics with friends, and the remaining 9.8 % have discussion networks composed of both relatives and friends.

A key variable to consider when attempting to measure the influence of peer effects on individuals' political attitudes and decisions is homophily, or people's tendency to associate with others who resemble them (Small, 2017). Individuals choose their social networks based on shared traits, including many common socioeconomic or demographic characteristics such as race, ethnicity, age, religion, education, occupation, and gender (McPherson, Smith-Lovin & Cook, 2001). Prior research has demonstrated that political characteristics correlate with these factors, so they are also likely to be shared among members of a network (Lazer *et al.*, 2008). However, many social ties emerge from random factors beyond personal selection, so homophily fails to characterize all of individual's social relationships (Fowler *et al.*, 2011).

The challenge of capturing the impact of political discussion networks on vote choices due to homophily is to identify the factors that drive the relationship between changes in political preferences that result from political discussions with others. In the absence of random assignment of individuals to their discussion networks, any association between discussing politics with others and vote choice could be equally explained by either the causal effect of peer influence or by the selection process that drove people to establish a relationship with their discussants (Molano & Jones, 2014).

There are various empirical strategies that can be used to capture the influence of political discussion networks on electoral decisions (Fowler *et al.*, 2011; Sinclair, 2012) without overestimating this causal relationship. First, since homophily is most likely to occur among those who share socioeconomic and demographic characteristics (McPherson, Smith-Lovin & Cook, 2001) accounting for these factors enable us to control for the selection of networks. If network variables remain significant after accounting for these shared characteristics that generate homophily, there is observational evidence of peer influence. Second, analyses should use panel data so that it is possible to model change in respondents' electoral preferences over time. If there was peer influence, over time individuals converge towards the preferences of their political discussion networks.[8]

In this paper we use the two strategies described above. Specifically, we model voting decisions and changes in electoral preferences. Both the vote and change models include sociodemographic controls that account for homophily; also, we take advantage of panel data, so the "treatment" and outcome variables

8. Sinclair (2012) suggests using randomized field experiments to test the influence of "others" on electoral decisions.

are observed at different moments in time. Finally, the change model allows us to test preference convergence due to peer influence.

For the vote models our dependent variable is a measure of whether a respondent voted for the winning candidate in the mayoral election as reported in wave two, that is, reporting to have voted for Petro.[9] In the change models, we use two dependent variables that capture whether a respondent changed her electoral preference from wave one to wave two. The dummy variable *changed to Petro* indicates whether someone who had stated in wave one the intention to vote for other candidates (or not knowing for whom to vote), then reported in wave two having voted for Petro. Likewise, *changed to Peñalosa* captures those who did vote for Peñalosa but had stated a different vote intention in wave one. We use binomial logistic models to evaluate both voting decision and change of electoral preferences. The appendix includes the survey questions used to build our dependent variables.

In both types of estimations, the main independent variables are measures of the percentage of discussants supporting either of the top two contenders in the election. One variable indicates the percentage of people in an individual's network that were going to vote for Petro (*network support for Petro*). Similarly, we use a variable that measures the percentage of people in the network supporting the candidate that finished in second place (*network support for Peñalosa*).

To account for the factors that drive the selection of personal relationships (Fowler *et al.*, 2011), our models include the following sociodemographic controls: gender, socioeconomic status (SES), age, marital status, employment status and having offspring.[10] We also include other controls that the literature on vote choice has found to have an impact on voting decisions. These variables are partisanship, closeness to leftist and closeness to rightist parties,[11] and sociotropic and pocketbook evaluations of the economy. All these variables were measured in wave one.

9. Overreport of voting for the winning candidate was of about 12 points. This distortion may increase the importance of independent variables that are related in the same direction to both overreporting and voting and decrease the importance of independent variables related in opposing directions to those two variables (Bernstein, Chadha and Motjoy, 2001). We don't think this may affect the effect of discussion networks on vote choice as there is no reason to believe that discussing politics with others is correlated to overreporting. Evidence from the US case shows that overreporting is correlated to socioeconomic factors.

10. Gender, marital status, employment status and having offspring are dichotomous variables that take the value of one for: males, married and employed people, and respondents with children. Age is a continuous variable that ranges from 18 to 89 years of age. Socioeconomic status is an index of individuals' ownership of nine consumption goods. These goods are television, refrigerator, conventional telephone, cellular telephone, automobile, washing machine, microwave, indoor running water, indoor bathroom, and personal computer. This index is measured on a 0 to 100 scale.

11. Despite that closeness to parties is not a direct measure of partisanship, we use it as a proxy of partisan identity because only 26 % of our sample identifies as members of a political party. By measuring

To evaluate the mechanisms behind the potential influence of political peers on people's vote choices our models include various interactions. We assess the informational mechanism with interactive terms between the network variables and political sophistication. If information drives the influence of peers on people's vote decisions, the network effect should be larger among the less politically informed individuals (Sinclair, 2012). In turn, the social pressure mechanism operates through repetitive interactions or intimate ties (Sinclair, 2012). Thus, if social pressure moves the influence of peers on political decisions, the network effects should be larger among those who have either frequent contact with their discussion partners or those who have a larger share of close ties in their network. We are aware that getting at social pressure is challenging as it operates through different ways that may depend on the type of information discussed in the network or its tone. However, we did not measure such characteristics as it would have made the survey too complicated. Instead, we relied on frequency of contact, which is a prerequisite for the social pressure to be exerted. We realize this may not be the best way to assess social pressure, but it is one that allows us to move in the appropriate direction.

To measure the effect of *political sophistication*, we use an index based on the correct answers given by respondents to six questions about general and specific political knowledge. For ease of interpretation, we recoded the variable so that it ranges from 0 (no correct answers) to 100 (all answers correct). In turn, *frequency of contact* measures how often respondents talked about politics with the people in their network. Our measure of frequency of contact is based on a wave one survey question that asked respondents how often they talked about politics with each reported member of their network. The answers were collected using a five-point scale that ranged from "almost daily" to "less than once a year". We recoded the variable to range from 0-100, with zero being minimum contact and 100 being maximum contact. To capture the share of close ties we use the variable *Family members* in the discussion network, which measures the percentage of discussion partners comprised by members of the respondent's family.[12] This variable was constructed using a question that asked respondents if discussants were: "spouse or permanent partner", "family member" or "friend". We coded as family members the first two options. Table 1 presents descriptive statistics.[13]

closeness or sympathy towards parties, we have a proxy of partisanship for our entire sample.

12. We assume that in the context of Latin American societies, people tend to have close ties with their families, and families are a source of social pressure. However, we are aware that people can develop very close ties with individuals outside their families.

13. The varying number of observations from one variable to another are explained by: (i) the wave in which the variable was measured. Variables measured in wave 2 have at least 15 % less observations due to attrition. And (ii) whether the variable measures an attribute of discussion networks. About 40 % of respondents did not report discussion partners.

Table 1. Descriptive Statistics

	Mean	Std. dev.	Min	Max	N
Voted for Petro	0.44	0.50	0	1	344
Network support for Petro	0.16	0.32	0	1	380
Network support for Peñalosa	0.13	0.28	0	1	380
Changed to Petro	0.16	0.37	0	1	629
Changed to Peñalosa	0.04	0.21	0	1	638
Percentage of network supporting Petro	0.16	0.32	0	1	380
Percentage of network supporting Peñalosa	0.13	0.28	0	1	380
Partisanship	0.27	0.44	0	1	710
Closeness to rightist parties	40.89	32.12	0	100	689
Closeness to leftist parties	29.86	27.71	0	100	684
Sociotropic evaluation	43.98	21.53	0	100	710
Pocketbook evaluation	56.87	18.39	0	100	710
Political sophistication	48.20	21.73	0	100	666
Frequency of contact with network	63.80	22.77	0	100	380
Percentage of family members in network	37.20	41.65	0	100	380
Age	42.91	17.54	18	89	712
Education	10.97	5.18	0	22	712
Employed (yes=1)	0.52	0.50	0	1	712
SES	62.9	19.1	0	100	713
Married (yes=1)	0.55	0.50	0	1	711
Has offspring (yes=1)	0.73	0.44	0	1	698

Source: Own elaboration.

RESULTS

Vote decision

The first column of table 2 displays a base model without interaction terms. To test the informational mechanism, models 2 and 3 include interactions between network variables (percentage of network that supports Petro and percentage of network that supports Peñalosa) and political sophistication. Models 4 to 7 include interactions between the measurements of network homogeneity and frequency of contact with political discussants, and the percentage of family members in the discussion network.

Recall that our theoretical expectation is that the percentage of discussants favoring the winner ought to be positively correlated with the decision of voting for this candidate. Results from the base model support our first hypothesis. As the percentage of the network that supports Petro increases, so does the likelihood of voting for him. Similarly, as the percentage of the network that supports Peñalosa increases, the probability of voting for Petro decreases significantly. Since the model controls for the variables that drive the selection of personal relationships, it is possible that the observed significant effects of political discussion networks on vote choice exist beyond those resulting from correlations based on selection into the network (Sinclair, 2012). Of course, such effect may be due to an unobserved characteristic (Fowler *et al.*, 2011).

The remaining models (4 to 7) include the interaction terms that test the proposed mechanisms through which discussing politics may have an influence on vote choices. To facilitate the interpretation of interactions, we estimate the average marginal effects of the homogeneity of the network at different levels of the three variables used in the different interactive terms (see figures 1, 2 and 3).

As can be seen in figure 1, we find evidence to support the informational mechanism (H2). As expected, the positive effect of the network variables is larger among less sophisticated individuals and decreases as people's sophistication increases. In other words, for those respondents who are more informed about politics, the effect of their discussion network on their vote decision is negligible, but there is an important effect for those who are less savvy about politics. The effect on the probability of voting for Petro (left panel) is positive and statistically undistinguishable from zero for sophistication levels ranging between 0 and 82 out of 100. The average marginal effect on the probability of voting for decreases about 20 points, from 0.45 when sophistication is reported at 0 to 0.24 when it is reported at 82 and above. Thus, networks are more persuasive for those individuals with lower levels of political knowledge. On the other hand, the informational mechanisms do not appear to influence *peñalosistas* as the effect of the network is not different from zero for any value of political sophistication, as the confidence interval in the right panel shows.

Table 2. Logistic models of vote choice (1/4)

	Informational mechanism			Social pressure mechanism			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Base model	Network support Petro x political sophistication	Network support Peñalosa x political sophistication	Network support Petro x frequency of contact	Network support Peñalosa x frequency of contact	Network support Petro x family members in network	Network support Peñalosa x family members in network
Percentage of network supporting Petro	1.862***	2.911	1.871***	0.599	2.006***	2.663***	1.959***
	(0.512)	(1.650)	(0.529)	(1.590)	(0.533)	(0.727)	(0.532)
Percentage of network supporting Peñalosa	-2.609*	-2.263*	-0.252	-2.679*	-3.079		-2.191
	(1.040)	(1.021)	(2.019)	(1.068)	(3.781)		(1.368)
Partisanship	-0.033	0.113	0.142	0.003	0.016	0.036	0.027
	(0.377)	(0.389)	(0.391)	(0.382)	(0.380)	(0.384)	(0.383)
Closeness to rightist parties	-0.027***	-0.027***	-0.027***	-0.028***	-0.028***	-0.030***	-0.027***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Closeness to leftist parties	0.015*	0.014*	0.014*	0.014*	0.015*	0.017**	0.015**
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Sociotropic evaluation	-0.008	-0.006	-0.006	-0.008	-0.007	-0.007	-0.008
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Pocketbook evaluation	-0.005	-0.004	-0.005	-0.005	-0.005	-0.006	-0.006
	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.011)	(0.012)
Gender (male=1)	0.312	0.486	0.454	0.294	0.297	0.370	0.301
	(0.352)	(0.372)	(0.369)	(0.354)	(0.353)	(0.352)	(0.361)

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Table 2. Logistic models of vote choice (2/4)

	Informational mechanism			Social pressure mechanism			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Base model	Network support Petro x political sophistication	Network support Peñalosa x political sophistication	Network support Petro x frequency of contact	Network support Peñalosa x frequency of contact	Network support Petro x family members in network	Network support Peñalosa x family members in network
SES	-0.002 (0.012)	-0.007 (0.013)	-0.006 (0.013)	0.000 (0.012)	-0.000 (0.012)	-0.004 (0.012)	-0.004 (0.012)
Age	0.000 (0.014)	0.001 (0.014)	0.001 (0.014)	0.002 (0.014)	0.002 (0.014)	-0.000 (0.014)	0.002 (0.014)
Education	-0.018 (0.040)	-0.002 (0.042)	-0.001 (0.042)	-0.022 (0.040)	-0.023 (0.040)	-0.043 (0.041)	-0.029 (0.041)
Married (yes=1)	0.336 (0.455)	0.500 (0.473)	0.522 (0.469)	0.470 (0.469)	0.414 (0.463)	0.324 (0.463)	0.516 (0.469)
Employed (yes=1)	0.529 (0.406)	0.641 (0.421)	0.612 (0.425)	0.598 (0.411)	0.569 (0.410)	0.536 (0.410)	0.618 (0.416)
Has offspring (yes=1)	-0.246 (0.547)	-0.554 (0.564)	-0.567 (0.566)	-0.386 (0.559)	-0.363 (0.556)	-0.244 (0.545)	-0.422 (0.561)
Political sophistication		-0.010 (0.012)	-0.011 (0.011)				
Percentage of network supporting Petro × Political sophistication		-0.018 (0.026)					

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Table 2. Logistic models of vote choice (3/4)

	Informational mechanism				Social pressure mechanism			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Base model	Network support Petro x political sophistication	Network support Peñalosa x political sophistication	Network support Petro x frequency of contact	Network support Peñalosa x frequency of contact	Network support Petro x family members in network	Network support Peñalosa x family members in network
Percentage of network supporting Peñalosa × Political sophistication			-0.036 (0.034)				
Frequency of contact with network				-0.014 (0.009)	-0.010 (0.008)		
Percentage of network supporting Petro × Frequency of contact with network				0.021 (0.023)			
Percentage of network supporting Peñalosa × Frequency of contact with network					0.007 (0.054)		
Percentage family member in network						0.012** (0.005)	0.010* (0.004)
Percentage of network supporting Petro × Percentage family member in network						-0.013 (0.012)	

Table 2. Logistic models of vote choice (4/4)

	Informational mechanism			Social pressure mechanism			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Base model	Network support Petro x political sophistication	Network support Peñalosa x political sophistication	Network support Petro x frequency of contact	Network support Peñalosa x frequency of contact	Network support Petro x family members in network	Network support Peñalosa x family members in network
Percentage of network supporting Peñalosa × Percentage family member in network							-0.010 (0.031)
Constant	0.631 (0.969)	1.078 (1.079)	1.121 (1.055)	1.412 (1.096)	1.192 (1.069)	0.397 (0.976)	0.504 (0.974)
Observations	214	202	202	214	214	214	214
Log likelihood	-107.274	-101.149	-100.923	-106.017	-106.419	-107.862	-104.754
Pseudo R^2	0.269	0.267	0.269	0.278	0.275	0.265	0.286

Standard errors in parentheses

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

Source: Own elaboration.

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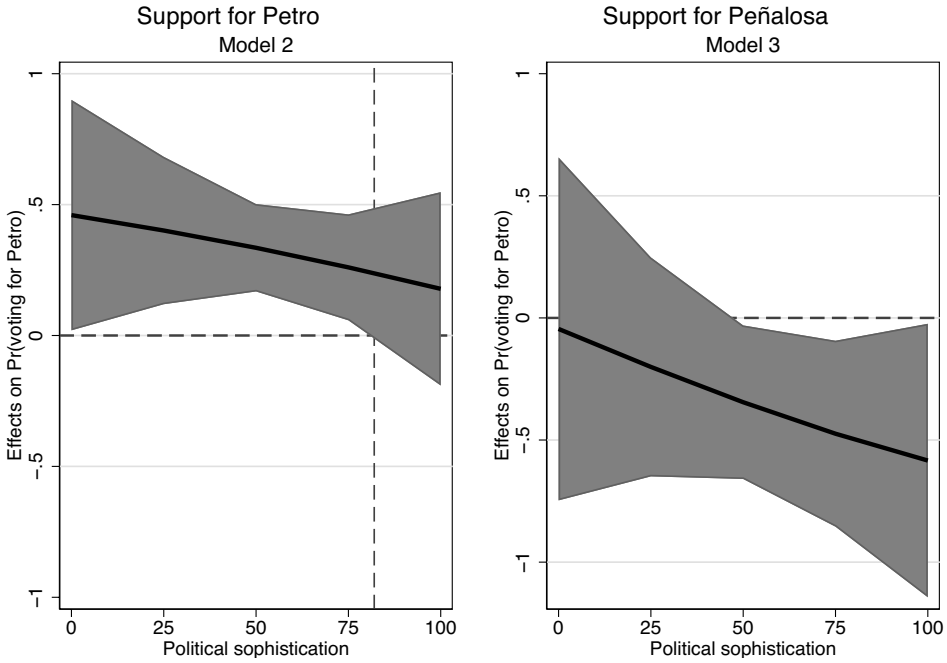
Figure 1. Average Marginal Effects of Network Support for Petro/Peñalosa

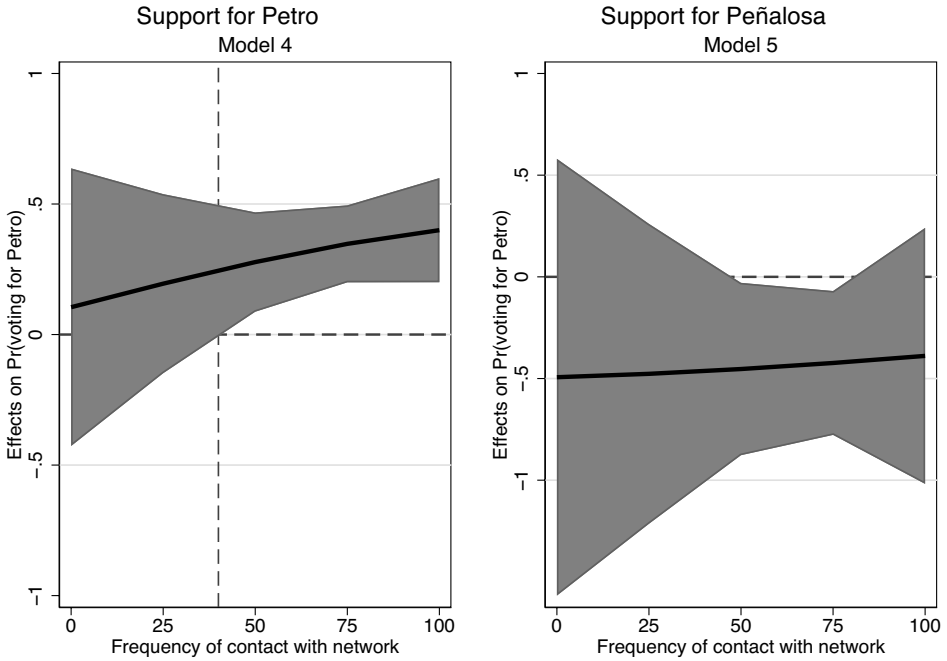


Source: Own elaboration.

In turn, figure 2 plots the test of the social pressure mechanism (H2) as estimated in models 4 and 5 in table 1. If this mechanism is behind the relationship between political discussion networks and vote choice, the positive effect of the network variables on vote choice would have to be larger among those who have frequent contact with their discussants, compared to those having sporadic contacts with them. As can be seen in figure 2, the positive network effect is statistically significant for higher levels of frequency of contact with discussants (left panel). Such an effect increases as individuals report higher frequency of contact with their network. The coefficient capturing the effect of the network variable becomes statistically significant after frequency is higher than 40 on a 100-point scale. The average marginal effects on the probability of voting Petro increases about 16 points, from 0.24 when frequency is reported at 40 to 0.39 when it is reported at 100. This result suggests that people need to be in constant contact with their peers to discuss politics with others to have an impact on their political choices. That is, the persuasiveness of the network kicks in after increased interaction with one's peers.

The effect of the variable that captures the percentage of discussants favoring Peñalosa on voting for Petro (right panel) seems to have positive slope that increases slightly as the frequency of contact increases. This effect is negative throughout the range. That is, individuals who have a network that supports Peñalosa have a negative effect on their probability of voting for Petro which increases slightly as they interact more with their peers.

Figure 2. Average Marginal Effects of Network Support for Petro/Peñalosa

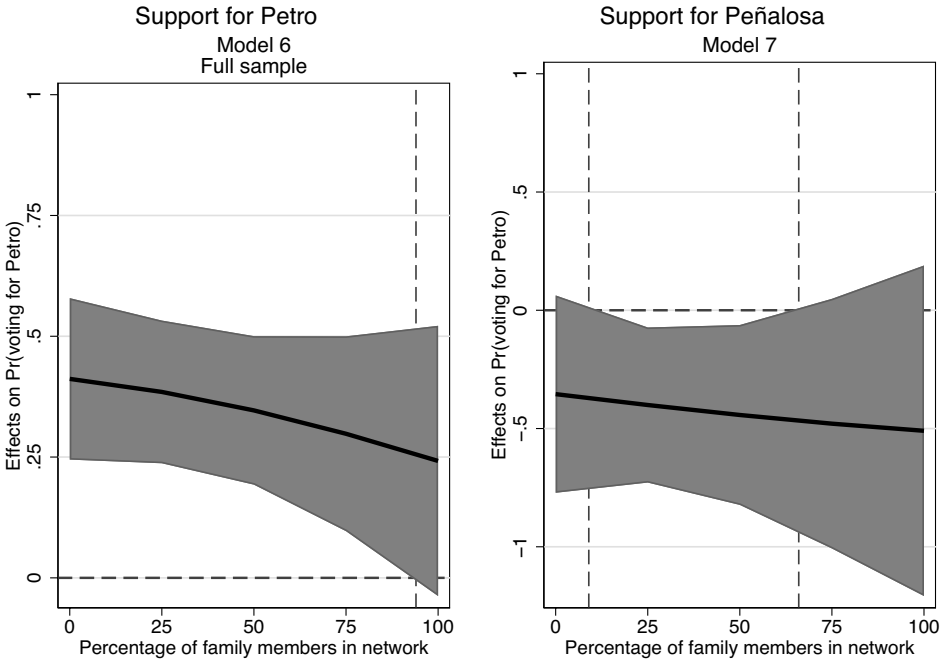


Source: Own elaboration.

Finally, figure 3 shows our additional test of the social pressure mechanism. We expected that the presence of a larger percentage of family members in a respondent's network should increase the network effect on vote choice. However, results show the opposite: the network effect on the probability of voting for Petro decreases as the percentage of family members increases. In turn, the effect of the variable that captures the percentage of discussants favoring Peñalosa on voting for Petro is negative and only significant in part of the range. We take from this result that, at least in the Colombian case, the social pressure mechanism

operates in a clearer fashion through the frequency of contact with the network than through the characteristics of its membership.[14]

Figure 3. Average Marginal Effects of Network Support for Petro/Peñalosa



Source: Own elaboration.

Beyond the network variables, closeness to political parties on the right or left of the political spectrum are the only two variables that are statistically significant in all the models presented in table 2.[15] As explained earlier, this election was ideologically charged as the top two contenders represented opposing political views. Because the leftist candidate won the election, closeness to leftist parties is positively related to voting for Petro, while closeness to rightist parties is negatively related to voting for him. Other than partisan identity, none of the other factors considered in the literature seem to explain vote choice, in particular

14. In the discussion section we explore a possible explanation for this atypical result.
15. To discard the possibility that the inclusion of both party identification and closeness to parties in the same model renders one of them insignificant, we run the models with only one measures. The results do not change. Results available upon request.

evaluations of the economy. Earlier we pointed out that variations in partisanship are not as strong in a context such as the Colombian one. Even though these results point to their importance in explaining vote choices, it should be noted that only about 26 % of survey respondents professed sympathy to a political party. Thus, we do not negate their relevance, but we believe that Colombians have a distant relationship with political parties and may need to complement their vote choice decision process with additional information such as that provided by discussion networks.

The results presented so far meet our expectations. Now we move on to present the results from the change models.

Change in vote choices

Our empirical strategy to test the influence of peers on vote choice, in the absence of random assignment of individuals to their discussion networks, includes change in people's electoral preferences over time. The panel structure of our data allows us to do just that, which is what we report in table 3. As our dependent variables, we used two dummy variables that recorded change in electoral preferences between waves one and two, as described earlier. We estimated a series of logistic models that contain the same independent variables included in previous models (models 8 and 9). To test the mechanisms through which networks influence individual's behavior, we estimated a series of models using *change to Petro* as the dependent variable and included interactions between the network variables and the same variables used in the previous set of models: political sophistication (models 10-11), frequency of contact (models 12-13) and percentage of family members in the network (models 14-15).

Results presented in models 8 and 9 support our first hypothesis (H1). As the percentage of discussants favoring either candidate increases the likelihood of people switching to vote for the candidate preferred by their discussion networks also increases. Similarly, the likelihood of changing to a given candidate decreases as the percentage of discussants that favor a different candidate increases. In terms of marginal effects (figure 4), the likelihood of changing to vote for Petro increases slightly more than 20 points, from 0.15 to 0.36, as the percentage of political discussants supporting Petro increases from zero to 100 %. Similarly, the probability of changing to vote for Petro decreases rapidly as the percentage of Peñalosa supporters increases. It drops from about 0.20 to about 0.0. This effect ceases to be statistically significant when the percentage of *peñalosistas* reaches 66 %. This may be an intriguing result because a more homogeneous network should have a stronger effect on its members. We believe that two things might explain the loss of significance. The probability of changing the vote in favor of

Table 3. Logistic model of change in vote decision (1/6)

	Information mechanism (DV = Change to Petro)				Social pressure mechanism (DV = Change to Petro)			
	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	DV = Change to Petro	DV = Change to Peñalosa	Interaction network support for Petro and political sophistication	Interaction network support for Petro and political sophistication	Interaction network support for Petro and frequency of contact	Interaction network support for Petro and frequency of contact	Interaction network support for Petro and percentage of family members in network	Interaction network support for Petro and percentage of family members in network
Percentage of network supporting Petro	1.280*	-1.047	4.804*		-0.070		1.258	
	(0.540)	(1.421)	(2.191)		(1.398)		(0.702)	
Percentage of network supporting Peñalosa	-1.865*	1.613*	-1.746	-0.931	-1.976*	-4.118	-1.901*	-1.029
	(0.950)	(0.801)	(0.952)	(2.375)	(0.973)	(2.913)	(0.950)	(1.113)
Partisanship	-0.103	0.625	-0.157	-0.135	-0.061	-0.082	-0.081	-0.114
	(0.389)	(0.564)	(0.405)	(0.398)	(0.393)	(0.386)	(0.395)	(0.387)
Closeness to rightist parties	-0.015**	0.020*	-0.013*	-0.015*	-0.017**	-0.017**	-0.015**	-0.016**
	(0.006)	(0.009)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Closeness to leftist parties	0.002	-0.037**	0.002	0.003	0.002	0.003	0.003	0.003
	(0.006)	(0.013)	(0.006)	(0.006)	(0.006)	(0.005)	(0.006)	(0.005)

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Table 3. Logistic model of change in vote decision (2/6)

	Information mechanism (DV = Change to Petro)				Social pressure mechanism (DV = Change to Petro)			
	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	DV = Change to Petro	DV = Change to Peñalosa	Interaction network support for Petro and political sophistication	Interaction network support for Petro and political sophistication	Interaction network support for Petro and frequency of contact	Interaction network support for Petro and frequency of contact	Interaction network support for Petro and percentage of family members in network	Interaction network support for Petro and percentage of family members in network
Sociotropic evaluation	-0.013	-0.004	-0.010	-0.011	-0.012	-0.011	-0.012	-0.012
	(0.008)	(0.013)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Pocketbook evaluation	-0.001	0.005	-0.002	0.000	-0.001	0.001	-0.002	-0.000
	(0.010)	(0.016)	(0.011)	(0.011)	(0.011)	(0.010)	(0.011)	(0.010)
Gender (male=1)	0.311	-0.604	0.431	0.421	0.233	0.370	0.272	0.390
	(0.359)	(0.591)	(0.385)	(0.370)	(0.362)	(0.356)	(0.362)	(0.356)
Wealth	0.004	0.035	-0.001	0.000	0.004	0.004	0.004	0.005
	(0.012)	(0.019)	(0.013)	(0.012)	(0.012)	(0.012)	(0.012)	(0.011)
Age	-0.010	0.041	-0.008	-0.010	-0.009	-0.009	-0.009	-0.008
	(0.013)	(0.022)	(0.014)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Education	0.028	-0.122	0.034	0.036	0.035	0.040	0.026	0.031
	(0.039)	(0.070)	(0.041)	(0.041)	(0.039)	(0.040)	(0.039)	(0.039)
Married (yes=1)	0.588	0.834	0.827	0.779	0.700	0.644	0.674	0.674
	(0.453)	(0.813)	(0.492)	(0.478)	(0.462)	(0.452)	(0.459)	(0.453)

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Table 3. Logistic model of change in vote decision (3/6)

			Information mechanism (DV = Change to Petro)			Social pressure mechanism (DV = Change to Petro)			
	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	DV = Change to Petro	DV = Change to Peñalosa	Interaction network support for Petro and political sophistication	Interaction network support for Petro and political sophistication	Interaction network support for Petro and frequency of contact	Interaction network support for Petro and frequency of contact	Interaction network support for Petro and percentage of family members in network	Interaction network support for Petro and percentage of family members in network
Employed (yes=1)	-0.249 (0.364)	-0.739 (0.611)	-0.181 (0.379)	-0.238 (0.368)	-0.157 (0.366)	-0.289 (0.360)	-0.257 (0.367)	-0.330 (0.363)
Has offspring (yes=1)	0.077 (0.567)	-1.594 (0.923)	-0.220 (0.595)	-0.074 (0.576)	-0.060 (0.575)	0.054 (0.562)	-0.006 (0.573)	0.094 (0.562)
Political sophistication			0.006 (0.010)	0.002 (0.010)				
Percentage of network supporting Petro × Political sophistication			-0.060 (0.037)					
Percentage of network supporting Peñalosa × Political sophistication				-0.016 (0.039)				

Table 3. Logistic model of change in vote decision (4/6)

			Information mechanism (DV = Change to Petro)			Social pressure mechanism (DV = Change to Petro)				
	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)		
	DV = Change to Petro	DV = Change to Peñalosa	Interaction network support for Petro and political sophistication	Interaction network support for Petro and political sophistication	Interaction network support for Petro and frequency of contact	Interaction network support for Petro and frequency of contact	Interaction network support for Petro and percentage of family members in network	Interaction network support for Petro and percentage of family members in network		
Frequency of contact with network					-0.016	-0.013				
					(0.008)	(0.007)				
Percentage of network supporting Petro × Frequency of contact with network					0.024					
					(0.022)					
Percentage of network supporting Peñalosa × Frequency of contact with network						0.033				
						(0.040)				

Table 3. Logistic model of change in vote decision (5/6)

	Information mechanism (DV = Change to Petro)					Social pressure mechanism (DV = Change to Petro)				
	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)		
	DV = Change to Petro	DV = Change to Peñalosa	Interaction network support for Petro and political sophistication	Interaction network support for Petro and political sophistication	Interaction network support for Petro and frequency of contact	Interaction network support for Petro and frequency of contact	Interaction network support for Petro and percentage of family members in network	Interaction network support for Petro and percentage of family members in network		
Percentage family member in network							0.005	0.006		
							(0.004)	(0.004)		
Percentage of network supporting Petro × Percentage family member in network							0.002			
							(0.013)			
Percentage of network supporting Peñalosa × Percentage family member in network								-0.029		
								(0.028)		

Table 3. Logistic model of change in vote decision (6/6)

	Information mechanism (DV = Change to Petro)				Social pressure mechanism (DV = Change to Petro)			
	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	DV = Change to Petro	DV = Change to Peñalosa	Interaction network support for Petro and political sophistication	Interaction network support for Petro and political sophistication	Interaction network support for Petro and frequency of contact	Interaction network support for Petro and frequency of contact	Interaction network support for Petro and percentage of family members in network	Interaction network support for Petro and percentage of family members in network
Constant	-0.997 (0.906)	-4.831** (1.725)	-1.370 (0.992)	-1.079 (0.945)	-0.181 (0.989)	-0.439 (0.950)	-1.195 (0.934)	-1.403 (0.926)
Observations	300	306	285	285	300	300	300	300
Log likelihood	-121.384	-48.803	-112.599	-117.390	-119.453	-122.315	-120.372	-122.572
Pseudo R2	0.123	0.287	0.129	0.091	0.137	0.116	0.130	0.114

Standard errors in parentheses

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

Source: Own elaboration.

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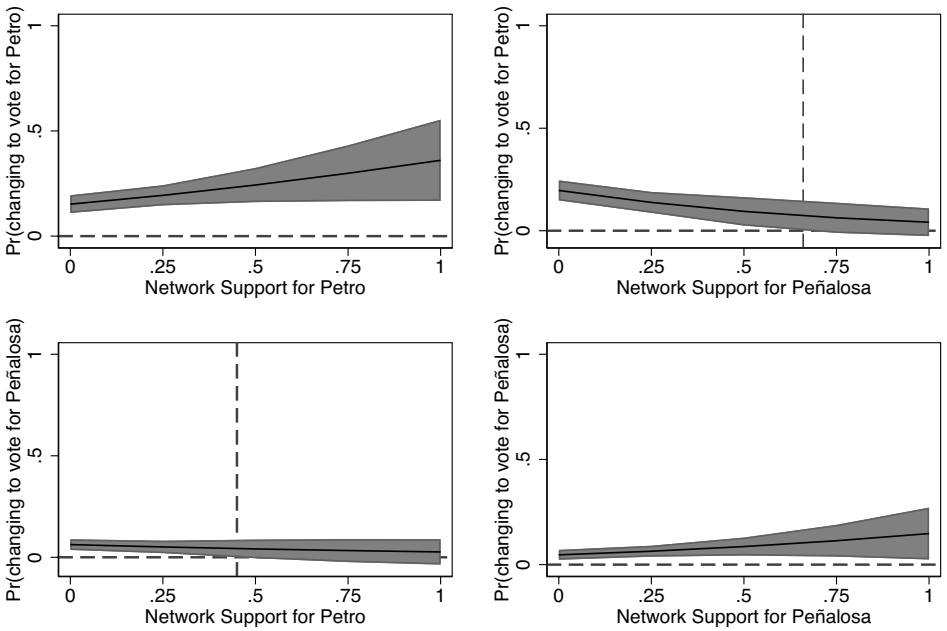
Petro is rather small to begin with. So, it doesn't require many people reinforcing the message of not changing the vote for it to have an effect. Also, there are probably very few people in our sample who considered changing the vote for Petro and were in a network where everyone was a *peñalosista*, which may explain the increased width of the significance interval for higher levels of homogeneity. Nevertheless, both for Petro and Peñalosa networks, we observe persuasiveness reflected in changes in voting behavior.

Figure 4. Average Marginal Effect of Changing Vote Decision



Source: Own elaboration.

These results show that, in the case of Bogotá, a more homogenous network was more persuasive as respondents were more likely to change their initial preference towards that candidate. Thus, homogenous political discussion networks incited voters to revise their vote choices in favor of those of their peers, although the effect is stronger for those respondents whose network favored Petro.

Additionally, as expected, closeness to leftist parties decreases the likelihood of changing the vote for Peñalosa. Closeness to rightist parties increases the likelihood of changing to vote for Peñalosa and decreases the likelihood of changing to vote for Petro.

Models 10-15 in table 3 explore the interactions between the network variables and political sophistication, frequency of contact with political peers and percentage of family members in the network. We estimated the marginal effects of the interaction terms and produced graphs to ease the interpretation of our results. These results are shown in figures 5-7.

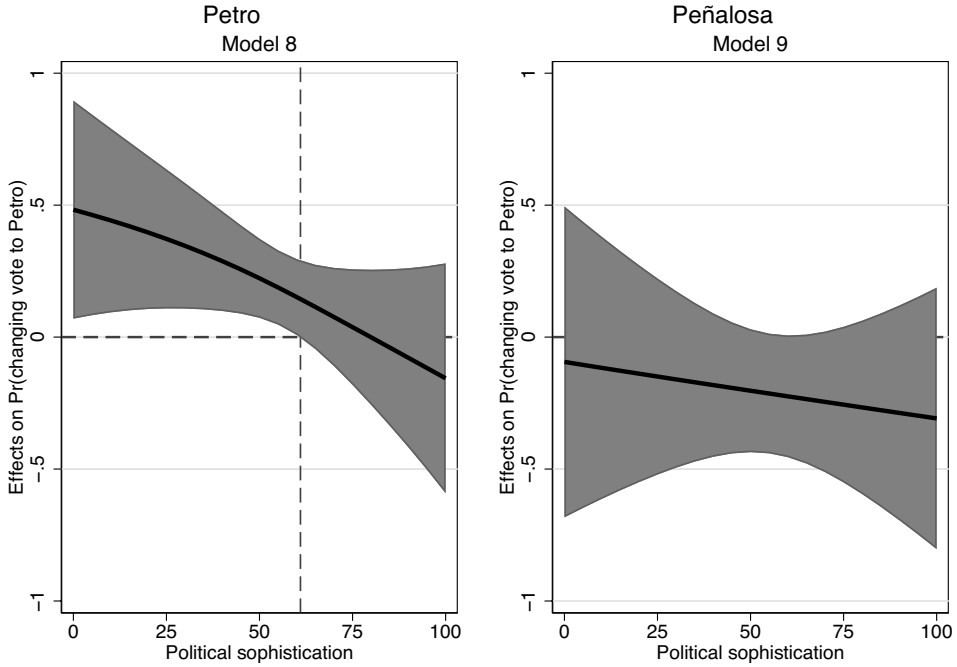
Figure 5 shows our test of the informational mechanism (H2) by assessing the effect of the network variables on the probability of changing the vote to Petro for varying levels of political sophistication. The effect of a network more homogeneously in favor of Petro on the probability of changing to vote for him is clearly conditioned by political sophistication. As in the models of voting decision, the effects are larger for those with lower levels of political sophistication, and it loses statistical significance, for those more informed about politics. Substantively, the conditional effect is quite large, it falls about 33 points, from a high of 0.48 when people score zero on political sophistication to about 0.15 when sophistication reaches 61, beyond this sophistication level the effect ceases to be significantly different from zero. More sophisticated voters are likelier to know who they support and do not seem to be affected by their network to change their vote in support of Petro. Again, networks have more power of persuasion for those people who have little political knowledge.

On the other hand, regardless of the level of political sophistication, a *peñalosista* network does not explain the decision to change the vote for Petro. This makes sense, people surrounded by peers supporting Peñalosa are unlikely to change their vote for the opposing candidate.

As discussed earlier, we believe discussion networks may also operate through a social pressure mechanism as well (H3). Figure 6 presents evidence that seems to support our claim: the effect of a network that becomes more homogeneously in favor of Petro on the probability of changing the vote to him is statistically significant only for those individuals with higher frequency of contact with their political discussants. The effect becomes significant after the frequency of contact reaches 50 on a 100-point scale ranging from minimum to maximum contact. The magnitude of this effect is rather modest, going from 0.15 to 0.20 in the range for which it achieves statistical significance. Unsurprisingly, a *peñalosista* network does not influence the decision to change the vote to Petro.

Finally, figure 7 shows the effect of discussion networks conditioned by the percentage of family members in such networks. Results from this interaction do not support the idea that the effect of a discussion network on the likelihood of changing vote decision increases for those whose networks are largely composed of family members. In fact, the effect of a network that more homogenously supports Petro on the dependent variable is almost flat, and it ceases to be significant when the percentage of family members in the network is about 70. For

Figure 5. Average Marginal Effects of Changing Vote Decision



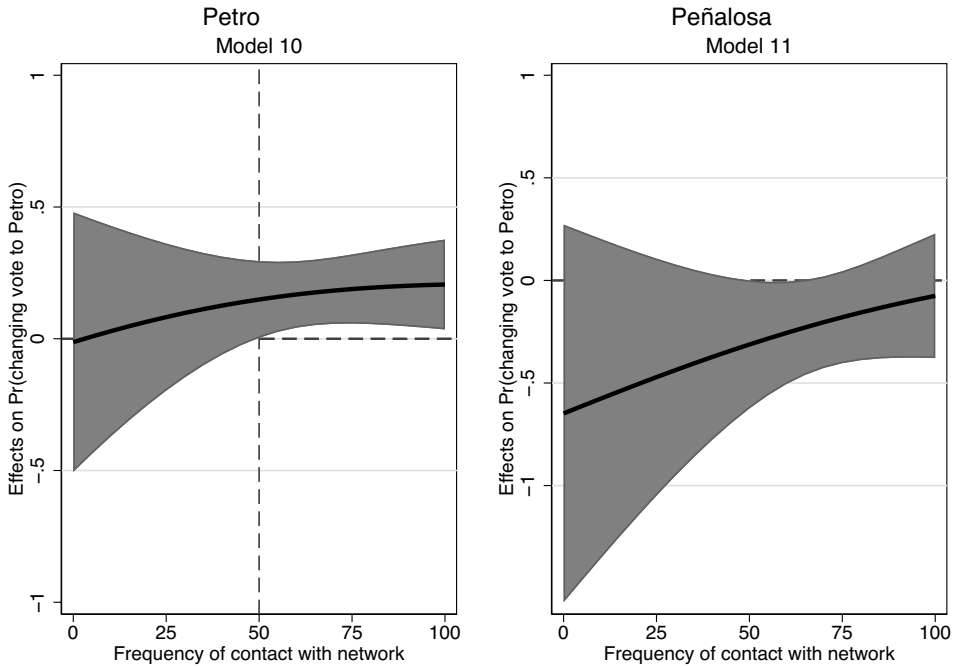
Source: Own elaboration.

the *peñalosista* network the conditional effect is not statistically significant. In the discussion section, we explain why this may be the case.

DISCUSSION AND CONCLUSIONS

Aware that nobody makes political decisions in an informational vacuum, in this paper we studied the influence of others on people's electoral decisions. More specifically we explored what type of discussion networks may have shaped those decisions and the mechanisms through which individuals' vote choices were influenced by others. We set out to study the influence of discussion networks on vote decisions using panel data from the 2011 local elections in Bogotá. That is, we modeled the influence of discussion networks on vote choice, as reported in wave one, and change of electoral preferences from wave one to wave two of our panel.

Figure 6. Average Marginal Effects of Changing Vote Decision

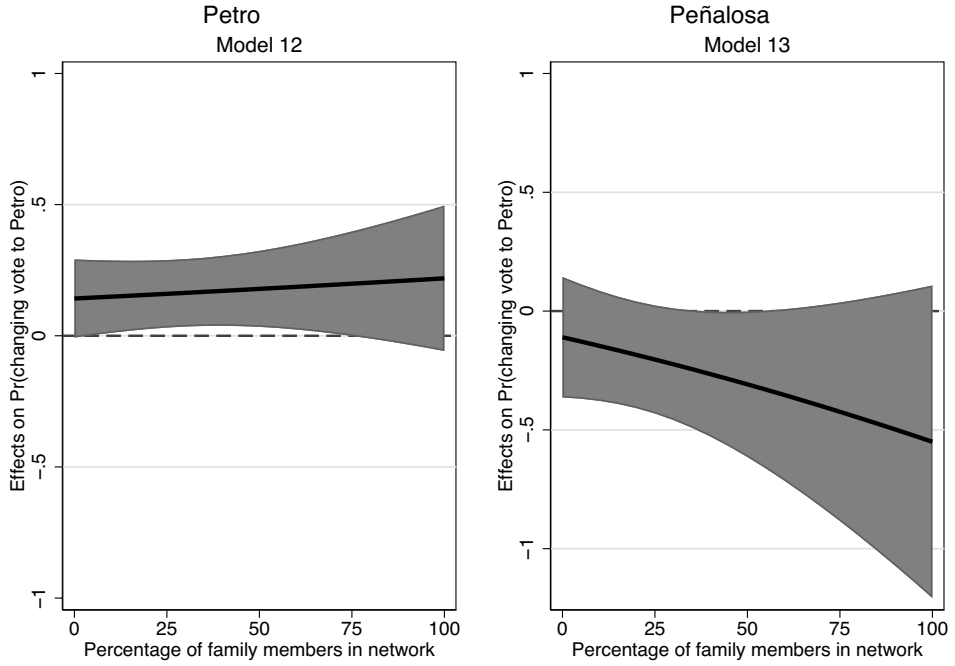


Source: Own elaboration.

Results from both the vote choice and change models gave us evidence that politically homogeneous discussions networks have significant effects on people's electoral decisions (H1). Concretely, having a greater percentage of political discussants that support a particular candidate increases: (i) the likelihood that a person votes for the candidate preferred by her discussion network, and (ii) the probability of changing her electoral preference from a different candidate to the candidate preferred by most of her peers.

We also found evidence that discussion networks operate through both informational and social pressure mechanisms (and H3). First, we showed strong evidence that networks work as information disseminators, particularly for individuals with lower political knowledge. Our results showed a large gap between the less and more informed in terms of the magnitude of the network effect on electoral decisions. In other words, those who are more likely to pay high informational costs associated with voting are largely benefited from the information that is aggregated and disseminated through the network of political discussants. In contrast, the highly informed are "immune" to the influence of their peers.

Figure 7. Average Marginal Effects of Changing Vote Decision



Source: Own elaboration.

Second, our data also gave us evidence that social networks influence voters through social pressure. However, compared to information the role of social pressure seems modest, at least for the case of residents of Bogotá in this election. Since the social pressure mechanism operates through repetitive contacts or intimate ties with political peers, we ran interactions between the network variables and measures of intensity of contact with peers and the percentage of family members in the network. Respondents who were in greater contact with their networks exhibited a higher chance of voting for Petro or changing their electoral preference, in favor of this candidate, when their network was more homogeneously in favor of this candidate. In contrast, we did not find the same effect when the percentage of family members in the network increased. We even found an atypical result as the effect of the network variable on the probability of voting for Petro decreased as the percentage of family members in the network increased.

Results from the test of the different mechanisms through which networks operate deserve further discussion due to their implications. In the first place, our data indicate that, unlike other cases such as the United States (Sinclair, 2012),

networks in Colombia operate more via the aggregation of information than via social pressure. The relevance of this mechanism may indicate that in Bogotá discussion networks compensate, more than in other contexts, for a deficit of political information. Prior research has demonstrated significant variation in sophistication levels across countries, and that such differences are caused by factors such as the proliferation of parties, or large income and education gaps (Gordon & Segura, 1997; Grönlund & Milner, 2006). We think some of the conditions that decrease citizens' levels of political sophistication may be present in Bogotá as well as in many Latin American nations: more and unstable political parties, large income gaps and poor educational systems. In these types of contexts, one can expect comparatively lower levels of political sophistication and more widespread scores of this indicator.[16] Therefore, the informational costs that citizens must pay, especially those in the lower extreme of the distribution, when making electoral decisions, are comparatively higher than in countries with higher sophistication averages, so the role of discussion networks as channels of information is more relevant, as we demonstrated in this paper. More studies are needed on this matter.

The atypical result of the one test of the social pressure mechanism deserves further discussion. Against our expectation, the network effect decreased or remained flat as the percentage of family members in the network increased. What might be driving this result? One possibility is that family members should not be regarded as more intimate than friends, and therefore closer and more influential. On the other hand, the influence of family members on individuals may be conditioned by age. A recent study conducted by *Observatorio de la Democracia* of *Universidad de los Andes* revealed that 58.4 % Colombians between the ages of 18 and 25 disagree on political issues with their parents. Therefore, the atypical result we observe may be driven by young respondents and their resistance to complying with the opinions of their relatives. To test for this possibility, we repeated the vote and change models excluding those between 18 and 25. Results that are presented in the appendix support our claim. For those older than 25 the effect of the network variable on vote choice ceased to be negative, and now is flat. In the case of the change model, after excluding young respondents, we observed a positive and significant effect of the network variable as the percentage of family members in the network increases. The social pressure exerted by

16. The contrast between the sophistication levels of our sample versus those of the United States is illustrative. We estimated a simplified measure of sophistication using two questions that were included in the 2010 LAPOP study for the United States and in our panel. Such questions were the length of the presidential term and the number of states / departments. The average sophistication level in the United States was 88.36 (in a 0 to 100 scale) with a standard deviation of 24.9; in our sample the average was 75.1 with a standard deviation of 26.2.

family members on vote decisions seems to work, in the expected direction, only for older voters, while for young individuals the effect of more family members among their political peers seems to trigger a process of resistance. This extension of our results highlights the necessity to explore the factors, scenarios, and situations in which a negative to comply with the electoral preference of peers is activated, particularly among young voters.

Thus, along with Baker, Ames, and Renno (2020) we can also claim that, in Latin America, the mechanism that drives the effects of political networks is informational. However, evidence presented in this paper contradicts the claim of these same authors, that the electoral influence of discussion networks does not occur via a social pressure mechanism. Our evidence indicates that in the region network effects seem to work through both the informational and social pressure mechanisms. Further tests in other cases are needed to generalize this claim to the region.

Our results also showed that, among the usual suspects that traditionally have explained vote decisions, in our case, only partisan identity played a significant role; evaluations of the economy appeared to be irrelevant. They highlight the necessity to consider multiple factors to explain vote choice. Along with the "the fundamentals" we need to continue exploring other factors to understand vote decision, especially in contexts in which party identities are very fluid and decreasing, and people's concerns go beyond the economy.

Finally, we must mention that our results apply to the case of Bogotá and may be also apply to Colombia and political scenarios like Bogotá. They showed clear differences with research conducted in the Global North, in the way discussion networks affect electoral decisions. To have more solid conclusions on the link between discussion networks and voting behavior in Latin America –beyond the most studied cases of Brazil, Mexico and now Colombia–, we need to continue accumulating new data and knowledge on a topic that is still in an early stage of development in the region.

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APPENDIX

REPRESENTATIVENESS OF SAMPLE

Table 1 and Table 2 below compare our sample with that of a much larger official study conducted by Colombia's National Bureau of Statistics (DANE). This is a household survey and the units of analysis are the household and the people that inhabit it.

Our study reflects quite well the distribution of the population with regards to gender and age, but not concerning education. The Living Standards study codes education as a categorical variable such that 0=no schooling, 1=some primary, 2=completed primary, 3=some secondary, 4=completed secondary, 5=one or more years of vocational education, 6=completed vocational education, 7=some college, 8=completed college, 9=graduate school. In contrast, in our survey we asked for the number of years of education received. Thus, the mean values of education in the Living Standards study suggest that household fathers and mothers were educated beyond primary. This would translate to slightly more than 5 years of formal education. In contrast, in our sample, people received on average almost 11 years of formal education. That is, the average respondent almost finished high school.

Table 1: Descriptive statistics of key demographic variables in Living Standards Measurement Study Bogotá

Variable	Obs	Mean	Std. Dev.	Min	Max
Gender	54614	0.53	0.49	0	1
Age	39243	41.60	16.76	18	99
Education level of father	33493	2.84	2.35	1	10
Education level of mother	27553	2.33	2.02	1	10

Source: Encuesta Multipropósito para Bogotá Distrito Capital - EMB – 201. http://formularios.dane.gov.co/Anda_4_1/index.php/catalog/189/study-description

Table 2: Descriptive statistics of key demographic variables in our survey

Variable	Obs	Mean	Std. Dev.	Min	Max
Gender	712	0.48	0.50	0	1
Age	712	42.90	17.53	18	89
Education	712	10.97	5.18	0	22

SURVEY QUESTIONS

Here are the questions that we use as our dependent variables in the model. We provide in brackets the actual Spanish language version of the question that was presented to respondents. For the models about participation, we used the following question from the first wave:

COLVBLOC.

Do you think you are going to vote in the local elections next October?

[*¿Piensa votar en las elecciones locales de octubre próximo?*]

(1)Yes (2)No (88) DK (98) NA

For the models about voting we used the following question from the second wave:

VB3_2.

Did you vote on the **elections of the past October 30, 2011 for Bogotá's Mayor**?

[*¿Votó usted en las* ***elecciones del pasado 30 de octubre de 2011 para alcalde*** *de Bogotá?*]

(1) Did vote (2) Did not vote (88) DK (98) NA

Here is the question used as dependent variable for the models about voting:

COLVBLOC1B_2.

For which **candidate** did you vote in the elections of the past October 30, 2011? **{Do not read list; accept answer if just a party is mentioned}**

[**¿Por qué *candidato*** *votó en las elecciones de Alcalde de Bogotá del pasado 30 de octubre?* ***{NO LEER LISTA, Aceptar si mencionan un partido}***]

(802) Aurelio Suárez (Polo Democrático Alternativo)
(803) Carlos Fernando Galán (Cambio Radical)
(804) Carlos Guevara (MIRA)
(805) David Luna (Partido Liberal)
(807) Enrique Peñalosa (Partido Verde / Partido de la U)
(808) Gina Parody (Gina Parody Alcaldesa)
(809) Gustavo Alonso Páez (Partido de Integración Nacional / PIN)
(810) Gustavo Petro (Progresistas)
(811) Jaime Castro (Autoridades Indígenas de Colombia / AICO)
(77) Other
(88) DK
(98) NA
(99) VOID

EXTENSIONS

Figure A1. Average Marginal Effects of Voting for Petro for Respondents 25 Years of Age and Older

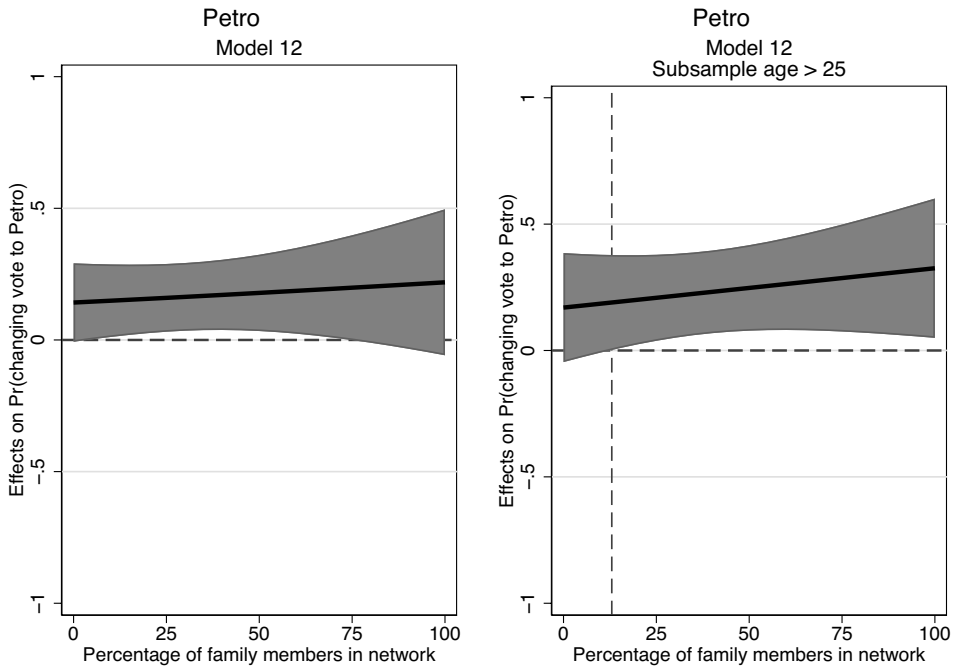
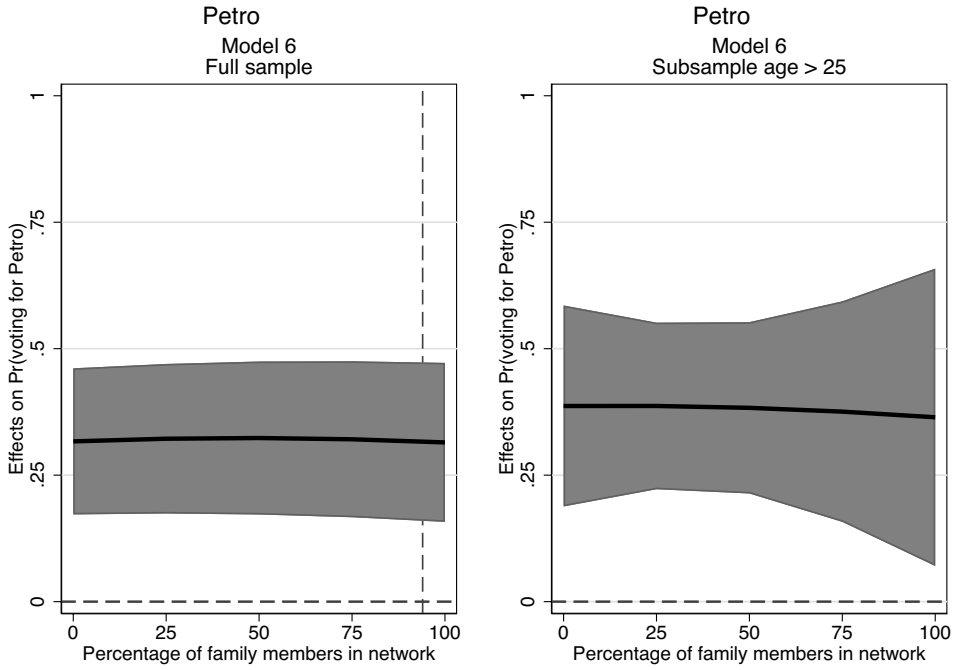
Figure A2. Average Marginal Effects of Changing Vote Decision to Petro for Respondents 25 Years of Age and Older