

UNIVERSIDADE DE SÃO PAULO
FACULDADE DE FILOSOFIA, LETRAS E CIÊNCIAS HUMANAS
DEPARTAMENTO DE CIÊNCIA POLÍTICA
PROGRAMA DE PÓS-GRADUAÇÃO EM CIÊNCIA POLÍTICA

NATÁLIA DE PAULA MOREIRA

**ARE CONGRESSWOMEN MORE RESPONSIVE TO THE PUBLIC
POLICY DEMANDS OF FEMALE VOTERS?**

SÃO PAULO

2016

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Natália de Paula Moreira

Dissertação apresentada ao Programa de Pós-Graduação em
Ciência Política do Departamento de Ciência Política da
Faculdade de Filosofia, Letras e Ciências Humanas da
Universidade de São Paulo, como requisito parcial para obtenção
de título de Mestre em Ciência Política

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São Paulo

2016

ii

NOME: Moreira, Natália de Paula.

TÍTULO: Are congresswomen more responsive to the public policy demands of female voters?

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Aprovado em: ____/____/____

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DEDICATÓRIA

Para os meus pais e irmãos,

pelos anos de compreensão, apoio e encorajamento.

AGRADECIMENTOS

Estou muito feliz por ter concluído esta etapa da minha carreira profissional e há algumas pessoas a quem devo agradecer por ter me ajudado ao longo desses anos.

Inicialmente, agradeço à CAPES pela bolsa de mestrado que recebi ao longo desses últimos dois anos de pesquisa e também devo agradecer à Fundação de Amparo à Pesquisa do Estado de São Paulo que me concedeu uma bolsa de iniciação científica na graduação e que fundamental para meu início na vida acadêmica.

Devo agradecer ao professor Fernando Limongi e ao Léo Barone pelas sugestões e críticas ao texto da minha qualificação. Na medida do possível, tentei incorporar a este texto a maior parte de suas valiosas sugestões.

Agradeço aos meus amigos do Departamento de Ciência Política pelas conversas produtivas e pelas contribuições a este texto. Em especial, agradeço ao Sergio Simoni que tem sido um ótimo amigo desde os tempos do CIS e que também fez excelentes sugestões ao meu texto de qualificação. Agradeço ao Rodrigo Nakahara que me socorreu solícitamente em diversos momentos com dúvidas metodológicas e técnicas. Aos meus colegas do grupo de orientação da profa. Lorena: Danilo Barboza, Gabriel Madeira e Murilo Junqueira, agradeço pelos os comentários que me ajudaram a dar maior coesão a este trabalho. Em especial, agradeço o Murilo Junqueira que me ajudou a resolver alguns problemas na coleta de dados e que tem sido um bom amigo e companheiro de pesquisa. Sou grata aos meus colegas do Núcleo de Estudos Comparados e Internacionais, em especial, à Joyce Luz que solícitamente me ajudou em diversos momentos. Também agradeço os meus colegas de departamento, pelas boas conversas e conselhos, Hellen Guicheneey, Fernando Rodrigues, Thiago Meireles, Grazi Silotto, Victor Araújo, Bárbara.

Em especial, sou muito grata por tem a profa. Lorena Barberia como orientadora desde a iniciação científica. Ela teve um grande impacto em meu desenvolvimento acadêmico ensinando-me a ser crítica com relação aos resultados e a buscar sempre excelência e transparência na pesquisa. Durante esses anos, ela sempre tem me encorajado a buscar desafios, e sua confiança e incentivo tem me motivado a continuar mesmo quando parece que não vou conseguir terminar. Ela também me ensinou que só com muito esforço você consegue ter um trabalho de qualidade. Agradeço-a também pela amizade e confiança.

Sou imensamente grata a Matheus Wehr que tem sido um companheiro excepcional para as horas mais difíceis, me ouvindo e me incentivando. Com amor e compreensão, ele tem me ajudado nas mais diferentes tarefas; e a sua generosidade já me salvou diversas vezes.

Por último, mas não menos importante, agradeço muito a minha família, meus pais, Luiz e Hilda, e meus irmãos, Anna e Matheus, que tem um papel fundamental em minha vida e em tudo o que eu já conquistei. Agradeço-os pela motivação, compreensão e carinho. Sou muito grata a minha irmã que sempre me incentiva a buscar novos desafios e a acreditar em mim. Eu tenho muito a agradecer-lá pela generosidade, certamente é a das pessoas que mais se empolga com as minhas conquistas e que mais me ajuda nos momentos difíceis. Agradeço também a minha mãe que lutou muito pelos nossos estudos.

RESUMO

Esta dissertação busca contribuir com a literatura estudando o impacto do sexo do deputado nas políticas públicas de saúde e segurança aprovadas no Congresso brasileiro, e se tais políticas estão alinhadas com as preferências dos eleitores. A literatura tem mostrado que mulheres enfrentam fortes barreiras para serem eleitas se comparado aos homens (Lawless 2015; Speck e Mancuso 2014) e elas também enfrentam um complexo e exigente jogo eleitoral quando concorrem à reeleição (Palmer e Simon 2010). Minha hipótese é de que deputadas precisam estabelecer sua credibilidade propondo políticas públicas em áreas *masculinas*, tal como segurança pública. Uma vez que a deputada tenha experiência política, como prefeita, deputada federal ou um outro cargo político, ela se arriscará fazendo política mais alinhada com as preferências das eleitoras. Utilizando dados de um *survey* nacional e de um *survey* com eleitores de baixa renda, eu analiso se as eleitoras e os eleitores brasileiros apresentam diferentes prioridades com relação a políticas de saúde e de segurança. Com esses resultados, eu posso prever quais os efeitos a representação de homens e mulheres deveria ter sobre a escolha de políticas públicas de saúde e segurança. Então, eu analiso as diferenças nos tipos de emendas orçamentárias de saúde e de segurança que são propostas pelos deputados e deputadas. Finalmente, eu analiso o impacto do sexo do parlamentar condicional à experiência na política. Com estes resultados, eu comparo as preferências e prioridades de eleitores e eleitoras com as prioridades dos parlamentares e vejo se elas correspondem. Empregando regressão logística, a análise dos *surveys* mostra que eleitoras não apresentam diferentes preferências políticas que os eleitores. Além disso, os resultados da análise das emendas orçamentárias utilizando regressão linear sugere que (i) deputadas não priorizam política de saúde mais que seus colegas o fazem; e (ii) deputadas que são políticas profissionais alocam menos recursos para política de segurança do que fazem os deputados profissionais.

PALAVRAS-CHAVE: mulheres; política pública; carreira política; Câmara dos Deputados.

ABSTRACT

This thesis seeks to contribute to the literature by studying the impact of a legislator's gender on health and public security policies passed in the Brazilian Congress and whether such policies are aligned with voters preferences. Evidences have shown that women face stronger barriers to being elected as compared to their male counterparts (Lawless 2015; Speck and Mancuso 2014) and they face a complex and demanding electoral playing field when running for re-election (Palmer and Simon, 2010). My hypothesis is that female politicians need to establish their credibility by proposing public policies in masculine areas, such as public security. Once a congresswoman has political experience, as a mayor, state deputy or another office, she risks making policy more aligned with female voter preferences. Using data from a national survey and a low-income voter survey, I analyze whether male and female Brazilian voters differ in the priority they assign to health and security policies. This enables me to predict what effects gender representation should have on health and public security policy choices. Then, I examine the differences in the types of health and public security budget amendments sponsored by male and female legislators. Finally, I analyze the impact of a politician's gender conditional on experience in politics. With these results, I compare the preferences and priorities of male and female voters with the representatives' priorities and see if they correspond. Employing logistic regressions, the voter surveys analyses show that female voters do not present different policy preferences than male voters. Moreover, the results of the budget amendments analysis using linear regressions suggest that (i) female deputies do not focus more on health policy than their male counterparts, and (ii) female deputies that are professional politicians allocate less resource for security policy than male professional deputies.

KEYWORDS: women; public policy; political career; House of Representatives.

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1. Introduction

Even though there has been an increase in the number of women in political leadership positions in the world, women remain underrepresented in key political positions. In 2015, women represented, on average, 22.1% of parliament members in the world, up from 13.5% in 2000. Although these numbers seem to show that there has been progress with respect to female politicians' presence in parliaments, women remain outnumbered as compared to their share of the population and their share of the electorate.

Despite the increasing number of studies about women in politics, we still know little about the impacts of women's leadership on policy decisions. A key question that has emerged in the literature is about the relation between greater female representation and greater advocacy of female voter priorities. On the one hand, the literature has shown that female politicians have different political preferences and priorities than their male colleagues (Schwindt-Bayer 2006; Swers 2002; Taylor-Robinson and Health 2003; Htun, Lacalle and Micozzi 2013). On the other hand, few studies have investigated whether there is a straightforward relationship between female politicians and their advocacy of female voters' interests (Chattopadhyay and Duflo 2004; Clots-Figueras 2012; Svaleryd 2009).

Evidences have shown that women face stronger barriers to being elected as compared to their male counterparts (Lawless 2015; Speck and Mancuso 2014) and they face a complex and demanding electoral playing field when running for re-election (Palmer and Simon, 2010). Once elected, women will attempt to produce policies that are aligned with the demands of both male and female voters in order to demonstrate their responsiveness to both groups (McDonagh 2009). But, they will focus on each demand in different times of their political career. My hypothesis is that female politicians need to establish their credibility by proposing public policies in *masculine* areas, such as public security. Once a congresswoman has political experience, as a mayor, state deputy or another office, she risks making policy more aligned with female voter preferences.

My preliminary findings contrast with other studies that have found a strong impact of female politicians on social policy (McDonagh 2009). The results show that gender does not influence health policy preferences in Brazilian Congress. Furthermore, my findings suggest that female deputies do not focus more on health policy than their male counterparts. Importantly, I introduce a new concept that mediates the relationship between voter preferences and politician priorities, which is the past political experience or career of the elected representative. I find that the past political experience of a congressional politician is an important factor for understanding the behavior of legislators; female deputies that are professional politicians allocate less resource for security policy than male professional deputies.

This paper seeks to contribute to the literature by studying the impact of a legislator's gender on health and public security policies passed in the Brazilian Congress and whether such policies are aligned with voter preferences. Brazil is a good example to study for several reasons. First, it adopted a gender quota in 1997, but the increase in representation has proven to be less responsive than had been hoped.¹ Second, in spite of the lower number of women holding congressional seats, they are an expressive part of the population and the Brazilian female electorate is larger than the male.² Finally, most recently, Brazilian women have secured prominent political positions, such as Dilma Rousseff, who was reelected President in the 2014 elections and Marina da Silva, who was third most voted presidential candidate in this same competition.

Therefore, the main contribution of this thesis is to propose a new mechanism to explain when politician priorities will converge with voter preferences about policy. While the literature has argued that a politician's gender impacts on policy choice, it has not examined how this effect is moderated by one's past political experience. In this sense, I propose that female deputies that

¹ See the Graph 1 (appendix). In 1998, Brazilian women occupied 5.7% of seats in Chamber of Representatives, 90th position in world classification. In the last elections, in 2014, they won 9.94% of seats, 118th position (IPU, 2015).

² Women represent 52.13% of the electorate (TSE, 2014) and 51.3% of the population (IBGE, 2013).

are first-timers in politics will exhibit different preferences for public security policies than female deputies who have held elected positions in government prior to their election to the Brazilian Congress.

The empirical strategy of this paper is as follows. First, I seek to examine if there are differences in public policy preferences between female and male voters using survey data. Specifically, I analyze if male and female Brazilian voters differ in the priority they assign to health and public security policies. This enables me to predict what effects gender representation should have on health and public security policy choices. Then, I examine the differences in the types of health and public security budget amendments sponsored by male and female legislators. Finally, I analyze the impact of a politician's gender conditional on experience in politics. With these results, I compare the preferences and priorities of male and female voters with the representatives' priorities and see if they correspond.

The remainder of this paper proceeds as follows. Section II presents a literature review about the impact of female politicians on public policy. Section III describes the theoretical framework that I am following based on the Citizen Candidate model of Osborne and Slivinski (1996) and Besley and Coate (1997). Section IV discusses the data collected for the empirical analyses and the research design. Section V explains the empirical strategy. Section VI presents the findings from the empirical tests undertaken in this paper. Finally, section VII draws conclusions and outlines an agenda for future research.

II. **Literature Review**

In the last thirty years, a growing literature has asked whether the women descriptive representation translates into substantive representation. As descriptive representation, the literature understands the degree to which politicians resemble those individuals that they

represent.³ On the other hand, substantive representation concerns whether politicians support the policy preferences of those citizens whom they were elected to represent. Therefore, the debate about whether descriptive representation leads instrumentally to substantive representation could be developed in other way: are female politicians more likely to address the interests or policy preferences of female citizens? Putting this question in other way, are female politician priorities aligned with female voter preferences for policy issues?

Based on empirical evidence, scholars have shown that the presence of women in legislatures leads to a significant and substantive effect on policy. This literature has focused on important cases in both developed and developing democracies. And, the majority of these studies have directed their attention mainly to studying the impact of gender on social policies. Together, these studies provide evidence that the gender of representatives affects public policy choice.

There is an important body of research that has found that female politicians are more likely to support welfare policies, such as health and educational policies, as compared to their male counterparts (McDonagh, 2009). Analyzing the impact of women's representation on policy in Swedish municipalities in 1980 and 1993, Svaleryd (2009) finds that increasing the representation of women in Swedish local councils increases spending on childcare and education controlling for demographical, socio-economic and political variables. Similar evidence about the priority of female politicians with respect to education policies is provided by Clots-Figueras (2012). Using data on Indian states, the author finds evidence that greater levels of female representation produces higher levels of education among voters in urban areas. The study is based on surveys and data from 29,686 Indian politicians who occupied seats in the 16 largest states from 1967 to 2001.

Studies have also shown that female politicians also have advanced policies related to children and family issues. Analyzing the impact of female legislators in the upper and lower houses of the US states, Besley and Case (2003) find that female politicians stand out in their

³ See Hanna Pitkin, "The Concept of Representation" (1967).

support for family assistance and child support legislation (Besley and Case, 2003). Similarly, analyzing legislators' attitudes and bill initiation behavior in Argentina, Colombia and Costa Rica, Schwindt-Bayer (2006) finds that congresswomen propose more bills on children and family issues than male representatives. For this author, in spite of congresswomen initiating bills in some areas characterized as pertaining to the "women's domain", this is not a signal that female legislators in Latin America are *supermadres*⁴, but the opposite. Such behavior among female legislators is a consequence of the "unfriendly legislative environment that pushes female politicians into these traditional roles" (Schwindt-Bayer, 2006). Neiva and Ogando (2012) provide evidence about how the legislative environment can be challenging and excluding especially for congresswomen. Analyzing data from legislative voting from 1991 to 2008 and the distribution of committee assignments in the Brazilian Congress, the authors find perplexing results. On the one hand, female legislators are more likely to be allocated to committees associated with the "feminine domain", such as committees about environment, family, human rights, health and education. On the other hand, the authors find that the most relevant factor to predict a representatives' voting behavior is the political party of the deputy, even on women's issues. According to the authors, this finding can be explained by the fact that there are two different groups among female legislators⁵: those deputies who come from social movements and those deputies that have relatives in politics and do not advocate the interests of women.

Microfinance studies also give support to the hypothesis that women have different spending priorities as compared to men. Evidence from microfinance studies show that in general women spend family income differently than their husbands; women spend more of their income on their families. According to Deshpanda (2001), "women's success benefits more than one person. Several institutions confirmed the well-documented fact that women are more likely than men to spend their profits on household and family needs". Therefore, increasing women's

⁴ As *supermadres*, it is expected that the female legislators focus on "nurturant and affectational tasks related to their traditional roles" (Schwindt-Bayer, 2006).

⁵ Neiva and Ogando (2012) import this argument from Pinheiro (2007).

income will provide greater benefits for their children in aspects related to the education and health care (Cheston and Kuhn, 2002). Analyzing the expansion of an old age pension program in South Africa, Duflo (2003) concludes that younger girls who live with a grandmother grew faster compared to those children who live with a grandfather or with none. These findings are especially true for economically disadvantaged women, which are the main target of social programs of development organizations.

In addition, female politicians are more likely to advocate on issues related to women's rights than their male colleagues (Schwindt-Bayer, 2006; Carroll, 2001). Analyzing bill sponsorship in 103rd and 104th Legislatures of the U.S. Congress, Swers (2002) highlights that congresswomen have exhibited greater interest in promoting legislation related to women's issues as compared to their male counterparts, particularly on feminist issues, such as reproductive rights and domestic violence. Examining data on bill initiation from the Honduras Congress from the 1990 to 1997, Taylor-Robinson and Health (2003) also find that female legislators dedicate a higher priority to women's rights issues. Similarly, Htun, Lacalle and Micozzi (2013) reinforce that congresswomen advocate more women's rights issues than their male colleagues. Using data on bills initiation from Argentine Congress from 1983 to 2007, the authors show that while the results confirm that women introduced more bills related to women's rights, on the other hand, the approval rates of these bills actually decline over time as female participation in Congress has increased. According to the authors, this evidence shows that women continue to be marginalized in the legislature and this affects their political efficacy.

However, a set of studies have shown that, in spite of female politicians presenting different legislative performance as compared to their male colleagues, they do not suffer from a lack of efficacy (Jeydel and Taylor, 2003). Analyzing data about U.S. districts, Anzia and Berry (2011) show that female legislators secure 9% more spending for their districts from federal discretionary programs than male legislators. In this sense, the authors conclude that congresswomen outperform their male colleagues due to the difficult selection process they must undergo; only the best females are able to win elections and these are therefore more effective.

Volden, Wiseman and Wittmer (2013) highlight that the legislative styles of women serve them well in some institutional settings, and less well in others. Analyzing bill data from the U.S. House of Representatives, their results show that minority party women are better able to keep their sponsored bills alive through later stages of the legislative process than their male counterparts. On the other hand, majority party women have become less effective as Congress has become more polarized.

In summary, the majority of literature about women in politics has presented evidence that male and female politicians have different policy priorities. Nevertheless, few studies have argued that female politicians behave differently from their male counterparts. Examining whether female mayors are more likely to increase citizen participation, Funk (2015) finds that women's styles of leadership are not inherently more inclusive. The author examines the adoption of participatory budgeting and municipal participatory policy councils in Brazilian municipalities, and her conclusion is that the decision to promote citizen participation is largely a function of other factors than mayors' gender.⁶ These findings could be understood as an attempt of female politicians to promote the view that they have the same ability on issues stereotyped as male domain, thus they are as good as male politicians. However, voters may expect that female politicians will make policies that differ from the ones made by males. According to McDonagh (2009), "women candidates are *hybrid candidates*, who go to great efforts to represent both male and female traits by establishing that they are both the same as and different from men."

However, it is important to highlight two criticisms of studies on the role of women in politics. First, few studies have examined female voter preferences. I argue that an accurate analysis about whether women's descriptive representation leads instrumentally to substantive representation should not only analyze the actions of female politicians, but also the preferences of female voters. Some issues are more salient for female voters, and this is likely to vary across

⁶ Funk (2015) still highlights that the gender of the executive was relevant to explain the decision to increase participation in few thematic areas, which defy gender stereotypes: female mayors in sports and male mayors in feminine issues, such as children, health and women.

societies and over time. Women and men have different policy preferences, which are related to their place in society, e.g. in India, one of the main concern of women is the availability of drinking water (Chattopadhyay and Duflo, 2004). Moreover, voters are more likely to pay attention to politician's behavior on salient issues (Ferejohn and Kuklinski, 1990).

Second, few efforts have been employed to understand how a woman's past political experience may influence policy choices. Recent studies that examine women's numeric underrepresentation in US politics have shown that women are less interested in seeking elective office; such gender gap has remained steady over time and did not vary with political party, income, age, race profession, or region (Lawless, 2015). According to the Lawless (2015), the main reasons identified for the persistent gender gap are recruitment patterns (among potential candidates, women are 15% less likely to receive a suggestion to run for office from a party leader, elected official or others) and gender differences in self-perceptions (among potential candidates, men are 60% more likely to assess themselves as qualified to run). However, the author highlights that in spite of women being less likely to emerge as candidates, once women run they win elections.

The evidence from nascent political ambition studies show that men and women are not equally interested in seeking elective office, but are female politicians as politically ambitious after running and winning an election? Analyzing elections to the U.S. House of Representatives from 1956 through 2006, Palmer and Simon (2010) conclude that "women who pursue careers in the House or run for the Senate have exhibited the same forms of ambition and behave in the same strategic manner as their male counterparts". Furthermore, the authors find that when female politicians run for reelection, their rates are slightly higher even though women face a more demanding and competitive environment in electoral playing field. According to the political ambition theory, before deciding to run for reelection or for another political office, a politician compares the benefit that he will receive from achieving that office and probability of election against the cost of an electoral campaign (Black, 1972). I argue that a politician's behavior is not

only a response to his office goals (Schlesinger, 1996), but also a politician's behavior is shaped by her past political experience. Thus, the decisions that a politician makes today are based on her past political experience. More importantly, a politician makes decision today in terms of the electorate that she expects to win tomorrow. Therefore, to understand the impact of a politician's gender on public policy choice, it is relevant to examine the relationship between a politician's gender and her accumulated experience as a politician.

In summary, the main goal of this study is examining whether female politicians promote female voter interests. To address this question empirically, I first analyze the differences in preferences between male and female voters. I use these revelations of voter preferences to predict how gender may influence policy. I then examine whether these predictions are confirmed by analyzing legislature behavior.

III. **Theoretical Framework**

This study seeks to understand what determine a politician's choice to emphasize certain types of public policies. In the classic Median Voter Model (Downs, 1957), politicians are bounded to credibly commit to their electoral platform and to implement it once in power. Given that politicians only care about winning elections, in order to maximize their popularity, they are led to announce convergent public policies. Thus, as a consequence of electoral competition, the platforms of those seeking office will converge to median voter preferences. In other words, the median voter policy choice will determine the type of public policy that will be enacted by politicians. In this theoretical model, a politician's characteristics, such as gender, do not matter for policy choice.

If the median voter's approach predicts that once elected politicians will implement their policy platform, the Citizen Candidate Model (Besley and Coate, 1997; Osborne and Slivinski, 1996) predicts that politicians can ignore their policy platform commitments and instead focus on

proposing their most preferred policies once in office. Once elected, the only commitment of a politician is to follow their preferred policies. According to the Citizen Candidate Model (CCM), citizens have perfect information about the preferred policies of politicians, which makes it easy for voters to predict the policy choices of each candidate if elected. Thus, voters will support candidates whose ideal policies are similar to their own. In contrast to the framework proposed by the Downsian framework, this model implies that public policy is determined by the preferences of candidates.

In the CCM model, identity is a good predictor characteristic of the policy choice of a candidate. The public policy that will be implemented by a candidate can be predicted by knowing their identity. For example, a citizen that belongs to a certain ethnic group shares the similar policy preferences of a politician that also belongs to that group. In this sense, a politician's gender can be used as a predictor of her policy priorities if elected. If female voters and male voters present different policy preferences, then it is expected that the implemented policy by female politicians will be different from that implemented by male politicians.

Chattopadhyay and Duflo (2004) provide an empirical case that supports the Citizen Candidate Model. Using data from 265 Indian village councils in West Bengal and Rajasthan, the authors document that the reservation of a council seat for a female politician influences the types of public goods provided in different localities. All else constant, female council leaders are more likely to support investment in drinking water and roads as compared to their male counterparts. According to the authors, the main reason that female politicians invest more in these goods is that they are directly relevant to the needs of their own gender. Together with Chattopadhyay and Duflo (2004), other studies provide empirical evidences that show that female politicians are more likely to support policies that benefit female voters (Clots-Figueras, 2012; Svaleryd, 2009).

According to Carroll (1990 *apud* Poggione 2004), "[r]egardless of whether the issue is foreign aid, the budget, or the environment, women are more likely than men to consider the possible impact of the policy on the lives of women and children." The sexual division of labor separates the social life between a public sphere, masculine, associated with politics and war, and a private

sphere, feminine, related to the reproduction and children care. The relation between the sexual division of labor and the woman's role in the reproductive process leads to understanding all other women roles as derivatives of her biological functions (Durham, 1983). Public policies that are aimed particularly at women focus on protective legislation and reproduction, such as provision of maternity leave (Afshar, 2005). In this sense, women and men have different policy agendas; women are more interested in issues related to family and the care of children and they are less likely to be engaged in issues of war. In fact, women take a more pacifist position in issues of war (Boneparth, 1988). Taking into account this discussion, my first hypothesis is the following:

H1: Women have different agenda that privilege social policy.

Evidence has shown that women face stronger barriers to being elected as compared to their male counterparts (Lawless, 2015; Speck and Mancuso, 2014). Once elected, I expect that women will attempt to produce policies that are aligned with the demands of both male and female voters in order to demonstrate their responsiveness to both groups. But, their dedication to pleasing both constituencies will depend on the stage of their political career. McDonagh (2009) argues that what makes women suitable for public office is their individual equality in comparison to men, that is, their *sameness* with men. For this reason, when women run as candidates for political office, one of their first tasks is to establish that they, too, can be "male" (McDonagh, 2009). Given that female politicians face pressures to show that they are the *same* as men and they have to establish their credibility on masculine political issues, my second hypothesis is the following:

H2: Female politicians who are in politics for the first time will need to establish their credibility by proposing public policies that appease male voters.

The elections to the House of Representatives in Brazil is based on an open-list proportional representation system. This institutional arrangement has been argued to create encourage

candidates to build their careers by proposing policies that benefit a small minority of voters (Myerson, 1993). As newcomers to Congress, I do not expect that female politicians will focus on the demands of female voters. As I have presented throughout the text, women face a demanding and challenging scenario when they seek to be elected; the recruitment process tends directly and indirectly to favor male candidates, they perceive themselves as less qualified and face additional obstacles. Scholars have argued that the legislative environment can be challenging and excluding especially for congresswomen. For this reason, female politicians have more incentives to show that they are as good as their male colleagues. During her initial entry into politics, a politician wants to demonstrate to her voters that they made the best choice. She will want to show that she has the same ability that a male politician has, and consequently, that she deserves to be re-elected or elected to another political office. As she accumulates political capital over time, a female politician will promote public policies that are important to female voters.

A deputy in the Brazilian Congress with past political experience has at least two advantages. First, she knows how the political world works as she understands the bureaucracy and the challenges of the legislative process better than a first-timer. Second, she already has a network probably inside and outside the Chamber. These political connections can facilitate her job during the term. When the legislative term finishes, a politician has four options (Leoni, Pereira and Rennó, 2003): to seek reelection (static ambition), to run for another political office perceived as more attractive and prestigious (progressive ambition), to run for another political office evaluated as less prestigious (regressive ambition) and, finally, she could retire. For a politician to decide which path to follow in the next election, she considers a number of factors and each step in a career ladder changes her evaluation about other next steps (Black, 1972). According to Black (1972), “as a politician’s investment in this career choice increases, his evaluation of political alternatives is likely to become more positive while his evaluation of nonpolitical alternatives is likely to remain about the same. The net effect is the development of higher levels of ambition in the politician.” Palmer and Simon (2010) highlight that, according to the Schlesinger’s theory,

seeking a career in politics is a product of ambition, but also depends on the opportunity to enter and to gain higher office, and party competition.

Analyzing political ambition in Brazilian politics, Samuels (2003) finds that “Brazilian politicians do not develop long-term careers in the Chamber of Deputies, the Chamber serves as a middle-level rung on a career ladder that for most politicians has both its bottom and top rungs at the subnational levels of government.” According to the author, when politicians hold a political office as deputy or other national office, they lose their political base and may even *endanger* their political career. While having an office in state or local government keeps them close to their voters and provides a better political return in terms of votes. However, Leoni, Pereira and Rennó (2003) reach a different conclusion about the political ambition of Brazilian deputies. The authors defend that those deputies who seek to be reelected are not the most vulnerable politically or the most unqualified. Instead, deputies that run for reelection are not so different from deputies seek a higher office. In other words, a political career inside the Chamber is an attractive option for a politically career-oriented individual.

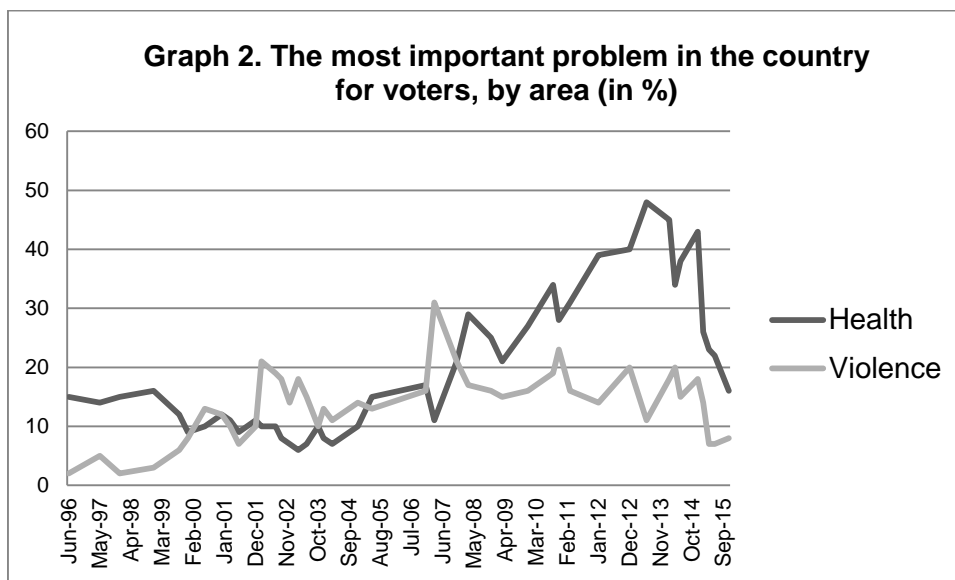
IV. **Research Design**

1. Are public security and health important social problems for voters?

Since the second half of the 1990s, Brazilian voters have ranked public health and violence as relevant social problems. In 1996, approximately 15% of Brazilian voters identified health as the most important problem in country, as can be seen in graph 2. The importance of health in voter surveys has increased noticeably since the beginning of 2004. And, it reached a peak exactly in 2013, when 48% of voters judged health as the most relevant issue in the country though there was a sharp decrease in 2014.

During the same period, voters have also ranked concerns about violence as an important problem and the share of voters who rank this as the most important problem has gradually

increased. The ranking of violence as a top concern reached a significant peak in 2002 and in 2007. Between 2001 and 2014, the ranking of health as the most important problem averaged 22% and the mean share of voters ranking violence as the most important problem was 17%.



Source: Datafolha. “O maior problema do país, 1996 – 2015.” São Paulo, Brazil (2015). Single answer.

While both men and women cite the health system as the most important policy realm demanding attention, health services are more relevant for female voters (see table 1). On the other hand, it seems that a similar share of women and men identify public security as the most important problem.

Table 1: The most important problem in Brazil

	Men	Women
Public security	35%	31%
	[32; 38]	[28.2; 33.8]
Health	48%	55%
	[44.8; 51.2]	[52; 58]

Source: Adapted from CNI – IBOPE: *Retratos da sociedade brasileira: segurança pública* – (October, 2011) – Brasília: CNI, 2011. 95% Confidence intervals are reported in brackets.

One of the reasons that health may be regarded as the most important problem is that women use health services more frequently than men; 68% female citizens (versus 53% male citizens) report

using health services in the last twelve months. Incredibly, 23% of men have never used health services. In other words, almost a quarter of men never sought a doctor, as can be seen in table 2.

Table 2: The utilization of health services in the last twelve months

	Men	Women
Sought treatment in the last twelve months	53%	68%
	[49.8; 56.2]	[65.2; 70.8]
Sought treatment more than a year ago	23%	17%
	[20.3; 25.7]	[14.7; 19.3]
Never sought treatment	23%	14%
	[20.3; 25.7]	[11.9; 16.1]
Do not know / No answer	1%	1%
	[0.4; 1.6]	[0.4; 1.6]

Source: CNI – IBOPE: *Retratos da Sociedade brasileira: Saúde Pública* – (January 2012) – Brasília: CNI, 2012. 95% Confidence intervals are reported in brackets.

The most utilized health services is outpatient treatment for both male and female citizens. However, women report accessing outpatient treatment more than men, 81% of women versus 75% of men sought care that did not warrant overnight admission into a hospital. On the other hand, men used emergency services noticeably more than women, 9% versus 5%. Men are more likely to seek health services in emergencies. They do not visit doctors for routine screening and check-ups. In contrast, women are more likely to visit a doctor's office either for their own or their children's health problems. These data are coherent with literature findings. Women are more likely to spend household income on health and nutrients. In addition, a mother's income has a bigger effect especially on health outcomes of her children (Thomas 1990; 1994).

Table 3: Types of Health Services utilized in the last twelve months

	Men	Women
Outpatient treatment	75%	81%
	[72.3; 77.7]	[78.6; 83.4]
Laboratory tests	9%	7%
	[7.2; 10.8]	[5.5; 8.5]
Emergency	9%	5%
	[7.2; 10.8]	[3.7; 6.3]
Other services	3%	2%
	[1.9; 4.1]	[1.1; 2.9]
Hospitalization	3%	4%

	[1.9; 4.1]	[2.8; 5.2]
Do not know/No Answer	1%	0%
	[0.4; 1.6]	

Source: Adapted from CNI – IBOPE: *Retratos da Sociedade brasileira: Saúde Pública* – (January 2012) – Brasília: CNI, 2012. 95% Confidence intervals are reported in brackets.

As regards to public security, female and male voters are equally likely to stress the poor quality of public security services. Indeed, approximately 50% of voters evaluate public security as bad or terrible, see table 4.

Table 4: How do you evaluate public security in Brazil?

	Men	Women
Optimal	2%	1%
	[1.1; 2.9]	[0.4; 1.6]
Good	13%	10%
	[10.9; 15.1]	[8.2; 11.8]
Normal	36%	37%
	[33; 39]	[34.1; 39.9]
Bad	23%	23%
	[20.3; 25.7]	[20.4; 25.6]
Terrible	27%	29%
	[24.2; 29.8]	[26.2; 31.8]

Source: Adapted from CNI – IBOPE: *Retratos da sociedade brasileira: segurança pública* – (October, 2011) – Brasília: CNI, 2011. 95% Confidence intervals are reported in brackets.

When asked if the current situation is better, the same or worse as compared to three years ago, female voters are more negative, as can be seen in table 5. Forty percent of women considered the current situation worse than three years earlier with 2011 being the year of the survey and 2008 being the year of reference. However, the difference between women and men is not robust since the confidence intervals of male and female voters overlaps.

Table 5: How is the situation of public security in Brazil compared to 3 years ago?

	Men	Women
Better	16%	13%
	[13.7; 18.3]	[11; 15]
The same	49%	45%
	[45.8; 52.2]	[42; 48]
Worse	34%	40%

Source: Adapted from CNI – IBOPE: *Retratos da sociedade brasileira: segurança pública* – (October, 2011) – Brasília: CNI, 2011. 95% Confidence intervals are reported in brackets.

In spite of a relatively similar share of women and men ranking public security as an important problem, the evidence shows that they have different perceptions about how to punish criminal people and how to prevent crimes. Analyzing data from the survey *Rio contra o Crime* with Rio de Janeiro citizens in 1984, Zaluar (1981) finds that women – of all social classes – are more in favor to actions that rehabilitate criminals through work. And they also identify child protection as an effective criminal prevention policy.

As I have attempted to show in this brief analysis of public opinion survey data, both female and male voters identify health and public security as important social problems for Brazil. This is pattern that is robust over time. In addition, women and men utilize health services differently and women give a greater priority to spending on health than their husbands. Although both female and male voters evaluate public security as an important problem, they have different point-of-views about which are the best solutions to improve public security. In the next section, I will focus on analyzing if the differences in the preferences of women and men in health and public security are statistically robust.

2. Data

This study aims to analyze whether female politicians priorities are aligned with female voters preferences. If female and male voters have different policy preferences, then we expect that female politicians will present different priorities as compared to their male colleagues.

In the first-stage of my analysis, I analyze the preferences of male and female Brazilians voters using a national survey data from 2001⁷. Quotas were used to stratify this sample and a total of 2,255 interviews were undertaken to obtain representativeness separately for the five

⁷ The survey is from *Vox Populi Company* and the data are available *Consórcio de Informações Sociais*. Last access in: March, 2015.

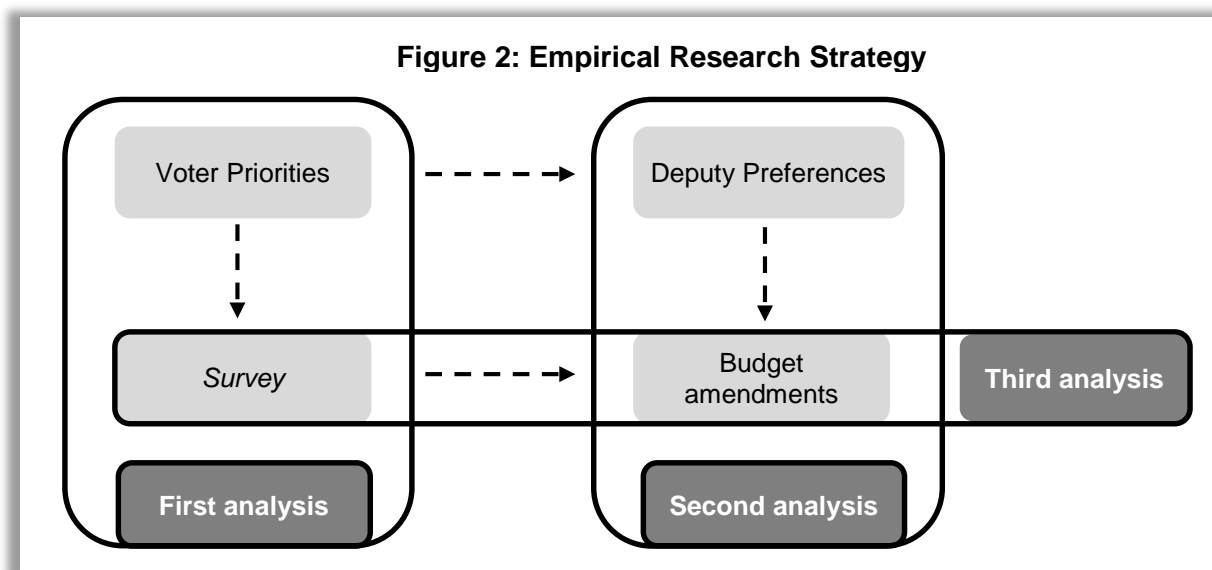
major regions of the country. The results for the adult population were weighted based on 1,986 observations. The interviews were done personally and at home in 26 Brazilian states (including the Federal District, except Amapá) and distributed over 171 municipalities of all sizes, some randomly selected and others included necessarily, such as state capitals. Since voting is mandatory for the Brazilian adult population, I consider survey data as being a representative sample of the Brazilian electorate. To provide further robustness, I will also show that these results are further confirmed in a subsample of the poorest voters based on a survey of the 40% poorest of the population of São Paulo city in different macro-areas of the city.⁸

In the second stage of my analysis, I will analyze the preferences of male and female deputies with respect to resource allocation for health and public security policies. For this purpose, I will use data from the Brazilian Congress.⁹ I collected data about the deputies' characteristics and their policy choices based on the budget amendments proposed over the entire span of the four years in office. The data are from the 53rd Legislature, which corresponds to the representatives that were elected in the 2006 elections who served in office from 2007 to 2010. It should be noted that this legislature stands out because it had one of the highest rates of female representation to date; 8.77% of elected representatives were women.

Based on the results from the first and second analyses, I will compare voter and deputy preferences of the same gender. The research design is summarized in Figure 2.

⁸ This survey was conducted by *CEM-CEBRAP* in partnership with *IBOPE* in November 2004, and it served as tool for the evaluation of public policies. I thank Renata Bichir that made available the survey dataset for this research.

⁹ Data from *Câmara dos Deputados do Brasil* (October, 2013).



Source: Author's analysis.

3. How the Brazilian budget process works

Brazil has a bicameral legislature with 513 deputies and 81 senators. Currently, Brazilian congresswomen occupy 9.94% of seats¹⁰. Federal deputies are elected at the same time for a four-year term in a proportional representation system. The district magnitude varies from 8 to 70 representatives by state. Despite being a multi-party system, an important literature has shown that the internal decision-making process of the Brazilian Congress is characterized by centralized organization and political party coordination (Figueiredo and Limongi, 2002).

In this scenario, the Brazilian public budget is a tool by which the Executive Branch exerts strong control in estimating public revenues and stipulating expenditures. In the budget process, the Executive Branch has exclusive prerogative to introduce budgetary issues. The budget process is composed of three successive steps each originating in a law. First, the Multiyear Plan (*Plano Plurianual* or “PPA”) is valid for four years, next the Law of Budgetary Guidelines (*Lei de*

¹⁰ According to law no. 12034 enacted in 2009, females should comprise 30% of candidates in a party list. However, few political parties have filled this percentage. For more information about the inefficiency of the Brazilian gender quota, see Clara Araújo (2009) Mala Htun (2001; 2002).

Diretrizes Orçamentárias or “LDO”) is valid for one year and, finally, the Annual Budget Law (*Lei Orçamentária Anual* or “LOA”) that describes the government expenditures and revenues for the next year is passed. All of these laws are written by the Executive and approved by Congress. Importantly, although the budget process is fixed, the Executive is not obligated to execute all actions described in the LOA. In general terms, there are two types of expenditure: discretionary and non-discretionary. And Congress can amend discretionary expenditures.

Representatives can modify expenditures in three different ways: by committees, by electoral district delegations and individually. The first two types are called as "collective amendments", because they are the result of negotiations and agreements between members of different political parties. Collective amendments especially do not have restrictions of amount or value. On the other hand, individual amendments have restrictions of amount and value. Between 2007 and 2010, each deputy could present annual budget amendments totaling R\$ 10.75 million on average (2008 annual budget: R\$8 million; 2009 annual budget: R\$10 million; 2010 annual budget: R\$12.5 million; and, 2011 annual budget: R\$12.5 million). Importantly, unlike what happened until before this legislature, deputies were not obliged to comply with a minimum value of amendments destined to the health area during the 53rd Legislature. Each deputy could present amendments to any thematic area which were targeted at directing resources to the government’s priority programs.

As a result, individual budget amendments are an especially good measure for capturing deputy preferences for policy issues during the 53rd Legislature. As highlighted, deputies could present amendments for any thematic area. Deputies face few constraints to follow their own preferences with respect to budget amendments; in opposite to other legislative activities which political parties interfere and exert stronger degrees of control. As noted by Deputy Mara Gabrielli during my interview with her¹¹:

¹¹ This interview was carried out by the author and took place in São Paulo on October 11, 2013.

“As emendas que eu destino, o partido nunca interferiu. Uma coisa que pode acontecer é eu fazer emendas de bancada. (...) Ninguém no partido disse ‘ah, você tem que botar uma emenda aqui’.”

As the testimony of Deputy Telma de Solza¹² further highlights:

*“[The choice by the thematic area of amendments depends on] escolha de vida, do perfil, do gênero.”*¹³

4. *Health and Public Security Amendments*

Nearly all resources for health in the proposed budget amendments were allocated to one of three budget programs: Fundo Nacional de Saúde (FNS), Fundação Nacional de Saúde (FUNASA) and Fundação Oswaldo Cruz (FIOCRUZ). In the 53rd Legislature, the amendments destined to the FUNASA and FNS programs represented 97.76% of health amendments. Health amendments destined to FUNASA provide resources for public sanitation, focusing on the water supply, the sewage system, and the solid residues system. The FNS funds investments related to the physical infrastructure of the Brazilian public health system (SUS) by directing resources to specialized health care and emergency treatments and this represents 90.12% of all resources directed for health programs. Of this total, 59.48% of FNS amendments were for outpatient care and specialized hospital care programs and 20.63% for primary care programs.

While health amendments represent 22% of amendments, public security received only 4% of allocations. Amendments destined for public security and national defense areas were

¹² This interview with the author took place in São Paulo in October 2013.

¹³ Of course, deputies do not make budget amendments without political constraints. Councilors and mayors usually make requests to deputies of the same electoral district to ask for financial resources for hospitals, purchase of equipment and other goods that budget amendments can be directed. In reply to a question about how deputies elaborate amendments, Deputy Mara Gabrilli said, *“Acho que muitos prefeitos e vereadores eles vão lá pedir. Eles chegam mostrando qual é o projeto que eles têm para colocar emendas”*.

coded as such if they refer to funding for programs that target internal and external security governmental actions, e.g. civil and military police. The main program related to security is *Calha Forte* program (Ministry of Defense) that corresponds to 28.8% of security amendments. The *Calha Forte* program aims to expand the presence of Brazilian government in the Amazon region; and one of the actions involves the deployment of military units in the region. Another important security program is the *Sistema Único de Segurança Pública* (Ministry of Justice) that received 10.4% of the amendments directed at public security. This program aims to strengthen coordination between the federal, state and municipal actions in the public security arena.

5. Variables

In the first stage of my analysis, the dependent variable is voter policy preferences. In the national survey, I measure policy preference with the following question: “What do you think should be the policy priority of the next government?”¹⁴ For this question, five different options were provided: a) to improve public health, b) to improve public education, c) to generate jobs, d) to improve public security/to combat violence, or e) to invest more in housing. Among these five problems, 35.7% of voters indicated that health was the most important issue. Public security was a relevant problem for 14.4% of voters.

In the low-income voter survey, the question: “What is the main problem that affects your neighborhood or people that live in your neighborhood?” was used as a measure of voter policy preferences.¹⁵ It is important to note that voters had to choose an issue among five different options in the national survey question. In the low-income voter survey, there was no closed list of options. In the low-income voter survey, 12.5% of voters cited health as the main problem in

¹⁴ In Portuguese: “Qual você acha que deveria ser a prioridade do próximo governo?”.

¹⁵ In Portuguese: “Qual é o principal problema que afeta o seu bairro ou as pessoas que moram no seu bairro?”.

their neighborhood and 17.9% cited public security as the main problem. In this case, public security was a more important problem for a greater share of voters.

The key independent variable is the voter's gender. As control variables, I use the social and economic characteristics that have an impact on the voters' policy priority, these include: age, schooling, familiar income, state, neighborhood, and professional activities.¹⁶

In the second stage of my analysis, the dependent variable is the share of proposed budget amendments directed to health and public security. I have chosen to focus on proposed amendments, and not whether these budgets were eventually authorized, since I am interested in the signaling that representatives choose to employ. I explore whether the allocation of amendments to these categories depends on a politicians' gender, which was coded 1 for female representatives and 0 otherwise. I also examine the influence of past political experience on budget amendment behavior.

As control variables, I also control if the deputy has experience in the "health profession" and "security profession" by coding as 1 those legislators who have past professional experience in these areas and 0 otherwise. I also use a variable to measure "political party affiliation" that indicates whether the representative belongs to a left, center or right spectrum of political parties in the Brazilian Congress.¹⁷ I also control by the share of votes that each deputy received in 2006 elections. Finally, I use a variable that captures the level of health infrastructure in each state – the average of number of health professionals per capita for the period between 2007 to 2010 (number of doctors per 1000 inhabitants) – and the level of public security in each state measured by the homicide rate in 2005.¹⁸

¹⁶ See "Summary Statistics: Voter Characteristics", tables 6 and 7, in appendix.

¹⁷ This analysis was made according to Zucco and Lauderdale (2011)'s ideological classification and also according to the legislative voting of the parties in the Parliament. See table 5.

¹⁸ Data about number of doctors was obtained from Brazilian Ministry of Health and homicide rate from *Fórum Brasileiro de Segurança Pública*.

V. Empirical Strategy

In the analysis that I will do, my hypothesis is that women will prefer more health policy and men security policies. Analyzing the interaction between a politician's gender and political career, I expect that female first-timer politicians in politics will present different policy focus than female politicians that have already held political office. Based on my theory, I predict that those women who have past political experience will focus more on health and those who are first-timers will allocate more budgetary resources towards public security policies.

1. First-stage analysis: National Public opinion data

To analyze the relation between gender and health policy preference, I employ a logistic regression model:

$$Y_i = \alpha + \beta_1 F_i + \beta_2 I_i + \beta_3 F_i * I_i + \beta_4 O_i + \beta_5 S_i + \beta_6 J_i + \beta_7 U_i + \beta_8 A_i + \varepsilon_i,$$

where the dependent variable is the most important policy (Y_i). According to the survey, voters can choose just one among five policy areas as being the one that is the most important problem in their opinion. I estimate whether a voter's gender matters for: i) health policy priority, or ii) public security priority, by estimating a logit model for both policy types.

The independent variables are the respondent's gender (F_i), age (A_i), schooling (O_i), family income (I_i), state (S_i), have a job (J_i), and if the interviewee lives in an urban area (U_i). Finally, I include an interaction term between female and income group ($F_i * I_i$). Unfortunately, in this survey there is no data for political party affiliation.

2. First-stage analysis: Low-income Public Opinion Data

The estimated model for this data is very similar to the national survey model. The difference are the control variables. I also estimate if a voter's gender matters for: i) health policy priority, or ii) public security priority by estimating a logit model for both policy types. The model is the following:

$$Y_i = \alpha + \beta_1 F_i + \beta_2 I_i + \beta_3 F_i * I_i + \beta_4 A_i + \beta_5 P_i + \beta_6 J_i + \beta_7 U_i + \beta_8 S_i + \varepsilon_i,$$

where the dependent variable is the policy preference (Y_i). The independent variables are the respondent's gender (F_i), age (A_i), schooling (S_i), income per capita (I_i), have preference for PT party (P_i), have a job (J_i), and if the interviewee consider his or her neighborhood as a poor area (U_i). As in the prior model, I include an interaction term between female and income ($F_i * I_i$).

3. *Second-stage analysis: Budget Amendments for Health and Public Security*

In order to study the relationship between a representative's gender and allocation for health and public security policy, I estimate linear regression models for each type of public policy: i) health; and ii) public security.

The dependent variable is the percentage of budget amendments allocated to each area relative to the total amount of resources allocated by each deputy ($\frac{Y_i}{Y_{t_i}}$).

$$\frac{Y_i}{Y_{t_i}} = \alpha + \beta_1 F_i + \beta_2 C_i + \beta_3 F_i * C_i + \beta_4 H_i + \beta_5 P_i + \beta_6 D_i + \beta_7 V_i + \varepsilon_i,$$

where the independent variables are a representatives' gender (F_i), past political career experience (C_i), profession (H_i), political party affiliation (P_i), share of votes that the representative received in the 2006 elections (V_i), and the level of health (measured as number of doctors per 1000 inhabitants in the deputy's state) or public security (measured as homicide rate) of each state (D_i).

I also include an interaction term between gender and political career ($F_i * C_i$) to test whether past political experience mediates gender preferences.

VI. Data Analysis

1. Brief descriptive analysis

Table 6 and 7 show a summary of the characteristics of voters. In the national survey, on average, interviewees are 36 years old, and have only primary school level education. Most of the interviews are employees living in urban areas who earn between one to five minimum wages. In the low-income voters sample, one quarter identify with the PT party (24.13%) and a little more than half of the interviewees are not employed (51.53%). More than half of the interviewees perceive their neighborhood as being poor or a slum. Median income per capita is R\$ 160, and the median interviewee did not finish middle school (that means the *oitava série do ensino médio*).

Tables 8 to 11 present a summary of the characteristics of representatives to the House of Representatives. Men are reelected more often than women. The rate of reelection is 36.17% for female deputies versus 45.84% for male deputies and this difference is significant statistically at an 80% confident interval. In general, male deputies have more schooling as a greater percentage have completed graduate studies. With respect to the number of votes, male politicians win with more votes than females. On the other hand, congresswomen are in greater proportion among those that are in the government coalition. There is also a greater proportion of PT congresswomen in this legislature (19% versus 15% of male deputies). In the 2006 elections, the PT won the presidential election. The percentage of female deputies in the government coalition is greater than the percentage of male representatives (83% against 74%). More than 50% of female representatives belong to the four largest parties in Congress (PT 15%, PMDB 18%, DEM 12%, and PSDB 11%). Almost half of congresswomen (46.94%) are in office for the first time,

while 39.58% of congressmen are first-timers. This evidence seems to support the argument that female politicians face more obstacles than male politicians to win elections and be reelected.

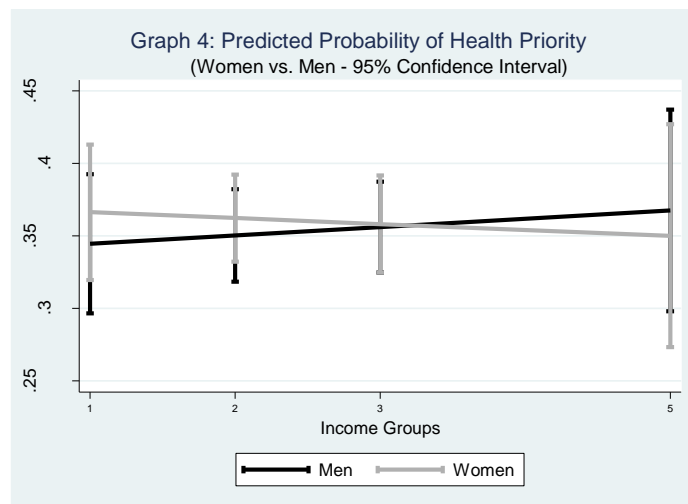
In terms of profession, 42.86% of female legislators worked in the education arena and 22.45% identify themselves as civil servants prior to entering Congress. Among male deputies, 39.96% worked in professions related to the economy and 26.83% were in the legal profession. Regarding health professions, 18.37% of congresswomen and 14.29% of congressmen are health professionals. Nevertheless, the results show that the proportion of health professionals between female and male deputies is not statistically different. In the Brazilian population, 16.89% of women are employed in education, health and social arenas, 16.43% in domestic service and 40.9% in the economy and construction areas. For men, 58.4% work in economy and construction area, 21.49% in agriculture and 7.22% in transport and communication area. The proportion of male deputies that are education, health or social professionals is about 37.07%, but among Brazilian males this proportion is 3.61%. The proportion of female legislators in education, health and social area is about 69.39% against 16.89% for the Brazilian female population. In summary, there is some evidence to indicate that a greater proportion of deputies work in professions related to education, health and social issues as compared to the proportion of workers in the population who dedicate themselves to these sectors. However, it is more impressive that among female politicians 70% of them are professionals from these areas.

2. First-stage analysis: Voter Preferences

A preliminary analysis with a chi-squared test with 95% confidence suggests that there is no statistically significant difference between a voter's gender and policy preference in both health and public security policy. Such result is confirmed by the national survey data and the low-income voters public opinion data, as can be seen in tables 13, 14, 15 and 16. Health issue is not a more relevant for women than for men. The same interpretation can be applied for public security problem.

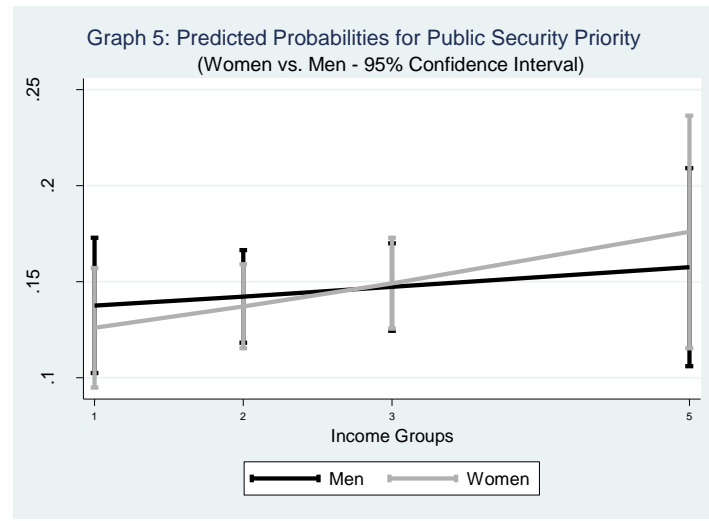
2.1. First-stage analysis: National Public Opinion Data

In logistic regression models, controlling for additional differences among voters, the results confirm, with 95% confidence, that there are no difference in how female voters view health and public security (see table 17). Age is the most relevant factor. This is an expected finding because health becomes a relevant issue as voters become older. An old man needs more health services than a young man. When income varies from an individual receiving 1 minimum wage (group 1) to 20 or more minimum wages (group 5), it is remarkable that women and men health priorities overlap. The result sustains for different income groups, as can be seen in graph 4.



Source: Author's analysis. Note: Income groups are (1) up to one minimum wage, (2) up to five minimum wages, (3) up to ten minimum wages and (5) 20 or more minimum wages. There are no observations for group 4, from ten to twenty minimum wages.

Analyzing public security policy, our findings are similar to that found in the health analysis: there is no significant difference between women and men over different income groups, as can be seen in graph 5.



Source: Author's analysis.

Interestingly, the age of the voter is also the variable that impacts the preference for public security policy. In contrast with health priority, young voters identify public security policy as a serious problem. A 16-year-old woman has significantly more chance to indicate public security as the main problem in country than does a 70-year-old woman.

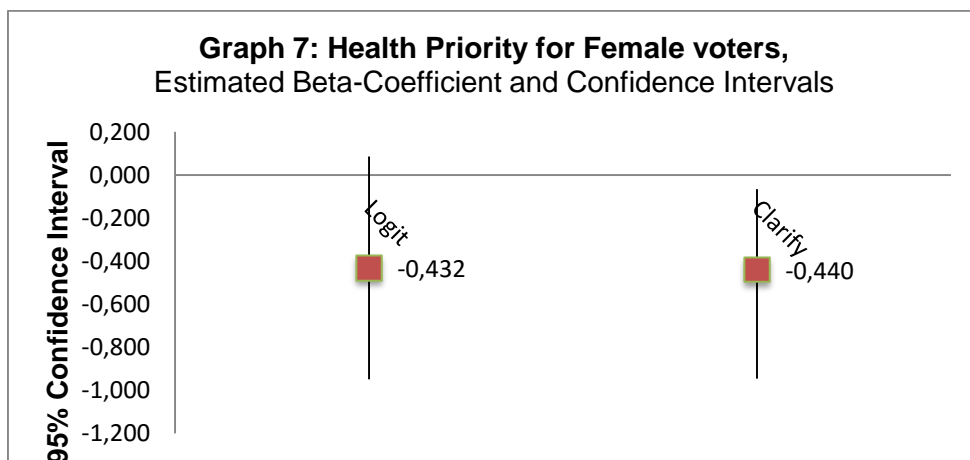
As conclusion of this first analysis using a national public opinion data, I can highlight that a voter's gender is not a relevant characteristic to explain the preference for health and public security as priority issues. The life cycle of a voter is an important attribute to understanding whether one identifies either issue as the most important problem. Older people evaluate health as the most important issue and young people say that public security is the most relevant problem.

2.2. First-stage analysis: Low-Income Voters

The results show that female voters are not different in the share who identify health and public security as the most important problems (see table 18). The income level of a voter is important for shaping whether health is the most important problem. The relatively poorest people are more likely to indicate that health as a priority as compared to the relatively richer poor. But, when we analyze gender, the confidence intervals overlap showing that women and men do not

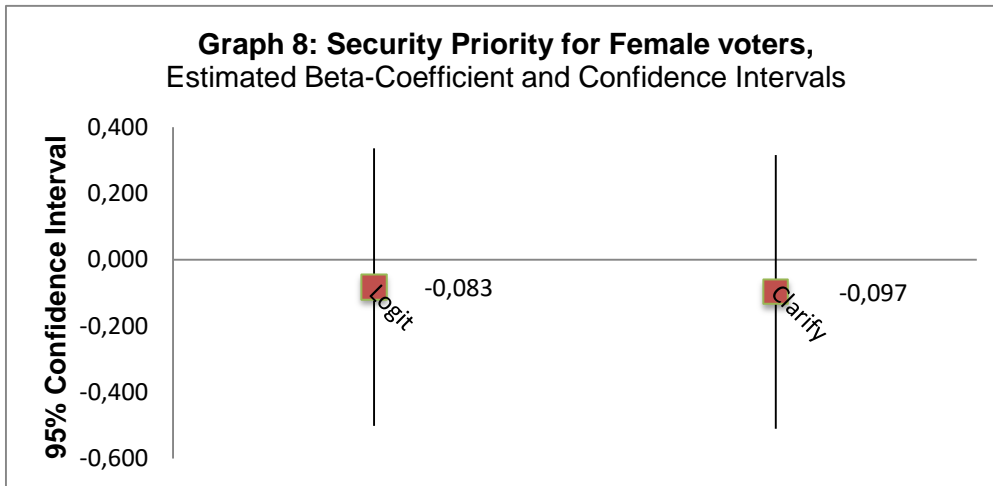
present different opinions about health priority even when income varies from R\$ 100 to more than R\$ 250 per capita, see graph 6 in appendix.

In order to examine the robustness of the results, I simulate values of the variable voters' gender using Clarify program. In the graph 7, I report the estimated coefficients and the confidence intervals for the voter's gender using a logistic model and Clarify simulations. The findings are striking. In fact, female voters are significantly less likely to indicate health as an important issue than male voters.



Source: Author's analysis

Analyzing the identification of public security as the most important problem, the results show that female voters do not evaluate this issue differently from males, see graph 8. The voters age is a relevant factor, but differently from the national survey's results, older poor people are more likely to evaluate public security as the most relevant problem in their neighborhood.



Source: Author's analysis.

3. Second-stage Analysis: Budget Amendments for Health and Public Security

In the second stage analysis, I examine if there are differences in how elected representatives allocate their amendments to health and public security programs depending on gender and past political experience. Overall, male deputies propose more amendments for health policies than women (22.9% vs. 17.9%). However, a Student's t test comparing the two proportions with a 95% confident interval indicates that there are no statistically significant differences between female and male representatives with respect to allocation by health and public security policies.¹⁹ The results indicate that a female deputy is just as likely to propose amendments in these areas as will be a male deputy.

3.1. General Profile of Deputies: Political Experience

Data reported by the *Brazilian Legislative surveys* (Power and Zucco, 2011) indicate that almost 60% of deputies agree that holding an executive office is better than a parliamentary seat. These results corroborate the discussion of Samuels (2003) about political ambition in the

¹⁹ See table 19 and 20.

Brazilian House of Representatives. When there is a conflict between the interests of one's region and the political party, most of the deputies say that they vote responding to local needs. Moreover, more than 90% of them agree that responding to voter demands and helping mayors and local leadership are decisive actions for future electoral success. For 95.1% of deputies, the proposition of budget amendments and their disbursement are meaningful for succeeding in their future election aspirations.

Analyzing data from the 1990, 1993, 1997, 2001, 2005, 2009 and 2013 waves of this survey, we can observe that 30% of federal deputies had already served as a state secretary and 4.3% had held the post of minister. There is a strong degree of incumbency as 85.5% of respondents had served as a federal deputy. But only 15.4% of them had been a federal senator. At the state level, 38.5% of them had held a state legislative seat and just 8.1% of deputies had been previously served as state governor or vice-governor. In terms of experience at the municipal level, 15.8% were mayors. Most deputies have past political experience prior to their current term in the House of Representatives; the most common prior post is holding a legislative seat or serving as a secretary in a governor's cabinet.²⁰

Examining the data that I collected for the 53rd Legislature, most deputies already had served in the House of Representatives. Impressively, 80% of representatives, both female and male, ran for reelection in the 2010 election, but less than 60% of these deputies were re-elected. Roughly 30% of representatives have experience as a city councilor or state deputy. Almost a quarter of them were mayors. However, few deputies were previously Senator, Governor or Vice-governor. Almost half of deputies were secretary or ministers.

²⁰ We would like do more robust analysis with the Brazilian Legislative surveys data, but unfortunately they do not present a question asking for the interviewee gender.

Analyzing the differences between share of women and men, I can conclude that female deputies have past political experience very similar to males. By the end of the term, the share of female deputies that were nominated to be a secretary was two times higher than male deputies.

Table 21. Political Experience of the Brazilian Deputies from 53rd Legislature

	Male Deputy	Female Deputy	Difference
<i>Reelection</i>			
Reelected in 2006 election	0.456 [0.414; 0.499]	0.34 [0.204; 0.476]	0.116 [-0.027; 0.261]
Ran for reelection in 2010	0.800 [0.758; 0.842]	0.82 [0.671; 0.968]	-0,02 [-0.165; 0.126]
Reelected in 2010 election	0.599 [0.557; 0.640]	0.58 [0.438; 0.722]	0.012 [-0.124; 0.161]
<i>Term</i>			
First-timer	0.394 [0.352; 0.435]	0.46 [0.317; 0.603]	-0,066 [-0.208; 0.076]
<i>Elected office</i>			
City councilor	0.308 [0.270; 0.348]	0.32 [0.186; 0.454]	-0,011 [-0.146; 0.123]
Mayor and vice-mayor	0.240 [0.204; 0.276]	0.2 [0.085; 0.315]	0.040 [-0.083; 0.164]
State deputy	0.360 [0.320; 0.401]	0.32 [0.186; 0.454]	0.040 [-0.099; 0.180]
Federal deputy	0.610 [0.569; 0.651]	0.54 [0.397; 0.683]	0.070 [-0.072; 0.212]
Senator	0.028 [0.014; 0.042]	0.04 [-0.016; 0.096]	-0,012 [-0.061; 0.036]
Governor and vice	0.046 [0.028; 0.064]	0.02 [-0.02; 0.06]	0.026 [-0.033; 0.086]
<i>Secretary or minister</i>			
Held an office before 2006 election	0.477 [0.435; 0.519]	0.46 [0.317; 0.603]	0.017 [-0.128; 0.162]
Held an office at the end of term	0.074 [0.047; 0.101]	0.14 [-0.001; 0.281]	-0,066 [-0.164; 0.032]

Source: Data collected in Câmara dos Deputados website and in the personal websites of deputies. Note: 95% Confidence Intervals, which are reported in brackets.

In the next sub-sections, I will explore the relation between a politician's gender and her past political experience and their impact on policy choice. I try to measure political experience

in different ways: if the deputy never occupied a political seat (first-timers)²¹, if occupied a seat as a city councilor, mayor, state deputy, federal deputy, senator, governor or if the deputy held a secretary or minister cabinet post in the past.

3.2. Political Experience as Mayor

Among national representatives to the legislature, 20% of female deputies (10) and 24% of male deputies (130) have experience as mayors or vice-mayor. In the following tables, I present the results of the predicted share of proposed budget amendments for each public policy type.

Table 22. The determinants of budget allocations for health policy depending on the level of political experience

	Male Deputy	Female Deputy
No experience in local government	0.222*** [0.186; 0.258]	0.255*** [0.174; 0.337]
Experience as mayor or vice-mayor	0.230*** [0.200; 0.26]	0.205*** [0.156; 0.255]

Source: Authors' analysis.

Regarding to health amendments, there is no distinction between a politician's gender and political experience. Deputies are equally likely to propose amendments for health. One explanation about why female and male deputies target more amendments to health is that health policy is a valence issue for Brazilian voters. In addition, a significant share of the Brazilian budget is allocated to health, thus it may be easier for deputies to present amendments for health since there is a greater chance to be approved. As the results show, female politicians that who were mayors or vice-mayors in the past are more likely to allocate less resource for security policy.

Table 23. The determinants of budget allocations for public security policy depending on the level of political experience

	Male Deputy	Female Deputy
No experience in local government	0.001 [-0.023; 0.022]	-0.015 [-0.067; 0.037]

²¹ I only classify as political experience the elective offices. In this sense, I ignore if the deputy occupied an office in political party.

Experience as mayor or vice-mayor	0.010 [-0.009; 0.029]	-0.031* [-0.062; 0.001]
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Source: Authors' analysis.

3.3. Political Experience as Senator

Among the deputies, few of them were elected senator; 2.77% of men (15) and 4% of women (2). Getting a seat in Senate is more challenging. According to Samuels (2003), most deputies would seek a senator seat instead of remaining in House of Representatives if they had the opportunity.²²

Table 24. The determinants of budget allocations for health policy depending on the level of political experience

	Male Deputy	Female Deputy
No experience	0.223*** [0.199; 0.259]	0.219*** [0.173; 0.265]
Experience as Senator	0.245*** [0.174; 0.316]	0.166* [-0.007; 0.338]

Source: Authors' analysis.

Corroborating the previous results, both female and male politicians focus on health area to allocate budget amendments. Male deputies that already had a seat in Senate present significantly more amendments for security policy than female deputies that already were elected as senator.

Table 25. The determinants of budget allocations for public security policy depending on the level of political experience

	Male Deputy	Female Deputy
No experience	0.008 [-0.011; 0.027]	-0.026* [-0.056; 0.003]
Experience as Senator	0.052** [0.006; 0.097]	-0.002 [-0.113; 0.108]

Source: Authors' analysis.

²² My analysis do not focus on what a deputy does after the end of the legislature, but I understood that such analysis is relevant to understand a politician's legislative behavior.

3.4. Political Experience as Governor

The analysis with governor data suffers the same problem that happens with the analysis about senators. There are few observations and the number of women is extremely small. Only 18 male deputies were elected as governor before, and among the female deputies only 1. Due to the small number of observations, the results are fragile.

Table 26. The determinants of budget allocations for health policy depending on the level of political experience

	Male Deputy	Female Deputy
Never was elected as governor	0.229*** [0.200; 0.259]	0.220*** [0.175; 0.266]
Experience as governor	0.278*** [0.217; 0.338]	0.186 [-0.065; 0.436]

Source: Authors' analysis.

Deputies that never were governor propose more amendments for health area. Again, female deputies present less security amendments.

Table 27. The determinants of budget allocations for public security policy depending on the level of political experience

	Male Deputy	Female Deputy
Never was elected as governor	0.008 [-0.010; 0.027]	-0.025* [-0.054; 0.004]
Experience as governor	0.010** [-0.028; 0.049]	-0.163** [-0.324; 0.002]

Source: Authors' analysis.

3.5. Political Experience as local councilor

In many cases, getting elected to a local council seat is the first step in a career ladder in politics. Among deputies in the 53rd Legislature, 32% of female representatives (16) and 30.9% of male representatives (167) have past political experience as local councilors.

Table 28. The determinants of budget allocations for health policy depending on the level of political experience

	Male Deputy	Female Deputy
Never was elected as local councilor	0.236*** [0.204; 0.267]	0.214*** [0.162; 0.265]
Experience in city council	0.220*** [0.188; 0.252]	0.227*** [0.160; 0.294]

Source: Authors' analysis.

Here once again, I find that a politician's gender or experience as a local councilor is not relevant for explaining the allocation of amendments in these two areas.

Table 29. The determinants of budget allocations for public security policy depending on the level of political experience

	Male Deputy	Female Deputy
Never was elected as local councilor	0.007 [-0.013; 0.027]	-0.027 [-0.060; 0.006]
Experience in city council	0.009 [-0.011; 0.030]	-0.027 [-0.071; 0.016]

Source: Authors' analysis.

3. 6. *Political Experience as State Deputy*

Among the female deputies, 32% of them (16) and 36.04% of the male deputies (195) already occupied a seat as state deputy.

Table 30. The determinants of budget allocations for health policy depending on the level of political experience

	Male Deputy	Female Deputy
No experience	0.236*** [0.205; 0.266]	0.222*** [0.171; 0.274]
Experience as state deputy	0.216*** [0.183; 0.249]	0.203*** [0.136; 0.270]

Source: Authors' analysis.

The results of analysis about political experience as state deputy corroborate with previous results. But, now female representatives that never had a seat as state deputy allocate less amendments for security policy.

Table 31. The determinants of budget allocations for public security policy depending on the level of political experience

	Male Deputy	Female Deputy
No experience	0.008 [-0.012; 0.027]	-0.040** [-0.073; -0.007]
Experience as state deputy	0.008 [-0.013; 0.028]	-0.001 [-0.044; 0.042]

Source: Authors' analysis.

3.7. *Political Experience as Federal Deputy*

A little more than half of the female deputies already occupied a seat in the Brazilian House of Representatives. Among male representatives, 61% of them had been elected as federal deputies in elections before 2006.

Table 32. The determinants of budget allocations for health policy depending on the level of political experience

	Male Deputy	Female Deputy
Never was elected as federal deputy	0.226*** [0.194; 0.257]	0.212*** [0.154; 0.270]
Experience in Câmara dos Deputados	0.232*** [0.201; 0.263]	0.222*** [0.166; 0.278]

Source: Authors' analysis.

The results corroborate previous results about health. Among female deputies, those that already occupied a seat in House of Representatives propose less budget amendment to security. This finding is aligned with my hypothesis that female politicians with political experience focus less on security issues.

Table 33. The determinants of budget allocations for public security policy depending on the level of political experience

	Male Deputy	Female Deputy
Never was elected as federal deputy	0.005 [-0.015; 0.026]	-0.000 [-0.036; -0.037]
Experience in Câmara dos Deputados	0.010 [-0.010; 0.030]	-0.052*** [-0.088; -0.016]

Source: Authors' analysis.

3.8. *Political Experience as Secretary or Minister*

Secretary and minister are political offices appointed by elected politicians; in general an appointment takes into account the expertise of the deputy on the issue and political aspects related to the deputy's party affiliation. On average, almost half of the deputies elected in 2006 election have experience as a member of a governor's cabinet. Surprisingly the share of female deputies that had a secretary appointment in the past is very similar to the share for males.

Table 34. The determinants of budget allocations for health policy depending on the level of political experience

	Male Deputy	Female Deputy
Never was elected as secretary	0.224*** [0.193; 0.255]	0.221*** [0.166; 0.276]
Experience as Secretary or Minister	0.235*** [0.203; 0.268]	0.213*** [0.153; 0.274]

Source: Authors' analysis.

The results reported in table 35 are very similar to results from previous analysis. Regarding to security policy, female politicians that were a member of a mayor's, governor's or president's cabinet are more likely to allocate more amendments to this area than male deputies.

Table 35. The determinants of budget allocations for public security policy depending on the level of political experience

	Male Deputy	Female Deputy
Never was elected as secretary	0.012 [-0.007; 0.032]	-0.001 [-0.036; 0.033]
Was elected as secretary	0.001 [-0.019; 0.022]	-0.062*** [-0.101; -0.024]

Source: Authors' analysis.

3.9 *First-Timers in Politics*

Most of the deputies elected in 2006 had a political experience before the term. Only 16% of female deputies (8) and 12.4% of male deputies (67) never held a political office. I expect that as first-timers in politics these deputies face a number of challenges in Congress and consequently their legislative performance will be different. Among the first-timers, I expect that female deputies will present a higher share of public security budget amendments. In addition, I expect that female deputies that have past political experience will focus on health policy.

Table 36. The determinants of budget allocations for health policy depending on the level of political experience

	Male Deputy	Female Deputy
First-timer	0.239*** [0.199; 0.279]	0.229*** [0.141; 0.316]
Past political experience	0.226*** [0.196; 0.257]	0.213*** [0.164; 0.262]

Source: Authors' analysis.

The results from the table 36 do not support the hypothesis that first-timer female politicians allocate a lower proportion of amendments for health policy. The results show that there is no difference between female and male deputies depending on their past political experience.

Table 37. The determinants of budget allocations for public security policy depending on the level of political experience

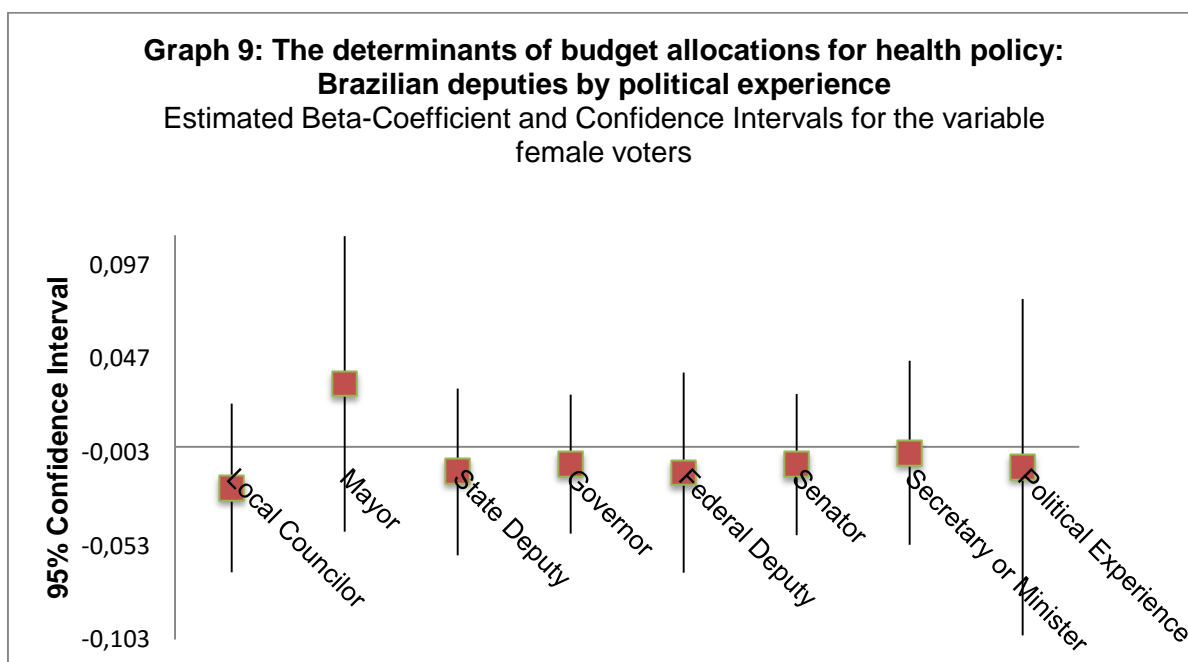
	Male Deputy	Female Deputy
First-timer	0.004 [-0.022; 0.029]	0.033 [-0.022; 0.089]
Past political experience	0.006 [-0.013; 0.025]	- 0.042*** [-0.073; -0.011]

Source: Authors' analysis.

Examining the results from table 37, we can observe that a female deputy that has political experience allocates less money for security policy.

3.10. Discussion

Analyzing the amendments for health policy, the results show that a politician's gender is not a determinant factor to explain the share of resources that a politician proposed for this area. This finding is true for politicians regardless of past political experience regardless of type, see graph 9.



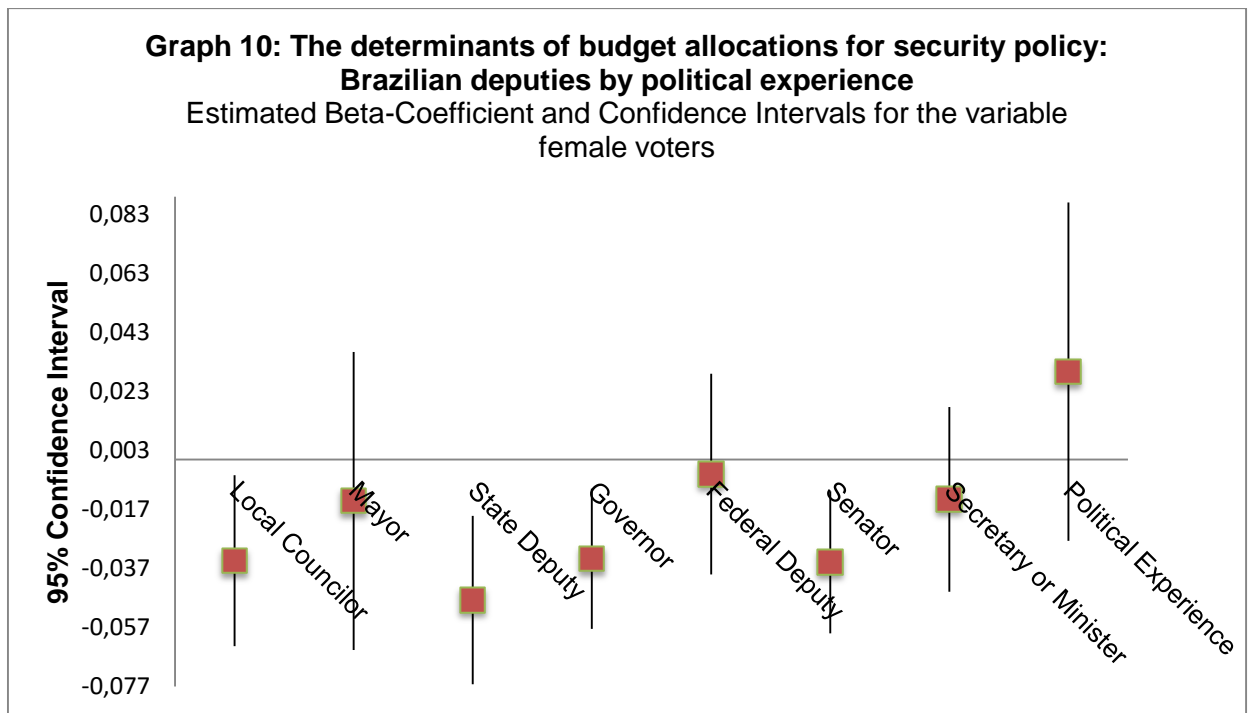
Source: Author's analysis

Regarding the control variables, politicians that are healthcare workers and belong to a right political party allocate more amendments for health care policy. The number of votes in the 2006 election is also a good predictor of the likelihood to be a deputy with a higher level of health allocations; politicians that received a high share of votes in the 2006 election present more amendments for health as can be seen in table 38 (in appendix).

The results from the security amendments analysis show that female politicians with past political experience as local councilor, state deputy, governor or senator allocate a share significantly smaller share of resources than men. Such finding gives support for my hypothesis that female politician that already had a political experience will focus less in security policy.

Analyzing the results from the regression for security policy, politicians that belong to a center or right-wing party propose more security amendments than deputies from a left party. As can be expected, right-wing party deputies invest in conservative policies, such as public security amendments, but they also direct more resources to health. As I said before, one explanation about why female and male deputies target more amendments to health is that health policy is a valence issue for Brazilian voters, in other words, it is relevant for both male and female voters. Besides that, a significant share of the Brazilian budget is allocated to health area, thus it may be easier for deputies to present amendments in this area if there is a greater chance to be approved.

Finally, the results show that deputies that have experience in security, e.g. policeman, present more security amendments.



Source: Author's analysis

VII. Conclusion

Among voters, an important factor that seems to differentiate the propensity to prefer a certain type of policy is not gender, but age. Older voters are more likely to rank health as the most relevant problem. On the other hand, young people consider public security to be the most important problem. For low-income voters, age has the opposite effect. Older voters evaluate public security as the most important problem in their neighborhood as compared to younger voters. Income is also a significant factor. Poorer voters evaluate health as the most relevant problem in their neighborhood as compared to relatively richer voters. In summary, the results suggest that there are no statistical differences between women and men in relation to their preference for health or public security policy.

Regarding the allocation of amendments to these two areas by deputies, the results show that a politician's gender is not an important factor. However, female deputies that have past political experience propose fewer amendments for security policy. Experience is a relevant factor mainly for congresswomen. This result suggests that first-timer female representatives may be allocating a greater share of resources to areas traditionally characterized as *masculine* to gain the favor of voters.

I have sought to examine if female voter preferences are aligned with congresswomen policy choices in this master's thesis. In the last decades, there is a growing literature discussing the importance of the descriptive representation of women in parliaments. One of the most common arguments used to advocate a bigger share of women in politics is that female politicians have a substantive impact on policy results. In this sense, studies have demonstrated that female politicians are less corrupt than their male counterparts (Dollar, Fisman and Gatti, 2001), they are also more effective (Anzia and Berry, 2011) and they produce more social policy (McDonagh, 2009).

The findings of this study do not support the results of this literature. First, there is not a substantial difference between the policy preference of male and female voters. Both prefer equally health and security policies. Second, the results suggest that female deputies do not focus

on health policy more than their male counterparts. One explanation about why female and male deputies target health amendments is that health policy has shown a valence issue for Brazilian voters, in other words, it is relevant for both male and female voters. Besides that, a significant share of Brazilian budget is destined to health area, thus it is easier to present amendments in such area if there is a greater chance to get an amendments approved.

Our results may be interpreted as evidence confirming that the challenge of representation is not an easy task for female legislatures in the Brazilian Congress and especially for female first-timers in politics. In addition to representing female preferences, women politicians must first show that they have the same ability of men by proposing policy in *masculine* area, e.g. security policy. Female politicians must also show that have the same ability and competence as male congressmen in order to get reelected.

There are several ways that future research on this issue can improve what we know about political behavior of female politicians. The first is by examining the political ambition of female politicians. Here, I only analyze a deputy's political experience, but it is important to examine which political office a deputy ran in the end of the term and if she had successes or just retired. Political ambition has been shown to be a promising research field especially for studies regarding female politicians. As we know, there is a significant gender gap in nascent political ambition (Lawless 2015), but once elected female politicians show the same political ambition as their male counterparts (Palmer and Simon 2010). In this sense, I argue that it is important to examine the impact of political experience and the political ambition on public policy choice. In order to get this, it is relevant to analyze the female and male politicians behavior over time and not only one term as I have employed here.

In this study, I have also only focused on two policy areas –health and security. The selection of these issues was justified, as these are areas identified by voters as being two of the most important problems for the nation. Rather than focusing on salient issues, further research examining if there are differences between males and females on other issues (education, for example) are important to undertake to see if the findings here are robust to other social policy

areas in particular. In order to do so, data will need to be collected at the voter and deputy-level. Unfortunately, there is very limited public opinion data in Brazil that includes information on public policy preferences. Nevertheless, this study has demonstrated that this is a promising area for which greater attention needs to be directed.

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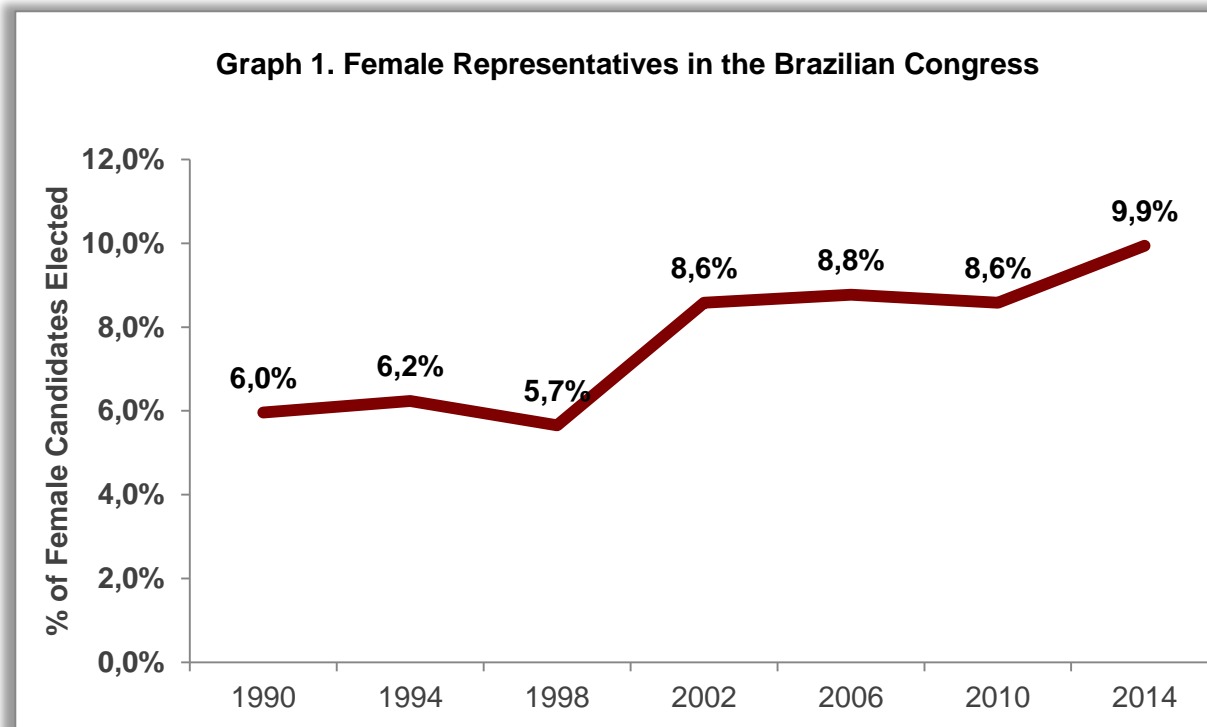
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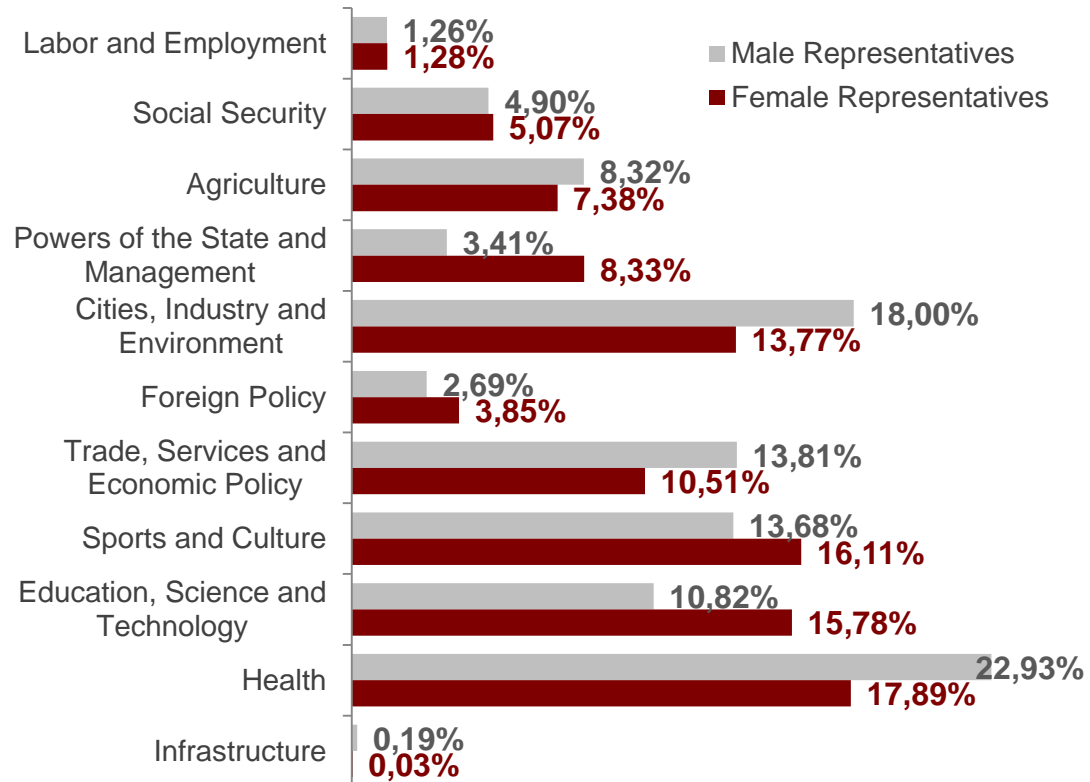
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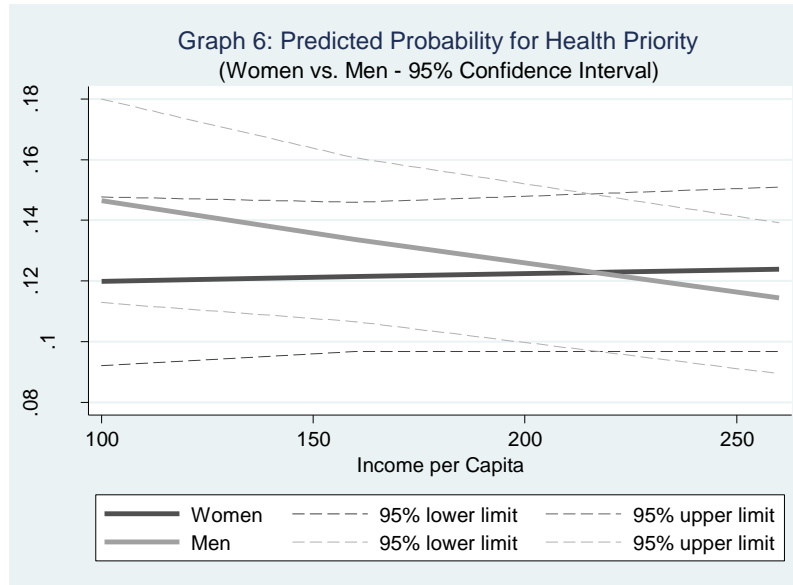


Source: Inter-Parliamentary Union, 2015.

Graph 3. Budget Amendments by thematic area, 53th Legislature



Source: Câmara dos Deputados do Brasil, 2013.



Source: Author's analysis.

Table 5. Classification of Political Ideology of Political Parties

Political Ideology	Political Party
Left	PC do B, PDT, PMN, PPS, PSB, PSOL, PT, PV
Center	PMDB, PRB, PRTB, PSDB
Right	DEM, PT do B, PFL, PHS, PSC, PTB, PP, PR, PTC

Table 6. Summary Statistics: Characteristics of Voter – National Survey

Variables	Observations	Mode/Mean	Frequency of mode/mean
Gender	2,255	Female	1,153
Age	2,255	36 years old	(median)
Schooling	2,255	Illiterate though Primary School	963
Familiar Income	2,255	One to five Minimum Wages	1,187
State	2,255	São Paulo	423
Urban Area	2,255	Urban	1,844
Professional Activity	2,255	Employee	826

Table 7. Summary Statistics: Characteristics of Voter – Low income Voters Survey

Variables	Observations	Mode/Mean	Frequency of mode/mean
Gender	1,500	Female	756
Age	1,500	37 years old	(median)
Schooling	1,500	Middle school: fifth until seventh grade level	364
Income per capita	1,500	R\$ 160 per capita	(median)
Neighborhood	1,500	Living in a poor neighborhood ²³	921
Job	1,500	Have a job ²⁴	727
Preference by political party	1,500	Have preference by PT party	362

²³ Neighborhood perceived by the interviewee as poor or slum.

²⁴ Student, unemployed, housewife, retired were classified as do not have a job.

Table 8. Summary Statistics: Characteristics of Congress people

Variables	Observations	Mode	Frequency of mode		
Schooling	575	Undergraduate degree	467		
Profession	575	Business	213		
Political Party	575	PMDB	103		
Gender	575	Men	528		
Term	575	First-term	314		
Party political position in government	575	Coalition	429		
		Mean	Standard Deviation	Minimum	Maximum
Number of votes	575	97,768	69,216	3,980	739,827
Income per capita	575	708	238	361	1,529

Source: Data from Câmara dos Deputados.

Table 9. Comparison between congressmen and congresswomen

Variables	Congresswomen	Congressman	Difference
Schooling - Graduate Studies	0.19	0.27	-0.08
Reelection	0.36	0.46	-0.10
Coalition	0.83	0.74	0.09
Number of Votes	88,170.06	98,622.23	-10,452.17
Political Party			
PT	0.19	0.15	0.04
PMDB	0.17	0.18	-0.01
PP	0.06	0.08	-0.01
PPS	0.02	0.03	-0.01
PC do B	0.11	0.02	0.09
PSB	0.13	0.05	0.08
PR	0.15	0.08	0.07
DEM	0.04	0.12	-0.08
PDT	0.02	0.05	-0.02
PSDB	0.09	0.11	-0.02
PSOL	0.02	0.01	0.02
PTB	(zero)	0.05	-0.05
PSC	(zero)	0.03	-0.03
PV	(zero)	0.03	-0.03
PMN, PHS, PRB, PTC, PRTB, PT do B	(zero)	0.04	-0.04

Notes: This table represents a comparison of the political and social characteristics between congressman and congresswoman. These statistics were computed for 575 deputies (included substitutes). Column 1 reports the means for the 47 women. Column 2 reports the means for the 528 men. Column 3 represents the differences in mean. The values are in percentage, except for the variable "Number of Votes".

Table 10. Number of Terms in office (in %), by gender

Terms	Congressmen	Congresswomen
First	39.58	46.94
Second	19.88	30.61
Third	14.67	12.24
Fourth	12.74	8.16
Fifth	7.53	2.04
Sixth	3.67	0
Seventh	.77	0
Eighth	.58	0
Ninth	.39	0
Tenth	.19	0
Total	100	100

Source: Data for the 53rd Legislature of the Câmara dos Deputados.

Table 11. Legislators Profession (in %), by gender

	Men	Women
Education	19.69	42.86
Civil Servant	11.97	22.45
Economy	39.96	20.41
Health	14.29	18.37
Law	26.83	8.16
Social	3.09	8.16
Communication	9.46	8.16
Agriculture	12.74	4.08
Engeneering	14.09	2.04
Religion	2.7	0

Source: Data for the 53rd Legislature of the Câmara dos Deputados.

Table 12. Profession of Brazilian's people (in %), by gender, in 2007

	Men	Women
Education, health and social	3.6	16.9
Civil Servant	5.3	4.5
Economy and Construction	58.4	40.9
Transport and Communication	7.2	1.5
Agriculture	21.5	13.9
Domestic services	0.8	16.4
Poorly specified activities	0.3	0.1
Other collective, social and personal services	2.8	5.8

Source: Data from Fundação Carlos Chagas, Activities and occupational structure in 2007

Table 13. Health Policy: Preference by Voter's Gender – Chi-square results (National Survey)

	No Policy	Policy	Total
Men	711	391	1,102
Women	738	415	1,153
Total	1449	806	2,255
			Pearson chi2(1) = 0.0643 P- Value= 0.80

Source: Data from Vox Populi survey.

Table 14. Security Policy: Preference by Voter's Gender – Chi-square results (National Survey)

	No Policy	Policy	Total
Men	943	159	1,102
Women	988	165	1,153
Total	1931	324	2,255
			Pearson chi2(1) = 0.006 P- Value = 0.936

Source: Data from Vox Populi survey.

Table 15. Health Policy: Preference by Voter's Gender – Chi-square results (Low income Voters Survey)

	No Policy	Policy	Total
Men	653	91	774
Women	662	94	756
Total	1315	185	1500
			Pearson chi2(1) = 0.0142 P- Value= 0.90

Source: Data from CEM-CEBRAP-Ibope survey.

Table 16. Security Policy: Preference by Voter's Gender – Chi-square results (Low income Voters Survey)

	No Policy	Policy	Total
Men	607	137	744
Women	628	128	756
Total	1235	265	1500
			Pearson chi2(1) = 0.567 P- Value = 0.452

Source: Data from CEM-CEBRAP-Ibope survey.

Table 17. The determinants of policy priorities: Brazilian's voters – National Survey

Variable	Voters' Preference by policy type	
	Health	Security
<i>Interviewee's Characteristics</i>		
Women	0.211 (0.221)	-0.118 (0.300)
Urban	-0,074 (0.129)	0.203 (0.195)
Age	0.014*** (0.003)	-0.013*** (0.005)
Women*Income	-0,067 (0.081)	0.036 (0.104)
<i>Familiar Income</i>		
Until one minimum wage	0.116 (0.146)	0.131 (0.212)
One to five minimum wages	0.355* (0.192)	0.245 (0.266)
Five to ten minimum wages	0.055 (0.248)	0.233 (0.339)
<i>Schooling</i>		
Until Primary school	0.097 (0.134)	-0.182 (0.181)
Primary school fifth to eighth grade level	0.029 (0.128)	0.018 (0.163)
<i>Professional Activity</i>		
Employee	0.279 (0.262)	-0.024 (0.346)
Self-employed	0.179 (0.266)	0.212 (0.349)
Persons who are not gainfully employed	0.177 (0.268)	0.227 (0.354)
<i>States</i>		
Acre	1.006* (0.519)	-0.457 (0.771)
Alagoas	0.942** (0.387)	-1.033 (0.746)
Amazonas	-1.162*** (0.423)	-0.628 (0.491)
Bahia	0.098 (0.202)	-0.262 (0.278)
Ceará	0.496* (0.258)	-0.265 (0.370)
Distrito Federal	-0,176 (0.345)	-0.658 (0.492)
Espírito Santo	0.428 (0.387)	0.352 (0.455)
Goiás	0.111 (0.222)	-0.214 (0.295)
Maranhão	0.139 (0.294)	-0.974* (0.538)
Minas Gerais	0.133 (0.174)	-0.606** (0.252)
Mato Grosso do Sul	-0,346 (0.355)	-0.116 (0.433)

Mato Grosso	0.303 (0.283)	0.278 (0.343)
Pará	0.473** (0.218)	-0.648* (0.338)
Paraíba	0.084 (0.333)	0.078 (0.416)
Pernambuco	-0,296 (0.257)	0.100 (0.298)
Piauí	0.005 (0.405)	-0.554 (0.627)
Paraná	-0,249 (0.231)	-0.037 (0.281)
Rio de Janeiro	-0,155 (0.190)	0.197 (0.221)
Rio Grande do Norte	-0,686 (0.471)	-1.042 (0.746)
Rondônia	1.469*** (0.399)	(omitted)
Roraima	1.533*** (0.553)	-1.245 (1.043)
Rio Grande do Sul	-0,063 (0.217)	-0.256 (0.288)
Santa Catarina	0.339 (0.273)	-0.557 (0.423)
Sergipe	0.438 (0.524)	-0.304 (0.778)
Tocantins	0.118 (0.395)	-1.901* (1.027)
Constant	-1,564*** (0.367)	-1.419** (0.498)
Log likelihood	-1420.65	-892.93
LR chi2	98.89	60.40
N	2255	2223

Notes: Data from Vox Populi survey. Results of Logistic Regressions reported in *log-odds*.

Beta coefficients and standard errors are reported. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

- a. In *Schooling*, the omitted category is High School/University.
- b. In *Professional Activity*, the omitted category is *Employer*.
- c. In *Familiar Income*, the omitted category is *More than 20 minimum wages*.
- d. In *States*, the omitted category is *São Paulo*.

Table 18. The determinants of policy priorities: Brazilian's voters – Low Income Voters Survey

Variable	Voters' Preference by policy type	
	Health	Security
Women	-0.431 [0.264]	-0.083 [0.214]
Income per capita	-0.001** [0.001]	0.000 [0.000]
Income*Women	0.002* [0.001]	0.000 [0.001]
Age	-0.008 [0.007]	0.014** [0.005]
PT as the preferred political party	-0.294 [0.197]	-0.005 0.162
Living in a poor neighborhood	-0.074 [0.166]	-0.031 0.143
Have a job	-0.078 [0.172]	0.103 0.151
<i>Schooling (a)</i>		
Read and write, but never went to school	0.700 [0.566]	0.086 [0.665]
Elementary school: first to third grade level	-0.204 [0.436]	0.619 [0.435]
Elementary school: until fourth grade level	0.170 [0.421]	0.713 [0.432]
Middle school: fifth until seventh grade level	0.098 [0.421]	0.896** [0.431]
Middle school: until eighth grade level	0.186 [0.456]	0.920** [0.458]
High school: first until second grade level	0.179 [0.508]	0.980* [0.501]
High school: until third grade level	0.213 [0.448]	0.1159** [0.448]
Incomplete higher education	0.469 [0.679]	0.554 [0.690]
Complete higher education	(empty)	0.241*** [0.751]
Constant	-0.932 [0.617]	-2.954***
Log-Likelihood	-551.10	24.18
LR chi2(16)	15.43	-687.362
N	1489	1500

Source: Data from CEM-CEBRAP-Ibope survey.

Notes: Results of Logistic Regressions reported in *log-odds*. Standard errors are reported in brackets.

***p<0.01, **p<0.05, *p<0.1. (a) In *Schooling*, the omitted category was *Illiterate*.

Table 19. Health Amendments spending by Deputies' Gender - Student's T-test results

	Mean	Standard Error	Minimum	Maximum
Congressmen	0.148	0.006	0.135	0.16
Congresswomen	0.128	0.015	0.097	0.16
Total	0.145	0.005	0.134	0.156

	Difference (M-F)	Student's t-test Standard Deviation	95% Confidence Interval	
	0.018	0.020	-0.020	0.057

Source: Data for the 53rd Legislature of the Câmara dos Deputados.

Table 20. Security Policy: Preference by Deputies' Gender - Student's T-test results

	Mean	Standard Error	Minimum	Maximum
Male representatives	0.039	0.005	0.030	0.048
Female representatives	0.058	0.017	0.024	0.092
Combined	0.041	0.004	0.032	0.049

	Difference (M-F)	Standard Error	95% Confident Interval	
	-0.019	0.016	-0.051	0.013

Source: Data for the 53rd Legislature of the Câmara dos Deputados.