Connecting the Nodes. How Social Capital Enhances Local Public Goods' Provision in Shantytowns.

by

Guadalupe Rojo

Department of Political Science
Duke University

Date: ______________________________
Approved:

____
Erik Wibbels, Supervisor

____
Pablo Beramendi

____
Michael C. Munger

____
Karen L. Remmer

Dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy in the Department of Political Science
in the Graduate School of Duke University
2017

Abstract

Connecting the Nodes. How Social Capital Enhances Local Public Goods' Provision in Shantytowns.

by

Guadalupe Rojo

Department of Political Science
Duke University

Date: ________________________
Approved:

____
Erik Wibbels, Supervisor

____
Pablo Beramendi

____
Michael C. Munger

____
Karen L. Remmer

An abstract of a dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the Department of Political Science in the Graduate School of Duke University
2017

Copyright © 2017 by Guadalupe Rojo
All rights reserved except the rights granted by the
Creative Commons Attribution-Noncommercial Licence

Abstract

The literature on clientelism has extensively covered the direct exchange of private goods for political support between voters and politicians. Yet, patronage does not end with the distribution of food, medicine or public employment. In poor informal settlements, access to a sanitation system or clean drinking water is often mediated by local politicians.Therefore, the interaction between slum politics and the provision of Local Public Goods (LPG) is quite relevant and requires further study.

This dissertation explains the variation in infrastructure and public services in shantytowns as a function of social capital. Well-connected communities –with stronger ties among its members– solve collective action problems, improving slum dwellers' quality of life. The linking mechanism between social capital and LPG is electoral coordination (bloc-voting). Neighbors agree for a common electoral strategy at the slum-level, which translates into an effective mechanism to demand for improvements in their locality ("good-type partisan homogeneity").

Alternatively, isolation among slum dwellers deteriorate their access to and quality of LPG. Under the absence of social capital, when slum-level electoral behavior appears to be homogenous, it is likely signaling political clientelism and not community-led coordination. Ultimately the "bad-type partisan homogeneity" represents the inability of slum dwellers to enforce electoral accountability and sanction unresponsive governments. I test my hypotheses with survey data from Udaipur (India) and eight provinces in Argentina.

Para mis amados JTs.

Contents

Abstract **iv**

List of Tables **ix**

List of Figures **xi**

Acknowledgements **xiii**

1 Introduction **1**

1.1 Main Argument 10

1.2 Dissertation Structure and Empirics 12

1.3 Fundamental Contributions 16

2 Social Capital, Leadership Accountability and Public Services in the Slums of India **19**

2.1 Introduction 19

2.2 Theoretical Framework 22

2.3 Fundamental Rationale: Social Capital and Agency 26

2.3.1 Voting as a Social Experience 28

2.3.2 Slum Leaders and Brokerage Roles 30

2.4 Empirical Analysis 35

2.4.1 Description of Relevant Variables from Survey Questions . . . 38

2.5 Results 40

2.5.1 Phase I 40

2.5.2 Phase II 44

2.5.3 Phase III 45
2.6 Discussion 48
2.7 Appendix 51

3 Drawing the line between Vote Banking and Clientelism. Social Capital and Local Public Goods in the Slums of Argentina 56

3.1 Introduction 56
3.2 Theoretical Framework 60
3.3 Empirical Analysis 67
3.3.1 Describing the Dependent Variable 70
3.3.2 Describing the Covariates 76
3.3.3 Model Results 80
3.4 Part 2: Assessing Electoral Competition 90
3.4.1 Empirics 92
3.5 Conclusion 97
3.6 Appendix 101

4 Squaring the Circle: Social Capital and Electoral Accountability in Slums 109

4.1 Introduction 109
4.2 Theoretical Framework 115
4.2.1 Social Capital and Political Participation 117
4.2.2 Retrospective Voting, Misattribution and LPG 119
4.2.3 Social Capital and Electoral Accountability 120
4.3 The empirical setting: slums in Buenos Aires 125
4.4 Measurement and Estimation 130
4.4.1 Dependent Variable - Incumbent Vote Change 130
4.4.2 Covariate: Social Capital 132

4.4.3 Covariate: Services and Infrastructure 134
4.5 Results 136
4.6 Concluding Remarks 143
4.6.1 Policy Implications 145
4.6.2 Future Research 147
4.7 Appendix 149
Bibliography **151**
Biography **162**

List of Tables

2.1 Diagnostics . . . 51

2.2 Correlation Matrix . . . 51

2.3 Regression for Electoral Coordination . . . 52

2.4 Regression for Leadership Accountability . . . 53

2.5 Regression table . . . 54

2.6 Regression table . . . 55

3.1 LPG Index by Province . . . 73

3.2 Expected Direction for Coefficients . . . 80

3.3 Regression table Fixed Effects . . . 83

3.4 Regression table . . . 94

3.5 Regression table . . . 95

3.6 Correlation Matrix Sub components for LPG Index (pca) . . . 101

3.7 Diagnostics for PCA (LPG Index) . . . 102

3.8 OLS Models . . . 103

3.9 Multilevel Models . . . 104

3.10 OLS - Alternative independent variable . . . 105

3.11 OLS Regression for LPG Index 2015 . . . 106

3.12 OLS Regression table . . . 108

4.1 Correlation between general LPG difference and components' differences 135

4.2 Regression table . . . 139

4.3 Regression table 140

List of Figures

1.1 Reasons for which slum dwellers vote in Udaipur, India 3

2.1 Margins for Electoral Coordination by Social Capital and by Leader Suggests 42

2.2 Margins for Electoral Coordination by Social Capital and by Help from a Neighbor 42

2.3 Margins for Electoral Coordination by Social Capital and by Frequency in Discussing politics with acquaintances 43

2.4 Margins for Leadership Accountability 46

2.5 Margins for Leadership Accountability (interaction) 46

2.6 Margins for Key Services Satisfaction 47

2.7 Margins for Average Services Satisfaction 48

3.1 Histogram LPG Index 72

3.2 Histogram LPG Index by Province 73

3.3 Marginal Effect on LPG Index with 95% CIs 86

3.4 Marginal Effect on LPG — structural conditions 87

3.5 Marginal Effect on LPG — irreversible conditions 87

3.6 Marginal Effect on LPG by Number of Families 88

3.7 Predicted Margins of LPG Index Difference (interaction model) . . . 96

3.8 Scatter Plot of LPG Index (pca) by summation of subcomponents . . 101

3.9 Regression Coefficients in LPG Index 2015 107

3.10 Regression Coefficients in LPG Index 2015 - II 107

3.11 Regression Coefficients on LPG Difference (alternative measure) . . . 108
4.1 Predictive Margins Incumbent Vote Change 138
4.2 Predictive Margins 2015 Incumbent Vote 138
4.3 Predictive Probability of Punishing Incumbent 149
4.4 Predictive Probability of Rewarding Incumbent 149
4.5 Predictive Margins for 2015 FPV Vote 150
4.6 Predictive Margins for 2015 Cambiemos Vote 150

Acknowledgements

I am severely indebted to many people for their assistance, advice, support, and friendship throughout the completion of this dissertation. First and foremost, I would like to thank my advisor, Erik Wibbels, who not only improved this project with brilliant insights but most importantly, helped me through the most distressing moments. Right from the beginning in 2011, we scheduled regular meetings, in which he would insist –sometimes with giant effort– for me to see the bigger picture. Oftentimes, Erik had to make sure I would not get lost in the middle of minor details, issues with the dataset or any other barrier I encountered along the way. Later, for the final stage, he was extremely generous to propose weekly calls and provided me with a clear plan for me to finish the dissertation from Buenos Aires. Although I always suspected this, now I am completely aware that this dissertation would not have been possible without Erik's encouragement and guidance.

I am also thankful to my committee members, whose critical comments pushed me to improve the quality of my dissertation. Pablo Beramendi is a great human being, who also happens to be an exceptional scholar. The political economy seminar taught by Pablo and Erik jointly, was the best way to reassure myself that I have chosen the right University and the right major field of specialization. I remember having fun every single Thursday even though we had to rush over 600 pages of comments and potential improvements, while setting the research agenda. From that time on, I often consulted Pablo when I was puzzled with my own theory. He

was always helpful, by debating ideas or sketching outlines in his white board. I also want to thank Michael Munger for showing me an alternative line of reasoning within Political Science. He also took the time to read several iterations of my formal modeling endeavor. Yet, one of the most valuable things I have learnt from Mike is the art of teaching. Many students at Duke agree that Mike is an awesome professor, but I saw it first-hand, as his student and as his T.A. He knows how to engage an audience, and usually that occurs even before his musical performance or famous acting. I am simply in debt to Mike for showing me a different perspective in preparing a class (both grad. and undergrad.). Last but not least, I am grateful to Karen Remmer for her support during my time at Duke. I am extremely lucky to count myself as one of Karen's students. Her seminar on Institutions was my initiation in the fabulous world of critical thinking during doctoral studies. Karen's constructive criticism is responsible for much of the improvement in this project. I am seriously in debt with her for suggesting me to incorporate electoral results to my dataset.

I truly appreciate the immense support of Duke's Political Science Department, going from faculty and staff to colleagues and friends. Many scholars have helped me on my way. I would like to thank Herbert Kitschelt for pushing me to reach to clearer argument.My research benefited substantially from his workshops. In one of these, I had the amazing opportunity to discuss an early-stage version of this dissertation with Kate Baldwin and Philip Keefer. I am in debt with Herbert for this. I especially thank Kyle Beardsley, who as the DGS provided me great support and assistance during my last year in the program. At Duke, I am also grateful to Anirudh Krishna, whose lead on the Duke-IIMU Research Collaboration constituted the origins of this dissertation. For my participation in the IIMU-Duke Collaborative Project, I thank Erik Wibbels, who was the first one to even realize I had a dissertation topic already, and that could fit within the IIMU proposal. I thank Erik for encouraging

me to consider India as a possible case study, albeit my exclusively-Latin-American mindset. I owe him for the amazing experience of doing fieldwork in Udaipur during 2013 and 2015. Precisely for my second chapter, I recognize the financial support of the Duke University and the Indian Institute of Management Udaipur (IIMU) Collaborative. At the beginning of this project, I spent several semesters working on the theoretical base underlying in this dissertation's common argument. I thank Bahar Leventoglu, David Siegel and David Soskice for taking the time to read many iterations of my attempt to formalize the theory with equations. I am indebted with these scholars for taking the time to receive me in their offices to discuss my primitive model. I am grateful for Duke University's generous financial support. I thank the Graduate School, the Latin American and Caribbean Studies, and the Political Science Department for different funding opportunities, DIPE, Dissertation Support and the Walter T. Molano Award.

I am also grateful to my friends for making my journey at Duke so enjoyable. My dear friend Shahryar Minhas is one of the most generous individuals I have ever known, I am very lucky to call him my PE buddy. I truly appreciate every time he was willing to help me with R or ready to go through tons of Tex error messages. And of course, for the great time we had in Durham, both at the Link and at Alivias! I am also thankful to Noa Cnaan-On for being such a caring friend with me at all times and for letting us be part of their family –thanks to Itay and the kids as well. Noa is a wonderful person always kind and ready to help her friends. I am indebted to Jared Daugherty for his awesome editing skills during my last week of writing and to Ben Barber for his generous advice. I sincerely thank all my fellow graduate students but in particular Cassy Dorff, Greg Schober, Sam Bagg, Tobias Konitzer, Cindy Cheng and Anna Schultz. Special thanks to Melina Altamirano and Sandra Ley for being my first friends at Duke. Meli and San are lovely human beings, sweet and considerate, and I am incredibly lucky to count them as friends. I am also

indebted to them for introducing me the rest of the gang. Thanks to Nati, Gaby, Juampi y Ema, Marian, Ale, Vero, Pame y Jose, Ceci y Mauricio, Pipe, Nata, Pablo y Wendy, Fede y Vicky, Sylvain y Emma, Cristina, Fantine, Luz y Joes, Gabi F., Andre, Gabo, Giulio, Martin, Pablo S., Sam y Maria, Sira and the two Valeries. I am grateful for every moment I shared with my friends in Durham, the parties, the 'asados', the soccer bets, and counting.

Once in Argentina, my work benefited from the invitation to teach at Di Tella University. I thank Catalina Smulovitz and Ana Maria Mustapic for showing constant interest in my career. I was fortunate to work at the university office, which was particularly helpful during the last writing phase. In particular, I thank Juan J. Negri, Benjamin Garcia Holgado, Nicolas Taccone, Camila Perochena and Paula Clerici for their great support and laughter during quite stressful times. I am grateful to Santiago Cunial and Cristian Silva for research assistance. I am also thankful to Mariana Chudnovsky and Mercedes Sidders for their friendship, and to Rodrigo Zarazaga, Lucas Ronconi and everyone at CIAS for welcoming me as a visiting fellow in 2015. Finally, I thank Marcelo Leiras and Mariano Tomassi for inviting me to present my work at the Universidad de San Andres. I am indebted to Mariano for his immense and continuous generosity.

Specifically for the third and fourth chapters, I recognize the contribution of the organization TECHO for allowing me fast access to their slum surveys and enabling a fruitful cooperation between the NGO and myself. I specially thank Ignacio Gregorini for showing interest in my project right from the beginning and opening the organization's doors to me. I am also grateful to Marina Morgan, TECHO Research Center Director and Florencia Yaccarino, the RAI 2016 National Coordinator. Special thanks to Esteban Fernandez for being so generous with his time and providing TECHO Polygons. Finally, I thank the executive Director of Fundacion Pro Vivienda Social (FPVS), Raul Zavalia Lagos.

Above all, I am thankful to my family and friends in Argentina. Mentioning every one of them is not possible, but I highlight the constant love from my lifelong friends, Romina Bulacio Sak, Geraldine Davies and Manuel Mera. For their encouragement during crucial times I also thank Agustina Suaya and Martin Alessandro. I am grateful to my stepfather, Ricardo for his early support and permanent interest in my progress. Special thanks to my mother, Monica, for always being there –for whatever we need– and for her constant encouragement. Among many other things, I am infinitely indebted with her for helping me out with Jofi during the last few months and in general, for teaching me how to be persistent in life.

Last but not least, I thank my partner in crime, Jeronimo M. Torrealday. It is absolutely impossible to express in words how much gratitude I feel for sharing my life with Jero. Of course going through two simultaneous PhDs was not easy but in the end we mastered the art of helping each other to find our best expression –individual and as a couple. Not only he is always ready to provide support and inspiration when needed the most, but Jero also plays an active role in the development of my ideas. Our brainstorming sessions have proven more than fruitful in this dissertation. The fact that he read and commented each paper numerous times is just a small detail when compared to his immeasurable job as a father. Finishing a dissertation with a toddler around is apparently a challenge. However, it did not feel so because Jero was always willing to take Jofi to the park whenever I needed a couple of hours of concentration. This example seems unfair in the context of how much he really accomplishes everyday as the best dad I could have ever imagined. Finally, our cute little girl, Jofi deserves the biggest kiss of gratitude for understanding –more often than I desired– that mommy was busy working. I am truly blessed for my family and of course this dissertation is dedicated to my beloved Jero and Jofi.

1

Introduction

The urban poor are the principal target of clientelistic practices to the detriment of the provision of Local Public Goods (Brusco, Nazareno and Stokes 2004; Calvo and Murillo 2004; Remmer 2007; Keefer 2007). Due to the diminishing returns of consumption, low-income constituencies derive higher marginal utility from handouts than do middle-income voters[1]. Given that these groups are electorally more responsive to direct transfers, we should expect that the provision of public goods will be lower in poor communities. Yet, variations in levels of public investment do exist across similarly impoverished populations and the current literature has failed to explain these divergences.

The tradeoff between clientelistic practices and the allocation of resources to services and infrastructure is quite relevant (Remmer 2007). While one may argue that receiving rice and beans is a priority for populations suffering from hunger, it is also necessary to consider the crucial importance of Local Public Goods (LPG)

[1] Although clientelistic practices are not only limited to the distribution of private goods, when I refer to clientelism throughout this dissertation I do not consider allocation of anything else but goods for immediate consumption (short-lived goods). The point of doing so is to clearly differentiate between the apportionment of significant government funds towards Local Public Goods vis a vis the minor allocation of resources towards consumable goods.

for raising slum dwellers' living standards. Having access to drinking water or a proper closed sewage system may draw the line between life and death in some metropolises. According to the Abdul Latif Jameel Poverty Action Lab (J-PAL), 21% of infant mortality in developing countries is caused by diarrhea, a disease that could be prevented through access to better sanitation. Across the globe, 2.5 million children die each year because of exposure to pathogens due to poor treatment of solid wastes (J-PAL. 2012). Although less dramatic, poor public services oftentimes translate into a higher economic burden. For instance, the typical slum dweller in Buenos Aires is not connected to the gas grid. This forces her to spend precious resources on purchasing gas cylinders, which on average cost seven times more than government-subsidized natural gas[2]. Moreover, Figure 1.1 shows that when slum dwellers in Udaipur (India)[3] were asked in surveys to prioritize their reasons for how they voted, the option "the services that my community is receiving" ranks higher than "private benefits that my family is receiving"[4]. Given that the urban poor place considerable value on LPG, this dissertation seeks to redirect attention within studies on slum politics to the allocation of public resources to improve services and infrastructure.

Why are some slums successful at demanding local public goods while others just receive inexpensive handouts the day before the election? How do neighborhood associations and internal organizations contribute to improving the quality of infrastructure and public services for the urban poor? Does partisan homogeneity

[2] This calculation was conducted by the author based on the reported price of the cylinder, approximately us$14. Since a minimum of 2 cylinders is needed monthly, the resulting us$28 represents seven times the subsidized bill on natural gas (on average us$4 per month).

[3] A two-wave survey was conducted in Udaipur during 2013, as part of a joint project with Prof. Wibbels. We thank Anirudh Krishna, Janat Shah, Mahesh Kapila, Seema Mishra, KP Singh and all of the supervisors and survey enumerators at Chitra Management for invaluable help on this project. We also recognize the financial support of the Duke-IIMU Research Collaborative.

[4] Figure 1 reports raw number of respondents that mentioned each issue (either as their first or second priority) for reasons on how to vote.

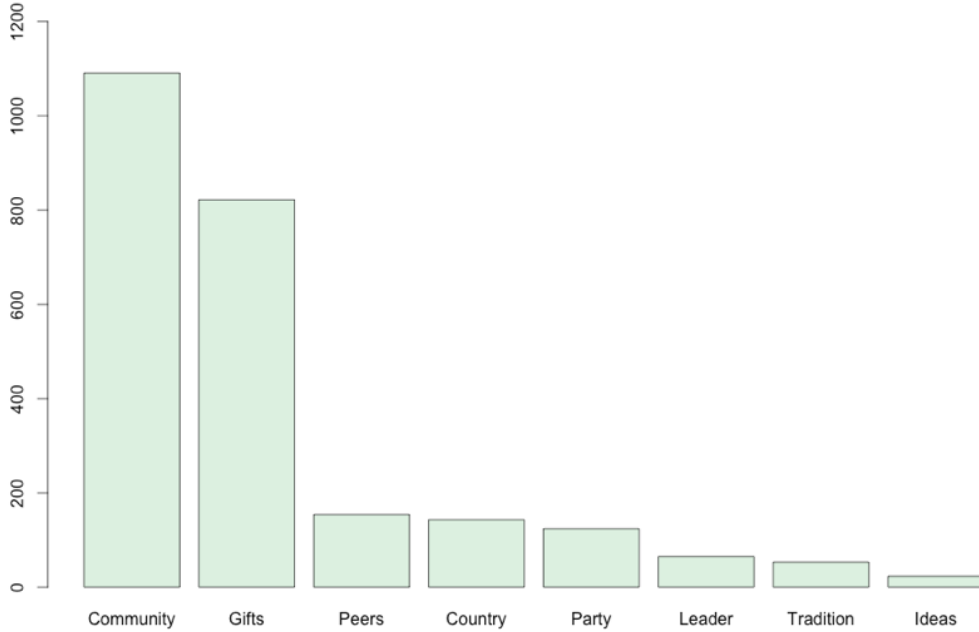


Figure 1.1: Reasons for which slum dwellers vote in Udaipur, India

increase the likelihood that a slum will receive LPG? Or is it always the case that political competition enhances responsiveness? The short answer: it depends on the level of social capital. The long answer is that community-led electoral coordination –enabled by social capital– translates into what I define as the good-type partisan homogeneity. When slum dwellers are able to cooperate with their neighbors and agree upon a common political behavior, they increase the odds that they will be rewarded with public investment. Alternatively, when social capital is absent within the community, partisan homogeneity hinders electoral accountability.

The existing literature on slum politics has mostly studied the distribution of private goods (food, medicine, personal favors, jobs, etc.) as a political exchange (Auyero 1999; Calvo and Murillo 2004; Remmer 2007; Kitschelt and Wilkinson 2007; Stokes et al. 2013, among many other authors). However, scholars so far have failed to address the ongoing variation in terms of the provision of LPG. Current research has underestimated the importance of identifying the factors that may contribute to

improve services and infrastructure in a slum. In poor informal settlements, access to a sanitation system or clean drinking water is often mediated by local politicians. Still, the traditional literature on public goods (e.g. Olson 1965; Hardin 1982) has weak explanatory power, particularly in regards to shantytowns, where patronage prevails.

The urban poor tend to be clustered in informal settlements, and an entire settlement –not an individual– is the recipient of water, electricity, or natural gas. This feature of LPG has implications for the study of "collective clientelism" (Kitschelt and Wilkinson 2007), which is embedded in a neighborhood context, and thus should be studied at the slum level using group-based models rather than solely considering individual-level exchanges. By shifting the paradigm from the individual to the neighborhood level, my goal is to bring attention to the local decision-making process. This dissertation takes communities as the main unit of analysis. The scope is not the individual voter but a group of voters residing in the same poor locality. The chief contribution of my study is to shed light on the dynamics of local organizations (e.g. neighborhood associations) as the key factors that empower the urban poor. This work illustrates how communities that are empowered with social capital raise demands to politicians, by calling their attention through bloc-voting. Ultimately, they gain access to better neighborhood infrastructure and higher-quality public services.

More recently, we have witnessed a new trend in development studies that focuses on participatory practices within local-decision making process (e.g. Olken 2010), such as the delegation of budget suggestions to local assemblies: the Gram Panchayat in India or the Conselho do Orcamento Participativo in Brazil. Still, in the case of slum dwellers the scope of these participatory alternatives is often limited, as they reside within informality –particularly when they dwell on land for which their possession is illegal. Theorizing along these lines, I propose to redirect the attention to

other forms of political participation that could empower these communities through the acquisition of more and better government services. Namely, this dissertation studies the interaction between social capital and electoral coordination, and the impact of this relation on the provision of LPG.

There are three features of Local Public Goods that make them particularly interesting, they are: i) non-contingent on individual vote choice; ii) non-excludable from any resident of the community; and iii) non-rival among neighbors. Namely, LPG are similar to club goods, where residency functions as the membership to the club. This portrayal assumes non-excludability as a necessary condition for the theoretical framework. However, I do recognize that there is a growing concern for the diffuse distinction between public and private goods. In other words, local politicians could limit access to services arbitrarily, transforming (in theory) local public goods into (de facto) private goods. Along these lines, Min (2015) argue that often political schemes often interfere not only with the delivery but also with the implementation of public goods. Thus, I am not assuming pork-barrel politics are not present in the allocation of LPG, but in fact this work seeks to explain how these political schemes play around social and political organizations of the slums. In most of the cases analyzed here, services and infrastucture are indeed non-excludable within the locality. For instance, when a government decides to allocate funds to build a sewage system, the most significant part of the investment goes to the central branch, and each individual household can easily enjoy the benefit subsequently. It is not impossible, but quite difficult for the government to prevent a family to access the newly-built sewage.

Then, it is precisely the non-excludability feature of LPG –"impossibility of exclusion" (Hardin 1982)– that introduces the need to examine coordination problems and that also makes bloc-voting relevant. Recent evidence supports the theory that resource-constrained politicians target communities that demonstrate collective ac-

tion skills (Rueda 2016; Gottlieb and Marx 2016; Pierskalla 2016; Gottlieb and Larreguy 2016*a*; Grossman, Pierskalla and Dean 2017). These theories build upon the assumption that electoral strategies are chosen in cost-benefit terms and that politicians require a group of voters who can credibly commit to reward public investment. Because the provision of local public goods is relatively expensive, parties will only provide them when they can be sure of consistently attaining a large share of support from any given slum over a period of years. Serving as a large vote bank for a single party implies a coordination problem for citizens who live in slums. If the community can solve this collective action problem, its ability to attract local public goods increases.

Then, when do slum voters coordinate? This dissertation proposes to examine political behavior both during and between elections. Building upon Hirschman (1970) and Cleary (2007), I present evidence of the positive effects of citizens actively pursuing participatory strategies (voice), albeit electoral sanctioning (exit). Namely, government responsiveness increases with voters' ability to articulate demands beyond the electoral process. Participatory activities include political actions such as protesting as well as community-led projects that seek direct contact with public officials. Forms of political participation that are relevant to this work then include voting behavior and extra-electoral civic engagement[5]. My theory maintains that it is along these two paths that slum dwellers build social capital that enables them to effectively demand LPG.

Political Scientists have shown that the act of voting is, by all means, a collective activity (Baker, Ames and Renno 2006; Gerber, Green and Larimer 2008; Nickerson 2008; Remmer 2010; Abrams, Iversen and Soskice 2010; Fowler 2006). Building upon "informational cascades" (Bikhchandani 1998), this dissertation argues that

[5] What Hirshman (1970) defined as "voice" induces good behavior by causing discomfort and embarrassment to politicians, particularly when citizens protest right to their government office door (Stokes 1995; Cleary 2007).

intercommunication between voters can initiate chains of reaction to government performance. Casual conversations frequently touch upon political matters (Putnam 2000). Particularly in the streets of a slum, these conversations center around tangible living conditions. Slum dwellers are likely to comment about whether or not they had water that morning, for instance, or if the stench from wastes was especially strong because the sewer system is blocked. Social interactions across the slum strengthen accountability because neighbors signal to each other improvements and misfortunes in their everyday lives and because these reactions promote party switching in response to the existence (or the lack) of public investment in their locality. In these situations, bloc-voting can occur even in cases where there are deeply-rooted partisan attachments.

The likelihood of receiving LPG depends on everyone in the slum working together and, therefore, it involves coordination problems. Collective action skills thrive when there are strong ties among community members (Huckfeldt 1983; Uzzi and Spiro 2005; Ward, Stovel and Sacks 2011). Along these lines, social capital increases monitoring mechanisms among peers, who observe and disseminate information about other neighbors' political behavior. Furthermore, horizontal accountability proves useful for slum dwellers who can ostracize other neighbors who are not contributing to the community political strategy. Tight communities possess mechanisms for sanctioning community members who deviate from socially expected behavior.

Building upon Ferejohn (1986) and Persson and Tabellini (2000), I propose that voters can hold public officials accountable only if they can coordinate on a performance threshold such that, if the incumbent fails to meet it, the voters expel the incumbent no matter who the challenger is. My group-level argument emphasizes that the likelihood of bloc-voting is shaped by slum dwellers' own capacity to organize themselves and to signal to each other the source of their grievances. In other words, individual voters forming a "vote bank", may agree to a party-switching electoral

strategy as a mode to sanction unresponsive governments. From the supply side, the marginality hypothesis (MacRae 1952) suggests that candidates who fear that they might lose the election in their district tend to improve their performance. In other words, safe districts produce less responsive politicians. Yet, other scholars such as Fiorina (1973) argue that more socially-homogenous localities yield safe legislators who better know their constituencies' demands and, thus, target public investment more efficiently. According to this theoretical approach, communities coordinating on their vote choice tend to attract more public resources when compared with electorally heterogeneous districts. Building upon this debate, I argue that in the case of slum dwellers, if social capital exists, homogeneity (in terms of vote choice) implies attaining better LPG.

Usually defined as the "glue" that holds a given community together, social capital describes the level of trust, solidarity, and cooperation among community members[6]. As in Putnam (2000) social capital represents "the connections among individuals' social networks and the norms of reciprocity and trustworthiness that arise from them" (p.19). From Putnam's seminal work "Bowling Alone" to Hamilton (2016), extensive scholarship has demonstrated the positive effects of social capital on individual welfare. For example, Krishna (2011) shows that when Indian villages are united they can impose social sanctions (e.g. ostracism) to unresponsive leaders, which makes it more difficult for politicians to cheat villagers. Especially for the northern region of Rajasthan, Krishna and Uphoff (1999) show how social capital promotes community-led water projects. Other examples across the globe include Narayan and Pritchett (1999), who study the positive effect of village-level social capital on household income in Tanzania. Isham and Kähkönen (1999) argue that an increase in the efficiency of water services is due to social capital in Indonesian villages. Reid and Salmen (2002) propose that in Mali community cohesion enhance the

[6] For a detailed outline of several definitions of social capital, see Paldam (2000).

effect of agricultural extension services. Finally, Klesner (2007) has shown that social capital encourages political participation and a more robust democratic experience in Argentina, Chile, and Mexico.

In this sense, social capital and agency are not independent. All sorts of principal-agent problems arise from the multiple interactions between voters, brokers and politicians. In Krishna's words:

> "Social capital represents a potential –a propensity for mutually beneficial collective action. But potential needs to be activated and agency is important for this purpose. [...] When intermediate links are weak, as they are when agency is not capable, social capital does not translate readily into good performance." (Krishna 2001: 934)

According to Baldwin (2013) and Rueda (2016) successful community endeavors require the existence of leadership within a community. There is a wide-ranging literature that focuses on the importance of actors who occupy central positions in social networks and their role in diffusion processes (e.g. Burt 2000; Marsden 1982; Granovetter 1973; Homans 1974; Stokes et al. 2013). In the words of Taube "brokers are actors that allow or enhance resource flows between otherwise unconnected or only weakly connected actors; as a result they are able to gain advantage due to their strategies position in social networks." (Täube 2004:30). In regards to my dissertation, the main distinction for leadership types is the following. Defined as *Liaison*, a rent-seeking broker, who is typically not part of the community, usually operates in contexts where the social fabric is fragile. Alternatively, I define an accountable leader as somebody who is fairly close to slum dwellers and responsive to their demands. Gould and Fernandez (1990) classify this type of leader as a *Coordinator*, who in my theory promotes a common electoral strategy at the slum-level.

Along these pages, I provide a slightly simplified version of local political dynamics, in which I emphasize on the importance of bottom-up demands. Although I argue that social and political organizations at the slum level are the key elements here, by no means I propose that outside-slum politics are irrelevant. In fact, I recognize a good portion of negotiations between community leaders and politicians does not take place inside the locality, but probably in some external political office (e.g. Municipal Government). However, this paper proposes to zoom in at the origins of the slum's political representation, which is –as my argument goes– social capital formation and community internal organization. Further research within this project should aim to address the interactions between slum leaders, political brokers and outside politicians, and how leverage oscillates among these actors contingent on both internal dynamics (e.g. slum dwellers electoral coordination) and also on external economics and political circumstances.

1.1 Main Argument

This dissertation's primary goal is to present a theory of slum-level social organization and its implications for (1) electoral behavior and (2) access to and the quality of public services. My argument departs from traditional theories, which only consider citizens' individual behavior. Put succinctly, I argue that the ability of slum dwellers to effectively demand LPG is contingent on the level of their social capital: when social capital is low, it is likely that slum dwellers will receive only private goods in exchange of their political support. I refer to this scenario as the bad-type partisan homogeneity; unresponsive candidates win in the district by large margins. Partisan homogeneity might appear to imply that slum residents are coordinating their vote, but in fact in these cases there is no collective initiative present. Typically, these situations are dominated by the distribution of inexpensive private goods during electoral periods. Bad-type partisan homogeneity is a consequence of the lack of

social tools to demand that public officials provide improvements in their living conditions. In this type of community, homogeneity does not provide with means to negotiate, but it even hurts the urban poor. As politicians do not feel an electoral threat, just distributing handouts is enough. In other words, in the absence of social capital, political competition is an alternative to attract public investment; the electoral threat does not emerge from the community but from political rivals.

However, there is variation in the provision of LPG for the urban poor, and there is evidence in young democracies that voters effectively punish bad governance (e.g. Weitz-Shapiro 2017). This dissertation explains how slum dwellers are successful at breaking the vicious cycle of clientelism, i.e. the distribution of short-lived consumable goods in exchange of political support. Strong connections among community members imply better tools to maximize their likelihood of obtaining public resources. First, social capital fosters the internal organization necessary to plan political mobilizations and express demands directly to local politicians (e.g. petitions, protests in front of the Governor's office, paperwork to councilmen for budget increases, etc.). Second, frequent communications and trustworthiness among slum dwellers intensify the speed in the informational flow. This capacity to communicate quickly and transmit knowledge can protect communities form being deceived by politicians[7]. Third, strong connections among neighbors boosts their capacity to clearly define and communicate community needs. This implies sharing common concerns and priorities among slum dwellers, as well as letting politicians know about these needs. Fourth, social capital fosters community-led electoral coordination such as collectively deciding to reward(sanction) (un)responsive politicians through bloc-voting. The latter scenario is what I define as good-type partisan homogeneity.

[7] During interviews in Pilar (PBA, Argentina), slum residents mention that in the 2015 political campaign, broker X tried to convince them that politician Y cut the resources to build the gas grid, but some heard a different story elsewhere. They recognize that knowledge represents power to them. The more information circulating within the community, the higher the chances that someone will know the truth behind political schemes.

The core of the argument is that participatory activities and electoral sanctioning intertwined produce government responsiveness to slum dwellers demands. The urban poor may rely on the combination of these two strategies because participation enhances solidarity among community members (Pateman 1970), and social capital enables electoral accountability. Building upon Cleary (2007) I posit that participation increases electoral sanctioning effectiveness because social networks amplify knowledge transmission, and while gaining information neighbors boost efficiency in their selection or punishment mechanisms. It is worth mentioning that my argument distinguishes between electoral coordination and partisan homogeneity. The former requires bottom-up community-driven political organization and agreement. Whereas the homogeneity may appear as electoral coordination but it could also be the by-product of very effective clientelism. Every case of electoral coordination results in partisan homogeneity (good-type), but not every case of partisan homogeneity implies electoral coordination.

1.2 Dissertation Structure and Empirics

The dissertation is composed of three papers. The common argument is that social capital is a necessary condition for slum dwellers to attract public investment for their district. The papers differ in terms of the empirical setting of each analysis and in the types of mechanisms that are tested. The first two articles share a similar goal: to provide evidence for my theory regarding good and bad types of partisan homogeneity and their implications for LPG provision. The particularity in the first article is that I am able to test for leaders' engagement as coordinators and leadership accountability using survey data from India. In a slightly different form, the third paper shows that in slums in Buenos Aires retrospective voting (i.e. sanctioning unresponsive governments) is contingent on the existence of social capital. While the first article presents evidence from individual-level data across 30 slums in Udaipur

(India); the second and third papers are based on slum-level surveys in Argentina. The second paper includes data on slums from eight provinces in Argentina, while the third is circumscribed to Buenos Aires. Finally, the datasets differ in that the Argentinean dataset is mostly observational, combining surveys on slums conditions with electoral results. Whereas the dataset from India measures perceptions on voting patterns and levels of satisfaction with both leadership and services.

More specifically, the first chapter exploits an original dataset based on two different waves of surveys conducted in 2013 in the city of Udaipur, in the northern state of Rajasthan. Taking place during June and July, the first round covered all households in four slums[8]. Neighborhoods surveyed were selected on the basis of analysis of existing preliminary data on slum populations in Udaipur, as well as previous qualitative fieldwork (March 2013). This process assured diversity across demographic and socioeconomic characteristics and, particularly, differences in the existence of clientelistic practices and the provision of LPG. For the second wave –during the state elections in November 2013– the strategy was modified to cover a sample of households from across the majority of slums in the city[9].

The first paper provides evidence on how electoral coordination improves access and quality of LPG in Udaipur slums. First, I show that communities with higher social capital are more likely to vote together (electoral coordination). Findings are robust across different measures: Social Capital Index and other alternative

[8] The four slums in the initial round of surveys were Bedwas Kachchi Basti, Bheelu Rana, Shivaji Nagar Kachchi Basti and Sukhadia Nagar.

[9] By a traditional stratified sampling, the second wave of the survey covered the following slums across the city: Amba Mata (Ambavgarh), Avri Mata, Banjara Basti, Bedwas Kachchi Basti, Bhagri Basti, Bheelu Rana, Bhopa Magri, Gandhi Nagar Harijan Basti, Gowardhanvilas Indira Colony, Hanuman (C) Roop Sagar, Indira Nagar Beeda, Kaumi Ekta Nagar, Kishanpol (N), Kishanpol (S), Lohiya Nagar Harijan Basti, Machhla Magra, Manoharpura, Math Madri, Neemach Khera, Neemach Mata, Od Basti, Parerion Ki Madri (Kc), Ram Singh Ji Ki Badi, Ratakhet, Sajjan Nagar Harijan Basti, Shaheed Bhagat Singh, Shanti Nagar, Shivaji Nagar Kachchi Basti, Sukhadia Nagar, and Vijay Singh Pathik Nagar. The sample size at the slum level (n=30) allows me to run multilevel models, which provides me with the opportunity to assess neighborhood characteristics, as well as individual trends.

variables. Simultaneously, in the first section, I show that leaders' engagement (i.e. efforts as coordinator) increases the likelihood of slum-level electoral coordination. Those survey respondents who say that their neighborhood leader suggested that they vote for a specific candidate, are more likely to respond that their community votes for the same political party. Then, the second part provides evidence that both social capital and electoral coordination have a positive impact on leadership accountability. The implication here is that strong links among community members build better leadership, as information helps them to dodge fraudulent politicians. If slum dwellers are happier with their leaders –the assumption goes– it is because they are providing better public services. Furthermore, "vote banks" become assets for both communities and brokers when they negotiate with higher-ranked politicians. Finally, the paper provides empirical evidence that slum dwellers who vote together are more satisfied with their LPG[10] only in the presence of social capital (good-type homogeneity). Whereas, in the absence of social capital, less satisfaction with LPG, results from (bad-type) partisan homogeneity.

The second paper tests two parts of my argument, circumscribed to slums in Argentina. First, I address the general thesis that social capital contributes to the ability of slum dwellers to attain better local services. This part of the paper is based on a survey of 1,834 slums in eight Argentinean provinces conducted in 2013 by TECHO, a renowned NGO. The statistical models indicate that there is a positive impact of social capital on Local Public Goods. The dependent variable –LPG Index– measures infrastructure and services such as sewage systems, access to drinking water, electricity, natural gas, and paved roads, etc. To capture the main explanatory factor –social capital– I use a variable that measures the existence of internal organizations in situ, such as cooperatives, neighborhood associations, community organizations

[10] The main dependent variable in this paper is satisfaction with public services, measured through (1) the average satisfaction for all listed services; (2) the summation of reported satisfaction over key services, namely roads, access to water and waste disposal (sewage).

("sociedad de fomento"), soup kitchens ("comedor"), and recreational or cultural workshops.

As a next step, the second paper tests the mechanism responsible for the positive association between social capital and LPG provision. Namely, it provides evidence for the bad-type partisan homogeneity. In order to complement the slum surveys with political features, I match precinct-level electoral results to each neighborhood in Buenos Aires (CABA and PBA). In 2015 a second wave of the slum survey was carried out, allowing me to monitor two-year variations. Fortunately, both surveys coincide with electoral cycles. Hence, I measure partisan competition through the margin of victory (the difference between the proportion of votes for the winning party minus proportion going to the second party). In coherence with findings in India, social capital improves the likelihood of electoral coordination. Then, to provide evidence for my theory of good and bad types of partisan homogeneity, I differentiate the impact of margin of victory on LPG provision, depending on the presence or absence of social capital. Interestingly, while in India I find evidence for the good-type partisan homogeneity, in Argentina there is evidence for the bad-type. For those slums in Buenos Aires with no internal organization, I find a negative effect of Margin of Victory –homogeneity– on LPG (two-year variation). This story has important implications: in the absence of social capital, political competition represents the right path for communities to attain a better quality of life. However, in those slums with strong connections among the residents, I find no evidence of the detrimental effect of partisan homogeneity on LPG provision. In other words, political competition is not a necessary condition for achieving better services in those cases where social capital is present. Ergo, partisan homogeneity is the bad-type when communities are not equipped with social tools to induce responsiveness from their governors.

Finally, the third paper presents a similar story based on the virtues of social

capital, however, involving a change of scope with respect to the previous two papers. Having already argued that public officials' good behavior is induced by the potential risk of bloc-voting, this paper provides evidence that this implicit threat is actually credible. Moreover, empirics indicate the conditions under which communities are sufficiently empowered to punish (reward) governments' poor (superior) performance. Traditional cientelism is the other side of the story here. Those slums with stronger links among their members are able to escape the vicious cycle by effectively demanding LPG from local politicians. One of the ways that they can induce responsiveness is through electoral sanctioning. Along these lines, the third paper provides evidence of how slums that suffered a deterioration in LPG –from 2013 to 2015– collectively punished the incumbent, if and only if they had community organizations. Alternatively, in the absence of social capital, slums that experienced setbacks in their local conditions, gave as much electoral support (or even more) to the incumbent party as they had two years earlier. This scenario of poor accountability is typically associated with political clientelism. Despite seeing decay in the quality of their lives, locked-in voters reward incumbents politically in response to the distribution of private goods (short-lived consumable goods). Once again, the answer is social capital. Communities that are socially organized have the means to coordinate their vote, which has implications for party switching.

1.3 Fundamental Contributions

This dissertation contributes to the studies of slum politics with many interesting findings . The most general conclusion is that social capital produces substantial positive outcomes for citizens, as is recognized in the extant literature (e.g. Krishna 1999). Yet, my contribution in these three articles is to stress that, among the many virtues of social capital, one may count enhancing electoral accountability at the slum-level. Community-driven endeavors bring favorable conditions to poor

urban neighborhoods by boosting the responsiveness of politicians and attracting public investment in their locality. As a byproduct, slum dwellers show higher rates of satisfaction with their leadership. One of the many ways in which social capital improves living standards is by intensifying informational flows and helping to coordinate political behavior at the slum-level. Slum dwellers share both opinions and knowledge, thereby increasing the probability that they will collectively decide upon their vote choice. And, as some recent scholarship has shown (e.g. Grossman, Pierskalla and Dean 2017), politicians reward electoral coordination with the allocation of government resources.

Yet, partisan homogeneity does not necessarily mean community-driven electoral coordination. The latter –the good-type partisan homogeneity– is positively correlated with better-quality LPG. But the evidence shows that it is fairly common for the urban poor to receive inexpensive handouts and still elect the same party, even by large margin of victory. This scenario of poor accountability is not rooted in electoral coordination but in patronage dynamics,. It is precisely the lack of social capital that enables clientelism to thrive. Based on data from Buenos Aires' slums, I show that there is a negative effect of margin of victory (the opposite of political competition) on LPG provision, but only for slums with no social capital.

Last, but not least, this dissertation makes a quite relevant contribution by showing that electoral accountability is a real alternative for the urban poor. Oftentimes, governments overlook certain neighborhoods' basic needs and voters in those places fail to effectively call the attention of politicians, even during political campaigns. Commonly, slum dwellers are trapped under the logic of the distribution of consumable goods through clientelism. But not all of them are locked-in voters. The successful cases, those empowered with social capital, are actually able to sanction politicians' poor performance. These communities enjoy the advantage of making their needs visible. There the lack of public investment is duly noted. Even in a

context of absolute informality, land irregularities, and complete deprivation of basic necessities, public officials can be forced to deliver more than private goods. Politicians will know that if they do not show any effort to improve quality of life for slum dwellers, they will lose elections. Yes, not every poor informal settlement is able to punish unresponsive governments, but some are. Patronage or other forms of clientelism tends to obstruct accountability. However, the good news is that, with the existence of social capital, we can expect governments to know that their performance will be evaluated and that electoral sanctioning is not just an idle threat.

2

Social Capital, Leadership Accountability and Public Services in the Slums of India

2.1 Introduction

Two random slum dwellers in the Indian city of Udaipur share most of their concerns. One lives in *Shivaji Nagar Kachchi Basti* and the other one in *Sukhadiya Nagar Kachchi Basti*. Ethnographic and socioeconomic conditions are quite similar in these communities, but one enjoys access to water, electricity and better roads, whereas the other one does not. What makes these homologous cases so different when it comes to services provided by the government? Why are some slums successful at demanding local public goods while others just receive rice and beans the day before an election? How does social capital improve the quality of infrastructure and public services for the urban poor?

The answer resides in the intersection between social capital, electoral coordination, leadership responsiveness and the nature of non-excludable, non-rival Local Public Goods (hereafter LPG). This paper examines the effects of the neighborhood's social structure on the capacity of the urban poor to gain access to higher-quality

public services. More explicitly, my theory suggests that, due to their political organization, communities with more social capital successfully articulate their demands to the government. Network connectedness empowers residents in slums. More and stronger ties represent higher likelihood for electoral coordination, hence allowing them to hold slum leaders[1] accountable. I argue that denser networks –rather than sparse ones– are able to improve their living conditions by channeling their demands through responsive leadership.

In exchange for their political support, poor voters often receive private goods. However, slum dwellers value LPG and therefore, their distribution plays a central role during electoral campaigns. Local communities may attract public investment if they manage to coordinate their vote choice and support the same candidate. More frequency in community interactions allows them to increase the pressure towards local leaders. By communicating and discussing local politics, the community builds up leadership responsiveness. In other words, social capital enhances the likelihood of extracting more resources and to better exploit the logic of political clientelism.

Along these lines, the positive effect of social capital is enhanced by leaders' efforts to function as a focal point in collective action problems. Leaders may engage due to their own incentives, but their efforts yield an electorally-homogenous locality. Through leaders' engagement –my argument goes– communities are able to take advantage of their connectivity in a more effective manner. By coordinating their political behavior –by virtue of social capital– the urban poor are better positioned to effectively demand public investment from politicians. It is a double-folded process: connected neighbors prompt accountable leaders, who simultaneously are able to extract more resources from higher-ranked politicians by offering a stronghold or "vote bank". In the long run, local politicians reward electorally-homogenous localities

[1] I use the words broker, leader, community leader and slum leader interchangeably. All to refer to a politically influential person residing in the neighborhood, who behaves as an intermediary between residents and politicians.

with government investment.

So far, students of political clientelism (e.g. Levitsky 2003; Calvo and Murillo 2004, Brusco, Nazareno and Stokes 2004; Kitschelt and Wilkinson 2007; Remmer 2007; Nichter 2010); have underestimated social influence. Political brokers not only distribute private goods. In poor informal settlements, access to sanitation system or clean water is often mediated by local politicians. The traditional scholarship on public goods (e.g. Olson 1965; Hardin 1982) has weak explanatory power in the particular case of shantytowns, where patronage prevails. Classical explanations from the field of economics depict public goods as the summation of agents' contributions. Yet, this approach only applies to scenarios where LPG depend on wealth endowments or contribution from the residents. Whereas access to LPG for the urban poor, is non-contingent on taxation and mainly determined by politics.

This paper comes to address the existing gap in the literature in terms of providing an all-embracing study of social capital and public goods provision under a context of political clientelism. By shifting the paradigm from the individual to the neighborhood level, my goal is to bring attention to the local decision-making process, and its repercussions on the quality of LPG. This paper intends to contribute to a better understanding of the mechanism linking social capital and leadership accountability. In other words, how social capital induces slum leaders to behave more responsively when it comes to acquiring investment from higher-ranked politicians.

Drawing on unique households survey in 30 slums in the Indian city of Udaipur[2], I assess the ways in which communities organize themselves to fulfill their needs. The data clearly evidences how these communities often place higher value on LPG (e.g. waste disposal system) rather than private goods such as personal favors, gifts, jobs,

[2] A two-wave survey was conducted in Udaipur during 2013, as part of a joint project with Prof. Wibbels. We thank Anirudh Krishna, Janat Shah, Mahesh Kapila, Seema Mishra, KP Singh and all of the supervisors and survey enumerators at Chitra Management for invaluable help on this project. We also recognize the financial support of the Duke-IIMU Research Collaborative.

etc. (Rojo, Jha and Wibbels n.d.)[3]. Empirical results suggest that both social capital and brokers' signaling efforts (i.e. suggesting explicitly a candidate or a party for whom to vote for) have positive effects on the capacity of the urban poor to coordinate their vote choices. In a second stage, I show that leadership accountability increases not only with social capital but also through electoral coordination. Last, I provide empirical evidence that electoral coordination increases the likelihood of improving the quality of public services and infrastructure, conditioned on the existence of social capital. More explicitly, in this third phase of the paper I present empirical evidence for the "good type partisan homogeneity". The paper is organized as follows. First, I present a review of the state-of-the-art on the related literature. Second, I describe the core of the paper's argument. This includes a discussion on the justification of why voting behavior is more of a collective than an individual experience and my argument on slum leaders' role as coordinators. Third, in order to address the empirical analysis, I describe the dataset. Fourth, I present the statistical models results –divided into three subsections– providing support for the hypotheses. Fifth, I conclude with a discussion on the contributions and future steps.

2.2 Theoretical Framework

In general terms, students of clientelism have disregarded the allocation of collective benefits, or, in other words, the interaction of patronage dynamics with the provision of LPG (e.g. sewage systems, water sanitation, local clinics, schools, road pavement, electricity, legal recognition of the entire area, etc.). Given that brokers also mediate in the distribution of local public goods, we need a comprehensive understanding of what Kitschelt and Wilkinson (2007) named "collective clientelism". Redirecting the attention to collective action, this paper underscores the role of the slum leader or political broker as a coordinator. Nonetheless, traditional literature on public goods

[3] Please see Figure 1.1 in the introductory chapter for an empirical illustration on this claim.

does not address any slum politics or patronage logics. All in all, there is a void in the current scholarship as rarely do studies try to understand clientelistic dynamics and public goods provision jointly.

The literature on clientelism is quite extensive, in particular regarding the description of the direct exchange of material benefits for political support between voters and politicians (Calvo and Murillo 2004; Chandra 2004; Kitschelt 2000; Kitschelt and Wilkinson 2007; Levitsky 2003; Nichter 2008; Remmer 2007; Robinson and Verdier 2013; Stokes 2005, among many other authors). Originally, scholars considered the exploitative aspect of the asymmetric relationship between voters and politicians (e.g. Brusco, Nazareno and Stokes 2004). Whereas, from a quite different approach, some works focused on the mutually beneficial side of the association (e.g. Auyero 1999). Recently, scholars redirected the attention towards the micro level, scrutinizing the relationship between voters and brokers (e.g. Stokes et al. 2013). Building upon this framework, clientelism is conceptualized as a repeated game, in which, on the one hand, voters provide political support; and on the other hand, brokers deliver goods such as handouts, food, cash, access to subsidies, welfare programs, health assistant, clothes, construction materials and among others, jobs in the government, etc. These linkages are part of a problem-solving network where favors are exchanged bi-directionally. Quite different from an anonymous machine only present during elections, *relational* clientelism portrays the voter-broker relationship as an on-going and durable one (Nichter 2010). Yet, studies so far have not considered the allocation of LPG as part of these continuous exchanges between neighbors and their slum leaders.

The basic argument in this paper is that the provision of LPG within the urban poor cannot be studied independently from clientelistic dynamics. Building upon Dixit and Londregan (1996), scholars have emphasized the relevance of the machine in order to minimize the dead-weight losses in the distribution of private goods. In

general, machine voters are defined as those loyal to the broker, from whom she is able to gather accurate information, and thus target resources more effectively. In this sense, uncertainty is significantly lowered if brokers are well informed about the handout-recipients. However existing studies have mostly examined the broker's network of loyal voters in terms of the distribution of private goods. This paper departs from traditional literature in clientelism by redirecting the attention to the role of the brokers as a *go-between* within the nodes of her own network. The importance of her connections not only relates to her one-to-one exchange job, but also is linked to the social organization of the community as a whole. By understanding the leader's role as a coordinator, the machine is no longer portrayed as an asymmetrical and vertical structure. Social networks –my argument goes– influence more than just informational flows, but constantly shape voters' political choices. In consequence, by coordinating their electoral preferences, communities are empowered to demand LPG more effectively.

In the context of poor informal settlements, there are mainly three features of LPG that make them particularly interesting; they are: i) non-contingent on individual vote choice; ii) non-excludable from any resident in the community; and iii) non-rival among the neighbors[4]. It is precisely the non-excludability feature of LPG –"impossibility of exclusion" in Hardin's words– that introduces the need to examine collective action and coordination problems. Once public investment is allocated to a specific locality, everyone in it enjoys free access to it. Hence, a comprehensive study of this phenomenon needs to evaluate the interaction between clientelistic linkages and coordination efforts. The traditional literature on collective action and public goods (e.g. Olson 1965; Hardin 1982) fails to explain cases where clientelism regulates resource allocation. Indeed, the mainstream understanding is that one will contribute to a public good as long as the marginal benefit for this contribution com-

[4] I do not consider 'crowding effects' in the consumption of local public goods at the slum level.

pensates its marginal cost. This framework applies to those LPG that result from adding up everybody's contribution (for a complete review on this perspective see Andreoni and McGuire 1993). However, this literature lacks explanatory power for public goods that are not contingent on, for example, taxation. On the contrary, in most poor informal settlements, residents' access to LPG is entirely independent from individuals' costly participation or income contributions.

In general, scholars have paid more attention to materialistic incentives than to solidaristic ones, with the notable exception of Ostrom (2000), and more recently of Auerbach (2013). Nevertheless, to address LPG at the slum level, community trust and solidarity are essential components. Existing research on clientelism analyzes dyadic relationships, paying little attention to the group dimension, and even less to the collective decision making process at the neighborhood level –Calvo and Murillo (2013) is an exception worth mentioning. Models for clientelism usually portray agent actions as individual level choices. Yet, behavioral scholars have shown that the act of voting is, to some extent, a collective activity (Baker, Ames and Renno 2006; Gerber, Green and Larimer 2008; Nickerson 2008; Remmer 2010; Abrams, Iversen and Soskice 2010; Fowler 2006).

Normally, local politicians retain degrees of freedom to decide where exactly (in which locality), they will allocate public investment, making this strategic decision quite relevant for the human well-being of poor constituencies. Hence, the distribution of LPG across similarly impoverished settlements cannot be studied independently from clientelistic dynamics. The typical exchange of political support for favors –generally ruling redistributive politics in the developing world– does not only entitle private goods. More often than not, local politicians reward localities with more than just handouts, making necessary for scholars to understand the provision of LPG embedded in a context of political clientelism.

Last, but not least, there is a solid consensus in current development scholarship

that social capital fosters improvements in living conditions. Some examples include Narayan and Pritchett (1999), who study village-level social capital positive effect of household income in Tanzania. Isham and Kähkönen (1999) argue an increase in efficiency in water services is due to social capital in Indonesian villages. Reid and Salmen (2002) propose that in Mali community cohesion enhance the effect of agricultural extension services. Finally, Krishna and Uphoff (1999) show how social capital promotes community-led water projects in Rajasthan, India. Notwithstanding the extensive literature, most of the studies involve rural villages. With this paper, not only I bring attention to the urban poor, but I also disentangle the underlying mechanism that explains such positive effects of social capital and development.

2.3 Fundamental Rationale: Social Capital and Agency

During electoral campaigns, urban poor localities experience a bargaining process between politicians and beneficiaries. This negotiation is mediated entirely by the figure of the broker. Since political actors are resource constrained, they build a portfolio diversification strategy and decide how much to invest in each electoral district. In order to maximize their vote share, they allocate public and private goods accordingly. For this study, I assume politicians are free to decide where to build a clinic or a sewage system according to their electoral strategies, in spite of any legal or institutional arrangement that may limit the allocation. Because the provision of local public goods is relatively expensive, parties will only provide them when they can be sure of gathering a large share of support from any given slum consistently over a period of years.

The mediator is a key actor in this argument. On the one hand, brokers negotiate with politicians for resources to distribute among slums' residents, with high discretion on how to allot particularistic benefits or handouts across households. On the other hand, these intermediaries are the recipients of claims from residents in terms

of lacking basic services. Therefore, brokers have to balance their jobs to deliver votes for specific political parties, rewarding voters with private goods, and to help the community as a whole to attract public investment for LPG.

Typically, poor voters live side by side with their local leaders or brokers. From an economic approach, voters maximize their well-being by evaluating the marginal utility of receiving private goods, and weighing the probability and the significance of LPG for their neighborhood. Traditional democratic channels are often insufficient for low-income voters, who rely heavily on direct transfers to get access to public goods[5]. Precisely, to evaluate the chances of receiving public investment in a particular electoral cycle, residents estimate how many others will vote for their same candidate. Serving as a large vote bank for a single party represents a coordination problem for citizens who live in slums.

In collective action problems when there are multiple equilibria, some kind of mechanism is often necessary for the interested parties to coordinate. Social conventions and shared expectations aid coordination towards higher social utility scenarios (Schelling 1960; Young 1996; Shepsle 2006). In this case, the coordination problem resides in getting the majority of the slum behind the same candidate. Community leaders oversee aggregating individual preferences with respect to LPG (turning their suggestions into a focal point). On the one hand, voters take leaders' actions as key information and cues. On the other hand, politicians realize these leaders are considered focal points and thus, represent a central informational diffusion element across network's agents.

In sum, the core argument in this paper is that both community and leadership

[5] In the words of Krishna (2011): "Some analysts expect political parties to perform the task of mediating between citizens and the state (e.g. Huntington 1968; Kohli 1987). In many new democracies, such as India, however, political parties are quite weakly organized, do not penetrate effectively to lower levels, have little or no presence at the grassroots, and may not provide much support for the tasks of interest articulation, demand representation, and political communication (Kohli 1990; Krishna 2002). Mediated transactions characterize an important part of citizen-state relations."

characteristics determine the likelihood of success in demanding local public goods from the government. In order words, a positive involvement from the leader's side, jointly with a highly connected community balance the bargaining process between voters, brokers and politicians, in favor of the community's best interests. It is a double-folded argument. Firstly, leaders' attitudes and network's density shape the prospect of electoral coordination. Secondly, electorally homogenous localities are entitled with more –or higher-quality– public services. Is this always the case? Or are there exceptions for the association between electoral coordination and better LPG? This paper's argument is that the good type partisan homogeneity yields positive results in terms of public investment, if and only if it is rooted in community-led electoral coordination (enabled by social capital) and not determined by political clientelism.

2.3.1 Voting as a Social Experience

Particularly in small communities, citizens do not perceive turnout as an individual experience, for example sometimes t-shirts with different colors are used to identify supporters which brings a sense of belonging (Remmer 2010). Recent evidence shows that citizens are often persuaded by their immediate social contexts, when taking political decisions (Baker, Ames and Renno 2006; Gerber, Green and Larimer 2008; Nickerson 2008; Abrams, Iversen and Soskice 2010; Fowler 2006). The neighborhood is the main environment where political communication thrives, either by word of mouth, yard signs or painted walls (Huckfeldt and Sprague 1995). This territory is the sphere "in which individuals think collectively" (Sinclair 2012). It is the inter-dependence among individuals what makes residents of the same locality permeable to other people's political choices (Marwell and Oliver 1993; Sinclair 2012).

The social network in a specific locality is conformed by those neighbors who are socially linked to each other and discuss every-day personal problems, as well

as community issues and politics in general. The electoral process is conceptualized as a group activity. Voters' political behavior is conditioned by the information at the very local level (Huckfeldt and Sprague 1995). For instance, an individual has a presumption about a certain issue, then encounters a neighbor and talk about it, and they both form a new opinion. Citizens are interconnected and they maximize utility by reducing informational costs (Downs 1957), and in this case, by matching their neighbors' political preferences.

As well, individuals derive utility by conforming to social norms (Festinger, Torrey and Willerman 1954) and try to avoid disagreement within their main social environment (Sinclair 2012). The underlying instrument is the need to seek for social approval (Lindenberg 1991). Ergo, social influence at the neighborhood level drives incentives to coordinate electorally. The intrinsic belief is that public scorn may result from violating or avoiding them. In order to anticipate that peers will praise those who uphold to informal norms, the perception has to be that these political choices are public (Lerner and Tetlock 1999; Cialdini and Goldstein 2004). In other words, voters evaluate their political preferences individually, but look for consensus collectively; they do not enjoy expressing a vote choice different from the one the majority in the community is pursuing. Consequently, given that agents sanction or reward their neighbors for their political actions or opinions –filtered by their own points of view– behavioral contagion is understood as a learning process with social influence (McPhee 1963; Huckfeldt and Sprague 1995).

Social capital intensifies informational flow on political behavior, aiding coordination. Although not in relation to clientelistic dynamics, social capital has been thoroughly studied (e.g. Coleman 1988; Lin 1982; Flap and Graf. 1986; Burt 2000). As in Putnam (2000) social capital represents "the connections among individuals' social networks and the norms of reciprocity and trustworthiness that arise from them". To Cohen and Prusak (2001) it represents ties binding neighbors and enabling coop-

eration. More ties between neighbors increase the speed of social reward/sanction, reinforcing the mechanism for peer pressure. By emphasizing the interdependence between nodes in a social network (Marwell and Oliver 1993) we can clearly challenge the common assumption that under clientelism actors are isolated.

Along these lines, a highly-connected social network simplifies the broker's task of signaling and monitoring political behavior across the community. Politicians know that the electorate is interdependent, and to optimally diffuse information they will seek to influence the most central node in the network –the broker. More explicitly, the social network impacts the informational flow, the monitoring structure (inherent to clientelistic linkages) and, consequently, the leadership's role as a focal point in coordination problems. In sum, a dense social network provides information on political behavior, promotes checking and supervising and facilitates a social-sanction system between agents. Scholars (e.g. Täube 2004) have argued that weak ties often imply private goods, whereas collective goods, like trust itself, tend to derive from strong ties[6]. Furthermore, the dichotomy between strong and weak ties often translates into the distinction between symmetric and asymmetric relations, respectively.

2.3.2 Slum Leaders and Brokerage Roles

There is a wide-ranging literature focusing on the importance of actors who occupy central positions in social networks –brokers– and their role in diffusion processes (e.g. Burt 2000; Marsden 1982; Granovetter 1973; Homans 1974). In the words of Taube "brokers are actors that allow or enhance resource flows between otherwise unconnected or only weakly connected actors; as a result they able to gain advantage

[6] Homans (1974:104) puts it this way: "If multiple individual exchanges among the members of a group are rewarding enough, that fact may increase the similarity among members in the sense that more of them conform to a group norm than we should have expected if the direct reward of conforming, that is, the attainment of a collective good, were the only one at work." See also Flache (1996) for a discussion on the provision of collective goods within dense groups.

due to their strategies position in social networks." (Täube 2004:30). In general terms, brokers or central nodes are decisive characters to boost connectedness and enable social capital throughout the network.

Merton (1968) classifies brokers (or "influentials" in his terminology) into two categories: *Local* and *Cosmopolitan*. The latter is distinguished for their capacity of connecting across communities or clusters (in my theory, political actors who connect across slums). Local brokers, then, are specialized in the transmission of leverage social capital within the community but are not considered brokers between different cliques. In relevance to this paper, the main distinction for leadership typology is the following. On the one hand, *Liaison* is defined as a rent-seeking broker, in a context of fragile networks, and provided she is not part of the community. On the other hand, this paper emphasizes the role of an accountable leader, somebody fairly close –and probably also a resident– to the locality neighbors, quite responsive to the residents' demands. Gould and Fernandez (1990) classify this type of leader as a *Coordinator*, which –for this paper– is associated with coordinating vote choice (focal point), in order to effectively achieve higher provision of LPG[7].

Responsiveness or accountability in leadership is closely related to the citizens' power to force politicians to comply with their promises, as the following quote illustrates:

> "Accountability refers to the ability to ensure that public officials are answerable for their behavior, in the sense of being forced to justify and report their decisions, and of being eventually sanctioned for those decisions. [...] The concept of political accountability refers instead to the responsiveness of governmental policies to the preferences of the electorate. Political accountability is intimately intertwined with the concept

[7] Other types of leaders in the literature are Gatekeeper and Itinerant. See Gould and Fernandez (1990) and Taube (2004) for a complete overview.

> of democratic representation. [...] A government is politically accountable if citizens have the means for punishing unresponsive or irresponsible administrations. It is usually assumed that elections are the central institution for this type of control (Przeworski, Stokes and Manin 1999). They provide a regular mechanism for citizens to hold governments responsible for their actions, forcing out of office those incumbents who did not act in the best interest of voters, or reelecting those who did." (Peruzzotti and Smulovitz 2002: 210-211)

In brief, slum-dwellers employ societal mechanisms to hold leaders accountable, by activating horizontal channels to threaten elected representatives to stop political support, or even unelected ones with reputation costs (Peruzzotti and Smulovitz 2002). For this paper, for accountable leaders I understand those who are forced to deliver their neighbors with more than just private goods. When deprived communities address their leaders with complaints on the lack of basic public services, this type of leader will have to respond to them with some type of solution. Otherwise, their continuity as leaders will be at risk. Moreover, when these leaders reside in the same neighborhoods (as they often do), not only political costs are at stake. Krishna (2011) finds empirical evidence in Indian villages that it is quite difficult for a leader (in his study: a *panchayat*) to cheat villagers because if the community is united, they can exert social sanctions (e.g. ostracism) to unresponsive leaders.

Particularly in the Indian case, we can differentiate two types of local leaders: traditional bosses and young men *"Naya Netas"*. The latter are characterized by their skills and education and are often specialized in terms of their abilities to deal with different governmental agencies. Hence, when in need of assistance with a particular issue, citizens recognize this differentiation system and approach *"Naya Netas"* according to their expertise. Most importantly, unmediated transactions are

very rare; people generally rely on *"Naya Netas"* or other type of intermediaries (Krishna 2011). In this work, I do not distinguish particular types or local leaders, and survey respondents in Udaipur identify both slum leaders and ward leaders as the central ones.

Hypotheses

H1: Communities with higher social capital are more prone to vote together (electoral coordination).

H2: Communities with active leaders (working as coordinators) are more prone to vote together (electoral coordination).

The first set of hypotheses explains how both social capital and leaders' engagement (efforts to monitor or suggest vote choices) enables electoral coordination. The rationalization for this argument is simple: more well connected communities manage to organize themselves in a way that they can negotiate better with politicians, while the intermediary is obliged to represent their interests in case she desires to remain in that position. The mechanism that enables political organization at the neighborhood level is the informational flow resulting from the density of the social network. In other words, the dissemination of information is aided by the shared values and mutual trust in communities with high social capital.

Interestingly, the positive effect that social capital exerts on electoral coordination is bolstered by the presence of an intermediary agent who effectively reach out and get resources for her community. Moreover, by signaling the suggested path, the mediator simplifies the task of aggregating neighbors' preferences in terms of electoral choices. In Krishna's words:

> "Social capital represents a potential –a propensity for mutually beneficial collective action. But potential needs to be activated and agency is important for this purpose. [...] when intermediate links are weak,

as they are when agency is not capable, social capital does not translate readily into good performance." (Krishna 2001: 934)

H3: Communities with higher social capital are more satisfied with their leaders and LPG.

H4a: Communities voting together are more satisfied with their LPG, only under the presence of social capital (good-type homogeneity)

H4b: In the absence of social capital, communities that vote together have lower levels of satisfaction regarding LPG (bad-type homogeneity).

The second set of hypotheses refer to the interaction between social capital and electoral coordination. Although I anticipate a strong association between social capital and satisfaction with LPG, I do believe that the effect of electoral coordination is distinct conditional on the level of social capital. More explicitly, I hypothesize that when slum voters coordinate their vote choice –when the majority of the slum chooses the same political candidate– they raise the likelihood of enjoying better-quality LPG, if and only if the community benefits from social capital. Alternatively, slums showing electoral homogeneity under the absence of social capital, tend to receive more private goods than LPG –within clientelistic practices. In the negative case (bad-type partisan homogeneity) communities appear to be coordinating at the ballot box, but not for the good reasons. Precisely because of the absence of social capital, slum dwellers are locked-in voters who tend to vote for the same political party as they are being persuaded with inexpensive handouts. It is worth mentioning that this argument differentiates between electoral coordination and partisan homogeneity. The former requires bottom-up community-driven political organization and agreement. Instead, homogeneity may appear as electoral coordination but could in fact represent the by-product of very effective clientelism. Every case of electoral coordination results in partisan homogeneity (good-type), but not every

case of partisan homogeneity implies electoral coordination.

The connecting link between LPG improvements and the good-type partisan homogeneity is leadership responsiveness. Frequent interactions and strong ties between slum dwellers improve leadership accountability. Well-connected communities yield empowered citizens –instead of locked-in voters– who, if necessary, can pose a credible threat to disappointing leaders and politicians. Simultaneously, once a broker is able to demonstrate that she is capable of delivering "vote banks", she increases her chances of demanding more investment from higher-ranking politicians. Not only the community is empowered through social capital, but through this process, leaders' maneuvering skills are bolstered too.

When posing demands to their local leader, the level of social connectedness in the residents' social network impacts positively the power residing in these voters. That is, higher connectedness favors the likelihood of the group to organize themselves politically, coordinate electoral choices and hence, extract more resources during electoral campaigns. Along these lines, when a local leader or broker is not being responsive to the community, it is feasible for them to communicate –without the need for a leader– and to try to replace him[8]. Networks with high degree of connectedness embody the most effective and successful undertakings in demanding for benefits bottom-up.

2.4 Empirical Analysis

The urban poor are the principal target of clientelistic practices, in detriment of provision of LPG (Brusco, Nazareno and Stokes 2004; Calvo and Murillo 2004; Remmer 2007; Keefer 2007). Due to the diminishing returns of consumption, low-income constituencies derive higher marginal utility from handouts (rather than middle-income

[8] Presumably there is some level of stickiness in leadership, and it might take several electoral periods, for a majority in the neighborhood to shift to a more dedicated leader. This is similar to what Magaloni (2006) recognized for the case of the Mexican electorate.

voters). Given that they are more electorally responsive to direct transfers, in poor communities we should expect provision of public goods to be low. Yet, variation in terms of public investment does exist across similarly impoverished populations and the current scholarship has failed to explain this divergence.

Along these lines, the empirical evidence in this paper comes from original household surveys in 30 slums in the Indian city of Udaipur. Located in the northern state of Rajasthan, the city of Udaipur has about 600,000 habitants while 10 percent of the population resides in slum. Like all Indian cities, Udaipur's main local government is a Municipal Corporation, formed by 50 wards leaders. The selected 30 slums provide the necessary variance in terms of population size, demographics, socioeconomic characteristics, and particularly differences on the existence of clientelistic practices and the provision of local public goods.

The data in this section was collected through two waves of surveys in 2013. The first round –during June and July– covered all households[9] in four slums (N= 750)[10]. Existing preliminary data on slum population in Udaipur, as well as previous qualitative fieldwork (March 2013), informed the selection of neighborhoods, assuring diversity across key variables. For the second wave –during November state elections– the strategy was modified, to represent the population in more than those four slums, covering 501 households. By a traditional stratified sampling[11], the survey covered a total of 30 slums across the city[12]. This time, the key questions asked about names

[9] The strategy required covering all residents of the neighborhoods, because the goal was to estimate networks analysis measures (connectedness and centrality). Thus, to avoid any possible bias in the present of sampling (Kossinets 2006), interviewing all households in the four slums was the mandatory research design.

[10] The four slums in the first wave are Bedwas Kachchi Basti, Bheelu Rana, Shivaji Nagar Kachchi Basti Sukhadia Nagar.

[11] Samples sizes at slum level were proportional to their share of the overall slum population of the city.

[12] The name of the 30 slums in the second wave are: Amba Mata (Ambavgarh), Avri Mata, Banjara Basti, Bedwas Kachchi Basti, Bhagri Basti, Bheelu Rana, Bhopa Magri, Gandhi Nagar Harijan Basti, Gowardhanvilas Indira Colony, Hanuman (C) Roop Sagar, Indira Nagar Beeda,

of most important leaders, as well as typical exchanges (of private and collective benefits) occurring during electoral campaigns.

In both waves of surveys, we asked about political and electoral monitoring (by the broker and among peers), vote coordination and the traditional components of social capital (trust within the community, solidarity between neighbors, etc.). As well, the survey includes assessment of satisfaction with slum leaders and quality of the services, to measure leadership accountability and improvements in LPG, respectively. For the following analysis, I have merged both waves. Since, not all questions were asked in both rounds, the number of observations oscillates across models.

I test the previously described hypotheses through a multilevel approach. In these models, the sample size is all interviewed subjects, but variance at the neighborhood level can also be explored. As in any voting model, the unit of analysis of classic studies on clientelism is the individual. However, the incorporation of collective considerations shifts the lens to the slum level. This change is not in itself problematic, but aggregation can be detrimental of the statistical power by dropping the number of cases significantly. To increase statistical power, the analysis is conducted in a pooled cross-sectional dataset. For these cases, running a multilevel model is the most efficient technique. The advantage of this model over traditional ones is that it allows me to account for clusters in the data without loosing efficiency.

According to Gelman and Hill (2007), multilevel works better with five or more groups. However, even in cases with less than five, these author believe multilevel can be better than a simple regression because it is no longer necessary to arbitrarily decide a base group. Moreover, in terms of the sample size per group, Gelman and

Kaumi Ekta Nagar, Kishanpol (N), Kishanpol (S), Lohiya Nagar Harijan Basti, Machhla Magra, Manoharpura, Math Madri, Neemach Khera, Neemach Mata, Od Basti, Parerion Ki Madri (Kc), Ram Singh Ji Ki Badi, Ratakhet, Sajjan Nagar Harijan Basti, Shaheed Bhagat Singh, Shanti Nagar, Shivaji Nagar Kachchi Basti, Sukhadia Nagar, and Vijay Singh Pathik Nagar.

Hill (2007) do not establish a necessary minimum *N*. While recognizing there might be challenges to estimate a precise variance within group, the authors believe there might still be interesting information available by running multilevel models for these cases.

2.4.1 Description of Relevant Variables from Survey Questions

- Electoral coordination: Do most members of your neighborhood vote for the same party?

- Leader's engagement as an electoral coordinator: Has your neighborhood leader suggested that you vote for a specific candidate in the coming elections?

- Social Capital Index: factor analysis[13] with two variables:

    1. Community trust: Now, speaking of the people from around here, would you say that people in this community are very trustworthy, somewhat trustworthy, not very trustworthy or untrustworthy...?
    2. Solidarity within neighbors: How often do people in your neighborhood help each other with problems (e.g. taking care of a sick family member, finding a job, lending money, and assistance in general)? Never, Rarely, Sometimes or Regularly?

- Ask help Neighbor: Suppose you have an emergency. Beyond your family, who would you go to for help. This variable was created as a dummy for respondents who answered 'neighbor' among other fixed choices.

- Frequency in discussing politics with main acquaintance: From time to time, most people discuss important matters with other people. Looking back over

[13] For diagnostics on factor analysis, please see Table 2.1 and Table 2.2 in the Appendix.

the last six months, about how often do you talk to [NAME[14]] about politics or public services: almost daily, at least weekly, at least monthly, at least yearly, less than yearly, or never?

- Leadership Accountability: Factor analysis with variables:

  1. Satisfaction with Slum Leader: Now I would like to ask how satisfied you are with the performance of your current community leader. Please kindly give a mark between 0 (very unsatisfied) to 10 (very satisfied) to show your degree of satisfaction.
  2. Slum Leader helpful: How helpful is each of the officials below likely to be in helping you get access to [the most important service mentioned in previous question] ? Not at all helpful? Somewhat Helpful? Or Very helpful?
  3. Contacted leader: In the past 12 months, have you done the following because of personal, family, or neighborhood problems? Contacted slum/neighborhood leader? If YES, was this meeting helpful in any way? From this question, I created an index that takes value 0 if there was no contact with the leader; 1 if the respondent contacted the leader but found it not helpful; and 2 if there was a contact and it was helpful.

- Satisfaction with public services: How satisfied are you with the quality of the following services: Primary Education, Secondary Education, Health Services, Roads, Access to Water, Waste disposal (or sewage), Electricity and Public Bathroom.

[14] In the first wave of the survey, we were able to ask each respondent the names of five acquaintances. Then for the question about frequency in discussing politics with main acquaintances, we mention the first and last name in their list of friends.

This is a 4-scale variable, where the highest means the greatest satisfaction. First, I created a variable that averaged the satisfaction for all these services (Average Satisfaction), and therefore the scale is 1-4. The main for this variable is 2.3 and the standard deviation is 0.7. Second, I created a variable adding up levels of satisfaction for the three most important public services: roads, access to water and waste disposal (sewage). The reason I chose these services is because when respondents in the survey were asked about priorities over government services, these were remarkably most important than any other[15]. In this case, this variable (Key Services Satisfaction) ranges from 1 to 10, with a mean of 3.7 and a standard deviation of 2.3.

- Partisan homogeneity at the slum level: share of the respondents in the same slum who mentioned affinity with the same political party as the majority of the slum residents. The question used here is: which political party do you consider is doing good?

2.5 Results

2.5.1 Phase I

The following statistical models support the principal argument in this paper. For the first phase, I run three multilevel models for electoral coordination on the main independent variables: Social Capital Index and Leaders' Engagement (leader suggests). All models control by the standard covariates: support for the BJP[16], Gender, Muslim (all three dummies), as well as variables for education level, age and a socioe-

[15] Respondents were asked to rank the 3 most important services. By adding up all first and second priorities, we get a total of 2490 mentions. From those, 617 correspond to Water Sanitation, 603 to Sewage and 407 to Roads. The rest of the priorities were Health with 344 mentions; Public Bathroom with 251; Primary Education 122; Secondary Education 115 and Electricity with only 31 mentions.

[16] BJP (Bharatiya Janata Party) is the incumbent party in India at the National level since 2014, and particularly in the State of Rajasthan, it is the principal party.

conomic status index (built through PCA using the battery of questions regarding households' assets[17]). Models do not control by turnout rates due to the stable patterns of turnout in India, through time and across territory. For instance, according to our data, about 93% of slum dwellers registered for suffrage, voted in the previous election.

All models in Table 2.3 (Appendix) provide evidence that electoral coordination is positively affected by the two conditions in my theory: i) social capital; ii) leader's efforts as a coordinator. I generate figure 2.1 by calculating the predicted probabilities for the variable *peer_same* in model 1 in Table 2.3. The horizontal axis shows how electoral coordination varies on social capital. While I also show two groups: (i) those respondents saying that their slum leaders suggest whom to vote for; (ii) those that say their leaders do not suggest any political party or candidate. As Figure 2.1 shows, both factors have a statistically significant positive impact on the probability of the neighborhood voting together. For example a hypothetical respondent with the minimum possible score of social capital, who also says that her Slum Leader did not suggest for any specific candidate to vote, has on average 10% chances of responding that in her slum, people vote for the same party. On the other hand, a respondent with the maximum level of social capital replying that her slum leader did suggest who to vote for, has on average 45% chances of responding that the neighbors coordinate their vote choice. The variable for the Social Capital Index ranges from 2.8 to 6.7 whereas the mean is 5.

Figures 2.2 and 2.3 show very similar effects for slightly different models –including two variables that were part of the first round of survey (but not in the second one). Because there are only four slums in that dataset, the model includes fixed-effects

[17] Following Filmer and Pritchett (2001), I build a Socioeconomic Index using Principal Component Analysis with all the questions in the survey referencing assets (car, scooter, bike, rickshaw, sewing tools, private bathroom, common bathroom, agricultural land, business, fans, almirah, refrigerator, Gas stove, Pump stove, Pressure Cooker, Washing machine, Cd player, DVD player, TV, radio, Dish TV, Camera, Prepaid mobile and postpaid mobile).

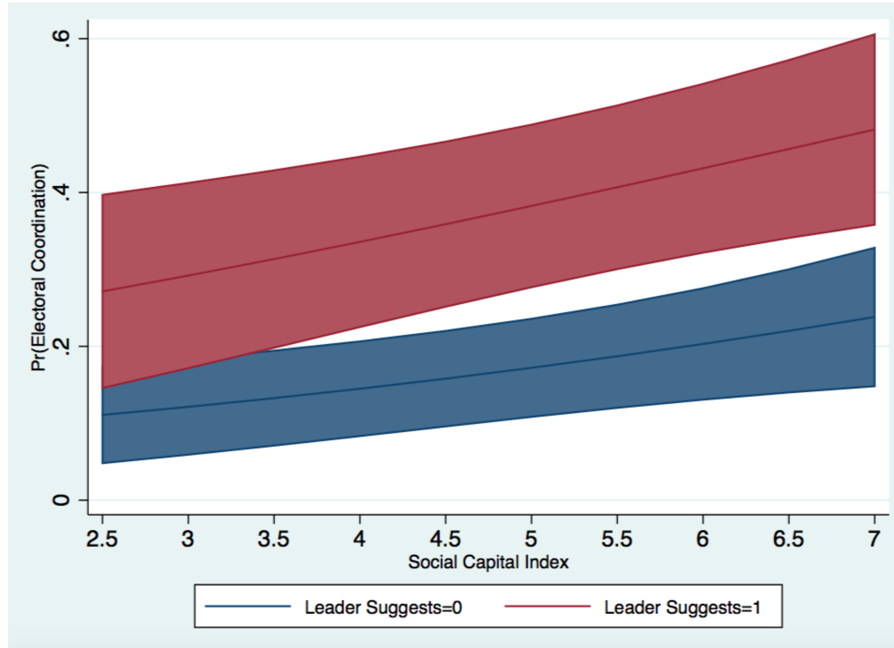


FIGURE 2.1: Margins for Electoral Coordination by Social Capital and by Leader Suggests

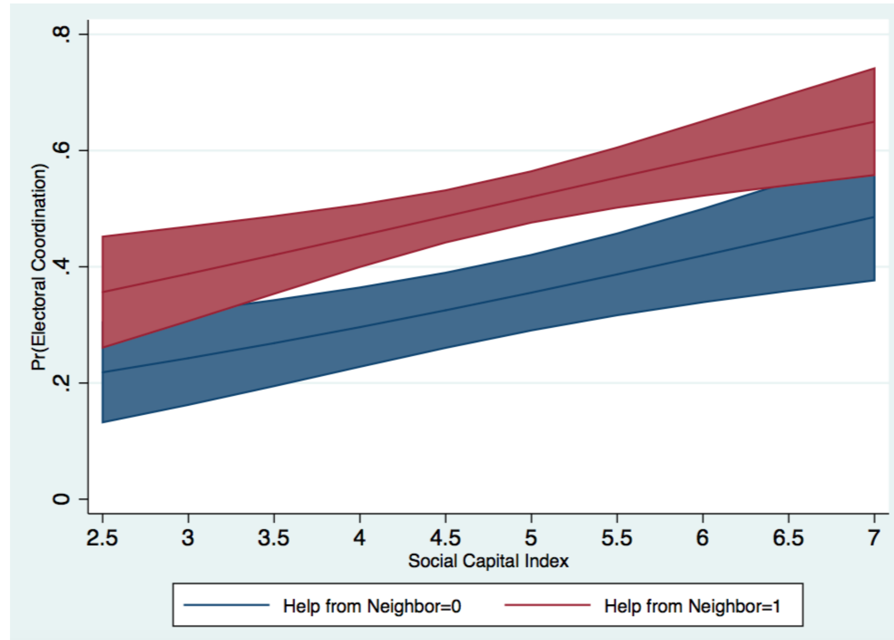


FIGURE 2.2: Margins for Electoral Coordination by Social Capital and by Help from a Neighbor

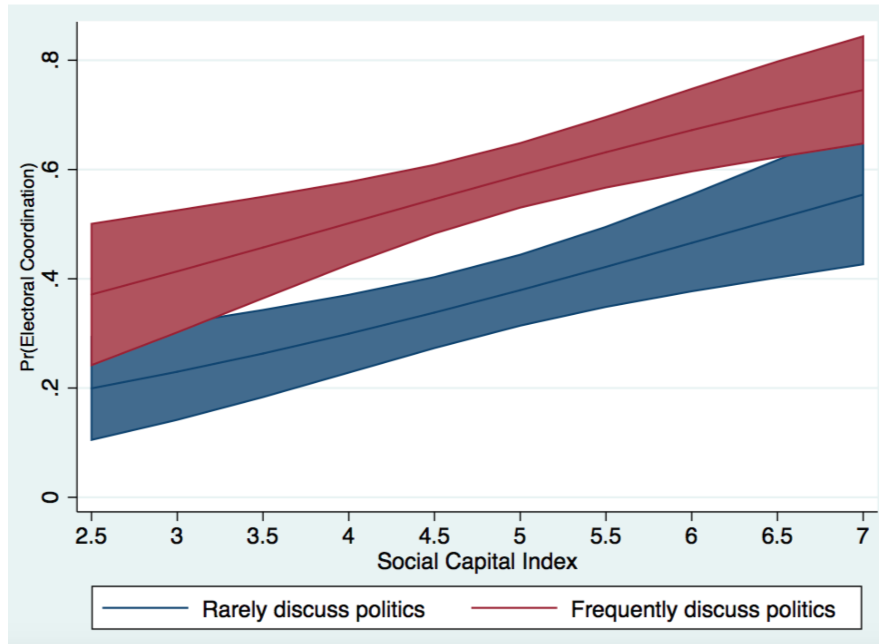


FIGURE 2.3: Margins for Electoral Coordination by Social Capital and by Frequency in Discussing politics with acquaintances

for the neighborhoods. For the three models, the effects of leaders' engagement and Social Capital are statistically significant and positive over the dependent variable (electoral coordination). But in particular the effect of Social Capital is stronger in models 2 and 3 relative to the first model –all in Table 2.3 in the Appendix. There are two new variables of interest in these models: Help from Neighbor and Rarely/Frequently discuss politics with acquaintances. The latter describes how often respondents discuss politics with someone beyond family members (dummy version) and the former indicates whether neighbors are the first ones to be contacted in case of an emergency. Although theoretically related, there is no statistical association between the Social Capital Index and these two variables (Pearson's correlation is less than 0.05). Figures 2.2 and 2.3 also show the predicted probabilities of voting together by the Social Capital Index, but split into different groups. For instance Figure 2.2 shows that the predicted probability of electoral coordination is about 0.2 for a person with the minimum level of social capital and who did not

ask help from a neighbor. Whereas a person with the maximum score of social capital and who did ask for help from a neighbor has a 0.65 predicted probability of answering that the neighborhood votes together. Likewise, the most frequently respondents discuss political issues or public services with their neighbors, the higher the likelihood of coordinating their vote throughout the community. Namely, the predicted probability of electoral coordination is about 0.2 for a person with the minimum level of social capital and who rarely discuss politics with acquaintances. In contrast, someone with the maximum score of social capital and who frequently discuss political matters beyond family members has a 0.75 predicted probability of answering that the neighborhood votes together. All in all, as the hypotheses estimate, the three independent variables suggesting a tighter community -jointly with leadership engagement- have a positive and statistically significant effect on Electoral Coordination.

2.5.2 Phase II

In this paper I argue that the mechanism linking electoral coordination with better public services has to do with leadership responsiveness. Although I do not claim any causal direction for this relationship, I found empirical evidence that those communities coordinating their vote are statistically associated with more accountable leaders. To measure leader accountability, I build an index with factor analysis using the following variables: general satisfaction with slum leader; how helpful she is to get access to services; if the respondent contacted the leader or not and if this was a useful enterprise. This association builds the foundation for the central results in Phase III. A t test shows that for respondents who say that their community tends to vote together (*peer_same*), the mean satisfaction with their leader is statistically different (higher, as the theory predicted) than for those saying their neighborhood

does not vote in the same political line (no electoral coordination[18]).

The models in Phase I show that social capital has a positive effect of the probability of the neighborhood voting together (electoral coordination). Now, I will show that this association fosters leadership accountability and ultimately impacts on the access and quality to LPG. For robustness checks, I consider two possible models for leadership accountability as the dependent variable. In the first multilevel model (Table 2.4), I find that both electoral coordination and social capital have positive effects on satisfaction with leadership. In the second one (Table 2.5), through an interaction effect, I find that electoral coordination enhances the positive effect of social capital, as Figure 2.5 illustrates. In general terms, social capital has a positive effect on leadership accountability but the slope is sharper for cases of electoral coordination. For very low levels of social capital, electoral coordination seems to be worse (than non-coordination) in order to hold leaders accountable. Although, for the highest levels of social capital, accountability levels are higher for neighbors voting together. This is consistent with the theory proposing that "bank votes" represent an asset to communities and also to brokers in negotiation with higher-ranking politicians.

2.5.3 Phase III

The last part of the empirical analysis shows the interaction effect of social capital and electoral coordination on services satisfaction. Table 2.6 (Appendix) presents the results of Multilevel Models for two different dependent variables: satisfaction with key services (roads, water and sewage)[19] and average satisfaction with all ser-

[18] The test yields a t student of -3.73 and the mean difference is 0.27 in leadership accountability, a variable ranging from 3.9 to 6.9.

[19] The variable Key Services Satisfaction ranges from 1 to 10 (mean=3.7; sd=2.3), and averages satisfaction over quality of roads, water and sewage.

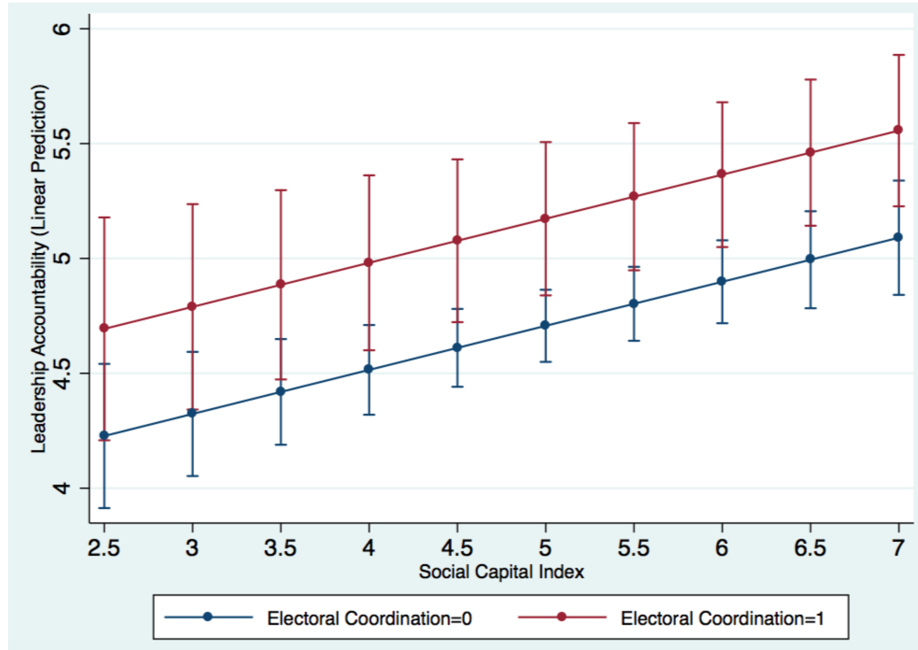


Figure 2.4: Margins for Leadership Accountability

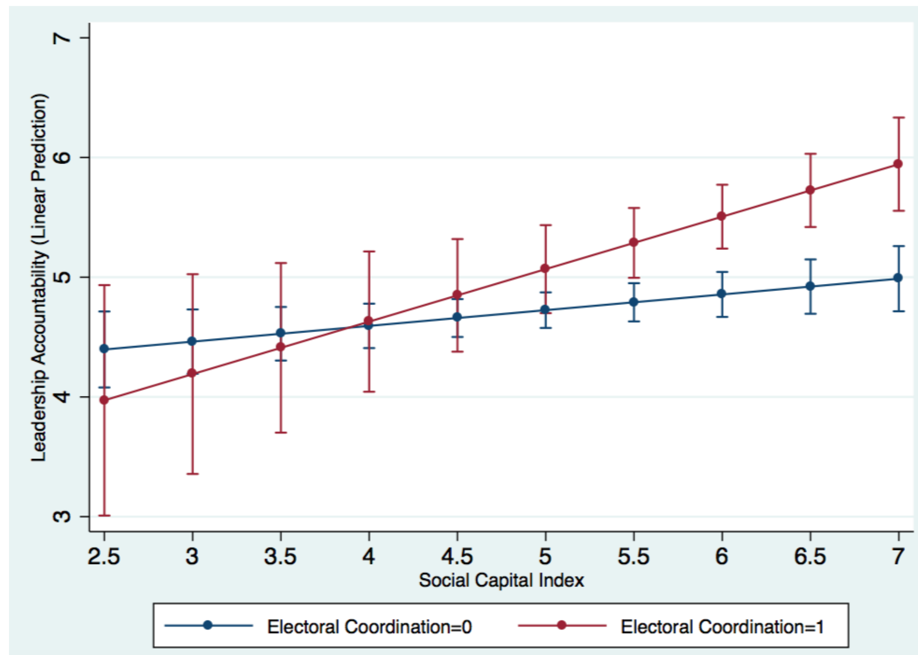


Figure 2.5: Margins for Leadership Accountability (interaction)

vices[20]. The main findings are robust throughout the different model specifications,

[20] This variable ranges from 1 to 4 (mean=2.3; sd=0.7) and it represents an average satisfaction of the following public services: Primary Education, Secondary Education, Health Services, Roads,

as Figure 2.6 and 2.7 illustrate. First, Partisan Homogeneity has a distinct effect on services, dependent on social capital. For those neighborhoods with low social capital levels, partisan homogeneity impacts negatively on services satisfaction. However, for those with high social capital, partisan homogeneity has a positive effect on services satisfaction. When social capital is low, what appears to be electoral coordination is actually an scenario of locked-in voters who receive private –in stead of public– goods (bad-type partisan homogeneity). Alternatively, in the presence of social capital, partisan homogeneity is showing a successful case of electoral coordination, where neighbors are able to achieve better public services by voting together and being rewarded by politicians. In other words, in the absence of social capital, partisan competition is more rewarding than homogeneity for poor informal settlements. Also as expected, both leadership accountability and socioeconomic status have a positive statistically significant effect on satisfaction over public services.

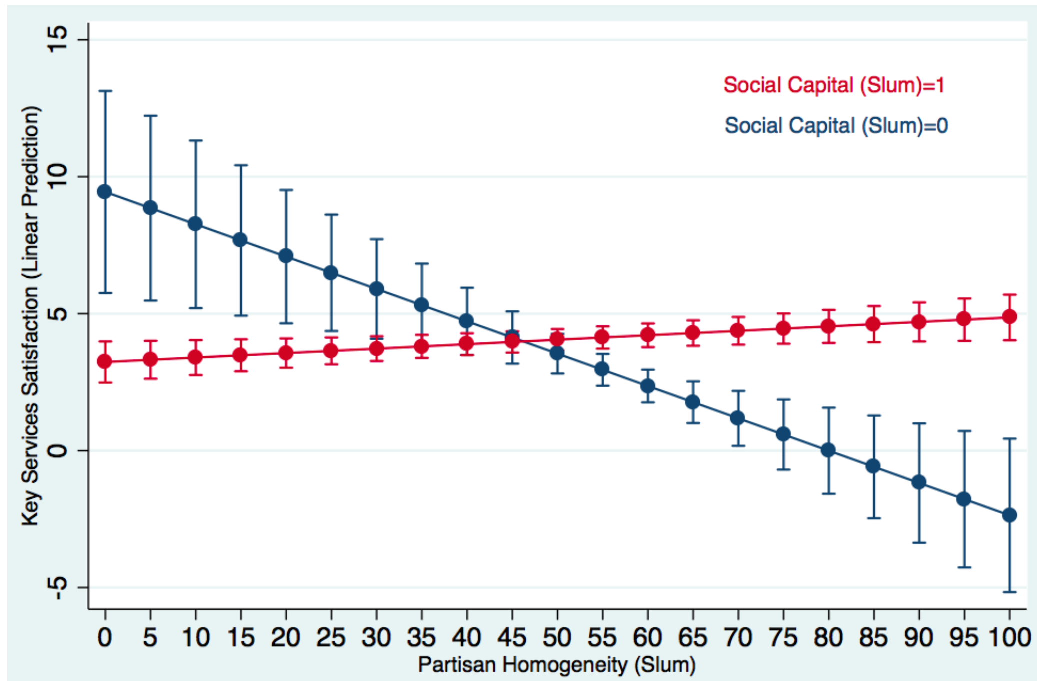
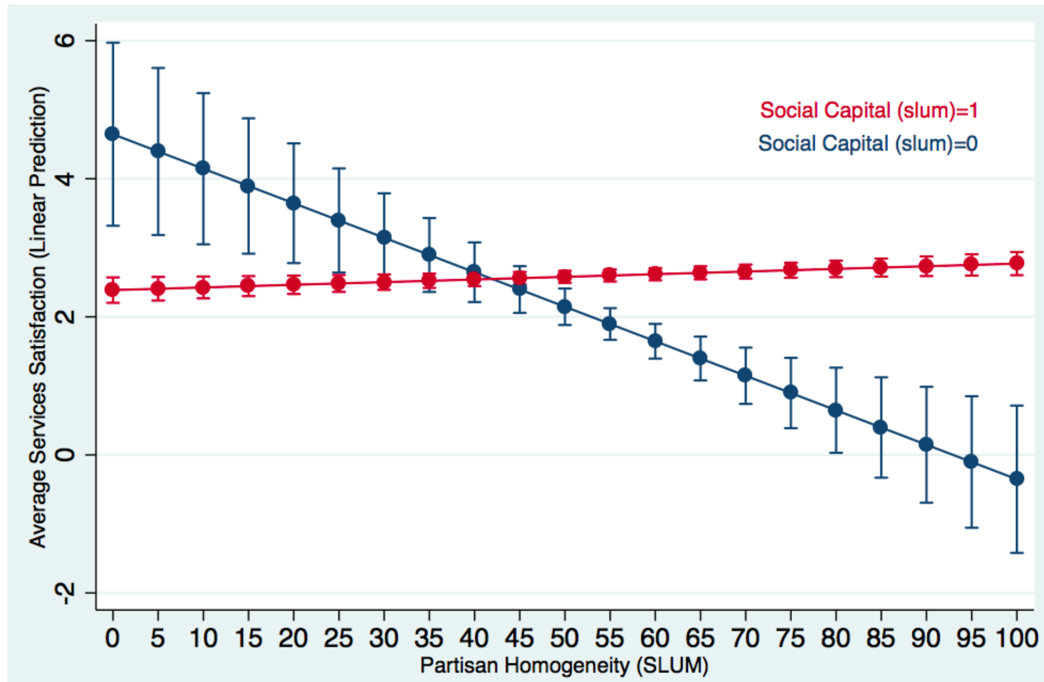


FIGURE 2.6: Margins for Key Services Satisfaction

Access to Water, Waste disposal (or sewage), Electricity and Public Bathroom.

FIGURE 2.7: Margins for Average Services Satisfaction



2.6 Discussion

This paper addresses the provision of local public goods for the urban poor, by focusing on the decision-making process at the neighborhood level. The argument describes the need to shift the clientelistic paradigm from the individual to the community level, as well as turning the attention to the dichotomy between private transfers and the provision of local public goods. More specifically, the paper explores how community organization shapes the levels of accountability in neighborhood leadership and, thus, the community efficacy in demanding investment from the government.

While political scientists have thoroughly studied clientelism, they have mainly overlooked group effects. From an economic perspective, slums politics are mostly absent in the study of LPG. Finally, albeit extensive, the literature on social capital and network analysis remains dissociated from the political clientelism phenomenon.

This paper's contribution is to integrate these different approaches into a single theory.

I explore the positive impact that social capital has on the capacity of the urban poor to improve their access to better infrastructure and public services. In sum, the level of connectedness in the neighborhood's social network impacts positively on the power residing in these voters when posing demands to their local politician. Social capital –this paper argues– enhances the most effective undertakings in demanding local public goods (bottom-up).

A dense network poses a credible threat to a negligent broker, as it is feasible for a well-connected community to communicate and coordinate to replace her. Alternatively, the community may attract public investment if they manage to coordinate their vote choice and support the same candidate. On the one hand, local politicians reward electorally-homogenous localities, increasing the power of negotiation that the slum leader has in the political bargaining process. On the other hand, by coordinating their efforts, neighborhood residents are able to hold their leaders accountable. Both sides of the argument translate into better infrastructure and services provided by the government.

With empirical evidence from 30 slums in the Indian city of Udaipur, I assess the ways in which communities approach the strategies for services-improving. Results evidence a statistically significant positive effect of social capital on the community's chances of voting together. Concomitantly, I provide evidence that brokers' efforts in signaling the political path (i.e. suggesting explicitly a candidate for whom to vote for) impact positively on the likelihood of electoral coordination. This result is coherent with the argument that slum leaders often function as coordinators (focal point in collective action problems). Through another set of models, the second part of the empirical section shows that electoral coordination impacts positively on the likelihood of improving the quality of LPG.

Through empirical evidence based on household surveys in Udaipur Slums, I show that social capital enhances the capacity of the urban poor to organize politically and coordinate their vote choice, improving their access to better public services. Future research should address dissimilar effects from different types of social capital. I anticipate that both types of social capital bonding and bridging are relevant for this research agenda. For high-homogeneity neighborhoods (e.g. in terms of ethnic or religious cleavages), bonding ties should be sufficient to foster electoral coordination. However, when communities are characterized by different minorities (e.g. Muslim clusters), bridging social capital becomes necessary to enable cooperation across communities within the same neighborhood.

2.7 Appendix

Factor Analysis for Social Capital Index

Table 2.1: Diagnostics

Factor	Eiegenvalue	Difference	Proportion
Factor 1	1.659	1.318	0.829
Factor 2	0.340		0.171
LR test: Independent vs. saturated: chi2(1) = 708.76 Prob>chi2=0.0000			

Following the Kaiser criterion that suggests retaining those factors with eigenvalue equal or higher than one, I use Solidarity and Community Trust as loading in a single factor.

Table 2.2: Correlation Matrix

	Social Capital Index	Community Trust	Solidarity
Social Capital Index	1.0000		
Community Trust	0.9108	1.0000	
Solidarity	0.9108	0.6591	1.0000

Table 2.3: Regression for Electoral Coordination

	Dependent variable: *peer_same*		
	(1) Multilevel	(2) Fixed Effects	(3) Fixed Effects
Leader Suggests	1.102*	0.696*	0.603*
	(7.25)	(4.13)	(2.87)
Social Capital Index	0.205*	0.286*	0.377*
	(2.62)	(3.21)	(3.31)
BJP supporter	0.258	0.299^{+}	0.0838
	(1.57)	(1.71)	(0.40)
Gender	0.0586	-0.0623	-0.120
	(0.38)	(-0.36)	(-0.57)
Muslim	-0.615*	-0.753*	-0.812^{+}
	(-2.02)	(-1.98)	(-1.70)
Socio-Economic Index	-0.0629	0.0841	-0.0204
	(-0.62)	(0.74)	(-0.15)
Age	0.000474	0.00237	0.00511
	(0.08)	(0.36)	(0.62)
Education	0.0131	0.0130	0.0254
	(0.70)	(0.63)	(1.01)
Ask Help Neighbor		0.720*	
		(3.92)	
Frequency discuss politics with acquaintance (dummy)			0.907*
			(4.50)
Bedwas Kachchi Basti (omitted)		–	–
Bheelu Rana		-0.157	-0.253
		(-0.60)	(-0.78)
Shivaji Nagar Kachchi Basti		0.545*	0.586^{+}
		(2.00)	(1.70)
Sukhadia Nagar		-0.832*	-0.687^{+}
		(-2.53)	(-1.72)
Constant	-2.709*	-2.617*	-2.772*
	(-4.34)	(-4.13)	(-3.58)
Observations	932	695	487

t statistics in parentheses $^{+}$ $p < 0.10$, * $p < 0.05$

Random-Effects Parameters	
Group-level Variance	0.432
	(0.247)

Std. Err. in parentheses

Table 2.4: Regression for Leadership Accountability

	Dependent variable: Leadership Accountability
	(1)
	Multilevel
Electoral Coordination	0.466^{*}
	(2.65)
Social Capital Index	0.192^{*}
	(3.63)
Gender	0.155^{+}
	(1.76)
Muslim	0.0521
	(0.45)
Socio-Economic Index	0.116^{+}
	(1.95)
Age	0.00368
	(0.87)
Education	0.00805
	(0.56)
Constant	3.141^{*}
	(7.58)
Observations	829

t statistics in parentheses $^{+}$ $p < 0.10$, * $p < 0.05$

Random-Effects Parameters	
Group-level Variance	0.066
	(0.046)
Individual-level Variance	0.757
	(0.052)

Std. Err. in parentheses

Table 2.5: Regression table

	Dependent variable: Leadership Accountability
	(1)
	Multilevel
1.Electoral Coordination	-1.192
	(-1.42)
Social Capital Index =1	0.131^{*}
	(2.28)
Electoral Coordination# Social Capital Index	0.307^{*} (2.13)
Gender	0.139^{+}
	(1.66)
Muslim	0.0364
	(0.30)
Socio-Economic Index	0.125^{+}
	(1.96)
Age	0.00344
	(0.85)
Education	0.00697
	(0.46)
Constant	3.489^{*}
	(8.46)
Observations	829

t statistics in parentheses $^{+}$ $p < 0.10$, * $p < 0.05$

Random-Effects Parameters	
Group-level Variance	0.064 (0.039)
Individual-level Variance	0.742 (0.053)

Std. Err. in parentheses

Table 2.6: Regression table

	Dependent variables:	
	Key Services Satisfaction	Average Satisfaction
	(1)	(2)
	Multilevel	Multilevel
Partisan Homogeneity (SLUM)	-0.118* (-3.62)	-0.0500* (-4.17)
Social Capital=1 (slum dummy)	-6.208* (-3.24)	-2.258* (-3.33)
Social Capital (slum dummy) × Partisan Homogeneity (SLUM)	0.134* (4.07)	0.0538* (4.50)
Leadership Accountability	0.275* (3.16)	0.187* (4.81)
BJP Supporter	0.0136 (0.06)	0.103 (1.40)
Gender	-0.156 (-0.95)	0.0215 (0.51)
Muslim	0.346 (0.82)	-0.0118 (-0.16)
Socio-Economic Index	0.447* (3.94)	0.0677* (2.28)
Age	0.00186 (0.27)	0.000573 (0.30)
Education	0.00771 (0.36)	0.00218 (0.36)
Constant	7.433* (3.55)	3.539* (4.89)
Observations	1064	1010

t statistics in parentheses $^{+}$ $p < 0.10$, * $p < 0.05$

Random-Effects Parameters		
Group-level Variance	0.772 (0.245)	0.032 (0.019)
Individual-level Variance	3.309 (0.266)	0.213 (0.014)

Std. Err. in parentheses

3

Drawing the line between Vote Banking and Clientelism. Social Capital and Local Public Goods in the Slums of Argentina

3.1 Introduction

Why are some slums successful at demanding public goods while others only receive food and handouts the day before an election? How does social capital improve the quality of infrastructure and public services for poor communities living in informal settlements? The purpose of this paper is to disentangle the effects of social organization –at the neighborhood level– on the ability of the poor to expand their access to Local Public Goods (hereafter LPG). More explicitly, my theory suggests that, due to the existence of social organizations *in situ*, communities with more social capital successfully articulate their demands to the government.

In San Miguel, Buenos Aires Province, a group of three small neighborhoods around the *Colegio Maximo de San Jose*[1] share several infrastructure challenges. To begin with, the localities have poor access to water and lack a natural gas connection

[1] Colegio Maximo de San Jose is the main establishment for Jesuit priests in Argentina.

and paved roads. In walking around and speaking with members of the community, I encountered a general feeling of despair. The general comment was how powerless they felt to change or fight any of their everyday problems. Jose[2], one of the interviewed social leaders, explained:

> *"People are hopeless because politicians do not even show up during electoral campaigns.[3] They have normalized the situation and they do not ask for much, they fight with each other but do not make demands to politicians."*

Evidently, these neighborhoods lack the social fabric to keep the community together, which translates into a poor quality of life. Along these lines, one of the priests from the Colegio Maximo confirmed my impressions about the community:

> *"It seems that people around here do not meet, and do not reach any agreements. There is no neighborhood assembly or anything like that."*

In a completely different scenario, I participated in a neighborhood assembly in a church[4] in Moreno, a locality in the province of Buenos Aires, very close to the aforementioned San Miguel. This type of meetings is relatively frequent in the neighborhood, occurring approximately every three months. At this particular neighborhood assembly meeting, about 200 people showed up to vote on a proposed budget that would connect the neighborhood to the natural gas grid. The NGO "Fundacion Pro

[2] In order to protect the privacy of the interviewee, no real names are revealed, a pseudonym is used.

[3] Precisely the day of this interview, July 18th 2015, one of the main presidential candidates, Sergio Massa, was campaigning a couple of blocks from there, and none of the neighbors I spoke with expressed interest in going to his rally. This was particularly strange considering that the mayor of San Miguel, Joaquin De la Torre, is part of Massa's political coalition. De La Torre was reelected a couple of months after that interview, but surprisingly he had shown no interest in mobilizing voters from that specific locality.

[4] The church is Parroquia Maria, Madre de Dios, on the corner of Camoati and Payro streets (Localidad de Moreno) and the assembly occurred on June 20th 2015.

Vivienda Social" assisted the local community in the process of financing the grid connection through a micro credit scheme. The precise objective of this NGO is to promote social capital by enabling slum dwellers to realize they can improve their quality of life through community organization. At this meeting, members of the NGO and several community leaders presented the information on costs and timelines and neighbors voted –by showing hands– if they would like to join the scheme. Although the NGO provided fundraising expertise and secured some external funds[5], each participating family agreed to pay monthly installments to eventually get access to natural gas. One of the first steps in this endeavor involved obtaining written municipal approval for safety reasons, and in the assembly some neighbors shared from their (fruitful) experience of dealing with public officials. The most interesting detail of this example of this community organization is that each block has its own leader, called "referente de manzana", who reports to a higher-ranking leader, representing a group of blocks. It was repeatedly mentioned in the assembly that only those blocks that were organized and had chosen their representative would be able to participate in the scheme. This is a clear example of how a strong community organization serves as the fundamental brick for a slum to access better services.

The contrast I encountered in these two communities illustrates the core argument of this paper. Oftentimes the potential link between the existence of political organizations at the very local level and any socioeconomic improvement has been examined through the lenses of political clientelism or patronage, focusing merely on individual targeting (Auyero 1999; Levitsky 2003; Calvo and Murillo 2004; Stokes 2005; Remmer 2007; Stokes et al. 2013, among many other authors). Existing scholarship analyzing political exchange in developing-world slums has mostly studied the distribution of private goods such as food, medicine, personal favors, gifts, jobs,

[5] In the assembly they mentioned they were no longer receiving funds from FOMIN (an IADB division), but had now secured resources from private banks and from a government program called "Vivir Mejor".

etc. However, the literature so far has failed to address whether social networks contribute to attracting the public investment that improves the provision of LPG. By shifting the paradigm from the individual to the neighborhood level, my goal is to bring attention to the local decision-making process. The chief contribution of this work is to shed light on the dynamics of social capital as a key factor in the empowerment of poor populations. This paper seeks to illustrate how –through this empowerment– communities are able to pose demands to politicians and gain access to better neighborhood infrastructure and higher-quality public services.

Furthermore, I provide empirical evidence for 1,834 slums across different provinces in Argentina supporting my claim that the role of a neighborhood's social structure is central to the capacity of the poor to gain access to basic services and better infrastructure. The model results in this paper show that there is a positive statistically significant effect of social capital on LPG. The dependent variable is an LPG Index –namely sewage, access to water, electricity, natural gas, garbage collection, street lights and pavement. Findings are robust across different measurements of social capital, and after controlling by possible cofounders and considering regional (provincial) effects.

In a second part of the paper, I develop a new theory for the linking mechanism between social capital and LPG. Namely, I propose that the capacity of slum dwellers to coordinate electorally poses a credible threat of bloc-voting, and is precisely what helps them to hold governments accountable. In this part of the paper, I distinguish two types of partisan homogeneity by how slum dwellers vote. On the one hand, community-led electoral coordination –enabled by social capital– translates into what I define as the good-type partisan homogeneity. On the other hand, when social capital is low, it is likely that slum dwellers will be the target of political clientelism (private goods). I refer to this scenario as the bad-type partisan homogeneity; unresponsive candidates win in this kind of districts by large margins.

Partisan homogeneity might appear to imply that slum residents are coordinating their vote, but in fact in these cases there is no collective initiative present. In the empirical section of the second part of the paper, I present evidence that the bad-type partisan homogeneity hinders slum dwellers' quality of life. In other words, I show that in the absence of social capital, electorally-homogeneous slums are predicted to worsen their LPG conditions. Alternatively, when social capital is present among community members, they do not necessarily require competition along the partisan spectrum in order to achieve better infrastructure and public services. Hence, social capital breeds "good-type" homogeneity: communities with strong ties coordinate their vote and successfully attract public investment.

This paper is organized as follows. The next section describes the theoretical framework, summarizing the existing literature and how this project departs from what has been written on the topic. The third section introduces a unique dataset, providing details on the questionnaire and a complete overview of the characteristics of the slums surveyed across Argentina. Afterwards I present the results of the models employed to test my argument. Finally, a second part of the paper introduces a more complex variant of the theory and tests the results with a new dataset. I conclude with an outline for other potential lines of research.

3.2 Theoretical Framework

In the context of poor informal settlements, there are mainly three features of Local Public Goods that make them particularly interesting; they are: i) non-contingent on individual vote choice; ii) non-excludable from any resident in the community; and iii) non-rival among neighbors[6]. It is precisely the non-excludability feature of LPG –"impossibility of exclusion" in Hardin's words– that brings the need to exam-

[6] Due to the nature and characteristics of LPG analyzed in this work, I do not consider 'crowding effects' in the consumption of public goods at the slum level.

ine collective action and coordination problems. Once public investment is allocated to a specific locality, everyone in it enjoys free access to it. The traditional literature on collective action and public goods (e.g. Olson 1965; Hardin 1982) fails to explain cases where clientelism regulates resource allocation. Indeed, the mainstream understanding is that one will contribute to a public good as long as the marginal benefit for this contribution compensates its marginal cost. This framework applies to those LPG that result from adding up everybody's contribution (for a complete review on this perspective see Andreoni and McGuire 1993). However, this literature has weak explanatory power for public goods that are not contingent on, for example, taxation. On the contrary, in most poor informal settlements, residents' access to LPG is independent from individuals' contribution. Traditional democratic channels are often insufficient for low-income voters, who rely heavily on direct transfers to get access to public goods[7]. Typically local politicians retain degrees of freedom to decide where exactly (in which locality), they will allocate public investment, making this strategic decision quite relevant for the well being of poor constituencies. Hence, the distribution of LPG across similarly impoverished settlements cannot be studied independently from commonly understood clientelistic dynamics. The standard exchange of political support for favors –generally ruling redistributive politics in the developing world– does not only entitle private goods. More often than not, local politicians –who are resource constrained– reward localities with more than just handouts, making necessary for scholars to understand the provision of LPG embedded in a context of political clientelism.

However, the distribution of resources in poor settlements in Argentina has been

[7] In the words of Krishna (2011): "Some analysts expect political parties to perform the task of mediating between citizens and the state (e.g. Huntington 1968; Kohli 1987). In many new democracies, such as India, however, political parties are quite weakly organized, do not penetrate effectively to lower levels, have little or no presence at the grassroots, and may not provide much support for the tasks of interest articulation, demand representation, and political communication (Kohli 1990; Krishna 2002). Mediated transactions characterize an important part of citizen-state relations."

consistently studied through the lens of political clientelism, focusing merely on private goods. Quite extensively, scholars have centered on the direct exchange of material benefits for political support between voters and politicians (Levitsky 2003; Calvo and Murillo 2004; Stokes 2005; Remmer 2007, among many other authors). Initially, the literature considered the exploitative aspect of the asymmetric relationship between voters and politicians (e.g. Brusco, Nazareno and Stokes 2004). Whereas, from a quite different approach, some works focused on the mutually beneficial side of the association (e.g. Auyero 1999). Recently, scholars redirected the attention towards the micro level, scrutinizing the relationship between voters and brokers (e.g. Stokes et al. 2013).

By and large, studies agree that this form of political representation substitutes more programmatic appeals, and broadly targets low-income voters. In terms of which groups are the primary recipients, a central question in the literature was directed towards ideological characteristics and partisan preferences. The controversy can be summarized as follows: parties tend to target core voters (Cox and McCubbins 1986; Calvo and Murillo 2004; Levitt and Snyder 1995; Magaloni 2006) or swing voters (Lindbeck and Weibull 1987; Stokes 2005) or both (Dixit and Londregan 1996; Magaloni and Estevez 2007; Stokes et al. 2013; Nichter 2010).

Specifically regarding clientelism in Argentina, scholars have focused essentially on the extensive networks of brokers within the Peronist Party (Partido Justicialista, PJ)[8]. A common understanding that has not been disputed is that brokers tend to have links to the PJ. This fact became clear in the 1980s when President Alfonsin (from the Radical Party) failed to implement a national food program[9] without the assistant of peronists brokers (Zarazaga, 2011). This prevalence of peronists

[8] See Zarazaga (2011) for a detailed description on the topic of peronist brokers networks.

[9] The program was 'Cajas PAN' and consisted of boxes of food that brokers distributed within low-income population.

within clientelistic networks was consolidated in the 1990s when the dynamics of political power required territorial control. And later intensified during the 2000s when Kirchnerist and anti-Kirchnerist groups led to Intra-Peronist competition (both in the electoral arena as well as in the territorial battle). Along these lines, Levitsky (2003) argues that the Peronist party shifted from labor-based politics to clientelistic strategies as a way of sustaining its traditional lower-class support while at the same time promoting economic reforms and a neoliberal policy platform.

Clientelism is frequently conceptualized as a repeated game (Stokes et al. 2013), in which, on the one hand, voters provide electoral support; and on the other hand, brokers deliver goods at the individual or household level (e.g. handouts, food, cash, access to subsidies, clothes, construction materials and among others, jobs in the government). According to Auyero (2001), brokers are those who are able to accumulate resources -mostly private goods- but also hold a monopoly over the information and the informal channels to communicate with other political actors. Likewise, Stokes and her colleagues (2004, 2005, 2013) portray brokers as the go-between and emphasize the role of monitoring to overcome commitment problems. Among other interesting findings on Argentinean clientelism, Remmer (2007) shows that spending in social services and economic development is negatively correlated to patronage expenditures. Whereas Calvo and Murillo (2004) focus on the distribution of excludable goods, specifically 'public jobs over a stable network of voters' (Calvo et al 2004: 743); Weitz-Shapiro (2012) explains how politicians may choose to opt out of clientelism by weighing their electoral costs and benefits, as a function of political competition and poverty rates.

Albeit the extensive literature regarding clientelistic dynamics in Argentinean poor informal settlements, studies so far have not considered the allocation of LPG as part of these continuous exchanges between neighbors and local politicians. Yet, existing scholarship has underestimated the role of social capital in securing better

access to public services and infrastructure. In other words, by and large, studies have disregarded the interaction between patronage dynamics, social capital and the provision of LPG (e.g. sewage systems, water sanitation, local clinics, schools, road pavement, electricity, etc.). Given that brokers also mediate in the allocation of public investment, we still need a more comprehensive understanding of *collective clientelism* (Kitschelt and Wilkinson 2007). Moreover, I suggest that we redirect the attention to collective action problems at the slum-level, underscoring the role of the community leader as a coordinator. All in all, there is a void in the current scholarship as rarely do studies try to understand clientelistic dynamics, electoral coordination and LPG's provision jointly.

The argument that I present –and subsequently provide evidence for– is that communities with higher social capital are more successful in demanding better public services and infrastructure. Social capital is usually described as the "glue" that holds a given community together, the level of trust, solidarity and cooperation among its members or in other words, the density in their networks[10]. As in Putnam (2000) social capital represents "the connections among individuals' social networks and the norms of reciprocity and trustworthiness that arise from them" (p.19). Extensive scholarship has shown the positive effects of social capital on the individual welfare, as well as improvements in living conditions. In his seminal work, "Bowling Alone", Robert Putnam has thoroughly described the decline in social capital in the United States, arguing that people started to interact less in the form of face-to-face and particularly memberships to clubs, religious groups and similar activities plummet. While social capital was declining, also were civic engagement. Among many consequences for the decline in social capital, Putnam shows that neighborhoods are less safe, government's performance deteriorated, children do worse at school, in

[10] In the words of Paldam (2000): "In the language of game theory, social capital is the excess propensity to play cooperative solutions in prisoners' dilemma games." For a detailed outline of several definitions of social capital, see Paldam (2000).

general people do not prosper as much as before, and they are less happy, and less healthy (Putnam, 2000).

Concerning Argentina, Ronconi, Brown and Scheffler (2010) has shown how social capital fosters health conditions for the elderly population. Other examples across the globe, include Narayan and Pritchett (1999), who study village-level social capital positive effect of household income in Tanzania. Isham and Kähkönen (1999) argue an increase in efficiency in water services is due to social capital in Indonesian villages. Reid and Salmen (2002) propose that in Mali community cohesion enhance the effect of agricultural extension services. Krishna and Uphoff (1999) show how social capital promotes community-led water projects in Rajasthan, India. With respect to Argentina, Chile and Mexico, Klesner (2007) has shown that social capital encourages political participation and a more robust democratic experience.

The core of my argument is that communities with stronger social ties and internal organizations enjoy better LPG. The linking mechanism in this association comprises three elements: i) electoral coordination; ii) mobilization; iii) leadership accountability. The first one is based on the following premise: higher social capital is associated to more aggregated political behavior (Huckfeldt and Sprague 1995). In this sense I propose that more frequent communications among neighbors, bring better public services and infrastructure, since higher-ranking politicians generally reward electorally-homogenous localities. When communities are well organized, their recurrent interactions increase the likelihood that they will vote for the same political party or candidate. The second one relates to empowering the community in their mobilization skills in order to pose demands to politicians. Communities with higher social capital are better equipped to organize political protests or to mobilize themselves and take their complaints or basic needs to the municipality or local political office[11]. Finally, the last one relates to social capital pushing towards more

[11] The local political office in Argentina is usually a"Unidad Basica", term that is reserved for

accountable local leaders. More frequency in community interactions allows them to increase the pressure towards local leaders. By communicating and discussing local politics, the community builds up leadership responsiveness. In other words, social capital enhances the likelihood of extracting more resources from politicians through a more convenient exploitation of the logic of political clientelism.

Regarding the first two mechanisms –electoral coordination and mobilization– there is a general consensus that social networks matter to define political activities, electoral choices and public opinion. Recent evidence shows that citizens are often persuaded by their immediate social contexts, when taking political decisions (Baker, Ames and Renno 2006; Gerber, Green and Larimer 2008; Nickerson 2008; Abrams, Iversen and Soskice 2010; Fowler 2006; Remmer 2010). Individuals derive utility by conforming to social norms (Festinger, Torrey and Willerman 1954) and try to avoid disagreement within their main social environment (Sinclair 2012). The underlying mechanism is the need to seek for social approval (Lindenberg 1991). It is the interdependence among individuals what makes residents of the same locality permeable to other people's political choices (Marwell and Oliver 1993; Sinclair 2012). Ergo, the electoral process is conceptualized as a group activity. Voters' political behavior is conditioned by the information at the very local level (Huckfeldt and Sprague 1995). When citizens are not isolated, they maximize utility by reducing informational costs (Downs 1957), and by matching their neighbors' political preferences. To Cohen and Prusak (2001) social capital represents ties binding neighbors and enabling cooperation. Social conventions and shared expectations aid coordination towards higher social utility scenarios (Schelling 1960; Young 1996; Shepsle 2006). In this case, there are mainly two types of coordination problems. First, neighbors have incentives to align their efforts behind a collective mobilization, such as a political

---

peronists but that has its equivalent for other political parties. In most cases, the political intermediaries (e.g. political brokers) play a central role in these mobilizations and receive the complaints and demands in a house right inside the slum.

protest or other common endeavor. Second, residents are often better off by getting the majority of the slum behind the same candidate, given that politicians reward electorally-homogenous districts with public investment.

Furthermore, a highly connected social network simplifies the community leader's task of signaling and monitoring political behavior across the community, as well as it builds up leadership responsiveness. More and stronger ties between neighbors increase the speed of social reward/sanction, reinforcing the mechanism for peer pressure, which works horizontally (among slum dwellers) and vertically (between neighbors and leaders). In this line, slum dwellers employ societal mechanisms to hold politicians accountable, by activating horizontal channels to threaten elected representatives to stop political support, or even unelected ones with reputation costs (Peruzzotti and Smulovitz 2002).

In sum, social capital intensifies informational flow aiding electoral coordination and collective mobilization. Ultimately, these elements boost leadership responsiveness. By emphasizing the interdependence between nodes in a social network (Marwell and Oliver 1993) we can clearly challenge the common assumption that under clientelism actors are isolated. In the following section, I present empirical evidence from Argentinean slums, showing how social capital breeds better-quality public services and infrastructure.

3.3 Empirical Analysis

This section introduces a unique data set for 1,834 slums across Argentina. The data is the product of a national survey -similar to a slum census- conducted in 2013 by TECHO, a renown nonpartisan and non-profit organization. As part of their work aiding poor communities, the Argentinean subsidiary of this NGO conducted a nationwide assessment of settlements, which they define as *villas* or *asentamientos informales*. Their criteria to select whether a neighborhood falls under the slum category is the

following: the majority of their population lacks land or property titles, and has no access to at least two of the basic services: electricity, water or sewage. In total more than 500,000 families live in these settlements, and they are distributed across 8 geographic jurisdictions: the City of Buenos Aires (CABA) and the provinces of Buenos Aires (PBA), Cordoba, Misiones, Neuquen, Rio Negro, Salta and Santa Fe.

TECHO began in 1997 and operates now in 19 countries: Argentina, Bolivia, Brasil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Republica Dominicana, Uruguay and Venezuela. Particularly in Argentina, TECHO has been working in slums across the territory, building transitional houses with young volunteers jointly with the population living in these unacceptable conditions. In 2012, the Argentinean subsidiary of TECHO started a Social Research Center (CIS, for its initials in Spanish), whose original goal was to measure and monitor their own work in the settlements. As a byproduct TECHO seeks to influence policymakers by providing reliable first-hand information on the living conditions of the poor. As part of their work with the Social Research Center, TECHO conducted a national survey of the localities where they work and later expand to similar settlements across the national territory. The information to map these settlements across the country was provided by an interdisciplinary team involving civil society organizations (OSC, for its initials in Spanish) universities, research centers and governmental institutions[12]. However, the greatest effort in this data collection corresponds to TECHO's own team in the field. For example in 2013, about 1,700 young volunteers worked permanently in the NGO.

Each unit of analysis in the dataset corresponds to one neighborhood, and the information is provided by one (or often two) local leader(s), identified by the com-

[12] For instance in July 2015, TECHO signed a cooperation agreement with the Province of Salta, more specifically with the Early Childhood Ministry. For more details on TECHO's collaboration with governmental offices, please see http://www.techo.org/paises/argentina/articulacion-con-gobiernos/

munity as their legitimate representative (e.g. President of the neighborhood association). The way the interviewers identify the local leader(s) is that when they arrive to the slum, they ask random slum dwellers for a community representative, or a person that they would identify as someone that usually helps the community. However, most of the interviewers and team coordinators hail from around the area. In order to identify respondents, preference was given to information coming from TECHO's volunteers who have already established contacts in the field[13]. Given that unit of analysis is the slum and not the individual, the existent data prevents me to test for the social composition of the neighborhood.

Regarding the survey respondents, the type of local leaders that are targeted are often denominated in Argentina as *referente*, as described in the previous section of this paper. For example, in recent floods in Argentina, in most communities there were one or two houses that spontaneously turned into gathering points for people to ask for help, get basic needs, or for the government to deliver medicine and water for the neighborhood. Usually, the owner of this house is someone that the community identifies as their leader, and call *referente*. When interviewers ask around for this type of community leader, in most cases neighbors point to the same person. If for some reason, there are more than one identified, then they interview both to get different perspectives[14].

The survey instrument is a semi-structured questionnaire designed to capture most common characteristics across slums. On average each interview lasts one hour. Most of the open and closed questions refer to infrastructure and geographical characteristics of the settlement. The questions are generally pretty technical, for

[13] For further information on the 2013 National Survey, see "RELEVAMIENTO DE ASENTAMIENTOS INFORMALES 2013" in www.techo.org/ar

[14] In order to get early access to a newer dataset (forthcoming in 2016), I volunteered with TECHO to collaborate with survey implementation in the field and post-collection preliminary data analysis. Since I was present in some of these interviews I was able to witness the procedure of some survey interviews, asking some of the questions myself.

instance there are two inquiries to measure access to water. First, to assess how drinkable the water is, there is a question with five choices: i) access to drinking water grid supplied by the State; ii) irregular connection to the network; iii) water well; iv) tanker truck; v) other. Second, the questionnaire inquires on where exactly this access is located, with four alternatives: i) faucet inside the house; ii) faucet inside the property but outside the house (e.g. in the yard); iii) communal faucet; iv) other. For some part of the questionnaire, interviewers ask about the conditions for the majority of the houses in the slum, and also what the situation is for the first minority.

3.3.1 Describing the Dependent Variable

The Dependent Variable (DV) is LPG Index. This variable is a combination of the following public services and infrastructure: sewage, access to water (what type and where in the vicinity), electricity, natural gas, garbage collection, street lights and pavement. Through Principal Components analysis (PCA), I build this index to measure quality of public services. Often in survey instruments, several questions are asked to gather the same information. Hence researchers are advised to either test these questions separately to measure a specific variable, or to combine them into an index. In this line, multi-item measures allow us to use different subdimensions of the variable of interest that are correlated (Ansolabehere, Rodden and Snyder 2008). For instance, in the LPG Index, the correlation between the components for Garbage Collection and Street Lights is 0.46[15]. The advantage of building an index through PCA is that this statistical technique identifies where the greatest variance among the components lies, weighing each of them accordingly. The eigenvalues matrix describes a series of uncorrelated linear combinations of the subcomponents. The first component, which is the one I am choosing, has an eigenvalue of 2.276

[15] Table 3.6 in the Appendix exhibits the correlation matrix for all components.

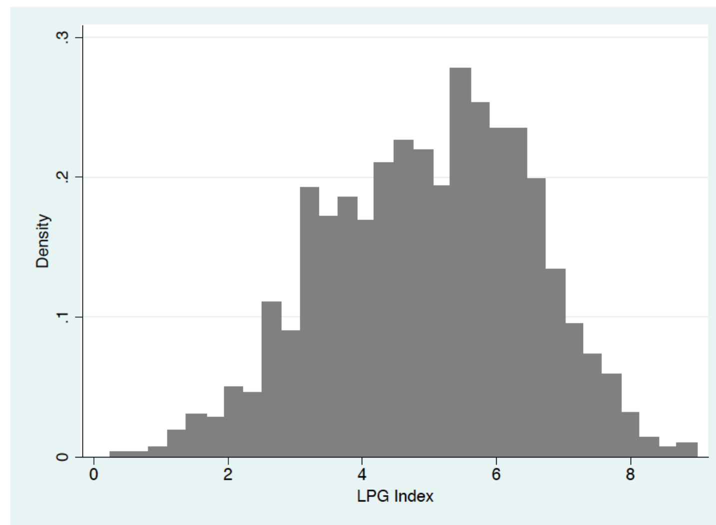
for the LPG Index (the standard threshold is over 1). There are more components resulting from PCA, but the first one shows the highest eigenvalue and the resulting composition of subdimensions is appropriate. For instance, the Index gives a small weight to access to water, which makes sense because there is not much variation for that service: most slum dwellers get water through an irregular connection. Finally, I transformed the first component by shifting it 5 points so that all values now are positive. The resulting variable is the LPG Index, with a mean of 5 and ranging from 0.27 to 8.99, with 1,580 for the total number of observations. As shown in Figure 3.1, the distribution is normal and the variable is continuos[16]. In order to check the robustness of this measure, I created an alternative variable by adding up all subcomponents. As illustrated in Figure 3.8 this new measure is highly correlated to the LPG Index.

In terms of regional variation, the distribution of the LPG Index is not homogenous across provinces. As Table 3.1 and Figure 3.2 depict, three groups could be identified. The best conditions for settlements appear in the City of Buenos Aires (CABA), with a substantially higher score than the rest of the jurisdictions. In a second group, provinces of Buenos Aires, Santa Fe and Cordoba, rank in that order. And finally, we find the worse conditions in the provinces of Misiones, Neuquen, Rio Negro and Salta -also in order from best to worse. These differences across provinces are substantively relevant because of how dissimilar are these regions in terms of geography, poverty rates and available state resources. Namely, this variation in terms of LPG is not surprising as some of these provinces are considerably poorer than others. Furthermore, the political dynamics involved in the transfer of resources top-down are not the same across the Argentinean territory. More often than not, provincial governors (and not mayors) provide resources for slum-improving programs, probably with the exception of the City of Buenos Aires (which as an independent district,

[16] Please see Table 3.7 in the Appendix for further details on the PCA diagnostics

does not belong to any province). In addition, if politically aligned with the National Government, some provinces will be able to obtain federal funds to allocate LPG in poor settlements. Then, provided they are in good political terms, governors may transfer resources to specific mayors, which in some cases will retain degrees of freedom on where to invest. Otherwise, if for example the mayor and the governor are from different political parties, funds for slums-improving programs may be allocated directly from the Provincial Government to neighborhoods, skipping the mayor in line. Then, the rules of how to apportion resources to LPG will depend on particular political scenarios of a Multilevel Government, taking into consideration divergence in partisan dynamics and electoral systems.

FIGURE 3.1: Histogram LPG Index



Since the unit of analysis is the slum, for most of the infrastructure questions pertaining households, interviewers ask about the situation for the majority of the houses and first minority, in order to get a sense of the general conditions. Due to this complexity in the data, I construct some new variables to capture all this information and in some cases, I build indices to better operationalize the concept. The dependent variable is an example of this procedure. The next paragraphs depict the population

Figure 3.2: Histogram LPG Index by Province

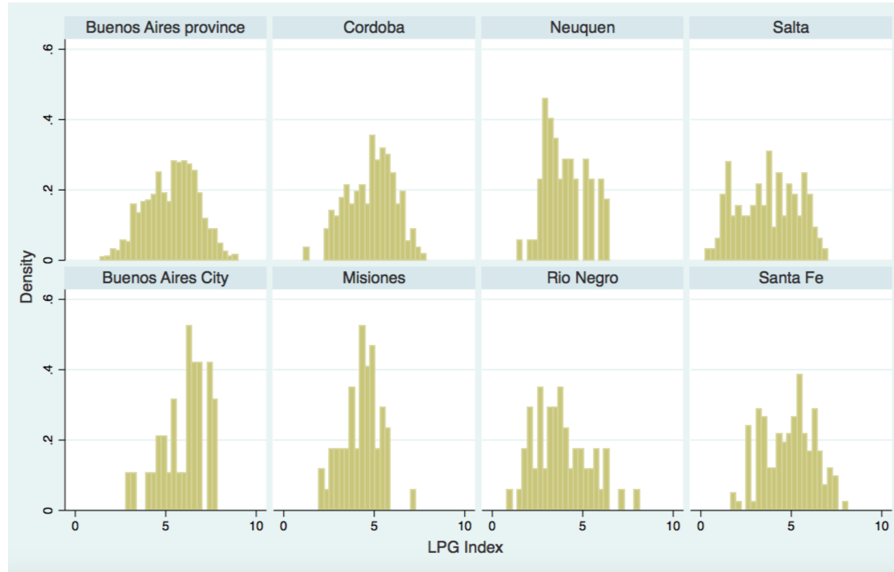


Table 3.1: LPG Index by Province

Province	Mean	Std. Dev.	Freq.
Buenos Aires Province (PBA)	5.36	1.42	898
Buenos Aires City (CABA)	6.06	1.29	34
Cordoba	4.83	1.31	201
Misiones	4.32	1.01	61
Neuquen	4.03	1.17	62
Rio Negro	3.84	1.51	61
Salta	3.75	1.64	115
Santa Fe	4.92	1.40	148
Total	5	1.51	1,580

in the survey through some descriptive statistics of the sub components in the LPG Index (sewage, access to water, electricity, natural gas, garbage collection, street lights and pavement).

Regarding waste disposal, the situation is quite precarious: about half of the slums surveyed by TECHO reported that not a single household has access to a closed sewage. This number increases to 62.7% if we consider that the majority of the houses has open sewage, but some minority has a different situation such as elimination with a septic tank. Furthermore, only 5.5% of the slums can say that the

majority of the population living there has access to a closed sewage. Approximately one fourth of the surveyed slums have regular connection to electricity, where the majority of the population has a meter in their houses. Whereas about 60% of the neighborhoods report having the majority of the houses connected to electricity, in an irregular form. Only a very few cases (26 slums, about 1.4 % of the survey) have no access to electricity at all.

In terms of the type of access to water, in approximately 60% of the slums, the majority of households has an irregular connection. About 22% of the slums reported having the majority of the population accessing water through a well. But this is not the worse of the situations, there are some neighborhoods (3.5% of those surveyed) who receive water through tanker trucks. On the other end, about 10% of the neighborhoods has drinking water through a State-provided network. As previously explained access to water is measured through two different variables. In terms of where exactly the water faucet is located, for 36% of the neighborhoods, every family has access right inside the house, whereas this figure rises to 60% when considering not every household, but the majority of them. Only in 7% of the slums, the majority of the households has access to water through a communal faucet -the worse possible scenario.

In Argentina, getting access to natural gas is quite important because it is both necessary to cook and for heating devices. Moreover, if you are connected to the grid, you are among the lucky ones to pay an affordable price (until recently subsidized by the Government). The fortunate ones within this dataset represent 4% of the slums. But if you do not have access to the grid, you will have to buy a gas cylinder which increases the consumption costs substantially. About 88% of the neighborhoods in this survey are among the later situation. Finally, about 6% of the neighborhoods uses charcoal or log for heating purposes. It is worth mentioning that the price of the gas cylinder is so high that often neighbors have great incentives to get access to

natural gas. As I observed during field work, some communities organize themselves to get access to micro finance, in order to be able to develop the gas grid. Concretely, this is the case of a group of neighborhoods in Moreno who, with the aid from the NGO "Fundacion Pro Vivienda Social", are joining a micro-credit scheme to build the natural gas grid in their streets -as formerly described in the introduction.

In terms of garbage collection, the situation is not that precarious, about 32% of the slums have a formal system where the collection occurs in every street. Whereas in 28% of neighborhoods, there is no door-to-door collection, but one (or a few) pick up points. For 24% there is no collection system at all, and in 15% there is a garbage collection system but it is informal. On a different issue, about 30% of the slums in the survey have no street lights. And 30% of them have lights provided by the Government in every (or almost every) street. While there are some street lights built by the neighbors in about 18% of the survey slums. Finally, in more than 60% of the slums there are no paved roads, and for 15%, only the main road of the neighborhood has pavement.

To name a concrete case "Barrio 48" a particular slum in La Matanza (PBA) has the highest score in the LPG Index: 8.99. This neighborhood –more precisely located in San Justo– is among the very few ones with a closed sewage system for the majority of the population. Also, this neighborhood is connected to the natural gas grid, has pavement and street lights for every block, formal garbage collection for all houses and also inside faucet for the majority of the households. However, the reason this neighborhood falls under the category of the slum is because the electricity and water provision situation is irregular for the majority of the families, this means they do not have access to a state-provided formal services. Furthermore, the majority of the population in Barrio 48 has no land title to claim property of their home.

On the other end of the spectrum, the lowest LPG score corresponds to a neighborhood in Tartagal, in the province of Salta, called "Comunidad KM16" or "Aso-

ciacion La Esperanza". The settlement does not have street lights, nor paved roads or garbage collection. There is no sewage, households use a well, both for waste disposal and water access. A communal faucet is how neighbors get water, there is no electricity and for heating purposes, the population uses charcoal and log. Nobody in this community holds land or house title.

3.3.2 Describing the Covariates

As previously mentioned, the main independent variable in this work is social capital, primarily measured through the existence of an internal organization *in situ*. The question corresponding to this variable is the following:

> Which of the following organizations or institutions exist inside the neighborhood?
>
> - Neighborhood association
> - Soup kitchen ["comedor" or "copa de leche"][17]
> - Community organizations ["sociedad de fomento"]
> - Cooperative
> - Recreational or cultural workshops

For this question, the interviewer emphasizes that it refers to internal organizations, activities organized by the community. Then, the main independent variable is called **Internal Organization** and is a dummy, taking the value of 1 if at least one of the aforementioned organizations is present inside the vicinity.

One example of social capital in the form of an internal organization has to do with workers self-administration or cooperatives in Villa Caraza (Lanus locality,

[17] This is a common activity in Argentina, usually run by some members of the community who are able to buy food and serve a meal to the neighborhood children. In most cases, it is an inexpensive meal in the afternoon like a cup of tea with milk, bread and sugar.

PBA). As reported by the "Observatorio de la Deuda Social Argentina" (Balzano and Hourquebie. 2015), there were different labor movements in Lanus that help organize *cartoneros* (waste pickers). This type of job has been fairly common in Argentina recently, peaking during the 2001 socioeconomic crisis. In Villa Caraza, a great proportion of the population works as *cartoneros* and some were able to organize themselves into cooperatives, such as the "*Amanecer de los Cartoneros*". By forming a cooperative, not only they improved their work conditions but also, their quality of life in general. According to one of the interviewed by the "Observatorio de la Deuda Social Argentina" in 2015, the cooperative workers are...

> "those who go to the City, take the buses, in the blue uniform clothes, those who earn a monthly salary. If you get yourself into the MTE [Excluded Workers Movement], you have to comply with certain requirements, it is not like you can stay at home sleeping. Apart from receiving a salary, you get your own health insurance and a center where parents can leave their children until they get back from work." (p.25 - Author's translation)

It is clear from this narration that being part of the cooperative generates rights and duties, bringing social capital as a byproduct. The community is strengthened, beyond the labor activity. For example by organizing a child care system inside the slum, neighbors increase their trust and solidarity levels. In other words, this type of internal organization fosters self-organization in the community that translates into different levels of the social life. For robustness checks, I test the models with an alternative measure for social capital. The variable **External Organization**, also a dummy taking the value 1 if at least one of the following external organizations carry out permanent work in the neighborhood: i) Civil Society Organizations (OSC), mostly referring to external NGOs; ii) Political Organizations;

iii) Religious Institutions. As Table 3.10 (Appendix) shows, the model including **External Organization** instead of **Internal Organization** produces extremely similar results.

Now, besides social capital, there are other possible explanations for an increase in the quality of LPG at the slum level. Fortunately, this survey allows me to control for the most common reasons behind the existence of better public services. For example, it is the expectation that the government will be more willing to invest in local infrastructure in those neighborhoods where inhabitants already own their properties -a clear indication that the settlement is not temporary. Then, I control by a dummy variable called **Land Title**, that indicates whether the majority of the families in the slum holds the title (or a bill of sales) of the house where they live. For a specific population in Buenos Aires, Galiani and Schargrodsky (2010) found that having access to land title fosters general socioeconomic conditions for slum dwellers, particularly for educational matters, reducing household size and increasing housing investment. Another indication of permanency is the year in which the settlement was established. If the state has the intention to relocate a certain slum population, age will present a difficulty in this matter: younger ones are more likely to be evicted. For this reason, the models include a control variable called **Settlement Year**, representing in which year the slum was established. The higher the value of this variable, the less time people have been living in the slum and –the expectation is– the less likely they are to get local public goods.

The models also include a control called **Geographical Hazard**, a dummy variable indicating wether the settlement is close (less than 10 meters) from at least one of the following: i) train tracks; ii) high-traffic road; iii) high-voltage tower; iv) industrial waste; v) agriculture area; vi) dumping ground; vii) cliff; viii) river bank; or ix) forest plantation. This proximity implies a potential risk for the people living in the area or for the environment. Naturally, provided the slum is close to a geographical

hazard, it is in the state interest to relocate the inhabitants of the settlement, avoiding a more permanent establishment or building further infrastructure. In a similar vein, I control by a dummy variable called **Frequent Floods**, which indicates that the neighborhood experiences recurring floods for most parts of its territory (if not all of it). For similar reasons related to a geographical hazard, I anticipate a negative relationship with public investment as well.

The size of the slum is another relevant variable to take into consideration. Large settlements are hard (if not impossible) to remove, speaking in political terms. Whereas the cost of relocating small slums is less significant. Moreover, there are considerably more political benefits of investing public resources in large neighborhoods, especially if we anticipate the district will electorally reward political candidates in a more generous way. Thus, the models control by the variable **Number of Families**, simply representing how many families are estimated to live in each slum. This variable has a log transformation, and I expect a positive association between population size and the likelihood of achieving more and better local public goods. Furthermore, I include a dummy variable, **Organized Occupation**, that indicates if the land occupation was organized –not spontaneous. The nature of the question identifies whether, when the settlement emerged, the occupation was done collectively and organized by some social movement, vis-a-vis a settlement that was planned or promoted by the State, or what is denominated *ocupacion hormiga*, a gradual and spontaneous occupation. I presume the level of political conflict is more elevated in slums that were established through this organized fashion. Then there are less incentives to provide public infrastructure that would legitimized the action, inciting to imitate the occupation by others. Finally, the model controls by a dummy variable called **Eviction Attempts**, informing if the state conducted at least one attempt of removing the population from that land during the last year. Naturally, if the government intended to remove or relocate them, their chances of getting LPG are

slim. The table 3.2 summarizes the effect direction I expect to find for each of the covariates.

Table 3.2: Expected Direction for Coefficients

Main IVs		
	Internal Organization	+
	Partisan Homogeneity (if Int. Org=1)	+
	Partisan Homogeneity (if Int. Org=0)	-
Controls		
	Land Title	+
	Organized Occupation	-
	Number of Families	+
	Geographical Hazard	-
	Eviction Attempts	-
	Frequent Floods	-
	Settlement Year	-

3.3.3 Model Results

In this section I present the empirical evidence to support the hypothesis that higher social capital aids improvements in public services and infrastructure in poor settlements. All three models in Table 3.3 share the same dependent variable: the index for Local Public Goods built through PCA (LPG Index). As shown in Figure 3.1, the dependent variable is continuous and normally distributed, ergo running simple OLS is appropriate. However, given that the neighborhoods are spread across eight geographical jurisdictions, it is theoretically and methodologically appropriate to incorporate province-level fixed effects, depicted in Table 3.3. Furthermore, by running OLS (Table 3.8 in the Appendix) and Multilevel (Table 3.9 in the Appendix), I obtain very similar results to those in Table 3.3. Yet, I choose to report results with province-level fixed effects because it is important to show the differences across regions throughout the country. These eight provinces are quite different in both political and socioeconomic terms. As previously discussed and shown in Table 3.1 and Figure 3.2, there are important differences with respect to quality and access

to local public goods. Therefore, I expect to find standard errors to be correlated within groups (provinces). Thus, the need to model group-level variance as well.

Given certain potential problems of multicollinearity, I present three different model specifications in Table 3.3. Columns 1 to 3 share the same main independent variable: Internal Organization, which is positively and significantly associated with the dependent variable, LPG Index, across all models in this paper. The variable Internal Organization is correlated with Number of Families. That is, as the number of families living in slums or settlements rises, the number of organizations increases. When running a t-test for this association, the mean for the numbers of families (logged) is 5.05 for slums with internal organizations, and 4.38 for slums with none (t=10.935 and 1832 degrees of freedom). The intuition is that more inhabitants are more likely to organize community activities and form civil society organizations. Besides, it is expected that from a more densely-populated slum, more social and political leaders could emerge. For this reason, one of the model specification does not include the number of families as a control variable. The remaining specifications required including only one of these two variables at the time: Settlement Year and Organized Occupation. Those settlements that had occupied their territory spontaneously are, on average, 9 years older than those that their land occupation was deliberately organized by some social movement. According to a t-test, the mean year of settlement for slums with organized occupation was 1993, whereas the other group mean was 1984. The difference between the two groups is statistically significant with a t student of 5.8 and 1676 degrees of freedom. This correlation is coherent with the fact that in Argentina social movements –and particularly those promoting land occupation– are relatively new considering the range of the variable for slum age[18].

[18] In this dataset, the year of settlement ranges from 1900 to 2013, with a mean of 1985 and a standard deviation of 23 years.

In line with the theoretical framework, I find a positive impact of the presence of communal organizations on the ability of the slum dwellers to access better LPG –for all models in this paper. That is, those slums or settlements that have their own organizations are better equipped to improve their living conditions, and this effect is statistically significant. For instance, in model 1, on average, having an internal organization predicts an increase of 0.313 point in the public services index compared to those neighborhoods that have not organized themselves. In model 2, this positive impact raises to 0.397 and in model 3, drops to 0.226. The positive effect of having an internal organization in the neighborhood on the LPG Index remains robust across all models, after controlling for number of families, Province, Land Title and other covariates. Figure 3.3 illustrates the marginal effect of social capital on LPG (taking the coefficients in Model 1). The size of the effect is approximately 3.5%, given that it is 0.313 in a variable ranging from 0.27 to 8.99.

As well, the effects of the control variables are all statistically significant and in the expected direction, evidencing the robustness of the models. In model 1, those neighborhoods where the majority of the households have a land title, are predicted to have on average 0.686 points more in the index for public services. The results are about the same for model 2 (0.706) and model 3 (0.636). This finding is coherent with the intuition that those areas where the majority of households holds tittles are already considered part of the city. Thus, there might be a predisposition to invest in LPG. Model 1 and 3 include the number of families living in the slum, and this variable has a positive statistically significant effect. As stated before, the size of the settlement matters.

Table 3.3: Regression table Fixed Effects

	Dependent variable: 2013 LPG Index		
	(1)	(2)	(3)
Internal Organization	0.313*	0.397*	0.226*
	(4.10)	(5.34)	(3.13)
Land Title	0.686*	0.706*	0.636*
	(6.42)	(6.57)	(6.56)
Organized Occupation	-0.181+	-0.169	
	(-1.73)	(-1.60)	
Number of Families	0.125*		0.101*
	(4.27)		(3.63)
Geo. Hazard	-0.301*	-0.271*	-0.323*
	(-3.35)	(-3.00)	(-3.83)
Eviction Attempts	-0.231*	-0.225*	-0.195*
	(-2.23)	(-2.17)	(-2.00)
Frequent Floods	-0.311*	-0.325*	-0.246*
	(-3.78)	(-3.93)	(-3.19)
Settlement Year			-0.0177*
			(-11.49)
PBA (baseline)	-	-	-
CABA	0.869*	0.996*	0.809*
	(3.36)	(3.85)	(3.19)
Cordoba	-0.322*	-0.413*	-0.378*
	(-2.83)	(-3.67)	(-3.48)
Misiones	-0.975*	-0.992*	-0.920*
	(-5.41)	(-5.46)	(-5.31)
Neuquen	-1.160*	-1.241*	-0.853*
	(-5.98)	(-6.39)	(-4.84)
Rio Negro	-1.252*	-1.348*	-1.263*
	(-6.50)	(-7.00)	(-7.14)
Salta	-1.216*	-1.314*	-1.192*
	(-8.31)	(-9.04)	(-8.58)
Santa Fe	-0.256*	-0.244+	-0.368*
	(-2.03)	(-1.92)	(-3.10)
Constant	4.769*	5.314*	40.13*
	(30.02)	(55.87)	(12.98)
Observations	1347	1347	1419

t statistics in parentheses $+\ p < 0.10$, $^{*}\ p < 0.05$

The rest of the control variables have negative statistically significant effect. For example, the survey collects information about the geographic conditions of the area where the slum is located. In the models the variable assessing this situation –Geo. Hazard– has the anticipated negative and statistically significant effect on the LPG index. Being located in a unsafe area is associated with 0.3 less points in the dependent variable, in model 1. The effect is slightly lower, 0.27 for model 2 and rises to 0.32 for model 3. These results indicate that the state tend not to build public infrastructure in territories considered dangerous for its inhabitants or the environment. Now, pointing to a similar situation, I included a variable indicating if the slum generally suffers from floods. Experiencing floods is associated with a decrease of 0.311 points in the public services index -in model 2 the effect is 0.325 and in model 3 is 0.246 (all coefficients are statistically significant). The reasoning is the same as with geographic location, in areas with a flooding problem, the state is less prone to invest in public services.

Furthermore, a record of previous vacating efforts is a good indication of the unwillingness of the state to invest in public infrastructure in a particular settlement. The variable eviction attempts indicates whether the state tried to remove the slum in the previous year. As expected, there is a negative and statistically significant effect of settlement instability in the provision of public services. Living in a slum that the state tried to eradicate is associated with 0.231 less points in the LPG index. Naturally, government investment is low or null in neighborhoods that they intend to get rid of. Then, model 3 controls by how old the slum is. There is a negative and statistically significant effect of age over the provision of public services. As the settlement is one year younger, there is a 0.018 points less in the LGP index. Longevity of the settlement increases the probability of getting public investment. The only covariate that does not have a statistically significant effect is Organized Occupation –except for the OLS model in Table 3.8 in the Appendix. In some models

I find that those places where the occupation of the territory was not spontaneous nor organized by the state are less likely to receive investment in public infrastructure. Although this effect does not hold after controlling by provincial level.

Finally, including provincial-level fixed effects uncover interesting differences across jurisdictions. First, a neighborhood located in CABA is predicted to have on average 0.87 points more on the LPG Index, compared to one in PBA. This is not surprising given that, in general, slums in city are provided with better infrastructure conditions than the poor neighborhoods in the Buenos Aires outskirts. As expected, all the rest of the provinces have statistically significant negative effects. For example, a slum in Rio Negro is predicted to score 1.25 points less in the LPG Index than one in PBA.

As marginal plots illustrate, the effect of an internal organization is statistically significant for the more disadvantaged slums, or in other words, those where the circumstances or initial conditions are generally detrimental of public services. For instance, Figure 3.4 (A) depicts the positive effect of social capital on LPG for slums where the majority of the population does not own property titles. As formerly described –theoretically and empirically– lacking land title undermines the possibility of attracting public investment for services and infrastructure in poor informal settlements. However, for these unfavored cases, the existence of an internal organization improves their likelihood of achieving better LPG. Likewise, Figure 3.4 (B) also illustrates this positive effect for another group of slums with adverse initial conditions: the existence of a geographical hazard near by, such as train tracks, high-voltage tower or dumping ground, among others. For these two groups of disadvantaged slums, the effect of an internal organization on the LPG Index is positive at the 95% level. Whereas the effect is not as strong for the group of slums with title or located in zones with no geographical hazard.

Nevertheless, as Figure 3.5 shows, quite the opposite situation occurs for these

Figure 3.3: Marginal Effect on LPG Index with 95% CIs

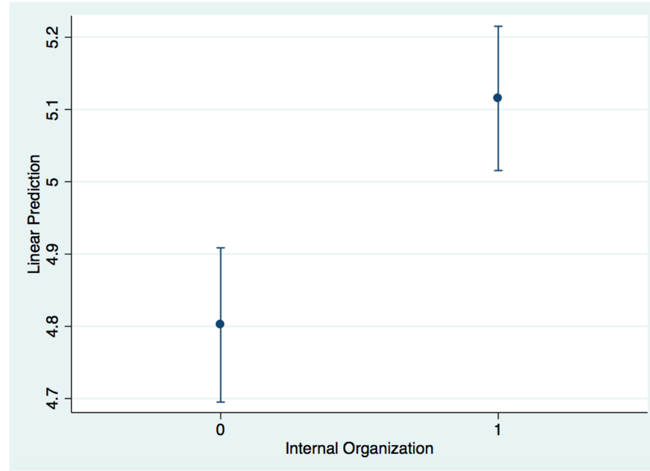
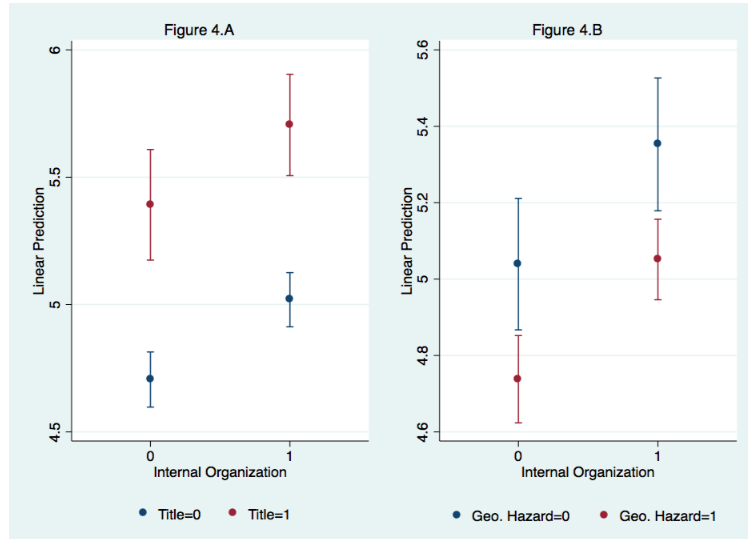


Figure 3.4: Marginal Effect on LPG — structural conditions



other unfavorable circumstances: eviction attempts and organized occupation. For these adverse initial conditions, the presence of internal organizations does not seem to bring improvements in LPG. But the positive effect of social capital is statistically significant at the 95% level for the neighborhoods that have not experienced any eviction attempt before –Figure 3.5 (A). Likewise, in the case of the slums whose origins resides in an organized occupation by a social movement, the internal organization does not yield a positive statistically significant effect either. Yet, as shown in

Figure 3.5: Marginal Effect on LPG — irreversible conditions

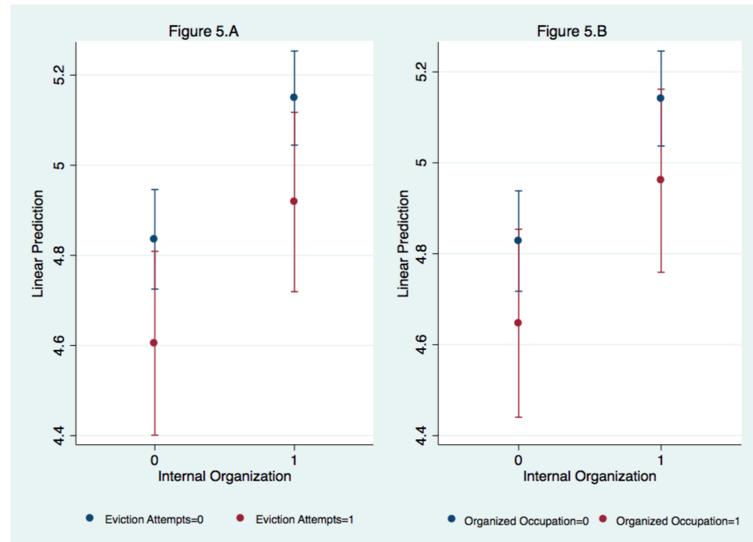


Figure 3.6: Marginal Effect on LPG by Number of Families

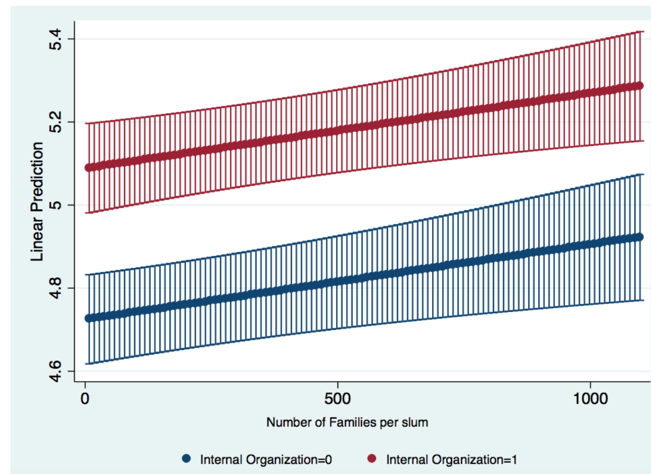


Figure 3.5 (B), this positive effect is statistically significant at the 95% level for the settlements that were either spontaneous or organized by the state, not originally occupied with the organization of a social movement.

The contrast between Figure 3.4 on one side, and Figure 3.5 on the other one illustrates an interesting finding. There are quite distinctive effects for separate disadvantaged groups. First of all, we know from the model –in coherence with the theory– that the following initial conditions tend to decrease the likelihood of public

investment: lack of land title; adverse geographical surroundings; previous attempts to evict slum dwellers; history of occupation through an organized movement. However, among these initial deprived groups, the positive effect of social capital on LPG appears to be stronger for the first two –lack of title and geo. hazard. Then, why is the case that social capital ameliorates the conditions for some of these disadvantages but not for other? One may argue that some adverse points of departure are more structural than others. For instance, the fact that the settlement was stablished in a particular territory with hazardous environment or that the majority of the population lacks land title seem to be circumstances for which social capital can reverse their negative effect. Then, these two could be labeled as the structural disadvantaged conditions.

Quite differently, the other two disadvantaged scenarios –eviction attempt and organized occupation– appear to be irreversible. It is likely the case that if the way the settlement was established involved an occupation organized by a social movement, first this occurred quite recently[19] and second, the government perceived the occupation as a serious problem. Precisely for these reasons, it is expected that the social movement that initiated the occupation is politically opposed to the incumbent political party. In the same fashion, if the government decided to try to evict the population in the past it is plausible that there is no social or political organization in the community in good dialogue with public officials. Accordingly, I label these as the irreversible disadvantaged conditions. The latter are often intertwined with contemporary political dynamics. Whereas, the structural disadvantaged conditions –lack of title and geographical hazard– give leeway for social capital to work its positive influence towards attracting public investment. Alternatively, for the irreversible disadvantaged conditions –eviction attempt and organized occupation– the fact that

[19] As formerly described, a t-test shows that age is statistically associated with the slum emerging as a non-spontaneous nor state-driven occupation. The mean year of settlement for slums with an organized occupation was 1993, whereas the other group mean was 1984.

the community is organized and empowered does not appear to help them in the path to improve their chances of demanding more and better LPG. The presumption is that in these settlements, internal social institutions might be associated to "negative" community organizations, such as the social movement that originated the settlement in the first place –not politically aligned with the government.

Finally, Figure 3.6 depicts how more populated neighborhoods usually score higher in the LPG Index, and the effect of higher social capital also contributes to better public services. About 95% of the dataset is composed by slums with less than 1,000 families. Ergo, it makes sense to scale the graph for about less than this slum size. In this case, the confidence intervals do not overlap, meaning that the effect of the internal organization is significant to the 95% level. The empirical findings in this section are robust across different model specifications, and are both consistent with theory and qualitative interviews conducted in the field.

3.4 Part 2: Assessing Electoral Competition

In the previous section I show that communities benefit from social capital, since by organizing themselves they manage to achieve better public services and infrastructure. It is precisely due to social capital that poor neighborhoods are able to hold politicians accountable. Now, in this section, I seek to shed light on how these dynamics interact with electoral features. Social capital and communal coordination do not exist in a vacuum. Partisan politics also influence the interaction among slum dwellers. Even at the neighborhood level, it is interesting to explore how political parties design their strategies and how competition affect neighbors voting behavior. Namely, I present a slightly more complex story, proposing an interaction between social capital and electoral homogeneity and how these jointly impact on access and quality of LPG. The idea is to reconcile the literature arguing electoral competition as the best alternative for accountability and the literature on social networks

and social capital suggesting that similar behavior emerge from tight communities, bringing positive outcomes.

This section does not intend to solve the controversy about politicians rewarding core vis a vis swing voters. However, by introducing electoral data at the slum-level, this part of the paper seeks to bring more information into the story of how social capital fosters public investment in poor informal settlements. Is it a story of tight communities coordinating their vote and public officials rewarding core voters? Or is there evidence that competition enhance supply and demand of LPG? In other words, this section of the paper aims to shed light on how partisan homogeneity or/and competition could help to attract investment at the slum-level. It is worth mentioning that my argument distinguishes between electoral coordination and partisan homogeneity. The former requires bottom-up community-driven political organization and agreement. Whereas the homogeneity may appear as electoral coordination but could in fact represent the by-product of very effective clientelism. Every case of electoral coordination results in partisan homogeneity (good-type), but not every case of partisan homogeneity implies electoral coordination.

In the literature so far, there is no clear conclusion in terms of how partisan homogeneity relates to public goods vis a vis patronage. For instance Remmer (2007) found that the association between social spending[20] and political competition is not lineal, but shaped like an inverted U. This finding is coherent with the proposed theory in this section. I argue that there are two possible types of electoral homogeneity, the good and the bad one. That is, communities with strong ties within its members manage to coordinate their vote choices in a way that the more neighbors vote for the same party, the more they will be rewarded by politicians. This mechanism relies on the assumption that politicians reward core voters with LPG. Therefore, when

[20] Social spending in Remmer (2007) includes health, education, housing, etc. However, since I am dealing with LPG in slums here, I propose, in similar fashion, that LPG represents the other side of the coin of the distribution of private goods through clientelism.

neighbors in a tight community are able to coordinate their vote, they are generally better off: partisan homogeneity attracts public investment. Alternatively, in the absence of social capital, when poor communities show high levels of homogeneity, the scenario is signaling locked-in voters. Under lack of political competition, these neighbors are likely subject of vote-buying and they do not have the necessary collective capacity to extract more resources from politicians. In other words, the good (bad) type of partisan homogeneity is associated to high (low) levels of social capital. Electoral behavior has either a positive or negative effect on access and quality of LPG conditioned on how tight communities are.

The main thesis is that in slums where social capital is low, electoral homogeneity masks the distribution of private goods through clientelistic practices, to the detriment of public services. For these communities (isolation among members), partisan competition is essential to achieve better LPG. Alternatively, when social capital is high, electoral competition is not a necessary condition to successfully demand public investment in LPG. In these places, tight communities may obtain good results either by coordinating their vote and being rewarded by politicians with LPG, or by enjoying the benefits of competing local politicians. In both scenarios, they are better off just by the fact that their social fabric protects them from the isolation implicit in the delivery of private goods (clientelism). Social capital increases the likelihood of receiving LPG because these neighbors frequently discuss with each other how to achieve collective goods, and they are not easily deceived by brokers/politicians. Furthermore, politicians perceive the credible threat of a big group of voters that could all together move to a different party if they wish to punish an unresponsive incumbent. This latent coordination (enabled by social capital) is what drives politicians intent to deliver.

3.4.1 Empirics

The statistical models in this section employ a new dataset which incorporates voting patterns for two jurisdictions (the City and the Province of Buenos Aires). Precinct-level electoral results for the years 2013 and 2015 were matched to the slum survey conducted by TECHO, described in the previous section. By assigning data from polling stations to each one of the 349 slums in Buenos Aires[21], I am able to measure of partisan homogeneity or dispersion for each neighborhood. Furthermore, this dataset includes a follow-up of the NGO settlements' assessments. In 2015-2016, TECHO replicated their 2013 survey, which allows to get a clear picture of the neighborhoods' evolution after a couple of years.

I introduce here two standard measures of partisan competition. First, following Cleary (2004) I use the margin of victory, which is the difference between the proportion of votes for the winning party minus the second one. This calculation is done by aggregating polling stations by slum, hence each slum in the dataset has its own value of margin of victory. If this value is high it represents a slum where the winning party has a big advantage. If the margin is low, it means there is partisan competition in the neighborhood[22]. Second, I measure slum-level Effective Number of Parties (ENP)[23]. For these measures, I use the 2013 electoral results in order to

[21] The number of slums in the models varies depending on which variables are included. There are a total of 1133 slums in Buenos Aires with data on the LPG Index. Regarding the 2013 electoral results, the sample size is reduced to 487. Finally, in terms of the 2015 elections, there are 349 slums for which I have electoral results. Therefore, the final sample size depends on the combination of these different variables.

[22] As recognized by Remmer (2007), margin of victory is one of the alternatives measures for political competition, although most of them behave similarly: "Party dominance, on the other hand, makes a difference, with two of the three coefficients suggesting that the narrower the electoral base of incumbent, the greater the incentives to spend on patronage rather than public goods. Replacing the indicator of party competition with a measure of the percentage difference between the vote for winning parties and their closest competitors yields similar but weaker results." (Remmer 2007: 18)

[23] For the value of Effective Number of Parties, I am using the traditional formula: the inverse of the sum of each party's proportion squared (Laakso and Taagepera 1979).

evaluate the voting behavior at time zero, and its impact on LPG variation between time zero and time one. Due to compulsory voting, turnout in Argentina is high by international standards (e.g. Nichter 2008). Moreover, electoral participation does not vary significantly across regions. For example in 2013, in the city of Buenos Aires voter turnout was about 77%, whereas in the Province of Buenos Aires was about 80 %. The same pattern repeats in 2015: 73 % in CABA and 79 % in PBA[24].

The following model shows how social capital could enhance electoral coordination, diminishing partisan competition. Results in Table 3.4 evidence a light association between electoral homogeneity and social capital (significant at the 90 percent level). The story is that in communities with strong ties, general trust and common information are higher, shared opinions, more frequent and the idea of a common sense or purpose governs their electoral choices. In this context, homogeneous voting behavior translates into a better position for the community to demand LPG.

Table 3.5 shows the effect of electoral homogeneity on LPG, conditional on the existence of social capital. The dependent variable is a measure for quality of services, considering the starting point of these neighbors by subtracting the LPG Index value in 2013 from the one in 2015. Therefore, the dependent variable (LPG Index Difference) takes value zero if the slum has not changed, a positive value if it has improved or a negative value if it has deteriorated. The first model in Table 3.5 shows a negative effect of electoral homogeneity on LPG evolution (under the absence of social capital). This scenario describes a slum with no community tools to demand from public officials improvements in their living conditions. These circumstances

[24] Voter turnout in Argentina remains steady across time and geography. The average turnout in Argentina was 76% in 2013 and 79% in 2015. Going back to 2011 for instance, the electoral participation in CABA was 77% (and 82% in PBA). Also in 2011, just to mention a few examples, turnout was 82% in the province of Neuquen and 77% in the province of Misiones. Variation in terms of electoral participation is almost inexistent across time for the region of Buenos Aires (city and province). Even if we analyze participation between 1996 and 2016, numbers range between 70 and 75 percent on average. Please see oear.cippec.org for further information on elections in Argentina.

Table 3.4: Regression table

	Dependent variable: Margin of Victory 2013
	(1)
Internal Organization	0.0253^{+}
	(1.90)
Geo. Hazard	-0.00601
	(-0.42)
Number of Families	-0.00474
	(-1.00)
Eviction Attempts	-0.0161
	(-0.68)
Land Title	0.0245
	(1.57)
Constant	0.156^{*}
	(5.86)
Observations	406
t statistics in parentheses	$^{+}$ $p < 0.10$, * $p < 0.05$

are typically dominated by the distribution of private goods in a political exchange (clientelism). I define this scenario as the bad-type partisan homogeneity. For these communities, homogeneity does not provide them with a way to negotiate, but it even hurts them. Politicians do not feel an electoral threat, just distributing handouts is enough. In other words, in the absence of social capital, political competition is better in order to attract public investment; the electoral threat does not emerge from the community but from their political rivals.

The second model in Table 3.5 shows that there is no statistically significant effect of electoral homogeneity on LPG, under a context of social capital. A general interpretation is that the deleterious effect of a high margin of victory on LPG does not hold for communities with close ties. For these communities, either competition

Table 3.5: Regression table

	Dependent Variable: Difference in LPG Index (2015-2013)	
	(1)	(2)
	Internal Org.=0	Internal Org.=1
Margin of Victory 2013	-2.370*	-0.415
	(-2.14)	(-0.43)
Land Title	0.865*	0.604*
	(2.52)	(2.21)
Number of Families	0.0156	0.195*
	(0.16)	(2.17)
Geo. Hazard	0.528+	-0.151
	(1.75)	(-0.57)
Eviction Attempts	-0.506	0.664
	(-1.30)	(1.22)
Frequent Floods	0.111	-0.0610
	(0.39)	(-0.23)
Settlement Year	-0.00315	-0.00416
	(-0.47)	(-0.84)
Constant	6.330	7.284
	(0.48)	(0.73)
Observations	136	139

t statistics in parentheses $^{+}$ $p < 0.10$, * $p < 0.05$

or partisan homogeneity (through electoral coordination) could attract public investment. In sum, the most interesting finding is that in the absence of social capital electoral homogeneity does not imply coordination but more a hindering scenario of locked-in voters. For these (not-well-connected) communities, partisan competition is the route to achieving better LPG.

The appendix presents several coefficient plots for robustness checks, showing three alternative forms of measuring this conditional association. First, Figure 3.9 in

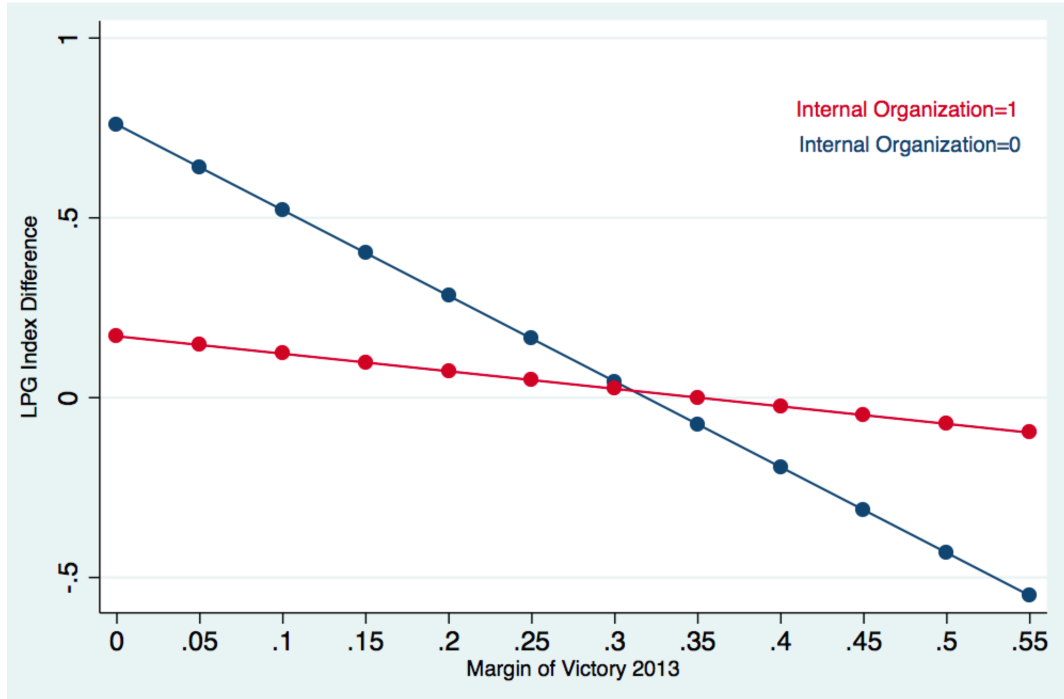


FIGURE 3.7: Predicted Margins of LPG Index Difference (interaction model)

the Appendix shows that the negative effect of electoral homogeneity exists also on absolute values of public services, the LPG Index in 2015 (without considering the point of reference). Second, instead of margin of victory, I test electoral competition through the 2013 ENP (measured at slum level) as depicted in Figure 3.10. Third, I show an alternative measure of the evolution of LPG that instead of subtracting the 2013 Index from the 2015 one, it takes each of the services in the Index and compares it with the previous year, and then calculates the average of the differences (Table 3.12 and Figure 3.11 in the appendix). The findings remain robust across all different cases: in the absence of social capital, electoral homogeneity has a negative effect on quality and access to public services and infrastructure.

3.5 Conclusion

This article aims to bring attention to the collective side of clientelistic exchanges in poor informal settlements. Given that some neighborhoods proved more successful

in achieving better public services and infrastructure than others, I intend to disentangle the positive effect of social capital in the way communities articulate their demands. The argument in this paper is that the existence of civil organizations inside a slum fosters social capital, which enables these communities to efficiently demand local public goods from the government. I test this hypothesis with a unique dataset for 1,834 settlements across the Argentinean territory. The results in the statistical models ratified the positive effect of social capital on LPG at the slum level and confirmed the expected direction of the effects for the rest of the independent variables.

For the second part of the paper, I match precinct-level electoral results to the TECHO dataset on slum services and infrastructure. This exercise is circumscribed to Buenos Aires (CABA and PBA) for the period 2013-2015. Now, this section provides evidence on the two types of partisan homogeneity (good and bad) contingent on the existence of social capital. More specifically, I show that in the absence of social internal organizations in the slum, partisan homogeneity hinders LPG provision. In this case, I hypothesize that homogeneity does not represent electoral coordination, but in fact masks clientelistic practices, in which private goods are distributed to the detriment of public goods.

In terms of policy implications, the findings in this paper contribute to broaden the expertise in the topic. Policy makers may take into consideration the theoretical ramifications in order to better target impoverished populations. To begin with, the development of the LPG Index allows governments (at the three levels: municipal, provincial and national) to identify localities where public investment is a more immediate necessity. Ranking slums by their quality of services and infrastructure enables easy and fast identification of the most deprived communities. Consequently the Government could prioritize where to allocate resources first. Along this line, both governmental and non-governmental actors would recognize the specific char-

acteristics of those localities with higher-quality services and infrastructure. Policy makers and scholars of development studies may find other features of interest in these successful cases, besides the existence of higher social capital.

Beyond the elaboration of the LPG Index, this project contributes to the field by presenting evidence that social capital matters to improve poor communities living standards. Therefore policy makers might be interested in distinguishing localities where the community is tight and neighbors are well connected. This differentiation allows us to recognize other features in these communities that could lead to higher social capital. Provided the existence of some previous government program (e.g. PLAN FINES[25]) had been effective in boosting community organization and strengthening the social fabric, then experts may choose to replicate these helpful initiatives elsewhere. Moreover, public officials could align their efforts to encourage internal organizations and institutions such as Cooperatives or Neighborhood Associations. It is worth mentioning that although the government can promote these activities through a system of incentives, the development and administration of the internal organizations should be community-driven.

This paper is a first step in the path of comprehending what type of communities are more successful in demanding public investment in their neighborhoods. Nonetheless, along these lines, new puzzles follow. The main question that, as researchers, we should seek to answer is what determines the existence of social capital in this type of communities. This line of investigation should be addressed in a different paper but for a more complete picture of these dynamics we ought to better understand where does social capital come from. This project presents a method-

[25] Plan FINES is a national program aiming to facilitate adult population to complete elementary and high school studies. The interesting feature is that students take classes twice a week in their own neighborhood. The government provides with teachers and the neighbors have to organize themselves to specify a house where lessons will take place. Usually, the community chooses to hold classes in establishments like a club, a church, or even the house of a social leader who is willing to lend the space. It is an example of a State-driven initiative that fosters community self-organization and tightens the social network.

ological challenge as we do not know enough about residential selection. How do slum dwellers decide where to establish their settlements in the first place? What are the main factors that determine this decision process? One may argue that better services and infrastructure could attract more empowered communities, with higher social capital. However, qualitative research –fieldwork interviews– provides support for the proposed direction in this project. To begin with, slum dwellers in Buenos Aires are mostly immigrants from either other provinces in Argentina or different countries (e.g. Bolivia, Paraguay and Peru). Oftentimes, these communities tend to seek residency in the same slums as their fellow immigrants, regardless of the conditions or quality of the services provided in place. In this line, the process of residency selection is driven mostly by knowing someone (or someone who knows someone) living there. Additionally, as Figure 3.4 shows, social capital has a robust positive impact on quality of LPG, in particular for disadvantaged circumstances such as the lack of land title or adverse geographical conditions (e.g. settlement close to train tracks). Even for these populations –for whom LPG are notoriously worse– the existence of social capital tends to help them improve their situation in terms of LPG.

Likewise, researchers ought to better understand where exactly does democracy begin to fail for slum dwellers, given that its formal mechanisms are insufficient to channel their demands. Supposedly, voters elect representatives who are able to act on their behalf or stand for their interests. However, in the most deprived communities where access to water and electricity is not guaranteed, suffrage may not be enough to get a proper representation. It is precisely in these localities where community organization and social capital become so relevant to compensate for the political vacuum. Nonetheless, we need a more complete explanation of why sometimes official democratic channels are not enough. In this effort, future work should also attempt to expand the empirical testing into other developing countries

sharing similar clientelistic dynamics or the same shortage in the supply of LPG in the poor informal settlements.

Finally, we should aim for a better understanding of the role of the social leader -the so called "referente" in Argentina- in regards to LPG. Scholars have focused mostly in describing political trajectories of "referentes", how they obtain hand-outs and how they choose to distribute them. However, future projects should seek to explain their interaction with higher political power when it comes to securing public investment for their own locality. Are these dynamics independent from the traditional form of clientelism, where local politicians deliver private goods through brokers? Is one strategy a good replacement of the other one, in electoral terms? When it comes to mobilizing voters, "referentes" use portfolio diversification strategies, including both private and public goods for their neighbors? Future iterations of this paper should search for answers to some of these questions.

3.6 Appendix

Table 3.6: Correlation Matrix Sub components for LPG Index (pca)

	Pav.	Lig.	Elec.	Sew.	W.	W.(where)	Gas	Garb.
Pavement	1							
Street Lights	0.30	1						
Electricity	-0.01	0.31	1					
Sewage	0.18	0.16	0.04	1				
Water	0.07	0.04	-0.22	0.03	1			
Water(where)	0.17	0.20	0.09	0.21	0.14	1		
Gas	0.32	0.24	0.15	0.14	0.01	0.22	1	
Garbage	0.25	0.46	0.21	0.16	0.04	0.18	0.24	1

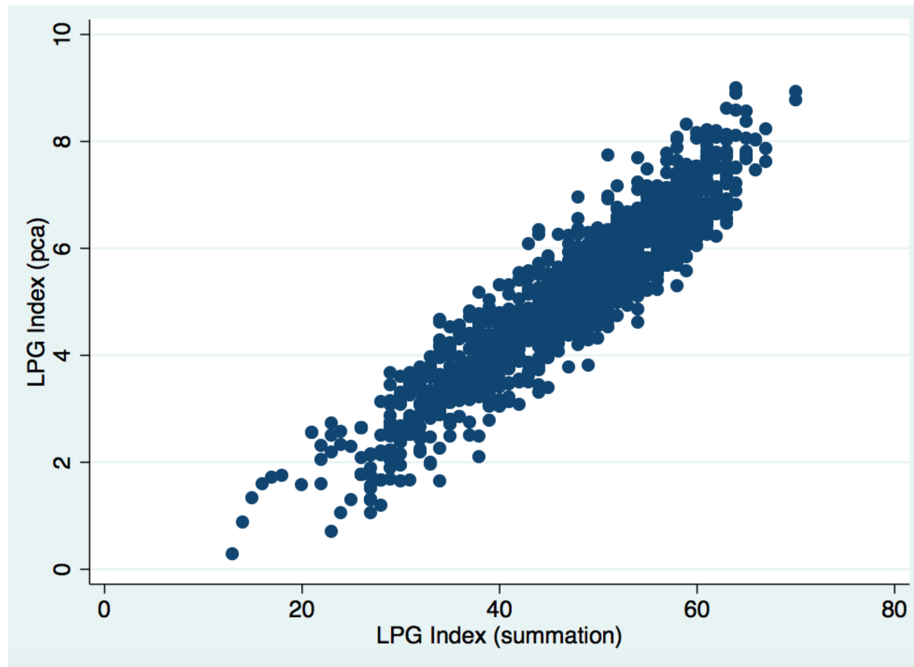


FIGURE 3.8: Scatter Plot of LPG Index (pca) by summation of subcomponents

Table 3.7: Diagnostics for PCA (LPG Index)

Principal components /correlation			Number of obs = 1,580
			Number of comp. = 8
			Trace = 8
Rotation: (unrotated = principal) (unrotated = principal)			Rho = 1.0000
Component	Eigenvalue	Difference	Proportion
Comp1	2.27568	.989779	0.2845
Comp2	1.2859	.351657	0.1607
Comp3	.93424	.0222643	0.1168
Comp4	.911976	.0831098	0.1140
Comp5	.828866	.169671	0.1036
Comp6	.659195	.0376441	0.0824
Comp7	.621551	.138952	0.0777
Comp8	.482599	-	0.0603

Variable	Comp1
Pavement	0.3874
Street Lights	0.4827
Electricity	0.2594
Sewage	0.2826
Water	0.0525
Water(where)	0.3329
Gas	0.3927
Garbage	0.4495

Table 3.8: OLS Models

	Dependent Variable: 2013 LPG Index		
Internal Organization	0.242*	0.386*	0.166*
	(3.03)	(4.90)	(2.21)
Land Title	0.800*	0.848*	0.744*
	(7.18)	(7.49)	(7.39)
Organized Occupation	-0.229*	-0.215+	
	(-2.09)	(-1.93)	
Number of Families	0.207*		0.176*
	(6.98)		(6.26)
Geo. Hazard	-0.426*	-0.390*	-0.449*
	(-4.53)	(-4.09)	(-5.11)
Eviction Attempts	-0.257*	-0.254*	-0.219*
	(-2.37)	(-2.30)	(-2.15)
Frequent Floods	-0.282*	-0.293*	-0.225*
	(-3.29)	(-3.35)	(-2.80)
Settlement Year			-0.0187*
			(-11.74)
Constant	4.234*	5.101*	41.59*
	(27.10)	(52.87)	(13.02)
Observations	1347	1347	1419

t statistics in parentheses   + $p < 0.10$, * $p < 0.05$

Table 3.9: Multilevel Models

	Dependent Variable: 2013 LPG Index		
Internal Organization	0.311*	0.398*	0.224*
	(4.08)	(5.36)	(3.12)
Land Title	0.685*	0.705*	0.634*
	(6.42)	(6.58)	(6.56)
Organized Occupation	-0.182+	-0.169	
	(-1.74)	(-1.61)	
Number of Families	0.130*		0.106*
	(4.47)		(3.83)
Geo. Hazard	-0.307*	-0.275*	-0.330*
	(-3.43)	(-3.06)	(-3.91)
Eviction Attempts	-0.234*	-0.228*	-0.197*
	(-2.27)	(-2.20)	(-2.04)
Frequent Floods	-0.307*	-0.322*	-0.243*
	(-3.75)	(-3.90)	(-3.16)
Settlement Year			-0.0178*
			(-11.55)
Constant	4.206*	4.741*	39.66*
	(15.04)	(17.20)	(12.83)
Observations	1347	1347	1419

t statistics in parentheses $+ \ p < 0.10$, $* \ p < 0.05$

Random-Effects Parameters

Group-level Variance	.429	.524	.358
	(.236)	(.283)	(.199)
Individual-level Variance	1.750	1.774	1.623
	(.068)	(.068)	(.061)

Std. Err. in parentheses

Table 3.10: OLS - Alternative independent variable

	Dependent Variable: 2013 LPG Index		
External Organization	0.213*	0.378*	0.160*
	(2.59)	(4.75)	(2.10)
Land Title	0.810*	0.858*	0.753*
	(7.22)	(7.55)	(7.45)
Organized Occupation	-0.216+	-0.192+	
	(-1.96)	(-1.71)	
Number of Families	0.206*		0.174*
	(6.85)		(6.12)
Geo. Hazard	-0.422*	-0.393*	-0.447*
	(-4.46)	(-4.08)	(-5.05)
Eviction Attempts	-0.237*	-0.220*	-0.202*
	(-2.17)	(-1.98)	(-1.98)
Frequent Floods	-0.284*	-0.289*	-0.225*
	(-3.29)	(-3.30)	(-2.79)
Settlement Year			-0.0189*
			(-11.81)
Constant	4.264*	5.130*	41.85*
	(27.15)	(54.15)	(13.09)
Observations	1341	1341	1413

t statistics in parentheses $+\ p < 0.10$, $*\ p < 0.05$

Table 3.11: OLS Regression for LPG Index 2015

	Dependent variable: 2015 LPG Index			
	(1) Internal Org.=0	(2) Internal Org.=1	(3) Internal Org.=0	(4) Internal Org.=1
Margin of Victory 2013	-3.140*	-0.958		
	(-2.20)	(-1.09)		
ENP 2013			0.435*	0.210
			(2.04)	(1.13)
Land Title	0.468	0.616*	0.879*	0.483+
	(1.32)	(2.33)	(2.67)	(1.71)
Number of Families	-0.190	0.294*	0.124	0.263*
	(-1.65)	(3.54)	(1.22)	(2.94)
Geo. Hazard	-0.220	0.0646		
	(-0.75)	(0.24)		
Eviction Attempts	-0.785	-0.0769	-0.419	-0.0921
	(-1.59)	(-0.20)	(-1.07)	(-0.16)
Frequent Floods	-0.854*	-0.206	-0.424	-0.554*
	(-2.86)	(-0.82)	(-1.49)	(-2.06)
Constant	2.159*	-0.668	-1.489	-1.197
	(3.32)	(-1.22)	(-1.46)	(-1.37)
Observations	114	186	151	149

t statistics in parentheses $^{+}$ $p < 0.10$, * $p < 0.05$

FIGURE 3.9: Regression Coefficients in LPG Index 2015

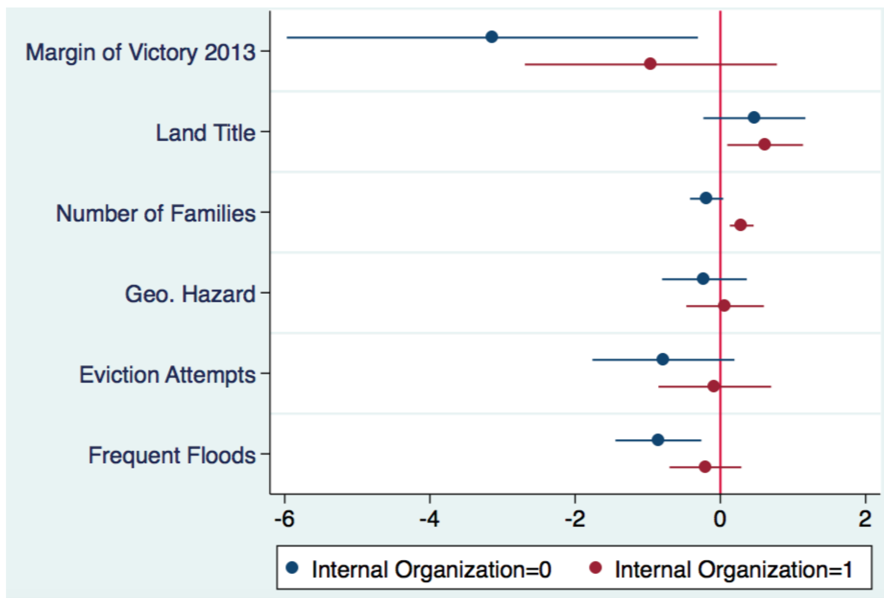


FIGURE 3.10: Regression Coefficients in LPG Index 2015 - II

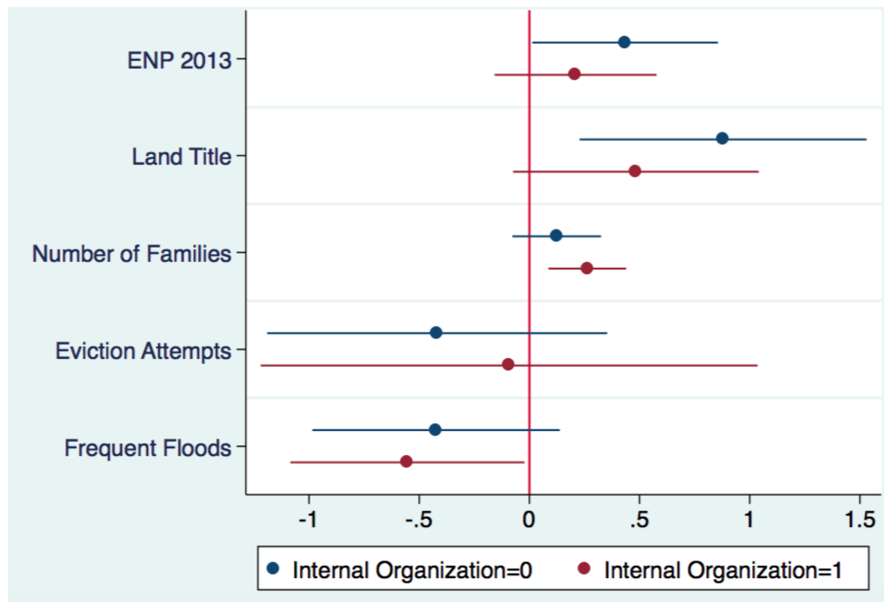


Table 3.12: OLS Regression table

	Dependent variable: LPG Index Difference (alternative measure)	
	(1) Internal Org.=0	(2) Internal Org.=1
Margin of Victory 2013	-1.677*	-0.258
	(-2.05)	(-0.38)
Land Title	0.712*	0.542*
	(2.83)	(2.82)
Number of Families	0.0370	0.168*
	(0.50)	(2.77)
Eviction Attempts	-0.324	0.393
	(-1.12)	(0.96)
Constant	0.128	-1.018*
	(0.33)	(-2.69)
Observations	132	136

t statistics in parentheses $^{+}$ $p < 0.10$, * $p < 0.05$

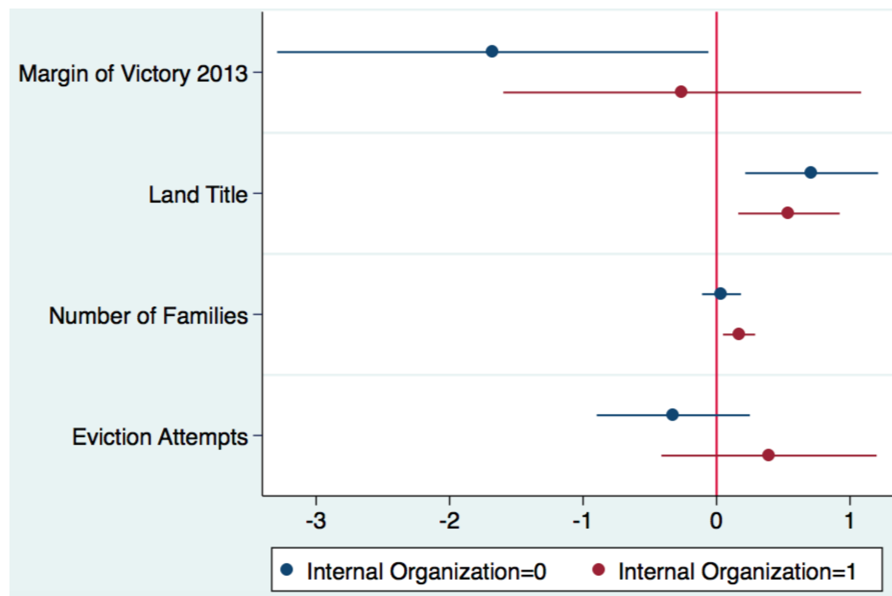


FIGURE 3.11: Regression Coefficients on LPG Difference (alternative measure)

4

Squaring the Circle: Social Capital and Electoral Accountability in Slums

4.1 Introduction

We are generally interested in identifying when governments are held accountable. Some scholars focus on retrospective voting; others on participation (extra-electoral civic engagement). This paper's argument is that electoral and participatory mechanisms, intertwined, are the building blocks for accountability in poor informal settlements. In the previous chapters, I presented evidence that social capital is a fundamental factor for the urban poor to achieve better public services and infrastructure. The core of my argument is that communities with stronger social ties and internal organizations enjoy better Local Public Goods (hereafter LPG), which refer to public services such as sewage, clean water, formal access to electricity, natural gas, etc. Now, this paper presents evidence on how slum dwellers in Buenos Aires respond electorally to LPG improvements (or the lack of thereof). This has implications for party switching and retrospective voting within the urban poor. Namely, this work provides tools to distinguish community features enabling them to either

punish or reward political parties, in response to their past performance on LPG investments.

Empirical research shows socioeconomic resources and education systematically correlate with turnout and others forms of political involvement (e.g. Papadopoulos and Warin 2007; Verba, Schlozman and Brady 1995; Abrams, Iversen and Soskice 2010). For this reason, poverty and inequality often pose limitations to redistributive politics (Amat and Beramendi 2016). The lack of investment in LPG in slums is the perfect manifestation of these dynamics. In this paper, I propose that social capital is what allows poor communities to overcome the so-called representational gap. As recognized by the principal-agent theory, representatives' decisions do not always match citizens' preferences (Przeworski, Stokes and Manin 1999). This problem is aggravated for poor voters, who must hold accountable politicians for actions they cannot observe. Informational asymmetries –in terms of policy design and implementation– are particularly large for low-income citizens. Social capital is an asset that poor communities can exploit to shape agents' incentives in order to increase responsiveness. The literature of P-A problems leaves a series of unanswered questions: How do slums dwellers, in particular, manage to influence politicians' actions and enforce electoral accountability? By aiding the transmission of knowledge among community members, social capital abridges informational asymmetries between principals and agents. Furthermore, it helps slum dwellers to organize themselves to mobilize and coordinate their political and electoral behavior.

Elsewhere, I have shown that LPG are positively correlated with social capital. The core of my argument is that communities with stronger social ties and internal organizations enjoy better access to government services. The linking mechanism in this association comprises three elements: i) mobilization; ii) leadership accountability; iii) electoral coordination. Frequent communications and trustworthiness among slum dwellers intensify the speed in the informational flow. Being deceived

by politicians can be avoided by transmitting knowledge about public investment (or the lack of thereof). Social capital fosters the internal organization necessary to plan political mobilizations and express demands directly to local politicians (e.g. petitions, protesting in front of the Governor's office, dealing with paperwork to ask councilmen for budget increase, etc.). Through extra-electoral civic engagement, slum dwellers increase the pressure on local leaders, such as brokers or neighborhood representatives. Most importantly, social capital aids community-led electoral coordination.

I label the scenario when slum dwellers are able to collectively decide to reward(sanction) (un)responsive politicians through bloc-voting, as good-type partisan homogeneity. By forming vote banks, slum dwellers present themselves as an asset to local politicians, who often choose to reward collective action skills (Grossman, Pierskalla and Dean 2017). It is precisely the idea of the credible threat to switch to a different candidate/party in a bloc of voters, that provides incentives for public investment. However, partisan homogeneity is not always a positive scenario for the urban poor. Oftentimes, a political party winning in a slum by 70% is not the product of electoral coordination, but locked-in voters being persuaded by inexpensive handouts. Mainly due to political clientelism, incumbents keep winning in these districts, but representatives are not held accountable and public goods provision is low. I define this scenario as the bad-type partisan homogeneity.

The decisive factor responsible for either the detrimental or the beneficial homogeneity –my theory goes– is social capital. Solidarity and community ties among neighbors are necessary conditions for slum dwellers to effectively hold public officials accountable. Well connected communities increase their likelihood of achieving better Local Public Goods (LPG) through the implicit threat to vote out public officials who did not honor their campaign promises. In other words, by forming vote banks, slum dwellers raise the stakes of investing in their neighborhood. Now,

this paper provides empirical evidence that this threat does turn into reality. Under specific circumstances, communities are entitled –or have acquired– the necessary tools so that they can punish or reward incumbent governments according to their performance. Social capital contributes to improve slum dwellers' quality of life, by giving them the tools to sanction politicians if they have ignored their demands for better services and infrastructure.

Considering budget constraints in governmental funding, politicians are often limited to choose between investing in either public goods or private goods. Although clientelistic practices could occur jointly with investments in LPG, in general slum dwellers witness the allocation of either one or the other. Therefore, the reference of clientelism in this work described the distribution of goods for immediate consumption (short-lived goods). The goal here is to distinguish between the allocation of significant government funds towards Local Public Goods vis a vis the petty resources towards consumable goods. Moreover, due to diminishing returns of income, the urban poor tend to be the principal target of clientelism, in detriment of provision of LPG (Brusco, Nazareno and Stokes 2004; Calvo and Murillo 2004; Remmer 2007; Keefer 2007). Yet, variation in terms of LPG in fact exists among similarly underprivileged populations. Extant literature has failed to address this puzzle. My argument suggests that variation in the quality of public services among informal settlements implies variation in terms of electoral accountability. And this is precisely what this paper seeks to answer: What are the factors accounting for the disparity in the ability of poor communities to sanction governmental performance?

Poor voters are not isolated, they are often clustered in informal settlements, which makes their slum-level political behavior particularly relevant to assess accountability mechanisms. Grievances on public services and infrastructure are decisive to punish or reward incumbent parties. Since casual conversations will frequently touch political matters (Putnam 2000), in the slums' streets they tend to

circle around the more tangible living conditions. Slum dwellers will hardly comment to each other on general national topics, but are more likely to comment for instance, if they do not have access to water that morning, or if the waste smell is remarkably strong because of sewage obstruction. In this line, social interactions across the slum boosts accountability because neighbors signal to each other improvements and misfortunes in their everyday lives. This in turn promotes party switching –bloc voting– in response to the existence or the lack of public investment in their locality. The ability to punish deficient performance of public officials then, has clear implications for the quality of life of the urban poor.

Argentina constitutes a great case to test my argument as the slum population has grown dramatically over the last decade. Particularly in the City of Buenos Aires, the number of slum dwellers rose about 156% between 2001 and 2014[1]. This has created new public demands for governments to pay attention to their needs and invest in LPG, particularly in infrastructure. Now, since politicians are resource-constrained it is interesting to test how citizens respond electorally to geographic variation in the allocation of LPG. The empirics in this paper exploits an original dataset for two key districts in Argentina: the City of Buenos Aires (CABA) and the Province of Buenos Aires (PBA). Fortunately, the NGO TECHO conducted a two-wave slum survey in 2013 and 2015; same points in time when national and local elections occurred in Argentina. Then TECHO slum surveys bearing on public services and infrastructure were matched with precinct-level electoral data for 349 slums in Buenos Aires.

There is an additional benefit of studying these two electoral processes in particular. The midterms of 2013 were seen as the prelude for 2015 presidential election since the president at the time could not be reelected again. The most important

[1] For more information, please see http://www.lanacion.com.ar/1725641-la-poblacion-en-villas-portenas-crecio-156-en-los-ultimos-13-anos

political figures at that moment were Macri (former Mayor of the City of Buenos Aires) and Scioli (former Governor of the Province of Buenos Aires). They were the candidates who disputed the 2015 Presidential Ballotage and the campaign centered mostly on their 8-year performance as Governors of the most important electoral jurisdictions. Building upon Samuels' (2000) "gubernatorial coattails effect" I argue that for both electoral processes, slum dwellers were either punishing or rewarding the Governor's political party. The implication from these special circumstances is that any claim of misattribution of responsibility between different government levels could be dismissed.

As I will show later in the paper, not every neighborhood is able to punish (reward) politicians for their bad (good) performance. Empirics reveal that social capital is a necessary condition for communities to be able to sanction public officials effectively. According to the statistical models, only for those slums empowered with social capital, the incumbent's vote share decreases as local public goods worsened –over these two years. In contrast, under the absence of social capital, poor informal neighborhood experiencing setbacks in their LPG show higher levels of vote share for the incumbent government in 2015, in comparison to 2013. Incumbency advantage –or in the case of Argentina, partisan advantage– is perpetuated under the absence of strong ties within the community.

The article proceeds as follows. The next section presents my main argument and how it relates to the existing research. The second section provides an overview of the empirical setting, covering details on Argentinean politics and the elections in Buenos Aires. The third section describes the original dataset, measurement and estimation. Section 4 goes over statistical models and empirical findings. Finally, the last section provides concluding remarks, a discussion on policy implications and potential improvements to factor in future research.

4.2 Theoretical Framework

Accountability refers to the citizens' capacity to enforce responsiveness from public officials[2]. When politicians are held accountable, they are expected to answer to their behavior, inform their policies and represent citizens' preferences (Peruzzotti and Smulovitz 2002). It is generally assumed that competitive elections establish the course towards accountability by providing the opportunity for voters to evaluate government's actions and respond accordingly at the ballot box (Przeworski, Stokes and Manin 1999). However, representatives' decisions do not always match citizens' preferences. As recognized by the principal-agent theory, voters are principals without full information on policy design or implementation. This problem is aggravated for poor voters, which broadens informational asymmetries. In this paper, I propose social capital as a partial solution to P-A problems specifically for poor communities.

Clientelistic practices are one of the main barriers to accountability among the urban poor. There is an implicit tradeoff between clientelism and the provision of public goods (Stokes 2005; Lizzeri and Persico 2001). Due to the diminishing returns of consumption, low-income constituencies derive higher marginal utility from handouts –rather than middle-income voters. Given that slum dwellers are more electorally responsive to direct transfers, poor communities are often deprived from public investment. Since private goods are relatively cheaper than public or club goods, resource-constrained politicians choose to allot short-lived goods, more often than not. Usually a political party winning in a slum by 70% is not the product of electoral coordination or citizens rewarding responsive governments. Mainly due to political clientelism, incumbents keep winning in these districts, but representatives are not hold accountable and LPG provision is low.

[2] According to Manin, Przeworski, and Stokes (1999: 40) accountability is "the electorate's capacity to reward or sanction incumbent politicians"

Building upon Hirschman (1970) and Cleary (2007), I propose a combination of electoral (exit) and participation (voice) to ensure electoral accountability. This paper's argument is these two democratic mechanisms, intertwined, are the building blocks for accountability in poor informal settlements. Voting and mobilization, then, interrelate through social networks. Through frequent interactions, neighbors boost participation and simultaneously increase monitoring capacity and informational flow (Fenno 1978; Burstein 1999; Brooks and Manza 2006). Social capital is a necessary condition for slum dwellers to effectively raise demands to public officials. Through a combination of mobilization and electoral coordination, well connected communities have the ability to punish unresponsive governments and, consequently, increase their likelihood of achieving better LPG.

It might be difficult to disentangle the specific effect of social capital at two different moments: during elections and in between the electoral calendar. Still, I argue that we can identify two different mechanisms. First, aside from vote choices, social capital increases the informational flow and helps to overcome collective action problems. When slum dwellers notice that the construction for a new natural gas grid has not been active for the past two months, just realizing is not enough. Social capital provides the means for community members to signal each other the source of their grievances. Besides, it helps transmitting information regarding political details, such as who is responsible for a certain program, or why the funding for a specific project was suspended. Most importantly, social capital promotes collective action skills, allowing for internal organization. In this sense, tight communities transform individual expressions of slum problems into cooperative efforts to demand for improvements. Second, particularly during the electoral process, social capital helps slum dwellers to reach an agreement and coordinate their voting choice as a group. When deprived communities address the government with complaints on the lack of basic public services, their social capital is what empowers them to pose the

credible threat of voting for the opposition party. The possibility of party switching through bloc-voting is what incumbents fear the most.

4.2.1 Social Capital and Political Participation

Among the advantages of participatory strategies, one may count directness, clarity and continuity. From the demand side, demonstrations or firsthand contact with government representatives allow citizens to organize themselves and articulate their demands through an ongoing exercise –irrespective from the electoral calendar. Unlike elections, which only signal general messages, mobilization allows voters to point exactly the source of their grievances, communicate concrete opinions on specific topics and target precisely their audience (Hirschman 1970; Cleary 2007; Verba, Schlozman and Brady 1995). From the supply side, extra-electoral civic engagement is also useful for politicians to incorporate input in between the electoral calendar (Pitkin 1967). Given that there is a correlation between what citizens communicate in protests and their voting behavior, these mobilizations signal to politicians where voters' priorities are.

All in all, participatory mechanisms aid to bridge the gap between principals and agents (Fung and Wright 2001). Along the process, communities are empowered and social capital thrives. Usually defined as the "glue" holding a community together, social capital represents the level of trust, solidarity and cooperation among its members or, in other words, the density in their networks. As in Putnam (2000) social capital represents "the connections among individuals' social networks and the norms of reciprocity and trustworthiness that arise from them" (p.19). To Cohen and Prusak (2001) social capital represents ties binding neighbors and enabling cooperation. Through social conventions and shared expectations (Schelling 1960; Young 1996; Shepsle 2006) neighbors point to each other common grievances and improvements, fostering mobilization skills. More explicitly, in this paper I argue

that because participation strengthen community ties, slum dwellers can increase the pressure over public officials by coordinating their political behavior.

More and stronger connections among neighbors increase the speed of sanctioning, reinforcing the mechanism for peer pressure, which works horizontally (among slum dwellers) and vertically (between neighbors and local politicians). Likewise, slum dwellers employ societal mechanisms to hold public officials accountable by activating channels to threaten elected representatives to stop political support, or even unelected ones with reputation costs (Peruzzotti and Smulovitz 2002). By reducing informational costs and solving collective action problems, social capital helps slum dwellers to successfully raise demands for public investment. This process does not refer only to slum dwellers signaling to each other if water is running clean in the corner's community faucet; but also how tight communities are more likely to organize themselves jumping from the individual expression of grievances to the collective demand for improvements.

Extensive scholarship has shown the positive effects of social capital on the individual welfare, as well as improvements in living conditions. In his seminal book, "Bowling Alone", Putnam shows that less social capital correlates with less safety in neighborhoods, deterioration in governments' performance, children doing worse at school and in general people being less happy, less prosper and less healthy (Putnam, 2000). Similarly, Krishna (2011) shows that when Indian villages are united, they can exert social sanctions (e.g. ostracism) to unresponsive leaders, which increases politicians' difficulty to cheat villagers. Specially for the northern region of Rajasthan, Krishna and Uphoff (1999) show how social capital promotes community-led water projects. Other examples across the globe, include Narayan and Pritchett (1999), who study village-level social capital positive effect of household income in Tanzania. Isham and Kähkönen (1999) argue an increase in efficiency in water services is due to social capital in Indonesian villages. Reid and Salmen (2002) propose that

in Mali community cohesion enhance the effect of agricultural extension services. Last, Klesner (2007) has shown that social capital encourages political participation and a more robust democratic experience regarding Argentina, Chile and Mexico. All in all, bottom-up demands foster the mere essence of accountability (Tommasi and Weinschelbaum 2007). Now in this paper, I empirically show how slum dwellers in Buenos Aires exert electoral accountability, contingent on the existence of social capital.

4.2.2 Retrospective Voting, Misattribution and LPG

In terms of electoral strategies, it is generally understood that voters both sanction past performance and select good-type candidates (Key 1966; Mayhew 1974; Fearon 1999). On the one hand, Downs (1957), Fiorina (1981) and Ferejohn (1986) argue past performance heavily shapes vote choice –retrospective voting[3]. On the other, Campbell (1960) theorize that voters evaluate competing candidates based on what they expect from future conditions and observed politicians' abilities, preferences and background –prospective voting. Anyhow, there is a blurry line that separates these theories since expectations over the future are generally influenced by the past (Lockerbie 1992). Building upon Ferejohn (1986), in this paper elections are conceived mainly as referendums on incumbent parties. Voting behavior is not determined by perceptions on credibility or reputation, but mostly by how much parties have invested in for their neighborhoods' infrastructure and services.

When citizens' ability to monitor public officials is poor, electoral accountability decreases. Several factors could interfere in the way voters handle the assessment of policy implementation, such as their sophistication level or how knowledgeable they are and how they process information (Conover, Feldman and Knight 1986; Krause 1997; Duch, Palmer and Anderson 2000). Voters' own experiences with democratic

[3] For a comprehensive review on retrospective voting see Healy and Malhotra (2013).

institutions, news outlets exposure, candidates' abilities to hide (highlight) their weakness (best assets) and campaigns' transparency and length may also produce misattribution problems (Stevenson and Vavreck 2000; Sanders and Gavin 2004; Anderson and O'Connor 2000).Another challenge to retrospectively evaluate candidates is partisanship strength. When political parties' brands are sufficiently clear, strong partisan loyalties become resistant to retrospective assessments, and vote switching turns into a rare phenomenon (Lazarsfeld, Berelson and Gaudet 1948; Huckfeldt and Sprague 1995)[4]. Yet, I propose that regarding local conditions –as opposed to national topics– voters are less biased by partisan attachments.

Clarity of responsibility is generally conditioned by different political conditions and institutional frameworks (Powell and Whitten 1993) and turns into even a more intricate matter in multi-tiered governments (Gelineau and Remmer 2006; Anderson 2006; Rodden and Wibbels 2011). Incumbents try to diffuse political responsibility (Powell and Whitten 1993), shifting the blame (claiming credit) to (from) another gubernatorial layer. Building upon Ebeid and Rodden (2006) and Grossman, Pierskalla and Dean (2017), this paper suggests that local matters –rather than national– are what voters have in mind when deciding how to punish or reward local politicians. And following Samuels' (2000) "gubernatorial coattails effect", I assume that partisan lines dominate concurrent elections and voters are more likely to sanction the incumbent Governor's party, throughout all different electoral categories.

4.2.3 Social Capital and Electoral Accountability

Following Remmer (2010), my argument conceptualizes the electoral process as a group activity where voters' preferences are conditioned by the information at the very local level. Recent evidence shows that citizens are often persuaded by their

[4] Gottlieb and Larreguy (2016*b*) show that in Senegal only a 10% of the villages experienced bloc-voting party switching between elections.

immediate social contexts, when taking political decisions (Baker, Ames and Renno 2006; Gerber, Green and Larimer 2008; Nickerson 2008; Abrams, Iversen and Soskice 2010; Fowler 2006; Remmer 2010). Individuals derive utility by conforming to social norms (Festinger, Torrey and Willerman 1954) and try to avoid disagreement within their immediate social environment (Sinclair 2012). The underlying mechanism is the need to seek for social approval (Lindenberg 1991). It is the interdependence among individuals what makes residents of the same locality permeable to other people's political choices (Marwell and Oliver 1993; Sinclair 2012). Therefore, higher social capital is associated to more aggregated political behavior (Huckfeldt and Sprague 1995). In this paper, I argue that intercommunication between voters will initiate chains of reaction to government performance, in what Baker, Ames and Renno (2006) denominate 'voter cascades' shaped by informational cascades (Bikhchandani, Hirshleifer and Welch 1992). Party switching –my theory goes– can occur even in cases of deeply-rooted partisan attachments.

Social capital promotes electoral coordination by aligning political demands and decreasing misattribution problems. By the process of aggregating political behavior, social capital byproducts are (1) resemblance among neighbors' beliefs; and (2) vote banks. With strong community ties, bloc-voting increases slum dwellers' power of negotiation. Due to the existence of an internal organization, knowledge, observations and opinions circulate faster. Through continuous interactions, slum dwellers become aware of improvements –or the lack thereof– and cultivate common beliefs about their living conditions. Building upon Ferejohn (1986) and Persson and Tabellini (2000), I propose that voters can boost accountability only if they can coordinate on a performance threshold such that, if the incumbent fails to meet it, they expel the incumbent no matter who the challenger is. My group-level argument emphasizes that what shapes the likelihood of bloc-voting (or vote banking) is slum dwellers' signaling to each other their source of grievances and their own capacity to

self-organize.

Retrospective voting –in terms of LPG or any other policy for that matter– requires that past performance is somehow visible. Yet, this is not always obviously laid out for voters to see and assess. Citizens often face limited information and time, thus shortcuts like partisan labels and neighbors' comments shape their judgements. I argue that slum dwellers cast their vote considering predominantly their neighborhood's infrastructure and services' quality[5] and misattribution problems are minimized for two reasons. First, LPG are concrete, visible, and tangible. Slum dwellers see with their own eyes whether the government has invested in their block's street lights or if water is running clean in the corner's community faucet. Second, the visibility of local conditions is maximized with the presence of social capital at the slum-level. Although neighbors do not depend on third party information –e.g. the media– to make their minds on the incumbent's responsiveness, communications among neighbors intensify accuracy and speed in the informational flow. Then, social Capital improves slum dwellers' capacity to monitor policy design and implementation, which results in them acting collectively on election day.

This paper suggests that slum dwellers overcome any misattribution issue by reducing informational costs through social capital. Whereas LPG are highly noticeable, social capital within community members increase awareness for public investments. Neighbors observe improvements in public services and new developments in infrastructure in situ, and share their beliefs with other community members. Social capital helps poor communities to reach a common agreement on how to demand necessary investments for their neighborhood. It is important to stress that for poor informal communities, suffering from under-provision of LPG, even a minimal improvement has a direct impact on their everyday lives. Moreover, the collective

[5] Please see Figure 1.1 in the dissertation's Introduction (chapter 1) for empirical evidence on how slum dwellers in Udaipur prioritize community benefits over individual ones.

feature of LPG precisely brings forward coordination problems[6]. It is not only about noticing that the sewage was not built in time, but also about knowing exactly who in the Government is responsible for it. Neighbors are better off if they all share information about the prospect of public investment and try to coordinate their electoral response as a group.

The urban poor tend to be clustered together in neighborhoods and they place enormous value over services and infrastructure. Hence I propose to study how slum-level characteristics shape their political behavior, accentuating their capacities to extract investment from resource-constrained politicians. Social capital –my theory goes– is a necessary condition to effectively sanction public officials and consequently to induce good behavior. Social capital contributes to improving slum dwellers' quality of life, not only by coordinating at the ballot box, but also by holding the community together in order to demand government investment in their neighborhood. Since both monitoring and information are crucial elements to enhance political accountability, social capital has clear implications for slums' infrastructure and public services.

All in all, the core in the argument is that slums' social internal organizations facilitate electoral coordination in the form of punishing (rewarding) bad (good) local performance. Communities with higher social capital are better equipped to mobilize themselves, take their complaints to the local political office, and coordinate their choice on the election day. Social capital increases the likelihood of receiving LPG because these neighbors frequently discuss with each other how to achieve collective goods, and they are not easily deceived by brokers/politicians. Furthermore, public

[6] Given the collective nature of LPG and their high salience, I propose that there is a blurry line between egotropic (pocketbook) and sociotropic motives for slum dwellers. For this specific population, the quality of life is highly associated with their neighborhood infrastructure. If they cannot get access to the gas grid for example, they will be forced to spend much more resources in buying the gas cylinder. Hence, for poor informal communities suffering from under-provision of LPG, the distinction between egotropic and sociotropic becomes difficult.

officials perceive the plausible threat of a big group of voters that could all together move to a different party if they wish to punish an unresponsive incumbent. This latent coordination –enabled by social capital– is what drives governments' intent to deliver. The following hypothesis expresses the argument concisely:

H1: Voter responsiveness to LPG investment in slums increases in the level of community social capital.

Several implications emerge from this hypothesis. One often assumes that voters will respond to the lack of investment by punishing the incumbent, supporting the challenger. However for the case of slum dwellers, this simple statement on electoral accountability might not be as simple as it sounds. As previously described, attribution of responsibility requires several elements such as visibility and voters' sophistication. In this line, I propose that some –but not all– poor communities will be able to attribute responsibility. Slum-level voting behavior depends on the level of social capital. In other words, slum dwellers' ability to electorally sanction poor performance is contingent on the existence of trustworthiness and cooperative ties among them. This hypothesis has important implications for the study of party switching, since I argue that even for the cases of deeply-rooted partisan attachments, slum dwellers reward(sanction) (un)responsive politicians, if they are entitled with community-level social capital.

This paper contributes to the literature on retrospective voting, social capital and local public goods. Yet, in general most of the previous studies focus on individual-level dynamics that shape civic engagement, voting choices and improvements in quality of life. The novelty in my work is that I present a slum-level theory combining these three subjects. In the following section I present the empirical evidence providing support for my theory. With an original dataset from Buenos Aires (Argentina) I interact changes in LPG with social capital as means to identify the ability of these communities to punish or reward at the ballot box.

4.3 The empirical setting: slums in Buenos Aires

In this paper, I exploit an original dataset for the two most important electoral jurisdictions in Argentina: the Province of Buenos Aires (PBA) and the City of Buenos Aires (CABA). The data combines precinct-level electoral results with slums services and infrastructure surveys, for two years: 2013 and 2015. This exercise is quite relevant for two important reasons: (1) slum population in Argentina has grown dramatically —specifically for Buenos Aires, 156% between 2001 and 2014; (2) one of the most distinctive features of this type of population is precisely the deprivation of the most basic public services (e.g. sewage, clean water, formal access to electricity, natural gas, etc.). As in many slums across the globe, the exceedingly deficitary infrastructure conditions explain the salience of LPG in slum dwellers' quality of life and the huge consequences in their everyday routines. Still, access to basic services varies across slums, even in the same region, for instance within the Metropolitan area of Buenos Aires.

Considering that politicians are resource-constrained and the apportionment of public funding for slums tend to follow an electorally strategic pattern, one may want to explore voting behavior right at the same level that LPG are allocated. Interestingly, studies on this topic, in Argentina, refer mostly to the clientelistic dynamics between broker, politician and voter, at the individual level. Hence, the great contribution of this paper is to analyze retrospective motives in vote choice, at the slum-level. Through a process of matching slum-level electoral results to infrastructure data, one may draw conclusions about the way in which slum dwellers react to public investment (or the lack thereof) precisely on the topic they value the most: LPG.

Before jumping to the empirics, there are several factors about Argentinean politics that are worth discussing. The first issue that could mitigate voters' ability

to punish public officials, is partisan attachments. Argentinean voting behavior has shown a class pattern combined with partisan loyalties (Canton and Jorrat 2001); jointly with elements of retrospective voting (Canton and Jorrat 1997). As recognized by Lupu and Stokes (2009) the Peronist party –officially called the Partido Justicialista (PJ)– has attachments to the rural poor and the urban working classes, including corporatist and patronage ties to the labor movement. Whereas Peronism has a solid working class support, Antiperonism appeals to the middle class. This translates into the bipartisan trend that have traditionally characterized Argentinean political party system (Mustapic 2013)[7]. Yet, more recently, both the party system and voting behavior have progressively been diminishing the nationalization feature –what in Spanish is called "territorializacion" (Jones and Mainwaring 2003; Calvo and Escolar 2005; Leiras 2006). Coincidental with 2001 representational crisis, the Effective Number of Parties increased dramatically, as well as the number or parties with representation in less than four districts (Mustapic 2013). Several intra-PJ splits noticeably contributed to this fragmentation. One of the resulting factions was Kirchner's Victory Front ("Frente para la Victoria", hereafter FPV), which governed the country from 2003 to 2015. On parallel, the UCR experienced a major breakdown (Torre 2003; Lupu 2014). Although initially this party could not reverse the defeat, in 2015 it formed a coalition of parties that won the presidency: the alliance Cambiemos[8]. Interestingly, the data in this paper shows that, at least for the specific population of poor informal settlements in Buenos Aires, the vote share for Cambiemos and FPV correlate at the -0.9 level. This striking polarization was

[7] According to Mustapic (2013), UCR and PJ together represented the 91,9% and 79,9% of the vote in the 1983 and 1989 elections, respectively.

[8] The candidate for Cambiemos was Mauricio Macri (former Mayor of the City of Buenos Aires). Macri won the presidency against the FPV candidate, Daniel Scioli (former Governor of the Province of Buenos Aires). Cambiemos is formed by a few parties, among those UCR is arguably the largest one. But the presidential formula was purely formed by PRO candidates, and did not have anybody from the UCR.

anticipated by De Luca and Malamud (2010) who described recent centripetal forces agglutinating the opposition parties. Along these lines, I argue that citizens follow partisan cues when they punish or reward incumbent Governors, in particular in cases of concurrent elections.

Another element that could interfere with retrospective voting –if not perhaps the most relevant one– is the special link between the Peronist party and clientelism or patronage. Access to public resources, jobs, contracts with the government and other forms of non-programmatic strategies tend to feed patron-client dynamics from the State (Robinson and Verdier 2013)[9]. As recognized by the literature[10], the PJ enjoys higher returns than the UCR in delivering private goods, and especially when distributing public jobs. This comparative advantage is often explained by the fact that the Peronist-governed provinces tend to be among the poorest, hence expanding public employment is the principal strategy to lower unemployment rates (Remmer 2007; Gervasoni 2010; Oliveros 2013; Ardanaz, Leiras and Tommasi 2014). That being the case, it is not surprising that in Argentina patronage and incumbency bias –favoring the PJ– are often considered part of the same phenomenon. The implication is that, if clientelism dominates the electoral strategy, then there will be poor or non-existent provision of public goods (Stokes 2005; Lizzeri and Persico 2001). The empirics for this paper confirm the idea that the Peronist vote is negatively associated with LPG[11]. Given that slum-dwellers are often portrayed as the clear

[9] Along these lines, Mares (2017) presents an interesting connection between partisanship, patronage and multi-tier governments. Co-partisanship between Mayors and Governors –she argues– provides benefits to local politicians to better exploit state resources towards their chosen electoral strategy.

[10] The literature on clientelism in Argentina is quite extensive. To learn more on the role of the PJ in this strategy see Brusco et al (2004), Calvo and Murillo (2004), Stokes (2005) or Remmer (2007).

[11] Please see appendix for findings along the partisan front. The other side of the story is the inability of Cambiemos to set up patronage networks, especially because of the novelty in politics of one of its parties. While the UCR exists since the end of the XIX century, Macri's party (PRO) first competed electorally in 2003. Given that clientelism could not be their main electoral strategy,

target of clientelism, which is associated to Peronist factions, we should expect then to see the FPV winning in every slum in the sample, which is not what we find in this dataset. Besides, if this were the case, we should expect no variation across slums in terms of LPG. But as I will show later in the Results section, variation does exist, and is precisely one of the main explanatory factors –as I present– for punishing the incumbent party.

Finally, we need to consider the possibility of misattribution problems, especially in the light of a complex multi-level government structure. Theorizing along these lines, Gelineau and Remmer (2006) and Rodden and Wibbels (2011) argue that Argentinean voters systematically confuse responsibilities between subnational and national economic performance, raising questions on the so presumed benefits of accountability in decentralized countries. The state of the national economy is conceived as a crucial component to influence voting results at the subnational level. Alternatively, Jones, Meloni and Tommasi (2009) show that voters in Argentina, unlike the United States case, do reward state expending. Regarding coat-tails effects in Argentina, Jones (1997) finds the effect is reversed ("from below"); elections for Provincial Governors have a strong influence in reducing the number of effective parties in the Congress. This phenomenon was defined by Samuels (2000) as "gubernatorial coattails effect"[12]. According to Leiras (2006) demonstrates that in Argentina gubernatorial coattails effects double the strength of the presidential effect for national legislative elections. I build upon this literature to argue that the electoral results for the National Congress (2013 and 2015) represent voters' perceptions on Provincial Governors' past performance.

PRO (City's incumbent party) was forced to appeal to different electoral tactics like club goods, as their signature to attract slums' votes. A similar strategy was chosen by the Brazilian PT (Partido dos Trabalhadores) for Lula's first presidency who chose to invest more on the CCT Bolsa Familia Program, bringing a dramatic shift in his suffrage base in 2006 (Zucco Jr. 2008).

[12] Samuels (2000) shows how candidates in Brazil organize their campaigns with a focus in state-based issues imposing a local dynamic to the national election.

After 12 years of the same political force (FPV) holding the National Presidency[13], the electoral scenario in 2015 was clearly polarized between the governing party and the non-peronist alternative. This polarization materialized in the 2015 Presidential Election. The two main candidates were, the from the FPV, Daniel Scioli –PBA Governor– and Mauricio Macri –CABA Governor– from the non-peronist alliance Cambiemos. The political discussion during the campaign oftentimes centered around their performance over the past 8 years as heads of the country's two main electoral districts[14]. The presidential election was perceived as a referendum on these candidates' performance in their districts. For this reason, it is hard to disentangle local issues from the national ones in the voters' minds. Especially since national news tend to focus on the political events in the City and Province of Buenos Aires, all year around. It is true that the election was about continuity against change[15], but it was also about which of the two (Macri or Scioli) was better at governing their districts. Thus, the 2015 electoral process shows a strong coat-tail effect among most of the categories, for which people voted along partisan lines, expressing approval or disapproval of their governor's performance. Building upon Samuels (2000), this paper sustains that voters punish or reward Governors' political parties, especially when multilevel governments make difficult for them to identify responsibility.

[13] Nestor Kirchner was president between 2003 and 2007 and his wife, Cristina Fernandez de Kirchner was president between 2007 and 2015.

[14] The following topics were discussed during the Presidential Debate on November 15, 2015: drug cartels and escalating crime in the Province of Buenos Aires; infant mortality in the City of Buenos Aires; number of children in public schools in the City of Buenos Aires; and public investment in Police and Safety both for the City and the Province of Buenos Aires. For more details on the debate, please see : `http://www.lanacion.com.ar/1845904-transcripcion-completa-del-debate-presidencial-entre-macri-y-scioli` or `http://www.unidiversidad.com.ar/ocho-chequeados-del-debate-entre-scioli-y-macri`

[15] Change was a very important word in the language of the 2015 political campaign. In fact the name of Macri's alliance (winning party at the National level and several subnational offices) was "Cambiemos", translated from Spanish to "Let's Change".

4.4 Measurement and Estimation

In this section I present the original dataset I use to test my hypothesis. The slum is the unit of analysis; regionally circumscribed Buenos Aires, namely the two most relevant electoral districts in the country: CABA and PBA. Through a process of geographic approximation, I match precinct-level electoral results with each neighborhood in the TECHO survey for the period 2013-2015. The process of assigning polling stations to each slum was carried out using geographical polygons. If more than one school is matched to a neighborhood, the votes for each party are computed together to calculate proportions. Fortunately, the NGO TECHO conducted slum surveys for two different years (2013 and 2015), in simultaneous to Argentinean National and Local elections. The two-wave slum survey, (bearing on community characteristics, public services and infrastructure) was matched to electoral data for 349 slums in Buenos Aires.

4.4.1 Dependent Variable - Incumbent Vote Change

The main dependent variable is party incumbent vote change, which is the difference between the proportion of votes for the incumbent in 2015 minus the proportion in 2013, at the slum level. If the variables takes value zero it means for that particular slum, the incumbent party received the same proportion of votes in the two elections. If it takes a positive number it means that the incumbent party improved the electoral performance two years later. If vote change is negative it means that neighborhood punished the incumbent party on election day. The incumbent party in CABA was Cambiemos (Macri) and in PBA was FPV (Scioli). As previously explained these politicians were the presidential candidates in 2015, and they both had been Governors in their respective district for an 8-year period, since 2007. The vote share is estimated individually for each slum using the National Congress category.

To better understand the 2015 electoral results, it is useful to describe a few political circumstances regarding the midterms of 2013. Given that the president at the time could not be reelected again, this electoral process was seen as the prelude for 2015 presidential election. In this context, the governing Peronist party suffered an internal split. Sergio Massa –the former chief of staff of the national government– decided to compete against the FPV as an alternative Peronist option in the province of Buenos Aires. Formerly part of the FPV, Massa formed a different PJ faction called Frente Renovador. This situation resulted in the electoral defeat of the national government, in the province of Buenos Aires: 44% Massa's FR vs. 32% incumbent FPV. Simultaneously, Mauricio Macri's party –who was then seen as the non-peronist option for the 2015 presidential election– won in his district: the City of Buenos Aires. In general terms, slum dwellers in Argentina are strongly identified with the peronism, as described in the previous section in this chapter. Given the particularities of 2013, FPV vote was lower than usual –circumscribed to slums. Ergo, when compared to 2013, the FPV vote share increases in 2015, due to the special poor performance in the former year.

There are two important reasons for which I decided to analyze the national legislative election. First, building upon the literature on reverse coat-tail effects in Argentina (e.g. Samuels 2000) I argue that comparing national congressional elections allows me to evaluate how voters perceive governors' performance. In this particular election, I am able to exploit the particularity that the former Governors were the presidential candidates, reinforcing the idea that citizens were voting in favor or against the Governor's party. Second, as the 2013 election was only a midterm, I decided to be consistent comparing partisan vote shares for the same electoral category. In 2015 voters in Buenos Aires had to choose President, Governor, Mayor and legislators for the three levels: Councilmen, Provincial legislators and National Congressmen and Senators. During fieldwork interviews in the previous

months before the election, slum dwellers mentioned LPG in their neighborhoods as the primary motive for their voting choice for all the different electoral categories. This fact should be taken into consideration jointly with the special circumstances surrounding the 2015 electoral process.

4.4.2 Covariate: Social Capital

All independent variables and controls come from the slum surveys conducted by TECHO in 2013 and 2015. TECHO is a renown NGO, and the Argentinean subsidiary has been conducting nationwide assessment of slums or poor informal neighborhoods. Their criteria to select whether a neighborhood falls under the slum category is the following: the majority of their population lacks land or property titles, and has no access to at least two of the basic services: electricity, water or sewage. Each unit of analysis in the dataset corresponds to one neighborhood, and the information is provided by one, or often two, local leader(s), identified by the community as their legitimate representative (e.g. President of the Neighborhood Association). The way the interviewers identify the local leader(s) is that when they arrive to the slum, they ask random slum dwellers for a community representative, or a person that they would identify as someone that usually helps the community. However, most of the interviewers and team coordinators hail from around the area. In order to identify respondents, preference was given to information coming from TECHO's volunteers who have already established contacts in the field.

Regarding the survey respondents, the type of local leaders that are targeted are often denominated in Argentina as *referente*. For example, in recent floods in Argentina, in most communities there were one or two houses that spontaneously turned into gathering points for people to ask for help, get basic needs, or for the government to deliver medicine and water for the neighborhood. Usually, the owner of this house is someone that the community identifies as their leader, and call

referente. When interviewers ask around for this type of community leader, in most cases neighbors point to the same person. If for some reason, there are more than one identified, then they interview both, in order to get different perspectives[16].

One of the main variables in my theory is social capital. In order to measure it at the slum level, I use a dummy variable called Internal Organization. An internal organization has to be *in situ*, and could be any of the following: neighborhood association, soup kitchen[17], recreational or cultural center, community organization, or cooperative.

One example of social capital in the form of an internal organization has to do with workers self-administration or cooperatives in Villa Caraza (Lanus locality, Buenos Aires Province). As reported by the "Observatorio de la Deuda Social Argentina" (Balzano and Hourquebie. 2015), there were different labor movements in Lanus that help organize *cartoneros* (waste pickers). In Argentina, this type of job has been fairly common during recent years, peaking on 2001 socioeconomic crisis. In Villa Caraza, a great proportion of the population works as *cartoneros* and some were able to organize themselves into cooperatives, such as the "*Amanecer de los Cartoneros*". By forming a cooperative, not only they improved their work conditions but also, their quality of life in general. According to one of the interviewed by the "Observatorio de la Deuda Social Argentina" in 2015, the cooperative workers are...

> "those who go to the City, take the buses, in the blue uniform clothes, those who earn a monthly salary. If you get yourself into the MTE [Excluded Workers Movement], you have to comply with certain require-

[16] In order to get early access to the dataset, I volunteered with TECHO to collaborate with survey implementation in the field. Since I was present in some of these interviews I was able to witness the procedure of some survey interviews, asking some of the questions myself.

[17] In Argentina, a very a common activity in a poor neighborhood is to open a "comedor" or "copa de leche", usually run by some members of the community who are able to buy food and serve a meal to neighboring children. In most cases, it is an inexpensive meal in the afternoon like a cup of tea with milk, bread and sugar.

> ments, it is not like you can stay at home sleeping. Apart from receiving a salary, you get your own health insurance and a center where parents can leave their children until they get back from work." (p.25 - Author's translation)

It is clear from this narration that being part of the cooperative generates rights and duties, bringing social capital as a byproduct. The community is strengthened, beyond the labor activity. For example by organizing a child care system inside the slum, neighbors increase their trust and solidarity levels. In other words, this type of internal organization fosters self-organization in the community that translates into different levels of the social life.

4.4.3 Covariate: Services and Infrastructure

The survey instrument is a semi-structured questionnaire designed to capture most common characteristics across slums. Most of the questions refer to infrastructure and geographical characteristics of the settlement and are generally pretty technical. For instance there are two inquiries to measure access to water: (1) how drinkable the water is (water grid supplied by the State; irregular connection; water well; tanker truck) and (2) where exactly is located (faucet inside the house; inside the property but outside the house; communal faucet). For some part of the questionnaire, interviewers ask about the conditions for the majority of the houses in the slum, and also what is the situation for the first minority.

To capture the variation in terms of quality of services, I first estimate an LPG Index. This variable is a combination of the following public services and infrastructure: sewage, access to water (what type and where in the vicinity), electricity, natural gas, garbage collection, street lights and pavement. Through Principal Components analysis (PCA), I build this index to measure quality of public services. Often in survey instruments, several questions are asked to gather the same infor-

mation. Hence researchers are advised to either test these questions separately to measure a specific variable, or to combine them into an index. Likewise, multi-item measures allow us to use different correlated sub-dimensions of the variable of interest (Ansolabehere, Rodden and Snyder 2008). The advantage of building an index through PCA is that this statistical technique identifies where the greatest variance among the components lies, weighing each of them accordingly. The eigenvalues matrix describes a series of uncorrelated linear combinations of the subcomponents. There are more components resulting from PCA, but the first one shows the highest eigenvalue and the resulting composition of sub-dimensions is appropriate.

Then to measure changes in services, I take into account the starting point of these neighbors. The LPG Index Difference is the LPG Index value in 2015 minus the one in 2013. This takes value zero if the neighbors have not changed, a positive value if they have improved or a negative value if it has deteriorated. The mean of the LPG Index Difference is 0.25, the standard deviation is 1.4, the minimum is -5.6 and the maximum is 4.6. Table 4.1 exemplifies how the general difference in LPG relates to the variation for each individual service[18]:

Table 4.1: Correlation between general LPG difference and components' differences

	LPG Index Difference
Sewage Difference	0.4
Electricity Difference	0.3
Water Difference	0.2
Water Provision Difference	0.4
Natural Gas Difference	0.4
Street Lights Difference	0.6
Pavement Difference	0.5
Garbage Collection Difference	0.4

[18] The LPG Index is an Index of Individual Indices (e.g. Sewage Index). Therefore, when comparing two time points, one may subtract individual indices for each service. For example, the Sewage Difference equals to Sewage Index in 2015 minus Sewage Index in 2013.

4.5 Results

In this section I present the results for the simple OLS models where the dependent variable is Incumbent Vote Change (2015-2013). The two main independent variables are (i) existence of internal organizations (as proxy for social capital) and (ii) LPG Index Difference (slum services and infrastructure variation between 2013 and 2015). To grasp the role of social capital, I interact the variable Internal Organization with LPG Index Difference. In coherence with the theory, the results for the first models (Table 4.2), support my claim that social capital is a necessary condition for retrospective voting. Slums experiencing setbacks in their local conditions collectively punish the incumbent if and only if the community is entitled with social capital. This is also illustrated in Figure 4.1: when communities suffer a decline of about 4 points in their LPG Index, the incumbent vote share is predicted to drop 3% on average, if they are empowered with social capital (red line). Alternatively, a setback of about 4 points, for instance, in the LPG Index, represents an increase of 4% approximately in the incumbent vote share, in the absence of social capital (blue line). Interestingly, voters in a neighborhood without social capital boost their electoral support for the incumbent political party, despite experiencing a deterioration in their quality of lives. The sole difference between communities with the ability to sanction or not, is the presence or absence of internal organization, which brings social capital into the equation. The community showing poor accountability in this case is usually associated to clientelism, where locked-in voters reward incumbents even after not seeing any investment in public goods.

For robustness checks, I follow different strategies. First, I test the same model including and excluding the incumbent vote share in 2013. Table 4.2 combines these alternatives, showing how the coefficient for the lagged term is statistically significant and, as expected, negative to vote change. Including the incumbent vote share for

2013 does not produce any variation in the interaction effect term. Second, Table 4.3 presents the same models but for a different dependent variable, now I use incumbent vote share in 2015 instead of incumbent vote change for the two-year period. With this alternative measure, results still hold. Failure to find a significant effect in model 2 in Table 4.3 is explained by the omission of the lag term for incumbent vote in 2013. Under the presence of social capital, the incumbent party gets a lower vote share if conditions in services and infrastructure worsened. Finally, I run these same models with two different dependent variables. First, I use a dependent variable –punish incumbent– which takes a value of 1 if they voted for the incumbent in 2013 and switched to the challenger in 2015. Second, I use another dependent variable –reward incumbent– which takes a value of 1 if they voted for the challenger in 2013 and switched to the incumbent in 2015. Both models confirm my expectations, communities with social capital are able to punish or reward politicians with respect to variations in LPG between 2013 and 2015. Figures illustrating these results are presented in the appendix.

To exemplify this dynamic, and bring real cases into the statistics, I chose four concrete slums to describe in detail. First, I present the case of the neighborhood "El Sanjon" in Ensenada, (Punta Lara, PBA). This slum has raised 4 points in the LPG Index in this two-year period, and the improvement had to do with four areas. First, in terms of water provision, the majority of the households in 2013 had access to water through the communal faucet, but in 2015 the majority had a faucet inside the house. Second, the slum did not have any pavement and two years later the principal roads were paved. Third, there was no garbage collection in 2013 but now the neighborhood has formal service. Last, "El Sanjon" had no streets lights at all and two years later the slum reported state-provided lights, although not for the whole neighborhood but for some blocks. "El Sanjon" is an example for those that rewarded the incumbent due to improvements in LPG. In 2015, their vote to the

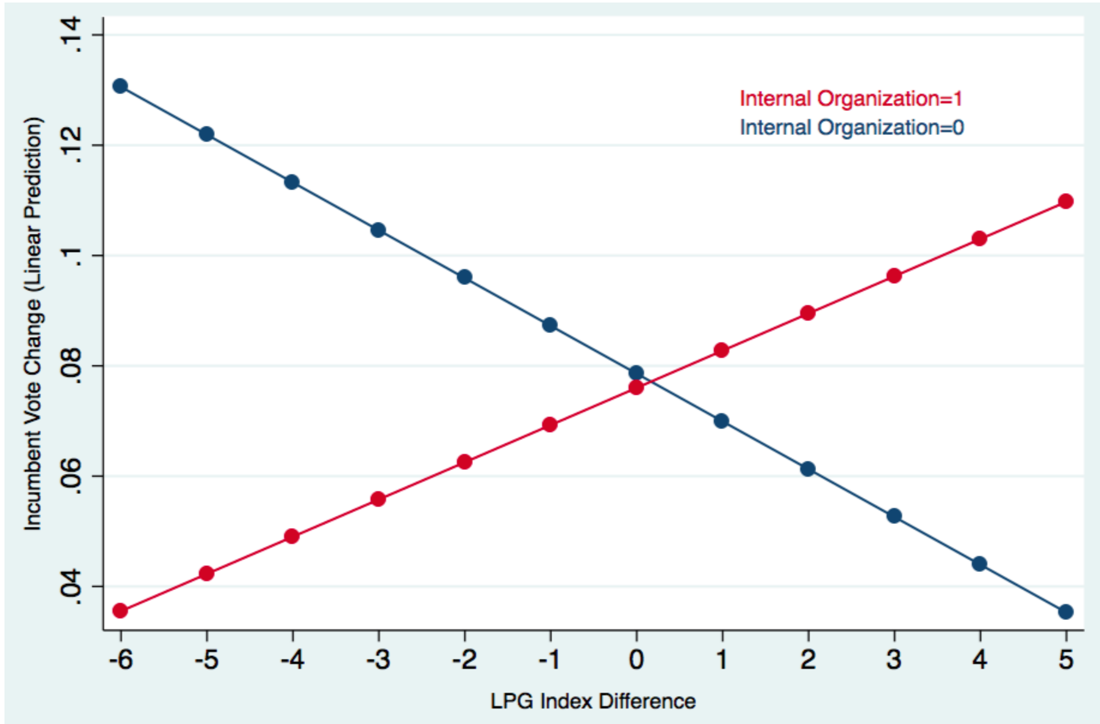


Figure 4.1: Predictive Margins Incumbent Vote Change

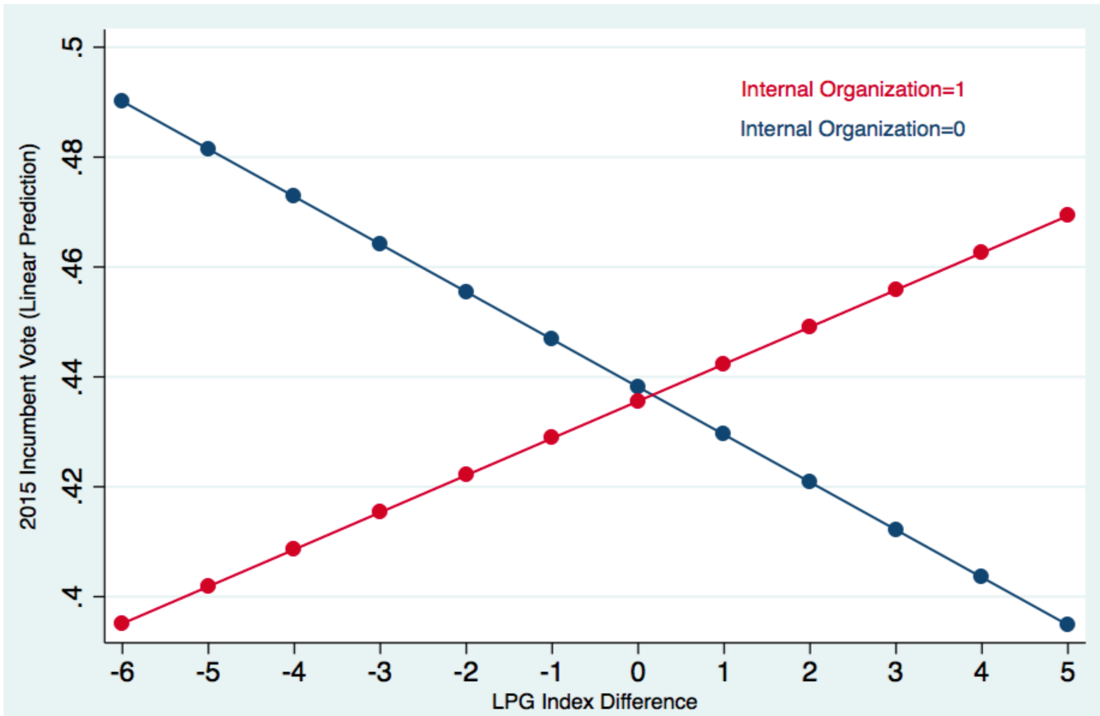


Figure 4.2: Predictive Margins 2015 Incumbent Vote

Table 4.2: Regression table

	Dependent variable: Incumbent Vote Change	
	(1)	(2)
LPG Index Difference	-0.00866	-0.0106+
	(-1.55)	(-1.81)
Internal Organization	-0.00258	0.00256
	(-0.23)	(0.21)
Internal Org. × LPG Difference (interaction)	0.0154*	0.0193*
	(2.05)	(2.44)
2013 Incumbent Vote	-0.246*	
	(-4.63)	
Land Title	0.0276*	0.0258+
	(2.06)	(1.82)
Number of Families	-0.00294	-0.00701+
	(-0.73)	(-1.68)
Geo. Hazard	0.00528	0.00728
	(0.43)	(0.56)
Organized Occupation	0.00195	0.00281
	(0.13)	(0.18)
Frequent Floods	0.00679	0.00943
	(0.56)	(0.73)
Settlement Year	0.000116	-0.000337
	(0.45)	(-1.33)
Constant	-0.0575	0.769
	(-0.11)	(1.52)
Observations	186	186

t statistics in parentheses $+\ p < 0.10$, $*\ p < 0.05$

Table 4.3: Regression table

	Dependent variable: 2015 Incumbent Vote	
	(1)	(2)
LPG Index Difference	-0.00866	-0.00622
	(-1.55)	(-0.98)
Internal Organization	-0.00258	-0.0125
	(-0.23)	(-0.95)
Internal Org. × LPG Difference (interaction)	0.0154*	0.00462
	(2.05)	(0.54)
2013 Incumbent Vote	0.754*	
	(14.21)	
Land Title	0.0276*	0.0313+
	(2.06)	(1.90)
Number of Families	-0.00294	0.0109*
	(-0.73)	(2.37)
Geo. Hazard	0.00528	0.00321
	(0.43)	(0.22)
Organized Occupation	0.00195	0.00364
	(0.13)	(0.22)
Frequent Floods	0.00679	-0.000831
	(0.56)	(-0.06)
Settlement Year	0.000116	0.00169*
	(0.45)	(6.04)
Constant	-0.0575	-2.959*
	(-0.11)	(-5.31)
Observations	186	309

t statistics in parentheses + $p < 0.10$, * $p < 0.05$

FPV was about 60%, while in 2013 was 38%. In concordance with my theory, this reward was feasible because the slum had an internal organization promoting social capital among neighbors.

Second, I chose the case of “El Manzanar” in Pilar (PBA) to illustrate a similar situation. This slum improved its conditions and raised 1.1 point in the LPG Index (from 2013 to 2015) due mainly to a change in the garbage recollection, going from an informal to a formal one. Then about waste disposal, the majority of households used to have an open sewage and now they have a septic tank. Finally, about access to water, now the majority has a faucet inside the house, but it used to be outside. Note that each service does not weight the same in the index so, these improvements altogether represent one-point difference because of the particular variance and leverage of each of them in the LPG Index. The majority of the voters in this slum did not vote for the incumbent in 2013, but did so in 2015: the FPV vote share went from 22% to 52% approximately. During my fieldwork in this slum I noted several institutions working among neighbors in situ, such as soup kitchens, cultural workshops, NGO and social clubs.

Now, some slums did not experience improvements in terms of LPG, but in fact reported a deterioration. For example, “El Alto” in Merlo (PBA) declined 2.5 points in the Index. This occurred mainly because waste disposal went from a septic tank to open sewage for the majority of the houses[19]. Also in terms of the electricity for each family, it used to have formal service with a meter in the house, and now the majority reports informal connection (no meter). Last but not least, street lights were not maintained by the government. In 2013, they had reported state-provided lights in some blocks and two years later, they said there were no street lights at

[19] This situation is fairly common in neighborhoods that experience a rapid increase in population. Since newer houses –often more precarious– are now counted as part of the slum, the average conditions shift. Now when we ask about the infrastructure situation for the majority of families, we include the new impoverished households.

all. This situation is not surprising. During fieldwork interviews neighbors recounted how they had to repeatedly ask politicians to replace the light bulbs in the streets because burglars and drug traffickers would break them almost every night. Under extremely unsafe conditions that are normally experienced in these neighborhoods at night, the absence of artificial light becomes a critical public service. This slum does not have any internal organization and did not punish the incumbent party; but actually FPV vote share increased from 47% to 57%.

Four and last, another example of a neighborhood experiencing a clear set back in public services is "La prosperidad" in Berazategui. This is the one slum that experience the worst deterioration in all my sample: a decline of 5.6 in the LPG Index in the two-year period. This variation is explained by the change in garbage collection, going from formal for every family to none at all. Sometimes this occurs because the private company that provides this services refuses to enter into an unsafe area. In this negotiation, the state mediates between the firm, the unions and the neighborhood association. About waste disposal, there was also a setback, the majority of the families used to have septic tank and now it is mostly open sewage. Also, in 2013, the water provision for the majority was inside each house, while in 2015 was an outside faucet. The slum used to have street lights provided by the government in every block. And two years later, they reported lights only in the principal road and no longer provided by the government (maintained by neighbors themselves). Finally, the majority of the houses used to have connection to the natural gas grid but now they cook and heat with a gas cylinder. The decay in this locality has to do with an enlargement of the population and the conditions of the new settlements bring a decline in the average conditions. In terms of social capital, this neighborhood count with internal organizations, namely "mutuales o cooperativas". The reversal translates into a clear electoral punishment for the incumbent party. The FPV vote share went down from 44% in 2013 to 38% in 2015.

4.6 Concluding Remarks

Shortcomings in the existing research on slums politics and electoral accountability, motivate me to study voting patterns in a collective form. Namely, this paper analyzes the electoral response –at the slum-level– to LPG improvements (or the lack of thereof), contingent on the existence of social capital. Social capital represents ties binding neighbors and enabling cooperation (Cohen and Prusak 2001). Interconnections in the social fabric influence more than just informational flows, but constantly shape political choices. The analysis of slum dwellers voting behavior as a collective unit is particularly relevant because the urban poor tend to be clustered together in neighborhoods and to them, non-excludable goods (i.e. LPG) are central for the quality of life. When communities are socially organized, their recurrent interactions increase the likelihood that they will vote for the same political candidate. More specifically for this study, slum dwellers who are empowered with social capital, coordinate their electoral response to punish unresponsive parties for the lack of investment in their neighborhood.

The two-wave slum survey conducted by TECHO provides information on infrastructure, services and social organizations, so that is possible to assess changes in a two-year lapse. Conveniently, the surveys coincide with two electoral cycles: the midterms of 2013 and the presidential elections of 2015. Through geographic approximation, precinct-level electoral results were matched for each neighborhood individually for 349 slums in Buenos Aires. This dataset allowed me to test how much the incumbent's vote share increased or decreased as a function of changes in local conditions. Embedded in a political system of multi-tiered governments, the allocation of resources for slum-upgrading programs in Argentina suggests an exceedingly complex picture. For this reason, we should consider problems regarding clarity of responsibility. Fortunately, I am able to exploit the special circumstances surround-

ing the 2015 electoral process[20], assuming that voters choose along partisan lines and perceive the election as a referendum of the Governors' past performance. Namely, for all different electoral categories, each voter punishes or rewards his incumbent Governor's party –FPV in PBA and Cambiemos in CABA.

Having argued in previous chapters, that politicians' good behavior is induced by the potential risk of bloc-voting, this paper provides evidence that the implicit threat is actually credible. Moreover, empirics indicate under which conditions –i.e. social capital– communities are sufficiently empowered, so that they can punish (reward) governments' poor (superior) performance. Again, the other side of the story here is clientelism. Those slums with stronger links among community members are able to escape the vicious cycle by effectively demanding LPG to local politicians. One of the forms they can induce responsiveness is through electoral sanctioning. In this line, the evidence from Buenos Aires describes how slums suffering a deterioration in LPG –from 2013 to 2015– collectively punish the incumbent, if and only if the community enjoys the benefits of having an internal organization. Alternatively, in the absence of social capital, slums that experienced setbacks in their local conditions, show as much electoral support –or even higher– for the incumbent party as they had two years ago. This scenario of poor accountability is typically associated to political clientelism (distribution of private goods). Despite seeing decay in their quality of lives, on election day locked-in voters reward incumbents in response to the distribution of private goods. Communities that are socially organized, on the other hand, have the means to coordinate their vote regarding LPG. This has implications for the study of party switching.

The most important finding in this paper is that electoral accountability is a real alternative for the urban poor. Oftentimes, governments overlook certain neighbor-

[20] As previously described, the two most important presidential candidates in 2015 were the Governors of PBA and CABA, respectively. Hence, the campaign circled around their job as Governors of the two most relevant electoral districts in the country.

hoods' basic needs, and its residents fail to effectively call the attention from politicians, not even during political campaigns. Trapped under the logic of clientelism, slum dwellers are often locked-in voters. Now, the successful cases –those empowered with social capital– are actually able to sanction public officials' performance. These communities enjoy the advantage of making their needs visible. There, the lack of public investment is duly noted. Even in a context of absolute informality, land irregularities and complete deprivation of basic necessities, governments can be forced to deliver more than private goods. Politicians will know then that if they do not show any effort to improve slum dwellers' quality of life, they will lose elections. Yes, not every poor informal settlement is able to punish unresponsive governments, but some are. Patronage or other forms of clientelism tend to obstruct accountability. However, the good news is that, with the existence of social capital, we can expect governments to know their performance will be evaluated, and electoral sanctioning is not just a threat.

4.6.1 Policy Implications

The foremost contribution in this article is the importance of building strong communities, especially for low-income individuals. As recognized by existing research (e.g. Krishna 2001) social capital is a fundamental tool to improve poor populations' living standards. Now, the findings in this paper contribute to expand the expertise in the topic. Drawing from electoral results, we learn that politicians should in fact fear social capital if they desire to ignore slum dwellers' demands. Interestingly, if consolidating community ties implies a good strategy for voters, it does not necessarily mean the best path for public officials.

As recognized by the Principal-Agent theory, voters are principals without full information on policy implementation. Particularly for the case of the urban poor, informational asymmetries are broadened. This situation highlights the need of poor

voters to do everything in their power in order to provide a structure of incentives to their agents so that they will increase responsiveness. Poor voters elect representatives that they should hold accountable based on actions and plans that they cannot themselves observe. But this is not always true, especially for the case of Local Public Goods (highly observable in comparison to abstract policies). Moreover, for communities empowered with social capital, Principal-Agent problems can be battled. This is how social capital represents the partial resolution to P-A issues. According to my theory and findings, poor voters should forget about changing politicians' incentives, and just concentrate their efforts in building social capital. As a byproduct of their internal organization, trustworthiness and solidarity, slum dwellers will provide the right incentives to public officials: the fear of electoral sanction through bloc-voting.

Ironically, governments will not have any incentive to foster community-led initiatives. If they are reading between lines correctly, the statistical models in this paper indicate that by promoting social capital within the urban poor, their electoral strategies will become costlier. This paradox represents an obstacle to accountability considering that many forms of communities' social organizations originate from government-funded programs. However, there is always the power of civil society and non-profits institutions to promote community-driven endeavors, such as cooperatives. Above all, the power to modify their circumstances resides precisely in their own hands. During fieldwork, I repeatedly witness social organizations in the form of "comedor o copa de leche", the classic soup kitchen organized in the house of some community member, who opens his doors to offer hot milk to neighboring children. Being a common feature within the slum's landscape, this particular institution –born within the community– has an immense power of strengthening the social fabric.

That being the case then, can social capital only emerge by inspiration and dedication of the community itself? This paper proposes that other non-governmental

actors such as NGO or Development Agencies take these findings as the grounds to increase grassroots activities. Considering that International Organizations (e.g. Inter-American Development Bank) often provide funding to slum-upgrading programs, one may suggest that they pose conditions to their government counterparts. For example, development initiatives may require that one third of the financial resources should be allotted to activities aiming to build stronger community ties. This way, they are not only helping governments build infrastructure in poor informal settlements, but they are also forcing them to build the fundamental bricks for accountability. Third-party entities fostering social capital is a simple form of compelling agents to empower principals precisely so that the former will ultimately have to respond to the latter's demands.

4.6.2 Future Research

Subsequent studies should address the following points. First, as a robustness check, I should complement the existing dataset with political surveys conducted in the same slums. Although the geographic approximation is fairly precise, it could be useful to corroborate slum-level electoral patterns with public opinion polls. Panel data –ideally in the field before and after the electoral process– circumscribed to each of the slums in TECHO dataset could validate this paper's findings and could potentially enlarge the sample. Second, complementing the dataset with variables on patronage or clientelistic practices could certainly improve the quality of my findings. There is an implicit assumption in this work that clientelism is the counterpart of LPG provision. Specifically, under the absence of social capital, the bad-type partisan homogeneity is linked to the distribution of private goods, in detriment to improvements in LPG. Future work should test this assumption directly by including questions on patronage or clientelism in slums surveys. Third, the scope of the paper could be significantly broadened by extending time and geographical reach.

So far, this project considers slums in Buenos Aires between 2013 and 2015. By including one more electoral cycle (e.g. 2011 presidential elections), findings would become more robust. In the same line, by expanding the jurisdictions to other provinces in Argentina or other countries, I could claim to offer a more generalizable theory. Fourth and last, social capital is mostly used to describe characteristics of connectivity and trustworthiness within social network's nodes, thus incorporating new data to conduct network analysis would represent a clear improvement in the research design. Considering the complexity of collecting network data on slums, this project could not address this issue in the short term. But while hoping to include it in the long term, network analysis will allow me to consider more precise measures of social capital such as network's density or level of connectedness.

4.7 Appendix

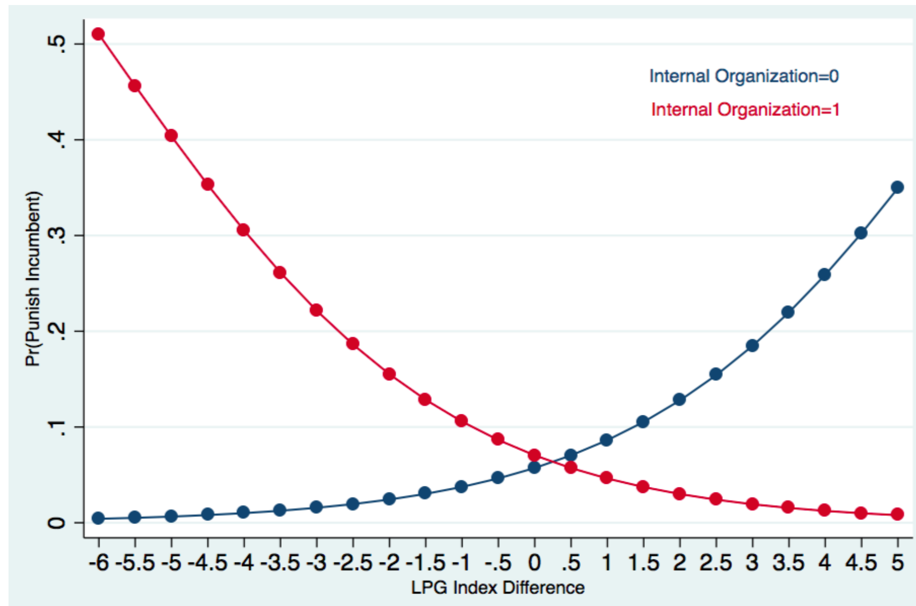


FIGURE 4.3: Predictive Probability of Punishing Incumbent

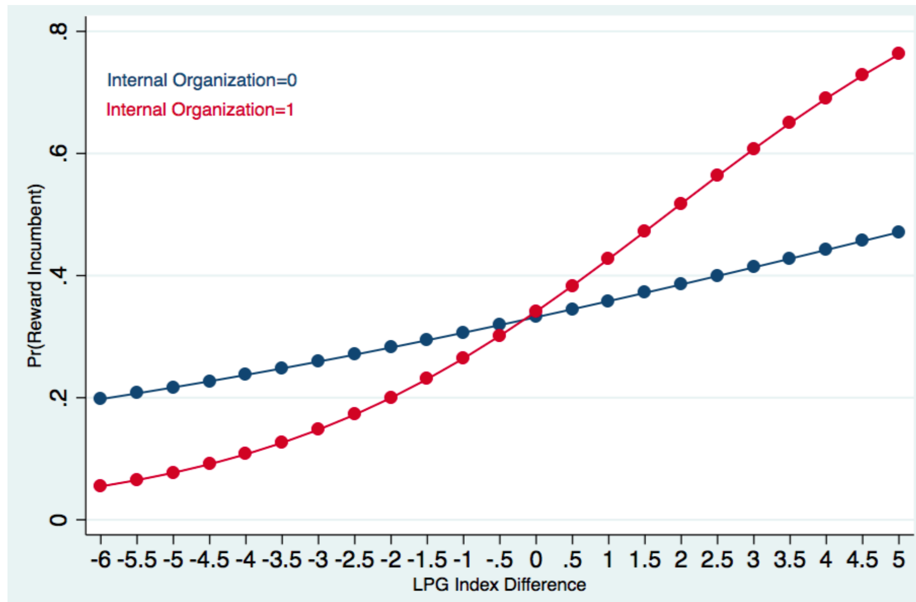


FIGURE 4.4: Predictive Probability of Rewarding Incumbent

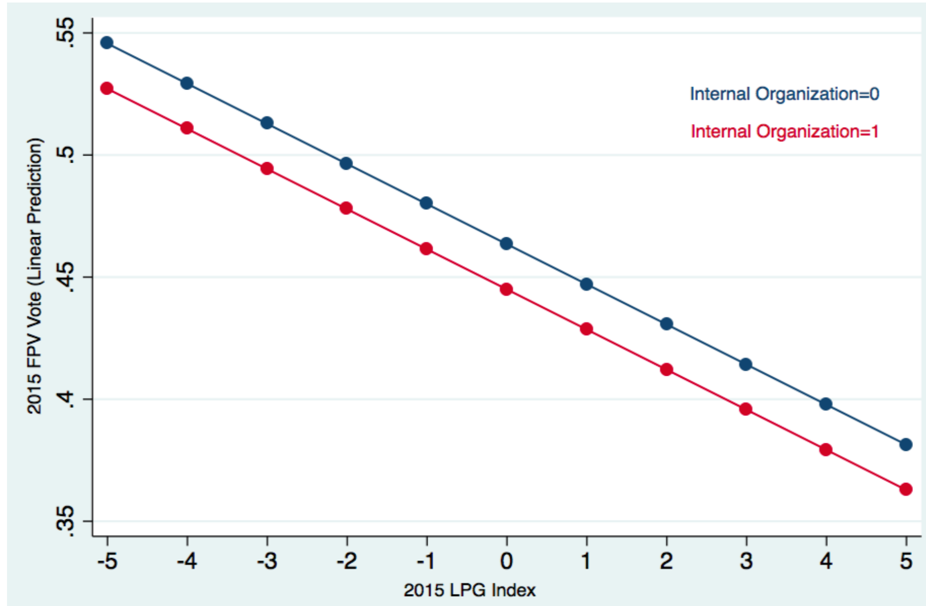


FIGURE 4.5: Predictive Margins for 2015 FPV Vote

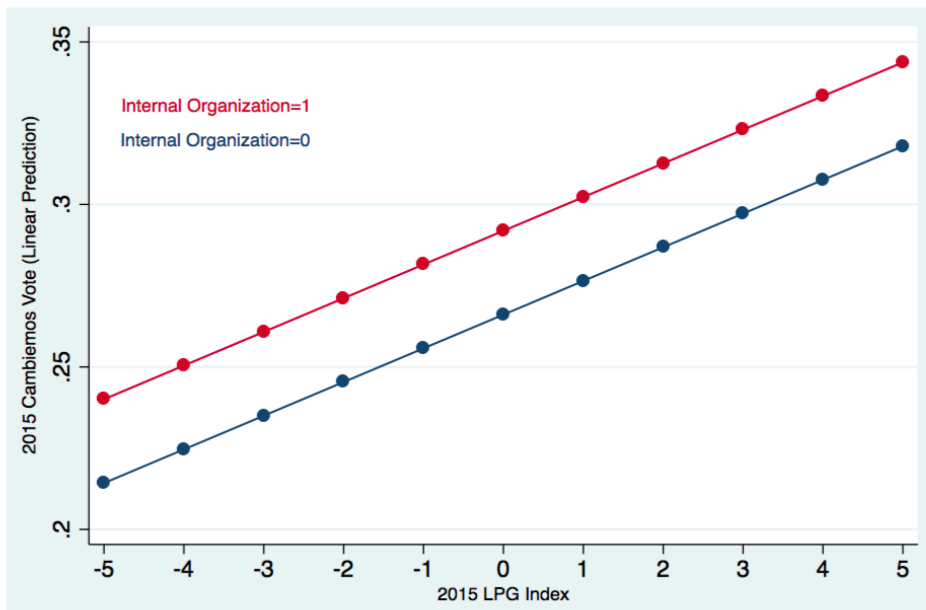


FIGURE 4.6: Predictive Margins for 2015 Cambiemos Vote

Bibliography

Abrams, Samuel, Torben Iversen and David Soskice. 2010. "Informal Social Networks and Rational Voting." *British Journal of Political Science* 41:229–257.

Amat, Francesc and Pablo Beramendi. 2016. "Economic and Political Inequality: The Role of Political Mobilization." *Unp* .

Anderson, Cameron. 2006. "Economic Voting and Multilevel Governance: A Comparative Individual-Level Analysis." *American Journal of Political Science 50: 44963.* .

Anderson, Christopher J. and Kathleen M. O'Connor. 2000. "System change, learning, and public opinion about the economy." *British Journal of Political Science 30 (1): 147-72.* .

Andreoni, James and Martin C McGuire. 1993. "Identifying the free riders: A simple algorithm for determining who will contribute to a public good." *Journal of Public Economics* 51(3):447–454.

Ansolabehere, Rodden and Snyder. 2008. "The Strength of Issues: Using Multiple Measures to Gauge Preference Stability, Ideological Constraint, and Issue Voting." *American Political Science Review 102(02):215-232* .

Ardanaz, M., M. Leiras and M. Tommasi. 2014. "The Politics of Federalism in Argentina and its Implications for Governance and Accountability." *World Development 53:2645.* .

Auerbach, M. 2013. Demanding Development: Democracy, Community Governance, and Public Goods Provision in India's Urban Slums PhD thesis University of Wisconsin-Madison.

Auyero, J. 2001. *La poltica de los pobres. Las practicas clientelistas del peronismo.* Prometeo.

Auyero, Javier. 1999. "From the client's point (s) of view: How poor people perceive and evaluate political clientelism." *Theory and Society* 28(2):297–334.

Baker, A., B. Ames and L. Renno. 2006. "Social context and campaign volatility in new democracies: networks and neighborhoods in Brazil's 2002 Elections." *American Journal of Political Science* 50(2):382–399.

Baldwin, Kate. 2013. "Why Vote with the Chief? Political Connections and Public Goods Provision in Zambia." *American Journal of Political Science, 57: 794809* .

Balzano and Hourquebie. 2015. Vivir en los bordes. LA VIDA EN OCHO BARRIOS, VILLAS O ASENTAMIENTOS DEL CONURBANO BONAERENSE. Technical report Observatorio de la Deuda Social Argentina.

Bikhchandani, S., D. Hirshleifer and I. Welch. 1992. "A Theory of Fads, Fashion, Custom, and Cultural Change as Informational Cascades." *Journal of Political Economy 100(5):992-1026* .

Bikhchandani, S., D. Hirshleifer I. Welch. 1998. "Learning from the Behavior of Others: Conformity, Fads, and Informational Cascades." *Journal of Economic Perspectives. 1998; 12(3):151-170.* .

Brooks, Clem and Jeff Manza. 2006. "Social policy responsiveness in developed democracies." *American Sociological Review, 71(3), 474-494.* .

Brusco, Valeria, Marcelo Nazareno and Susan Carol Stokes. 2004. "Vote buying in Argentina." *Latin American Research Review* 39(2):66–88.

Burstein. 1999. *How Social Movements Matter*. Minneapolis, MN: University of Minnesota Press. chapter Social Movements and Public Policy., pp. Pp. 3–21.

Burt, Ronald S. 2000. ""The network structure of social capital."." *Research in organizational behavior* 22:345–423.

Calvo, E. and M Escolar. 2005. *La Nueva Politica de Partidos en la Argentina: Crisis Politica, Realineamientos Partidarios y Reforma Electoral*. Buenos Aires: Prometeo.

Calvo, Ernesto and Maria Victoria Murillo. 2004. "Who delivers? Partisan clients in the Argentine electoral market." *American Journal of Political Science* 48(4):742–757.

Calvo, Ernesto and Maria Victoria Murillo. 2013. "When Parties Meet Voters Assessing Political Linkages Through Partisan Networks and Distributive Expectations in Argentina and Chile." *Comparative Political Studies* 46(7):851–882.

Campbell, A. et al. 1960. *The American Voter*. New York and London: John Wiley & Sons, Inc.

Canton, Dario and Jorge Raul Jorrat. 1997. *La investigacion social hoy.* Buenos Aires, CBC-Universidad de Buenos Aires.

Canton, Dario and Jorge Raul Jorrat. 2001. "Elecciones en la ciudad 1892-2001." *Instituto Historico de la Ciudad de Buenos Aires* .

Chandra, Kanchan. 2004. *Why ethnic parties succeed : patronage and ethnic headcounts in India.* Cambridge University Press.

Cialdini, Robert B. and Noah J. Goldstein. 2004. "SOCIAL INFLUENCE: Compliance and Conformity." *Annual Review of Psychology* 55:591–621.
URL: *http://search.proquest.com/docview/205845016?accountid=10598*

Cleary, Matthew R. 2007. "Electoral Competition, Participation, and Government Responsiveness in Mexico." *American Journal of Political Science* 51(2):283–299.
URL: *http://dx.doi.org/10.1111/j.1540-5907.2007.00251.x*

Cohen, D and L. Prusak. 2001. *In Good Company: How Social Capital Makes Organizations Work.* Harvard University Press.

Coleman, James S. 1988. ""Social capital in the creation of human capital."." *American journal of sociology* S95-S120.

Conover, Pamela Johnston, Stanley Feldman and Kathleen Knight. 1986. "Judging Inflation and Unemployment: The Origins of Retrospective Evaluations." *Journal of Politics 48: 565-588.* .

Cox, Gary W and Mathew D McCubbins. 1986. "Electoral politics as a redistributive game." *Journal of Politics* 48(2):370–389.

De Luca, M. and A. Malamud. 2010. "Argentina: turbulencia econmica, polarizacin social y realineamiento poltico." *Revista de ciencia poltica (Santiago) 30 (2), 173-189* .

Dixit, Avinash and John Londregan. 1996. "The determinants of success of special interests in redistributive politics." *Journal of Politics* 58:1132–1155.

Downs, A. 1957. *An Economic Theory of Democracy.* Harper.

Duch, Raymond M., Harvey D. Palmer and Christopher J. Anderson. 2000. "Heterogeneity in Perceptions of National Economic Conditions." *American Journal of Political Science 44:635-649.* .

Ebeid and Rodden. 2006. "Economic Geography and Economic Voting: Evi- dence from the U.S. States." *British Journal of Political Science 36: 52747.* .

Fearon, J. 1999. *Democracy, accountability, and representation.* Cambridge University Press chapter Electoral Accountability and the Control of Politicians: Selecting Good Types versus Sanctioning Poor Performance, p. chapter 2.

Fenno, Richard. 1978. *Home Style: House Members in Their Districts.* Boston, MA: Little, Brown.

Ferejohn, John. 1986. "Incumbent performance and electoral control." *Public Choice* 50:5–26.

Festinger, Leon, Jane Torrey and Ben Willerman. 1954. "Self-Evaluation as a Function of Attraction to the Group." *Human Relations* 7:161–174.

Filmer, D. and L. Pritchett. 2001. "Estimating wealth effects without expenditure data–or tears: an application to educational enrollments in States of India." *Demography* 38(1):115–132.

Fiorina, Morris P. 1973. "Electoral Margins, Constituency Influence, and Policy Moderation: A Critical Assessment." *American Politics Quarterly 1 (4): 47998.* .

Fiorina, Morris P. 1981. *Retrospective Voting in American National Elections.* New Haven, London: Yale University Press.

Flache, A. 1996. "The Double Edge of Networks." Dissertation at the ICS, Amsterdam: Thesis Publishers.

Flap, H.D. and N.D. De Graf. 1986. "Social Capital and attained occupational status." *The Netherlands' Journal of Sociology* 22:145–161.

Fowler, James H. 2006. "Altruism and Turnout." *The Journal of Politics* 68:674–683.
URL: *http://journals.cambridge.org.proxy.lib.duke.edu/article*$_S$0022381600008719

Fung, A. and E. O. Wright. 2001. "Deepening Democracy: Innovations in Empowered Participatory Governance." *POLITICS & SOCIETY, Vol. 29 No. 1, March 2001 5-41* .

Galiani, Sebastian and Ernesto. Schargrodsky. 2010. "Property rights for the poor: Effects of land titling." *Journal of Public Economics. Vol. 94(9). 700–729* .

Gelineau, Francois and Karen L. Remmer. 2006. "Political Decentralization and Electoral Accountability: The Argentine Experience, 19832001." *British Journal of Political Science* .

Gelman, Andrew and Jennifer Hill. 2007. *Data Analysis Using Regression and Multilevel/Hierarchical Models.* Analytical Methods for Social Research Cambridge, UK and NYC: Cambridge.

Gerber, Alan S, Donald P Green and Christopher W Larimer. 2008. "Social pressure and vote turnout: Evidence from a large-scale field experiment." *American Political Science Review* 102(1):33.

Gervasoni, Carlos. 2010. "A Rentier Theory of Subnational Regimes: Fiscal Federalism, Democracy, and Authoritarianism in the Argentine Provinces." *World Politics 62(02):302340.* .

Gottlieb, Grossman, Larreguy and Marx. 2016. "Signaling Theory of Distributive Policy Choice: Evidence From Senegal." *Unpublished manuscript* .

Gottlieb, Jessica and Horacio Larreguy. 2016*a*. "An Informational Theory of Electoral Targeting in Clientelistic Contexts: Evidence from Senegal,." *Unpublished manuscript, 2016.* .

Gottlieb and Larreguy. 2016*b*. "An Informational Theory of Electoral Targeting in Clientelistic Contexts: Evidence from Senegal." *Unpublished manuscript* .

Gould and Fernandez. 1990. "Structures of Mediation: a formal approach to brokerage in transaction Networks." *Sociological Methodology* pp. 89–126.

Granovetter, Mark S. 1973. "The Strength of Weak Ties." *American Journal of Sociology* 78(6):1360–1380.

Grossman, Pierskalla and Boswell Dean. 2017. "Government Fragmentation and Public Goods Provision." *The Journal of Politics* .

Hamilton, Kirk E.; Helliwell, John F.; Woolcock Michael. 2016. "Social capital, trust, and well-being in the evaluation of wealth." *Policy Research working paper; no. WPS 7707. Washington, D.C. : World Bank Group.* .

Hardin, R. 1982. *Collective action.* Baltimore: John Hopkins University Press.

Healy, Andrew and Neil Malhotra. 2013. "Retrospective Voting Reconsidered." *Annual Review of Political Science* 16:285–306.

Hirschman, Albert O. 1970. *Exit, Voice, and Loyalty.* Harvard University Press,.

Homans, G. C. 1974. *Social Behavior, Its Elementary Forms (Revised Edition).* New York: Harcourt Brace.

Huckfeldt, R. and J. Sprague. 1995. *Citizen Politics and Social Communication.* Cambridge.

Huckfeldt, Robert. 1983. "Social Contexts, Social Networks, and Urban Neighborhoods: Environmental Constraints on Friendship Choice." *The American Journal of Sociology* 89(3):651–669.

Huntington, Samuel P. 1968. *Political Order in Changing Societies.* New Haven, CT: Yale University Press.

Isham, J and S. Kähkönen. 1999. What determines the effectiveness of community-based water project? Evidence from Central Java, Indonesia on demand responsiveness. Service Rules and Social Capital. Social Capital Initiative Working Paper The World Bank.

J-PAL. 2012. “”J-PAL Urban Services Review Paper.”.” *Cambridge, MA: Abdul Latif Jameel Poverty Action Lab.* .

Jones, Mark, Osvaldo Meloni and Mariano Tommasi. 2009. “Voters as Fiscal Liberals: Incentives and Accountability in Federal Systems.” *Mimeo, Universidad de San Andrs.* .

Jones, Mark P. 1997. “Federalism and the number of parties in Argentine congressional elections.” *The Journal of Politics 59 (2): 53849* .

Jones, Mark P. and Scott Mainwaring. 2003. “The Nationalization of Parties and Party Systems.” *Party Politics* 9(2):139–166.

Keefer. 2007. “Clientelism, Credibility, and the Policy Choices of Young Democracies.” *American Journal of Political Science* 51:804–821.

Key, V. O. Jr. 1966. *The Responsible Electorate: Rationality in Presidential Voting, 1936-1960.* Cambridge, Mass.: The Belknap Press of Harvard University Press.

Kitschelt, Herbert. 2000. “Linkages between citizens and politicians in democratic polities.” *Comparative Political Studies* 33(6-7):845–879.

Kitschelt, Herbert and Steven Wilkinson, eds. 2007. *Patrons, clients, and Policies. Patterns of Democratic Accountability and Political Competition.* Cambridge University Press Cambridge.

Klesner, Joseph L. 2007. “Social Capital and Political Participation in Latin America. Evidence from Argentina, Chile, Mexico, and Peru.” *Latin American Research Review, Vol. 42, No. 2* .

Kohli, A. 1987. *The state and poverty in india: The politics of reform.* Cambridge University Press.

Kohli, A. 1990. *Democracy discontent: India's growing crisis of governability.* Cambridge University Press.

Kossinets, G. 2006. “Effects of missing data in social networks.” *Social Networks* 28:247–268.

Krause, George A. 1997. "Voters, Information Heterogeneity, and the Dynamics of Aggregate Economic Expectations." *American Journal of Political Science 41: 1170-1200. .*

Krishna, A. and N. Uphoff. 1999. Mapping and measuring social capital: A conceptual and empirical study of collective action for conserving and developing watersheds in Rajasthan, India. Social Capital Initiative Working Paper No13 The World Bank.

Krishna, Anirudh. 2001. "Moving from the Stock of Social Capital to the Flow of Benefits: The Role of Agency." *World Development* 29(6):925–943.

Krishna, Anirudh. 2002. *Active Social Capital.* New Delhi: Oxford University Press.

Krishna, Anirudh. 2011. "Gaining Access to Public Services and the Democratic State in India: Institutions in the Middle." *Studies in Comparative International Development (SCID)* 46.1:p.98.

Lazarsfeld, Paul F., Bernard Berelson and Hazel Gaudet. 1948. *The People's Choice: How the Voter Makes Up His Mind in a Presidential Campaign.* New York: Columbia University Press.

Leiras, M. 2006. Parties, Provinces and Electoral Coordination: A Study on the Determinants of Party and Party System Aggregation in Argentina, 1983-2005 PhD thesis University of Notre Dame.

Lerner, Jennifer S and Philip E Tetlock. 1999. "Accounting for the effects of accountability." *Psychological bulletin* 125(2):255.

Levitsky, Steven. 2003. *Transforming labor-based parties in Latin America: Argentine Peronism in comparative perspective.* Cambridge University Press.

Levitt, Steven D and James M Snyder. 1995. "Political parties and the distribution of federal outlays." *American Journal of Political Science* 39:958–980.

Lin, Nan. 1982. *Social resources and instrumental action.* Vol. Social structure and network analysis Beverly Hills: Sage Publications.

Lindbeck, Assar and Jörgen W Weibull. 1987. "Balanced-budget redistribution as the outcome of political competition." *Public choice* 52(3):273–297.

Lindenberg, Siegwart. 1991. Social approval, fertility and female labour market. In *Female labour Market behaviour and fertility.* Springer pp. 32–58.

Lizzeri, Alessandro and Nicola Persico. 2001. "The provision of public goods under alternative electoral incentives." *American Economic Review* pp. 225–239.

Lockerbie, Brad. 1992. "Prospective Economic Voting in U. S. House Elections, 1956-1988." *American Politics Research* 20:308–325.

Lupu, N. and S. Stokes. 2009. "The Social Bases of Political Parties in Argentina, 1912-2003." *Latin American Research Review 44 (1): 58-87.* .

Lupu, Noam. 2014. "Brand Dilution and the Breakdown of Political Parties in Latin America." *World Politics 66(04):561602.* .

MacRae, Duncan Jr. 1952. "The Relation Between Roll Call Votes and Constituencies in the Massachusetts House of Representatives." *American Political Science Review, 12/1952, Volume 46, Issue 4* pp. 24–48.

Magaloni, B. 2006. *Voting for Autocracy: Hegemonic Party Survival and Its Demise in Mexico.* Cambridge Studies in Comparative Politics. Cambridge University Press.

Magaloni, Beatriz; Diaz-Cayeros, Alberto; and Federico Estevez. 2007. *Clientelism and portfolio diversification: a model of electoral investment with applications to Mexico*. Cambridge University Press. chapter 8, pp. 182–205.

Marsden, P. 1982. *Brokerage Behavior in Restricted Exchange Networks.* Social Structure and Network Analysis Beverly Hills: Sage Publications.

Marwell, Gerald and Pamela Oliver. 1993. *The Critical Mass in Collective Action. A Micro-Social Theory.* Cambridge Univ Press.

Mayhew, David R. 1974. *The Electoral Connection.* Yale University Press.

McPhee, William N. 1963. *Formal theories of mass behavior.* Free Press of Glencoe New York.

Merton, Robert King. 1968. *Social theory and social structure.* Simon and Schuster.

Mustapic, Ana Maria. 2013. *Los partidos politicos en la Argentina: Condiciones y oportunidades de su fragmentacion.* Buenos Aires: Siglo XXI.

Narayan, D. and L. Pritchett. 1999. "Cents and sociability: Household income and social capital in rural Tanzania. Cents and sociability: Household income and social capital in rural Tanzania." *Economic Development and Cultural Change* 47(4):871–97.

Nichter, Simeon. 2008. "Vote buying or turnout buying? Machine politics and the secret ballot." *American political science review* 102(01):19–31.

Nichter, Simeon. 2010. Politics and poverty: Electoral clientelism in Latin America. PhD thesis Political Science, University of California, Berkeley.

Nickerson, David W. 2008. "Is Voting Contagious? Evidence from Two Field Experiments ." *American Political Science Review* 102(February):49–57.

Oliveros, Virginia. 2013. A Working Machine: Patronage Jobs and Political Services in Argentina PhD thesis Columbia University.

Olken, Benjamin. 2010. "Direct Democracy and Local Public Goods: Evidence from a Field Experiment in Indonesia." *American Political Science Review 104, no. 2: 24367 .*

Olson, Mancur. 1965. *The logic of collective action; public goods and the theory of groups.* Harvard University Press.

Ostrom, Elinor. 2000. "Collective action and the evolution of social norms." *The Journal of Economic Perspectives* 14(3):137–158.

Paldam, Martin. 2000. "Social Capital. One or many? Definition and Measurement." *Journal of Economic Surveys Vol. 14. No5 .*

Papadopoulos, Y. and P. Warin. 2007. "Are innovative, participatory and deliberative procedures in policy making democratic and effective?" *European Journal of Political Research 46(4):445 - 472 April 2007 .*

Pateman, Carole. 1970. *Participation and democratic theory.* Cambridge University Press.

Persson and Tabellini. 2000. *Political Economics: Explaining Economic Policy.* MIT Press.

Peruzzotti, Enrique and Catalina Smulovitz. 2002. "Held to Account: Experiences of Social Accountability in Latin America." *Journal of Human Development* 3(2).

Pierskalla, Jan H. 2016. "Splitting the Difference? The Politics of District Creation in Indonesia." *Comparative Politics, 48 (2), 249268. .*

Pitkin, Hanna. 1967. *The Concept of Representation.* Berkeley: University of California Press.

Powell, G. Bingham and Guy Whitten. 1993. "A Cross-National Analysis of Economic Voting: Taking Account of the Political Context." *American Journal of Political Science 37: 391414 .*

Przeworski, A., Susan Stokes and Bernard Manin. 1999. *Democracy, Accountability, and Representation.* Cambridge University Press.

Putnam, Robert. 2000. *Bowling Alone: The Collapse and Revival of American Community.* New York, NY: Simon and Schuster.

Reid and Salmen. 2002. Qualitative analysis of social capital: The case of agricultural extension in Mali. In *Understanding and Measuring Social Capital: A Multidisciplinary Tool for Practitioners*, ed. van Bastelaer T Grootaert, C. The World Bank.

Remmer, Karen L. 2007. "The political economy of patronage: Expenditure patterns in the Argentine provinces, 1983–2003." *Journal of Politics* 69(2):363–377.

Remmer, Karen L. 2010. "Political scale and electoral turnout: Evidence from the less industrialized world." *Comparative Political Studies* 43(3):275–303.

Robinson, James A and Thierry Verdier. 2013. "The Political Economy of Clientelism." *The Scandinavian Journal of Economics* 115(2):260–291.

Rodden, J. and E. Wibbels. 2011. "Dual accountability and the nationalization of party competition: Evidence from four federations." *Party Politics* .

Ronconi, Lucas, Timothy Brown and Richard Scheffler. 2010. "Social Capital and Self-Rated Health in Argentina." *Health Economics* .

Rueda, Miguel. 2016. "Small Aggregates, Big Manipulation: Vote Buying Enforcement and Collective Monitoring,." *American Journal of Political Science* .

Samuels, David. 2000. "The Gubernatorial Coattails Effect: Federalism and Congressional Elections in Brazil." *Journal of Politics 62:240253.* .

Sanders, David and Neil Gavin. 2004. "Television News, Economic Perceptions and Political Preferences in Britain, 1997-2001." *Journal of Politics 66(4): 1245-1266.* .

Schelling, Thomas C. 1960. *The strategy of conflict*. Cambridge, MA: Havard University Press.

Shepsle, Kenneth A. 2006. "Rational choice institutionalism." *The Oxford handbook of political institutions* pp. 23–38.

Sinclair, Betsy. 2012. *The social citizen: Peer networks and political behavior*. University of Chicago Press.

Stevenson, Randolph T. and Lynn Vavreck. 2000. "Does campaign length matter? Testing for cross-national effects." *British Journal of Political Science 30 (Apr): 217-35.* .

Stokes. 1995. *Cultures in Conflict: Social Movements and the State in Peru*. Berkeley University of California Press.

Stokes, Susan C. 2005. "Perverse accountability: A formal model of machine politics with evidence from Argentina." *American Political Science Review* 99(3):315.

Stokes, Susan C, Thad Dunning, Marcelo Nazareno and Valeria Brusco. 2013. *Brokers, Voters, and Clientelism: The Puzzle of Distributive Politics*. Cambridge University Press.

Täube, Volker G. 2004. "Measuring the social capital of brokerage roles." *Connections* 26(1):29–52.

Tommasi, Mariano and Federico Weinschelbaum. 2007. "Centralization vs. Decentralization: A Principal- Agent Analysis." *Journal of Public Economic Theory 9 (2): 369389.* .

Torre, Juan Carlos. 2003. "Los hurfanos de la poltica de partidos. Sobre los alcances y la naturaleza de la crisis de representacin partidaria." *Desarrollo Econmico, Vol. 42 No 168, enero-marzo, pp. 647-665.* .

Uzzi, Brian and Jarrett Spiro. 2005. "Collaboration and creativity: the small world problem." *American Journal of Sociology* 111(2):447–504.

Verba, Schlozman and Brady. 1995. "Beyond Ses: A Resource Model of Political Participation." *American Political Science Review Vol. 89, No. 2 (Jun., 1995), pp. 271-294* .

Ward, Michael D., Katherine Stovel and Audrey Sacks. 2011. "Network Analysis and Political Science." *Annual Review of Political Science* 14(1):245–264.

Weitz-Shapiro, R. 2012. "What wins votes: Why some politicians opt out of clientelism." *American Journal of Political Science* .

Weitz-Shapiro, Rebecca, Winters Matthew S. 2017. "Can Citizens Discern? Information Credibility, Political Sophistication, and the Punishment of Corruption in Brazil." *The Journal of Politics. 2017; 79 (1) : 60-74* . .

Young, H Peyton. 1996. "The economics of convention." *The Journal of Economic Perspectives* pp. 105–122.

Zarazaga, Rodrigo Esteban. 2011. Political Machines and Networks of Brokers: The Case of the Argentine Peronist Party. PhD thesis Political Science, University of California, Berkeley.

Biography

Guadalupe Rojo was born in Buenos Aires, Argentina, on December 12th 1982. She earned a Bachelor of Arts in Political Science and Government from Universidad Torcuato Di Tella in 2005. She holds two Masters of Arts; one in Latin American Studies from Stanford University (2010), and one in Economics from Duke University (2014). Lastly, she earned a PhD in Political Science from Duke University in 2017. Her research interests include political economy, quantitative methods, development studies and behavioral economics. Currently, she is teaching Political Science at Universidad Torcuato Di Tella, an activity that she enjoys a great deal and plans to pursue. Before going to graduate school, she worked in the non-profit and public sector in Argentina, and at the Inter-American Development Bank in Washington, D.C.