

Electoral Incentives to Cultivate a Personal Vote and Political Particularism: a Text Analysis Approach

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Declaration

I declare that this thesis has not been submitted as an exercise for a degree at this or any other university and it is entirely my own work.

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Silvia Decadri

To mum and dad

*"If we want things to stay as they are, things will have to change."
— Il Gattopardo*

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Summary

In this dissertation I examine the impact of electoral rules on political particularism. I study the legislative behaviour of Italian members of parliament (MPs) as a case study of how this causal mechanism works. To analyse the inner workings of the causal mechanism, I employ computational text analytic methods, multivariate regression analysis and a quasi-experiment.

In Chapter 2, I devise and validate a new methodology to capture particularistic policy-making by means of automated dictionary methods. To this aim, I produce the first and most extensive data-set on Italian proposed legislation, which spans the period from 1948 to 2013. I build four new dictionaries of Italian political particularism and three algorithms, that I use to code the newly-collected bills. I validate the dictionaries by comparison with a human-coded “gold-standard” set, using an online labour platform called Figure Eight. The newly developed data-set and methodology will assist future analyses on particularistic policy-making in Italy and, more broadly, prospective studies on legislative activity and legislators’ behaviour.

In Chapter 3, I concentrate my analysis on postwar Italy. At that time—from 1948 to 1994—Italy used an open-list proportional system (open-list PR) to elect representatives to the chamber of deputies, whereby voters could express up to four preference votes. Conventional wisdom in Italian studies tells us that this electoral system promoted pork-barrel and clientelism. In this context, I employ data on the preference votes gained by each MP to scrutinize more in depth the well-established causal mechanism linking the construction of a personal vote to the promotion of particularistic policy-making .

In Chapter 4, I use the peculiar features of the Italian mixed-member electoral system operating from 1994 to 2006 to obtain analytic leverage on the causal mechanism linking electoral rules to particularistic policy-making. To study the causal effect, I employ regression discontinuity design (RDD) to test if MPs elected in the majoritarian tier are more willing to serve the interests of narrow segments of society when compared to MPs elected in the proportional tier.

1 Introduction

1.1 Motivation

In this study I investigate the impact that the search for a personal vote has on legislators' choice to either represent the interests of localities or to safeguard those of society at large. This choice is relevant to political representation as well as to social welfare maximization. To guarantee full representation, a legislator should safeguard both national and local interests, but since elected representatives have limited time and resources they can end up being mainly focused on accommodating voters' local interests (Searing 1985, Shugart 2001). This can increase the level of political particularism in a country, which produces targeted benefits and widespread costs (Lancaster 1986). Diversion of goods and services to parliamentarians' constituencies increases the welfare of restricted local areas, while spreading the costs nationally. Distributive policies targeted at certain functional groups in society produce higher benefits for a restricted category, while raising the costs for all private individuals that are not part of that specific category (Lowi 1964). This is problematic, for a few reasons.

First, in political systems where candidates' personal ties with their constituents are crucial in order to get elected, usually politicians focus on serving parochial interests while neglecting society's interests at large. This brings them to guarantee mainly local accountability, while overlooking accountability to their national parties that stand for a bundle of collective goods that is preferred over some other by as broad a segment of the society as is achievable (Shugart 2001). Second, politicians who serve localities can generate an inefficient political system characterized by the

provision of particularistic benefits at the expense of programmatic policy-making (Carey & Shugart 1995, Cox 1987, Lancaster 1986). The consequence is a political class that is unable to address the crucial issues that divide a society. (Shugart 2001). For example, Italian legislators' inability to engage in programmatic policy-making is notorious. For years scholars have denounced how Italian deputies committed to proposing and discussing laws aimed at serving localities' interests have not managed to promote "broader" legislation, like education reforms or job acts (see Di Palma 1977, p. 66; Somogyi & Sartori 1963; Wallack *et al.* 2003, p. 134). Third, when politicians act primarily as local representatives they can end up generating a non-equitable and Pareto-inefficient redistribution of resources; in a nutshell, a political system characterized by discriminatory policies and overspending (Pennock 1970). The diversion of goods and services towards deputies' constituencies can generate an over-provision of resources that can result in higher than optimal budget deficits. Moreover, political particularism can bring about discriminatory policies that provide benefits to local groups while spreading the cost to the whole electorate (Pennock 1970, Shepsle & Weingast 1981, Weingast *et al.* 1981). Again, the Italian higher than optimal budget deficits, as well as Italian politicians' tendency to favour small clientele's interests through taxpaying, are notorious (Alesina & Perotti 1995, Di Palma 1977, Putnam *et al.* 1994).

Political representation and welfare maximization are a matter of equilibrium, and the local-national trade-off is the hub of this balance. The way in which elected representatives manage their time and resources in national assemblies is crucial to voters' representation as well as to society's welfare. If deputies have incentives to spend most of their time and resources to favour the interests of narrow groups of citizens, they could end up neglecting the interests of larger shares of the population. If we want to guarantee representation to the broadest possible segment of society and safeguard welfare maximization, we need to understand what are the factors that move elected representatives' attention toward localities.

1.2 The incentives to cultivate a personal vote and political particularism

Common wisdom in the literature on political particularism and comparative electoral studies tells us that different electoral rules produce different incentives for candidates who seek election (see among many Carey & Shugart 1995, Shugart 2001). Under certain electoral rules, being well-known in the constituency and cultivating personal links with constituents enhances the electoral prospects of a political candidate. When legislators compete in elections under such electoral rules—candidate-centered electoral systems—personal reputation becomes more valuable relative to party reputation, which incentivizes politicians to cultivate a personal vote. The personal vote constitutes that fraction of a candidate's support that he gains thanks to his individual actions, personal characteristics and qualifications, and it distinguish itself from that portion of a candidate's support that he obtains thanks to the reputation earned by his political party, which depends strictly on the information that the party label conveys to voters (Cain *et al.* 1984). Since party and personal reputation require a different set of actions in order to be acquired and maintained—advertising the party label and pursuing the party agenda versus cultivating a personalized support and serving constituents in personal ways— if one of the two becomes relatively more important, politicians will engage with greater commitment in activities aimed at promoting it. The construction of a personal vote often leads to higher levels of political particularism. Candidates distribute goods and services to their constituents, in exchange for votes, while ignoring the interests of the general population (Lancaster 1986, Shugart 2001).

The connection between electoral incentives to cultivate a personal vote and political particularism constitutes the main theoretical background of this dissertation. Building on this, I aim at producing a more nuanced understanding of political particularism and of the causal mechanism linking the electoral rule to the search for a personal vote and to the consequent increase in particularistic policy-making. As a first step, I offer a novel approach to the study of political particularism.

1.3 A new approach to the study of political particularism

In this dissertation, I propose an approach to the study of political particularism that is based on the idea that a politician can conceive his constituency in a multitude of ways: as a geographic entity, as a set of functional groups, or as a collection of individuals. To this aim, I build on Eulau & Karps (1977)'s theory of styles and foci of responsiveness. While the authors use foci and styles to describe representation at large¹, I apply them to the definition of political particularism with the aim of offering a more nuanced understanding of this phenomenon.

Styles define the target of representation that a legislator has, i.e. the way in which he represents his voters. Policy responsiveness pertains to a legislator who represents his voters by sustaining their policy orientation. Service responsiveness pertains to a legislator who represents his voters by offering them non-legislative services, like casework or grievances resolution. Symbolic responsiveness pertains to a legislator who represents his voters by generating and maintaining a relationship of trust and support with them. Allocative responsiveness pertains to a legislator who represents his voters by providing them with goods and services.

Foci define the way a legislator perceives his constituency. A legislator who conceives his constituency in terms of territorial levels has a geographic focus. A legislator who conceives his constituency in terms of a set of functional groups has a group-related or sectoral focus. A legislator who conceives his constituency in terms of a collection of individuals has an individual focus. Political particularism pertains to distributive policies and thus constitutes the main way in which an elected representative guarantees allocative responsiveness to his constituents.

While all legislators with an allocative style of representation will engage in political particularism, legislators with a different focus will engage in a different type

¹And without providing an in depth description of the relationship between styles and foci of representation (see Eulau & Karps 1977, p. 248).

of particularism. An elected representative with a geographic focus will engage in geographic particularism, an elected representative with a sectoral focus will engage in sectoral particularism, while an elected representative with an individual focus will engage in individual particularism. Geographic particularism is the act of distributing goods and services to a deputy's constituency, conceived as a unique geographic entity. A typical example of geographic particularism would be an infrastructural intervention, like the construction of a bridge or of a car park. Sectoral particularism is the act of distributing goods and services to functional groups determined by sectors of the economy. A typical instance of sector-related particularism would be the distribution of subsidies to the tourism sector, or the institution of an award for the urban and architectural sector. Individual particularism is the act of distributing goods and services to individual constituents. A typical example of individual particularism would be the distribution of jobs in the public sector via patron-client relations.

Contrary to what I propose, most of the literature describes political particularism as a phenomenon of a purely geographical nature. In other words, scholars usually define an elected representative's constituency only in terms of its geographic location: the electoral district.² Only few authors have described elected representatives' willingness to serve the interests of narrower entities inside their constituency like a social group, a company, or even a single individual. For example, Di Palma (1977) differentiates between national legislation that regulates all the citizens that possess a certain characteristic or engage in a certain behaviour, and sectional legislation that regulates all the citizens belonging to a certain functional group in society. Pedrazzani & Zucchini (2013) define "pork barrel bills" all those laws that include benefits for specific places, professional categories or interest groups, legal subjects or individuals. Still, these authors do not formalize elected representatives' willingness to serve these interests in a comprehensive theory of political particularism. This hinders our ability to better understand and explain the phenomenon of sectoral particularism, which is a relevant one for a number of reasons. First, once we define political particularism as a *style* of representation, as I do in this dissertation, analyzing sectoral particularism helps

²An example among many, Fenno (2002) uses the term "home places" to illustrate the tendency of House members to represent localities' interests.

us appreciating the multidimensionality of political representation³. As Eulau & Karps (1977) illustrate in their comprehensive review of the literature on political representation, representation is a composite phenomenon that encompasses a variety of *targets*, and if we do not acknowledge this we end up reducing a complex phenomenon to just a few of its components. Political particularism is, in the end, a way for politicians to guarantee political representation to their voters. Particularism is a style of political representation that uses distributive policies to represent the interests and preferences of citizens. As such, it is part of the phenomenon of political representation at large, and it exhibits the same *multidimensionality*. Analyzing sectoral particularism, in addition to geographic particularism, helps us appreciating the multiple targets that politicians have in mind when they represent citizens: not just their electoral constituency but also professional categories, specific industries, certain social classes or ethnic groups, etc. Second, theories of particularism that only consider its geographic component equate particularism to “pork-barrel spending”, i.e. to the diversion of public funds to infrastructure projects located in candidates’ constituencies. This ends up producing a theory of particularism that mainly explains the diversion of public goods to certain areas, regions or municipalities. Still, I have just shown how previous research has acknowledged the fact that elected representatives are also willing to serve clientelistic interests that do not coincide with those of the constituency as a whole, but belong to narrower entities like a social group, a company, or even a single individual (Di Palma 1977, Golden 2003, Pedrazzani & Zucchini 2013, Swindle 2002). Conceptualizing and studying the phenomenon of sectoral particularism helps us providing a theory of political particularism that does not limit itself to explaining public overspending targeted at elected representatives’ constituencies. On the contrary, it gives us the opportunity to also explain elected representatives’ willingness to serve a variety of clientelistic interests inside their constituencies⁴; a phenomenon that does not result in the over-provision of geographically-targeted public goods, but instead produces distributive policies that benefit restricted categories in society while raising the costs for all private

³For a more in depth discussion on the multidimensionality of political representation, the reader is referred to Eulau & Karps (1977).

⁴Which correspond to the variety of target that political representation has.

individuals that are not part of those specific categories.

In my dissertation, I offer theoretical background and empirical evidence of legislators' propensity to favour the interests of diverse clientele residing in their constituency. Legislators in search of a personal vote do not simply divert goods and services to their districts, they also target the interests of specific economic sectors or professional categories residing in their constituencies. This shows that even though national parliaments are elected through a geographically-based mechanism, elected representatives do not necessarily perceive their electoral constituency just as a geographic location corresponding to their electoral district. As a second step in the direction of producing a better understanding of the connection between the construction of a personal vote and political particularism, I try and propose a better proxy to capture the level of personal vote.

1.4 A better proxy for the personal vote

In the field of comparative electoral studies, many scholars interested in the analysis of the personal vote have focused on the effect that candidate-centered electoral systems have on elected representatives' propensity to favour parochial interests (see, among many, Di Palma 1977, Gamm & Kousser 2010, Martin 2011, Somogyi & Sartori 1963, Wallack *et al.* 2003). These studies assume that in candidate-centered electoral systems the level of personal vote will be high, without actually producing a direct proxy for the personal vote. Some exceptions include Martin (2010) who measures personal vote using the number of first preference votes received by each candidate under a STV electoral system, and Golden & Picci (2015) who estimate the level of a candidate's personal vote using the total number of preference votes received by a candidate in an open-list PR system. These studies have moved the literature in the direction of producing better theoretical and empirical proxies for the personal vote. Still, they do not explicitly connect the cultivation of a personal vote to politicians' propensity to engage in particularistic policy-making.

This brings to the second lacuna to be found in the literature on the personal vote and political particularism. Indeed, many existing studies implicitly assume that

the personal vote and political particularism are equivalent (Swindle 2002). These studies are based on the idea that, since the level of personal voting and the level of particularism are both determined by the same electoral incentives, the two concepts can be used interchangeably (Swindle 2002, p. 280). The basic idea is that the electoral connection is a relation between an elected representative and his voters that is based on a mutual exchange of resources: votes for particularistic goods. Therefore, political particularism and personal voting are just two facets of the same phenomenon.

The main issue with proxies of the personal vote based on electoral rules or particularistic behaviour is that they are equating three phenomena that are actually distinct.⁵ Political particularism is a characteristic of policy-making, personal voting is a facet of the electoral choice, and electoral rules pertain to the institutional mechanism that converts votes into seats (Swindle 2002). To shed more light on the connection between the search for a personal vote and political particularism, we should rely on data on votes by candidates, candidates' list ranks, and candidates' personal attributes. Based on these considerations, I in this dissertation I employ preference votes expressed by Italian electors during the postwar period to measure the level of personal vote amassed by each candidate running for a seat in the Italian chamber of deputies, and I use such proxy to show how candidates with larger followings actually tend to engage more in particularistic policy-making.

1.5 Why Italy?

To examine the connection between politicians' search for a personal vote and political particularism, I analyze the legislative behaviour of Italian members of parliament as a case study of how this causal mechanism works. A frequent issue that arises when performing single country analysis is that of limited generalizability. This is often the consequence of choosing a context that is carefully selected to bolster a particular standpoint. However, the choice of the Italian case constitutes

⁵To get an idea, Martin (2011) talks interchangeably of elected representatives' focus on cultivating a personal-vote and on favouring parochial interests when he describes legislative particularism.

a quite different circumstance, for a few reasons.

First, the Italian case can offer novel theoretical insights by providing the necessary conditions to observe a particular phenomenon of interest (see Golden 2005, p. 6). Indeed, anecdotal evidence reports the strong presence of particularistic policy making in Italy (Di Palma 1977, Golden 2003, Somogyi & Sartori 1963). Anecdotal accounts of high levels of political particularism' in the Italian political scenario set the stage for a more in depth analysis that aims at providing compelling empirical evidence. Simply put, we would like to be reasonably confident that we are choosing a country/state/region where the phenomenon we want to analyze actually manifests itself.

Second, by focusing on an in-depth single country analysis, I have been able to produce a measure that is more attuned to capture the phenomenon of interest and thus displays levels of measurement validity that would not be feasible when performing cross-national analyses. Let me illustrate the point. To study political particularism, I have relied on the Italian Parliament's official classification and on available data sets on Italian bills categorization to develop four dictionaries of Italian political particularism. I have then validated the proposed measure using an on-line labour platform where Italian speaking individuals have read and classified sentences randomly extracted from my corpus. This procedure has allowed me to produce a measure of political particularism that is tailor-made for the Italian case. Better attuned measures lead to better findings because they are specifically conceived for capturing the phenomenon that we want to analyze (Golden 2005).

Third, by focusing on Italy I have been able to offer an analysis of political particularism that goes as deep as the individual level. Many cross-country analyses ends up being merely correlational when they study causal relationships that cannot be directly inspected or measured at the national level, like the relation between elected representatives and voters (see Golden 2005). On the contrary, single country studies can achieve greater rigor in analyzing causal mechanisms that occur at the sub-national level, exactly because they are able to produce individual-level analyses.

1.6 Automated text analysis of proposed legislation

To study the electoral connection I employ automated text analysis techniques. Political actors produce a great amount of written documents: from bill proposals to electoral manifestos, parliamentary questions, parliamentary speeches, blog posts and many more. Content analysis creates the opportunity for studying politics beyond surveys or elections. By producing fine grained analyses of politically relevant texts we can get insight into legislative behavior, public opinion and many other politically relevant topics.

Previous studies used manual content analysis to inspect texts. These analyses were either limited to short periods of time or required prohibitive levels of time and resources to be accomplished (see Gamm & Kousser 2010, Martin 2011). Thanks to automated text analysis and natural language processing techniques we can now scale up the content analysis of documents and produce more detailed and comprehensive studies that span longer periods of time. Furthermore, computer coding outperforms manual coding in terms of reliability (see Laver & Garry 2000, p. 314). Unlike human-coded content analysis, the same computer coding applied to the same text always reproduces the same results. Finally, since replicating the same or analogous analyses using automated text analysis is faster than when we use manual content analysis, automated language processing techniques improve the feasibility of replication or extension studies. Automated text analysis of politically relevant documents is now one of the most promising fields in the political science literature. We should definitely take advantage of the opportunities that it creates for studying and understanding politics on a deeper level.

1.7 Outline of the thesis

Each of the following chapters takes a step forward in explaining the causal mechanism connecting electoral rules to political particularism. Throughout Chapter 2, I seek to answer three main research questions. Are constituency service

and political particularism normative principles, detrimental phenomena, or both? What is the style of representation of a legislator that engages in particularistic policy-making? What are the different types of political particularism that we can observe? To find satisfactory answers, I offer a new theoretical perspective on political particularism and a novel methodological approach to measure it. First of all, I collect a new data-set on Italian proposed legislation and Italian deputies' demographics. To build the dataset I have automatically retrieved the texts of individual members bill proposals (IMBPs) from the Italian Parliament website and I have obtained a corpus of 49,212 documents that spans over a period of 65 years. From the same website, I have retrieved data on Italian deputies' demographics and got information on each deputy's date and place of birth, district and region of election, political party or list of election, system of election, parliamentary group, education, profession, age and gender. After having collected the required data, I have devised and validated a new methodology to capture particularistic policy-making by means of automated dictionary methods. I have developed four new dictionaries of Italian political particularism building on previous studies of Italian legislation and on the Italian parliament's official documentation (Pedrazzani & Zucchini 2013, Somogyi & Sartori 1963). I have then validated the dictionaries by comparison with a human-coded "gold-standard" set using an online labour platform called Figure Eight. Descriptives from the newly collected database show that the average Italian deputy is a male graduate, who is employed in occupations that require medium or high qualifications. The database also shows that Italian deputies propose a considerable amount of IMBPs, which is comparable the number of ordinary bills they propose. This evidence further substantiates scholars' assumption that IMBPs are relevant to the legislative process, and that elected representatives use them regularly to communicate with their voters and to attract electoral consensus (Mattson 1995).

In Chapter 3, I begin to analyze the connection between electoral rules, the search for a personal vote, and political particularism. In this chapter I seek an answer to a fourth and a fifth research question: are legislators who cultivate a larger personal vote more willing to favour parochial interests? And if they are, what

kind of parochial interests are they willing to favour? I concentrate my analysis on postwar Italy, understood as the period that goes from 1948 to 1994. In this chapter I aim at producing a more direct evidence of a connection between candidates' search for a personal vote and their propensity to serve parochial interests. To fulfill this purpose, I employ preference votes expressed by Italian electors during the postwar period to measure the level of personal vote amassed by each candidate running for a seat in the Italian chamber of deputies. Previous studies of the relationship between personal vote and political particularism have equated the personal vote with either one of its main determinants, candidate-centered electoral rules, or with one of the main outcomes it can produce, political particularism (Swindle 2002). I thus produce a new proxy to capture the level of personal vote in the hope of providing a more efficient measurement for such phenomenon. By using a more direct proxy for the personal vote, I try and provide a better understanding of the theoretical link of how the search for a personal vote influences policy-making. Results suggest that, irrespective of localism, party affiliation and personal characteristics, legislators who constructed a large personal vote are more willing to serve parochial interest within their district, be they related to sectors of the economy represented in the constituency or to the constituency as a geographic unity.

Having found empirical evidence of a connection between candidates' search for a personal vote and their propensity to serve parochial interests, in Chapter 4 I bring the analysis a step forward seeking answer to a sixth and last research question: can we find empirical evidence of a causal link between the electoral rule and deputies' willingness to serve parochial interests? While the literature offers extensive empirical evidence and solid theoretical background for a connection between the electoral rule and elected representatives' tendency to serve parochial interests, "acid tests" of a causal linkage are still quite rare. This is mainly due to the difficulty in controlling for potential confounding factors connected to the institutional environment or to political parties' internal organization. To fill these gaps, I exploit the peculiar features of the Italian mixed-member electoral system operating from the 12th to the 14th legislature to test if deputies elected in the majoritarian tier are more willing to serve the interests of narrow segments

of society, when compared to deputies elected in the proportional tier. In my analysis, I do not find any empirical evidence in support of the hypothesis that a candidate-centered electoral rule *causes* greater incentives for a member of parliament to serve the interests of narrow segments of society with respect to a party-centered electoral rule.

2 “What have you done for me lately?” Re-thinking Constituency Service and Political Particularism

Abstract

Political scientists have analyzed constituency service and political particularism at length. According to a first strand of the literature, constituency service is a crucial part of a congressperson's job. Other scholars concentrate, instead, on the drawbacks of constituency service and juxtapose efficient political systems that promote diffused interests to inefficient political systems that serve particularistic interests. Still, the question remains: are constituency service and political particularism normative principles, detrimental phenomena, or both? In an effort to develop a theoretical and methodological framework that can help answer this question, (1) I discuss a multidimensional model of constituency service composed of a geographical, group-related and individual focus, and a political, symbolic, service and allocative style; (2) I produce the first and most extensive data-set on Italian proposed legislation, which spans the period from 1948 to 2013; (3) I build four new dictionaries of Italian political particularism, that I use to code the newly-collected bill proposals; (4) I validate the dictionaries by comparison with a human-coded “gold-standard” set, using an online labor platform called Figure Eight. The newly developed data-set and methodology will assist future analyses on particularistic policy-making in Italy and, more broadly, prospective studies on legislative activity and legislators'behaviour.

2.1 Introduction

Understanding what are the factors that influence elected representatives' propensity to either specialize in serving localities or safeguard broader interests is important. On the one hand, we could consider serving localities as a crucial part of an elected representative's job. If that is the case, studying phenomena like constituency service and casework would be first of all relevant to political representation. On the other hand, we could be worried that distributive policies targeted at narrow constituencies could result in a non-equitable and non-efficient distribution of resources. If that is the case, studying what are the factors influencing deputies' propensity to serve localities would be helpful in developing strategies to curb a detrimental phenomenon.

Political scientists have analyzed constituency service and political particularism at length. The two terms are either used as synonyms, or as a way to indicate two different means by which elected representatives can serve localities, the first one with a more positive and second one with a more negative connotation. Indeed, according to a first strand of the literature rooted in the tradition of US Congress studies, constituency service is a crucial part of a congressperson's job through which he guarantees his constituents proper representation in parliament (Fenno 2002, Mayhew 1974a, Miller & Stokes 1963, Munroe 1977, Searing 1985). A second strand of the literature equates constituency service, also called political particularism, to distributive policies that produce sub-optimal social and economic conditions (Bagehot 1867, Carey & Shugart 1995, Cox 1987, Mayhew 1974a). Scholars of political particularism juxtapose efficient political systems that promote diffused interests to inefficient political systems that serve particularistic interests, and warn us against the perils of political particularism for the preservation of political representation and welfare maximization.

In this study, I argue that none of these two traditions proposes in and of itself a complete perspective on constituency service and political particularism. Instead, I contend that by combining them in a comprehensive theory of representation-as-responsiveness¹ we can obtain a more nuanced understanding of constituency

¹On the concept of representation-as-responsiveness see Miller & Stokes (1963) and Eulau

service and political particularism. My first contribution to the literature is thus theoretical. Building on Eulau & Karps (1977), I discuss a multidimensional model of constituency service composed of a geographical, group-related and individual focus, and of a policy, symbolic, service and allocative style. Based on this model, I conceptualize political particularism as a specific kind of constituency service characterized by an allocative style.

To properly operationalize my new perspective on political particularism, I use automated text-analysis techniques to code the newly-collected bill proposals. I build and validate four new dictionaries of Italian political particularism. My third contribution to the literature is thus methodological: I produce a new proxy to capture variation in Italian political particularism. The newly developed theoretical framework, data-set, and methodology will assist future analyses on particularistic policy-making in Italy and, more broadly, prospective studies on legislative behaviour and political particularism.

2.2 Literature review

2.2.1 The dilemma of representation

Before concentrating on the study of constituency control and local representation, it is worth analyzing the connection between the local and the national dimension of political representation. The local-national trade-off informs most of the academic debate on local representation and constituency influence in national assemblies (see, among many, Mayhew 1974a, 2004). Throughout this literature, the terms “constituency control”, “constituency influence” and “constituency service” are usually used interchangeably to indicate all those actions² aimed at serving localities’ interests, from pork barrel to casework. I will do the same in this study. The trade-off between national and local representation constitutes what has been defined as the “classical dilemma of representation”³, whereby the two dimensions of representation are described as in conflict with each other (King 1990 and

& Karps (1977).

²Implemented by elected representatives’.

³For a brief theoretical discussion on these concepts, see also Shugart *et al.* (2005).

Pitkin 1967, p. 215). The national dimension concerns parliamentarians' role in guaranteeing programmatic representation to the citizenry through policy schemes that address the great public issues. The local dimension, instead, concerns elected representatives' role in redressing grievances and promoting local interests. Scholars of political representation usually assume that deputies are accountable both to their constituents in a local dimension and to a national party program in a national dimension, and that they should therefore act as representatives in both dimensions. However, MPs have limited time and resources. If they allocate most of them to a local dimension they could end up neglecting their role as national representatives. At the same time, if they mostly engage in programmatic policy they could end up neglecting their role as local representatives (Searing 1985). Representation thus ends up being either focused around individual legislators accommodating voters' local interests or around cohesive parties endorsing voters' preferences over national policy objectives (Shugart *et al.* 2005).

2.2.2 Constituency service as a central aspect of representation

Two different classes of works can be identified within the literature that analyzes the influence exerted by constituents on elected representatives' action in national parliaments. A first strand of research, rooted in the tradition of US Congress studies, investigates the role of constituency service in guaranteeing citizens' political representation (Fenno 2002, Mayhew 1974a, Miller & Stokes 1963, Munroe 1977, Searing 1985). For example, Miller & Stokes (1963) define constituency control as "a normative principle and a factual truth". Indeed, in the US system of single-member districts each congressperson in the House represents the citizens of a single constituency, and he is therefore expected to represent his constituents' interests. The relevance of constituency influence to the concept of political representation has been recognized also by scholars of European parliaments. When analyzing incumbency advantage in the US Congress and in the British parliament, Cain *et al.* (1984) recognize that constituency service represents a considerable part of an MP's job. Munroe (1977) acknowledges that Members of the Parliament (MPs) who provide constituency service, not

only act as representatives of their constituents, but they also contribute to the management of public administration and to the stability of the political system.

2.2.3 The perils of constituency service: introducing political particularism

A second line of research concentrates, instead, on the pitfalls of constituency control. This second set of works is centered around the concept of legislative efficiency first proposed by Walter Bagehot and then reintroduced by Cox (see Shugart & Carey 1992, p. 8; Bagehot 1867, Cox 1987). Cox (1987) explains that, at the beginning of the 19th century, MPs in Britain were mainly acting as promoters of patronage and private bills aimed at advocating their interests and those of the local elites that they were representing (see Cox 1987, p. 169). By the end of the nineteenth century, the expansion of suffrage induced a decisive switch in the nature of electoral politics. MPs, who used to appeal to narrow elites in their constituencies in order to be elected, at that point needed to secure votes from broader sectors of the electorate. In order to gain consensus from larger groups of the population, MPs shifted their focus from the distribution of particularistic goods and patronage to the provision of general measures of public policies (see Cox 1987, p. 168-169). The authors describes the shift from a political system focused on the provision of particularistic goods and services to a system offering an “efficient selection” from among alternative policy choices as a movement towards legislative efficiency (Cox 1987, p. 168).

The concept of legislative efficiency expressed by Cox (1987) underpins the theoretical framework of the literature on constituency service's drawbacks, which is based on a juxtaposition between efficient political systems that promote diffused interests and inefficient political systems that serve particularistic interests. Academics belonging to this scholarship look at constituency service from a narrower perspective when compared to their colleagues belonging to the tradition of US Congress studies. Indeed, they equate constituency service to distributive politics. When deputies prioritize local interests, they tend to become local representatives connected with their electorate through clientelistic linkages, i.e.

goods and services allocations. This kind of politicians is opposite to national representatives, who are connected with their electorate through programmatic linkages, i.e. policy programs that address the great public issues (see Kitschelt 2000, p. 847-850). The predominance of local representatives produces a ruling class that prioritizes particularistic interests, which are expressed through patron-client relations, over society's interests at large, which are expressed through programmatic relations (Kitschelt 2000, Searing 1985). Given the emphasis that scholars of the perils of constituency service put on the contrast between diffused and particularistic interests, the term "constituency service" is usually substituted by "political particularism". For example, when studying Members of Congress' (MCs) behaviour, Mayhew (1974a) affirms that politicians exploit their ability to grant particularized benefits to their constituency in order to be re-elected. The author includes among these particularistic benefits casework as well as pork barrel projects secured by a congressman for his constituency, i.e. constituency service.⁴

Political particularism

Following Mayhew (1974a), a conspicuous amount of studies has analyzed political particularism and the negative externalities that it can produce. When politicians act primarily as local representatives, they can generate two different kinds of side-effects in a society: (1) a non-equitable and inefficient redistribution of resources; (2) a disregard of programmatic representation. Political particularism creates a non-equitable and Pareto-inefficient⁵ distribution of resources: in a nutshell, a political system characterized by discriminatory policies and overspending (see Pennock 1970, p. 714). The diversion of resources towards deputies' constituencies can generate an over-provision of goods and services, which can result in "excessive" public spending and therefore higher budget deficits (Ferejohn 1974). The relation between constituency service and fiscal discipline has been scrutinized by an ample set of political science and political economy studies (see, among many, Alesina & Perotti 1995, Battaglini & Coate 2008, Besley & Coate

⁴For a clarification on the use of the term "constituency service" and its synonyms, the reader is referred to Section 2.2.1.

⁵On the concept of Pareto efficiency see Stiglitz (1987) and Ross (1973)'s studies.

2003). For example, Alesina & Perotti (1995) explain how legislators who engage in distributive politics might not adequately internalize the costs of their spending decisions and therefore end up financing local projects that increase public debt. Furthermore, political particularism can bring about discriminatory policies that spread across the whole electorate the cost of geographically concentrated benefits (Pennock 1970, Shepsle & Weingast 1981, Weingast *et al.* 1981). Shepsle & Weingast (1981), for instance, illustrate that legislators in search of credit claiming seek to finance mainly pork barrel projects, whose benefits are geographically concentrated and whose costs are spread through general taxation. Pennock (1970) explains that the essence of pork barrel is to provide benefits to local groups, while spreading the cost throughout taxpaying.

Politicians who serve particularistic interests may also generate an inefficient political system characterized by the provision of particularistic benefits at the expense of programmatic policy-making (Carey & Shugart 1995, Cox 1987, Lancaster 1986). In order to investigate deputies' tendency to serve localities' interests at the expense of national policy-making promotion, scholars have engaged in the content analyses of legislative texts. These studies show that MPs can conveniently exploit the legislative process to favour parochial interests (Gamm & Kousser 2010, Martin 2011, Mejía-Acosta *et al.* 2006, Taylor-Robinson 1999). For instance, Gamm & Kousser (2010) explain that in political systems that tie MPs to their electoral constituencies, "district bills" are at the core of the electoral connection.⁶ The massive proposition of narrow scope-legislation generates highly inefficient policy-making, which is unable to address the crucial issues that divide a society. Somogyi & Sartori (1963) and Di Palma (1977) illustrate this quite extensively by explaining how Italian MPs committed to proposing and discussing laws aimed at serving localities' interests usually do not manage to promote "broader" legislation like an education reform or a job act (see also Wallack *et al.* 2003, p. 134).

⁶See also Taylor-Robinson (1999), Gagliarducci *et al.* (2011) and Marangoni & Tronconi (2011).

2.2.4 Constituency service and political particularism: where do we stand?

The reviewed literature shows that the study of constituency service has taken two main routes. A first strand, stemming from the field of American politics, describes constituency service as a central aspect of representation (Fenno 2002, Mayhew 1974a, Miller & Stokes 1963, Munroe 1977, Searing 1985). A second group of scholars, instead, describes constituency service—or, as they call it, political particularism—as a detrimental phenomenon that produces a sub-optimal political system characterized by discriminatory policies and overspending.

While scholars of constituency service have disagreed on the relevance of constituency control to political representation and on the externalities that it can generate, they generally agree on the fact that constituency service is a phenomenon of a geographical nature. In other words, they define an elected representative's constituency only in terms of its geographic location, i.e. the electoral district. For example, Miller & Stokes (1963) discuss how a representative's roll call behaviour can be influenced by the preferences of his own constituency, which is described as a unique geographic entity. Fenno (2002) uses the term "home places" to illustrate the tendency of House members to represent localities' interests.

The literature offers only few examples of studies that analyze instances of particularism and constituency service that are not uniquely geographically based. These studies describe elected representatives' willingness to serve the interests of narrower entities inside the constituency, like a social group, a company, or even a single individual (Di Palma 1977, Mejía-Acosta *et al.* 2006, Taylor-Robinson 1999). For example, Taylor-Robinson (1999) categorize bills initiated in the Honduran Congress as "local" if they target a local community, a sector of society, or an individual in the constituency.⁷ Di Palma (1977) differentiates between national legislation, which regulates all the citizens that possess a certain characteristic or engage in a certain behaviour, and sectional legislation, which regulates all the citizens belonging to a certain functional group in society. Pedrazzani &

⁷A person or a "legal" individual in the constituency.

Zucchini (2013) define “pork barrel bills” all those laws that include benefits for specific places, professional categories or interest groups, legal subjects or individuals.

2.2.5 Representation as responsiveness

The two scholarships on constituency service and political particularism⁸ that I have just introduced offer significant insights. However, some gaps remain. First, both scholarships mainly describe particularism and constituency service as phenomena of an exclusively geographical nature. By assuming that an elected representative’s service to localities only addresses the interests of his constituency as a whole, scholars of constituency service have overlooked the possibility that deputies could be willing to favour the interests of disparate clientele who belong to specific functional groups residing in their constituency, like certain professional categories, social classes, ethnic or religious groups. Second, while the first tradition⁹ overlooks the possible negative externalities arising from constituency influence, the second one¹⁰ completely disconnects constituency control and particularism from political representation. Starting from these considerations, I introduce Eulau & Karps (1977)’s work on representation as responsiveness, in an effort to show that by merging the two traditions in a comprehensive theory of representation we can obtain a more nuanced description of the phenomena of constituency service and political particularism.

Eulau & Karps (1977) build on Miller & Stokes (1963)’s contribution on constituency influence in the American Congress and propose a theory of representation-as-responsiveness. The authors explain that the relation of a politician with his own constituents can be well described by the instructed-delegate model of representation. According to this model, elected representatives should act in line with their electorate’s preferences regardless of their own preferences (Donsbach & Traugott 2007). By acting as delegates who represent their voters’ interests, legislators safeguard political representation. When we conceptualize political

⁸See Section 2.2.2 and 2.2.3.

⁹See Section 2.2.2.

¹⁰See Section 2.2.3.

representation in these terms, an elected representative's ability to be responsive to his voters' preferences is at the core of the representative-voters relationship, hence the use of the term "representation-as-responsiveness".

The authors describe four *styles*¹¹ and three *foci*¹² of political representation-as-responsiveness (see also Miller & Stokes 1963, p. 45). An elected representative's style of responsiveness pertains to the target of his "responsive conduct" (see Eulau & Karps 1977, p. 241). *Policy responsiveness* targets the great public issues and the extent to which representatives' policy opinions coincide with their constituency's policy positions. A second style is that of *service responsiveness*, which concerns the non-legislative services that deputies perform for their constituents, from answering to written inquiries to case work. The third style of representation-as-responsiveness is called *allocation responsiveness*, and is defined as the provision of "more generalized" benefits than those provided through service responsiveness, i.e. benefits that should cover the whole constituency (Eulau & Karps 1977, p. 244). The fourth style of responsiveness is called *symbolic responsiveness*, and it entails the construction of a relationship of trust and support between deputies and their constituents, attained through symbolic public gestures.

An MPs' focus of responsiveness defines the way he perceives his constituency (see Eulau & Karps 1977, p. 248). To look at the focus of responsiveness allows us to better appreciate the multidimensional character of representation, i.e. the fact that representatives can perceive their constituencies in a multitude of ways and not just as a geographic area corresponding to the electoral district (see Eulau & Karps 1977, p. 248). For instance, an MP can perceive his constituency in terms of territorial levels: a nation, a region, a state or a district. In this case, the focus is *geographical*. A second focus concerns particular functional groupings in a society: economic, religious, ethnic or ideological. In this case, the focus is *group-related*. Finally, a representative can focus his attention on individual voters, from notables to unknown clients. In this case, the focus is

¹¹"There are four possible components of responsiveness which, as a whole, constitute representation."(Eulau & Karps 1977, p.241)

¹²"The representative can perceive his constituency in a multitude of ways [...]. One might organize these possible foci into three categories." (Eulau & Karps 1977, p.241).

individual.

The authors conclude by explaining that an MP's focus of representation can vary with each of the four components of responsiveness and suggest that a better understanding of the relationship between styles and foci of representation would help disentangling the puzzle of representation. While a comprehensive analysis of political representation goes beyond the scope of this thesis, I will review Eulau & Karps (1977)'s model in an attempt to apply it more explicitly to the phenomena of constituency service and political particularism. I will propose a novel approach to the study of political particularism which has a twofold approach. First, it aims at clarifying what is the style of representation of a legislator that engages in particularistic policy-making. Does he have a policy, service, symbolic or allocative style? Second, it aims at explaining what are the different instances of political particularism that we can observe based on the the focus of representation of the elected representative engaging in particularistic policy-making: geographical, group-related, or individual instances.

2.3 Theoretical framework

2.3.1 Re-thinking political particularism

To develop my novel theoretical framework on political particularism I build on Eulau & Karps (1977)'s model of representation-as-responsiveness. While the authors apply the concept of representation-as-responsiveness to the study of political representation at large, I intend to use this same concept to explain the phenomena of constituency service and political particularism. The authors present a theory based on styles and foci of representation, which explains to us that a deputy can represent his voters' interests in different ways: through policy-making proposals, casework, constituency service, or symbolic gestures.¹³ Also, they assume that each elected representative can identify his voters either as citizens living in his electoral district, or as members of a specific functional

¹³Policy responsiveness, service responsiveness, allocative responsiveness, symbolic responsiveness.

group, or as separate individuals.¹⁴ Eulau & Karps (1977) do not explicitly refer to constituency service in their work, but they more generally talk about the relation of an elected representative with his constituents. The authors employ the concepts of foci and style of responsiveness with the intention of applying their theory of representation-as-responsiveness to political representation at large, which they conceive as a direct relationship between an elected representative and his constituents. Eulau & Karps (1977)'s model provides a valuable contribution to the study of political representation, and I argue that by adding a third element, that of the scope of responsiveness, we can obtain an even more nuanced understanding of representation. I use the concept of scope of responsiveness to differentiate between the local and the national levels of representation.¹⁵ An elected representative with a local scope will be mainly responsive to localities' interests, while an elected representative with a national scope will be mainly responsive to national interests. While we could apply Eulau & Karps (1977)'s model of foci and style of responsiveness to both levels of representation, in this study I will concentrate on the local level. In the next section, I will describe in detail how we can employ Eulau & Karps (1977)'s model of representation-as-responsiveness to describe the behaviour of elected representatives with a local scope of representation.

Table 2.1 sketches a possible combination of foci and styles of representation used to explain the phenomena of constituency service and political particularism. Each cell in the table refers to a particular combination of a style and a focus of representation-as-responsiveness. A quick look at the table shows that political particularism can be described as a specific instance of constituency service that is characterized by an allocative style of responsiveness. Starting from the first cell of Table 2.1, we find policy responsiveness. Policy responsiveness pertains to the policy orientation of a representative and of his voters. When the two match, and the representative acts accordingly, we can say that he is responsive to his voters (see Eulau & Karps 1977, p.242). Miller & Stokes (1963) call this agreement

¹⁴Geographic focus, group-related focus, individual focus.

¹⁵This of course means that the idea of "scope" is not new *per se*, since the differentiation between a local and national dimension is already part of the established literature on representation.

Styles of Representation				
Foci of Representation	Policy	Service	Allocation	Symbolic
Geographical	Congruence with the median voter	Non-legislative services for the whole constituency	Geographical Particularism	Symbolic gestures directed towards the whole constituency
Group	Congruence with functional groups	Non-legislative services for functional groups	Group-related Particularism	Symbolic gestures directed towards functional groups
Individual	Congruence with individuals	Non-legislative services for individuals	Individual Particularism	Symbolic gestures directed towards individuals

Table 2.1: **Political representation as responsiveness.** The table describes the relation between the *foci* and the *styles* of representation. While the definition of foci and styles is taken from Eulau & Karps (1977), the use of these concepts to describe the phenomenon of constituency service is part of this study's contribution to the literature.

“congruence”, and I use the same term in the first column of Table 2.1. Eulau & Karps (1977) state that policy responsiveness can be assessed by comparing the policy orientation of an elected official with “some measure of central tendency” of his district policy position. In the first cell of the table, I interpret this measure of central tendency as the preferences of the median voter in the constituency. Since the median voter’s preferences are a proxy for the policy position of the whole district perceived as a unique geographic entity, congruence with this policy opinion will be typical of a deputy with a geographical focus. Nothing prevents a politician from being responsive to the policy positions of certain ethnic, religious, economic or ideological groups in the constituency. This type of representative would have a group-related focus. A deputy with an individual focus would, instead, be responsive uniquely to the policy preferences of certain individuals residing in the constituency, they being notables or unknown clients. Symbolic responsiveness concerns gestures aimed at generating and maintaining trust and support. A deputy with a geographical focus would engage in public gestures that involve the whole constituency, for example by taking part in local events. A representative with a sector-related focus, instead, would participate in meetings and gatherings involving only certain economic, ethnic or religious groups. Lastly, a representative with an individual focus would cultivate personal relationships of mutual trust and support with individual constituents. Service responsiveness concerns the non-legislative services that deputies perform for their constituencies, i.e. casework (see Clapp 1963). Also in this case, a representative could be service-responsive with a focus on the whole district, for example, by using local newspapers to inform constituents about legislation that may be of interest to the whole geographic district (Eulau & Karps 1977, p. 243). Alternatively, a deputy could undertake to solve grievances that pertain exclusively to certain groups in the constituency (Eulau & Karps 1977, p. 243). Finally, a representative could have an individual focus, and devote time to solve particular problems for individual members in her constituency, for example, by acting as facilitator in bureaucratic matters (Eulau & Karps 1977, p. 243). Allocative responsiveness pertains to the distribution of resources to a candidate’s constituency. On the one hand, Eulau & Karps (1977) equate allocation responsiveness to pork-barrel, i.e. to public infrastructure projects that produce public goods. On the other

hand, the authors recognize that the expansion of government action in all sectors of the economy makes it difficult to assert that pork-barrel projects are only about the provision of non-excludable and non-rivalrous goods¹⁶. Indeed, the allocation of funds to deputies' constituencies could also finance, for example, the local police, or local education programs (see Eulau & Karps 1977, p. 245). I understand allocative responsiveness as the act of distributing goods and services, i.e. distributive policy in the broadest sense. As for the other three style of representation-as-responsiveness, allocative responsiveness can be targeted at the whole constituency, at certain functional groups inside the constituency, or at individuals living in the constituency. Allocative responsiveness coincides with what previous literature that studies distributive policy-making targeted at elected representatives' constituencies has defined "political particularism" (see Section 2.2.3). I will use the same terminology in this study. In the next section, I propose a detailed description of political particularism variation along the foci of responsiveness proposed by Eulau & Karps (1977).

2.3.2 A novel approach to the study of political particularism

Based on the previous discussion, I define political particularism as a style of representation that consists in the allocation of goods and services to identifiable geographic entities, functional groups, or individuals. The type of particularism is determined by the interest being served, i.e. by the focus of the representative. The third column of Table 2.1 illustrates the variation of political particularism along the three foci of representation defined by Eulau & Karps (1977). *Geographical particularism* is the act of distributing goods and services to a geographic entity, i.e. an MP's constituency. An example of geographical particularism would be an infrastructural intervention, like the construction of a bridge. In most of the previous literature, geographical particularism is equated to particularisms at large. Indeed, previous scholarship describes political particularism as a phenomenon of a purely geographical nature that takes the form of an over-provision of public goods to certain candidates' constituencies. Differently, in my theory I propose

¹⁶i.e. public goods.

a conceptualization of political particularism that aims at acknowledging its *multidimensionality*. To do so, I build on Eulau & Karps (1977)'s multidimensional model of representation-as-responsiveness and I propose the concept of group-related particularism.

Group-related particularism is the act of distributing goods and services to functional groups living in the constituency. An instance of group-related particularism would be the distribution of subsidies to the agricultural sector. Group-related particularism varies also along the types of functional groups considered. For example, if we were interested into the functional groups determined by sectors of the economy, we would talk about *sectoral particularism*. Why should we be interested in studying the phenomenon of sectoral particularism? Analyzing sectoral particularism, in addition to geographic particularism, helps us appreciating the multiple targets that politicians have in mind when they represent their voters: not just their electoral constituency but also professional categories, specific industries, certain social classes or ethnic groups. Moreover, conceptualizing and studying the phenomenon of sectoral particularism helps us providing a theory of political particularism that does not limit itself to explaining public overspending targeted at elected representatives' constituencies. On the contrary, it gives us the opportunity to also explain elected representatives' willingness to serve a variety of clientelistic interests inside their constituencies¹⁷: a phenomenon that produces distributive policies that benefit restricted categories in a society while raising the costs for all private individuals that are not part of those specific categories.

Finally, I also acknowledge elected representatives' willingness to serve the interests of specific individuals. To do so, I build on Eulau & Karps (1977) and propose the concept of individual particularism. *Individual particularism* is the act of distributing goods and services to a person, be it a notable or an unknown client. An example of individual particularism would be the distribution of patronage appointments in the bureaucracy.

Before describing the operationalization of particularism in the next Section, I would like to make a few remarks on the novel conceptualization of political

¹⁷Which correspond to the variety of target that political representation has.

particularism here proposed. First, I contend that political particularism, like constituency service, can generate negative externalities¹⁸ but it is not a detrimental phenomenon *per se*. The literature presented in Section 2.2.3 illustrates the potential perils of political particularism: inefficient allocation of resources, discriminatory policies and a disregard of programmatic policy-making. While these are some of the potential negative externalities of political particularism, they are not to be considered as the only effects of targeted distributive policies. Indeed, the literature shows that distributive policies can also generate positive externalities. For example, Wallack *et al.* (2003) explains that modest levels of particularism are linked to better policy outcomes. Gaviria *et al.* (2004) demonstrates that moderate levels of political particularism foster economic recovery. Cadot *et al.* (2006) find scant evidence of concern for the maximization of economic revenues to distributive policies.

Second, I conceptualize political particularism as a style of representation. While this does not exclude the fact that particularism can create sub-optimal social and economic conditions in a society, it helps understanding the phenomenon more in depth. When deputies act as resources allocators, they are still exercising their role as citizens' representatives. Allocative responsiveness is one of the ways in which deputies can represent the interests of their voters in national assemblies, just like policy, service or symbolic responsiveness.¹⁹

Finally, I claim that political particularism varies with each of the three components of the foci of representation. Elected representatives can favour the interests of their whole constituency conceived as a unique geographic entity²⁰, the interests of specific functional groups inside their constituency²¹, or those of certain individuals living in their constituency.²²

¹⁸As explained in Section 2.2.3.

¹⁹On this, see also Eulau & Karps (1977)'s argument on the fact that equating political representation to policy responsiveness means reducing the concept of representation to one of its components.(see Eulau & Karps 1977, pp. 240-241).

²⁰Geographic particularism.

²¹Sectoral particularism.

²²Individual particularism.

2.4 Data

2.4.1 Constructing a new dataset on Italian MPs and bill proposals

In order to capture instances of particularistic lawmaking in Italy, I have developed a new database on Italian MPs' proposed legislation, more precisely on individual member bill proposals (IMBPs). IMBPs are private bills, i.e. bills presented by individual MPs.²³ IMBPs were very popular in the postwar period and they were mainly used as "a gesture to please local and special interests" (Di Palma 1977, p. 46). Particularistic IMBPs were so relevant and well-known that observers of Italian politics even devised a new name to refer to them: *leggine*. Indeed, previous literature offers substantial anecdotal evidence of the importance that particularistic bills had for Italian politicians in search of electoral support among their constituents. Among many, Somogyi & Sartori (1963) explain how the term *leggine* became very popular during the 1960s and 1970s as it was meant to signal MPs' inclination to propose particularistic laws to abet their clientele's interests. Di Palma (1977) reports a testimony from a Socialist²⁴ senator explaining the relevance of particularistic legislation in Italian electoral politics²⁵:

"Parliament continues to pass *leggine* upon *leggine* as come, tailor-made for this or that special category [...]; to add... fringe benefits ... upon fringe benefits [...]"

Golden (2003) explains how Italian politicians, especially members of the Christian Democracy, were able to claim credit for particularistic services offered to their voters through the peculiar system of the *factional organizations*. Predieri (1963) explains how crucial were *leggine* for Italian politicians looking for electoral support. If we are interested in studying political particularism, IMBPs' thus seem to be among the most relevant documents to analyze.

Aside from their relevance to the study of particularistic policy-making, I con-

²³Or bills presented as first signatory—"primo firmatario".

²⁴The author also reports similar testimonies by members of the Communist Party and of the Christian Democracy.

²⁵See Di Palma 1977, p. 77.

concentrate on IMBPs for three further reasons. First, to consider an MP's bill proposals enables an individual-level analysis. While a significant strand of the literature on political particularism and pork barrel has employed data at the state, region, or electoral district level of aggregation²⁶ (Gamm & Kousser 2010, Golden & Picci 2008, Mejía-Acosta *et al.* 2006, Taylor-Robinson 1999), scholars have recognized that the use of individual-level data helps in achieving a greater rigor when analyzing causal mechanisms that operate primarily at the individual level²⁷ (Gagliarducci *et al.* 2011, Marangoni & Tronconi 2011, Mejía-Acosta *et al.* 2006). That is the case with political particularism, a phenomenon that pertains the electoral connection between each individual representative and his voters.

Second, scholars have recognized that legislative initiative is one of the few parliamentary activities where an MP's action is not rigidly constrained by party discipline (see Bráuninger *et al.* 2009 p. 4). As a consequence, to propose legislation best reflects an MP's individual behaviour with respect to, for example, voting decisions (see Marangoni & Tronconi 2011, p. 419).²⁸

Third, while the weak control exercised by political parties over IMBPs is to be attributed to their little chance of becoming laws, this does not mean that these legislative texts are of limited relevance.²⁹ Indeed, IMBPs fulfill many critical functions (Arter 2006, Marangoni & Tronconi 2011, Mattson 1995, Vassallo 2001). First, IMBPs have an "instrumental function". MPs can influence the legislative process simply by getting individual bills to the floor, since these proposals become part of the ongoing bargaining process that takes place in national parliaments. Second, IMBPs constitute an effective electoral propaganda tool, especially when they aim at favouring small clientele's interests. Third, IMBPs have an "expressive

²⁶Golden & Picci (2008) have taken into consideration the characteristics of the average Italian MPs.

²⁷More details on this matter, and in particular on the better suitability of single country studies which employ individual-level data for the analysis causal mechanisms, are available in Section 2.6.1.

²⁸For a comprehensive discussion of party discipline and legislators behaviour see Franks (1987), Kam (2009), Krehbiel (1993), Laver & Schofield (1990), Proksch & Slapin (2012).

²⁹Marangoni & Tronconi (2011), Mattson (1995), among many, discuss the small chance of success of individual members' bill proposals.

function". Through legislative proposals, MPs express and communicate their opinion to their voters and to the public at large.

The procedure to acquire bills' texts involved web scraping techniques as well as an optical character recognition (OCR) procedure. First, I have automatically retrieved the texts of MPs' bill proposals from the Italian Parliament website using a set of scripts written in Python. While bills' texts belonging to the last four legislatures are available in machine-readable format, documents belonging to the first 12 legislatures are available exclusively in pdf-scanned format. I have therefore converted the scanned images of bills' texts belonging to the first 12 legislatures³⁰ into machine-encoded text using a set of scripts written in Python³¹ (see Figure A.2 in Appendix A.1 for an example of a scanned image of bill proposal's text). The final corpus contains every bill proposed as first signatory by Italian MPs during the first 16 legislatures of the Italian Republic—from 1948 to 2013.³² The total number of documents amounts to 49,212, and it spans over a period of 65 years. Second, I have retrieved data on Italian MPs' demographics from the Italian Parliament website (see Figure A.1 in Appendix A.1 for an MP's personal page example). I have subsequently classified the profession indicated by each MP using the International Standard Classification of Occupations (ISCO), which categorizes professions based on the skills level required to perform them—from routine physical tasks to complex problem-solving operations.³³ I have categorized the level of education of each MP on a scale that goes from primary to postgraduate education. Finally, I have inserted the gender dimension in my data-set using a thesaurus of more than 1,600 Italian proper nouns. The final data-set on MPs demographics now includes, for every MP elected during the first 16 Italian legislatures, information on his date and place of birth, district

³⁰For the last four legislature the OCR procedure was not necessary, since bills' texts are available in html and txt format.

³¹The procedure used for converting scanned texts into machine-encoded text is called optical character recognition (OCR), and it is an essential step if one wants to perform an automated text analysis, since computer-based content analysis is implemented on written text and not on images.

³²Bill proposals introduced by individual members of parliament - *leggi presentate come primo firmatario*.

³³ILO International Standard Classification of Occupations (ISCO-08), http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_172572.pdf.

and region of election, political party or list of election, system of election³⁴, parliamentary group, education, profession, age and gender.

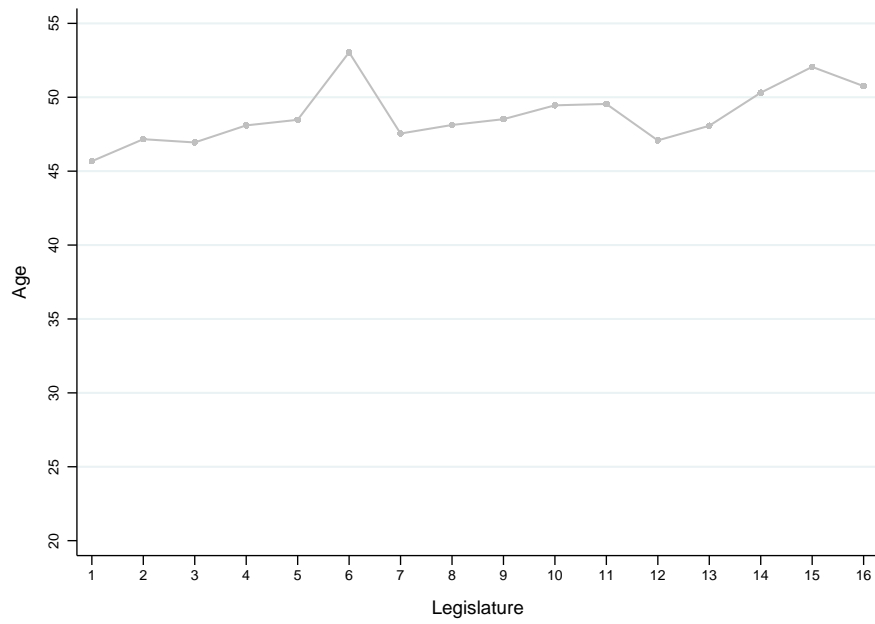
2.4.2 Describing the new dataset

Deputies' demographics

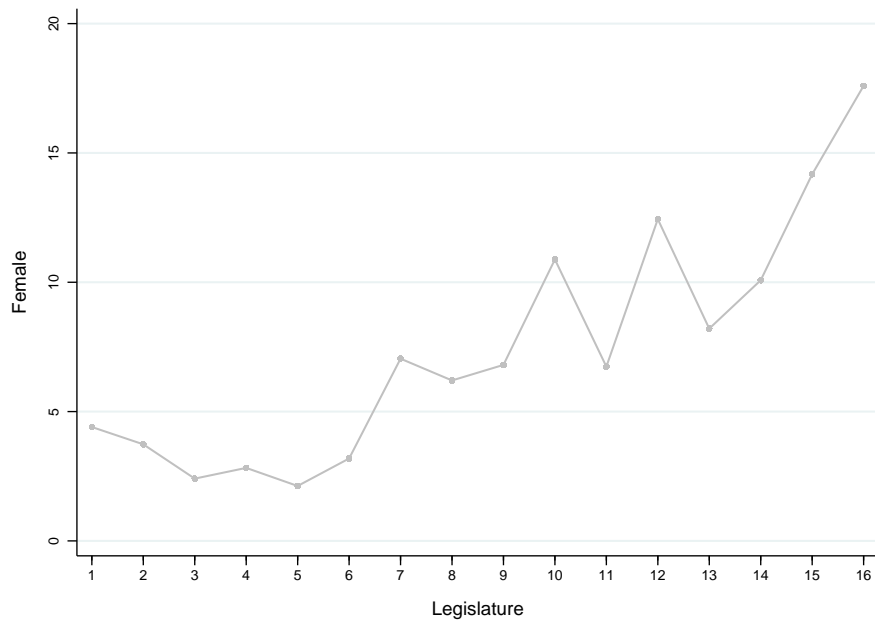
The new dataset contains information on more than 10,000 MPs over 65 years. Figure 2.1 shows that for the whole time period considered most of the MPs elected in the Italian parliament are middle-aged males. While the average age remains pretty stable over the years (see also Table 2.3), the female quota follows an increasing trend, with the percentage of women deputies going from 4.4% in the first legislature to 17.6% in the 16th legislature (see also Table 2.2). Italian MPs on average have a high level of education, with most of the MPs having a university degree (see Figure 2.2 and Table 2.4). Deputies with a very high and very low level of education—postgraduate and primary—are an absolute minority, while secondary and tertiary levels of education are well represented in the sample. Still, most of the MPs are graduates, with a percentage that stays almost stable at 60-70% over the years.³⁵ Table 2.5 shows that the majority of the MPs are employed in occupations that require medium or high qualifications, being them professionals or employees. Also more elementary occupations are represented in the sample, like plant or agricultural workers, but they constitute a minority.

³⁴In case of mixed-member electoral system.

³⁵Note that the two lowest values in legislature 14 and 15 seem to be driven by the number of MPs that choose not to provide their education level.



(a)



(b)

Figure 2.1: **Deputies' age and gender.** The figure shows the average age of MPs (panel 2.1a) and the percentage of female deputies (panel 2.1b) over the first 16 legislative terms of the Italian parliament.

Legislature	Male	Female
1	95.6%	4.4%
2	96.3%	3.7%
3	97.6%	2.4%
4	97.2%	2.8%
5	97.9%	2.1%
6	96.8%	3.2%
7	93.0%	7.0%
8	93.8%	6.2%
9	93.2%	6.8%
10	89.1%	10.9%
11	93.3%	6.7%
12	87.6%	12.4%
13	91.8%	8.2%
14	89.9%	10.1%
15	85.8%	14.2%
16	82.4%	17.6%

Table 2.2: **Deputies' gender.** The table shows the percentage of male and female deputies during the first 16 legislatures of the Italian parliament.

Legislature	Age
1	46
2	47
3	47
4	48
5	48
6	53
7	48
8	48
9	49
10	49
11	50
12	47
13	48
14	50
15	52
16	51

Table 2.3: **Deputies' age.** The table shows the average age of Italian deputies over the first 16 legislative terms of the Italian parliament.

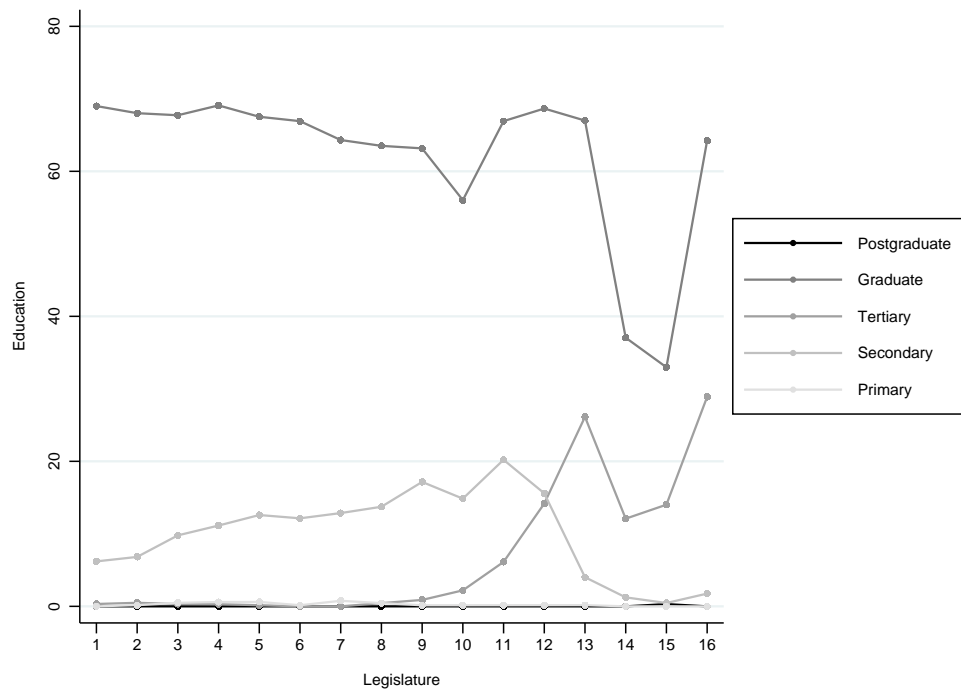


Figure 2.2: **Deputies' education level.** The Figure shows the percentage of deputies with a certain education level (Postgraduate, Graduate, Tertiary, Secondary and Primary) over the first 16 legislative terms of the Italian parliament.

Legislature	Graduate	Postgraduate	Prefer not to say	Primary	Secondary	Tertiary
1	69.0%	0.0%	24.5%	0.0%	6.2%	0.3%
2	68.0%	0.0%	24.5%	0.2%	6.8%	0.5%
3	67.7%	0.0%	21.7%	0.5%	9.8%	0.3%
4	69.1%	0.0%	18.9%	0.6%	11.1%	0.3%
5	67.5%	0.0%	19.1%	0.6%	12.6%	0.2%
6	66.9%	0.0%	20.8%	0.2%	12.1%	0.0%
7	64.3%	0.0%	22.1%	0.8%	12.9%	0.0%
8	63.5%	0.0%	21.9%	0.4%	13.7%	0.4%
9	63.2%	0.0%	18.6%	0.1%	17.2%	0.9%
10	56.0%	0.0%	26.8%	0.1%	14.9%	2.2%
11	66.9%	0.0%	6.6%	0.2%	20.2%	6.1%
12	68.7%	0.0%	1.4%	0.2%	15.6%	14.2%
13	67.0%	0.0%	2.7%	0.2%	4.0%	26.1%
14	37.1%	0.0%	49.6%	0.0%	1.2%	12.1%
15	33.0%	0.3%	52.2%	0.0%	0.5%	14.0%
16	64.2%	0.0%	5.1%	0.0%	1.8%	28.9%

Table 2.4: **Deputies' education level.** The Table shows the percentage of deputies with a certain education level (Postgraduate, Graduate, Tertiary, Secondary and Primary) over the first 16 legislative terms of the Italian parliament. Note that some MPs did not supply their education level; these are inserted in the category "Prefer not to say" (not included in Figure 2.2).

	Armed Forces	Clerical support workers	Craft and Related Trades Workers	Elementary Occupations	Managers	Plant and Machine Operators	Prefer not to say	Professionals	Skilled Agricultural Forestry Workers	Student	Technicians Associate Professionals	Unemployed
1	1.0%	12.9%	0.5%	3.6%	2.1%	0.5%	5.2%	70.8%	2.6%	0.3%	0.2%	0.3%
2	1.0%	15.6%	0.6%	5.7%	2.8%	0.2%	8.0%	62.5%	3.1%	0.5%	0.2%	0.0%
3	0.3%	20.2%	0.3%	4.7%	2.9%	0.3%	6.3%	62.6%	1.9%	0.3%	0.2%	0.0%
4	0.6%	19.5%	0.7%	4.0%	2.1%	0.3%	7.0%	64.0%	1.5%	0.1%	0.1%	0.0%
5	0.6%	21.7%	0.3%	4.4%	2.7%	0.3%	5.8%	61.9%	2.0%	0.2%	0.2%	0.0%
6	0.6%	23.2%	0.3%	3.2%	3.9%	0.3%	5.2%	61.5%	1.5%	0.3%	0.0%	0.0%
7	0.5%	26.3%	0.0%	4.3%	4.3%	0.3%	6.1%	57.0%	1.1%	0.2%	0.0%	0.0%
8	0.3%	25.8%	0.0%	3.2%	4.7%	0.3%	8.3%	56.0%	1.2%	0.1%	0.0%	0.0%
9	0.3%	26.6%	0.0%	4.0%	5.0%	0.3%	7.4%	55.0%	1.2%	0.1%	0.0%	0.0%
10	0.1%	20.6%	0.0%	1.6%	4.6%	0.0%	23.8%	48.5%	0.7%	0.0%	50.0%	0.0%
11	0.0%	22.8%	0.2%	0.8%	6.7%	0.2%	12.3%	56.0%	0.8%	0.0%	0.3%	0.0%
12	0.0%	15.0%	0.3%	0.8%	9.1%	0.3%	2.7%	70.9%	0.5%	0.0%	0.5%	0.0%
13	0.0%	21.3%	0.5%	0.8%	13.1%	0.3%	2.3%	60.1%	0.2%	0.3%	1.0%	0.0%
14	0.0%	9.6%	0.2%	0.2%	7.6%	0.2%	50.1%	31.9%	0.0%	0.2%	0.2%	0.0%
15	0.0%	6.2%	0.3%	0.0%	11.7%	0.0%	51.8%	30.0%	0.0%	0.0%	0.0%	0.0%
16	0.1%	16.9%	0.3%	0.3%	22.4%	0.0%	4.1%	55.6%	0.1%	0.0%	0.1%	0.0%

Table 2.5: **Deputies' profession.** The table indicates the profession of deputies elected over the first 16 legislative terms of the Italian parliament. The professions are categorized according to the International Standard Classification of Occupations (ISCO), which categorizes professions based on the skill level required to perform them—from routine physical tasks to complex problem-solving operations.

Individual member bill proposals

The relevance of IMBPs³⁶ is confirmed by the considerable number of private bills that Italian MPs propose in every legislature. Deputies seem to employ this “legislative instrument” quite often. To give a better idea of the relative importance of IMBPs with respect to other legislative documents, I compare the number of IMBPs proposed to the amount of ordinary bills proposed (see Table 2.7).³⁷ A quick look at Table³⁸ 2.6 and 2.7 shows that IMBPs are not a small minority among the set of laws presented in the Italian Parliament. Indeed, the number of IMBPs presented is comparable to the total amount of ordinary bills proposed in the Senate. Italian MPs present at least 1000 (IMBPs) per legislature, with an average of 3,000 and a maximum of almost 5,000 in the 10th legislature. The number of IMBPs has increased over the years, going from 1,004 during the first legislature to 3,319 in the 16th legislature. The upward trend is not constant, showing downward spikes during the 7th, 11th, 12th, and the 15th legislature. These counter-trend movements seem to be produced by the lower than usual duration of these legislatures: two years instead of four/five years.³⁹

2.5 Operationalizing political particularism

2.5.1 Explaining variation in political particularism: the foci of representation

I operationalize political particularism as an MP’s act of serving parochial interests by proposing ad hoc legislation.⁴⁰ Table 2.8 reports the types of political particularism that I consider in my analysis, accompanied by an example. The bill proposals indicated in the examples are taken from Pedrazzani & Zucchini (2013) and Somogyi & Sartori (1963)’s manual content analyses of Italian legislation. I operationalize geographical particularism as a bill proposal that distributes

³⁶Instrumental, expressive and propaganda function.

³⁷Data on the amount of ordinary bills presented in the Chamber are not available for the time period considered, this is why I am using data from the Senate.

³⁸Ordinary bills initiated by citizens and by the regions are not included in the sum.

³⁹The regular duration of a legislature in Italy is five years.

⁴⁰Individual Member Bill Proposals.

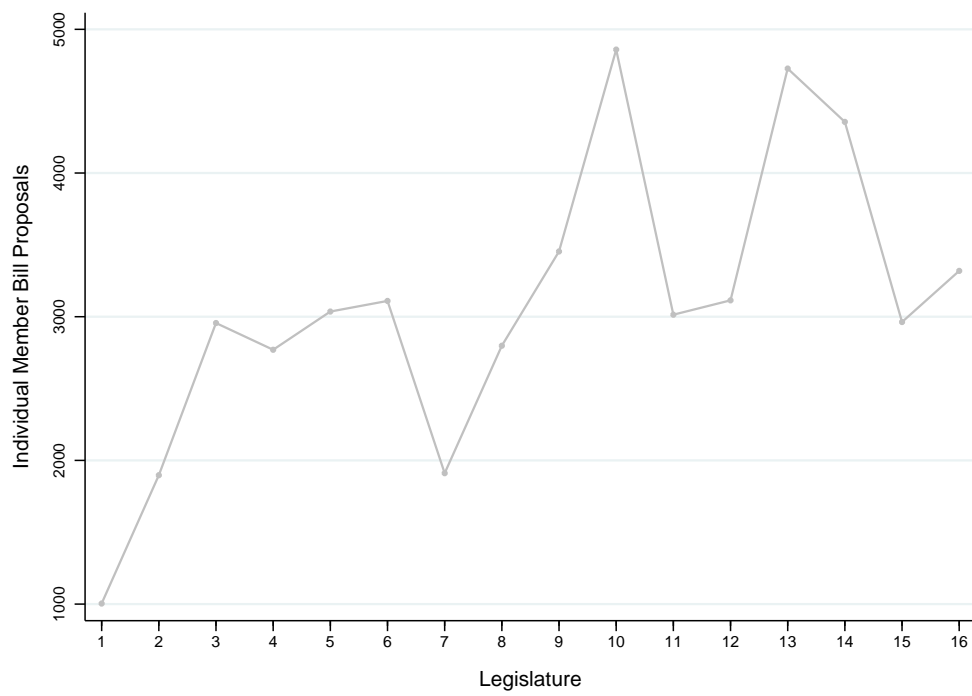


Figure 2.3: **Individual member bill proposals.** The figure shows the number of individual member bill proposals (IMBPs) presented by Italian deputies over the first 16 legislative terms of the Italian parliament.

Legislature	IMBPs	Duration
1	1,004	5 years
2	1,897	5 years
3	2,956	5 years
4	2,770	5 years
5	3,036	4 years
6	3,110	4 years
7	1,911	3 years
8	2,798	4 years
9	3,454	4 years
10	4,859	5 years
11	3,014	2 years
12	3,114	2 years
13	4,727	5 years
14	4,356	5 years
15	2,963	2 years
16	3,319	5 years

Table 2.6: **Individual member bill proposals.** The table shows the total number of individual member bill proposals (IMBPs) presented by Italian deputies over the first 16 legislative terms of the Italian parliament.

Legislature	Bill Presented at the Senate
1	1,466
2	1,487
3	1,521
4	1,848
5	1,609
6	2,000
7	1,228
8	1,787
9	1,808
10	2,632
11	1,692
12	2,372
13	4,598
14	1,971
15	3,401

Table 2.7: **Ordinary bills presented at the Senate.** The table shows the total number of ordinary bills presented at the Senate. The sum includes all bills initiated by senators and by the government.

Type of Political Particularism / Foci of Representation		
	Geographical	Sectoral
Interest Type / Focus	The MP's Constituency	From a firm or a professional category, to an entire sector of the economy
Example	<i>Infrastructural intervention for the city of Rome</i>	<i>Award for the urban & architectural sector</i>

Table 2.8: **Operationalization of political particularism.** The table describes the operationalization of political particularism. The examples are taken from the content analyses of Italian legislation provided by Pedrazzani & Zucchini (2013) and Somogyi & Sartori (1963) .

goods and services to a candidate's constituency. An example of geographically-targeted bill would be one that proposes infrastructural interventions for the city of Rome.⁴¹

With regard to group-related particularism, I operationalize only the sectoral type. While an analysis that considers all functional groups in a society—economic, religious, ethnic—would certainly be more exhaustive, the most substantial channels of perceived impact of lawmaking that targets functional groups remain the basic sectors of the economy (see Lowi 1964, p.691). I thereby concentrate on functional groups related to the economy—economic sectors—following previous analyses of distributive policy-making targeted at functional groups (see Mejía-Acosta *et al.* 2006, Taylor-Robinson 1999). I operationalize sectoral particularism as a bill that distributes goods and services to a whole sector of the economy, a professional category, or a company/firm active in that particular economic sector. An example of sector-targeted bill would be one that institutes an award for the urban and architectural sector.⁴²

While the literature proposes examples of bills directed towards individual persons (see Taylor-Robinson 1999, p. 618)⁴³, to systematically detect individual particularism in the Italian legislation would be unfeasible. The distribution of favours to individual clients was mainly performed by distributing jobs in the bureaucracy through non-legislative initiative. Patronage appointments were granted by means of: (1) the spoils system in parastatal structures; (2) the manipulation of the recruitment process by adjusting merit examination results; (3) the promotion of personnel on the basis of political affiliation instead of merit (see Golden 2003, p. 201). To detect these instances of individual particularism would be impractical. On the one hand, the manipulation of the recruitment process was obviously an illegal and therefore concealed practice. Furthermore, it would be hard to undoubtedly distinguish between a partisan appointment in a parastatal structure

⁴¹“Conversione in legge del decreto-legge 16 settembre 1987, n. 380, recante interventi urgenti per Roma, Capitale della Repubblica.” (Pedrazzani & Zucchini 2013).

⁴²“Istituzione di ricompense per benemerienze nel settore urbanistico, architettonico e costruttivo.”(Somogyi & Sartori 1963).

⁴³The example of individual particularism inserted in Table 2.8 is taken from Taylor-Robinson (1999)'s analysis.

and a merit-based one, or between a promotion based on merit and a promotion based on partisanship. I will thus limit my analysis to geographical and sectoral particularism.

2.6 Methodology

2.6.1 Case selection. The Italian way: political particularism and *leggine*

Why does a single-country case study constitute a valid option to study political particularism? Also, why Italy? First, a single country case study can offer novel theoretical insights by providing the necessary conditions to observe a particular phenomenon of interest (see Golden 2005, p. 6). The Italian case is well-suited for this purpose. Indeed, anecdotal evidence reports the presence of particularistic policy making in Italy, especially in the postwar period. During the restoration of democracy, the connection of the majoritarian Acerbo Law with the rise of Fascism fostered the support for a proportional system (see Baldini 2011, p. 644). The 1948 electoral law established an open-list proportional system (PR open-list), where the relative importance of personal reputation over party reputation was higher for a candidate seeking re-election (Shugart 2001). This highly personalistic system incentivized “pork barrel” politics (Golden & Picci 2008). Moreover, little room was left in the Italian Parliament for legislation that did not find ready and organized clientele to support it (Di Palma 1977). Most of the proposed bills were defined *leggine*, or *small laws*. The term became popular during the 1960s and 1970s, and it was meant to signal MPs’ inclination to propose particularistic laws to abet their clientele’s interests (see Di Palma 1977, p. 65). A high presence of geographically-targeted lawmaking has been detected also in subsequent years, during the 13th and 16th legislatures (Gagliarducci *et al.* 2011, Marangoni & Tronconi 2011).⁴⁴

Second, when focusing on an in-depth single country analysis, scholars can produce

⁴⁴Marangoni & Tronconi (2011) refer in particular to the 13th and 14th legislatures, which span the years from 1996 to 2006. Gagliarducci *et al.* (2011)’s analysis considers also the 13th legislature—from 1994 to 1996.

measures that are more attuned to capture the phenomenon of interest. This, in turn, can potentially permit a level of measurement validity⁴⁵ that would not be feasible when performing cross-national analyses (see Golden 2005, p. 7). Let me illustrate the point. To study political particularism, I have collected 49,212 bills proposed by Italian MPs over a period of 65 years. Subsequently, I have relied on the Italian Parliament's official classification and on available data sets on Italian bills categorization to develop four dictionaries of Italian political particularism. Finally, I have validated the proposed measure using an on-line labour platform⁴⁶ where Italian speaking individuals have read and classified 500 sentences extracted from my corpus. This procedure has allowed me to produce a measure of political particularism that was tailor-made for the Italian case. As previous studies have shown, "better measures lead to better findings" because they are specifically conceived for capturing the phenomenon that we want to analyze (see Golden 2005, p. 7).

Third, single country studies can achieve greater rigor in analyzing causal mechanisms. Indeed, many cross-country analyses are merely correlational, since they study causal relationships that occur at the sub-national level and cannot be directly inspected or measured at the national level (see Golden 2005, p. 6). Scholars have already recognized the suitability of employing one-country case studies to analyze causal mechanisms. Gagliarducci *et al.* (2011), when analyzing electoral incentives to particularistic and rent-seeking policy making in the Italian parliament, claims that cross-national tests detect meaningful correlations conforming with the theory, but they usually do not provide incontrovertible evidence on the disclosure of causal effects (Gagliarducci *et al.* (2011), p. 5). In his account of the case study method, Gerring (2004) explains that single-country studies outperform cross-country analyses with regard to theory-building and to the disclosure of causal mechanisms. Moreover, Golden (2005) explains that one-country analyses enable data collection efforts and measurement validation techniques that would be unfeasible cross-nationally. Given my intention to

⁴⁵Further details on the validity of the measure of political particularism here proposed are provided in Section 2.7.

⁴⁶The on-line platform that I have used is called Figure Eight (Benoit *et al.* 2014). More details on the platform features and functionalities, as well as on the validation procedure that I have performed, are available in Section 2.7.

provide a new theoretical framework for political particularism, and considered my interest in the disclosure of the causal-mechanism underlying particularistic policy-making, I argue that an in-depth study of the Italian case is best suited to fulfill my purpose.

2.6.2 Content analysis of politically relevant documents

Analyzing legislation' content

Most of the literature on political particularism focuses on the geographical diversion of government resources usually looking at infrastructural expenditures (Battaglini & Coate 2008, Besley & Coate 2003, Golden & Picci 2008, Pennock 1970, Shepsle & Weingast 1981, Weingast *et al.* 1981). This methodology works well in identifying the geographical instances of political particularism. Nevertheless, it has four main flaws: (1) it only considers geographical instances of particularistic policy-making; (2) it completely neglects the relevance of allocative responsiveness to political representation; (3) it tells us little about the incentives to engage in particularistic policy-making (see Shugart 2005, p. 50). As a result, the aforementioned methodology does not provide a comprehensive explanation of the causal mechanism underlying political particularism.

Based on these remarks, I propose an analysis of political particularism that focuses on lawmaking. First, the analysis of legislative texts facilitates a study of political particularism that takes into account all the different existing foci of representation. While most of the literature on particularism focuses only on its geographical instances, previous studies have shown that text analysis techniques can be used to detect group-related and individual instances of political particularism too (Martin 2011, Mejía-Acosta *et al.* 2006, Taylor-Robinson 1999). Second, analyzing bills' texts gives us the opportunity to study political particularism without overlooking its relevance to political representation, i.e. the fact that allocative responsiveness is one of the four existing styles of representation (Eulau & Karps 1977). As Miller & Stokes (1963) remind us, "the question of how the representative should make up his mind on legislative issues is what the classical arguments over representation are all about" (see Miller & Stokes 1963, p. 47).

To put it simply, if we really want to analyze political particularism within the context of political representation, we cannot overlook the most relevant means through which politicians guarantee political representation to their voters: the legislative process. Third, previous studies have shown that the content analysis of bills provides valuable insights on the potential causes of political particularism.⁴⁷ Indeed, when we study the legislative process, and in particular bill proposals, we are able to capture MPs' willingness to propose particularistic legislation without incorporating the effect of potential confounding factors influencing the chances that a bill proposal becomes law (Cox 1987). Since this dissertation aims at studying the causes of particularistic policy-making, looking at the legislative process seems to be the best approach.

In sum, the scrutiny of bills' texts makes it possible to detect group-related and individual as well as geographical instances of political particularism, to take into account political representation, and to better study the causes of particularistic policy-making. All of this contributes to a more nuanced understanding of particularistic policy-making.

Computer-assisted content analysis

To detect instances of geographical and sectoral particularism, I employ automated text analytic techniques to inspect the content of legislative texts. More precisely, I employ a dictionary approach integrated by the use of algorithms that aim at reducing instances of false positives, i.e. bills incorrectly classified as particularistic. The use of automated text analysis scales up the content analysis of documents, thus enabling the scrutiny of a very large corpus of parliamentary documents. Furthermore, computer coding outperforms manual coding in terms of reliability (see Laver & Garry 2000, p. 314). Unlike human-coded content analysis, the same computer coding applied to the same text always reproduces the same results. Finally, the use of automated language processing techniques improves the feasibility of replication or extension studies. Since reproducing the same

⁴⁷Indeed, there is a vast literature that scrutinizes lawmaking in an effort to identify the incentives that different electoral systems have on elected representatives' propensity to favour parochial interests (Di Palma 1977, Gamm & Kousser 2010, Martin 2011, Mejía-Acosta *et al.* 2006, Somogyi & Sartori 1963, Taylor-Robinson 1999, Wallack *et al.* 2003).

or analogous analyses using automated techniques is faster than when we use manual content analysis, replication or extension analyses can be more easily conducted.

The dictionaries of Italian political particularism

Automated dictionary methods usually consider the rate at which key words appear in a text to classify documents into known categories (Grimmer & Stewart 2013). For the sake of this analysis, I consider two different categories of classification: geographical and sectoral particularism. I develop one specific dictionary for each category, *Geo* and *Sector*. Moreover, I construct a pork-barrel dictionary (*Pork*), and a non-pork barrel dictionary (*Non-pork*). *Pork* contains words indicating the provision of benefits, while *Non-pork* contains words indicating that a certain benefit has been negated or suspended. In order to build my dictionaries of Italian political particularism, I rely on TESEO: the Italian's Parliament's official classification.⁴⁸ The dictionary comprehends two broader classification systems: *teseo* and *geografici* (TESEO, GEO). GEO includes 9,602 geographical locations, from entire regions to cities and small towns. TESEO comprehends 3,650 terms grouped into 45 thematic areas. TESEO includes, among other descriptors, a list of economic sectors' activities. The key terms constituting the entries of the dictionaries are those used to classify parliamentary documents since 1848, and they have been updated until 2015.

In order to detect geographical instances of political particularism, I use a complete list of all the Italian municipalities updated in 2017. I subsequently integrate the list of municipalities with the geographical locations indicated in GEO. The integration with GEO enables the inclusion of municipalities, or geographical entities smaller than a municipality (e.g. *frazioni*), that could not exist anymore and therefore would not be present in the up to date list of municipalities. The final dictionary, *Geo*, also contains the names of all the Italian regions (e.g. "Lombardia") as well as the names of regions' inhabitants (e.g. *Lombardi*), and

⁴⁸A more detailed description of the dictionary is available here: https://www.senato.it/3235?testo_generico=745. The dictionary can be accessed here: <http://www.senato.it/TESEO/h3.exe/ateseo/fteseo?type=R&artddl=0&form=/ric/docnonleg/raffinaricerca.do&extra=params.rows>.

adjectives referring to a region (e.g. “Lombarda”, “Lombardo”), for a total of 14,735 terms (see Table A.3, in Appendix A.5.1).

In order to detect sectoral instances of particularism, I use the Italian version of the Statistical Classification of Economic Activities in the European Community (NACE)⁴⁹ integrated by the list of economic sector activities contained in TESEO. The final dictionary, *Sector*, contains 623 terms that comprehend three different typologies: (1) an economic sector or activity name (e.g. agriculture); (2) the name of the equipment used in or the output produced by an economic or sectoral activity (e.g. agricultural tools, cereals); (3) the name of the working category employed in a certain economic or sector activity (e.g. farmers) (see Table A.4, in Appendix A.5.2). While the construction of *Geo* involved the simple integration of municipalities' names with the geographic locations indicated by GEO, the development of *Sector* proved to be less straightforward. Some of the key words contained in NACE and TESEO, while actually referring to a sector of the economy or a professional category in a specific context, can possess a completely different meaning in other contexts. A typical example is the term “impresa”, which in the Italian language can both refer to a firm or business or to an endeavour or challenge. To avoid the uncontrolled inclusion of multiple meaning words (mm-words) like “impresa”, I have checked every entry in *Sector* by using an online dictionary of Italian language that indicates all the common meanings of a particular term.⁵⁰ Afterwards, I have developed two different action strategies. First, if the mm-word was accompanied by an adjective or a genitive case, I have included it in the relative dictionary entry. For example, “impresa edile”, (mm-word accompanied by adjective), indicates exclusively a construction company, as well as “coltivazione di ortaggi”, (mm-word accompanied by a genitive case), indicates exclusively the cultivation of vegetables.⁵¹ Second, if the mm-word is not accompanied by an adjective or a genitive case, the mm-word in question has not been inserted in the dictionary.

⁴⁹A detailed description, as well as a complete list in excel format, are available here: http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL&StrNom=NACE_REV2&StrLanguageCode=IT&IntPcKey=&StrLayoutCode=HIERARCHIC.

⁵⁰Treccani - Vocabolario della Lingua Italiana: <http://www.treccani.it/vocabolario/>.

⁵¹The term “coltivazione”, similarly to “cultivation” in English, can either refer to the cultivation of land or to the cultivation of skills or interpersonal relationships.

I consider targeting a specific sector of the economy or a geographic location as a necessary but not sufficient condition to categorize legislation as particularistic. The bill concerned, indeed, needs to be clearly designed to benefit that particular sector or constituency. In order to capture this crucial feature, I have developed the *Pork* and *Non-pork* dictionaries. Previous analyses of Italian legislation have categorized as particularistic every bill that reported a reference to the same region where the MP proposing the bill had been elected (Gagliarducci *et al.* 2011, Marangoni & Tronconi 2011). Building on this approach, I try to produce a measure that also captures the subject⁵² that is presumably receiving a benefit. To construct *Pork* I have relied on available data sets on Italian bills classification⁵³ (Pedrazzani & Zucchini 2013; Somogyi & Sartori 1963). Somogyi & Sartori (1963), in a corpus of 177 bills⁵⁴, identify 110 *leggine*, defined as bills of limited scope and relevance, that can benefit individuals or restricted categories of citizens. The term “*leggine*”, indeed, more generally refers to limited scope legislation, which is not always aimed at benefiting a particular category and which could also include administrative acts (see Somogyi & Sartori 1963, p. 228). Pedrazzani & Zucchini (2013) analyze a corpus of 636 bills and categorize 290 of them as “pork barrel bills”, defined as laws that include benefits for particular places, professional categories or interest groups, legal subjects or individuals. I have detected instances of words or phrases indicating the provision of a benefit by reading the title and the first three articles of all the pork barrel bills, and of all the *leggine* that specifically referred to the provision of benefits to restricted categories. The final corpus that I have used to detect phrases that indicate pork-barrel includes bills proposed during the third legislature—the Sartori-Somogyi sample, as well as legislation introduced during the 10th-14th legislatures—the Pedrazzani-Zucchini sample, for a total of 372 bills. I have considered a corpus that covers a vast time frame, the years from 1960 to 2006, in order to take into account potential changes in the Italian legal language. The choice of reading exclusively the title and the first three articles, in addition to speeding up the process of manual content analysis, is motivated by the specific structure of

⁵²Be it a place, a societal group, or a person.

⁵³In both cases, the bills have been manually content analyzed.

⁵⁴The sample size refers to the publicly available data, the total sample size is 532 bills.

Italian legislation. Italian bills' titles must not only contain a date and a reference number, but also the main topic discussed in the legislative text. In addition to the information included in the title, the first article must contain a more detailed, introductory, description of the topic itself.⁵⁵ It thus seems reasonable to assume that the title and the first two articles of a bill contain all the most relevant information, in order to detect words or phrases indicating the specific benefit provided. The pork-barrel phrases that I have identified appear to cover a pretty heterogeneous set of benefits, described by a limited number of recurring words (see Table 2.9). For example, "contribute", "payment", "flow rate", "financing" and "award"⁵⁶ are used to indicate *money transfers*. *Salary increases* are described by two main phrases, "pay grade increases" and "raise of wages".⁵⁷ *Titularization* is captured by sentences like "creation of permanent posts".⁵⁸ *Subsidies* to firms or economic sectors are described by words like "subsidy" and "incentive"⁵⁹, or phrases like "measures to assist" and "aids to"⁶⁰. *Tax reliefs* and *waivers* are described by phrases like "tax relief"⁶¹ and words like "waiver". *The construction of infrastructures* is indicated by phrases like "construction plan" and "construction of [...]".⁶² The final dictionary, *Pork*, contains 184 keywords (see Table A.5, in Appendix A.5.3).

While pork-barrel terms may seem unambiguous within the context of a pork-barrel sentence, when inserted as key terms in a dictionary they could easily lead to an erroneous classification. Bills containing a pork-barrel word or phrase could actually indicate the suppression or suspension of the benefit captured by that pork-barrel word or phrase. E.g. the word "subsidy" could be inserted in a sentence like "elimination of the subsidy" or "suspension of the subsidy". In order to limit misclassifications of this sort, I have constructed a non-pork barrel dictionary. *Non-pork* contains key words that indicate the elimination or

⁵⁵Disposizioni sulla promulgazione e la pubblicazione delle leggi 1985, 1985/1092 art 22; Regolamento di esecuzione 1986, 1986/217 art 5.

⁵⁶"Contributo", "corresponsione", "erogazione", "finanziamento" and "premio".

⁵⁷"Aumenti stipendiali" and "aumenti di stipendio".

⁵⁸"Passaggi in ruolo" or "Sistemazioni in ruolo".

⁵⁹"Sussidio" and "incentivo".

⁶⁰"misure a favore" and "interventi a favore".

⁶¹"Agevolazioni fiscali" and "condono".

⁶²"Piani di costruzione" and "costruzione di [...]".

Benefit	English Translation	Term
Money transfer & Awards	contribute payment flow rate financing award	contributo corresponsione erogazione finanziamento premio
Salary increase	pay grade increases raise of wages	aumenti stipendiali aumenti di stipendio
Recruitment/Titularization	creation of permanents posts	passaggi in ruolo sistemazioni in ruolo
Subsidy	subsidy incentive measures to assist aids to	sussidio incentivo misure a favore interventi a favore
Tax reliefs	tax relief waiver	agevolazioni fiscali condono
Construction of infrastructures	construction plan construction of [...]	piani di costruzione costruzione di [...]
Measures to guarantee economic, social and cultural development	measure to guarantee the economic development measure to guarantee the socio-cultural development measure to guarantee economic prosperity	misure per garantire lo sviluppo economico misure per garantire lo sviluppo socio-culturale misure per garantire la prosperita' economica
Measures to guarantee the preservation of homelands	measures to guarantee the preservation of lands land protection	misure per garantire la preservazione del territorio tutela del territorio

Table 2.9: **Types of benefits.** The table describes the types of benefits identified by the *Pork* dictionary. The table illustrates, for each type, some of the Italian terms used in the dictionary together with an English translation.

suspension of a benefit. To develop a dictionary that is as exhaustive as possible, I have searched all the synonyms of “eliminate”⁶³ and “suspend”⁶⁴ in an online dictionary of Italian language⁶⁵, and I have inserted them both as verbs and as substantives (see Table 2.10). The final dictionary contains 41 key terms (see Table A.6, in Appendix A.5.4). Before applying *Non-pork*, I have lemmatized the text. Lemmatization converts a word into its base form, or lemma, which translates into converting nouns into their singular form and verbs into their infinitive form (see Manning *et al.* 2008, p.32). This enables a more exhaustive and agile procedure of keywords detection, that only requires a dictionary with nouns in their singular form, and verbs in their base form.

Non pork category	English Translation	Term
elimination of a benefit verb	abolish	abolire
	repeal	abrogare
	cut	tagliare
suspension of a benefit verb	interrupt	interrompere
	suspend	sospendere
elimination of a benefit noun	abolition	abolizione
	abrogation	abrogazione
	cut	taglio
suspension of a benefit noun	interruption	interruzione
	suspension	sospensione

Table 2.10: **Non-pork categories.** The table reports, by way of example, keywords from the *Non-pork* dictionary. For each category, the table illustrates some of the Italian terms used in the dictionary together with an English translation.

2.6.3 The algorithms

As previously pointed out, I have integrated the described dictionaries into algorithms (Figure 2.4, 2.5 and 2.6) designed to reduce the instances of false positives. As a first step, I have cleaned all the bills’ texts from html tags and accents, and separated them into sentences. I then proceeded to categorize each

⁶³“Eliminare”.

⁶⁴“Sospendere”.

⁶⁵Treccani - Vocabolario della Lingua Italiana: <http://www.treccani.it/vocabolario/>.

sentence as geographically targeted or sectoral using two distinct procedures. For the detection of geographically-targeted bills, I selected only the sentences containing at least one of the geographical references contained in *Geo*. I have then narrowed down the sub-set thus obtained to a selection of sentences containing at least one key term from *Pork* and none from *Non-pork*. To ensure that the bills actually referred to an MP constituency, I have further narrowed down this second sub-set to a list of sentences where the *Geo* key term belonged to the same region where the MP proposing that bill had been elected.⁶⁶ In Italy, the size of the electoral districts varies over time and between different tiers⁶⁷ of election. Nevertheless, the size of a district is never larger than that of a region. The use of the region of election as a proxy for geographically targeted bills thus guarantees the opportunity to compare legislators' behaviour over time, and in both tiers of election (Gagliarducci *et al.* 2011, Marangoni & Tronconi 2011). This third sub-set constituted the relevant selection of geographically-targeted sentences. As a final step, I have categorized as geographically-targeted all the bills where one or more geographically-targeted sentences occurred.

Before I proceed with the description of the algorithm used to detect sector-related legislation, I shall make a few remarks on sectoral particularism. Political particularism constitutes one of the possible instances of constituency service, which characterized by the distribution of goods and services to a politician's constituency; be it represented by the entire geographic location of the electoral district or by narrower entities like functional groups and individuals living in the constituency. Therefore, one could argue that when classifying a bill as sectoral I should follow the same procedure used for geographically-targeted bills. That is, I should verify that the sector of the economy to which the legislative text refers actually "belongs" to the MP's constituency. However, the distribution of economic sectors does not necessarily follow the boundaries defined by electoral districts. This means that a candidate that proposes a bill that affects a sector of the economy or a professional category could also target individuals living outside her constituency. For example, tax reliefs or waivers may be distributed to recipients outside the home district (see Mayhew 2004, p. 57). Still, it would

⁶⁶For an analogous procedure see Gagliarducci *et al.* (2011).

⁶⁷In the case of the 13th and 14th legislatures mixed-member systems

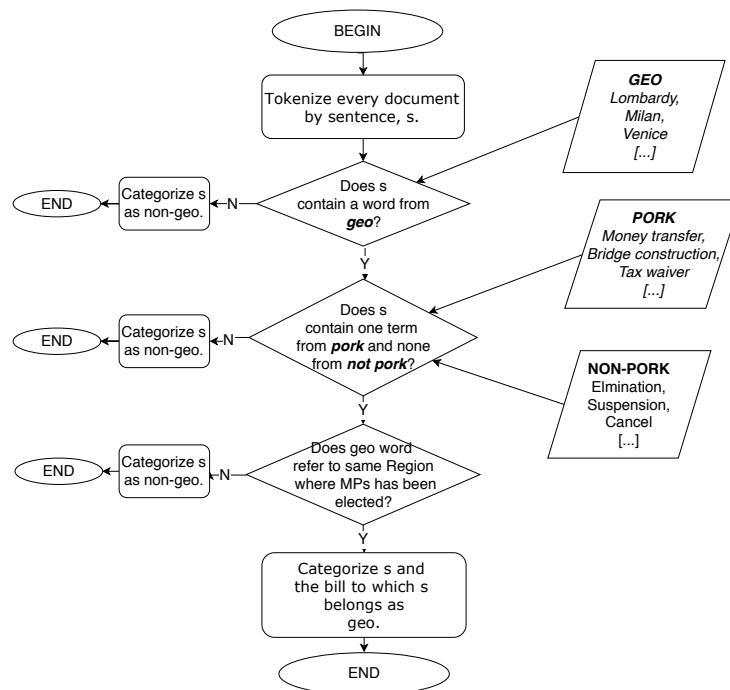


Figure 2.4: **Flowchart for geographically-targeted legislation.** The figure illustrates the step-by-step procedure used to classify bills as geographically-targeted.

be more difficult to find solid evidence of an electoral connection in this case, since representatives are still elected to parliament via a geographically-based mechanism (Mayhew 2004). Moreover, the incentives that lead to sector-targeted lawmaking could change depending on the fact that the allocation precisely refers to a professional category or economic sector belonging to the constituency where the MP proposing the bill has been elected or not. In order to develop a categorization system for sector-targeted legislation that takes full account of these specificities, I have designed two different algorithms. The first one captures sector-targeted legislation with a “broader scope”, i.e. every bill that affects a specific sector of the economy in its entirety⁶⁸ regardless of whether said sector belongs to the constituency where the MP proposing the bill has been elected or not. The second algorithm captures sector-targeted legislation with a “narrower scope”, i.e. legislation that affects a sector of the economy⁶⁹ that belongs to the MP’s constituency. I propose a categorization of sectoral particularism that also entails the possibility of MPs’ serving sectoral interests that are outside of their home district for the sake of completeness. Indeed, I think that a comprehensive theory of political particularism should consider this specific instance of sectoral particularism as its existence is well-documented and studied in previous literature (Mayhew 2004). Still, given that my dissertation also aims at studying the effect that electoral incentives have on politicians’ propensity to engage in particularistic policy making, I would like to clarify that I do not expect “broad” sectoral particularism to be influenced by electoral incentives at the same degree as “narrow” sectoral particularism and geographical particularism. This will be explained in further details in the next chapter, and it will be of much relevance when explaining the connection between the personal vote and political particularism.

To detect sectoral bills with a “broader scope”, I have selected only those sentences containing at least one of *Sector*’s key terms. Subsequently, I have narrowed down the sub-set thus obtained to a selection of sentences containing at least one key term from *Pork* and none from *Non-pork*. This second sub-set constituted the relevant selection of sector-targeted sentences. As a final step, I have categorized

⁶⁸Or a professional category employed in said sector.

⁶⁹Or a professional category employed in said sector.

as sectoral—broader scope—all the bills to which one or more sector-targeted sentences belonged. Note that I have not inserted any geographical localization function in the algorithm used to detect “broader” sectoral bills. To detect sectoral bills with a “narrower scope”, I have followed a procedure similar to the one used to categorize sectoral legislation with a “broader scope”. The only difference lies in the final step of the algorithm. Indeed, in this case I have selected only sectoral sentences that also contained a geographic location belonging to the same region where the promoter MP has been elected. Finally, I have categorized as sectoral—narrower scope—all the bills to which one or more sector-targeted sentences belonged.

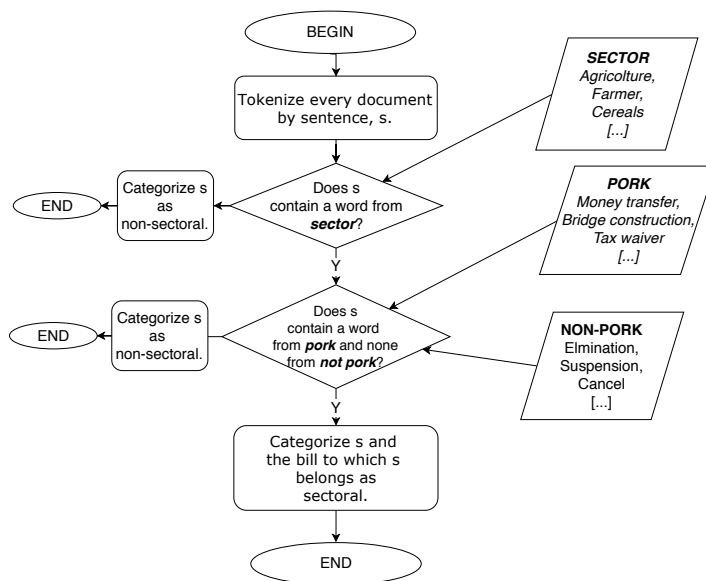


Figure 2.5: **Flowchart for sector-targeted legislation—Broader scope.** The figure illustrates the step-by-step procedure used to classify bills as sector-targeted with a broader scope, i.e. without a specific reference to an MP’s constituency.

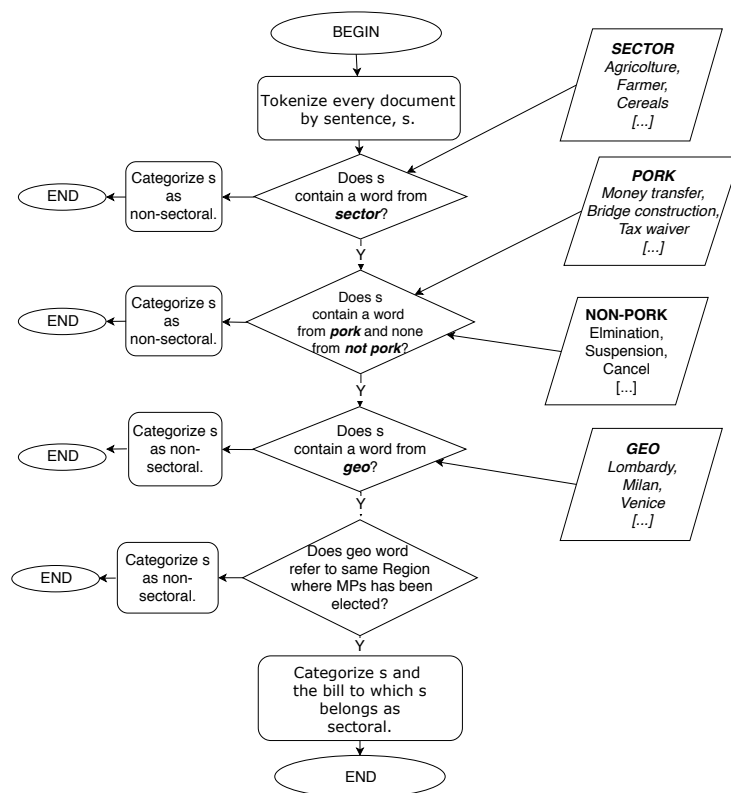


Figure 2.6: **Flowchart for sector-targeted legislation—Narrower scope.** The figure illustrates the step-by-step procedure used to classify bills as sector-targeted with a narrower scope, i.e. with a specific reference to an MP's constituency.

2.7 Algorithms and dictionary validation

2.7.1 Validation procedure using Figure Eight

Computer-aided text analysis should always be coupled with explicit validation to avoid the risk of producing misleading results (see Grimmer & Stewart 2013, p. 5-9). Validation by means of comparison with a human gold standard is usually considered to be the ideal procedure (Grimmer & Stewart 2013, p. 5). Based on these considerations, I have employed an on-line labour platform called Figure Eight⁷⁰ to validate the algorithms employed to identify sector and geographically-targeted legislation and each of the four dictionaries⁷¹ (see Section 2.6.3). Figure Eight enables access to many different crowdsourcing channels and gives the opportunity to employ more than 10,000 registered workers. Crowd-sourcing platforms use the Internet to distribute a time-consuming job that has been split into small tasks called Human Intelligence Tasks or “HITs”. These HITs are assigned to an extensive number of anonymous workers who are offered a small fee for each task completed (see Benoit *et al.* 2016, p. 3). Crowd-sourcing first emerged as a tool for data-processing tasks like data entry, proofreading, and human-performed optical character recognition. Progressively, social scientists have begun to introduce it in their analyses (Bohannon 2011, Peer *et al.* 2017, Sorace 2018, Young & Soroka 2012). Scholars have shown that crowd workers produce data whose reliability and validity is comparable to that of more traditional procedures of manual coding (Lind *et al.* 2017). Most importantly, numerous studies have found that expert survey data can be replicated, with similar or even improved quality, by aggregating judgments provided by non-experts (Alonso & Baeza-Yates 2011, Benoit *et al.* 2016, Hsueh *et al.* 2009, Lind *et al.* 2017, Snow *et al.* 2008). Benoit *et al.* (2016) demonstrate that text analysis performed by the crowd can supply political scientists with data that have the same quality as expert surveys. In addition, crowd-sourcing enables full transparency and replicability at a lower cost and with a quick and agile procedure (Benoit *et al.* 2016, p. 34).

⁷⁰<https://www.figure-eight.com/>.

⁷¹*Geo, Sector, Pork, Non-pork.*

With the use of Figure Eight, I have performed two distinct validation procedures, one for each of the two algorithms. In both cases, the first step of the validation procedure consists in the extraction of a random sample of 500⁷² natural sentences, the validation set, from the corpus of bill proposals. Half of the sample is composed of sentences that the algorithms categorized as non-particularistic, while the other half is made up of sentences categorized as particularistic (see Appendix A.3). I have uploaded the randomly selected sentences to the on-line platform Figure Eight. On the platform, each worker is shown a detailed but simple description of the job accompanied by examples. Each eligible worker, exclusively Italian speaking individuals, reads the job description before starting to perform any task. Appendix A.2 provides an English translation of the job description. I have divided the classification process into small and easy-to-perform tasks. Benoit *et al.* (2016) explains that breaking down the data production into many simple tasks, each completed by a different worker, tends to eliminate the bias that could affect a single contributor. This is more broadly based on the idea of the wisdom of the crowd⁷³, according to which the average of an extensive number of individual judgments is closer to the true answer than any typical individual judgment alone (Benoit *et al.* 2014, Lyon & Pacuit 2013).

The set of tasks that the workers need to perform differs slightly depending on the algorithm being validated. To validate the algorithm for sector-targeted legislation, the workers need to answer four questions in sequence. At the end of this four-steps process each sentence is categorized as particularistic or non-particularistic. The first question asks a worker if the sentence refers to any sector of the economy. If the worker answers “yes”, in the following question he needs to select one or more sectors of the economy from those indicated in the check-box (see Figure A.3 & A.4, in Appendix A.3). The third question asks the worker if the sentence describes the provision of a benefit to the sector of the economy that he has just indicated. If the worker answers “yes”, in the next question he is then asked to select one or more benefits from those indicated in

⁷²See Hopkins & King (2007) on the ideal number of texts that need to be hand-coded, in order to perform a reliable validation procedure. Hopkins & King (2007) demonstrates that 500 hand coded documents are enough to estimate a quantity of interest.

⁷³The concept of “wisdom of the crowd” actually dates back to Aristotle (Aristotle, Politics, Book III, Section XI).

the check-box (see Figure A.3 & A.4, Appendix A.3). Finally, the sentence is coded as sector-targeted if the contributor answers “yes” both to the first and to the third question.

To validate the algorithm for geographically-targeted legislation, the workers need to answer three different questions in sequence. The first question asks a worker if the sentence refers to any Italian city, province or region. The second question asks the worker if the sentence describes the provision of a benefit to the city, province or region that he has just indicated. If the worker answers “yes”, in the next question he is asked to select one or more benefits from those indicated in the check-box (see Figure A.5 & A.6, in Appendix A.3). Finally, the sentence is coded as geographic-targeted if the contributor answers “yes” both to the first and to the second question.

Since workers get paid for each task they complete⁷⁴, they could be tempted to finish as many tasks as possible, as quickly as possible, at the expense of job quality. Workers who engage in this kind of behaviour are called “spammers” (Benoit *et al.* 2016). Given that Figure Eight is an open access platform, it is essential to prevent spammers from taking part in a job. It is possible to achieve this with the use of quality assessment and rigorous screening (Benoit *et al.* 2016, Conway 2013, Kapelner & Chandler 2010, Nowak & Rürger 2010). Figure Eight offers the opportunity to use “gold” HITs, also called gold standard or test questions, to ensure a good job quality. Gold HITs are questions with correct answers specified in advance by the researcher. Following Benoit *et al.* (2016), I use a set of “natural” gold questions, i.e. questions based on sentences that actually appear in my corpus. I have randomly selected the sentences and I have manually coded them, following the same procedure that a contributor on the platform would follow to answer the job questions. I have also inserted a special type of test questions, called “screeners” (Berinsky *et al.* 2014). Screeners, in addition to containing the answer specified in advance, also contain specific instructions on how to code a sentence.⁷⁵ I have inserted a total of 35 test questions, 5 of which

⁷⁴Each worker gets paid 0.03 \$ per coded statement, which is 50% higher than the default payment.

⁷⁵For example: "To demonstrate that you have read the whole sentence, please ignore the question and provide these answers: “yes”;“public sector”;“yes”;“subsidy”."

are screeners. The quality assessment is composed of two different steps. First, each worker must pass a qualification test by answering correctly 4 out of 5 test questions. Only contributors that pass the test are allowed to perform the tasks. Second, every page of work contains one hidden gold question. Once a contributor starts working, he is assigned a “trust” score, which indicates the proportion of correctly answered test questions. If the trust score falls below 0.8, the worker is excluded from the job and his answers are not included in the final results. Answers provided by this kind of worker are called “non-trusted judgments”, to differentiate them from the “trusted judgments”, which are included in the final results. Workers know that a portion of the questions they are answering are gold questions, but they cannot recognize a hidden gold question. Moreover, they do not get paid if their HITs are rejected. This gives them a high incentive to perform all the tasks with maximum care and attention.

The concept of wisdom of the crowd is based on the idea of aggregating individual judgments, in order to obtain a result that is as close as possible to the true answer (Lyon & Pacuit 2013). But, how many judgments are enough? Also, how should we aggregate individual judgments? Benoit *et al.* (2016) demonstrates that uncertainty over the estimates of the crowd has a negative correlation with the number of judgments per sentences. However, the decline in uncertainty remains steep right until we reach the level of 5 judgments per sentence. At around 5 judgments, the uncertainty surrounding document classifications is leveled (see Benoit *et al.* 2016, p. 27). Based on these considerations, I have collected five judgments for each sentence, for a total of 2,500 trusted judgments. Finally, I have aggregated the judgments using the “honeypot” aggregation technique (Hung *et al.* 2013). Honeypot is based on a two-steps procedure. At first, a pre-processing step filters the non-trusted judgments. The filtering process is represented, in my case, by the use of test questions and workers’ trust scores. The second step consists of the actual aggregation of the trusted judgments, through majority decision aggregation (MD). According to the MD aggregation criterion, for a given sentence s_i , k is the total amount of answers received.⁷⁶ The probability of each label l_z is then calculated as the percentage of its count

⁷⁶Five judgments, in this case.

over k . I therefore assign to each of the 500 coded sentences the label with the most frequent coding (see Hung *et al.* 2013, p. 4).

Results

		<i>Reference</i>	
		<i>Non-targeted</i>	<i>Sector-targeted</i>
Prediction	Non-targeted	243	3
	Sector-targeted	134	120

Table 2.11: **Confusion matrix for sector-targeted legislation.** The table shows the confusion matrix obtained when comparing the coding produced by the algorithm that detects sector-targeted legislation (Prediction) to the coding produced by Figure Eight workers (*Reference*). Accuracy level: 0.7

		<i>Reference</i>	
		<i>Non-targeted</i>	<i>Geo-targeted</i>
Prediction	Non-targeted	250	0
	Geo-targeted	44	206

Table 2.12: **Confusion matrix for geographically-targeted legislation.** The table shows the confusion matrix obtained when comparing the coding produced by the algorithm that detects geo-targeted legislation (Prediction) to the coding produced by Figure Eight workers (*Reference*). Accuracy level: 0.91

I summarize the performance of the newly proposed algorithms and dictionaries of Italian political particularism in two steps. First, I illustrate the “global performance” of the algorithms employed to classify sector and geographically-targeted legislation (see Figure 2.5 and Figure 2.6) by looking at the proportion of correctly classified sentences. Tables 2.11 and 2.12 show the confusion matrix for sector-targeted and geographically-targeted legislation, respectively. The rows of each confusion matrix display the codes produced by the algorithms, (Prediction), while the columns report the human-produced codes, (Reference). The cells display the number of sentences that received the corresponding algorithm-based and human-based coding. The on-diagonal cells display the number of sentences that received the same coding from the algorithms and from the Figure Eight workers,

i.e. the correctly classified sentences. The proportion of correctly classified sentences is captured by the level of accuracy. The algorithm that classifies sector-targeted legislation exhibits a good level of accuracy, 0.73, comparable to accuracy levels associated with complex categories found in other studies (Grimmer & Stewart 2013, Hopkins & King 2010). The algorithm that classifies geo-targeted legislation displays an excellent level of accuracy, 0.91, which indicates that more than 90% of the sentences have been correctly classified.

<i>Dictionary</i>	<i>Precision</i>	<i>Recall</i>	<i>F1</i>
SECTOR	0.81	0.88	0.85
PORK & NON-PORK	0.5	0.91	0.64

Table 2.13: **Performance of the dictionaries of Italian political particularism—Sector-targeted legislation.** The table shows the levels of *precision*, *recall*, and the *F1* score for *Sector* and for *Pork & Non-pork* when used to categorize sector-targeted legislation.

<i>Dictionary</i>	<i>Precision</i>	<i>Recall</i>	<i>F1</i>
GEO	0.91	0.99	0.95
PORK & NON-PORK	0.87	0.93	0.90

Table 2.14: **Performance of the dictionaries of Italian political particularism—Geographically-targeted legislation.** The table shows the levels of *precision*, *recall*, and the *F1* score for *Geo* and for *Pork & Non-pork* when used to categorize geographically-targeted legislation.

Second, I evaluate the performance of the different dictionaries separately. The two algorithms used to selected geographically and sector-targeted legislation employ three distinct dictionaries, respectively (see Section 2.6.2). Each of the two tables, 2.13 and 2.14, evaluates the individual performance of the three dictionaries that make up each algorithm. The tables report three statistics that are commonly used to summarize a confusion matrix: precision, recall and the F1 score (Grimmer & Stewart 2013). Each of the three statistics ranges from 0 to 1, with higher levels indicating better performing algorithms. Precision measures the number of documents correctly classified into a category *c*, divided by the total number of documents the algorithm classifies as category *c*. Recall measures

the number of documents correctly classified in a category c , divided by the number of human-coded documents in category c . Precision can be defined as “a measure of confirmation”: when the dictionary assigns a document to a category, how often is in fact correct? Recall is “a measure of utility”: how many of the hand-coded documents assigned to a certain category is the dictionary able to correctly detect? (see Zumel *et al.* 2014, p. 96). The $F1$ score is a harmonic mean of precision and recall, and it is used to summarize the two scores with a single indicator.

Table 2.13 shows the performance of *Sector* and of *Pork & Non-pork*, when used to detect sector-targeted legislation. The performance of *Sector* is measured by comparing the dictionary codes with the codes produced by the crowd workers when answering the first question (see 2.7). The performance of *Pork* and *Non-pork* is measured by means of comparison of the dictionary codes with with the codes produced by the crowd workers when answering the third question (see 2.7). For *Sector*, the levels of precision, recall and $F1$ all range above 0.8. For *Pork & Non-pork*, recall is above 0.9, while the $F1$ score is 0.6. The sub-optimal level of the $F1$ score is driven by the precision score, which displays a level of 0.5. The large level of recall tells us that the dictionary has a wide breadth, i.e. it is able to capture a large portion of the pork-barrel sentences. The low level of precision, instead, tells us that the dictionary is not very precise, i.e. some of the sentences that it codes as pork-barrel actually are not pork-barrel sentences. Table 2.14 shows the performance of *Geo* and of *Pork & Non-pork*, when used to detect geographically-targeted legislation. The performance of *Geo* is measured by comparing the dictionary codes with the codes produced by the crowd workers when answering the first question (see 2.7). The performance of *Pork* and *Non-pork* is measured by means of comparison of the dictionary codes with with the codes produced by the crowd workers when answering the second question (see 2.7). Both for *Geo* and *Pork & Non-pork*, the levels of *precision*, *recall* and *F1* range above 0.8.⁷⁷

The results of the validation procedure are satisfying. Globally, the two algorithms display accuracy levels that are either good—0.73, or excellent—0.91. The only

⁷⁷ Precision level for *Pork & Non-pork*

concern could arise from the low level of precision of *Pork & Non-pork* when employed to detect sector-targeted legislation. In appendix A.4, I present a manual coding of the sentences that the crowd workers detected as false positives. A closer scrutiny reveals that most of these sentences discusses agencies or bodies that have the authority to provide certain benefits, without actually mentioning an actual provision of benefits. This kind of error is not due to a wrong choice of keywords⁷⁸ but to the fact that a dictionary cannot discriminate between the simple description of a benefit, and the actual provision of it. Notwithstanding the fact that a greater precision would be ideal, the F1 score for *Pork & Non-pork* still shows a satisfactory level thanks to the high recall. Moreover, *Sector*, *Geo*, and *Pork & Non-pork* in the second iteration (geo-targeted legislation), display either good or excellent F1 scores. To conclude, the validation process demonstrates that the newly constructed algorithms and dictionaries of Italian political particularism are able to reliably replicate human coding.

2.7.2 Face validity: insights from postwar Italy

To further corroborate the validity of the algorithms and dictionaries, I ascertain whether the distribution of particularistic bills complies with the evidence provided by numerous researchers on political particularism in postwar Italy⁷⁹ (Di Palma 1977, Golden 2003, Golden & Picci 2008, Somogyi & Sartori 1963). As explained in Section 2.6.1, scholars report a widespread diffusion of particularistic policy-making in the Italian postwar period, mainly in the form of patronage appointments in the public sector and pork-barrel allocations. While the phenomenon was ultimately nation-wide, academics agree that it was mainly coordinated and perpetuated by the ruling political party, i.e. the Italian Christian Democracy (CD) (see Golden 2003, p. 193-205). If the algorithms constitute a valid measure of political particularism, they should comply with the evidence provided by observers of postwar Italy. Namely, they should be able to accurately capture the aforementioned variation in particularistic bills distribution among Italian political parties.

⁷⁸This is also confirmed by the fact that the *Pork/Non-Pork* dictionaries work pretty well, when employed to detect geo-targeted legislation.

⁷⁹Understood as the period that goes from 1948 to 1994.

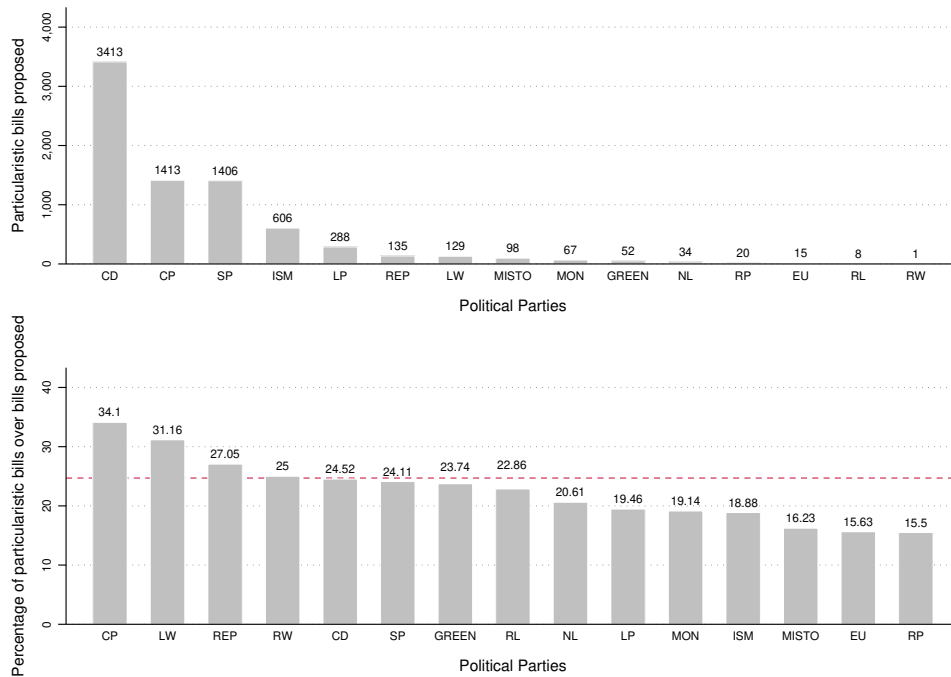


Figure 2.7: **Particularistic bills distribution over Italian political parties.** The graphs show the distribution of particularistic bills over Italian political parties, during the postwar period. The top panel shows the total number of particularistic bills (geographical and sectoral) proposed by each party. The bottom panel shows, for each party, the percentage of particularistic bills in relation to the total number of bills proposed. A red horizontal line indicates the average percentage over parties.

Figure 2.7 shows the distribution of particularistic bills among Italian political parties over the period from 1948 to 1994. The top panel shows the total number of particularistic bills proposed by the members of each political party. The bottom panel shows, for each political party, the percentage of particularistic bills proposed in relation to the number of bills proposed. The graphs show that particularistic bills, as captured by the algorithms and dictionaries, are mainly proposed by Christian Democracy's candidates (see top panel of Figure 2.7). While the percentage of particularistic bills proposed by candidates of the CD, in relation to the total amount of bills that they propose, is in line with the average (see red horizontal line in bottom panel of Figure 2.7) and only slightly

above the median (Green party), the total amount of particularistic bills proposed by the Christian Democratic party is by far the largest. Almost half (44.4%) of the particularistic bills proposed during the postwar period are introduced by members of the CD. Even though members of other prominent parties, like the Socialist (SP) and the Communist Party (CP), propose few particularistic bills, the CD appears as undisputed leader in the enacting of particularistic law-making, as expected. The dictionaries thus prove to be able to effectively capture the variation of political particularism among political parties in postwar Italy. This evidence further substantiates the validity of the newly proposed proxies of Italian political particularism.

2.8 Showing variation in political particularism

In the Italian parliament, particularistic bills constitute a substantial minority among all the IMBPs. Indeed, they usually amount to 2% of the whole number of IMBPs presented by Italian MPs⁸⁰ (see Table 2.15). This suggests that political particularism is a phenomenon with a non-negligible relevance in the Italian political scenario. On average, Italian deputies devote 2-3% of their bill proposals to favouring particularistic interests.

Looking at Figure 2.8, we can appreciate the variation in the level of different types of particularistic legislation. The amount of sector-targeted legislation appears to be always higher than the amount of geo and sector-geo legislation. The graphical evidence suggests that sectoral-targeted legislation constitutes a great portion of the amount of particularistic bills proposed by Italian MPs. This is in line with previous anecdotal evidence showing Italian deputies' habit to devote much of their time in parliament to favour small clientele which were often represented by certain professional categories or economic sectors (Di Palma 1977, Golden 2003).

Figure 2.8 also shows the variation in the number of particularistic bills proposed

⁸⁰A part from the very first legislature.

by MPs over the years. Not surprisingly, the trend is similar to that shown in Figure 2.3, which illustrates the variation in the amount of bills proposed over the years. The number of particularistic bills proposed follows an upward trend with downward spikes visible during the 7th, 11th, 12th and the 15th legislature. Interestingly, the downward spike⁸¹ in the proposition of particularistic legislation of the 11th legislature coincides with the start of the “*mani pulite*”⁸² judicial investigation into widespread corruption and clientelism, and with the establishment of a mixed-member electoral system⁸³ that was introduced with the aim of counteracting clientelism and particularism.⁸⁴ While the very high levels of political particularism displayed in the 10th legislature are no longer reached, caution should be exercised when using this graphical evidence to evaluate the effectiveness of the new electoral system or of the judicial investigation in counteracting particularism. Indeed, the decreasing trend in the proposition of particularistic legislation does not last much, and sector-targeted legislation shows a clear increasing trend starting from the 12th legislature. The main takeaway is that particularistic legislation, over the years, remains a significant part of the Italian lawmaking process. Counteracting actions like judicial investigations or a specific electoral rule seem to have reduced but not completely offset particularistic policy-making. This evidence urges us to examine more in depth the causes of political particularism.

⁸¹Note that this downward spike also coincides with the downward spike in the number of IMBPs proposed by Italian MPs, which is shown in Figure 2.3. At this level of analysis, it is hard to disentangle the effect of a decrease in the proposition of IMBPs more generally, from the decrease in the proposition of particularistic IMBPs. This urges us into analyzing more in depth the possible factors explaining variations in political particularism.

⁸²Whose beginning is usually indicated by the arrest of the Italian Socialist Party member Mario Chiesa in the first half of 1992.

⁸³Shugart (2001) talks in details about the efficiency of mixed-member systems in counteracting clientelism and particularism (see Shugart (2001), p. 189).

⁸⁴Which were thought to be favoured by the earlier preferential list system (see Section 2.6).

Percentage of Particularistic Bill Proposals by Legislature	
1	0.3%
2	1.09%
3	1.81%
4	1.55%
5	1.83%
6	1.86%
7	1.11%
8	1.70%
9	2.29%
10	3.42%
11	1.68%
12	1.64%
13	2.34%
14	2.24%
15	2.08%
16	2.52%

Table 2.15: **Percentage of particularistic bill proposals.** The table shows the percentage of particularistic bill proposals over the total number of IMBPs presented during the first 16 legislative terms of the Italian parliament.

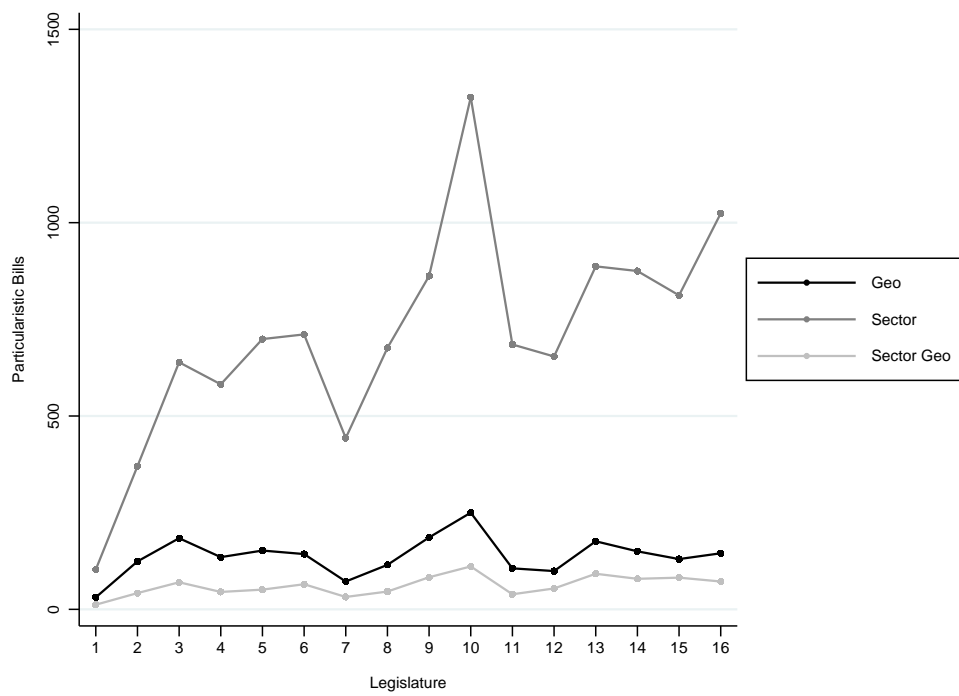


Figure 2.8: **Particularistic bill proposals.** The figure shows the number of particularistic bill proposals presented by Italian deputies over the first 16 legislative terms of the Italian parliament.

Legislature	Geo	Sector	Sector Geo
1	31	103	12
2	124	370	42
3	184	639	70
4	135	582	45
5	152	699	51
6	143	711	65
7	72	443	32
8	115	676	46
9	186	862	83
10	250	1324	111
11	106	685	39
12	99	654	54
13	176	887	92
14	150	875	79
15	130	812	82
16	145	1024	72

Table 2.16: **Particularistic bill proposals.** The table shows the number of particularistic bill proposals presented by Italian deputies over the first 16 legislative terms of the Italian parliament.

2.9 Discussion

The analysis here presented offers multiple contributions to the literature on constituency service, political particularism and legislative activity. First, I set political particularism in the context of a multidimensional model of constituency service, which is composed of four styles of representation, and three foci of attention (Eulau & Karps 1977). This model offers a more nuanced perspective on constituency service and political particularism. It recognizes that promoting the interests of constituents is a crucial part of an elected representative's job and that political particularism can produce negative externalities but it is not inherently detrimental. It acknowledges that constituency service is not equivalent to goods diversion, since deputies can represent localities' interests in different ways: through policy-making proposals, casework, constituency service, or symbolic gestures. It assumes that each elected representative can identify his constituents either as citizens living in his electoral district, or as members of a specific functional group, or as separate individuals.

Second, I build and validate four new dictionaries of Italian political particularism. The methodology that I propose guarantees a more exhaustive analysis of particularistic policy-making thanks to the detection of sector-related particularism, a phenomenon that has been overlooked by previous researchers. Scholars have mainly studied geographical instances of political particularism, even though pork-barrel projects are not only about the geographical diversion of non-excludable and non-rivalrous goods (Eulau & Karps 1977). This has prevented them from studying the provision of benefits targeted to specific clientelistic groups represented by certain professional categories (Golden 2003), and has consequently led them to propose an incomplete perspective on political particularism and pork-barrel.

Third, I produce the first and most extensive data-set on Italian proposed legislation and particularistic law-making. The newly developed dataset will assist future research on distributive and particularistic politics and, more broadly, prospective studies on legislative activity and legislators' behaviour. Descriptives from the newly collected database show that the average Italian MP is a male graduate employed in occupations that require medium or high qualifications. With regard

to gender representation, even though female MPs still constitute a minority, the percentage of female deputies shows an upward trend during the time period considered.

The database also shows that Italian deputies propose a considerable amount of IMBPs, actually comparable the number of ordinary bills proposed. This evidence further substantiates the idea that IMBPs constitute a relevant legislative instrument that elected representatives use regularly to communicate with their voters and to attract electoral consensus (Marangoni & Tronconi (2011), Mattson (1995)).

Finally, particularistic legislation seems to constitute a significant part of the Italian lawmaking process. Counteracting actions like judicial investigations or a specifically-designed electoral rule have not completely offset particularistic policy-making. Over the years, Italian MPs have kept devoting 2-3% of their IMBPs to favouring particularistic interests. This corroborates previous anecdotal evidence showing that *small-clientelistic laws* are a big part of the Italian lawmaking process (Di Palma 1977).

Having devised and validated a new methodology to capture particularistic policy-making, in the next chapter I focus on the causes of this phenomenon. Since scholars agree that electoral incentives constitute the main driver of parochial interests promotion at the hands of politicians, I concentrate on electoral rules (see, among many, Carey & Shugart 1995). More precisely, building on previous literature on personal vote and particularistic policy-making, I analyze to what extent the search for a personal vote and the electoral system in force can incentivize elected representatives to promote particularistic policies.

3 The construction of a Personal Vote and Political Particularism. The case of Postwar Italy.

Abstract

Conventional wisdom in the study of personal vote and elected representatives' behaviour tells us that candidates with large personal followings provide goods and services to narrow segments of society in exchange for votes. While instructive, previous studies have produced mainly indirect proxies of the personal vote. This approach hinders our ability to more directly analyze how the search for a personal reputation influences elected representatives' willingness to engage in particularistic policy-making. In this observational study, I employ preference votes expressed by Italian voters during the postwar period—1948-1992—to measure the level of personal vote amassed by each candidate running for a seat in the Italian chamber of deputies. Using a set of negative binomial regressions, I then analyze the effect of personal vote on Italian members' of parliament (MPs) propensity to serve geographic and sector-targeted interests. Results suggest that irrespective of localism, party affiliation and personal characteristics, legislators who constructed a large personal vote are more willing to serve particularistic interests within their constituency. No relation is found between the level of a candidate's personal vote and his propensity to serve parochial interests that lack a geographic constituency.

3.1 Introduction

The personal vote is that portion of a candidate's support that he gains thanks to his personal characteristics and actions (Cain *et al.* 1984). Conventional wisdom in the study of personal vote and elected representatives' behaviour tells us that the search for a personal vote increases a candidate's propensity to serve parochial interests (Carey & Shugart 1995). Once elected, candidates with large personal followings provide goods and services to narrow segments of society in exchange for votes. The distribution of goods and services to small clientele—political particularism—can bring about some negative externalities: from a non-equitable and inefficient redistribution of resources, to a disregard of programmatic representation¹ (Carey & Shugart 1995, Cox 1987, Ferejohn 1974, Lancaster 1986, Pennock 1970). Given this, many scholars have engaged in the study of the determinants of political particularism, among which the search for a personal vote, with the aim of developing strategies to curb a detrimental phenomenon.

Previous studies of the relationship between the personal vote and political particularism have equated the personal vote with either one of its main determinants, candidate-centered electoral rules, or with one of the main outcomes it can produce, political particularism (Swindle 2002). Examples of studies trying to produce more accurate proxies of the personal vote are still quite rare. This hinders our ability to directly observe how the seat allocation process generates incentives for candidates to cultivate a personal reputation, and how this can, in turn, influence policy-making. I thus produce a new proxy to capture the level of personal vote in the hope of providing a more efficient measurement for such phenomenon.

The Italian electoral system during the postwar period was an open-list proportional system where voters could cast a vote for a party list and express up to four preferences. In this observational study, I employ preference votes expressed by Italian voters to measure the level of personal vote amassed by each candidate

¹For further details, the reader is referred to the discussion on “the perils of particularism” in Chapter 1.

running for a seat in the Italian chamber of deputies. I then use the newly produced proxy for personal vote to ascertain whether candidates that have acquired larger personal followings are more willing to engage in particularistic policy-making with respect to their colleagues. I define political particularism as a candidate's propensity to allocate goods and services to identifiable geographic entities, functional groups, or individuals using *ad hoc* legislation. I consider two instances of political particularism in the analysis— geographical and sectoral particularism. To capture the level of particularism, I employ the four newly constructed and validated dictionaries of Italian political particularism that I have presented in Chapter 1.

Results suggest that, irrespective of localism, party affiliation and personal characteristics, legislators who constructed a large personal vote are more willing to serve parochial interest within their constituency, be they related to sectors of the economy represented in the constituency or to the constituency as a geographic unity. No relation is found between the level of a candidate's personal vote and his propensity to serve particularistic interests that lack a geographic constituency.

3.2 Literature review

3.2.1 The search for a personal vote, electoral rules and political particularism

There is a vast literature on the personal vote and on the incentives to serve parochial interests that the search for a personal reputation can generate for candidates seeking re-election. Scholars of the American Congress have attributed great importance to the role of the personal vote in Congress' elections. Mayhew (1974b)² is among the first to call attention to the relevance of congresspersons' personal links with their constituents. The author explains how members of congress (MoC) cultivate strong personal ties with their constituents, whereby they offer service and accessibility in exchange for votes. The study of the personal

²See also Mayhew (1974a).

vote remained limited to the American political context until the publication of Cain *et al.* (1987)'s seminal work. The authors show that, even if to a lesser extent, British parliamentarians (MPs) are also willing to cultivate personal links with their constituents (see Cain *et al.* 1987, p. 122). Later on, scholars have shown that the relation between the personal vote and political particularism holds across countries (see, among many, Ames 1995b, Golden 2003, Golden & Picci 2008, Hicken & Simmons 2008).

Following Cain *et al.* (1987)'s analysis of how elected representatives in UK and US construct personalized support, Carey & Shugart (1995) proposed that electoral rules can influence candidates' propensity to cultivate a personal vote. When competing in elections under certain electoral rules, cultivating personal links increases a candidate's chances of being elected. These electoral systems are called candidate-centered electoral systems. In such a situation, personal reputation becomes more valuable relative to party reputation, which incentivizes politicians to cultivate a personal vote. The personal vote distinguishes itself from that fraction of a candidate's support that he obtains thanks to the reputation earned by his political party. Party reputation, indeed, is built on the information that the party label conveys to voters, and it requires politicians to advertise said label and to campaign for their party. Electoral systems where party reputation is relatively more important are called party-centered systems. Since personal and party reputation require a different set of actions in order to be acquired—cultivating personal links with constituents versus advertising the party label— if one of the two becomes relatively more important, candidates will engage with greater commitment in activities aimed at promoting it.

Following Carey & Shugart (1995)'s contribution, other studies have further formalized the relation between electoral rules and the search for a personal vote (Lancaster 1986, Shugart 2001). The reasoning, as explained by Shugart (2005), goes as follows. Electoral rules can be classified as working on an *interparty* and an *intraparty* dimension (Shugart 2005). An electoral system can work predominantly on the interparty dimension by defining an allocation process that directly distributes seats among parties, or it can operate mainly on the intraparty dimension by defining an allocation process that directly distributes seats among

individual candidates. When an electoral system operates mainly on the interparty (intraparty) dimension, the allocation of seats to candidates (parties) is incidental to the allocation of seats to parties (candidates). In interparty-based electoral systems, as is the case for closed-list systems³ (closed-list PR), party reputation matters more and therefore we call these systems party-centered. Since the share of seats won by each candidate is incidental to the share of seats won by his party, cultivating party reputation takes priority over the construction of a personal vote. On the contrary, intraparty-based electoral systems like first-past-the-post, two-rounds majority, alternative vote, single non-transferable vote (SNTV), single transferable vote (STV) and open-list proportional systems (open-list PR) enhance the importance of personal reputation over party reputation. These systems are called candidate-centered electoral systems, and they produce an electoral environment where cultivating a personal vote enhances each candidate's chances of being elected.

While previous literature on electoral incentives and political particularism explicitly theorize a causal mechanism connecting the search for a personal vote to particularism, analyses that explicitly scrutinize and empirically measure the connection between the level of a personal vote earned by a candidate and her propensity to engage in particularistic behaviour are still quite rare. As Swindle (2002) well explains in his review of the literature on the personal vote and political particularism, this state of affair has two main reasons. First, since the electoral system is considered to be a predominant factor in influencing politicians' propensity to cultivate a personal vote, many scholars interested in the study of the personal vote have concentrated their analysis on the effect that candidate-centered electoral systems have on policy-making. Most of these studies analyze the incentives that different electoral systems can have on elected representatives' propensity to favour parochial interests (see, among many, Di Palma 1977, Gamm & Kousser 2010, Martin 2011, Mejía-Acosta *et al.* 2006, Somogyi & Sartori 1963, Taylor-Robinson 1999, Wallack *et al.* 2003). These studies assume that in candidate-centered electoral systems the level of personal vote will be high, without actually producing a direct proxy for the personal vote.

³Which are almost exclusively proportional systems.

On a different note, many existing studies implicitly assume that the personal vote and political particularism are equivalent (Swindle 2002). Most of the literature on the personal vote and particularism is based on the idea that, since the level of personal voting and the level of particularism are both determined by the same electoral incentives, the two concepts can be used interchangeably (Swindle 2002, p. 280). More explicitly, the electoral connection is a relation between an elected representative and his voters that is based on a mutual exchange of resources: votes in exchange for particularistic goods. Therefore, political particularism and personal voting are just two facets of the same phenomenon⁴.

The main issue with proxies of the personal vote based on electoral rules, or particularistic behaviour, is that they are equating three phenomena that are actually distinct. Indeed, particularism is a characteristic of policy-making, personal voting is a facet of the electoral choice, and electoral rules pertain to the institutional mechanism that converts votes into seats (Swindle 2002). This approach cannot appropriately help us in measuring the direct connection between candidates' search for a personal vote and their willingness to serve parochial interests. To shed more light on such a link, we should rely on data on votes by candidates, candidates' list ranks, and candidates' personal attributes⁵, (see Gallagher & Mitchell 2005, p. 49-50). We need to propose proxies for the personal vote that can more directly capture the level of personal following amassed by each politician.

3.2.2 Proxies for the personal vote

A more recent strand of the literature on the personal vote has concentrated its efforts on trying to produce better proxies for evaluating the level of personal vote in a political system. Martin (2010) measures personal vote using the number of first preference votes received by each candidate under a STV electoral

⁴To get an idea, Martin (2011) talks about elected representatives' focus on personal-vote earning and parochial interests when describing legislative particularism; Gamm & Kousser (2010) describes Fenno (2002) and Mayhew (1974a)'s electoral connection as politicians' action of proposing particularistic policies to meet the electoral demands of their constituencies, to name but a few.

⁵a task which requires a considerable effort in data collection

system. Carson *et al.* (2007) estimate the personal vote as the mean vote loss for an incumbent who runs in a new county in the U.S. House of Representatives elections. Allen (2015) measures the level of personal vote as the percentage of voters in a district that cast a personal vote for a candidate under a flexible-list system. Ansolabehere *et al.* (2000) propose a proxy for the personal vote that is determined by the difference between an incumbent's share of votes in the new part of the district with his share of votes in the old part of the district. Golden & Picci (2015) estimate the level of a candidate's personal following as the national ranking of a legislator within his party based on the total number of preference votes he received in an open-list PR system. These studies have moved the literature in the direction of producing better theoretical and empirical proxies for the personal vote. As such, they constitute a valid starting point for disentangling the concept of the personal vote from those of candidate-centered electoral rules and political particularism.

3.3 Theoretical framework

3.3.1 Defining political particularism and the personal vote

I am interested in studying the relationship between candidates' search for a personal vote and their propensity to engage in particularistic policy-making. My main explanatory variable thus is personal vote. Based on previous contributions, I define the personal vote⁶ as that part of an MP's support that he gets thanks to his individual actions, personal characteristics and qualifications (Cain *et al.* 1984, 1987).

While I provide a definition of the personal vote that is based on previous contributions, I propose a novel characterization of political particularism, which I have justified and illustrated in greater detail in Chapter 1. I build on Eulau & Karps (1977)'s theory of representation as responsiveness, which conceptualizes

⁶or personal following.

political representation as composed of four styles and three foci of representation.⁷ Styles of representation define the target of representation that a legislator has: policy responsiveness, service responsiveness, allocative responsiveness, symbolic responsiveness. Foci of representation define the way a legislator perceives his constituency: in terms of territorial levels, functional groups, or individuals.

Based on this approach, I conceptualize political particularism as an allocative style of representation, which means that political particularism concerns distributive policy-making. Legislators who engage in particularistic policy-making wish to represent constituents' interests by providing them with goods and services. I also incorporate Eulau & Karpis (1977)'s concept of focus of representation. That is, I assume that representatives can perceive their constituencies in a multitude of ways. For instance, an elected representative can perceive his constituency in terms of territorial levels: a nation, a region, a state, or a district. In this case, the focus is geographic. Alternatively, a legislator can perceive his constituency as consisting of various functional groups: economic, religious, ethnic or ideological. In this case, the focus is group-related. Finally, a representative can perceive his constituency as composed of different individuals, from notables to unknown clients. In this case, the focus is individual. I thus define political particularism as a style of representation that consists of the allocation of goods and services to identifiable geographic entities, functional groups, or individuals. The type of particularism is determined by the interest being served. In the case of geographic entities'⁸ interests we would talk about geographical particularism, in the case of functional groups' interests we would talk about group-related particularism, while in the case of individuals' interests we would talk about individual particularism.

In this analysis, I consider two types of particularism: geographical particularism and sectoral particularism, which is a "sub-type" of group-related particularism. Sectoral particularism concerns the distribution of goods and services that are targeted to certain sectors of the economy or professional categories. While an analysis that considers all the different functional groups in a society would be more comprehensive, the most substantial channels of perceived impact of

⁷For further details, the reader is referred to Table 1 in Chapter 1.3.1.

⁸In this case, the geographic unit is the constituency.

lawmaking that targets functional groups remain the basic sectors of the economy (see Lowi 1964, p. 691). I thereby concentrate on functional groups related to the different sectors of the economy, hence the name sectoral particularism. While the literature proposes examples of bills directed towards individual persons (see Taylor-Robinson 1999, p. 618), the systematic detection of individual particularism in the Italian legislation would be unfeasible. Indeed, most of the distribution of favours to individual clients was performed through illicit, and therefore concealed, practices: from the recruitment or promotion of personnel on the basis of political affiliation, to the manipulation of the recruitment process for posts in the public sector. To find systematic evidence of such concealed practices would be highly impractical.⁹

Geographical particularism is the act of distributing goods and services to a geographic entity, i.e. an MP's constituency. An example of geographical particularism would be an infrastructural intervention like the construction of a bridge or of a car park. Sectoral particularism is the act of distributing goods and services to functional groups determined by sectors of the economy. An instance of sector-related particularism would be the distribution of subsidies to the tourism sector or the institution of an award for the urban and architectural sector. While geographical particularism will always be targeted to an elected representative's constituency, an elected representative proposing a bill that affects a sector of the economy, or a professional category, could also target individuals living outside her constituency. This happens because the distribution of economic sectors does not necessarily follow the boundaries defined by electoral districts. Indeed, scholars have already mentioned the possibility that some benefits, for example tax reliefs or waivers, may be distributed to recipients outside the home district (Mayhew 2004, p. 57). Alternatively, elected representatives could target economic sectors and professional categories outside their constituency even if their intention is that of serving exclusively sectoral interests within their constituency. They could, for example, propose a bill concerning public sector employees' salaries, or the tourism sector at large, because these professional categories are largely represented in their constituency. Not specifying a particular geographic location could constitute

⁹For a thorough discussion on sectoral and individual particularism, the reader is referred to Chapter 1.5.1.

a better strategy. The bill would appear as “less localized” and maybe have a much better chance of being passed by their colleagues in parliament, while at the same time producing the desired effect of favouring the interests of the clientele inside the constituency. On the other hand, as I explain in Chapter 2 and in the introduction to this manuscript¹⁰, it would be difficult to find solid evidence of an electoral connection in this case, since representatives in parliaments are still elected through a geographically-based mechanism. We would thus expect electoral incentives to have a much stronger effect on a candidate’s propensity to serve interests, be them sectoral or purely geographic, localized inside his constituency. To take into account all of these matters, I consider both kinds of sectoral particularism described in Chapter 1. The first one captures sector-targeted legislation with a “broader scope”, i.e. every bill that affects a specific sector of the economy¹¹ in its entirety, regardless of whether said sector belongs to the constituency where the MP proposing the bill has been elected. The second one captures sector-targeted legislation with a “narrower scope”, i.e. legislation that affects a sector of the economy¹² that belongs to the MP’s constituency. Still, my expectation is that only sectoral particularism directed at a geographic constituency—sectoral particularism with a “narrower scope”—will be influenced by the search for a personal vote.

3.3.2 The effect of personal vote on political particularism

Previous literature has shown that candidates in search of a personal vote are more willing to serve parochial interest, which should increase the level of particularism in the political systems where they operate. Most of the literature on political particularism has concentrated its efforts in studying elected representatives’ willingness to serve interests belonging to the constituency as a whole—geographical particularism (Gamm & Kousser 2010, Golden & Picci 2008, Keefer & Khemani 2009, Lancaster 1986). According to this perspective, elected representatives in

¹⁰For a bibliographic reference the reader is referred to Mayhew (1974a).

¹¹Or professional category, or enterprise/firm employed in said sector.

¹²Or professional category, or enterprise/firm employed in said sector.

search of a personal vote will distribute goods and services to their constituency, without distinguishing among the interests of different constituents—functional groups or individuals—inside the constituency. This will usually results in the building of infrastructures inside the constituency. Indeed, most of this literature produces proxies of political particularism that are based on the amount of infrastructure expenditures in the constituency (Alesina & Perotti 1995, Battaglini & Coate 2008, Besley & Coate 2003, Golden & Picci 2008, Pennock 1970, Shepsle & Weingast 1981, Weingast *et al.* 1981).

Only a few scholars have proposed a categorization of political particularism that encompasses more explicitly the other two foci of representation described by Eulau & Karps (1977): functional groups as well as individual persons (Mejía-Acosta *et al.* 2006, Taylor-Robinson 1999). Taylor-Robinson (1999) categorizes bills initiated in the Honduran Congress as “local” if they target a local community, a sector of society, or an individual. Mejía-Acosta *et al.* (2006) use Taylor-Robinson (1999)’s categorization scheme to content-analyze bills proposed in the lower chamber of Paraguay and in the Ecuadorian congress. Golden (2003) talks about a strong connection of Italian deputies’ with their voters during the postwar area, which was based on legislators’ propensity to serve the interests of clientelistic groups and individual notables inside the constituency. Pedrazzani & Zucchini (2013) define “pork barrel bills” all those laws that include benefits for specific places, professional categories or interest groups, legal subjects or individuals. Di Palma (1977) explains that elected representatives in postwar Italy used to propose many *small laws*—*leggine*—aimed at favouring their voters’ interests, be those interests strictly individual or connected to functional groups. Building on these analyses, I argue that legislators who seek a personal vote are more willing to favour the interests of the whole constituency—geographical particularism—as well as those of clientelistic groups belonging to a specific economic sector or professional category represented in the constituency—sectoral particularism.¹³. Based on these considerations, I postulate:

H1: Deputies who have acquired a larger personal vote, will be more

¹³For a through theoretical discussion on geographical and sectoral particularism, see Chapter 1.3.

willing to serve parochial interests inside their constituency.

3.3.3 The effect of localism on political particularism

I also consider localism as an alternative explanation for legislators' propensity to serve parochial interests. Scholars argue that candidates with strong local roots usually have greater familiarity with local interests and are more willing to serve them (Gallagher 1985, Lancaster 1986, Putnam *et al.* 1976, Tavits 2010). Localism is typical of countries where MPs are most often elected in the same constituency where they were born, where they reside, or where they have already gained local political experience. Conventional wisdom tells us that localism was particularly strong in Italy during the postwar period. Italian deputies have a story of acting as notables who bring pork to their districts (Allum 1974, Lancaster 1986).

The local connection does not work exclusively at the purely geographic level. Local politicians are also usually willing to serve the interests of various clientele inside the constituency. These include functional groups connected to sectors of the economy—sectoral particularism (Golden 2003, Lancaster 1986). With regard to sectoral particularism, while I cannot exclude the possibility that local MPs would serve sectoral interests using the same strategy described in Section 3.3.1—i.e. drafting legislation that “broadly” favours sectors of the economy that are highly represented in the constituency—I would expect local deputies to be more careful in making sure that the sectoral interests favoured are precisely those inside their constituency. Since local MPs base their connection with voters mostly on common local roots, they should be more incentivized to signal that the sectoral interests been favoured are just those inside the constituency. Moreover, since they are familiar with the local economic situation, MPs with more local roots will more easily draft legislation targeted to sectors of the economy or industries present in their constituency. To do that, they would refer to specific industries in the constituency or to sectors of the economy in a specific¹⁴ region. Accordingly, I postulate:

¹⁴For example, the tourism sector in Sardinia.

H2: Local deputies will be more willing to serve parochial interest that have a geographic constituency with respect to non-local MPs.

3.3.4 Controls

In addition to the conventional demographics, gender and age, I take into account the possible effects of other confounders. The number of particularistic bills should be highly correlated with the total number of bills proposed by an MP, be they particularistic or not.¹⁵ However, what I want to capture in my analysis is only MPs' propensity to propose particularistic bills, and not their propensity to propose legislation more in general. I therefore control for the total number of bills proposed by an MP during a legislative period.

Ministers, who are engaged with government business, usually have less time to draw up bill proposals. This could result in ministers proposing less particularistic bills, with respect to parliamentarians without a government appointment, simply because they do not have the time to do so. Moreover, members of government are usually well known among voters and they are thus more likely to get a considerable number of preference votes. To control for this confounding effect, I take into account if an MP is a minister or an undersecretary.

An MP with a longer experience in parliament could have gained the opportunity to build stronger personal links with his constituents and thus be more willing to serve parochial interests with which he has strong connections. At the same time, his longer experience in parliament should have gained him more popularity among voters and thus he would potentially gain more preference votes than a deputy with less experience. I therefore control for incumbency by considering the number of terms that each MP has served.

While the phenomenon of political particularism was spread throughout the country in postwar Italy, anecdotal evidence tells us that it was particularly strong in the south. I therefore control for an MP's area of election. Moreover, some political parties, like the Christian Democracy, were more likely to engage in it

¹⁵This is confirmed by the descriptive evidence provided by the trends illustrated in Figure 3 and Figure 8 of Chapter 1.

with respect to the others (Allum 1974, Cotta 1979, Golden 2003, Marangoni & Tronconi 2011)¹⁶. I therefore insert party fixed effects in my regression.

3.4 Data and methods

3.4.1 The context and the data

During the postwar period, Italian deputies were elected through an open-list PR system, where voters could vote for a party list and express up to four preference votes.¹⁷ The 630 members of the Italian chamber of deputies were elected in 32 constituencies, with an average of 20 deputies per constituency. Moreover, a so called “Collegio Unico Nazionale” (CUN) was used to fill the remaining seats once all votes gained by candidates running in the electoral districts were converted into seats. Since deputies elected in the “Collegio Unico Nazionale” are, by definition, not connected to a specific geographic constituency, I have not included them in the analysis.¹⁸ Conventional knowledge in Italian studies tells us that the open-list system boosted pork-barrel politics and clientelism. Patron-client relationships were very common during this period and the so called “voto di scambio”¹⁹, whereby legislators offered service and accessibility or jobs in the public sector in exchange for a preference vote, was very common. Indeed, after the “manipulate”²⁰ investigation the electoral system was changed into what was considered a less personalistic one, to avoid new corruption scandals (Di Palma 1977, Golden 2003). The Italian open-list PR system offers a great opportunity to assess the impact of the personal vote on particularism. In addition to a party list, voters could also cast up to four²¹ nominal votes for candidates running in the same list. In this context, the preference vote clearly signals a voter’s intention to pick a candidate based on his or her personal characteristics, qualifications and

¹⁶See also Chapter 1.7.2 for empirical evidence on Christian Democracy predominance in proposing particularistic legislation.

¹⁷Four in the districts where more than 16 candidates were elected.

¹⁸For further details, see Italian Electoral Law n. 26—Legge elettorale n. 26, 5 Febbraio 1948.

¹⁹Exchange vote.

²⁰“Clean hands”.

²¹Four in the districts where more than 16 candidates were elected.

actions. This vote distinguishes itself from that fraction of a candidate's support that he obtains thanks to the reputation earned by his political party, which is represented by the list vote.

To analyze the effect of the personal vote on candidate's propensity to serve particularistic interests, I employ a newly-constructed dataset on Italian MPs' demographics and on the individual member bill proposals (IMBPs) that they have introduced in the Chamber. For this study, I use that portion of the database composed of all the IMBPs introduced in Parliament in the period that covers the first 10 legislatures of the postwar era.²²

I have chosen IMBPs as unit of analysis because I do not include all bills, passed by or proposed in the Chamber, because this would not only capture the effect of the search for a personal vote on MPs' willingness to propose particularistic legislation, but it would also incorporate the effect of potential confounding factors which influence the chances that a bill proposal becomes law. These confounders include political party affiliation, majority status in parliament, and committee leadership (Anderson *et al.* 2003, Cox & Terry 2008). On the other hand, analyzing IMBPs allows to dismiss the whole approval process which comes after a bill proposal goes to the floor, and it thus produces a more direct and transparent measure of candidates' willingness to serve parochial interests. Moreover, IMBPs fulfill many critical functions. First, they have an instrumental function, which means that they can influence the legislative process simply by getting on the floor, since they become part of the ongoing bargaining process that takes place in parliament (see Mattson 1995, p. 483). Second, they have an expressive function, which means that legislators can communicate their opinion to their voters through legislative proposals (see Mattson 1995, p. 483). Finally, IMBPs constitute an efficient propaganda instrument, especially when they aim to favour narrow clientele's interests.

Data on the demographics of Italian MPs include their age, gender, place of birth, district and region of election, political party or list of election. Data on

²²The 11th legislature is not considered in this analysis, even though an analogous electoral system was in place, because the number of possible preferences expressed was limited to a maximum of one in every district. For a similar approach see Golden & Picci (2015).

preference votes are from the historical archives retained by the Italian ministry of interior. The final dataset spans over 44 years and it contains more than 5,600 MPs from 10 different legislatures.

3.4.2 Variables operationalization and methodology

Operationalizing political particularism

I operationalize political particularism as an MP's act of serving parochial interests through *ad hoc* legislation. In my analysis, I include two different instances of particularistic policy-making: geographical and sectoral. I operationalize geographical particularism as a bill proposal that distributes goods and services to a candidate's constituency, like the construction of infrastructures inside the constituency. I operationalize sectoral particularism as a bill that distributes goods and services to a whole sector of the economy, a professional category, or a company/firm active in that particular economic sector. An example of a sector-targeted bill would be one that institutes an award for the urban and architectural sector.²³

To classify a bill as particularistic—geographical or sector-targeted— or non-particularistic, I employ the four new dictionaries of Italian political particularism that I have constructed and validated in Chapter 1 (see Chapter 1.6.3; 1.7). Geographically-targeted bills are those containing references to the distribution of a benefit²⁴ intended for the whole MP's constituency. In line with the discussion provided in Chapter 1.6.3 and in Section 3.3.1, I propose two types of sector-targeted legislation. Sector-targeted legislation with a “broader scope”, and sector-targeted legislation with a “narrower scope”. Broader scope legislation affects a specific sector of the economy²⁵ in its entirety, regardless of whether it belongs to the district where the MP proposing legislature has been elected.

²³For further examples of particularistic bills found in the literature the reader is referred to the online Appendix.

²⁴The benefits considered are: money transfers, salary increases, subsidies, tax reliefs, constructions of infrastructures, measures to guarantee economic, social and cultural development (for further details, see Table 5 in Chapter 1.6.4).

²⁵Or professional category, or enterprise/firm employed in said sector.

Narrower scope legislation affects a sector of the economy²⁶ that belongs to the MP's constituency. Non-particularistic bills are those which contain no reference to the distribution of a benefit to an MP's constituency, or to a sector of the economy. I use an MP region of election as a proxy for his constituency. In Italy, the width of the electoral constituencies varies over time. Nevertheless, the size of constituencies is never larger than that of a region. The use of the region of election as a proxy for the constituency thus allows a comparison of legislators' behaviour over time.²⁷

For each MP, his propensity to engage in particularistic policy-making is measured by the total number of particularistic bills—geographical or sectoral—he proposes. The variable called *geo* measures the number of geographic-based bills proposed by an MP, while *sector* and *sector geo* measure the number of sector-based bills. *Sector geo* indicates the number of sectoral bills with a “narrow” scope, i.e. those referring to sectors or professional categories inside the constituency. *Sector* measures the number of sectoral bills with a “broad” scope, i.e. those with no specific reference to the MP's constituency. Particularistic bills constitute a substantial minority among all the IMBPs presented in parliament. A part from the very first legislature, over time particularistic bill proposals usually amount to 2% of the whole number of IMBPs presented during a legislative term (see Table B.1 in Appendix B.1). The phenomenon of political particularism was widespread in the Italian Parliament, with almost 20% of the MPs proposing one particularistic bill²⁸ per term, and 5% of them proposing between four and five per term.²⁹

Operationalizing the personal vote

To capture the amount of personal vote amassed by each MP, I count the number of preference votes gained by each candidate in the district where he was elected, and I normalize it by dividing it by the total amount of voters³⁰ in the district.

²⁶Or professional category, or enterprise/firm employed in said sector.

²⁷For a similar approach, see Marangoni & Tronconi (2011).

²⁸Either geographical or sector-based.

²⁹For further details see Table B.3 in Appendix B.1.

³⁰Note that this includes all the registered voters in the district and not just those who actually went to the polls and cast a valid vote.

Therefore, the level of personal following gained by each MP is captured by the variable *personal vote*, which measures the proportion of preference votes he gained over the total amount of possible preference votes he could have gained in the district. On average, an MP amassed 36,510 preference votes, with an average of more than 21 million preference votes expressed in a whole electoral district.³¹ The maximum number of preference votes ever received by a Deputy was 367,235, gained by the Christian Democrat Giulio Andreotti during the 6th legislature. The maximum share³²—0.47—was gained during the first legislature by another Christian Democrat, Paolo Farinet. On average, MPs received much less than a 0.47 share of preference votes. Indeed, the average share of preference votes throughout the ten legislative terms is 0.03.³³

Operationalizing localism

To operationalize localism, I use a geolocalization algorithm to assess if an MP has been elected in the same region where he was born. I have retrieved data on the city of birth of each MP and on the district where they have been elected when I have assembled the main dataset (see Chapter 1). To perform this chapter's analysis, I use the geolocalization algorithm to assign a region to each city of birth and district of election by geolocating them on a map of Italy. I then simply compare the region of birth with the region of election in order to create my localism variable.³⁴ The final variable, *local*, is a dummy variable which defines a legislator "local" if the district where he has been elected is in the same region where he was born, and "non-local" otherwise. The widespread diffusion of localism in Italy that I have illustrated in Section 3.3 is corroborated by the data, with about 70% of the MPs being locals in each legislative term.³⁵ There are other factors that could provide further details on an MP's level of "localness", like his region of residence or his previous local government experience (Gagliarducci *et al.* 2011, Marangoni & Tronconi 2011). These measures could more precisely capture the strength of the local connections that deputies have built in their

³¹Note that each voter could express up to 4 preference votes.

³²Minimum share: 0.0005.

³³Median: 0.02.

³⁴R packages used for the geolocalization: *ggmap*, *maps*, and *maptools*.

³⁵For further details, see Table B.4 in Appendix B.1.

district, for example, if combined in an *index of localness* that takes into account different levels or types of localism³⁶³⁷. Unfortunately, I do not have data on an MP's region of residence or previous local government experience for the period that goes from the 1st to the 10th legislature. In my analysis, I therefore employ only the dummy variable *local* just described.

Operationalizing control variables

To operationalize incumbency I use a set of dummies indicating the number of terms a candidate has served, from two to ten.³⁸ The variable *bill proposals* indicates the total number of bills proposed by each MP over one legislative period. A dummy variable called *minister or undersecretary* indicates if an MP occupies a government position, as minister or undersecretary. A dummy variable called *male* indicates if an MP is a male or not, while a variable called *age* measures the age in years of an MP. Two dummy variables called *north* and *center* indicate if a legislator has been elected in a northern or center district.³⁹ To control for the predominant role of certain political parties in distributing particularistic goods and services, I use dummy variables indicating an MP's party membership⁴⁰ and I keep the dummy for membership in the Christian Democracy as the reference category.

3.4.3 Methods

Since almost 70% of the MPs considered in the analysis do not stay in parliament for more than two consecutive terms, and less than 1% serve for the whole postwar period, a panel data analysis would be unfeasible. In addition to produce results based on a very small sample, such an analysis would draw inferences from a very selected sample of politicians, who most probably managed to stay in parliament for so long thanks to idiosyncratic characteristics or special circumstances, which

³⁶For a similar approach, see Marangoni & Tronconi (2011).

³⁷Suppose that an MP was born in a certain region but then moved to a different one before starting his political career.

³⁸One term is the reference category.

³⁹*Southern* is the reference category.

⁴⁰The party membership is inferred from the MP's parliamentary group.

could hardly be incorporated in a statistical analysis. I therefore consider the whole sample of 5,617⁴¹ pooled cross-sectional time-series observations, whereby the unit of analysis is constituted by an MP in a given legislature. To control for potential time-idiosyncratic effects, I employ time—legislature—fixed-effects. Section 3.5 shows the results obtained when running three different negative binomial regression models, one for each type of particularism considered.⁴²

3.5 Results

Table 3.1 reports the results of three different negative binomial regressions.⁴³ The first model illustrates the effect of personal vote on an MP's propensity to propose geographically-targeted legislation, while the second and third model illustrate the effect of personal vote on a deputy's propensity to propose sector-targeted legislation. The level of personal vote amassed by an MP has a strong positive and statistically significant effect on his propensity to propose geographically-targeted legislation—*geo*—and sector-targeted legislation addressed to sectors of the economy in the MP's constituency—*sector geo*. To give a better idea of the substantive effects, in Appendix B.2 I propose results in terms of incident rate ratios, and I multiply *personal vote* by 100. This way, we can easily interpret changes in the level of personal vote as percentage changes.⁴⁴ When the level of personal vote earned by a candidate increases by 1%, the number of geographically targeted bills that he proposes increases by 5%, while the number of sector-geo bills that he proposes increases by more than 7%. Put it differently, a shift from no preference votes to the maximum share of preference votes observed in the sample increases the average predicted number of *geo* bills from three to almost 37, and

⁴¹Including candidates elected in the Valle d'Aosta district.

⁴²In Appendix B.4, I justify the choice of using a negative binomial model instead of a well-known alternative—Poisson regression.

⁴³Candidates running in the Valle d'Aosta district were elected under a different electoral rule, in a uninomial district. Voters could opt for one candidate connected to a party list. Since voters were simultaneously expressing a preference for the party list as well as for the candidate running for that list, it would be unfeasible to detect the level of personal vote amassed by said candidates. Consequently, I have excluded candidates running in the Valle D'Aosta district. Appendix B.5 shows the results obtained when including candidates running in the Valle d'Aosta district, which do not distance themselves much from the results illustrated in this section.

⁴⁴Note that *personal vote* is a proportion. If we multiply by 100 we get a percentage.

	(1) Geo	(2) Sector Geo	(3) Sector
Personal Vote	4.958** (2.14)	6.935** (3.02)	-0.340 (1.27)
Local	0.046 (0.11)	0.142 (0.15)	-0.070 (0.05)
Minister or Undersecretary	-0.334*** (0.13)	-0.384** (0.18)	-0.331*** (0.06)
North	0.168 (0.11)	0.053 (0.15)	-0.090 (0.06)
Center	0.092 (0.11)	0.159 (0.15)	0.047 (0.06)
Bill Proposals	0.075*** (0.01)	0.063*** (0.01)	0.107*** (0.01)
Age	-0.005 (0.00)	-0.012* (0.01)	-0.006** (0.00)
Male	0.617*** (0.24)	0.702** (0.30)	0.057 (0.11)
EU Federalist	0.183 (0.95)	-22.906*** (0.53)	-1.584* (0.92)
Greens	-1.225 (1.12)	-23.045*** (0.39)	-0.048 (0.32)
Italian Communist Party	0.139 (0.12)	0.056 (0.15)	-0.040 (0.07)
Italian Republican Party	-0.253 (0.32)	0.243 (0.36)	0.047 (0.15)
Italian Social Democratic Party	-0.144 (0.22)	-0.031 (0.31)	-0.004 (0.09)
Italian Social Movement	0.095 (0.18)	0.511** (0.25)	-0.116 (0.11)
Italian Socialist Party	0.001 (0.13)	-0.047 (0.18)	-0.040 (0.08)
Left wing	-0.752 (0.50)	-0.511 (0.49)	0.138 (0.14)
Liberal	-0.092 (0.20)	-0.147 (0.31)	-0.137 (0.13)
Misto	-1.020** (0.48)	-2.078** (1.05)	-1.065*** (0.25)
Misto Regional Leagues	0.602 (0.44)	0.104 (0.72)	-0.851 (0.53)
Monarchic Party	-1.357*** (0.45)	-1.169* (0.63)	-0.147 (0.19)
Radical Party	-25.740*** (0.31)	-22.412*** (0.33)	-0.500* (0.30)
2 Terms	-0.082 (0.08)	-0.095 (0.12)	0.134*** (0.04)
3 Terms	-0.113 (0.11)	-0.154 (0.16)	0.124** (0.06)
4 Terms	0.029 (0.14)	0.085 (0.20)	0.140* (0.08)
5 Terms	0.005 (0.19)	0.003 (0.26)	0.086 (0.09)
6 Terms	-0.505** (0.23)	-0.437 (0.34)	-0.100 (0.14)
7 Terms	0.398 (0.30)	0.565 (0.42)	-0.300 (0.24)
8 Terms	-0.765 (0.62)	-0.587 (1.02)	-0.616*** (0.22)
9 Terms	-0.299 (0.56)	-0.852 (0.72)	-0.578* (0.30)
10 Terms	-0.887 (0.98)	-19.156*** (0.45)	-0.336 (0.51)
N	5767	5767	5767

* p<0.10, ** p<0.05, *** p<0.010

Table 3.1: The effect of personal vote on MPs' propensity to propose particularistic legislation.

The table reports negative binomial regressions that estimate the effect of an MP's level of personal vote on his propensity to propose particularistic legislation: geographic-targeted legislation—Model 1, and sector-targeted legislation—Model 2 & Model 3. Observations are MPs in a given legislature. Party fixed-effect, dummy for membership in the Christian Democracy party is the reference category. Legislative dummies and constant are not reported. Robust standard errors, clustered by MP, in parentheses.

it increases the average predicted number of *sector geo* bills from less than to more than nine. As expected, the level of personal vote does not seem to influence a candidate's propensity to propose sector legislation that is not targeted to his geographic constituency—*sector*. These results are in accordance with hypothesis 1 and suggest that candidates with a stronger personal support are more willing to propose particularistic bills targeted at professional categories represented in their constituency as well as at their constituency as a whole geographic unit. Being born in the same region where he has been elected does not seem to significantly affect an MP's propensity to propose particularistic legislation. I thus do not find empirical evidence in support of hypothesis 2.⁴⁵⁴⁶ As expected, being a minister decreases the number of particularistic bills proposed by an MP. On average, the number of *geo bills* proposed by ministers is almost 28% less than the number of *geo bills* proposed by deputies without a government appointment, the number of *sector geo* bills is 32% less and the number of *sector* bills is 28%. As expected, the number of bills proposals are positively related to the number of particularistic bills proposed. One more bill proposal increases the average number of *geo bill* proposals by 8%, the average number of *sector geo* by 7% and the average number of *sector* by 11%. Male has a positive and statistically significant effect on the propensity to propose particularistic legislation that is targeted at a geographic constituency. On average, a man proposes 85% more *geo bills* and 102% more *sector geo* bills with respect to a woman. Party membership displays a rather erratic impact, with members of only some of the political parties proposing significantly less particularistic bills with respect to members of the DC, like those from the Radical or the Monarchic Party. Incumbency has an even more erratic impact, with the sign and significance of the effect changing across different types of particularism and number of terms served.

⁴⁵With regard to the use of the region of birth as a proxy for localism, instead of the region of residence or previous local government experience, the reader is referred to the discussion in Section 3.4.2.

⁴⁶Of course, this result does not imply that localism or local connections are irrelevant, *per se*. Better proxies for localism could capture an effect, but unfortunately I do not have data on region of residence or previous local government experience.

3.6 Discussion

A vast literature on legislative behaviour shows that the search for a personal vote should increase elected representatives' propensity to serve parochial interests. While instructive, previous studies have most often equated personal vote to either one of its main determinants, candidate-based electoral systems, or to one of the main outcomes it can produce, political particularism (Swindle 2002). The main issue with these kinds of proxies is that they are equating phenomena that are actually distinct: a feature of policy-making—political particularism, a characteristic of the electoral choice—personal vote, and the institutional mechanism used to convert votes into seats—the electoral system (Swindle 2002). This study aimed at more directly showing how the search for a personal vote influences legislators' propensity to serve parochial interests, building on previous contributions that propose more direct proxies of the personal vote (Allen 2015, Ansolabehere *et al.* 2000, Carson *et al.* 2007, Golden & Picci 2015).

Results from a set of negative binomial regressions suggest that, indeed, the search for a personal vote influences candidates' propensity to serve parochial interests inside their constituency. Interestingly, this study provides evidence of MPs' propensity to serve not only the interests of their constituency as a whole—geographical particularism, but also the interests of specific functional groups connected to sectors of the economy or professional categories represented in the constituency—sector-geographical particularism. These results provide further empirical evidence that corroborates the previous mainly anecdotal accounts on Italian legislators' propensity to favour the interests of diverse clientele residing in their constituency (Di Palma 1977, Golden 2003). The evidence here presented suggests that sectoral particularism is indeed a relevant phenomenon. Even though national parliaments are elected through a geographically-based mechanism, this does not imply that elected representatives perceive their electoral constituency only in geographic terms. Legislators in search of a personal vote do not simply divert goods and services to their districts, they also target the interests of specific economic sectors or professional categories residing in their constituencies.

Differently from previous scholarship, this analysis provides a more direct evidence

of a connection between candidates' search for a personal vote and their propensity to serve parochial interests. This is obtained with the use of a more direct proxy for the personal vote, which is based on the number of preference votes gained by each candidate. Deputies with large personal followings are more willing to propose legislation targeted at their constituency, be it aimed at favouring the interests of the whole constituency or of sectors of the economy represented in the constituency. Localism, has no significant effect once we consider the level of personal vote. This suggests that having strong local roots does not increase a legislator's propensity to serve parochial interests, unless he manages to convert his personal links into votes. A possible interpretation of these results could be that political systems where elected representatives build strong local roots with their constituents are not necessarily more prone to particularistic policy-making, unless the electoral system through which they are elected explicitly requires them to acquire wide personal followings, as in the case of open-list PR, first-past-the-post, or STV/SNTV. Of course, being this just an observational study of one country over a 44 years period, further single-country or cross-country studies would be needed in order to build further confidence in the generalizability of this analysis. Moreover, my proxy for localism could be less-than-optimal in capturing an MP's level of localness. Indeed, while I argue that the proxy for personal vote here used should be considered an improvement with respect to previous "less-direct" measures of the personal vote, I recognize that the proxy for localism that I employ could be a second-best option. Scholars have used proxies based on an MP's region of residence or on his previous experience in the local government (Gagliarducci *et al.* 2011, Marangoni & Tronconi 2011). These measures, combined in an index of localness, could more effectively capture the strength of a legislators' local ties. I therefore do not think that my results provide definitive evidence on the irrelevance of local roots in increasing MPs' propensity to serve particularistic interests. Instead, I argue that future contributions could propose better proxies to capture the strength of localism in Italy and thus improve our understanding of the effect of local connections on political particularism.

Lastly, while this study proposes theoretical evidence in support of the claim that legislators with strong personal followings in their constituency are more willing

to serve their constituents⁴⁷ in personal ways, no relation is found between the level of a candidate's personal vote and his propensity to serve sectoral interests outside his constituency. There thus appear to be no clear connection between an elected representative's search for a personal vote and his propensity to favour the interests of certain sectors of the economy at large. Future studies could further scrutinize the potential factors influencing elected officials' propensity to serve parochial interests that lack a geographic constituency. For instance, Bawn & Thies (2003) and Kunicova & Rose-Ackerman (2005) propose that party leaders could be more willing to provide favours to clientele that lack a geographic constituency, while Marangoni & Tronconi (2013) propose that MPs should be more willing to serve the interests of the professional category to which they belonged before being elected, irrespective of the fact that such professional category has a relevant representation inside their constituency. A better understanding of the determinants of sectoral particularism at large would offer additional concrete insights to policymakers who are willing to reduce socially sub-optimal phenomena such as clientelism and misallocation of resources.

To conclude, with all of the limitations typical of an observational study, this analysis suggests that the search for a personal vote influences a candidate's propensity to serve parochial interests. This brings me to the second step in my analysis of the causal mechanism connecting electoral rules to political particularism. After having found empirical evidence of a connection between the search for a personal vote and political particularism, I try and look for evidence of a connection between electoral systems that incentivize the cultivation of a personal vote and political particularism. In the next chapter, I look for empirical evidence in support of a causal connection between personalistic electoral rules and political particularism by comparing the legislative behaviour of Italian MPs elected under different electoral rules.

⁴⁷Be them perceived as a whole geographic entity—the constituency—or as members of functional groups connected to specific sectors of the economy.

4 The impact of Electoral Rules on Political Particularism. Highlights from the Italian Chamber of Deputies.

Abstract

Candidate-centered electoral systems make it more convenient for politicians to cultivate a personal reputation, rather than to improve the reputation of their political parties. In order to cultivate personal followings, candidates provide goods and services to narrow segments of society in exchange for votes. Conversely, party-centered electoral systems increase the importance of party reputation in the electoral process. When party reputation matters more for a politician, policy-making should respond more effectively to general interests. While conventional wisdom in the comparative electoral systems literature tells us that there is a connection between candidate-centered electoral systems and political particularism, attempts to disclose a causal relationship are still rare. In this study, I employ regression-discontinuity design (RDD) to analyze the causal mechanism linking electoral incentives to particularistic policy-making, in the Italian political system. Results from a quasi-experimental study of Italian legislators' behaviour challenge conventional wisdom on the effect of electoral rules on elected representatives' willingness to serve parochial interests. No empirical evidence is found in support of the hypothesis that a candidate-centered electoral rule generates greater incentives

for a member of parliament (MP) to serve the interests of narrow segments of society with respect to a party-centered electoral rule.

4.1 Introduction

Scholars have studied political particularism at length, concentrating on the possible negative externalities that it can produce. From a non-equitable or Pareto-inefficient distribution of resources (Alesina & Perotti 1995, Battaglini & Coate 2008, Besley & Coate 2003, Ferejohn 1974, Pennock 1970), to the construction of a political system that is focused on the provision of particularistic benefits instead of offering a selection from among alternative policy choices (Carey & Shugart 1995, Cox 1987, Lancaster 1986). A large strand of the literature on electoral incentives and legislative behaviour has proposed that the electoral system can significantly influence elected representatives' willingness to engage in particularistic policy-making. Some electoral systems should make it more convenient for candidates to cultivate a personal reputation, rather than to improve the reputation of their political parties. The construction of a personal vote should in turn incentivize political particularism: candidates provide goods and services to narrow segments of society in exchange for votes. Conversely, if party reputation matters more for a politician, policy making should respond more effectively to general interests (Carey & Shugart 1995, Lancaster 1986, Shugart 2001).

While the literature offers extensive empirical evidence and solid theoretical background for a connection between the electoral rule and elected representatives' tendency to serve parochial interests, "acid tests" of a causal linkage are still quite rare. This is mainly due to the difficulty in controlling for potential confounding factors connected to the institutional environment or to political parties' internal organization. For instance, scholars have demonstrated that a presidential system of government and strong committees can incentivize elected officials to engage in particularistic policy-making regardless of the electoral system (Ashworth & Mesquita 2006, Cain *et al.* 1984, Lancaster 1986). However, most of the studies found in the literature are not able to concurrently control for these

confounding factors. A second source of endogeneity that scholars have not always properly addressed is the interaction between the electoral system and intraparty regulations. Previous studies have shown that when party leaders exert a strong control over access to the party ballot, elected officials are less willing to serve parochial interests irrespective of the electoral system (Bawn & Thies 2003, Franchino & Mainenti 2013). However, studies of the electoral incentives to cultivate a personal vote that explicitly control for confounding factors like ballot control are still quite rare (with few exceptions, like Franchino & Mainenti 2013, Mejía-Acosta *et al.* 2006). In line with previous scholarship, in Chapter 2 I provide empirical evidence in support of a connection between the construction of a personal vote and political particularism by showing that legislators who amassed large personal followings are more willing to serve parochial interest within their constituency. This, however, does not guarantee the presence of a causal relationship. In this chapter, I take the analysis a step further by looking for a causal linkage between the electoral rule and legislators' willingness to serve particularistic interests. More precisely, I intend to answer this question. Can we find evidence of a causal effect of the electoral system on MPs' willingness to serve parochial interests, when analyzing the legislative behaviour of national representatives elected under different electoral rules?

A second issue that I intend to address in this study relates to scholars' understanding and scrutiny of the nuances of political particularism. Indeed, while previous studies have found anecdotal evidence of elected representatives' willingness to favour the interests of clientelistic groups belonging to a specific economic sector or professional category present in their constituency¹, most of the scholarship on political particularism only refers to geographical instances of particularistic policy-making. I argue that overlooking sector-based instances of political particularism leads to a limited understanding of the political particularism phenomenon. In the previous Chapter, I provide further empirical evidence supporting the hypothesis that MPs in search of a personal vote are willing to favour sectoral interests in their constituencies. In this Chapter, I further analyze the connection between the electoral system and sectoral instances of political particularism looking for a

¹For example, Di Palma (1977), Golden (2003), Mejía-Acosta *et al.* (2006).

causal linkage.

To this aim, I propose a quasi-experimental study of Italian legislators' behaviour. Starting with the 12th legislative term and up to the 14th term, members of the Italian Parliament were elected with a mixed-member system, in which 25% of the seats was allocated through party lists in 26 multiple-member districts while 75% was filled by plurality rule in 475 single-member districts. On the election day, voters received two ballots: one to express their preference for a candidate running in their single-member electoral district (SMDs), and the other one to cast a vote for a party list running in their larger proportional district. The two tiers of the Italian mixed-member electoral system thus produced opposing incentives for candidates who seek re-election. Closed-list proportional (Closed-list PR) electoral systems are considered party-centered systems, while SMDs systems with plurality rule are candidate-centered systems (see Shugart 2001). The peculiar features of this electoral system thus create suitable prerequisites for a quasi-experiment that compares the behaviour of MPs elected in the SMDs to that of MPs elected in the closed-list PR tier. Results from a RDD analysis challenge conventional wisdom on the effect of electoral rules on elected representatives' willingness to serve parochial interests. No empirical evidence is found in support of the hypothesis that a candidate-centered electoral rule causes an MP to serve the interests of narrow segments of society.

4.2 Literature review

4.2.1 Different electoral systems and different incentives

In 1995, Carey and Shugart kick-start a new strand of research in the field of comparative electoral studies by analyzing the effect that electoral mechanisms to distribute seats to candidates have on legislators' behaviour in their constituencies and in parliament. The authors concentrate on a previously overlooked area of comparative electoral systems studies, the *intraparty dimension* of electoral systems, which concerns the distribution of seats to candidates and the effect

that said distribution has on legislators' behaviour² (Shugart 2005). Carey & Shugart (1995) explain that different electoral rules produce different incentives for candidates who seek re-election. Under certain electoral rules, being well-known in the constituency and cultivating personal links with constituents enhances the electoral prospects of a political candidate. When legislators compete in elections under such electoral rules—candidate-centered electoral systems—personal reputation becomes more valuable relative to party reputation, which incentivizes politicians to cultivate a personal vote. The personal vote constitutes that fraction of a candidate's support that he gains thanks to his individual actions, personal characteristics and qualifications, and it distinguish itself from that portion of a candidate's support that he obtains thanks to the reputation earned by the political party of which he is a member (Cain *et al.* 1984). Party reputation, indeed, depends strictly on the information that the party label conveys to constituents, and it requires politicians to advertise said label and to campaign for their party. Since party and personal reputation require a different set of actions in order to be acquired and maintained—advertising the party label and pursuing the party agenda versus cultivating a personalized support and serving constituents in personal ways— if one of the two becomes relatively more important, politicians will engage with greater commitment in activities aimed at promoting it.³

In addition to producing a universal model that accounts for the importance of personal reputation in different electoral systems, Carey & Shugart (1995) sketch some of the potential policy outcomes arising from politicians' greater attention to personal reputation with respect to party reputation. Pork barrel, and more broadly political particularism⁴, are among the most relevant (see Carey & Shugart 1995, p. 433). The authors build on Cox (1987)'s concept of legislative efficiency⁵, explaining that more attention by elected representatives to personal reputation usually leads to an inefficient political system where particularistic interests take

²For a more detailed discussion on the *intraparty* and *interparty* dimension of the electoral rule, the reader is referred to Chapter 2.2.

³On the potential collective action problem that arises when politicians are required to acquire and maintain party reputation, see also Carey & Shugart (1995), Cox & McCubbins (1993).

⁴For a detailed discussion on the concepts of "pork barrel", "constituency service" and "political particularism", the reader is referred to Chapter 1.

⁵For a thorough discussion on legislative efficiency, the reader is referred to Chapter 1.2.2.

priority over diffused interests. A greater relevance of party reputation, instead, should promote a more efficient political system, one where diffused interests have priority (see also Bagehot 1867, Lancaster 1986, Lancaster & Patterson 1990).

4.2.2 Electoral incentives to cultivate a personal vote and political particularism: where do we stand?

Along the same lines of Carey & Shugart (1995)'s work, many scholars have studied the variation in particularistic outputs produced by different electoral rules. Most of them focus their attention on pork-barrel, which is measured by the distribution of infrastructure expenditures (Ames 1995a, Ashworth & Mesquita 2006, Golden & Picci 2008, Lancaster 1986, Lizzeri & Persico 2001, Milesi-Ferretti *et al.* 2002).⁶ Others analyze lawmaking, calling attention to the fact that MPs can conveniently exploit the legislative process to favour parochial interests (Crisp *et al.* 2004, Gagliarducci *et al.* 2011, Gamm & Kousser 2010, Mejía-Acosta *et al.* 2006).⁷

While in the literature there is much work on the effect of electoral incentives to cultivate a personal vote and political particularism, significant limitations remain. First, most of the scholarship does not take into proper consideration potential confounding factors connected to the institutional setting. Scholars have demonstrated that the institutional environment influences candidates' propensity to engage in particularistic policy-making. Cain *et al.* (1984) show that legislators elected in presidential systems do more constituency service than legislators elected in parliamentary systems regardless of the operating electoral rule (see also Ashworth & Mesquita 2006, p. 168). Lancaster (1986) discusses other institutions that could influence the impact of the electoral system on political particularism. The author explains that the presence of a strong committee system in national assemblies provides better opportunities for legislators to specialize

⁶For further theoretical insights on the causal mechanism linking electoral incentives to pork-barrel see also Ashworth & Mesquita (2006), Lancaster (1986).

⁷For a detailed review of the literature on political particularism, the reader is referred to Chapter 1.2.2.

in a specific policy area and thus influence allocations decision. Moreover, he argues that strong local roots could increase politicians' propensity to serve their constituencies regardless of the electoral system.⁸ However, most of the studies found in the literature are not able to concurrently control for these institutional confounding factors. For example, Milesi-Ferretti *et al.* (2002) select OECD and Latin American countries with different electoral systems and control for GDP and the number of parties in the system, but they do not isolate institutional factors like the difference between parliamentary and presidential systems. Crisp *et al.* (2004) control for the different effect of presidential systems with respect to parliamentary systems by studying only presidential democracies, but they do not control for the effect of the remaining confounding factors— strong committees, localism, local government experience, strong interests groups.

Second, confounding factors related to intraparty regulations are not always taken into proper account. Studies of the electoral incentives to cultivate a personal vote that explicitly control for confounding factors at the electoral regulations' level are still quite scarce. Yet scholars have shown that the level of ballot control influences the degree of intraparty competition, and it consequently affects candidates' propensity to cultivate a personal vote regardless of the electoral rule. Bawn & Thies (2003) explains that party control over nominations affects legislators' propensity to serve the interests of unorganized constituents (Bawn & Thies 2003, p. 10). Mejía-Acosta *et al.* (2006) show that the presence of strong party leaders offsets the impact of personalistic electoral rules on legislators' propensity to propose particularistic bills (see Mejía-Acosta *et al.* 2006, p.24). Franchino & Mainenti (2013) show that ballot control, district magnitude and party-based voting and pooling have a joint effect on politicians' propensity to cultivate a personal vote and engage in distributive policy-making.

Third, most of the studies considers only geographical instances of political particularism (Ames 1995a, Golden & Picci 2008, Lizzeri & Persico 2001, Milesi-Ferretti *et al.* 2002). This approach hinders our ability to study incentives to

⁸In Chapter 2 I do not find a significant effect of localism on MPs' propensity to propose particularistic legislation. Still, in this Chapter I take into account different factors that could act as proxies for the presence of strong local roots, like previous local government experience.

provide benefits that are not intended for the whole constituency but instead are targeted to specific clientelistic groups inside the constituency (Golden 2003). Scholars have pointed out that legislators can be incentivized to serve parochial interests that do not coincide with those of the entire constituency (see Eulau & Karps 1977, p. 245; Mayhew 2004, p. 57; Chapter 1.2.3). The literature on political particularism offers examples of studies that analyze sectoral as well as individual instances of political particularism (Di Palma 1977, Gamm & Kousser 2010, Martin 2011, Taylor-Robinson 1999). However, examples of studies that analyze the electoral incentives to serve this kind of parochial interests are still quite rare (with exceptions, such as Mejía-Acosta *et al.* 2006). To fill these gaps, I propose a quasi experiment that employs regression-discontinuity design (RDD) to analyze the causal mechanism linking electoral incentives to particularistic policy-making. The objective is twofold: (1) to study the effect of the electoral system on legislators' propensity to engage in particularistic policy-making, in search of empirical evidence of a causal linkage; (2) to explore elected representatives' willingness to provide benefits that are not only intended for the whole constituency but are also targeted to specific clientelistic groups linked to sectors of the economy.

4.3 Theoretical Framework

4.3.1 Defining political particularism

Before getting into the details of how I am modeling electoral incentives in the Italian mixed-member system, I propose a brief overview of my novel characterization of political particularism.⁹ I build on Eulau & Karps (1977)'s theory of representation as responsiveness, which conceptualizes political representation as composed of four styles and three foci of representation.¹⁰ Styles define the target of representation that a legislator has: policy responsiveness, service responsiveness, allocative responsiveness, symbolic responsiveness. Foci define the way a legislator perceives his constituency: in terms of territorial levels, functional

⁹Which I have justified and illustrated in greater detail in Chapter 1.

¹⁰For further details, the reader is referred to Table 1 in Chapter 1.3.1.

groups, or individuals. Based on this approach, I define political particularism as an allocative style of representation¹¹, which means that legislators who engage in particularistic policy-making wish to represent constituents' interests by providing them goods and services. I also incorporate Eulau & Karps (1977)'s concept of focus of representation, i.e. I assume that representatives can perceive their constituencies in terms of territorial levels and thus have a geographic focus¹², functional groups¹³ and thus have a group-related focus, or individuals¹⁴ and thus have an individual focus. I thus define political particularism as a style of representation that consists in the allocation of goods and services to identifiable geographic entities, functional groups, or individuals. The type of particularism is determined by the interest being served. In the case of geographic entities'¹⁵ interests we would talk about geographic particularism, in the case of functional groups' interests we would talk about group-related particularism, while in the case of individuals' interests we would talk about individual particularism.

In this analysis, I consider two types of particularism. Geographic particularism and sectoral particularism. Sectoral particularism concerns functional groups connected to sectors of the economy, discounting the other functional groups in a society. While an analysis that considers religious, ethnic, or ideological groups would be more comprehensive, the most substantial channels of perceived impact of lawmaking that targets functional groups remain the basic sectors of the economy (see Lowi 1964, p. 691). I thereby concentrate only on functional groups related to the different sectors of the economy, hence I use the name sectoral particularism. Moreover, I do not include individual particularism in the analysis. While the literature proposes examples of bills directed towards individual persons (see Taylor-Robinson 1999, p. 618), to systematically detect individual particularism in the Italian legislation would be unfeasible since most of the distribution of favours to individual clients was performed through illicit, and therefore concealed, practices¹⁶ (Golden 2003). To find systematic evidence of

¹¹Distributive policy-making.

¹²A nation, a region, a state, or a district.

¹³Economic, religious, ethnic, or ideological groups.

¹⁴From notables to unknown clients.

¹⁵In this case, the geographic unit is the constituency.

¹⁶From the recruitment or promotion of personal on the basis of political affiliation to the

such concealed practices would be highly impractical.¹⁷

I define geographic particularism as the act of distributing goods and services to a geographic entity, i.e. an MP's constituency. An example of geographic particularism would be an infrastructural intervention, like the construction of a bridge or of a car park. I define sectoral particularism as the act of distributing goods and services to functional groups determined by sectors of the economy. An instance of sector-related particularism would be the distribution of subsidies to the tourism sector, or the institution of an award for the urban and architectural sector.

While geographic-based legislation will always be directed at an elected representative's constituency, a sector-targeted bill could also affect individuals living outside the constituency. MPs proposing sectoral legislation could either target those living outside their constituency unintentionally, simply because the distribution of economic sectors does not necessarily follow the boundaries defined by the electoral districts (see Mayhew 1974a, p.57). Alternatively, elected officials could strategically propose legislation that appears "less localized" thinking that this would make it easier for them to get their legislation passed, while at the same time producing the desired effect of favouring the interests of their clientele inside the constituency.¹⁸ In Chapter 2, however, I have not found any relation between the level of a candidate's personal vote and his propensity to serve sectoral interests outside his geographic constituency. This suggests that the search for a personal vote does not incentivize MPs to favour sectoral interests outside of those belonging to their constituency. For this reason, I consider only one of the two types of sectoral particularism that I described in Chapter 1. This kind of sectoral particularism concerns sector-targeted legislation with a "narrower scope", i.e. legislation that affects a sector of the economy¹⁹ that belongs to the MP's constituency. Based on previous literature (Carey & Shugart 1995) and on the results obtained in Chapter 2, I expect electoral incentives to influence elected representatives' propensity to serve both geographic and sector-targeted—with a

manipulation of the recruitment process for posts in the public sector.

¹⁷For a thorough discussion on sectoral and individual particularism, the reader is referred to Chapter 1.5.1.

¹⁸For further details, the reader is referred to Chapter 2.3.1.

¹⁹Or professional category, or enterprise/firm employed in said sector.

“narrow scope”—interests.

4.3.2 Ballot, vote and district magnitude

Building on the existing literature on the electoral incentives to cultivate a personal vote, I propose an evaluation of the Italian mixed-member system based on: *ballot*, *vote* and *district magnitude* (Carey & Shugart 1995, Shugart 2001). Since I want to compare the incentives produced by the majoritarian tier with those generated by the proportional tier, I will evaluate the effect of *vote*, *district magnitude* and *ballot* separately for each of the two tiers.

Ballot measures the rate of control that party leaders have on the access to a party's label and on the ballot rank of a party's list.²⁰ The more ballot control party leaders exert, the more important party reputation will be relative to personal reputation. Instead, if political parties guarantee access to the ballot through primaries, the collection of signatures, or the payment of a deposit, personal reputation will become more important. The level of ballot control exercised by party oligarchies is pretty high in the Italian political system during the time-frame considered in this analysis (see Ferrara 2004b, p. 16). Italian party leaders have a direct control over the whole nomination process. They choose the candidates to run in the single-member districts, and they define the structure of the party lists. Ballot control is thus uniformly high in the Italian political system hereby analyzed, independently from the tier of election considered.

Vote determines the type of vote that voters cast, list versus nominal. The most party-centered systems are those where voters cast only a single vote for a party list; that is the case for closed-list PR systems. The most personalized systems are those where voters express only a nominal vote, that contributes exclusively to the election of the candidate for whom the vote was cast. That is the case for SNTV, and SMDs with plurality decision rule. The type of vote cast differs between the two tiers of election. In the majoritarian tier, voters cast a single nominal vote that assists the election of only the candidate for whom it was cast. This type of vote generates high incentives to cultivate a personal reputation.

²⁰Of course, the second one is relevant only in electoral systems that require political parties to define party lists: closed-list and preferential list systems.

In the proportional tier, voters cast a single vote for a party list. They cannot interfere with the rank of the list, and they cannot express any preference for candidates in the list. This type of vote produces very low incentives to cultivate a personal reputation.

District magnitude captures the different effect of district magnitude in systems where ballot control is highly centralized, with respect to systems where access to the ballot is more open. If political parties exert a strong influence over the nomination process, candidates will have weak incentives to compete against each other (see Carey & Shugart 1995, p. 430; Shugart 2001, p. 183). In this circumstance, the relative importance of each candidate shrinks as the number of co-partisans increases. In systems where access to the ballot is not dominated by party leaders, instead, intraparty competition becomes more salient. In this circumstance, as the number of co-partisans from which a candidate must distinguish himself increases, the importance of establishing a personal reputation increases too. Consequently, in cases where party hierarchies have a determining (scarce) influence over the nomination process, the increase of district magnitude will decrease (increase) the relative importance of party reputation²¹ (Lancaster 1986; Carey & Shugart 1995, p. 430; Franchino & Mainenti 2013). Since the level of ballot control is pretty high in the whole Italian system considered, higher district magnitudes should decrease the relative importance of personal reputation, with respect to party reputation. The district magnitude of the 26 proportional constituencies ranges from 2 to 11, while the district magnitude of the single-member districts is, by definition, 1. Following Shugart (2001)' approach, I only take into account the dichotomy between single-member districts and multi-member districts, regardless of potential differences between very large and very small multi-member districts (see Shugart (2001), p. 183). Accordingly, a district magnitude of one in the majoritarian tier should make personal reputation relatively more important, while a district magnitude higher than one in the proportional tier should make party reputation relatively more important.

²¹This will be of key importance in the theoretical and empirical analysis proposed in this study (see Section 4.3 and Section 4.4).

4.3.3 Dual candidates' strategy

The above discussion clarifies the set of incentives in the two tiers of election. The effect of vote and district magnitude differs between the two tiers. In the majoritarian tier, a nominal vote and a low district magnitude should incentivize the cultivation of a personal vote. In the proportional tier, a list vote and a high district magnitude should incentivize candidates to campaign for their party. Accordingly, differences in the electoral rules should produce heterogeneous incentives: to cultivate a personal vote in the majoritarian tier, and to cultivate party reputation in the proportional tier.

The aforementioned set of incentives is further complicated by the fact that all the MPs considered in this analysis are dual candidates. Dual candidates could run in one single-member district while at the same time being inserted in one or more party-lists presented for the proportional (PR) districts. However, if elected in both tiers, they had to accept the majoritarian seat. On the one hand, a personalized campaign strategy would help them gaining consensus in their single-member district. However, a personalized campaign strategy would not be particularly helpful for winning in the the PR districts. Moreover, party leaders would value more an electoral campaign that aims to advertise the party label. Given this set of conflicting incentives, I argue that candidates will unlikely have a “pure”, either personalized or party-centered, campaign strategy. Candidates will more likely have a “mixed” strategy, whereby they campaign to earn a personalized support in the single-member districts, while also advertising the party label in the PR districts. This strategy should ensure approval from the party leaders, since a candidate would still campaign for his party in the PR districts. At the same time, a mixed campaign strategy would still help maximizing a candidate's chance of winning the single-member seat, since he would still have the opportunity to cultivate a personal vote in his single-member district.

When campaigning, dual candidates concurrently operate in two different environments—the single-member and the PR districts—which are characterized by opposing incentives. Once elected, candidates will either be elected in the proportional tier or in the majoritarian one. I argue that, at this stage, their behaviour will no

more be influenced by the necessity to cope with the conflicting incentives typical of a dual candidacy. Instead, elected officials' behaviour in parliament will be determined by their tier of election. I thus expect an MP elected in a SMD district to be more inclined to favour the district's parochial interests. Conversely, I expect an MP elected in a PR district to be more inclined to carry out the party agenda. Why should an MP switch from a "mixed strategy" to a "pure tier-dependent strategy", once elected? Because of re-election incentives.²² During the election campaign, dual candidates make different promises to electors in the PR and in the single-member districts. In the PR districts, running candidates commit themselves to pursue the party agenda. In the single-member districts, candidates commit themselves to favour the district's parochial interests. If a candidate is elected in the majoritarian tier, his voters will recognize him as the representative of the district, and they will therefore expect him to maintain his electoral promise to favour the district's interests. On the other hand, if an MP is elected in the proportional tier, his voters will recognize him as a representative of the party, and they will therefore expect him to maintain his electoral promise to pursue the party agenda. In order to defend his credibility with the electorate and maximize his chances of being re-elected, an MP will need to act in accordance with his—tier-dependent—electoral promises.²³

Candidates' specialization should be further boosted by the absence of a direct seat linkage between the two tiers of election. Indeed, in the mixed-member system in force in Italy, differently from what happens in Germany or New Zealand, the total number of seats won by a party did not depend on its vote share in the PR tier. Instead, the system was a "partially compensatory" one, which provided that for each SMD won by a candidate connected to a party list in the PR tier, the votes received by the best loser (plus one) were subtracted from the total list vote. Moreover, parties who decided to coordinate in the majoritarian tier, were not required to also coalesce in the PR system. This electoral rule created the perfect conditions for the formation of two broad center-left and center-right

²²A common assumption in the literature on legislators' behaviour, and on personal vote, is that politicians are motivated by the desire to seek re-election (Carey & Shugart 1995, Mayhew 1974a, Taagepera & Shugart 1989).

²³For a similar approach, see Gagliarducci *et al.* 2011.

coalitions in the SMDs tier, while in the PR tier the parties forming each coalition run independent lists (see Cox & Schoppa 2002, Ferrara 2004a). On the one hand, none of the larger parties had a strong enough support to be able to run alone in single seat districts, especially considering the compensatory system in force that undermined parties winning in many SMDs. Furthermore, small parties were willing to join a coalition in the majoritarian tier to increase their chances of winning some of the SMDs, while at the same time keeping their independent lists in the PR tier where they had better odds than bigger parties.²⁴ Coordination in the SMDs, together with an independently-run electoral race in the PR districts, should further increase the diversification between the two tiers of election in the eyes of voters. In the majoritarian tier, there are single candidates running under a large coalition banner, not directly linked to a political party. In the PR tier, instead, there are party lists campaigning under their party label. Candidates running in the SMDs should appear even more as representatives of their district rather than of their party, while MPs running in their party's lists should mainly appear as representatives of their party.

Finally, the hypothesis of “candidates specialization” in mixed-member systems is backed by studies like Gagliarducci *et al.* (2011), which shows that once candidates have been assigned to a given electoral tier they tend to persist there (see Gagliarducci *et al.* 2011 p. 164). The authors show that among the MPs re-elected in the next term, the probability of being reelected in a SMD is about 87% for politicians elected in the majoritarian tier, versus 57% for politicians elected in the proportional²⁵ (see Gagliarducci *et al.* 2011, p. 164). Instead, empirical evidence in support of “contamination effects” reducing candidates’ propensity to specialize relates primarily to MP’s uniform voting behaviour across tiers, and not to their propensity to engage in particularistic policy-making (Ferrara 2004b). While a uniform voting behaviour signals a uniformly high party loyalty—both among PR and SMD candidates—this does not exclude the possibility that SMD legislators specialize in serving localities while PR legislators specialize in safeguarding broader interests through constituency service or proposed legislation. Indeed, scholars have shown that Italian legislators elected in the majoritarian tier

²⁴Bigger parties were worst-affected by the compensatory system.

²⁵The difference is significant at the 1% level.

propose geographically targeted legislation to a greater extent than representatives elected in the proportional tier (Gagliarducci *et al.* 2011). Empirical evidence and theoretical reasoning seem thus to suggest that MPs elected in the majoritarian tier should specialize in serving localities while MPs elected in the PR tier should specialize in representing their party label. Accordingly, I posit:

H1: Deputies elected in the majoritarian tier will engage in particularistic policy-making to a greater extent than deputies elected in the proportional tier.

The following sections present a quasi-experiment of Italian legislators' behaviour, in an effort to test the validity of this hypothesis.

4.4 Research design

4.4.1 Why a one-country case study?

Why does a single-country case study constitute a valid option to study the relationship between electoral incentives and political particularism? First, the choice of a one-country case study enables an individual-level analysis. As explained in Section 4.2, the electoral connection is a phenomenon that works at the individual level by linking a candidate in search of a vote to a constituent. An individual level analysis thus appears as the most suitable option to study a relationship that works at the individual level. More precisely, the choice of the Italian case enables us to perform a controlled quasi-experiment, where we observe the behaviour of individuals who share similar characteristics but are elected with a different electoral rule.

Second, a one-country case study makes it possible to control for confounding factors connected to the institutional framework.²⁶ Scholars have shown that the institutional environment influences the degree of political particularism in a

²⁶Of course, given that such institutional framework does not significantly change in the time period considered. In the case of Italy, there has not been any significant change in the form of government, the parliamentary committees system, or electoral regulations in the period that goes from the legislative 12th term up to the 14th term.

country (Bawn & Thies 2003, Franchino & Mainenti 2013, Mejía-Acosta *et al.* 2006). Cain *et al.* (1984) show that legislators elected in presidential systems do more constituency service than legislators elected in parliamentary systems (see also Ashworth & Mesquita 2006, p. 168). Lancaster (1986) explains that the presence of a strong committee system can increase elected representatives' propensity and ability to serve parochial interests. Disentangling the effect of the electoral system from that of the institutional environment, when performing cross-country studies, could prove to be non-trivial. Cross-country differences in aggregate outcomes could be produced by differences in the institutional environment, as well as in the electoral rule, and controlling for all the relevant institutional factors is not always feasible. In this case, one-country studies can be more effective in addressing country-level endogeneity by keeping all the mentioned institutional factors fixed. More precisely, the Italian case offers the opportunity to analyze the behaviour of individuals that operate in the same institutional environment but have been elected with a different electoral rule. Differences in the legislative behaviour of SMD and PR candidates' should not be produced by the interaction of institutional factors with the effect of the electoral system.

Third, a one-country case study makes it possible to disentangle the effect of the electoral system *per se* from that of electoral regulations. While the electoral system concerns the rules that determine how votes are cast and converted into seats, "electoral regulations" is a wider concept. Electoral regulations concern, for example, the right to vote, free, fair and transparent elections, and ease of access to the ballot (see Gallagher & Mitchell 2005). Researchers have shown that, among all the regulations concerning elections, ballot control is of major significance when studying candidates' propensity to cultivate a personal vote. Carey & Shugart (1995) and Shugart (2001), indeed, include ballot control in their classification of electoral systems. The authors propose an ordinal ranking of electoral rules—from party-centered to candidate-centered—that includes the interaction of ballot control with the founding elements of an electoral system: *vote* and *district magnitude*. Notwithstanding the importance of Carey & Shugart (1995), Shugart (2001)'s contribution to the comparative study of electoral systems, I argue that

embedding ballot control in an ordinal categorization of electoral systems implies a certain level of discretion. Indeed, it requires to evaluate the joint effect of two factors—intraparty norms regulating the nomination process and the electoral rule in the strict sense—that can have conflicting effects on legislators' willingness to engage in particularistic policy-making. This could happen, for example, if we were to consider a candidate who runs under a personalized electoral rule but is also member of a party which grants access to its label through primaries. The matter is further complicated if, in the same country, political parties do not have uniform internal organizations. If that is the case, we should not only disentangle the effect of the electoral system from that of ballot control on a certain MP's behaviour, but we should also take into account the fact that candidates in the electoral race could be affiliated with parties that have different levels of ballot control. In these circumstances, members of parties whose leaders do not have an important role in the nomination process will have higher incentives to cultivate a personalized support with respect to members of highly-centralized parties, even though they compete under the same electoral rule (Bawn & Thies 2003, Mejía-Acosta *et al.* 2006). Here again, the choice of a one-country case study offers a great opportunity to simplify things. Political parties in Italy, in the time period considered, were highly-centralized. Party leaders had direct control over the nomination process in both tiers of elections, without any delegation to local branches, or to voters through primary elections (see Ferrara 2004b, p. 16; Verzichelli 2002). The uniformly centralized nomination system that was in place in Italy allows the study of the electoral system's effect on particularistic policy-making, while keeping the level of ballot control fixed. Differences in the legislative behaviour of SMD and PR candidates' should not be produced by the interaction of ballot control with the effect of the electoral system.

4.4.2 Individual-level endogeneity

The fact that a one-country case study enables us to control for confounding factors connected to the institutional environment and electoral regulations does not mean that one-country case studies are not subject to endogeneity issues. Since I am studying the effect of different electoral rules within the same country,

instead of comparing countries with different electoral systems, candidates' self-selection in one or the other tier of the electoral system could bias my results. Candidates with certain characteristics could be more likely to run in the single-member districts. If that was the case, they could be more willing to favour parochial interests merely because of their preferences, irrespective of the electoral system (see Gagliarducci *et al.* 2011, p. 145).²⁷ Given the high level of ballot control exercised by party leaders in the Italian political system, candidates would unlikely be able to self-select into one tier or the other. Nonetheless, the party leadership could, for example, be incentivized to allocate candidates with strong local ties in the majoritarian tier because they see strong local ties as a competitive advantage. For the same reason, party leaders could prefer to insert in the PR lists candidates with a national profile like national leaders. Table 4.1 indeed shows that the proportion of politicians with previous local government experience is higher in the majoritarian tier, while candidates running outside of their region of residence and national leaders²⁸ are more likely to be elected in the proportional tier. Also in this case, the Italian mixed-member electoral system has a peculiar characteristic that can be used to control for endogeneity: dual candidacies. The electoral rule allowed candidates to run both in a single-member district and in one or more PR districts. These candidates run both in the majoritarian and in the proportional tier, but if they won both they had to accept the majoritarian seat. This means that dual candidates elected in the majoritarian tiers are those who won the race in their single-member district, while dual candidates elected in the proportional tier are those who lost the race in their single-member district. Of course, candidates' idiosyncratic characteristics play an important role in determining their chance of being elected. However, a candidate who has barely won, and one that has lost by a small margin, are likely to share similar characteristics. If we assume that random factors—rain on election day, or breaking news—play even a modest role in determining electoral results, dual candidacies can be used to mimic random assignment to the majoritarian and proportional tier for elected representatives

²⁷It is important to note that Gagliarducci *et al.* (2011)'s, differently from the analysis here proposed, does not fully address individual endogeneity. Indeed, the authors exclude non-dual candidates elected in the PR tier, but they include all SMD candidates in their analysis— dual and non-dual (Gagliarducci *et al.* 2011, p. 153).

²⁸The difference in the proportion of national leaders is not statistically significant, though.

who lost or won by a narrow margin²⁹ (for a similar approach, see Gagliarducci *et al.* 2011). In conclusion, a single-country case study that focus on Italy creates suitable prerequisites to tackle the endogeneity arising from potential confounding factors related to the institutional setting, electoral regulations at large, and self-selection.

National	0.0338 (0.0215)
Different residence	0.0433** (0.0128)
Local government experience	-0.168** (0.0254)
Observations	1877
Proportional	485
Majoritarian	1392

Standard errors in parentheses
⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Table 4.1: **Pre-treatment variables descriptives.** The table reports the results of z-tests that investigate for the presence of a different proportion of national leaders, candidates running outside of their region of residence, and politicians with local government experience across the two tiers.

4.5 Data and variables operationalization

4.5.1 Data

To analyze particularistic lawmaking in Italy, I employ the new dataset on Italian individual members bill proposals (IMBPs) presented in Chapter 1.4.1. For this study, I use the portion of the database composed of all the IMBPs introduced in parliament in the period that goes from the 12th legislative term up to the 14th term. From the same database, I also get data on the demographics of Italian MPs—age, gender, education, profession, date and place of birth, district and region of election, political party or list of election, system of election

²⁹For further details on these assumptions see Section 4.6.

and parliamentary group. In the final dataset used for this analysis, every bill is categorized as particularistic— geographically or sector targeted—or non-particularistic according to the dictionary-based classification illustrated in Section 4.5.3. Data on dual candidacies are from the historical archives retained by the Italian ministry of interior and from Gagliarducci *et al.* (2011)'s study.³⁰ The final sample is composed of 361 dual candidates running in the 1994, 1996 and 2001 elections.

4.5.2 Individual members' bill proposals

Following the approach illustrated in Chapter 1.5, the documents that I use to evaluate the level of political particularism are IMBPs. I argue that to include bills passed by the parliament would hinder my ability to adequately capture the effect of electoral incentives on legislators' behaviour. Indeed, an approach of this kind would not only include the effect of electoral rules on MPs' willingness to propose particularistic legislation, but it would also incorporate the effect of potential confounding factors influencing the chances that a bill proposal becomes law. Conventional wisdom in the study of legislative behaviour argues that political party affiliation, committee leadership, and majority status in parliament, can influence an MPs' legislative productivity, i.e. the proportion of his bills proposals that actually becomes law (Anderson *et al.* 2003, Cox & Terry 2008). On the contrary, analyzing IMBPs allows to dismiss the whole approval process which comes after the proposal has been presented in parliament. Accordingly, IMBPs should constitute a more direct and transparent measure of candidates' willingness to serve parochial interests. Moreover, IMBPs fulfill many critical functions. First, they have an instrumental function (see Mattson 1995, p. 483). MPs can influence the legislative process simply by getting individual bills to the floor, since these proposals become part of the ongoing bargaining process that takes place in national assemblies. Second, IMBPs constitute an effective electoral propaganda instrument, especially when they aim at favouring small clientele's interests. In addition, MPs can communicate their opinion to their voters, and to the public at large, through legislative proposals, and thus IMBPs also fulfill

³⁰See also <https://elezionistorico.interno.gov.it/>.

an expressive function (see Mattson 1995, p. 483). In sum, IMBPs are relevant to the legislative and electoral process even when they do not become law, and they constitute a clear and transparent proxy of candidates' propensity to serve parochial interests.

4.5.3 Geographical and sectoral instances of particularistic policy-making

Building on the theoretical and methodological analysis of Chapter 1, I operationalize political particularism as an MP's act of serving parochial interests through *ad hoc* legislation (IMBPs). In my analysis, I include two different instances of particularistic policy-making: geographical and sectoral.³¹ I operationalize geographical particularism as a bill proposal that distributes goods and services to a candidate's constituency. An example of geographically-targeted legislation would be a bill that requires the construction of infrastructures inside the constituency. I operationalize sectoral particularism as a bill that distributes goods and services to a whole sector of the economy, a professional category, or a company/firm active in that particular economic sector present in an MP's constituency. An example of sector-targeted legislation would be one that institutes an award Sardinia's tourism sector.³²

To classify a bill as particularistic³³ or non-particularistic, I employ the four new dictionaries of Italian political particularism that I have constructed and validated in Chapter 1 (see Chapter 1.6.3; 1.7). Geographically-targeted bills are those containing references to the distribution of a benefit³⁴ intended for the whole MP's constituency. In line with the discussion provided in Chapter 1.6.3 and in Section 4.3.1, sector-targeted bills are³⁵ those containing references to the distribution of benefits for a sector of the economy, professional category, or

³¹For further details, the reader is referred to Chapter 1.

³²For further examples of particularistic bills found in the literature, see Chapter 1.5.

³³Geographical and sector-targeted.

³⁴The benefits considered are: money transfers, salary increases, subsidies, tax reliefs, constructions of infrastructures, measures to guarantee economic, social and cultural development (for further details, see Table 5 in Chapter 1.6.4).

³⁵With a "narrow scope".

enterprise/firm present in the MP's constituency. Non-particularistic bills are those which contain no reference to the distribution of a benefit to an MP's constituency or to a sector of the economy. I use an MP region of election as a proxy for his constituency. In Italy, the width of the electoral constituencies varies over time and all over the national territory. Nevertheless, the size of constituencies is never larger than that of a region. The use of the region of election as a proxy for the constituency thus allows a comparison of legislators' behaviour over time and space.³⁶

For each MP, his propensity to engage in particularistic policy-making is measured by the total number of particularistic bills—geographic or sectoral—he proposes. The variable called *geo* measures the number of geographic-based bills proposed by an MP, while *sector geo* measures the number of sector-targeted bills.

4.6 Methodology

4.6.1 Regression discontinuity design: an overview

To estimate the effect of the electoral system on legislators' willingness to serve parochial interests, I employ a quasi-experiment based on regression discontinuity design technique (RDD). Following Campbell *et al.* (1963)'s seminal study, RDD design has often been used in education studies. Recently, scholars have expanded the domain of RDD analysis to social-scientific research using this methodology to study the socio-economic impact of policy interventions assigned to some geographic units but not to others, or to analyze the effect that winning office in close elections has on legislators' behaviour (Brollo & Nannicini 2012, Brollo *et al.* 2013, Gagliarducci *et al.* 2011, Lee 2008).³⁷ In all of these circumstances, a political process assigns individuals to one or the other category of an independent variable, (IV), based on whether they are above or right below a certain threshold on some co-variate. All these analyses take advantage of the fact that the assignment to one or the other category of an IV is as good as random for individuals right above or right below the threshold. When that is the case, RDD

³⁶For a similar approach, see Marangoni & Tronconi (2011).

³⁷For further examples, see Dunning (2012), p. 71.

can be used to obtain analytic leverage on the impact of the treatment variable (IV) on the dependent variable (DV) (Dunning 2012).

4.6.2 Statistical framework

As previously illustrated, to elect parliamentarians in the 12th-14th legislative term Italy employed a mixed-member system where a portion of the candidates could run in both tiers. For the sake of this analysis, dual candidates running in the 1994, 1996 and 2001 elections constitute the study group. Dual candidates could compete for a seat in one single-member district, and be inserted in one or more of their party's lists running in the PR districts. However, if elected in both tiers, they had to accept the majoritarian seat. Accordingly, all the dual candidates elected in the proportional tier are those who lost in their single-member district, while all the dual candidates elected in the majoritarian tier are those who won in their single-member district. The peculiar characteristic of the Italian mixed-member system can thus be used to estimate the causal effect of the treatment "being elected in the majoritarian tier", as opposed to "being elected in the proportional tier", for near-winners and near-losers (for a similar approach see Brollo & Nannicini 2012, Gagliarducci *et al.* 2011).³⁸

In general, candidates who gained a very large share of votes should be different from candidates who gained a very narrow share of votes. For example, they could have been able to win by a large margin because they are well known in the district, or differently, because they are national leaders. As a consequence, their behaviour in parliament could be mainly determined by their idiosyncratic characteristics and preferences, rather than by the electoral system. Candidates with strong local ties could be more willing to initiate particularistic legislation, irrespective of their tier of election. National leaders should have a higher probability of receiving government appointments, which would leave them with less time to draw up bill proposals; or they could simply be less willing to propose particularistic legislation because they need to show their electorate that they are pursuing the party agenda. Conversely, on average, candidates who barely won—near-winners—will

³⁸For a general discussion on the use of RDD analysis to study close elections see also Dunning (2012), p. 77-79.

be very similar to candidates who barely lost—near-losers. As a consequence, given the role that random factors play in determining electoral outcomes, their chance of being elected in the majoritarian or in the proportional tier could be considered as good as random.

Generally speaking, near-winners and near-losers are thus candidates running in close elections. In these electoral races, the difference in the percentage of votes won by the candidate who secures the SMD seat and the next best candidate should be very narrow. But what exactly does constitute a narrow margin of victory? Previous studies have proposed values ranging from 5% to 15% (see, for example, Brollo & Nannicini 2012, Eggers & Hainmueller 2009, Gagliarducci *et al.* 2011, Titiunik 2009). Of course, the “closeness” of a particular electoral race will also depend on the electoral context. An electoral race won by a 10% margin could be considered as a close victory in an electoral context where the average winning margin is higher than that value, but in a different context it could actually be in line with the average. In the the case here considered, the average margin of victory is 13%, with a median value of 10%. I would thus consider close elections all those electoral races where the margin of victory is lower or equal to 10%.

When choosing the scope of the study group, particular attention should be paid to the trade-off between the gain in precision from choosing a wider study group, and the risk of producing biased results when including units that are not valid counterfactuals for each other (see Dunning 2012, p. 127). With a larger study group, the treatment effect estimator will have a lower variance, thus the gain in precision. At the same time, including units that are located too far from the key discontinuity threshold could produce biased results. As a rule of thumb, researchers usually perform analyses that consider different choices of bandwidths (see Dunning (2012), p. 128). For strong quasi-experiments, the results should be consistent across smaller and larger study groups. Moreover, in cases where the number of observations could potentially be too small to detect an effect, showing results for larger study groups should address potential concerns that the results are simply an artifact of the data. In my analysis, I will thus provide results for four different bandwidths—13%, 10%, 5% and 3% —even though

close elections are really only those included in the 10%-3% bandwidths.

Treatment assignment for dual candidates can be specified as:

$$T(MV_c) = \begin{cases} 1 & \text{if } MV_c \geq 0 \\ 0 & \text{if } MV_c < 0 \end{cases} \quad (1)$$

where MV_c is the margin of victory, i.e. the difference between the votes earned by candidate c , and the votes earned by the next-best candidate. The margin of victory for candidates elected in the proportional tier will be lower than 0, while the margin of victory for candidates elected in the majoritarian tier will be greater than 0. In accordance with equation 1, members elected in the majoritarian tier constitute the treatment group, while members elected in the proportional tier constitute the control group. Moreover, we can assume that each candidate's chance of winning does not depend exclusively on his personal characteristics, but instead includes some random component, such that the probability of winning for a candidate c is never equal to 1 or to 0. More precisely, for dual candidates running in close election, the assignment to the proportional or majoritarian tier is as good as random.

Given these assumptions, we can estimate the effect that being elected in the majoritarian, with respect to being elected in the proportional tier, has on candidates' propensity to propose particularistic legislation. Said effect is defined as the average treatment effect, AT , and it is calculated as the difference between the average number of particularistic bills proposed by dual candidates elected in the majoritarian tier, and the average number of particularistic bills proposed by candidates elected in the proportional tier:

$$AT = \bar{T} - \bar{C} \quad (2)$$

where \bar{T} is the average value of the potential outcomes under the treatment, while \bar{C} is the average value of the potential outcomes for all the candidates in the control group.

4.7 Analysis

4.7.1 Electoral incentives in the majoritarian and in the proportional tier

Before starting the actual RDD analysis, I provide empirical evidence on the different set of incentives relative to the two tiers of election, for the whole sample of elected representatives—dual and non-dual candidates—running in the 1994, 1996 and 2001 elections. Table 4.2 shows the results of t-tests comparing the average number of particularistic bills proposed by MPs elected in the majoritarian tier to the average number of particularistic bills proposed by MPs elected in the proportional tier. The t-tests show a statistically significant difference: on average, representatives elected in the majoritarian tier propose more particularistic bills. Figure 4.1 report RDD plots for geographically (panel a) and sector-targeted (panel b) legislation. The RDD plots present two summaries: (i) a global polynomial fit, represented by the black solid line, and (ii) local sample means, represented by the grey dots. The polynomial fit is a smooth approximation of the unknown regression function based on a second-order polynomial regression. The local sample means are non-smooth approximations of the unknown local regression functions (see Cattaneo *et al.* 2018, p. 20). The graphs show a positive discontinuity at the threshold, consistent across higher-order polynomials (see Appendix C.1), which corroborates the evidence provided by the t-tests. Majoritarian MPs appear to be more likely to engage in particularistic policy-making. In addition, previous studies applying a RDD analysis to a similar sample of Italian MPs found analogous results (Gagliarducci *et al.* 2011).

Can this empirical evidence be considered enough to support the validity of hypothesis 1? Hardly. This preliminary analysis, like previous contributions, does not consider exclusively MPs who are valid counterfactuals of each other.³⁹ The

³⁹Gagliarducci *et al.* (2011) propose a RDD analysis that should include only MPs who are valid counterfactuals. However, while the authors propose valid thresholds in order to select near-winners and near-losers in their analysis, they include in their study group both dual and non-dual candidates. This hinders the RDD design's ability to effectively control for MPs' idiosyncratic characteristics.

observed differences could be produced by MPs' idiosyncratic characteristics that increase their chances of running, and thus being elected, in one of the two tiers. That is why a more compelling analysis should only consider MPs who are valid counterfactuals of each other. The next section proposes a similar RDD analysis which includes only dual-near winners and dual-near losers.

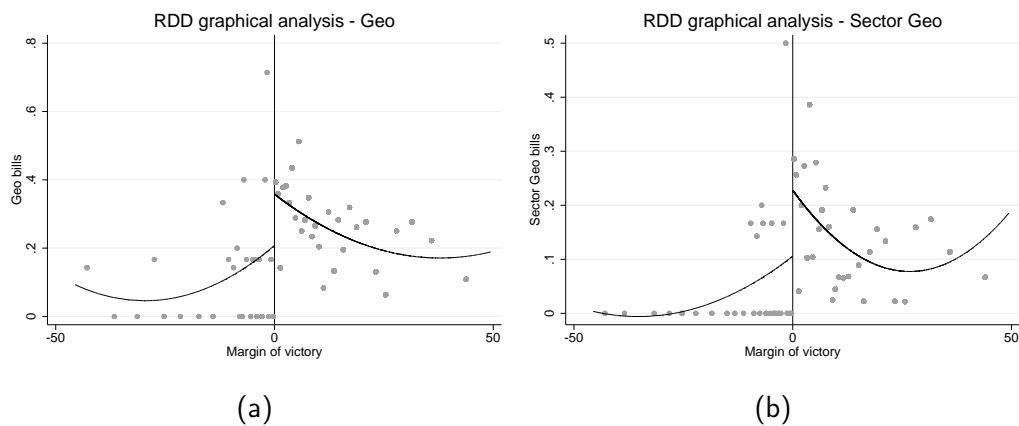


Figure 4.1: **RDD Analysis - full sample.** The figure shows RDD plots for geographic (panel a) and sector-targeted (panel b) legislation. The dots represent local sample means of the number of particularistic bills proposed by each MP, while the solid line is a second-order polynomial fit. Bins are non-overlapping partitions all containing the same number of observations, i.e. quantile-spaced bins. The total number of bins has been determined using the mimicking variance method.

	Jump at the threshold
Geo Bills	0.142** (0.0257)
Sector Geo Bills	0.0744** (0.0171)
Observations	1869
Majoritarian	1392
Proportional	447

Standard errors in parentheses
+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Table 4.2: **RDD Analysis - full sample.** The table reports the results of t-tests that compare the average number of geographically-targeted (*geo bills*) and sector-targeted bills (*sector geo bills*) proposed by dual MPs elected in the majoritarian tier with those proposed by dual MPs elected in the proportional tier.

4.7.2 How plausible is “as-if random”? Information, incentives and abilities

Before showing results for dual candidates running in close elections, I present evidence in support of my as-if-random condition. Indeed, in any study that lacks true randomization researchers should present both qualitative and quantitative evidence in support of the as-if random condition (Dunning 2012, p. 236). The most common qualitative diagnostics discuss the *information*, *incentives* and *abilities* of the units under study. First, we should ask ourselves if the units have information about the fact that they will receive a certain treatment, or not. Do they, or other relevant actors, know if they will be exposed to the treatment? Second, we should inquire if the units have an incentive to self-select into the control or the treatment group, or if other actors have an incentive to allocate units to either of the two groups. Finally, it is important to understand if the units in the study group have the ability to self-select into the control or treatment group, or if other relevant actors have the ability to allocate units to either of the two groups. A convincing quasi-experiment should therefore comprise a discussion of the three conditions of information, incentives and abilities, aimed at

demonstrating that the as-if random condition holds in the circumstances under which the experiment takes place.

The three conditions of information, incentives and abilities should not be considered as mere elements of a checklist to be completed, whereby satisfaction of each criterion is necessary for the as-if random condition to hold. Indeed, it would seem too restrictive to require that units have neither incentives, nor information, nor abilities to influence treatment assignment. For example, the units could have an incentive to self-select in the treatment or control group, while at the same time lacking information on how to do it and being unable to actually self-select. On the other hand, claiming that the as-if random condition is met simply because units have no incentive⁴⁰ to self-select in either of the two groups would seem too permissive (see Dunning 2012, p. 237). Qualitative evaluation of the as-if random condition should therefore be based on a case by case analysis, which provides a critical examination of the conditions under which the treatment is administrated.

As explained in Section 4.4.2 , candidates with a strong local support could have an incentive to self-select in the majoritarian tier. Similarly, party leaders could have an incentive to allocate candidates with strong local ties in the majoritarian tier. However, neither the candidates nor party leaders have exact information on who will be elected in the majoritarian tier. While all the relevant actors know the conditions under which units end up being exposed to the treatment—they have to win in their single-member district—they cannot know for certain which of the dual candidates will win in their single-member districts. Furthermore, when a candidate win both in his single-member district and in one or more PR districts, he must accept the majoritarian seat. This means that neither the candidates nor the party leaders have the ability to allocate units to the control or to the treatment group. It thus seems that candidates and party leaders do have an incentive to allocate certain individuals to the majoritarian tier. Nevertheless, the fundamental question is whether they have the ability and information to do so (see Dunning 2012, p. 239). In this case, candidates cannot know for sure if they will be elected in the majoritarian or in the proportional tier. Moreover, neither

⁴⁰Or information on how to do it, or the ability to actually do it.

them nor their party elites may determine who will be assigned to the majoritarian tier, and who will be assigned to the proportional tier. To conclude, an analysis of the Italian electoral context that takes into consideration candidates' incentives and abilities, as well as actors' information on the electoral outcome, suggests that it is plausible to retain the assignment of candidates to either tier of election as good as random.

4.7.3 How plausible is “as-if random”? Balance and placebo tests

As a complement to qualitative diagnostics, researchers should also perform statistical tests to provide further evidence in support of the as-if random condition.⁴¹ Balance tests are the most commonly used tools for the validation of quasi-experiments (see Dunning 2012, p. 239). With balance tests researchers evaluate if there is a systematic difference in relevant “pre-treatment covariates” across the treatment and control group. Pre-treatment covariates are all those factors whose value has been determined before the treatment takes place. If the as-if random condition holds, assignment to the control and treatment group should be statistically independent of such pre-treatment covariates. Balance tests consist in difference of mean tests that compare the average value of pre-treatment covariates across the treatment and control group, or in z-tests that investigate for the presence of a significantly different proportion of individuals with certain characteristics across the treatment and control group. The balance tests that I propose include thirteen covariates that convey information on candidates' age, education level, profession, political experience and district of election (see Table 4.3). Of the thirteen pre-treatment variables considered only the dummy variable *physician* has a statistically significant coefficient. Apart from this single imbalance, in general the tests show that candidates' assignment to either the control or the treatment group seems to be independent from pre-treatment

⁴¹In general, researchers should also perform conditional density tests to provide empirical evidence against units' ability to sort at the threshold. However, in the case of RDD analyses that considers near-winners and near-losers of elections conditional density tests will be automatically satisfied. For a more detailed discussion, see Dunning (2012), p. 246.

covariates.⁴²

Another kind of tests that researchers usually perform to assess the as-if random condition are placebo tests (see Dunning 2012, p. 246). Placebo tests check for the presence of apparent causal effects at points different from the key discontinuity threshold. RDD is based on the idea that relevant differences in the observed outcomes, for units in the treatment and control group, should be induced only by the treatment itself. Accordingly, units in the study group should not display large differences in observed outcomes, at points other than the discontinuity determining treatment/control assignment. Placebo tests consists of difference of means tests at “fake thresholds”, i.e. at points different from the relevant threshold. To pass the test, no significant difference in observed outcomes across the treatment and control units should be found. The results of placebo tests are reported in Table 4.4. The tests show that there are no statistically significant discontinuities in the propensity to propose particularistic legislation, for units at left and at the right of the two “fake threshold” considered—median at the left, and median at the right of the discontinuity threshold. The empirical evidence provided by balance and placebo tests gives further support to the previous analysis of relevant actors’ incentives, abilities and information.

To conclude, a substantive analysis of the Italian electoral context, as well as the evidence provided by balance and placebo tests, suggest that the peculiar characteristics of the Italian mixed-member system allow a quasi-experimental study of the causal mechanism linking electoral incentives to legislators’ willingness to engage in particularistic policy-making. Based on the evidence in support of random assignment here provided, I now perform a RDD analysis.

⁴²See also Dunning 2012, p. 241 on balance tests, and acceptable imbalances. One imbalanced variable out of 20 should be the target, when demonstrating that pre-treatment variables are balanced in the neighbourhood of the treatment threshold. Unfortunately, there are not other pre-treatment covariates available, that I know of, to perform balance tests. Still, one imbalanced factor over thirteen seems to suggest that there should not be consistent imbalances around the threshold able to undermine the validity of the as-if-random condition.

	Jump at the threshold
Different residence	-0.00646 (0.0341)
Previous Local Government	0.0560 (0.0665)
Clerk	0.0125 (0.0200)
Entrepreneur	0.0359 (0.0317)
Lawyer	0.000631 (0.0426)
Physician	0.0619* (0.0309)
Selfemployed	-0.00646 (0.0341)
Teacher	0.0662+ (0.0369)
Female	-0.0653+ (0.0375)
Graduate	0.0999+ (0.0580)
South	-0.0159 (0.0634)
North	0.0104 (0.0654)
Age	1.972 (1.222)
Observations	226
Majoritarian	122
Proportional	104

Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Table 4.3: **Balance tests.** The table reports balance tests for pre-treatment variables. *Different residence* is a dummy variable that indicates if an MP has been elected in the same region where he resides. *Previous Local Government* is a dummy variable that indicates if an MP had previous local government experience—mayor, president of a regional government. *Clerk*, *Entrepreneur*, *Lawyer*, *Physician*, *Selfemployed* and *Teacher* are dummy variables for a candidate's profession. All these variables are from Gagliarducci *et al.* (2011). *Female* is a dummy variable for gender. *Graduate* is a dummy variable for graduate education level. *South (North)* is a dummy variable that indicates if a candidate run in a southern (northern) district. *Age* measures the age of candidates in years.

	50th left Jump at the threshold	50th right Jump at the threshold
Geo	-0.0837 (0.101)	-0.0164 (0.103)
Sector Geo	-0.0326 (0.0586)	-0.0656 (0.0752)
Observations	104	122
Treatment	50	54
Control	61	61

Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Table 4.4: **Placebo tests.** The table reports placebo tests that compare the average number of particularistic bills proposed by dual MPs to the left and to the right of two “fake thresholds”. The placebo thresholds are represented by the empirical median of observations to the left and to the right of the regression-discontinuity cutoff—50th percentile at the left of 0, and 50th percentile at the right of 0.

4.7.4 Results

Building on the statistical framework proposed in Section 4.6 and on the qualitative and quantitative evidence provided in Section 4.7.2 and 4.7.3, I perform a RDD analysis to estimate the causal effect of the treatment “being elected in the majoritarian tier”, as opposed to “being elected in the proportional tier”, for dual candidates running in the 1994, 1996 and 2001 elections. To estimate the average causal effect (AVE), I perform a difference of means test for geographically and sector-targeted legislation (see Table 4.5). As explained in Section 4.6.2, I present results for four different bandwidths. The t-tests fail to detect any significant difference between the mean number of particularistic bills proposed in the treatment groups and the mean number of particularistic bills proposed in the control group.⁴³ Moreover, I report RDD plots that fit a second-order polynomial to local sample means, to investigate the presence of a discontinuity at the threshold (see Figure 4.2). The graphs corroborate the results of the t-tests. The discontinuity shown, much smaller than the one observed in Figure

⁴³Both geographical and sectoral particularism.

4.1, is almost imperceptible. This graphical evidence is robust to the choice of higher-order polynomials (see Appendix C.2). The treatment “being elected in the majoritarian tier” does not seem to have a statistically significant effect on MPs’ propensity to propose particularistic legislation. These results are much different from those obtained in section 4.7.1 and those proposed by previous studies that did not restrict their analysis to MPs who are valid counterfactuals of each other (Gagliarducci *et al.* 2011).

A quasi-experiment on Italian legislators behaviour does not provide empirical evidence for Hypothesis 1 and suggests that the relationship between the electoral system and candidates’ propensity to serve parochial interests could be correlational rather than causal. When we consider MPs who are valid counterfactuals of each other, but have been elected under different electoral rules, we are not able to find any relevant difference in their propensity to propose particularistic legislation. To provide further support to these results, I provide two alternative analyses (see Appendix C.3 and C.4). In Appendix C.3, I perform a RDD analysis that uses local-linear regressions to estimate the average causal effect (for a similar approach, see Gagliarducci *et al.* 2011). Also in that case, there appears to be no significant difference in the number of particularistic bills proposed by MPs elected in different tiers. In Appendix C.4, I perform RDD analyses that consider each of the three legislatures—12th, 13th and 14th—separately. Similar results to those shown in this Section are obtained when considering dual MPs elected in the 12th, 13th and in 14th legislature, separately.

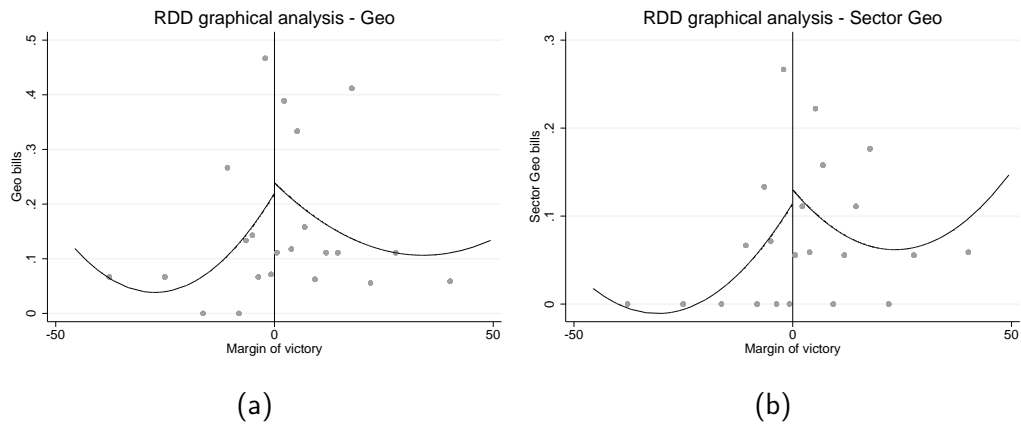


Figure 4.2: **RDD Analysis - study group.** The figure shows RDD plots for geographic (panel a) and sector-targeted (panel b) legislation. The dots represent local sample means of the number of particularistic bills proposed by each MP, while the solid line is a second-order polynomial polynomial fit. Bins are non-overlapping partitions all containing the same number of observations, i.e. quantile-spaced bins. The total number of bins has been determined using the mimicking variance method.

	Jump at the threshold 13% bandwidth	Jump at the threshold 10% bandwidth	Jump at the threshold 5% bandwidth	Jump at the threshold 3% bandwidth
Geo Bills	0.0251 (0.0729)	0.0497 (0.0787)	-0.0107 (0.112)	-0.000922 (0.176)
Sector Geo Bills	0.0214 (0.0490)	0.0188 (0.0555)	-0.0224 (0.0637)	-0.0433 (0.0986)
Observations	226	196	111	66
Majoritarian	122	104	57	35
Proportional	104	92	54	31

Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Table 4.5: **RDD Analysis - study group.** The table reports the results of t-tests that compare the average number of particularistic bills proposed by dual MPs elected in the majoritarian tier—treatment group, to the average number of particularistic bills proposed by dual MPs elected in the proportional tier—control group. Results are reported for all the relevant bandwidths—13%, 10%, 5%, 2%.

4.8 Discussion

A vast literature on legislative behaviour shows that candidate-centered electoral systems should increase elected representatives' propensity to serve parochial interests. While previous studies offer extensive empirical evidence and solid theoretical background for a connection between the electoral rule and elected representatives' tendency to engage in particularistic policy-making, attempts to disclose a causal relationship are still rare. This is mainly due to the difficulty in simultaneously control for determinants connected to the institutional environment, electoral regulations at large, and candidates' self-selection. This study has proposed a quasi-experiment as a convenient solution to control for confounding factors and increase our understanding of the causal mechanism linking the electoral system to political particularism.

Notwithstanding the relevance of electoral rules in influencing elected officials' behaviour, my findings show that the electoral system, *per se*, does not seem to cause a higher propensity to serve parochial interests in national assemblies. When comparing the propensity to engage in particularistic policy-making of deputies who are valid counterfactuals for each other, but have been elected under different electoral rules, t-tests and RDD plots fail to find significant differences. Still, deputies elected in the majoritarian tier do propose more geographic and sector-targeted legislation than MPs elected in the proportional tier (see Table 4.2 and Figure 4.1). These results call for further explanation.

The culprits behind these contradictory results could be MPs' personal characteristics connected to their political experience or to the strength of their local connections. Conventional wisdom in the study of political particularism and legislative behaviour tells us that candidates with previous local government experience usually have greater familiarity with local interest, and are more willing to serve them (Marangoni & Tronconi 2011). At the same time, MPs who are national leaders are usually less willing to propose particularistic legislation, because they want to safeguard their national profile by showing the electorate that they give priority to national interests (Gagliarducci *et al.* 2011, Marangoni & Tronconi 2011). Table 4.1 shows that politicians with local government experience are more

likely to be elected in the majoritarian tier, while national leaders and candidates running outside of the region where they reside are more likely to be elected through party lists. These elected representatives' idiosyncratic characteristics could then be relevant factors responsible for the different propensity to favour parochial interests that we observe across the two tiers of election but disappears once we compare MPs who are valid counterfactuals.

Another relevant factor to be taken into account is ballot control. In section 4.4.1 I quoted a relevant difference made in the literature between electoral rules and electoral regulations at large (Gallagher & Mitchell 2005). While the electoral system concerns the rules—list versus nominal vote or district magnitude—that determine how votes are cast and converted into seats, “electoral regulations” is a wider concept. Electoral regulations concern, for example, the right to vote, free, fair and transparent elections, and ballot control (see Gallagher & Mitchell 2005). Since in my analysis I compare MPs who have been elected under different electoral rules but are subject to similar electoral regulations, I cannot show empirical evidence of an effect of ballot control. Still, the fact that I do not find an effect when I consider exclusively differences in electoral rules leads to think that electoral regulations could be a relevant alternative explanation, especially if considered in conjunction with electoral rules. Indeed, previous studies have shown that “electoral institutions”⁴⁴ have a relevant impact on distributive policy making only when they boost each other in inhibiting the incentives to cultivate a personal vote (see Franchino & Mainenti 2013, p. 511). This suggests that the effect of electoral rules could become relevant only if accompanied by the reinforcing effect of congruent electoral regulations. The empirical evidence of a non significant difference in legislative behaviour between MPs elected in different tiers could thus be produced by the dampening effect of a strong ballot control on majoritarian MPs' propensity to serve parochial interests.

My results could also be driven by the peculiar electoral strategy and legislative behavior that characterize some of the dual candidates considered in my analysis. As I explain in Section 4.3.3⁴⁵, dual candidates should be more likely to exhibit

⁴⁴Understood as the combination of electoral rules and electoral regulation.

⁴⁵See p. 86-88.

a “mixed strategy” when they campaign, because they aim at maximizing their chances to be elected in both tiers—the majoritarian and the proportional one. Once elected, I assume that they should instead be more likely to adapt their legislative behavior to the tier where they have been elected, because they want to show their voters that they are willing to maintain their “tier-dependent” electoral promises. Deputies elected in the majoritarian tier should then be more likely to engage in particularistic policy-making with respect to deputies elected in the proportional tier. Still, MPs who have been dual candidates in one election are also more likely to be dual candidates in the next one. This has two main implications. First, these candidates will most likely re-run in both tiers. Second, on the one hand usually candidates tend to stick in the same tier of election, i.e. dual candidate who won in the majoritarian district in one election is also usually re-elected in the majoritarian tier in the next electoral race (see Section 4.3.3, pp. 86-88). On the other hand, there are some dual candidates who are not re-elected in the same tier in the next election. This makes us suspect that some candidates could be more willing to adapt their behavior to the possibility of not knowing in what tier they will be re-elected⁴⁶. These candidates could decide to opt for a legislative behavior that resembles more the “mixed-strategy” they have employed during the electoral campaign. If that is the case, the difference in the electoral incentives to which they are subject due to the tier where they have been elected could be less prominent than predicted. As a consequence, the results of a non-significant difference in the propensity to engage in particularistic policy-making between candidates elected in the majoritarian tier and candidates elected in the proportional tier could be driven by the mixed-strategy employed by certain dual deputies. A final point to be taken into account is the of the sample size which, depending on the bandwidth that we consider, has a maximum possible magnitude of 226 and a minimum possible magnitude of 66. While a sample size that is higher than 40 is by convention considered enough in order for the assumptions of normality to hold⁴⁷, clearly the the power of the test, and thus the ability to find a statistically significant difference, will be affected by the moderate sample size.

⁴⁶If they are, indeed, re-elected.

⁴⁷For a bibliographic reference the reader is referred to, among many, Field (2000)

In conclusion, more compelling evidence should be provided in order to deliver a final verdict on the effect of electoral systems on political particularism. Since my analysis aims at controlling for MPs' idiosyncratic characteristics and electoral regulations at large, it clearly cannot provide empirical evidence on the effect of such factors on MPs' propensity to engage in particularistic policy making. Still, descriptive evidence (see table 4.1 and figure 4.1) and theoretical reasoning suggest that if we want to understand how to impact elected representatives' propensity to safeguard broader interests rather than specializing in serving localities, we might need to look *also* at something different than the electoral system in the strict sense. In particular, localism, MPs' political experience and career, and the interaction between electoral rules and electoral regulations could constitute valid contributing factors.

5 Conclusion

Aim of my dissertation was to produce a more nuanced understanding of political particularism and to test a causal mechanism linking electoral incentives to the construction of a personal vote with elected representatives' propensity to engage in particularistic policy-making. I have examined the legislative behaviour of Italian members of parliament as a case study of how this causal mechanism works. Throughout the dissertation, I have sought to answer six main research questions:

1. Are constituency service and political particularism normative principles, detrimental phenomena, or both?
2. What is the style of representation of a legislator that engages in particularistic policy-making?
3. What are the different types of political particularism that we can observe?
4. Are legislators who cultivate a larger personal vote more willing to favour parochial interests?
5. And if they are, what kind of parochial interest will they be willing to favour?
6. Can we find empirical evidence of a causal link between the electoral rule and deputies' willingness to serve parochial interests?

The literature on constituency service and political particularism has taken two main routes. A first strand, stemming from the field of American politics, characterizes constituency service as a central aspect of representation (Fenno 2002,

Mayhew 1974a, Miller & Stokes 1963, Munroe 1977, Searing 1985). A second group of scholars, instead, describes the electoral connection as a detrimental phenomenon that produces a sub-optimal political system characterized by discriminatory policies and overspending (Bagehot 1867, Carey & Shugart 1995, Cox 1987, Mayhew 1974a). While these two scholarships offer significant insights, some gaps remain. The first tradition overlooks the possible negative externalities arising from constituency service, while the second one completely disconnects constituency service and particularism from political representation. Starting from these considerations, I have built on Eulau & Karps (1977)'s work in an effort to show that by merging the two traditions in a comprehensive theory of representation we can obtain a more nuanced analysis of constituency service and political particularism. The theoretical model that I propose recognizes that, although political particularism can produce discriminatory policies and overspending, promoting the interests of constituents is a crucial aspect of an elected representative's job. To answer my first research question, political particularism produces negative externalities, but it is not inherently detrimental. Serving parochial interests threatens welfare maximization and political representation when elected representatives dedicate most of their time to it. If legislators are willing to equally divide their attention between local and national interests, full political accountability as well as society's welfare at large can be preserved (Shugart 2001).

Furthermore, I have explained how each elected representative that engages in particularistic policy-making has an *allocative style* of representation, but not all *allocative* legislators have the same focus. Some of them favour the interests of their constituency as a whole, while others are more interested in developing systems of clientele associations with members of certain economic sectors or professional categories. This generates different types of particularistic policy-making: a strictly geographically-based one that delivers goods and services to a legislator's electoral district, and a sectoral one that favours certain professional categories residing in the constituency. Scholars are used to think about particularism in terms of pork-barrel projects that correspond to the distribution of public goods to a deputy's district. My analysis shows, instead, that the electoral

connection binds parliamentarians to a heterogeneous set of interests inside their constituency. This leads them to distribute also private goods to economic sectors-related clientele. Previous studies have pointed out to this fact (Eulau & Karpis 1977, Golden 2003, Mayhew 1974a). Still, the majority of political particularism and pork-barrel scholars have overlooked phenomena like sectoral particularism. This has led them to describe particularistic electoral connections as a matter of non-rivalrous and non-excludable goods' distribution that leads to higher than optimal budget deficits and geographically targeted benefits sustained through taxpaying. Conversely, when we acknowledge the existence of phenomena like sectoral particularism, we understand that the electoral connection can also bring about distributive policies targeted at certain functional groups in society. These policies do not simply produce geographically targeted benefits that favour certain electoral districts at the expense of others. Instead, they produce higher benefits for a restricted professional category while raising the costs for all individuals that are not part of that category (Lowi 1964).

A second contribution of this study is more empirical in nature. The scholarship on the incentives to cultivate a personal vote and political particularism does not provide explicit empirical evidence of a direct connection between the level of personal vote gathered by a politician and his propensity to serve parochial interests. I have thus proposed a new proxy to measure the personal vote and offered a more direct evidence of a higher propensity to serve parochial interests for deputies that have gathered larger personal followings. This should provide empirical backing to the compelling theoretical augmentations offered by a vast literature on the search for a personal vote and political particularism. My analysis suggests that, indeed, candidates who have acquired a large personal vote should be more willing to engage in particularistic policy-making. Moreover, I have provided empirical evidence suggesting that Italian deputies building a large personal vote do not favour exclusively the interests of their constituency as a whole, but also the interests of specific functional groups connected to sectors of the economy or professional categories residing in their district. These results suggest that, even though national parliaments are elected through a geographically-based mechanism, elected representatives do not perceive their

electoral constituency just in purely geographic terms. Depending on his focus, a legislator can also perceive his constituency in terms of functional groups connected to professional categories.

Third, I produce the first “acid test” of a causal linkage between the electoral rule and Italian elected representatives’ propensity to serve parochial interests. While previous studies offer solid theoretical background and empirical evidence suggesting the presence of a connection between the electoral rule and elected representatives’ tendency to engage in particularistic policy-making, attempts to disclose a causal relationship are still rare. This is mainly due to the difficulty in simultaneously control for confounders connected to the institutional environment, electoral regulations at large, and candidates’ idiosyncratic characteristics. I have thus decided to propose a quasi-experiment as a convenient solution to control for confounding factors and test the causal connection between the electoral rule and political particularism. Notwithstanding the relevance of electoral rules in influencing elected officials’ behaviour, my findings show that the electoral system does not seem to *cause* a higher propensity to serve parochial interests in national assemblies, in and of itself. Deputies elected in the majoritarian tier do propose more geographic and sector-targeted legislation than MPs elected in the proportional tier. Still, when I compare the propensity to engage in particularistic policy-making of deputies who are valid counterfactuals of each other but have been elected under different electoral rules, I do not find significant differences. To answer my last two research questions, politicians in search of a personal vote are more willing to serve parochial interests, but there does not seem to be a purely causal connection between the electoral rule and political particularism.

This study sought to provide a better understanding of the electoral connection and political particularism, but of course it also leaves some opened questions. First, while I find evidence of a connection between legislators’ search for a personal vote and their propensity to propose particularistic legislation, the results of my quasi-experiment suggest that is not the electoral rule *per se* that causes legislators’ higher propensity to serve particularistic interest. This does not imply that the electoral system is not producing any incentive for candidates to serve parochial interests. There simply are other relevant factors that we should take

into account. For example, MPs' personal characteristics connected to their political experience or to the strength of their local connections. Politicians with previous local government experience usually have greater familiarity with local interest and are more willing to serve them. On the contrary, MPs who are national party leaders are usually less willing to propose particularistic legislation since they want to safeguard their national profile by showing the electorate that they give priority to national interests (Gagliarducci *et al.* 2011, Marangoni & Tronconi 2011). Descriptive evidence from Chapter 4 suggests that MPs' local government experience, or their role as national leaders, could explain part of the difference in the propensity to engage in particularistic policy making that we observe across the two tiers of election¹. Still, my analysis of postwar Italy shows that MPs elected in the same region where they were born do not seem to be more willing to propose particularistic legislation (see Chapter 3). These results stand in contrast with those of Chapter 4, as they would suggest that localism is not a relevant factor in influencing political particularism. On the one hand, one could argue that having strong local roots does not increase a legislator's propensity to serve parochial interests, unless he manages to convert his personal links into votes. This would imply that political systems where elected representatives build strong local roots with their constituents are not necessarily more prone to particularistic policy-making, unless the electoral system requires candidates to acquire wide personal followings in order to be elected—as in the case of open-list PR, first-past-the-post, or STV/SNTV. On the other hand, the proxy for localism that I have used in Chapter 3 could be less-than-optimal in capturing an MP's level of local connection. Indeed, while in Chapter 4 I consider an MP's local government experience and his region of residence, in Chapter 3 I only consider an MP's region of birth as proxy for localism. It is possible that the region of birth of an MP is not a strong enough proxy to capture the total strength of his local connections. Localism could be better captured, for example, by an *index of localness* that takes into account legislators' place of birth, region of residence and local government experience (Marangoni & Tronconi 2011). If that is the case, the results of Chapter 3 could be more connected to the proxy employed to measure localism than to a genuine absence of a connection

¹Which disappears once we compare MPs who are valid counterfactuals.

between localism and political particularism. Future studies could employ the dataset generated in this study, in conjunction with more comprehensive indexes of localness, to disentangle the dynamics of this connection. For now, the extent to which localism can influence legislators' propensity to engage in particularistic policy making remains an open question for future research.

Another dynamic that we should take into account when analyzing electoral incentives to cultivate a personal vote, and that could explain the similar legislative behaviours observed across different tiers of election when I compare deputies who are valid counterfactuals, is the interaction between electoral rules and regulations. Indeed, the empirical evidence of a non significant difference in legislative behaviour between MPs elected in different tiers could also be produced by the dampening effect of a strong ballot control on majoritarian MPs' propensity to serve parochial interests. If that is the case, my analysis would suggest that differences in the rules that determine the way in which votes are counted and converted into seats—the electoral system in the strict sense—could simply be not a strong enough factor to produce relevant differences in legislators' propensity to engage in particularistic policy-making, in and of itself. This assumption would be in line with previous studies showing that electoral rules and regulations have a relevant impact on distributive policy making only when they boost each other in their effect on the incentives to cultivate a personal vote (Franchino & Mainenti 2013). More compelling evidence should be provided in order to draw definitive conclusions on these matters.

My results could also be driven by the peculiar legislative behavior that characterizes some of the dual candidates considered in my analysis. As I explain in Section 4.3.3², dual candidates should be more likely to exhibit a “mixed strategy” when they campaign. Once elected, they should instead exhibit a “tier-dependent” electoral behaviour. Deputies elected in the majoritarian tier should then be more likely to engage in particularistic policy-making than deputies elected in the proportional tier. Still, MPs who have been dual candidates in one election are also more likely to be dual candidates in the next one and are thus at the risk of being elected in a different tier with respect to the previous electoral race.

²See p. 86-88.

This suggests that some candidates could be more willing to adapt their behavior to the possibility of not knowing in what tier they will be re-elected³. These candidates could thus decide to opt for a legislative behavior that resembles more the “mixed-strategy” they have employed during the electoral campaign. If that is the case, the difference in the electoral incentives to which they are subject due to the tier where they have been elected could be less prominent than I envisioned. As a consequence, the results of a non-statistically significant difference in the propensity to engage in particularistic policy-making between candidates elected in the majoritarian tier and candidates elected in the proportional tier could also be driven by the mixed-strategy employed by certain dual deputies. In conclusion, more compelling evidence should be provided in order to deliver a final verdict on the effect of electoral systems on political particularism.

On a different note, while my analysis confirms that legislators with strong personal followings are more willing to favour the interests of sectoral clientele residing in their constituency, I do not find any relationship between the level of a candidate’s personal vote and his propensity to serve sectoral interests outside his constituency. There thus appear to be no clear connection between an elected representative’s search for a personal vote and his propensity to favour the interests of certain sectors of the economy at large. Still, scholars have pointed out that elected representatives are willing to serve parochial interests that lack a geographic constituency. Some propose that party leaders would be more inclined to do so (Bawn & Thies 2003, Kunicova & Rose-Ackerman 2005), while others suggest that legislators should be more willing to serve the interests of the professional category to which they belonged before being elected (Marangoni & Tronconi 2013). Future analyses could build upon these contributions, and employ data on MPs’ professional experience produced by this study, to provide further empirical evidence on what are the most relevant factors leading legislators to favour certain economic sectors or professional categories residing outside their constituency. A better understanding of the determinants of sectoral particularism at large would offer additional concrete insights to policymakers who are willing to reduce socially sub-optimal phenomena such as clientelism or misallocation of resources.

³If they are, indeed, re-elected.

Lastly, in this study I contend that while political particularism can produce negative externalities for society at large it shouldn't be considered *a priori* as a detrimental phenomenon. Still, in my analysis I do not provide empirical evidence on the effects of political particularism for society's welfare or political representation. On the one hand, my dissertation focuses on the causes of political particularism, thus discussing its consequences is outside the scope of the study. On the other hand, I argue that proposing a theory on political particularism that refrains from taking a definitive view on the consequences of this phenomenon is the first step towards a more nuanced perspective on particularistic policy-making. Many researchers have studied political particularism with the aim of developing strategies to curb a detrimental phenomenon. This is for sure a relevant approach, since particularism can produce negative externalities. Still, I argue that a methodology that remains open to the possibility of positive as well as negative externalities would give the opportunity to produce more transparent and comprehensive analyses of particularistic policy-making. This study and the dataset that I generate pose the basis for further analyses looking at the effect of political particularism on welfare maximization and political representation.

As a final remark, I would like to stress the tangible opportunities for future research that this study creates. First, the newly developed dataset on Italian political particularism and proposed legislation will assist future studies on political particularism in Italy. Second, the methodology employed could offer a valid starting point in developing proxies to measure political particularism in countries other than Italy. Furthermore, my data may be used for prospective studies on the Italian political scenario and on Italian legislators' behaviour at large. The advent of big data has shown us that being able to access ready-to-use input is not always a trivial task. We now have plenty of information available on the Internet, but we are not always able to promptly access and analyze it. Data collection and mining processes often require a considerable amount of time and resources to be completed, which often makes them not very attractive for researchers. The production, to date, of the most extensive dataset on Italian deputies' demographics and proposed legislation will thus remarkably assist future research on political particularism and legislative behaviour at large.

A Appendix to Chapter 2

A.1 A new dataset on Italian MPs and bill proposals

The screenshot displays the personal page of an Italian MP, Adonino Giovan Battista, on the website 'Legislature Precedenti'. The page is titled 'Dati personali e incarichi nella I Legislatura'. It provides biographical information, including birth and death dates, and details about his political career, such as his election to the Chamber of Deputies and his membership in various parliamentary commissions. A portrait of the MP is shown on the right side of the page.

Legislature Precedenti Cookie Torna alla legislatura corrente

ATTIVITA' SVOLTA NELLA I LEGISLATURA
(8 maggio 1948 - 24 giugno 1953)

DATI PERSONALI
 Dati biografici e incarichi

ATTIVITA' DI DEPUTATO

Iniziativa

- Proposte di legge
- Relazioni scritte presentate
- Interrogazioni con risposta scritta

Attività legislativa

- in Assemblea
- in Commissione

Attività non legislativa

- in Assemblea

Dati personali e incarichi nella I Legislatura

ADONINO Giovan Battista
LICATA (AGRIGENTO), 6 novembre 1889 - 14 dicembre 1973

Laurea in giurisprudenza; avvocato.

Eletto nel collegio PALERMO

Proclamato il 27 aprile 1948
Elezione convalidata il 28 luglio 1948

Iscritto al gruppo parlamentare: [DEMOCRATICO CRISTIANO](#) dal 1° giugno 1948 al 24 giugno 1953

Componente di organi parlamentari:

- Componente della [IX COMMISSIONE \(AGRICOLTURA E ALIMENTAZIONE\)](#) dal 15 giugno 1948 al 24 giugno 1953
- Componente della [COMMISSIONE SPECIALE PER L'ESAME DEL DISEGNO DI LEGGE N. 1: "DISPOSIZIONI PENALI PER IL CONTROLLO DELLE ARMI"](#) dal 4 giugno 1948 al 24 giugno 1953
- Componente della [COMMISSIONE SPECIALE PER L'ESAME DEL DISEGNO DI LEGGE N. 20: "RATIFICA DEGLI ACCORDI INTERNAZIONALI FIRMATI A PARIGI IL 16 APRILE 1948"](#) dal 15 giugno 1948 al 24 giugno 1953
- Componente della [COMMISSIONE SPECIALE PER L'ESAME DEL DISEGNO DI LEGGE N. 36: "RATIFICA DELL'ACCORDO DI COOPERAZIONE ECONOMICA TRA L'ITALIA E GLI STATI UNITI, CONCLUSO A ROMA IL 28 GIUGNO 1948"](#) dal 30 giugno 1948 al 24 giugno 1953

Termine del mandato: 24 giugno 1953

Figure A.1: MP's personal page. The figure illustrates, by way of example, the personal page of an Italian MP. Data on MPs' demographics have been automatically retrieved from MPs' personal pages using a set of scripts written in Python.

Figure A.2: **Scanned image of a bill proposal.** The figure illustrates, by way of example, the scanned image of a bill proposal. Bills' texts belonging to the first 12 legislative terms have been converted into machine-encoded text using a set of scripts written in Python.



A.2 Coding instructions for crowd workers

A.2.1 Sector-targeted legislation

Overview

For this activity you will have to read some sentences and indicate if the content refers to a sector of the economy. Moreover, you will have to indicate whether the sentence makes reference to the conferral of a benefit to the sector that you have just indicated, or to some workers/firms belonging to that sector. Sentences have been extracted from bills' texts.

Some of the sentences could contain typos or appear incomplete. This is due to the process of conversion into machine-encoded text. Please ignore these issues when interpreting the content of the sentence, if possible. Thank you!

Steps

1. Read the sentence.
2. Indicate whether the sentence refers to a sector or the economy, or not.
3. Indicate all the sectors to which the sentence makes reference.
4. Read the sentence again.
5. Indicate whether the sentence makes reference to the conferral of a benefit.
6. Indicate all the granted benefits.

Sectors of the economy

The sectors of the economy represent a formal subdivision of a country's economic system. The *macro-sectors* of the economy are:

1. primary: this is the sector that includes agriculture, breeding, and mining;
2. secondary: this is the industry sector;
3. tertiary: this is the services sector;

4. fourth sector: this is the sector that includes high-value-added activities and R&D.

Each of these macro-sectors includes one or more sectors. For this activity you will have to identify *sectors* of the economy.

The sectors that you could identify in the sentences are:

- *Agriculture, breeding and mining.*
- *Other Service activities:* cultural associations, sports club, non-public education services etc.
- *Cultural and artistic activities, entertainment.*
- *Financial activities.*
- *Real estate business.*
- *Manufacturing sector.*
- *R&D.*
- *Commerce and retail sector.*
- *Information & communication sector.*
- *Housing & construction.*
- *Energy sector.*
- *Public education.*
- *Waste management and water supply.*
- *Public health care.*
- *Public sector.*
- *Transport and warehousing.*
- *Tourism.*

Granting Benefits

Some bills grant benefits to some sector of the economy, or to people or businesses employed in some sector. A bill can grant different kinds of benefits:

- *Salary increase.*
- *Tax reliefs & waivers:* a waiver is the repeal of penalty or fine.
- *Construction of infrastructures:* bridges, highways, buildings, etc.
- *Recruitment/Titularization:* conversion of temporary contracts into permanent ones, in the public sector.
- *Measures to guarantee economic, social and cultural development.*
- *Measures to guarantee the preservation of homelands.*
- *Money transfer & awards:* money transfers, awards, scholarships.
- *Subsidies and incentives. Thank you!*

A.2.2 Geographically-targeted legislation

Overview

For this activity you will have to read some sentences and indicate if the content refers to an Italian city, province, or region. Moreover, you will have to indicate whether the sentence makes reference to the conferral of a benefit to the city, province or region that you have just indicated. Sentences have been extracted from bills' texts.

Some of the sentences could contain typos or appear incomplete. This is due to the process of conversion into machine-encoded text. Please ignore these issues when interpreting the content of the sentence, if possible.

Thank you!

Steps

1. Read the sentence.
2. Indicate whether the sentence refers to a city, province, region, or not.

3. Read the sentence again.
4. Indicate whether the sentence makes reference to the conferral of a benefit.
5. Indicate all the granted benefits.

Granting Benefits: Infrastructures and Homeland Promotion & Preservation

Some bills grant benefits to a certain city, province, or region. A bill can grant different kinds of benefits. These benefits usually include the *construction of infrastructures* (highways, bridges, hospitals etc), or the homeland preservation and promotion.

The kinds of benefits that you could identify while reading the sentences are the following:

- *Tax reliefs & waivers*: a waiver is the repeal of penalty or fine.
- *Construction of infrastructures*: bridges, highways, buildings, etc.
- *Measures to guarantee economic, social and cultural development*.
- *Measures to guarantee the preservation of homelands*.
- *Subsidies and incentives*.

Thank you!

A.3 Figure Eight workflow

A.3.1 Sector-targeted legislation

To guarantee that crowd workers will be reading meaningful and relevant sentences, I have extracted the random sample after having selected from my corpus only the sentences that have more than 11 tokens. This number of tokens represents the minimum length of a so called “complex sentence”¹. In Italian, a complex sentence is a minimal text structure composed of one principal sentence, one coordinate sentence and one subordinate sentence².

c) sviluppare con sovvenzioni destinate agli enti locali, a loro consorzi o ad altre forme associative, l'esercizio pubblico nei teatri comunali e di altri enti pubblici e nelle sale private prese in affitto dai comuni;

La frase fa riferimento ad uno o più settori dell'economia? (required)

- Sì
 No

Indica tutti i settori dell'economia che hai individuato in questa frase. (required)

- Agricoltura, allevamento e pesca
 Altre attività di servizi
 Attività culturali, artistiche e di intrattenimento
 Attività estrattiva
 Attività finanziarie e assicurative
 Attività immobiliari
 Attività manifatturiera
 Attività scientifiche
 Commercio
 Comunicazione e informazione
 Edilizia
 Energia
 Istruzione pubblica
 Rifiuti e fornitura di acqua
 Sanità pubblica e assistenza sociale
 Settore pubblico
 Trasporti e magazzinaggio
 Turismo

La frase fa riferimento alla concessione di benefici? (required)

- Sì
 No

Indica tutti i benefici che hai individuato nella frase. (required)

- Aumento di stipendio
 Sussidi, incentivi
 Condoni, agevolazioni fiscali o tributarie
 Costruzione di infrastrutture
 Misure per garantire lo sviluppo economico, sociale, culturale
 Misure per la promozione del territorio
 Immissione in ruolo
 Somma di denaro, premio

Figure A.3: **Work-flow SECTOR - 1**. The screen-shot shows the work-flow of the coding task, as described in Section 2.7. When a worker answers “yes” to the first and to the third question, he has to indicate what sector/sectors of the economy and what benefit/benefits he has detected in the sentence.

¹“Frase complessa”, in Italian.

²subject+verb+article+object, verb+article+object, conjunction+verb+article+object.

c) sviluppare con sovvenzioni destinate agli enti locali., a loro consorzi o ad altre forme associative., l'esercizio pubblico nei teatri comunali e di' altri enti pubblici e nelle sale private prese in affitto dai comuni;

La frase fa riferimento ad uno o piu' settori dell'economia? (required)

- Si
- No

La frase fa riferimento alla concessione di benefici? (required)

- Si
- No

Figure A.4: **Work-flow SECTOR - 2.** The screen-shot shows the work-flow of the coding task as described in Section 2.7. When a worker answers “no” to the first and to the third question, questions on the types of sectors and benefits detected in the sentence do not appear.

A.3.2 Geographically-targeted

Also in this case, I have used only sentences with more than 11 tokens.

La proposta di legge assegna al Comitato nazionale un finanziamento di 300 milioni di lire per l'anno 1996, al fine di realizzare attività divulgative e mostre ed incentivare studi e convegni scientifici (tra cui si ricordano il convegno di Civitella del Tronto e quello di Gaeta).

La frase fa riferimento ad una città, provincia o regione Italiana? (required)

- Sì
 No

La frase fa riferimento alla concessione di benefici? (required)

- Sì
 No

Indica tutti i benefici che hai individuato nella frase. (required)

- Sussidi, incentivi
 Condoni, agevolazioni fiscali o tributarie
 Costruzione di infrastrutture
 Misure per garantire lo sviluppo economico, sociale, culturale
 Misure per la promozione del territorio

Figure A.5: **Work-flow GEO - 1**. The screen-shot shows the work-flow of the coding task as described in Section 2.7. When a worker answers “yes” to the second question, he has to indicate what benefit/benefits he has detected in the sentence.

La proposta di legge assegna al Comitato nazionale un finanziamento di 300 milioni di lire per l'anno 1996, al fine di realizzare attività divulgative e mostre ed incentivare studi e convegni scientifici (tra cui si ricordano il convegno di Civitella del Tronto e quello di Gaeta).

La frase fa riferimento ad una città, provincia o regione Italiana? (required)

- Si
- No

La frase fa riferimento alla concessione di benefici? (required)

- Si
- No

Figure A.6: **Work-flow GEO - 2**. The screen-shot shows the work-flow of the coding task as described in Section 2.7. When a worker answers “no” to the second question, the question on the types of benefits detected in the sentence does not appear.

A.4 Manual content analysis of false positives

This appendix shows a manual content analysis of the sentences categorized as false positives by the crowd workers, when validating sector-targeted legislation (2.7). I have read and coded each of the 134 sentences, following the same procedure adopted by the crowd workers (see A.2). I have detected only 65 false positives, out of the 134 detected by the crowd workers. Of these 65 false positives, 32 are due to the fact that a dictionary cannot discriminate between actual discussion of provisions (*true positive*), and discussion of agencies or bodies that have the authority to provide (*false positive*). Table A.1 shows the results of the manual content analysis that I have performed, while Table A.2 shows some examples of the 32 false positive sentences that are due to the inability of a dictionary-based approach to distinguish between the description of a benefit, and the actual provision of it.

		<i>Reference</i>	
		<i>Non-targeted</i>	<i>Sector-targeted</i>
Prediction	Non-targeted	0	0
	Sector-targeted	65	69

Table A.1: **Confusion matrix for sector-targeted legislation—False Positives.** The table shows the confusion matrix obtained when comparing my manual coding (*Reference*), to the coding produced by the algorithm that detects sector-targeted legislation (Prediction). This analysis considers only the sentences categorized as false positives obtained by the validation procedure for sector-targeted legislation (see Section 2.7).

Table A.2: **False positives examples.** The table shows, by way of example, some of the 32 false positives that are due to inconsistencies arising when differentiating between the discussion of actual provisions (true positive) and the discussion of agencies or bodies that have the authority to provide (false positive).

Sentence	English Translation	Sector Category	Type of benefit
Il rapporto farmacie-abitanti nelle localita d'interesse turistico ed il numero delle autorizzazioni devono essere in funzione della somma [...] rilevate dalle aziende di promozione turistica.	The ratio pharmacies-inhabitants, in tourist areas, has to be determined as a function of the sum [...] determined by companies that promote tourism.	Tourism	Measures to guarantee economic, social and cultural development
Spettano al CSM, secondo le norme dell'ordinamento giudiziario, le assunzioni [...] le promozioni e i provvedimenti disciplinari nei riguardi dei giudici".	The Supreme Judicial Council, according to the law, is in charge of recruitment, [...] promotions and disciplinary action.	Public Sector	Recruitment/ Titularization
Il servizio pubblico radiotelevisivo si caratterizza altresì per una programmazione volta a garantire: a) la diffusione di trasmissioni televisive e radiofoniche dedicate all'educazione, e alla promozione culturale [...].	Public service broadcasting should be characterized by: a) television-shows devoted to education, and cultural promotion.	Information and Communication Services	Measures to guarantee economic, social and cultural development
I consorzi scolastici formulano e gestiscono progetti per l'innovazione, il miglioramento e la promozione di attività scolastiche [...]	The schools associations manage innovation projects, in order to promote scholastic and cultural activities [...]	Public Education	Measures to guarantee economic, social and cultural development

A.5 Dictionaries of Italian political particularism

A.5.1 Geo dictionary - selected terms

Geo	Region
Abazia di Sulmona	Abruzzo
Abano Terme	Veneto
Abano Terme Bagni	Veneto
Bacchereto	Tuscany
Baccinello	Tuscany
Bacciolino	Emilia Romagna
Ca Bianca	Veneto
Ca Bramante	Marche
Ca Corniani	Veneto
Daffina	Calabria
Dagala del Re	Sicily
Dagnente	Piedmont
Eboli	Campania
Edolo	Lombardy
Eggental	Trentino-Alto Adige
Fabbrica Curone	Piedmont
Fabbrica di Peccioli	Tuscany
Fabbriche	Liguria
Gabbiana	Lombardy
Gabbio con Monte Ossolano	Piedmont
Gabbioneta Binanuova	Lombardy
Hafling	Trentino-Alto Adige
Holen	Trentino-Alto Adige
Hone	Aosta Valley
Iamiano	Friuli-Venezia Giulia
Iavre Vigo Rendena	Trentino-Alto Adige
Iddiano	Emilia Romagna
Jacurso	Calabria
Jalmicco	Friuli-Venezia Giulia
Japigia	Puglia
Kaltenbrunn	Trentino-Alto Adige
Kaltern A.D.Weinstrasse	Trentino-Alto Adige
Kamma	Sicily
L'Alzoni	Sardinia
L'Aquila	Abruzzo
La Botte	Lazio
Macari	Sicily
Maccacari	Veneto
Maccagno	Lombardy
Nago	Trentino-Alto Adige

Table A.3 continued from previous page

Nago-Torbole	Trentino-Alto Adige
Nalles	Trentino-Alto Adige
Oberbozen	Trentino-Alto Adige
Oberin	Trentino-Alto Adige
Occhieppo Inferiore	Piedmont
Pabillonis	Sardinia
Pace	Lazio
Pace del Mela	Sicily
Quaderni	Veneto
Quadrelle	Campania
Quadrelli	Umbria
Rabbi	Trentino-Alto Adige
Racale	Puglia
Racalmuto	Sicily
S'Archittu	Sardinia
S'Arridellu	Sardinia
S'Ena Sa Chitta	Sardinia
Tabaccaro	Sicily
Tabellano	Lombardy
Tabiano	Emilia Romagna
Ubersetto	Emilia Romagna
Ubiale Clanezzo	Lombardy
Uboldo	Lombardy
Vaccareccia	Lazio
Vaccarezza	Emilia Romagna
Vaccarile	Marche
Waidbruck	Trentino-Alto Adige
Walten	Trentino-Alto Adige
Wangen	Trentino-Alto Adige
Xitta	Sicily
Zaccanopoli	Calabria
Zaccheo	Abruzzo
Zafferana Etnea	Sicily
Abruzzo	Abruzzo
Abruzzes.*?	Abruzzo
Basilicata	Basilicata
Lucano	Basilicata
Lucana	Basilicata
Lucania	Basilicata
Lucani	Basilicata
Lucane	Basilicata
Calabria	Calabria
Calabrese	Calabria
Calabresi	Calabria
Campania	Campania
Campano	Campania
Campana	Campania
Campani	Campania

Table A.3 continued from previous page

Campane	Campania
Emilia Romagna	Emilia Romagna
Emilian.*?	Emilia Romagna
Friuli-Venezia Giulia	Friuli-Venezia Giulia
Venezia Giulia	Friuli-Venezia Giulia
Friuli Venezia Giulia	Friuli-Venezia Giulia
Friulan.*?	Friuli-Venezia Giulia
Friuli	Friuli-Venezia Giulia
Lazio	Lazio
Lazial.*?	Lazio
Liguria	Liguria
Ligur.*?	Liguria
Lombard.*?	Lombardy
Lombardia	Lombardy
Marche	Marche
Marchigian.*?	Marche
Molise	Molise
Molisan.*?	Molise
Piemonte	Piedmont
Piemontese	Piedmont
Piemontesi	Piedmont
Puglia	Puglia
Puglies.*?	Puglia
Sardegna	Sardinia
Sardo	Sardinia
Sarda	Sardinia
Sardi	Sardinia
Sarde	Sardinia
Sicilia	Sicily
Siciliano	Sicily
Siciliani	Sicily
Siciliane	Sicily
Siciliana	Sicily
Toscana	Tuscany
Toscano	Tuscany
Toscani	Tuscany
Toscane	Tuscany
Trentino-Alto Adige	Trentino-Alto Adige
Trentino Alto Adige	Trentino-Alto Adige
Alto Adige	Trentino-Alto Adige
Trentino	Trentino-Alto Adige
Trentini	Trentino-Alto Adige
Trentina	Trentino-Alto Adige
Umbria	Umbria
Umbro	Umbria
Umbri	Umbria
Umbre	Umbria
Umbra	Umbria

Table A.3 continued from previous page

Valle d'Aosta	Aosta Valley
Valdostan.*?	Aosta Valley
Veneto	Veneto
Veneta	Veneto
Veneti	Veneto
Venete	Veneto

Table A.3: **Geo dictionary - selected keywords.** The table contains selected terms from *Geo*. The table illustrates some of the municipalities' names, all the Italian region's and region's inhabitants names, and all of the adjectives referred to a region.

A.5.2 Sector dictionary

Sector
acquacoltura
acquicoltura
agrari\w
agricol\w
agricoltor\w
agricoltur\w
agronom\w
allevament\w di bovini
allevament\w di bufalini
allevament\w di caprini
allevament\w di cavalli
allevament\w di ovini
allevament\w di pollame
allevament\w di suini
allevamenti
apicoltura
bestiame
bieticoltura
bovin\w
cass\w rural\w
cereal\w
coltivator\w dirett\w
coltivazion\w agricol\w
coltivazion\w del riso
coltivazion\w di agrumi
coltivazion\w di canna
coltivazion\w di cereali
coltivazion\w di frutt\w
coltivazion\w di legumi
coltivazion\w di ortaggi

Table A.4 continued from previous page

coltivazion\w di piante
coltivazion\w di pomacee
coltivazion\w di radici
coltivazion\w di semi
coltivazion\w di spezie
coltivazion\w di tabacco
coltivazion\w di tuberi
concim\w
consorzi agrari
consorzio agrario
contadin\w
edilizia rurale
fertilizzant\w
floricoltura
fond\w rustic\w
grano
granturco
impresa zootecnica
imprese zootecniche
insetticid\w
irrigazione
itticoltura
lavorazion\w delle sementi
macell\w
macellazione
mezzadria
mitilicoltura
olive
olivicoltura
orti botanici
pascol\w
pastorizi\w
pesca
pescator\w
pescherecci
pesticid\w
prodott\w ittic\w
prodott\w ortofrutticol\w
prodotti lattiero caseari
prodotto lattiero caseario
produzion\w animal\w
produzion\w vegetal\w
proprietà terrier\w
sementi
viticoltura
produzion\w di latte
produzion\w di latticini
vivai

Table A.4 continued from previous page

associazion\w cultural\w
associazion\w non profit
associazion\w no profit
cas\w di cura
ent\w di assistenza
ent\w non profit
istitut\w cultural\w e artistic\w
istitut\w di cultura italiana
istruzione non statale
organizzazione\w associativ\w
polisportiv\w
scuol\w legalmente riconosciut\w
scuol\w per corrispondenza
scuol\w privat\w
strutture\w particolar\w di istruzione
universita non stata\w
aeronautica militare
agent\w di custodia
ambasciat\w
ambasciator\w
amministrazion\w autonom\w
amministrazion\w central\w dello stato
amministrazion\w comunal\w
amministrazion\w local\w
amministrazion\w provincial\w
amministrazion\w regional\w
amministrazione periferica dello stato
amministrazione pubblica
amministrazioni periferiche dello stato
amministrazioni pubbliche
anagraf\w
assessor\w
assessorat\w
aviazione di marina
avvocat\w dello stato
avvocatur\w dello stato
aziend\w municipalizzat\w
banca d'italia
brigadier\w
burocrat\w
burocratic\w
burocratic\w
burocraz\w
cap\w di stato maggiore
capitan\w di corvetta
capitan\w di fregata
capitan\w di vascello
capitaneri\w di porto

Table A.4 continued from previous page

caporal\w
carabinier\w
caserm\w
colonnell\w
commissariat\w militar\w
consolat\w
consultori familiari
consultorio familiare
corp\w armat\w dello stato
corp\w forestal\w dello stato
difensor\w civic\w
dipendent\w dello stato
dirigenz\w militar\w
ent\w local\w
ent\w portual\w
ent\w public\w
enti previdenziali
giudic\w amministrativ\w
giudic\w conciliator\w
giudic\w delegat\w
giudic\w della giurisdizione penale
giudic\w di sorveglianza
giudic\w monocratic\w
giudic\w onorari
giudic\w per le indagini preliminari
giudic\w tutelar\w
giudic\w unic\w
giudiziari\w
guardi\w costier\w
guardi\w di finanza
guardi\w forestali
guardi\w giurat\w
ispettore tributario
ispettori tributari
istitut\w di credito di diritto pubblico
maggior\w di corvetta
magistrat\w
magistratura
maresciall\w
marina militare
militar\w di truppa
militar\w mobilitati
operator\w della giustizia
personale avventizio
personale civile delle forze armate
personale del fisco
personale dell'amministrazione carceraria
personale dell'amministrazione della giustizia

Table A.4 continued from previous page

personale della sicurezza sociale
personale delle regioni
personale dello stato
personale di custodia carceraria
personale diplomatico
personale giudiziario
personale militare
polizia
procurator\w dello stato
protezione civile
pubblica amministrazione
pubbliche amministrazioni
pubblici impieghi
pubblico impiego
pubblico servizio
pubblici servizi
ragioneri\w general\w dello stato
sergent\w
servizi pubblici
servizio pubblico
soggett\public\w
sottotenent\w
sottotenent\w di vascello
sottufficial\w
tenent\w di vascello
trasport\w public\w
ufficial\w di stato civile
ufficial\w giudiziari
ufficial\w in ausiliaria
ufficio di stato civile
ufficio distrettuali delle imposte dirette
ufficio giudiziari
ufficio tecnici erariali
ufficio territoriali del governo
vigil\w del fuoc\w
vigil\w urban\w
vigilatrici penitenziarie
artistic\w
artist\w
scrittore\w
attore\w
bande musicali
cantant\w
cinematografia
cinema
circhi equestri
orchestre
cori

Table A.4 continued from previous page

danzator\w
doppiator\w
maghi
mestier\w artistic\w
musicist\w
cinematografic\w
scultor\w
pittur\w
stilist\w
regist\w
teatr\w
muse\w
attivit  estrattiv\w
carbon\w
cavator\w
conglomerati cementizi
cement\w
estrazion\w di antracite
estrazion\w di ardesia
estrazion\w di argill\w
estrazion\w di caolino
estrazion\w di carbone
estrazion\w di creta
estrazion\w di gas
estrazion\w di gesso
estrazion\w di ghiaia
estrazion\w di lignite
estrazion\w di minerali
estrazion\w di petrolio
estrazion\w di pietr\w
estrazion\w di sabbia
estrazion\w di sale
estrazion\w di torba
industri\w estrattiv\w
industri\w minerari\w
minator\w
minier\w
agent\w di assicurazion\w
attivit  creditizi\w
mercati finanziari
mercato finanziario
attivit  assicurativ\w
banche
intermediazione monetaria
intermediazioni monetarie
aziend\w di credito
istitut\w di credito
immobiliar\w

Table A.4 continued from previous page

affitt\w di ben\w immobil\w
compravendit\w di ben\w immobil\w
gestion\w di immobil\w
manfatturier\w
antiquariat\w
artigianat\w
artigian\w
attivit  metallurgiche
attivit  siderurgica
attivit  siderurgiche
attivit  metallurgica
carpenteri\w
carpentier\w
confezione di abbigliamento
costruzione di imbarcazioni
fabbricazion\w di aeromobili
fabbricazion\w di armi
fabbricazion\w di autoveicoli
fabbricazion\w di birra
fabbricazion\w di borse
fabbricazion\w di calzature
fabbricazion\w di coke
fabbricazion\w di coloranti
fabbricazion\w di cosmetici
fabbricazion\w di elettrodomestici
fabbricazion\w di esplosivi
fabbricazion\w di giochi
fabbricazion\w di gioielleria
fabbricazion\w di mobili
fabbricazion\w di motocicli
fabbricazion\w di motori
fabbricazion\w di munizioni
fabbricazion\w di tessuti
fabbricazion\w di utensili
fabbricazion\w di veicoli
fabbricazion\w di vernici
fabbricazion\w di vetro
opifici
opifici\w
industrie aeronautiche
industria aeronautica
industri\w alimentar\w
industria automobilistica
industrie automobilistiche
industri\w degli armamenti
industri\w del legno
industri\w del tabacco
industri\w della moda

Table A.4 continued from previous page

industri\w farmaceutica
industri\w tessil\w
industri\w alimentar\w
industri\w manifatturier\w
produzion\w di alimenti
produzion\w di bevande
produzion\w di bibite
produzion\w di metalli
produzion\w di tabacchi
raffineri\w
riparazione di aeromobili
riparazione di imbarcazioni
riparazione di veicoli
trattamento dei metalli
attivit  scientifica
attivit  scientifiche
istitut\w di ricerca
ricerca e sviluppo
ricerca scientifica
ricerche scientifiche
sperimentazione scientifica
sperimentazioni scientifiche
attivit  professionali
avvocati
dentisti
dottori commercialisti
farmacie
farmacisti
geometri
ingegneri
liberi professionisti
medici specialisti
notai
oculisti
odontoiatri
ortopedici
periti industriali
professioni intellettuali
psichiatri
psicologi
radiologi
ragionieri
studi legali
studi medici
studi odontoiatrici
veterinari
agent\w di commercio
commercial\w

Table A.4 continued from previous page

commerciant\w
commercio al dettaglio
commercio all'ingrosso
commercio ambulante
commercio di autoveicoli
commercio di autovetture
commercio di motocicli
commercio digitale
commercio elettronico
grand\w magazzin\w
intermediari del commercio
intermediario del commercio
mercantil\w
supermercat\w
vendit\w a domicilio
vendit\w di seconda mano
vendit\w per corrispondenza
venditor\w
architett\w
architettur\w
are\w edificabil\w
arred\w urban\w
attivit  di design
cantier\w
cantieristic\w
edil\w
edilizi\w
finitur\w di edifici
impiantistica civile
impres\w di costruzion\w
material\w da costruzione
urbanistic\w
zon\w edificabil\w
energetic\w
energetich\w
energia elettrica
energie elettriche
energie eoliche
energie geotermiche
energie idriche
energie meccaniche
energia eolica
energia geotermica
energia idrica
energia meccanica
energi\w nuclear\w
energi\w solar\w
energie termiche

Table A.4 continued from previous page

energia termica
fornitur\w di energia
combustibil\w fossil\w
fornitur\w di gas
fornitur\w di vapore
gas metan\w
gas natural\w
oleodott\w
gasdott\w
gasoli\w
impiant\w electronic\w
impiant\w nuclear\w
industri\w electronic\w
industri\w petrolifer\w
prodott\w petrolifer\w
produzion\w di energia
produzion\w di gas
trasmission\w di energi\w
attrezzatura didattica
attrezzature didattiche
bidell\w
circol\w didattic\w
conservatori di musica
direttor\w didattic\w
docent\w
istituti linguistici
istituti magistrali
istituti nautici
istituti professionali
istituti tecnici
istruzione elementare
istruzione primaria
istruzione professionale
istruzione scientifica
istruzione secondaria
istruzione superiore
istruzione tecnica
lice\w
personale della scuola
personale non docente nella scuola
professor\w
scolastic\w
scolastich\w
scuol\w bus
scuol\w dell'infanzia
scuol\w dell'obbligo
scuol\w elementare
scuol\w magistrali

Table A.4 continued from previous page

scuol\w materna
scuol\w media
scuol\w primaria
scuol\w professionali
scuol\w secondaria
universita
universitari
universitari\w
acquedott\w
fornitura di acqu\w
impiant\w idric\w
impiant\w idroelettric\w
raccolta di acqu\w
trattamento di acqu\w
igiene urbana
material\w di rifiuto
nettezz\w urban\w
raccolta differenziata dei rifiuti
riciclaggio dei materiali
smaltimento dei rifiuti
trattamento dei rifiuti
ambulanz\w
ambulatori di medicina
ambulatorio di medicina
assistent\w social\w
autoambulanz\w
aziend\w sanitari\w local\w
direttori sanitari
direttore sanitario
edilizi\w ospedali\w
ent\w mutualistic\w
guardia medica
guardie mediche
infermier\w
interventi chirurgici
ispezion\w sanitari\w
medic\w convenzionat\w
medic\w mutualistic\w
medic\w ospedali\w
medic\w universitar\w
medicina del lavoro
medicin\w legal\w
ospedal\w
ostetric\w
ostetriche
personale della sanita
personale paramedico
personale sanitario

Table A.4 continued from previous page

pronto soccorso
repart\w ospedali\w
ricerca sanitaria
ricover\w ospedali\w
rifiuti ospedali
sanita pubblica
servizi ospedali
servizio ospedali
servizi sociali
servizio sociale
sperimentazione clinica
trapianti di organi
uffici sanitari
unita sanitari\w local\w
agenzi\w di viaggio
agenzi\w di viaggio
agriturism\w
alberghi
albergo
alloggi per vacanze
bar
campeggi
campeggio
guid\w alpin\w
locand\w
ostell\w
ristorant\w
ristorazione
stabiliment\w balnear\w
stabiliment\w termal\w
tour operator
turismo
turistic\w
turistich\w
agenzi\w di stampa
caten\w librari\w
concessionari\w pubblicitari\w
editori
editori\w
editorial\w
editric\w
edizion\w di libri
edizion\w di periodici
edizion\w di quotidiani
edizion\w di riviste
giornal\w
giornalismo
giornalist\w

Table A.4 continued from previous page

linee telefoniche
poste private
pubblicità
radiofonic\w
radiofoniche
radiotelevision\w
radiotelevisiv\w
ret\w di comunicazione\w
servizi d'informazione
servizi di comunicazione
servizi telefonici
servizi telegrafici
telecomunicazione\w
television\w
aeroporto\w
aeroportual\w
attività di corriere\w
attività di imballaggio
autista\w
autobus
autocarr\w
autoferrotranvi\w
autoferrotranvier\w
autolinee\w
autostrade\w
autotrasporto\w
compagnie\w aeree\w
compagnie\w di navigazione
consorzi autonomi dei porti
consorzio autonomi dei porti
ferrovie\w
ferroviari
ferroviari\w
ferrovieri\w
funivie\w
gestione de\w trasporto\w
imprese\w di trasporto
linee\w aeree\w
linee\w di navigazione\w
linee\w ferroviarie\w
magazzinaggio
marinai
navigazione\w aeree\w
navigazione\w marittime\w
personale di volo
porti\w di preminente interesse
porti\w marittimi\w
servizi di trasloco

Table A.4 continued from previous page

settore de\w trasport\w
stazion\w ferroviari\w
tranvi\w
trasport\w aere\w
trasport\w con taxi
trasport\w di merci
trasport\w di passeggeri
trasport\w eccezional\w
trasport\w extra urban\w
trasport\w marittim\w
trasport\w mediante condotte
trasport\w per conto terzi
trasport\w stradal\w
trasport\w su binario
trasport\w urban\w
trasport\w via acqua
tren\w

Table A.4: **Sector dictionary.** The table lists all the keywords contained in *Sector*.

A.5.3 Pork dictionary

Pork

adeguament\w struttural\w
agevolazion\w fiscal\w
agevolazion\w piccole e medie imprese
agevolazion\w tributari\w
aiut\w di stato
aiut\w nazional\w
ammodernament\w e potenziament\w
assegn\w di confine
asegni ordinari annuali
assegno ordinario annuale
assistenza economica
assistenze economiche
assunzion\w a carico del bilancio dello stato
assunzion\w a carico dello stato
aument\w periodic\w di stipendio
aument\w stipendial\w
aument\w d\w capital\w
aument\w del capitale
aument\w de\w fond\w
aument\w dell'indennita di buonuscita
aument\w di capitale

Table A.5 continued from previous page

autorizzazion\w di spesa
autorizzazion\w della spesa
benefici alle imprese
benefici fiscali
beneficio alle imprese
beneficio fiscale
bors\w di studio
cofinanziament\w
collocament\w ne\w ruol\w permanent\w
collocament\w nei ruoli ordinari
completament\w e ampliament\w
concession\w a favore
concession\w di euro
concession\w di lire
concorso dello stato nell\w spes\w
concorso statale ne\w pagament\w
condon\w
contribut\w a favore
contribut\w annu\w
contribut\w dello stato
contribut\w destinat\w al finanziamento
contribut\w di euro
contribut\w di lire
contribut\w stata\w annu\w
contribut\w su\w credit\w
contributi ordinari a favore
contributi straordinari dello stato
contributi straordinari di euro
contributi straordinari di lire
contributi straordinari fino a lire
contributi straordinari fino ad euro
contributo ordinario a favore
contributo straordinario dello stato
contributo straordinario di euro
contributo straordinario di lire
contributo straordinario fino a lire
contributo straordinario fino ad euro
corresponsion\w
costruzione di
credit\w d'imposta
disposizion\w a favore
disposizion\w urgenti a favore
disposizion\w urgenti per il restauro
disposizion\w urgenti per la ripresa
emolument\w
erezione di
erezion\w a comune autonomo
erezion\w in comune autonomo

Table A.5 continued from previous page

elevazion\w in comune autonomo
elevazion\w a comune autonomo
erogazion\w dei contributi
erogazion\w di contributi
estension\w dei benefici
esenzion\w fiscal\w
finanziament\w
fiscalizzazion\w degli oneri sociali
fond\w di dotazione
fond\w di incentivazione
fond\w di previdenza
fond\w per l'indennita
fond\w per lo sviluppo
fond\w perequativ\w
fond\w scorta
fondi ordinari
fondo ordinario
immission\w in ruolo
incentiv\w
incentivazion\w
increment\w del patrimonio
indennita di tramutamento
indennita integrativ\w special\w
indennita special\w
integrazion\w patrimonial\w
integrazion\w salarial\w
intervent\w a favore
intervent\w a sostegno
intervent\w a tutela
intervent\w di sostegno
intervent\w in favore
intervent\w per l'ammodernamento
intervent\w per lo sviluppo
intervent\w pubblic\w
intervent\w urgent\w a sostegno
intervent\w urgent\w di adeguamento strutturale
intervent\w urgent\w per il risanamento
intervent\w urgent\w per opere
interventi finanziari a favore
intervent\w urgent\w in favore
intervento finanziario a favore
investment\w
manutenzion\w edilizi\w
manutenzione stradale
migliorament\w economic\w
misur\w di sostegno
misur\w necessari\w per il ripiano dei bilanci
misur\w necessari\w per il ripiano del bilancio

Table A.5 continued from previous page

misur\w per la stabilizzazione e lo sviluppo
misur\w straordinari\w ed urgent\w in favore
misur\w urgent\w a sostegno
misur\w urgent\w per la costruzione
misur\w di potenziamento
mutu\w agevolat\w
oper\w di urbanizzazione
oper\w straordinari\w
partecipazion\w stata\w
passaggi in ruolo
passaggio in ruolo
permess\w sindacal\w annual\w retribuit\w
pian\w di potenziamento
pian\w di ricostruzion\w
pian\w di risanamento
potenziament\w
premi
premio
promozion\w a titolo onorifico
promozion\w d*
promozione dello sviluppo
provvediment\w a favore
provvediment\w in favore
provvediment\w urgent\w a sostegno
provvediment\w urgent\w per lo sviluppo economico
provvidenze
quot\w di aggiunta di famiglia
realizzazion\w di opere e di infrastrutture
regim\w di aiuto
reindustrializzazion\w
ricompens\w
rifinanziament\w
rilanci economici
rilancio
rilancio economico
rimbors\w
rimess\w in pristino
riplanament\w de\w deficit
ripiano del bilancio
ripiano dei bilanci
ripiano bilancio
ripiano bilanci
riqualificazione urbana
risanamento del settore
ristrutturazion\w del settore
ristrutturazion\w della produzione
ristrutturazione e lo sviluppo
sgrav\w contributiv\w

Table A.5 continued from previous page

sgrav\w dei contributi sociali
sgrav\w dell'imposta
sistemazion\w a ruolo
sistemazion\w in ruolo
sistemazion\w nei ruoli
somme da versare
soprassold\w
sostegn\w per le attività
sostegno e rilancio
sovvenzion\w
spes\w di euro
spes\w di lire
spes\w per il funzionamento
spes\w per un importo di lire
spes\w straordinaria
stanziament\w
sussidi
sussidio
trasferiment\w di fondi

Table A.5: **Pork dictionary.** The table lists all the keywords contained in *Pork*.

A.5.4 Non-pork dictionary

Non pork

abolire
abrogare
annullare
arrestare
bloccare
cancellare
cassare
cessare
depennare
elidere
eliminare
espungere
estinguere
fermare
finire
interrompere
revocare
rimuovere
smettere
sopprimere
sospendere

Table A.6 continued from previous page

tagliare
terminare
togliere
abolizione
abrogazione
annullamento
arresto
blocco
cancellazione
depenamento
elisione
eliminazione
espunzione
estinzione
interruzione
rimozione
interruzione
soppressione
sospensione
taglio

Table A.6: **Non-pork dictionary.** The table lists all the keywords contained in *Non-pork*.

B Appendix to Chapter 3

B.1 Summary statistics

Percentage of Particularistic Bill Proposals by Legislature	
1	0.3%
2	1.09%
3	1.81%
4	1.55%
5	1.83%
6	1.86%
7	1.11%
8	1.70%
9	2.29%
10	3.42%

Table B.1: **Percentage of particularistic bill proposals.** The table shows the percentage of particularistic bill proposals over the total number of IMBPs presented in each legislature.

Terms served	Percentage
1	42.77%
2	26.56%
3	14.48%
4	8.15%
5	4.07%
6	2.18%
7	0.89%
8	0.55%
9	0.20%
10	0.15%

Table B.2: **Frequency distribution of total number of terms served.** The table reports the frequency distribution of the total number of terms served by an MP, including the current one. Almost 70% of the MPs does not serve for more than 2 terms, only 2% stays for 6 terms, and less than 1% stays in parliament for the whole postwar period. Data include also MPs elected in the Valle d'Aosta district.

Tot. number of particularistic bills	Number of MPs	Percentage of MPs
0	3,789.00	58.04%
1	1,239.00	18.98%
2	611.00	9.36%
3	337.00	5.16%
4	184.00	2.82%
5	122.00	1.87%
6	78.00	1.19%
7	41.00	0.63%
8	39.00	0.60%
9	22.00	0.34%
10	18.00	0.28%
11	12.00	0.18%
12	6.00	0.09%
13	6.00	0.09%
14	7.00	0.11%
15	4.00	0.06%
16	2.00	0.03%
17	3.00	0.05%
18	3.00	0.05%
19	2.00	0.03%
21	1.00	0.02%
26	1.00	0.02%
34	1.00	0.02%

Table B.3: **Frequency distribution of particularistic bills.** The table reports the frequency distribution of particularistic bills. “Number” and “Percentage” of MPs indicate the total number and the percentage of MPs proposing the amount of particularistic bills indicated in the first column. Of the MPs considered in the analysis, 19% proposed one particularistic bill over a legislative term. Data include also MPs elected in the Valle d’Aosta district.

Legislature	Non local	Local
1	29%	71%
2	32%	68%
3	26%	74%
4	25%	75%
5	22%	78%
6	23%	77%
7	26%	74%
8	25%	75%
9	24%	76%
10	23%	77%

Table B.4: **Frequency distribution of local MPs.** The table indicates the percentage of local and non-local MPs in each legislature. An MP is defined local if he has been elected in the same region where he was born. In each legislature, most of the MPs are local, with percentages ranging from 68% to 78%. Data include also MPs elected in the Valle d'Aosta district.

B.2 Main analysis' results using incident rate ratios

	(1) Geo	(2) Sector Geo	(3) Sector
Personal Vote	1.051** (0.02)	1.072** (0.03)	0.997 (0.01)
Local	1.047 (0.12)	1.153 (0.17)	0.933 (0.05)
Minister or Undersecretary	0.716*** (0.09)	0.681** (0.12)	0.719*** (0.04)
North	1.183 (0.13)	1.054 (0.16)	0.914 (0.05)
Center	1.097 (0.12)	1.173 (0.17)	1.048 (0.06)
Bill Proposals	1.078*** (0.01)	1.065*** (0.01)	1.113*** (0.01)
Age	0.995 (0.00)	0.988* (0.01)	0.994** (0.00)
Male	1.854*** (0.44)	2.018** (0.61)	1.059 (0.11)
EU Federalist	1.201 (1.15)	0.000*** (0.00)	0.205* (0.19)
Greens	0.294 (0.33)	0.000*** (0.00)	0.953 (0.30)
Italian Communist Party	1.149 (0.13)	1.058 (0.16)	0.961 (0.06)
Italian Republican Party	0.777 (0.25)	1.275 (0.46)	1.048 (0.16)
Italian Social Democratic Party	0.866 (0.19)	0.969 (0.30)	0.996 (0.09)
Italian Social Movement	1.100 (0.20)	1.667** (0.41)	0.890 (0.09)
Italian Socialist Party	1.001 (0.13)	0.954 (0.17)	0.961 (0.07)
Left wing	0.471 (0.23)	0.600 (0.30)	1.148 (0.16)
Liberal	0.912 (0.18)	0.864 (0.27)	0.872 (0.11)
Misto	0.361** (0.17)	0.125** (0.13)	0.345*** (0.09)
Misto Regional Leagues	1.826 (0.81)	1.109 (0.80)	0.427 (0.23)
Monarchic Party	0.257*** (0.11)	0.311* (0.20)	0.864 (0.16)
Radical Party	0.000*** (0.00)	0.000*** (0.00)	0.607* (0.18)
2 Terms	0.921 (0.08)	0.909 (0.11)	1.143*** (0.05)
3 Terms	0.894 (0.10)	0.857 (0.14)	1.133** (0.06)
4 Terms	1.030 (0.14)	1.089 (0.22)	1.150* (0.09)
5 Terms	1.005 (0.19)	1.003 (0.26)	1.089 (0.10)
6 Terms	0.604** (0.14)	0.646 (0.22)	0.905 (0.12)
7 Terms	1.488 (0.45)	1.760 (0.74)	0.741 (0.18)
8 Terms	0.465 (0.29)	0.556 (0.56)	0.540*** (0.12)
9 Terms	0.741 (0.41)	0.427 (0.31)	0.561* (0.17)
10 Terms	0.412 (0.40)	0.000*** (0.00)	0.715 (0.36)
N	5767	5767	5767

Table B.5: The effect of personal vote on MPs' propensity to propose particularistic legislation—IRR. The table reports negative binomial regressions that estimate the effect of an MP's level of personal vote on his propensity to propose particularistic legislation. Coefficients are incident rate ratios, *personal vote* is multiplied by 100. Observations are MPs in a given legislature. Legislative dummies and constant not reported. Robust standard errors, clustered by MP, in parentheses.

B.3 Robustness checks: First Legislature

As a further robustness check to support the validity of the results obtained in the main regression analysis presented in Chapter 3, I here present an analogous analysis that only considers deputies elected in the First Legislature. This analysis should produce a more direct evidence of a connection between candidates' search for a personal vote and their propensity to propose particularistic legislation once elected. Table B.6 shows robust empirical support for a positive relationship between the search for a personal vote and politicians' propensity to propose particularistic legislation targeted at sectors of the economy represented in their constituency. However, while the coefficient for geographically targeted legislation is positive as expected, it fails to reach statistical significance at the 5% level. While I don't think that this test offsets the validity of my conclusion as to the fact that the search for a personal vote indeed increases a politician's propensity to engage in particularistic policy-making, I acknowledge the need for a cautious framing of my results, which is reflected in the final discussion.

	(1) Geo	(2) Sector Geo	(3) Sector
Personal Vote	13.568 (12.49)	35.741** (16.82)	5.927 (7.99)
Local	-0.906 (0.79)	-2.804*** (1.08)	-0.890** (0.42)
Minister or Undersecretary	-16.842*** (0.72)	-20.390*** (1.08)	-3.030*** (1.16)
North	0.417 (0.69)	-23.368*** (2.39)	-0.366 (0.44)
Center	-20.967*** (3.63)	-21.343*** (1.52)	-3.379*** (0.61)
Bill Proposals	0.394*** (0.14)	0.174 (0.13)	0.610*** (0.09)
Age	0.051 (0.04)	0.085* (0.05)	0.021 (0.02)
Male	-0.551 (1.15)	-7.871*** (2.11)	0.126 (0.65)
PC	0.731 (0.80)	-3.188** (1.57)	0.688 (0.48)
RP	-0.556 (1.48)	0.999 (2.24)	5.496*** (1.71)
PSI	-17.036*** (0.83)	-18.673*** (1.15)	-19.772*** (0.97)
SI	-17.314*** (0.71)	-25.297*** (2.52)	0.587 (0.94)
Lib	-16.877*** (0.71)	-19.959*** (0.95)	-19.219*** (1.27)
Misto	-17.307*** (0.76)	-18.908*** (1.75)	-19.097*** (0.61)
PM	-17.390*** (0.98)	-20.564*** (1.36)	-19.254*** (0.73)
N	532	532	532

* p<0.10, ** p<0.05, *** p<0.010

Table B.6: **The effect of personal vote on MPs' propensity to propose particularistic legislation—First Legislature.** The table reports negative binomial regressions that estimate the effect of an MP's level of personal vote on his propensity to propose particularistic legislation: geographic-targeted legislation—Model 1, and sector-targeted legislation—Model 2 & Model 3. Observations are MPs in a given legislature. Party fixed-effect, dummy for membership in the Christian Democracy party is the reference category. The analysis consider only MPs elected in the First Legislature.

B.4 Goodness of fit tests for Poisson distribution

Poisson regression is one of the viable alternatives to negative binomial regression, when analyzing count data. For the Poisson regression to be a valid option, the dependent count variable should follow a Poisson distribution. In this appendix, I propose goodness of fit tests to demonstrate that the Poisson distribution is, in this case, not a valid option. The statistically significant goodness of fit chi-squared test indicates that the data do not fit the model well. A Poisson regression does not seem to be a valid alternative to analyze these count data.

	Geo	Sector Geo	Sector
Pearson Goodness of Fit =	7876.395	Pearson Goodness of Fit = 6690.214	Pearson Goodness of Fit = 10682.02
Prob > chi ² (5583) =	0.0000	Prob > chi ² (5583) = 0.0000	Prob > chi ² (5583) = 0.0000

Table B.7: **Goodness of fit tests.** The table reports goodness of fit tests for Poisson regression for each of the three models illustrated in Table 3.1.

B.5 Valle d'Aosta

As explained in Section 3.5, MPs running in the Valle d'Aosta district were elected under a different electoral rule, whereby voters could vote for one candidate connected to a party list. Since voters were simultaneously expressing a preference for the party list as well as for the candidate running for that list, it would be unfeasible to detect the level of personal vote amassed by said candidates. I have thus excluded MPs running in the Valle d'Aosta districts from the main analysis. To guarantee transparency and completeness, I also report the results obtained when including deputies elected in the Valle d'Aosta district. As can be seen from Table B.8, the results are analogous from those obtained in the main analysis (see Table 3.1).

	(1) Geo	(2) Sector Geo	(3) Sector
Personal Vote	4.504*** (1.42)	5.958*** (2.04)	0.173 (1.07)
Local	0.047 (0.11)	0.141 (0.15)	-0.070 (0.05)
Minister or Undersecretary	-0.329*** (0.13)	-0.371** (0.18)	-0.334*** (0.06)
North	0.160 (0.11)	0.030 (0.14)	-0.080 (0.06)
Center	0.085 (0.10)	0.143 (0.14)	0.054 (0.06)
Bill Proposals	0.075*** (0.01)	0.063*** (0.01)	0.107*** (0.01)
Age	-0.005 (0.00)	-0.013* (0.01)	-0.006** (0.00)
Male	0.618*** (0.24)	0.703** (0.30)	0.055 (0.11)
EU Federalist	0.174 (0.95)	-24.452*** (0.52)	-1.568* (0.92)
Greens	-1.231 (1.12)	-24.613*** (0.39)	-0.037 (0.32)
Italian Communist Party	0.134 (0.11)	0.043 (0.15)	-0.034 (0.07)
Italian Republican Party	-0.267 (0.32)	0.218 (0.35)	0.062 (0.15)
Italian Social Democratic Party	-0.155 (0.22)	-0.056 (0.30)	0.010 (0.09)
Italian Social Movement	0.085 (0.18)	0.491** (0.24)	-0.105 (0.11)
Italian Socialist Party	-0.006 (0.13)	-0.063 (0.18)	-0.030 (0.08)
Left wing	-0.763 (0.49)	-0.526 (0.49)	0.149 (0.14)
Liberal	-0.102 (0.20)	-0.167 (0.31)	-0.125 (0.12)
Misto	-0.828** (0.41)	-1.663** (0.69)	-0.951*** (0.23)
Misto Regional Leagues	0.586 (0.43)	-0.029 (0.78)	-0.905* (0.53)
Monarchic Party	-1.362*** (0.44)	-1.182* (0.63)	-0.131 (0.19)
Radical Party	-25.376*** (0.31)	-23.934*** (0.33)	-0.488 (0.30)
2 Terms	-0.077 (0.08)	-0.094 (0.12)	0.132*** (0.04)
3 Terms	-0.109 (0.11)	-0.145 (0.16)	0.121** (0.06)
4 Terms	0.033 (0.13)	0.096 (0.20)	0.134* (0.08)
5 Terms	0.011 (0.19)	0.024 (0.26)	0.080 (0.09)
6 Terms	-0.494** (0.23)	-0.401 (0.33)	-0.107 (0.14)
7 Terms	0.406 (0.30)	0.601 (0.42)	-0.309 (0.24)
8 Terms	-0.751 (0.62)	-0.541 (1.01)	-0.629*** (0.22)
9 Terms	-0.276 (0.54)	-0.772 (0.70)	-0.606** (0.30)
10 Terms	-0.861 (0.97)	-20.549*** (0.43)	-0.358 (0.51)
N	5774	5774	5774

* p<0.10, ** p<0.05, *** p<0.01

Table B.8: **The effect of personal vote on MPs' propensity to propose particularistic legislation—Valle d'Aosta deputies included.** The table reports negative binomial regressions that estimate the effect of an MP level of personal vote on his propensity to propose particularistic legislation: geographically-targeted legislation—Model 1—and sector-targeted legislation—Model 2 & 3. Observations are MPs in a given legislature. Legislative dummies and constant are not reported. Robust standard errors, clustered by MP, in parentheses.

B.6 Robustness checks with fraclogit regressions

We may have valid theoretical reasons for operationalizing the dependent variable of Chapter 3 in the form of a fraction. Indeed, this would directly capture the proportion of particularistic bills proposed by each deputy, without the need to control for the total number of bills that she proposes. However, I have chosen to operationalize the dependent variable as a count for very compelling empirical reasons. Indeed, some of the MPs in my sample do not propose legislation at all. By using a fraction as dependent variable, I would have to exclude these MPs from the analysis. This would most likely produce a biased analysis of the electoral incentives to propose particularistic legislation, as it would simply delete a substantive number of observations from my analysis without a valid theoretical and/or methodological reason. Based on this, I have opted for operationalizing the dependent variable in the form of a count, in the main analysis. However, for reasons of transparency and thoroughness, I include in this appendix an analysis with the dependent variable in the form of a fraction. The results confirm the positive and statistically significant effect of the personal vote on deputies' propensity to propose particularistic legislation directed to a geographic constituency.

	(1)	(2)	(3)
	Geo	Sector Geo	Sector
Personal Vote	11.034*** (3.04)	15.942*** (4.41)	2.352 (1.69)
Local	0.077 (0.12)	0.292 (0.18)	-0.112 (0.07)
Minister or Undersecretary	-0.070 (0.17)	-0.134 (0.24)	-0.015 (0.09)
North	0.112 (0.13)	-0.189 (0.19)	-0.063 (0.07)
Center	0.005 (0.14)	-0.162 (0.20)	-0.023 (0.08)
Age	0.004 (0.01)	-0.004 (0.01)	-0.002 (0.00)
Male	0.764*** (0.24)	0.866** (0.35)	0.161 (0.14)
EU Federalist	0.674 (1.59)	-40.058*** (2.31)	-1.540* (0.88)
Greens	-0.582 (1.02)	-40.465*** (1.48)	-0.270 (0.57)
Italian Communist Party	0.616*** (0.14)	0.661*** (0.20)	0.535*** (0.08)
Italian Republican Party	-0.453 (0.44)	0.482 (0.64)	0.146 (0.24)
Italian Social Democratic Party	-0.173 (0.27)	-0.029 (0.39)	0.005 (0.15)
Italian Social Movement	-0.200 (0.23)	0.268 (0.34)	-0.258** (0.13)
Italian Socialist Party	0.203 (0.17)	0.067 (0.25)	-0.058 (0.10)
Left wing	-1.420*** (0.43)	-0.781 (0.63)	0.407* (0.24)
Liberal	-0.149 (0.30)	-0.486 (0.44)	-0.355** (0.17)
Misto	-0.012 (0.46)	-1.139* (0.67)	-0.997*** (0.25)
Misto Regional Leagues	0.126 (0.81)	-0.540 (1.17)	-1.759*** (0.45)
Monarchic Party	-2.370*** (0.56)	-2.053** (0.81)	-0.212 (0.31)
Radical Party	-20.450*** (0.93)	-39.871*** (1.35)	-0.404 (0.51)
2 Terms	-0.239* (0.13)	-0.251 (0.19)	0.049 (0.07)
3 Terms	-0.428*** (0.17)	-0.513** (0.24)	-0.002 (0.09)
4 Terms	-0.098 (0.21)	-0.224 (0.31)	0.027 (0.12)
5 Terms	-0.149 (0.27)	-0.255 (0.40)	0.142 (0.15)
6 Terms	-0.827** (0.36)	-0.544 (0.52)	-0.166 (0.20)
7 Terms	0.231 (0.62)	0.201 (0.90)	-0.349 (0.35)
8 Terms	-0.687 (0.72)	-0.762 (1.04)	-0.348 (0.40)
9 Terms	-0.331 (1.15)	-2.775* (1.67)	-0.770 (0.64)
10 Terms	-0.219 (1.44)	-41.507*** (2.08)	-0.071 (0.80)
N	4010	4010	4010

* p<0.10, ** p<0.05, *** p<0.010

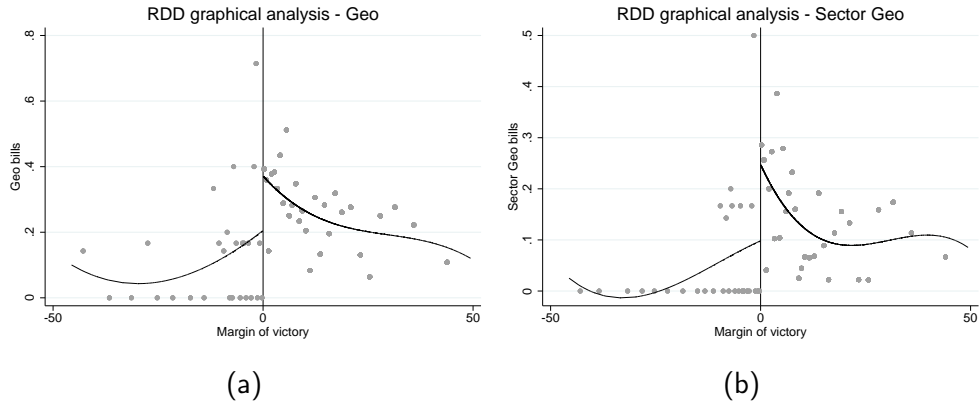
Table B.9: **The effect of the personal vote on MPs' propensity to propose particularistic legislation—Dependent variable in fractional form.** The table proposes three fraclogit regressions that test the effect of the personal vote on the fraction of particularistic bills proposed by each deputy over the total amount of bills proposed that she proposes.

C Appendix to Chapter 4

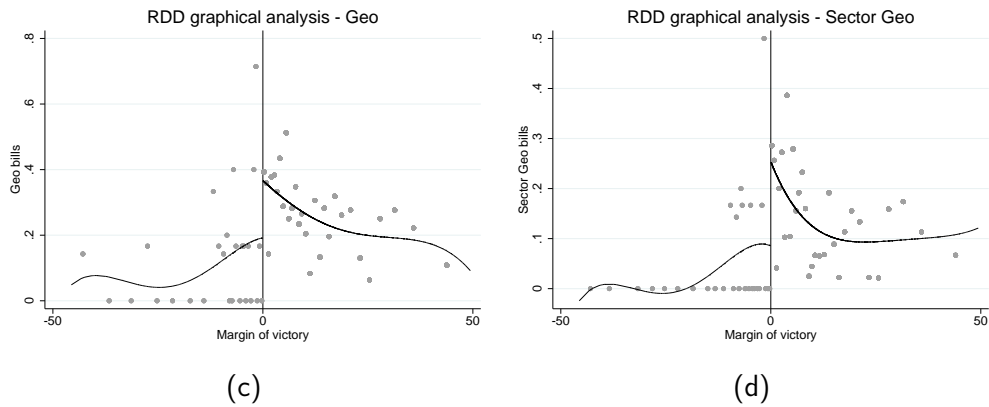
C.1 RDD Analysis - Complete sample - Robustness checks

Figure C.1 reports RDD plots for geographically (panels a,c,e) and sector-targeted (panel b,d and f) legislation. The plots show that the positive discontinuity detected in Section 4.7.1 is robust across across third (panel a and b), fourth (panel c and d), and fifth order polynomials (panel e and f).

Third-order polynomials



Fourth-order polynomials



Fifth-order polynomials

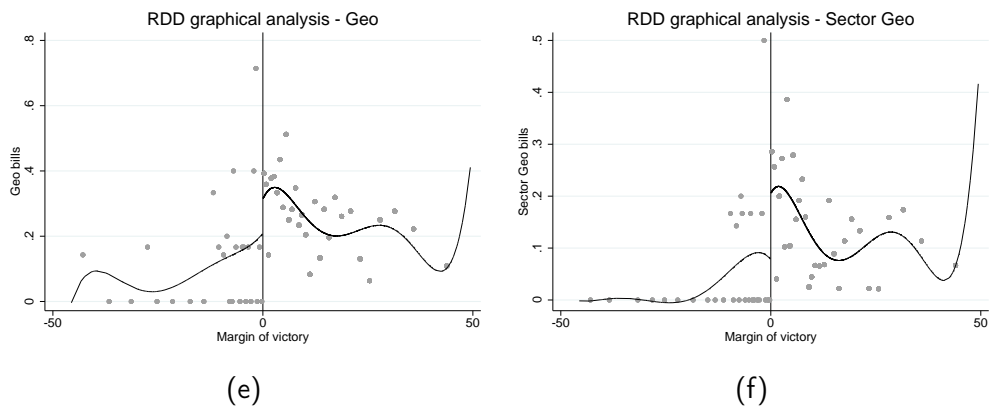
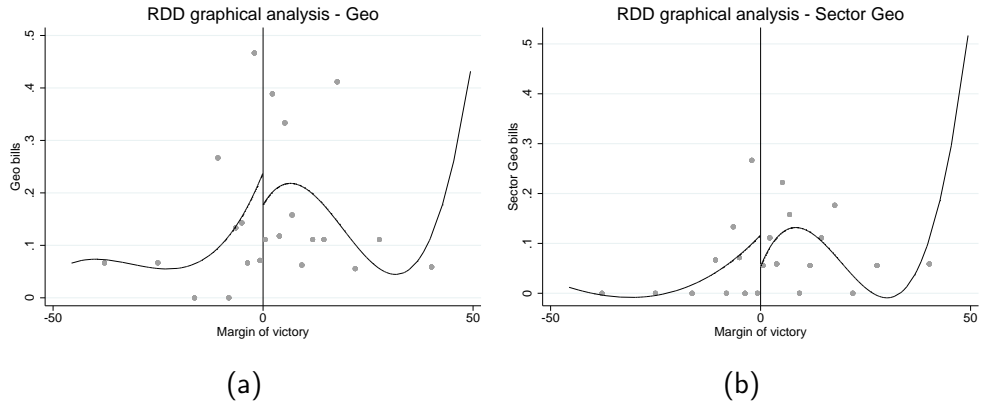


Figure C.1: **RDD Analysis - full sample**. The figure shows RDD plots for particularistic legislation. The dots represent local sample means of the number of particularistic bills proposed by each MP, while the solid line is a third-order (panel a and b), a fourth-order polynomial (panel c and d) or a fifth order (panel e and f) polynomial fit. Bins are non-overlapping partitions all containing the same number of observations. The total number of bins has been determined using the mimicking variance method.

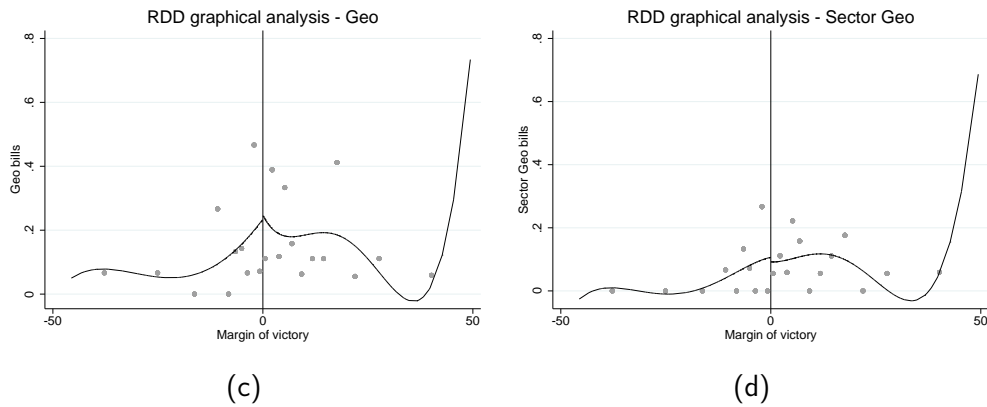
C.2 Electoral incentives - Study group - Robustness checks

Figure C.2 reports RDD plots for geographically (panel a, c and e) and sector-targeted (panel b, d and f) legislation. The plots show that the absence of a relevant discontinuity detected in Section 4.7.4 is robust across third (panel a and b), fourth (panel c and d), and fifth order polynomials (panel e and f).

Third-order polynomials



Fourth-order polynomials



Fifth-order polynomials

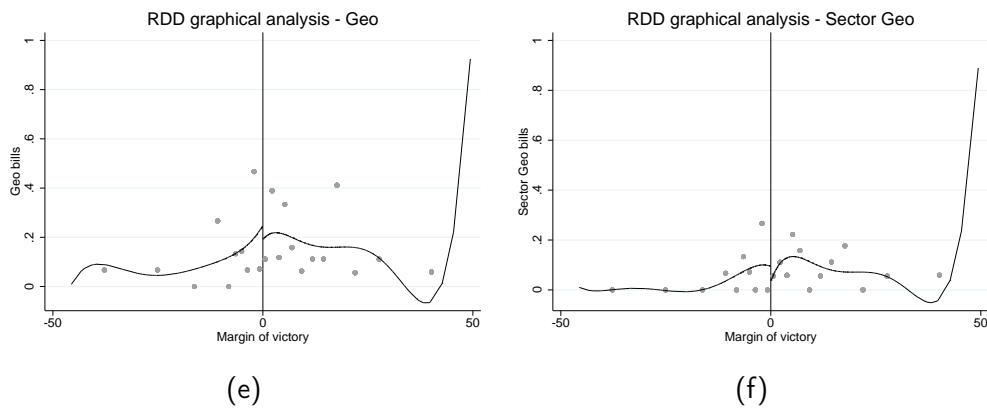


Figure C.2: **RDD Analysis - study group.** The figure shows RDD plots for particularistic legislation. The dots represent local sample means of the number of particularistic bills proposed by each MP, while the solid line is a third-order (panel a and b), a fourth-order polynomial (panel c and d) or a fifth order (panel e and f) polynomial fit. Bins are non-overlapping partitions all containing the same number of observations. The total number of bins has been determined using the mimicking variance method.

C.3 Local linear regression

This appendix reports local linear regressions (LLR) that estimate the causal effect of the treatment “being elected in the majoritarian tier” as opposed to “being elected in the proportional tier”. Local-linear regressions are widely used in studies that perform RDD analysis (see Dunning 2012, p. 128). However, opinions on the validity of LLR estimators are mixed. Some argue that, since these regressions draw power from observations further from the threshold, they end up estimating a model that is a less credible description of the data generating process (Green *et al.* 2009). Others consider LLR estimators to be a better option when performing RDD analysis (Hahn *et al.* 2001, Imbens & Lemieux 2008). Building on Dunning (2012), I have opted for what I consider to be a more transparent approach, and I have proposed difference of means tests in my analysis (see Section 4.7). For the sake of completeness, in this appendix I propose a LLR analysis. The results are in line with the quasi-experiment in Section 4.7. The local-linear regressions fail to detect any significant effect of the treatment “being elected in the majoritarian tier” on parliamentarians’ propensity to propose particularistic legislation— geographically and sector-targeted.

	Geo Bills 13%	Geo Bills 10%	Geo Bills 5%	Geo Bills 3%	Sector Geo Bills 13%	Sector Geo Bills 10%	Sector Geo Bills 5%	Sector Geo Bills 3%
Elected in majoritarian tier	0.0439 (0.155)	-0.00976 (0.167)	-0.0331 (0.206)	-0.123 (0.170)	-0.00398 (0.0860)	-0.00179 (0.0945)	-0.0400 (0.114)	-0.0347 (0.103)
Observations	226	196	111	66	226	196	111	66
Majoritarian	122	104	57	35	122	104	57	35
Proportional	104	92	54	31	104	92	54	31

errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Table C.1: **Local linear regressions.** The table reports the results of a local-linear regression estimating the effect of the treatment “being elected in the majoritarian tier”, on candidates’ propensity to propose geographically-targeted legislation. Results are reported for all the relevant bandwidths: 13%, 10%, 5% and 2%.

C.4 Analysis of the 12th, 13th and 14th legislature

This appendix reports difference of means tests that compare the average number of particularistic bills proposed by dual MPs elected in the majoritarian tier to the average number of particularistic bills proposed by dual MPs elected in the proportional tier. The analysis is analogous to that of Section 4.7, but it is performed separately for each legislature. Section C.4.1 reports t-tests for the 12th legislature, Section C.4.2 for the 13th, and Section C.4.3 for the 14th legislature. In each legislative term, t-tests fail to detect any significant difference, in the number of particularistic bill proposals, between parliamentarians elected in the majoritarian tier and parliamentarians elected in the proportional tier.

C.4.1 12th Legislature

	Jump at the threshold 13% bandwidth	Jump at the threshold 10% bandwidth	Jump at the threshold 5% bandwidth	Jump at the threshold 3% bandwidth
Geo Bills	0.0923 (0.151)	0.127 (0.163)	-0.0195 (0.114)	0.100 (0.131)
Sector Geo Bills	0.0610 (0.147)	0.0899 (0.160)	-0.0909 (0.0801)	0 (0)
Observations	53	48	25	16
Majoritarian	32	27	14	10
Proportional	21	21	11	6

Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Table C.2: **RDD Analysis - 12th legislature.** The table reports the results of t-tests that compare the average number of particularistic bills proposed by dual MPs elected in the majoritarian tier—treatment group, to the average number of particularistic bills proposed by dual MPs elected in the proportional tier—control group. Results are reported for all the relevant bandwidths: 13%, 10%, 5% and 2%. The analysis includes only MPs elected in the 12th legislature.

C.4.2 13th Legislature

	Jump at the threshold 13% bandwidth	Jump at the threshold 10% bandwidth	Jump at the threshold 5% bandwidth	Jump at the threshold 3% bandwidth
Geo Bills	0.109 (0.0944)	0.112 (0.0980)	0.0201 (0.108)	0.0476 (0.143)
Sector Geo Bills	0.0439 (0.0648)	0.0311 (0.0724)	-0.0334 (0.0699)	-0.111 (0.0867)
Observations	95	81	49	32
Majoritarian	47	39	23	14
Proportional	48	42	26	18

Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Table C.3: **RDD Analysis - 13th legislature.** The table reports the results of t-tests that compare the average number of particularistic bills proposed by dual MPs elected in the majoritarian tier—treatment group, to the average number of particularistic bills proposed by dual MPs elected in the proportional tier—control group. Results are reported for all the relevant bandwidths: 13%, 10%, 5% and 2%. The analysis includes only MPs elected in the 13th legislature.

C.4.3 14th Legislature

	Jump at the threshold 13% bandwidth	Jump at the threshold 10% bandwidth	Jump at the threshold 5% bandwidth	Jump at the threshold 3% bandwidth
Geo Bills	0.0285 (0.226)	0.0725 (0.251)	0.282 (0.486)	0.200 (0.921)
Sector Geo Bills	0.0270 (0.120)	0.0124 (0.141)	0.179 (0.269)	0.100 (0.522)
Observations	52	44	22	11
Majoritarian	23	21	9	6
Proportional	29	23	13	5

Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Table C.4: **RDD Analysis - 14th legislature.** The table reports the results of t-tests that compare the average number of particularistic bills proposed by dual MPs elected in the majoritarian tier—treatment group, to the average number of particularistic bills proposed by dual MPs elected in the proportional tier—control group. Results are reported for all the relevant bandwidths: 13%, 10%, 5% and 2%. The analysis includes only MPs elected in the 14th legislature.

C.5 Robustness checks

This appendix reports robustness checks for the higher presence of ministers in the majoritarian tier. Ministers, who are engaged with government business, usually have less time to draw up bill proposals. Can this act as a confounding factor in the RDD analysis presented in Section 4.7? More precisely, if ministers turn out to be overly represented in the majoritarian tier, and if they are actually less likely to propose legislation with respect to all the other MPs, they could average down the number of particularistic bills proposed in the treatment group. If that was the case, the results of a non significant difference between the number of particularistic bills proposed by MPs in the majoritarian tier, and the number of particularistic bills proposed by MPs in the proportional tier, could be driven by the predominance of ministers in the majoritarian tier. Table C.5 (panel a) reports z-tests that investigate for the presence of a higher proportion of

ministers in the majoritarian tier with respect to the proportional tier. The results show that there is a statistically significant higher proportion of ministers in the majoritarian tier. According to these results, the predominance of ministers in the majoritarian tier could act as a confounding factor. What matters, however, is if ministers are actually less willing to propose particularistic legislation with respect to parliamentarians that did not receive a government appointment.

Table C.5 (panel b) provide the results of t-tests that compare the mean number of particularistic bills proposed by ministers to the mean number of particularistic bills proposed by parliamentarians who did not receive a government appointment. The tests fail to find any statistically significant difference. Notwithstanding the fact that ministers are usually said to propose less legislation with respect to parliamentarians without a government appointment, they do not appear less willing to propose particularistic legislation, at least in the study group employed in this analysis. It thus seems unlikely that the higher presence of ministers in the majoritarian tier could act as a confounding factor and bias the results of the quasi-experiment.

Robustness checks - Ministers

		Ministers	
	Difference in proportions Proportional - Majoritarian	Geo	0.187 (0.162)
Minister	-0.0805** (0.0276)	Sector Geo	0.0935 (0.109)
Observations	226	Observations	226
Majoritarian	104	Majoritarian	104
Proportional	122	Proportional	122
Standard errors in parentheses		Standard errors in parentheses	
+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$		+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$	
(a)		(b)	

Table C.5: **(a) Tests for proportions - Ministers.** The table reports the results of z-tests that investigate for the presence of a higher proportion of ministers in the majoritarian tier.

(b) Difference in means tests - Ministers. The table reports the results of t-tests that compare the average number of particularistic bills proposed by dual MPs who have received a government appointment to the average number of particularistic bills proposed by MP who did not receive a government appointment.

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