FRAGMENTED SOLIDARITY

Distributive Politics in Multi-tiered Systems

Pablo Beramendi
Department of Political Science
Maxwell School of Syracuse University

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*****COMMENTS WELCOME****

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Chapter 1
Fragmented Solidarity: an Introduction

Under what conditions do countries decentralize fiscal and social policy? And what are the distributive consequences of their choices? What is the relationship between decentralized political institutions and income inequality? These long-standing questions have regained salience as the institutional structure of nations changes over time. The arena for conflicts about who gets what is in flux across advanced industrial societies as conflicts about the allocation of fiscal powers haunt countries worldwide. A good deal of these conflicts currently unfold in Europe. Ninety per cent of the members of the Parliament of Catalonia (Spain) have just voted to radically strengthen federal fiscal autonomy in Spain. In addition, the Basque Nationalists demand the break-up of the common Social Security system. Further east, the Italian Parliament has passed a major constitutional reform towards the full federalization of Italy. The reform introduces fiscal federalism and grants regions important spending powers in health, education and local services. In Belgium, the interplay between federalism and the welfare state absorbs a good deal of the political agenda, while Germans continue to struggle with the adjustment of their fiscal constitution after the Reunification. While redesigning their own national institutions, these European countries have been long engaged, together with many others, in a classical process of federalization, that is to say in a process of political integration through a supranational set of institutions. In the aftermath of the French rejection of the proposal for a Constitution for Europe, this process appears to have stagnated, trapped among (often diametrically opposed) national fears. British Euroskeptics dread a potentially unrestrained European Leviathan, whereas a good deal of the French left interpreted the project for a
European constitution as a masked attempt to allow the invisible hand to undo the main features of their social model. Likewise, supporters of the Scandinavian welfare state are skeptical of full integration in an enlarged Europe. Yet the process of integration continues, as reflected by the agreement in extremis about the 2007-2013 budget cycle.

Regardless of the many differences existing between these political realities, this book argues, they have one basic feature in common. In all these political entities a common economic space coexists with fragmented political authority. As a result, the degree of fiscal policy centralization and its distributive consequences occupy the centre stage among political conflicts. This is by no means a new issue. In fact, the distribution of tasks and burdens within political unions is a perennial one, as reflected in the Athenian League, the medieval covenants, the contract between Fernando de Aragon and Isabel de Castilla in 1474 (*Concordia de Segovia*), the Holy Roman Empire, or Montesquieu’s federal republic. While the problem of federalism is as old as the Athenian league and medieval covenants, the admixture of federalism with the modern welfare state is a completely new phenomenon.

The increasing preeminence among a state’s functions of the provision of social insurance and redistribution for its citizens forces federations and political unions in general to manage the coexistence of two different motives. Decentralized political institutions emerge for the protection of the autonomy of heterogeneous units, whereas redistribution concerns public policy intervention to prevent the spread of inequality. Across space and time, since the dawn of the welfare state in the 1930s, existing federations and aspiring federations must opt for different levels of social and fiscal policy centralization. In so doing they are really making a decision about who should have the capacity to redistribute. Herein lies a fundamental dilemma for fiscal unions: how to strike a balance between territorial autonomy and social citizenship, how to make
compatible the political protection of territorial differences and the public provision of social welfare to individuals through insurance and redistribution. The revival of distributive conflicts in multi-tiered systems associated with the processes of European integration and different decentralization experiences around the world have brought this dilemma back to the forefront of political analysis.

Before I continue, let me clarify briefly a number of terms that will be repeatedly used in this book. **Multi-tiered systems** are systems in which a common economic space is shared by several levels of government. They include confederations, all the federations, former unitary countries undergoing processes of political decentralization. More specifically, I shall refer to **federalism** as a constitutionalized arrangement of power between a strong central government and strong subnational units. As it will become clear later in this chapter and throughout the book, I do not treat federalism and decentralization as the same phenomenon. Federations can have very different levels of political and fiscal decentralization (both across countries and over time) and, indeed, varying patterns of fragmentation of solidarity. In fact, the degree of variation among federations in terms of the fragmentation of solidarity is a central puzzle to this project. **In turn, what does “fragmentation of solidarity” refer to?** Generally speaking, the fiscal structure of any multitiered system has two dimensions: **vertical redistribution** (among individuals, through taxes and transfers) and **horizontal redistribution** (among territories, through a much more complex set of instruments). As we shall see later, one cannot be separated from the other while analyzing the fiscal structure of federations. However, strictly speaking, the term “fragmentation of solidarity” refers primarily to the decentralization of the political authority over taxes and transfers, that is to the decentralization across space and time of the policy tools used to provide vertical fiscal redistribution among individuals. I refer to fiscal decentralization
in similar terms. Thus, throughout the book fiscal decentralization and fragmented solidarity are used interchangeably.¹

1.1. Inequality: the dark side of federalism and decentralization?

The aforementioned historical developments parallel an ongoing increase of scholarly attention to the origins and effects of political institutions on a vast array of economic, political and social outcomes (Persson and Tabellini 2003; Iversen 2006), including a blooming literature on federalism and macroeconomic outcomes.² However, our understanding of distributive politics within multi-tiered systems has not kept pace with events. While the political economy of federalism has made considerable advances over the last fifteen years, the analysis of its interplay with the politics of redistribution and inequality remains a largely under-explored territory. Simply put, the way the question has been addressed to this point in the literature has been guided by a rather limited view of how political institutions and social outcomes condition one another.

The dominant view so far is that decentralized political institutions are associated with a lower equilibrium level of redistribution and hence higher levels of income inequality (Wildavsky 1984: 55-73). Indeed, this idea emerges as a result of rather distant streams of scholarship.

During the years of pluralist hegemony, the comparative study of political institutions was not at the top of the research agenda in comparative politics. Indeed, Riker himself declared that insofar as institutions were a mere reflection of the underlying preferences in society, there was little reason to expect meaningful effects of federalism on public policy. Public economists

¹ [this paragraph should be expanded into a stand alone, including descriptive chart, section to be integrated with the discussion in 1.2]

² For comprehensive reviews of this literature, see Beramendi (forthcoming), Rodden (2006) and Wibbels (2006).
felt differently, and in their quest to establish the optimal design of the public sector proceeded to fill the gap.

Welfare economics and Public Choice theory, while anchored in opposite assumptions, reinvigorated the federal illusion that characterized classical political theory. Welfare economists were concerned mostly with market failures and the problem of externalities. In sharp contrast, public choice theorists were concerned with public sector failures and how to control the predatory, rent-seeking behavior of public officials. And yet they came to similar conclusions about the economic benefits of decentralized political and fiscal institutions: they breed better democracy, better bureaucracies and better markets. While the relationship between federalism and democracy is not directly relevant to this book, the reasons why public economists have seen in federalism a source of bureaucratic and economic efficiency are.

Welfare economists saw federalism and decentralization as particularly useful to balance the need to attend to both to heterogeneous local preferences and cross-jurisdictional externalities (Musgrave 1997; Gramlich 1973, 1987; Oates 1972, 1987, 1991, 1999; Wildasin 1991). Local provision of public goods copes better with informational asymmetries, preference revelation and issues of adequacy between policy instruments and people’s needs. Rulers, assumed to be welfare maximizers, benefit from more frequent and deeper interactions with the ruled. In turn, a central ruler is supposed to achieve more efficient outcomes in those policy realms affected by cross-jurisdictional externalities.

In contrast, public choice theorists approach politics from radically different premises. Rather than welfare maximizers, incumbents and administrators are seen as predators, concerned almost exclusively with the maximization of their own rents. In this context federalism is

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3 The federal illusion has a long pedigree in political theory and economics. For a more detailed review of its classical and modern sources, see Rodden (forthcoming).
attractive because it provides an institutional arena for different levels of government to interact strategically in their desire to maximize political returns and minimize costs. Deeply anchored in these tenets, the literature on *market preserving federalism* provides a prominent example of this line of reasoning (Buchanan 1970, 1995: 19-27; Inman and Rubinfield 1997: 73-105; Qian and Weingast 1997: 83-92; Weingast 1993: 286-311;1995:1-31; Weingast et al. 1995: 50-81). Put briefly, federalism is market friendly because it restraints the predatory nature of the public sector, mainly via two mechanisms. First, under federalism bureaucracies compete to fulfill the needs and match the tastes of a pool of voters who can otherwise *vote with their feet*. Second, federalism sets incumbents at different levels of government to compete to attract economic factors. As a result, the interplay between mobility and the behavior of subnational incumbents becomes the key issue. Both welfare economists and public choice theorists see in the mobility of economic factors an important engine behind the benefits of federalism, though, again, from rather different angles. For welfare economists, as illustrated by the seminal work by Tiebout (1956), the mobility of citizens and factors is for the most part a mechanism of preference revelation for incumbents who are otherwise willing to help.4 Tiebout’s work, even though based on rather extreme assumptions, provided a benchmark case on the basis of which public choice theorists offered a very different take on the interplay between federalism, factor mobility and

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4 Provided that the demand for local public services is income elastic, that these services are financed by income taxes (Oates 1972, 1991) and that there is perfect mobility, Tiebout’s model predicts that communities become homogeneous in income and heterogeneous in capacities. The basic setup of Tiebout’s model is as follows: consumer-voters are fully mobile and will move to that community where their preference patterns are best satisfied; consumer-voters are assumed to have full knowledge of differences among revenue and expenditure patterns and to react to these differences; there are a large number of communities in which the consumer-voters may choose to live; restrictions due to employment opportunities are not considered; the public services provided exhibit no external economies of [or?] diseconomies between communities; there is an optimal community size, which is defined as “the number of residents for which the bundle of services can be produced at the lower average cost” (p. 569) and finally, it is assumed that communities below the optimum size seek to attract new residents to lower average cost. In turn, the process and policy implications are as follows: by voting with their feet individuals reveal their true preferences, reducing the problem of information about tastes faced by the government, and promote an efficient allocation of resources in a fashion close to the way markets provide private goods. At the same time individuals engage themselves in a process of sorting out across jurisdictions according to their preferences for different local public goods.
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public sector efficiency.\(^5\) If capital and labor can exercise *exit* as a behavioral response to distortionary policies, federalism brings up an undernourished Leviathan. Moreover, decentralized redistribution operates as a welfare magnet on dependent populations. By moving towards those areas providing more generous benefits, the poor increase the cost of regional redistribution to unsustainable levels. As a result, regional governments must adjust their policy downwards to prevent the financial burden associated with this induced migration. To put it with the widely read words of Prud’homme, “decentralized redistribution is self-defeating” (1995: 202). In sum, the interplay between federalism and factor mobility promotes economic efficiency because the reduction in the size of government is essentially reflected in lower levels of distortionary redistribution. While this view is largely normative, it bears empirical implications about the relationship between federalism, decentralization and redistribution that clearly overlap with the empirical work produced by students of the welfare state.\(^6\)

Indeed, a widely shared understanding among welfare state scholars is that the fragmentation of political power reduces the size of the welfare state and therefore limits the scope of redistribution. Federalism contributes to the fragmentation of power in that it institutionalizes a system of veto points that enable defenders of specific territorial interests to object, and eventually block, nationwide redistributive endeavors.\(^7\) This argument is primarily anchored in two lines of work within the welfare state literature, namely historical case studies of the development of the welfare state in the United States and quantitative cross-national

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\(^6\) This overlap ends, however, when it comes to assessing the relation between decentralization and inequality. While in the comparative political economy of the welfare state it is implicitly assumed that less redistribution implies more income inequality, the seconders of the different versions of the market preserving theory argue that, in the medium-long term, by facilitating a non-distorted functioning of the market, federalism will be associated with enhanced economic growth and, according to the Kuznets’s curve, with an increasingly equal distribution of income (the second half of the inverted U).

\(^7\) For data on the correlation between federalism and fiscal decentralization see Lane and Ersson (2000:77-102).
comparisons. A similar logic guides many analyses of welfare reform in North American federations, where scholars tend to interpret proposals in favor of decentralization as masked efforts to curtail the welfare state.  

The preeminence of this view presents policy makers and institutional designers with a dilemma. Does decentralization necessarily imply accepting a new wave of institutionally induced inequalities? If there is a trade-off between political autonomy and social solidarity, how is it that politicians all around the world, including North American liberals and European socialists, are promoting the creation of federal structures? Has the European left gone mad by enthusiastically endorsing a process of political integration that, according to these theories, sets the stage for drastic cuts in European welfare systems?

Faced with these questions, European social democrats will quickly point out to a number of experiences that do not seem to be consistent with either the desires or the predictions underpinning the consensus view. Germany is the most obvious example of a large and highly redistributive welfare state being perfectly compatible with federalism and decentralization (Manow 2005). But there are others. In Belgium, thirteen years after the country’s constitution became formally federal, a common social security system remains in place, albeit highly contested. On the other side of the Atlantic, Canada is often mentioned as one case in which federalism and a well developed social union have been able to coexist rather well. As suggested

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by a series of recent comparative historical studies (Linz and Stepan 2000; Lindert 2003; Obinger, Leibfried, and Castles 2005), there is a great deal of variation among established federations when it comes to both the development and the retrenchment of the welfare state. Yet it is probably the Spanish experience that is most clearly at odds with the predictions emerging from the consensus view. Over the last two decades of the twentieth century the Spanish welfare state has expanded rapidly and significantly at the same time that the state structure has undergone a far reaching process of political decentralization.

Figure 1 offers additional evidence of the gap between the standard view of the relationship between federalism, fiscal decentralization and inequality and the observable reality. The x axis ranks countries according to their level of fiscal decentralization, whereas the y axis ranks countries according to their levels of disposable household income inequality (Gini coefficients). All countries included are federations.

**Figure 1**

![Figure 1](image)
A number of points follow from figure 1. First, throughout the period 1980-2000 advanced industrial federations present a great deal of variation in the levels of inequality of disposable income. Second, the United States, the case on which the conventional view is largely based, is indeed the most prominent example of a positive association between fiscal decentralization and income inequality. Yet it clearly seems to be more the exception than the rule. Moreover, the variation would be even larger if other cases of multi-tiered systems were to be included, most notably the European Union as an emerging federation.

In taking all these experiences together and moving beyond particular cases where the conventional wisdom better fits history, comparative social scientists are left with a set of interrelated puzzles that are at the heart of this book. Why is it that multi-tiered systems lead to less redistribution and more inequality in some cases and not in others? Why are some systems of public insurance and redistribution more decentralized than others in the first place? More generally, how does the relationship between federalism and fiscal decentralization, on the one hand, and redistribution and inequality, on the other, work? What does it tell us about the interplay between political institutions and social outcomes? Providing answers to these questions, thereby facilitating a better understanding of distributive politics in multi-tiered systems, is the main task of this book.

1.2. The Argument

Over the last fifteen years, political scientists and economists have joined strengths to demonstrate that when it comes to the political and economic consequences of federalism, the evil is in the specifics of the institutional design and its interaction with the surrounding economic and social circumstances. Results have proved particularly fruitful in the study of the
macroeconomic consequences of federalism and fiscal decentralization (Rodden and Wibbels 2002; Wibbels 2005; Rodden 2006; Diaz-Cayeros 2006; Gibson 2004). Thanks to this scholarly effort, today’s analyses of the economic consequences of federalism necessarily include more qualifications and institutional conditionalities, thereby leaving little room for straight answers.

This reflects a good deal of progress in a field that has been able to part ways with highly stylized, mostly normative models of federalism to engage in a positive reconsideration of how federations actually work. In developing a new approach to the dynamics of distributive politics in multi-tiered systems, this book ties with and contributes to an emerging field in which scholarly attention has been almost exclusively devoted to concerns about economic development and macroeconomic efficiency.

By shifting attention to income redistribution and inequality in multi-tiered systems, this book also engages with a new stream of literature that points to the endogenous character of federal institutions and decentralization (Persson and Tabellini 2000; Bolton and Roland 1997; Alesina and Spolaore 2003). This book shares with this literature the fundamental premise that to understand the effects of institutions, one should recognize that economic outcomes and political institutions may be endogenous. Indeed this premise has permeated comparative political economy more generally, as illustrated by Persson and Tabellini’s recent empirical assessment of the economic effects of constitutions (2003: 277). In line with this literature and unlike previous political science approaches to the relationship between federalism, decentralization and the welfare state, this book works on the premise that a full understanding of the relationship between political institutions and social outcomes requires taking a few steps back, and analyzing the role that the outcome of interest itself might have had in the very process of institutional selection. In fact, what lies behind the inability of conventional approaches to deal
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with the variation in observable outcomes is precisely their failure to take such a step, as reflected in the dominant assumption that federalism and decentralization exogenously work to reduce redistribution and increase inequalities.

Exogeneity implies the assumption of unidirectional causality: any positive correlation between decentralization and inequality is interpreted as the former causing the latter.\(^\text{10}\) By doing so, theories underpinning the notion of a trade off between decentralization and equality assume away the possibilities of (a) a third factor related both to decentralization and inequality selecting them and therefore generating the correlation and/or (b) the possibility of decentralization being itself a function of inequality, as part of a more complex long term relationship. At first sight, especially in light of recent contributions, there is no reason to regard either of these two possibilities as implausible. History matters and institutions result from both efficiency reasons and specific distributive conflicts (Williamson 1985). Hence, if the conditions under which a particular institution emerges (in this case decentralization) are not independent from the conditions generating the outcome we are trying to relate it to (in our case, income inequality), then any account of the relationship between them ought to deal with a more complex set of causal relationships. In sharp contrast with previous arguments, one of the core findings of this book is indeed that the causal process behind observable empirical correlations between decentralization and income inequality cannot simply be reduced to an exogenous effect of the former on the latter. Under specific circumstances, the causal arrow is actually reversed.

To precisely identify these circumstances this book presents several innovations to the literature on endogenous federalism and decentralization. First, I develop a more detailed analysis of how specific dimensions of the distribution of income (income levels, income risks

\(^{10}\) This is for instance the logic underlying the conclusions Huber, Ragin and Stephens (1993: 711-750) and Huber and Stephens (2001) draw upon their index of constitutional structure.
associated to asset specificity, share of dependent population and external shocks) affect the formation of preferences regarding fiscal policy integration. Second, I part ways with the standard, and rather naïve assumptions concerning factor mobility, and offer a more realistic approach to the interplay between selective patterns of mobility and the dynamics of distributive politics in complex unions. Third, unlike economic models devoid of political and institutional complexities, I purposefully avoid any “neo-structuralist” (Iversen 2006) temptation by adding to the analysis a substantive political and institutional dimension. The variation in distributive outcomes in multi-tiered systems cannot be explained by paying almost exclusive attention to the economic origins of preferences, and without reference to the institutional contexts in which the different preferences compete against each other. The central argument of the book unfolds around three main ideas.

(1) *Conditionality of the distributive effects of decentralization.*

First, decentralization matters for the distribution of income primarily because it activates territorial differences concerning the structure of inequality and the politics of redistribution. By increasing the number of actors with the capacity to develop fiscal policies, decentralization alters the nature of redistributive conflicts. Hence, whatever the impact of decentralization on the distribution of income may be, it is to a large extent a function of the internal structures of inequality within regions and their combination. Contrary to what is conventionally argued, I find that decentralization *per se* does not necessarily lead towards higher levels of income inequality. This result justifies a cautious evaluation of the expected effects and desirability of different institutional designs, and points to specific circumstances in which political autonomy and relative economic equality can coexist.
(2) *Inequality and the process of preference formation*

The formalization of this argument leads to a second theoretical development. If decisions about the territorial allocation of power shape the politics of redistribution, choices about the institutional design are themselves contentions about *who gets what*. To put it more technically, decentralization becomes endogenous in relation to inequality. Preferences about the specific degree of decentralization of redistributive policies are modeled as a function of the scope of risk-sharing between regions, in turn determined by the territorial patterns of inequality. The territorial patterns of inequality are identified as the combination of three elements: (1) differences between regions in terms of income, labor market asset specificity, and size of the dependent population; (2) the scope of interregional mobility; and (3) the presence of external risks.

The first set of elements includes the mechanisms directly linking the structure of inequality and the preferences for fiscal decentralization. In analyzing them, *Fragmented Solidarity* expands our knowledge of the determinants of fiscal decentralization by blending two streams of literature in political economy, namely the literature on endogenous political integration on the one hand and the literature on the relationship between risks and preferences of insurance and redistribution on the other. The argument not only establishes that fiscal decentralization and economic inequality (and the risks/uncertainty associated to it) are jointly endogenous; it also identifies a number of specific mechanisms through which this endogeneity may occur. These include the differences in the demand for public insurance associated with inter-regional differences in the degree of economic specialization, and the differences in the demand for redistribution associated with inter-regional differences in income inequality.
To give a preview, poor regions face a trade-off between the inter-regional income transfers implicit in centralization and their capacity to maintain their preferred policy choice in order to cope with their own specific labor market risks. Indeed, sufficiently high levels of specialization may shape the preferences of relevant actors even up to the point of overcoming the pro-centralization incentives of lower income regions. As a result, a *specialized* poor region may choose to stay on its own in order to protect its capacity to choose how much redistribution is to be provided. On the other hand, in the absence of inter-regional factor mobility, rich regions have no reason to centralize. Relatively richer regions enjoy policy autonomy and have strong incentives to protect their tax bases.

The presence of external shocks and high levels of labor mobility complicates matters as these two factors work in the opposite direction, creating incentives for richer regions to accept policy centralization. Insofar as they affect all sub-national units equally, external shocks pool risks across regions. This, in turn, makes centralized fiscal policy a more attractive solution in that a centralized fiscal system is the only one able to provide insurance against external shocks (Alesina and Perotti 1998). Likewise, higher levels of labor mobility work to increase the levels of fiscal centralization. In developing this latter point, *Fragmented Solidarity* provides a clear alternative to the ways in which conventional economic theories of federalism have understood the interplay between institutions and the behavior of economic factors (capital and labor).

The idea of a *race to the bottom* constraining the growth of government is a popular image that presents incumbents as individuals subject to the constraints imposed by highly mobile economic factors. This argument is based on standard assumptions that include not only a fixed institutional framework, but also perfect, costless mobility, as well as *myopic* actors driven by short term concerns about after tax income. Capital and labor will move to those regions
where taxes are lower, while the dependent population will move, following an identical logic, to those jurisdictions providing the most generous benefits. Yet the races predicted on the basis of these assumptions are very hard to find empirically.\textsuperscript{11} The very existence of federations with largely developed welfare states (such as Canada or Germany) suggests, once again, that standard theoretical approaches fall very short of accounting for the variation existing within decentralized systems. An approach that integrates a more realistic set of assumptions about factor mobility into a theory of endogenous fiscal institutions helps explain why.

Mobility is not an option for everyone. Highly specialized workers find it hard to move outside their industries. Since industries tend to be clustered geographically, labor mobility is inversely related to asset specificity and economic specialization. In turn, not all employers have incentives to exit in response to short-term changes in the level of redistribution (Lucas 1990), nor are all redistributive attempts on the part of regional incumbents doomed to failure. In contrast, those citizens permanently dependent on public transfers, such as low- to middle-income pensioners, are more likely to respond to the welfare magnet, that is to say to the levels of overall generosity in the tax and transfers package. Under certain circumstances, and for specific benefits, this may indeed trigger a race to the bottom (see footnote 9). In other policies, however, the race turns towards the top: when the region of Catalonia (Spain) decided to pass a supplement to the pensions of those resident in Catalonia who had not previously contributed to Social Security, the national government matched the increased nationwide shortly after (Arriba 2000).

\textsuperscript{11} A very illustrative example of this is provided by the conflicting findings on welfare reform in the US. Marl Carl Rom, Paul Peterson and Ken Scheve offer evidence of a re-emergence of a kind of \textit{race to the bottom} among American states during the period 1976-1994, in relation to the substitution for TANF of the AFDC program during Clinton’s recent reforms. According to them, “the welfare guarantee offered to families under the AFDC program by individual states was sensitive to the guarantee offered by their neighbors” (1998: 37). Alternatively Mark Schröder (1995: 183-191), doing research on the same program for the period 1982-1988 and using a similar estimation technique, found that “in almost all models the price elasticity for welfare benefits is small,” even pointing to some cases in which the effects were positive.
Two points are worth noting here. First, with selective patterns of mobility, the magnitude and direction of whatever race states enter becomes a policy-specific, group-specific phenomenon (Volden 2004, 2005). If regional economies are asset-specific, labor mobility is likely to be low, and therefore regional redistributive endeavors are unlikely to be constrained (Boix 2003). Second, and more importantly, mobility itself becomes a key factor in the process of endogenous institutional selection. Large levels of mobility, in particular of workers and long-term dependents, do not operate as an external constraint on the behavior of regional and federal incumbents, as argued, for instance, by market-preserving models of federalism or the race to the bottom metaphor. Instead, I argue, by directly affecting the distribution of income, mobility alters the levels of risk sharing between regions, thereby shaping actors’ preferences about the degree of integration of fiscal policy. In particular, the threat of a large inflow of dependents may lead rich regions to accept a centralized policy regime. High levels of mobility work as a multiplier of social risks across regions, thereby creating political incentives to centralize policy provision. In this sense, mobility operates as a mechanism muting the decentralizing effects of large inter-regional income and labor market disparities, as opposed to a mechanism reinforcing the inegalitarian bias of pre-existing political institutions.

In sum, regional differences in terms of income, labor market risks and size of the dependent population produce more heterogeneous distributions of income. As regional distributions of income become more diverse, so do preferences for fiscal redistribution, thereby working towards more decentralized fiscal structures. In contrast, the presence of external shocks and high levels of labor mobility work in the opposite direction, towards pooling risks across regions by making regional distributions of income more alike, thereby providing incentives to develop a more centralized public insurance system. Thus, if the effects of mobility and external
risks overcome the decentralizing push associated with regional income and labor market disparities, a more centralized fiscal structure is likely to emerge. And vice-versa. As a result, I argue, the degree of centralization of fiscal structures reflects the balance between the different forces shaping regional distributions of income.

Yet this takes us only half way towards a full explanation. To complete the study, the book abandons the realms of economics to return, once again, to the classical domain of political science to analyze under what political and institutional conditions those in favor of a more decentralized system of social insurance get their way as well as the conditions under which these preferences become muted by other factors. This brings us to the third major pillar of the argument, which addresses the transition from particular distributions of preferences as determined by the territorial structure of inequality to the choice of the actual level of decentralization of redistribution.

(3) Institutional Contingencies

In carrying out this task, the third part of the book focuses on the institutional contingencies in the relationship between inequality and fiscal decentralization. The theory is expanded to allow for different initial conditions that are defined by the relative power of national versus regional elites. By focusing on the interplay between the institutional status quo and the changing levels of inter-regional disparities in terms of income inequality, the argument is expanded to account for the formation of coalitions in favor of alternative institutional choices. The institutional status quo establishes the playing field for the distributive conflict inherent in the choice between integrating or decentralizing fiscal policy. Pre-existing institutional conditions discriminate the political leverage of the different actors involved, and alter the
incentives and strategies of political actors. As a result, they shape the conditions for the formation of alternative winning coalitions, ultimately determining who the pivotal player is. Hence, by operating as the mechanism that anchors the class conflict either within or between regions, the institutional status quo mediates the translation of preferences (previously determined by the levels of risk sharing between regions) into choices about the level of decentralization of redistribution.

The fundamental distinction in this effect is between institutional arrangements that constrain the distributive conflict to be an affair between units and institutional arrangements that facilitate the definition of distributive conflicts, at least in part, across units. On the basis of these two ideal types, I show how, given different initial scenarios, a similarly exogenous modification of the levels of risk sharing between regions leads to substantially different institutional, political and distributional outcomes.

Consider first the case of emerging unions, that is to say unions that are formed thorough the consent given by pre-existing sovereign units to a process of political integration. The formation of the United States and the process of European integration provide two examples. In these cases, each pre-existing state or country has the capacity to choose whether it wants to join or opt out. In the early stages of the process, major institutional choices require a broad consensus among all pre-existing units. As a result, qualified majorities or even unanimity are required, which in turn concedes significant veto capacity to each of the units. The absence of electoral competition beyond the unit level and the attendant lack of political organizations cutting across units ensures that the relevant coalitions are those at work within the specific units. This lack of effective political organization beyond the unit level gives local leaders maximum leverage to carry out the mandates of their respective principals. Thus, the protection of unit-
specific interests dominates the political agenda. These political and institutional circumstances facilitate the direct impact of inequality on the politics of institutional choice. Larger inequalities produce larger levels of fiscal decentralization and fragmentation of solidarity. In other words, under these specific political and institutional circumstances, inequalities reproduce themselves by contributing to the selection of institutional arrangements that in turn will protect these inequalities over time.

Existing federations face a different dynamic, in which the impact of territorial inequalities on the institutional design is contingent upon the existing power sharing arrangements among their constituent parts. Two specific dimensions are particularly important: the electoral representation of regional interests in the national arena and the degree of nationalization of the party system. The election, organization and functioning of second chambers, especially those intended for representation of territorial interests, has been a major focus of scholarly attention since the very first generation of theories of federalism (Watts 1999). In turn, the role played by the party system, brought to center stage by the seminal work of Riker, has revived as a major locus of attention in the more recent wave of positive studies of the interplay between federalism and macroeconomic outcomes (Wibbels 2005; Rodden 2006; Diaz-Cayeros 2006).

These two dimensions of the institutional configuration of federations matter because they condition the long-term horizons of regional incumbents, ultimately shaping their political strategy. When Tony Blair, Jacques Chirac or Jose Luis Rodriguez Zapatero recently debated the EU budget, their primary concern was the preservation of the relative position of their nations in the continuum ranging from net contributor to net recipient. Leaving aside the accepted need to reach an agreement to discontinue the institutional deadlock in the union, EU-wide concerns,
such as the proportion of seats to be gained by the Socialists or Conservatives in the coming
elections to the European Parliament, carried very little (if any) weight in their strategies.

Regional incumbents in established federations cannot afford this luxury, as the shadow
of the central (federal) government is far too long. In contrast to the leaders of sovereign nations
in an emerging union, regional incumbents in existing federations must balance their interests as
local leaders against the interests of either the party they represent or the national coalition they
belong to. Not all parties (or types thereof) approach this trade-off in the same way. On the one
hand, those parties that represent regional interests exclusively, such as the nationalist parties of
Galicia, the Basque Country or Catalonia in Spain, the Partit Quebecois in Canada or the Liga
Lombarda in Italy, openly put the interests of their local constituencies at the forefront of their
list of priorities. Although they are still constrained by the national arena, especially if they are
part of a coalition government, their main concern is to achieve and sustain power locally. The
only development, progress or inequality that concerns them is that within the limits of their own
region. On the other hand, national parties in federations approach the balance between local and
national interests from a different perspective: what they do in a particular region may be highly
consequential for their electoral chances at the national level, and vice versa. The reason is
straightforward: national parties build their constituency on the basis of groups that cut across
regional boundaries. As a result, the national leadership of the party keeps an eye on the choices
made by local incumbents, whereas local leaders use their position in the party to steer the
central government’s policies in the “right direction”. In addition, as the recent study by Diaz-
Cayeros nicely shows, the control of career paths by national parties is a powerful device in
monitoring the behavior of local incumbents (Diaz-Cayeros 2006).
Because the degree of vertical integration of the party system in federations is quite diverse, the extent to which regional and national party leaders can monitor and steer each other varies enormously. In turn, an important determinant of the degree of nationalization itself is the system of representation of territorial interests that is in place. Germany and the United States provide two contrasting examples. US Senators are directly elected by the people in a contest resolved by a plurality system. This strengthens the links between incumbents and local constituencies. Senators are re-elected to the extent they deliver personally as much as because of their membership in either the Democratic or the Republican party. Everybody knows their name, and often times public facilities or even research institutes are named after them.

Nothing of the sort occurs in Germany, where senators are first class yet largely anonymous messengers. The Bundesrat is composed of representatives named and sent to Berlin by the regional governments. Members of the regional government themselves often attend the sessions. These regional governments are selected under a proportional representation system, in which national party organizations play a prominent role. Indeed, there is evidence that voters use regional elections to send midterm warning signals to the federal government (Kedar 2005). The declining performance of the SPD in the series of regional elections that preceded the 2005 federal contest, in which Social Democrats performed relatively better than anticipated, provides additional evidence in support of this claim. National party politics permeates regional elections and, ultimately, the very representation of the länder’s interest in the Bundesrat. Clearly, the capacity of the national leadership of either the SPD or the CDU to influence the political decisions of local leaders is much larger than the capacity of the Republican Party to keep its governors and senators on a tight leash. Similarly, US senators enjoy far more autonomy in the representation of the interests of their constituencies than the members of the Bundesrat.
As far as existing federations are concerned, these differences become a key element in the political process linking the territorial structure of inequality to institutional choices and subsequent distributive outcomes. Given different patterns of relations between parties and regional elites, a sudden transformation in the territorial levels of inequality triggers substantially different political processes. The desire to protect local interests is more likely to shape the overall response of the federation in those cases in which the representatives of territorial interests are directly elected and national, vertically integrated party organizations are relatively weaker. In such cases, the territorial structure of inequality translates into relatively larger levels of fiscal decentralization and fragmentation of solidarity, which in turn sustain and reinforce pre-existing inequalities. As I shall elaborate upon later in the book, the dynamic interplay between institutions and inequality in the United States fits this pattern quite well.

In contrast, when the electoral system creates incentives for parties to coordinate their actions across regions, and federal institutions are articulated around a nationalized party system, a sudden transformation in the territorial structure of inequality will not automatically lead to an institutional adjustment driven almost exclusively by the protection of local interests. Local interests will no doubt be present and protected, but only they will be tempered by other aspects within the broader agenda of national parties. As a result, changes in the territorial structure of inequality will not necessarily cause changes in institutional choices and distributive outcomes. Later in the book, I illustrate this political process and its distributive effects by analyzing Germany’s assimilation of six significantly poorer new länder during reunification.

Finally, at the other end of the institutional spectrum, the argument predicts that in previously centralized contexts, where regional leaders have at best limited institutional leverage, increasing regional inequalities will lead to higher levels of polarization between a minority of
mobilized (rich) regions and a majority of supporters of the status quo. Thus, the likely outcomes are either the resilience of fiscal centralization or, depending on the electoral constraints of national parties, a long series of partial steps in the direction of fiscal decentralization. The process of creation and reform of the Spanish *Estado de las Autonomias*, as well as the experiences of Belgium and Italy, provide historical examples of this kind of process.

To summarize, this book proposes a new way to understand distributive politics in multi-tiered systems based on the interplay between the territorial structure of inequality, the behavior of economic factors, and the institutional status quo. I explain observable associations (or lack thereof) between federalism, fiscal decentralization and inequality as the result of long-term historical processes driven by different combinations and sequences in this interplay rather than as the exogenous effect of a set of intrinsically inequalitarian institutions. In doing so this book establishes that the association between federalism, decentralization and inequality, far from being a historical imperative, reflects a particular combination of socioeconomic and institutional variables. It also explains why and how, under specific societal and institutional circumstances, federalism and decentralization can coexist with increases in the levels of redistribution.

1.3. Methodology and Organization of the Book

The core of the argument I have just outlined is about the mutually causal, long-term relationship between institutional selection and income inequality. Given certain conditions, how and why federalism and decentralization matter is not at all independent from the reasons why these institutions came into existence in the first place. But it is also an argument about institutional conditionalities: the extent to which the levels of fiscal decentralization reflect the
contextual structure of inequality is itself contingent upon the institutional status quo, and how that shapes the formation of coalitions in support of alternative designs.

Empirically testing the different elements of this argument requires us to address a number of methodological issues that are common to any study relating political institutions and social outcomes (Przeworski 2004). This need is particularly strong here because institutions (or dimensions thereof) appear as both causes and effects at different stages in the argument. So what is the position of the different elements in the causal hierarchy? And how can we assess the subtleties of this argument empirically? If institutions are endogenous, do they really have causal effects of their own, or do they operate as mechanisms that merely reproduce pre-existing economic conditions? In other words, how can we differentiate empirically the conditions under which institutions are created from the institutional effects themselves?

A first, rather radical, response to these questions is to argue that insofar as institutions are endogenous, their effects are self-selected and therefore essentially irrelevant. Insofar as institutions reproduce the underlying tastes of the relevant political coalition, they do not really matter per se. Through a different route, we would revisit the early, and rather disconcerting, Rikerian assessment on the significance of federalism (Riker 1964). More recently, Przeworski has summarized this position by arguing that “the new institutionalism contains a potential contradiction when it asserts simultaneously that institutions matter and that they are endogenous. If they are endogenous then we need to sort out the effects of institutions of the conditions under which they function….If everything is path-dependent, then it makes no sense to speak of the impact of institutions” (Przeworski/Munck~2004).

I do not find this logic compelling on a number of accounts. First, the very reason why institutions are selected, that is, the very reason why political actors engage in conflict about

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12 Cite and refer to the exchange with Acemoglu and Robinson as an area of related discussions.
them is that institutions have effects on their political and economic environment. In other words, the motivations and preferences of the actors involved in the process of institutional choice derive from the expected impact of institutions, that is, from counterfactual exercises about what the institutional effects will be. Endogenous institutional choice only makes sense because institutions matter.

Second, a clear line needs to be drawn between expectations about institutional consequences and the consequences themselves. Institutional effects may be consistent with previous expectations, in which case, arguably, institutions become a mechanism by which a particular dimension of reality becomes self-perpetuating. Alternatively, institutions may end up working in directions unexpected and/or unintended by their designers, in which case institutions became a factor of change. Two caveats are important for the purposes of this volume. From the fact that the actual effects of a particular institution are consistent with what the designer anticipated it does not follow logically that that institution has no impact. Symmetrically, from the fact that a particular institution has unintended effects it does not follow that this institution is exogenous. It simply means that the designers had the wrong expectations about the institutional effects. Whether designers have the right expectations is a different issue from the existence and influence of the expectations themselves.

Third, the relationship between institutions and outcomes is clearly a long-term, dynamic one in which feedback processes play an important role. By feedback I mean a process by which institutions alter their environment in ways that either contribute to their stability or facilitate the conditions for change (Pierson 2004). In both cases, the evolution is path dependent in that the conditions under which political actors debate about keeping institution x or replacing it for
institution y depend greatly on the nature of the status quo institution. In sum, path dependency exists because institutions do have an impact.

On the basis of these three points I think that the neo-rikerian claim that endogenous institutions necessarily lack an impact of their own is misleading because it conflates the methodological difficulties of distinguishing the causal effects of institutions with an alleged theoretical impossibility for these effects to exist. It is precisely to avoid this confusion that we need to “sort out institutional effects from the conditions under which they function” (Przeworski/Munck 2004).

The practical problem is that there is not much margin in which to do that. As Przeworski himself reminds us (2006), causality refers to the identification of the mechanisms behind the observed impact of a particular factor or institution on the basis of (1) a theoretical argument and, ideally, (2) a comparison between the observable world and a counterfactual scenario in which all other elements but the factor of interest remain unchanged.13 Clearly, this definition of causality imposes requirements that can hardly be satisfied by the research designs normally in use.

In some areas of political research, counterfactuals can be created through micro-simulations or experimental research designs, but these tools are of little use when it comes to cross-national comparisons of the distributive effects of institutions. Scholars are therefore at the “mercy of history” (Przeworski 2006): slaves of the observable world by virtue of their inability to construct counterfactuals, comparativists appear subject to the heavy restrictions imposed by the different identifying assumptions that they make, which in turns creates a spiral of conflicting results. Alternative assessments of causality would simply reflect alternative identifying assumptions. The comparative study of federalism and decentralization is no exception. As

13 The specialized literature refers to this requirement as the “cotenability” condition (Fearon 1991?).
detected by three different overviews of the field (Beramendi 2006; Rodden 2006; Wibbels 2006), issues of endogeneity and selection have become more and more prominent throughout the field, and the literature has managed to find causal arrows running in all possible directions.\footnote{The scholarship on the links between fiscal centralization and the party system provides an illustrative example. A recent stream of literature identifies the centralization of national party systems as the causal mechanism behind the macroeconomic performance of federations. More integrated party systems lead to more centralized fiscal constitutions and, in some cases, to better macroeconomic outcomes (Rodden 2006). Recently however, the elegance of this logic has been challenged by two compelling pieces. Chibber and Kollman (2004) have exploited the experiences of Canada, India, the United States and the United Kingdom to argue that fiscal and administrative centralization are an important cause behind the centralization of the party system. In addition, Diaz-Cayeros (2006) provides additional evidence of the difficulties of detaching institutional choices, electoral concerns and distributive politics. His innovative analysis of the institutional dynamics of the Mexican federation reveals that the centralization of the party system and the centralization of tax policy are jointly endogenous. In this and other Latin American cases, centralization of tax policy emerges as the outcome of bargaining with local political elites. The key to the process was to allow rich regions to become richer while using centralized redistribution to buy off the support of the leaders of backward regions. This coalition between leaders of rich and poor regions alike, Diaz-Cayeros argues, was forged through the articulation of a national party system.} The question then is what is to be done to avoid circular arguments.

An important assumption throughout the book is that a general equilibrium theory of origins and effects of decentralization is out of reach. Partial equilibrium analysis is the only choice. By that I refer to the study of the impact of one or two dimensions of the problem on the assumption that all other relevant aspects of the problem can be assumed to be static with some degree of confidence. In practical terms this requires to exploit long-term, dynamic processes to isolate instances that come very close to satisfy the requirements of an experiment. The issue is how to identify these moments of exogeneity.

Such a quest is about \textit{fortuna} and \textit{virtù}. While there is no easy recipe that guarantees success, in what follows I proceed on the assumption that any successful approach needs to meet a number of necessary (yet not sufficient) conditions to remain in the race. The first one is to think dynamically, or if I may use an increasingly popular \textit{leitmotif}, to place \textit{politics in time} (Pierson 2004). To be sure scholars are at the “mercy of history” (\textit{fortuna}) in our dependence upon observables. But sometimes history can also be exploited in the quest for these \textit{instances of}...
exogeneity. This brings me to the second condition: the need to combine a dynamic approach with the recognition of the multidimensional character of institutions in general and federalism and decentralization in particular.\textsuperscript{15}

This book is about the relationship between the decentralization of fiscal and public insurance policies on the one hand and income inequality on the other. But there are obviously many other aspects to federalism and decentralization (Rodden 2003?), including the system of representation of regional interests at the national level, the articulation and organization of the party system, judicial review, and political, non-fiscal, decentralization. All of these are dimensions of the territorial distribution of power. Some of them are constitutionalized; some others are not.

Constitutional rules and procedures regulate the strategic interaction between different levels of government. They tend to be under the protection of an independent judicial review system, and sheltered from the comings and goings of normal politics by the special requirements of constitutional reform. `In turn, the distribution of political authority across levels of government in different policy areas reflects the outcome of such a bargaining process. Ultimately, it reflects the equilibrium of forces within the federation in a particular moment in time. In between, a number of extra-constitutional institutions, such as the party system, shape the incentives of political elites and serve as a two-way mechanism connecting constitutional constraints to political preferences and outcomes. Loosely following Filippov, Ordeshook, and Shvetsova (2004), these three layers correspond to three levels of institutional analysis. In principle, constitutional rules and procedures offer more resistance to change, whereas the levels of political decentralization in different policy fields, including redistributive policy, appear to be

\textsuperscript{15} For instance, Falleti (forthcoming) shows that the dynamic sequence in which different types of decentralization (fiscal, political, administrative) condition each other shapes in important ways the actual structure of power within federations.
more malleable. In turn, the possibility of change in the characteristics of the party system is likely to fall between the two. As a result, the different dimensions of federations are unlikely to move at the same time. They are not equally fluid.

Precisely for this reason the multidimensionality of political institutions becomes an asset worth exploiting. The relationship between the different elements of federalism and decentralization, among themselves as well as with their environment, can be theorized by imposing the assumption that the other factors/dimensions are given. The possibility of institutions being both endogenous and the source of independent effects over time only becomes meaningful on the basis of this assumption. Insofar as it is possible to establish that the adoption of a particular status quo at time t is unrelated to societal, political, or economic conditions that can be taken to be outcomes of federalism itself at time t + n, some of the Gordian knots of the relationship between institutions and social outcomes appear on target. By combining a dynamic approach with a multidimensional conception of institutions, the leverage to reasonably identify moments of exogeneity increases, thereby facilitating the empirical evaluation of the theoretical mechanisms of interest. The real hurdle is how to exploit this leverage, arguably a matter of virtù. To conclude this introduction I briefly lay out how *Fragmented Solidarity* approaches the issue.

Empirical and methodological quests, much like any other, hinge upon a good navigation chart to clarify what the quest is all about and where to look for it. In this context, this amounts to a theory that makes explicit the different stages in the argument, the causal mechanisms of each stage, and the conditions under which specific outcomes are expected to emerge. Chapter 2 carries out this task by developing in detail the theoretical argument of the book. The chapter unfolds in three steps: (1) analysis of the exogenous distributive effects of decentralization,
thereby explaining why a conflict about the design of institutions is in fact a redistributive conflict; (2) a detailed analysis of the ways in which the territorial structure of inequality, external shocks and factor mobility shape preferences about fiscal decentralization; and (3) an elaboration of the logic behind the institutional mechanisms that condition the way in which the territorial structure of inequality is reflected in different levels of fiscal decentralization and distributive outcomes. From each of these three steps a number of empirical implications follow. The rest of the book is devoted to test them.

The inability to build counterfactuals ensures that any methodological quest is a journey through a sea of second best solutions. This study is no exception. The rest of the book is built on the assumption that, under these circumstances, the only way ahead is to embrace methodological eclecticism, combine different approaches and hope (*fortuna*, again) that they complement each other, leading to a similar set of conclusions. I use two different methodologies. Carefully constructed historical case studies, where different assumptions about what is to be considered as given can be discussed, are used to illustrate the workings of specific causal mechanisms and to produce a preliminary test of the predictions of the argument. Yet regardless of how informative these cases are or how closely they resemble a natural experiment, whatever conclusions are obtained from them ought to be verified and complemented with inferences based on a more general and systematic evaluation of the evidence. To this end, statistical analyses serve two purposes. They provide a tool to check the extent to which the conclusions derived from particular experiences hold more generally. And, more importantly, quantitative analyses test the robustness of the findings to alternative identifying assumptions about the process generating the data. In this spirit, once the goals and
theoretical foundations of the book have been laid out in chapter 2, I carry out the empirical analyses in two steps.

First, Chapters 3 to 5 include several in depth analyses of specific experiences to illustrate in depth particular elements of the argument. These experiences are selected theoretically, on the basis of the nature of the institutional status quo. Thus, chapter 3 analyzes how the structure of inequality has shaped the nature of redistribution in the European Union, selected as a case of an emerging union. In this chapter I show how the dual nature of redistribution in the EU (large horizontal transfers, negligible vertical transfers) responds to the way country members have balanced their conflicting preferences, and how these preferences are directly linked to their expectations about the distributive consequences of alternative institutional designs. I also show how the positions adopted by each country during the recent constitutional convention largely respond to the territorial structure of inequality within the union.

Chapter 4 focuses on existing federations. In particular it develops two comparisons, one between Canadian and US responses to the Great Depression, and another between US responses to the Great Depression and German ways of handling the integration of six poorer länder after Reunification. Both the Great Depression and the Reunification were exogenous shocks to the existing territorial structure of inequality. As a result, they forced the adjustment of pre-existing allocations of fiscal redistributive powers. The empirical question across both comparisons is whether these adjustments were driven by the mechanisms identified in the argument.

The chapter first compares the way Canada and the United States developed their systems of unemployment insurance in response to the Great Depression in the 1930s. Having identically fragmented systems prior to the Depression, Canada ended up adopting a fully centralized
system after the provinces gave up their constitutionally protected powers, whereas the US states opposed frontally that possibility during the negotiation of the Social Security Act. This comparison is extremely useful to illustrate how income differences, asset specificity and selective patterns of mobility combine to generate different sets of preferences (and ultimately outcomes) in two countries with previously identical institutional settings.

In turn, the comparison between Germany and the USA illustrates how alternative power sharing arrangements in federations shape the way in which exogenous transformations of the structure of inequality translate into institutional adjustments and subsequent distributive outcomes. In the case of the United States, I focus, again, on the response to the Great Depression, and how it has shaped the interplay between inequality and fiscal decentralization in the United States ever since. In the case of Germany I focus on the way interregional redistribution has evolved in response to the assimilation of six dramatically poorer länder into the federation in 1990-91 and what the observable distributive effects of this strategy are.

Thereafter, in chapter 5 I use the case of Spain to analyze the implications of growing interregional disparities in contexts in which a process of political decentralization unfolds from a previously centralized fiscal system. Taken together, chapters 3 to 5 provide a first test of the claim that, given different initial institutional configurations, modifying the territorial structure of inequality, and therefore changing the patterns of risk sharing between regions, translates into significantly different institutional, political and distributional outcomes. Finally, Chapter 6 develops a systematic statistical scrutiny of all the empirical implications of the argument. The rationale behind it is to check the extent to which the insights obtained from the detailed case analyses hold more generally under different identifying assumptions. Chapter 7 pieces together the main findings and elaborates the general implications of the book.
Chapter 2: A Theory of Fragmented Solidarity

Chapter 2

A Theory of Fragmented Solidarity

Introduction

The previous chapter has presented the reasons why a full understanding of the relationship between political institutions and social outcomes requires to take a step back, and analyze the role that the outcome of interest itself might have had in the process of institutional selection. That is to say, it requires to allow for the possibility that the distributive effects of political institutions are not independent of the conditions under which political institutions were selected in the first place.

The development of this broad theme in the particular case of fiscal decentralization can be disaggregated into several smaller steps, the first one being the study of the distributive consequences of different levels of fiscal decentralization. In establishing whether decentralization has distributive consequences and what these are, the chapter focuses on the exogenous effects of decentralization. Fleshing out the distributive consequences of decentralization helps understand why the choice of a particular level of decentralization is a redistributive issue in the first place. This leads to a second step, namely the analysis of decentralization as an endogenous process, i.e., the study of the factors determining the choice of a particular level of fiscal decentralization. By developing a general argument on the determinants of fiscal decentralization, this chapter illuminates the role that inequality and its interplay with different status quo play in the selection of the levels of fiscal decentralization, ultimately offering an explanation of the different observable combinations between institutional designs and distributive outcomes. The chapter is structured as follows.
Relying on a very simple model of redistributive politics, I first show that the distributive consequences of decentralization are a function of the pre-existing structure of inequality. The chapter goes on to argue that, precisely for this reason, the choice to decentralize fiscal and social policies becomes itself affected by different aspects of the territorial structure of inequality. This effect originates from the impact of the territorial structure of inequality on the levels of risk-sharing between regions and, therefore, on the preferences regarding the level of fiscal decentralization. Section two lays out a simple model in which preferences about the specific degree of decentralization of redistributive policies are modeled as a function of the scope of risk-sharing between regions. The extent to which regions face similar risks reflects the combination of three elements: (1) the territorial structure of inequality, (2) the scope of interregional mobility and (3) the presence of external risks.

The impact of the territorial structure of inequality is decomposed into three interrelated factors: income differences, labor market risks, and the share of dependent population. All three of these factors are important in that, by creating different income distributions across territorial units, they generate distinctive preferences about the levels of redistribution. As differences among subnational units in terms of any of these three dimensions (or combination thereof) grow, subnational unit’s preferences for redistribution and social insurance become more diverse.

In contrast, the presence of external shocks and high levels of labor mobility work in the opposite direction, namely in the direction of pooling risks across regions by making regional distributions of income more alike, thereby providing incentives to develop a more centralized public insurance system. Thus, if the effects of mobility and
external risks overcome the decentralizing push associated with regional income and labor market disparities, a more centralized fiscal structure is likely to emerge. And vice-versa. As a result, I argue, the degree of centralization of fiscal structures reflects the balance between the different forces shaping regional distributions of income and risk structures. This reflection is quite straightforward in the case of emerging unions, the institutional setting assumed throughout section two, but it is far from automatic under different institutional conditions.

Thus, sections three and four move beyond the analysis of the origins of preferences to analyze how the interplay between different institutional status quo and the territorial structure of inequality translates into different choices of the level of fiscal decentralization. Section three focuses on existing federations, where the constitutional rules can be taken to be fixed. In turn, section four analyzes the impact of increasing inequality in the context of dissolving unions, i.e., previously centralized fiscal systems operating in a context of political decentralization. By illuminating the way in which different pre-existing institutional frameworks mould the interplay among contending institutional preferences sections three to five build the link between preferences, in turn determined by inequality, observable institutional arrangements and subsequent distributive outcomes. Finally, section five recapitulates the empirical implications of the argument and outlines how they inform the subsequent chapters of the volume.

2.1.- The Impact of Decentralization on the Distribution of Income

Why should one expect decentralization to matter for inequality? In addressing this question, consider a very simple model of redistributive politics, namely the median
voter of redistribution (Meltzer and Richard 1981; Roberts 1977; Romer 1975). Redistribution operates through a linear income tax with an intercept, which reduces it to a single dimension, in turn allowing for single-peaked preferences and the application of the median voter theorem. Within this framework, the preferred amount of redistribution is a function of the relative position of the median voter on the income scale: the larger the distance between the income of the median voter and the average (mean) income in the society, the larger the preferred amount of redistribution. In what follows, I apply this logic to a situation in which there exist several layers of power to answer the question above.16

As defined previously, decentralization refers to a system in which sub-national political entities (regions, states, provinces, or if preferred nations) are allowed to make their own choices concerning redistribution. Alternatively, under centralization the citizens of all regions are pooled into a common decision making process.

Let subscript \( r = 1 \ldots, r \) denote each of the regions in the union, and subscript \( u \) denote the national/union level. Regions are assumed to be of equal size. Define \( Y_r \) and \( Y_u \), respectively, as the average pre-tax income at the regional and national levels. Likewise, define \( t_r \) and \( t_u \) as the levels of redistribution at the regional and national levels. Finally, let superscript \( m \) define the median voter’s pre-tax income either at the regional (\( Y^m_r \)) or national level (\( Y^m_u \)). This basic model allows one to define three hypothetical unions that help explore the link between decentralization and income inequality.

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16 Admittedly, this is an oversimplification of the actual politics of redistribution taking place in each of these regions or in the nation as a whole. Yet its predictions are very similar to those emerging from much more realistic, and complex, models such as the one developed by Dixit and Londregan (1998) to analyze the redistributive implications of the strategic interaction between different levels of government in federations. Thus, in this particular case, there is no loss of generality in using a median voter framework.
Chapter 2: A Theory of Fragmented Solidarity

Union A: \( \frac{Y_1^m}{Y_1} = \frac{Y_2^m}{Y_2} \); and \( \frac{Y_1^m}{Y_1} = \frac{Y_2^m}{Y_2} = \frac{Y_u^m}{Y_u} \) provided that

\[ Y_r = Y_n, \quad Y_r^m = Y_u^m, \quad \text{but} \quad Y_u^m \neq Y_u. \]

Union B: \( \frac{Y_1^m}{Y_1} = \frac{Y_2^m}{Y_2} \) but \( \frac{Y_1^m}{Y_1} = \frac{Y_2^m}{Y_2} \neq \frac{Y_u^m}{Y_u} \), because \( Y_r \neq Y_u \).

Union C: \( \frac{Y_1^m}{Y_1} \neq \frac{Y_2^m}{Y_2} \), which implies \( \frac{Y_1^m}{Y_1} \neq \frac{Y_2^m}{Y_2} \neq \frac{Y_u^m}{Y_u} \)

The first union (A) defines the characteristics of a nation in which the structure of inequality, i.e., the distance between the income of the median voter and the mean income in each demos, is identical for the two regions (r) and the national level (u).

Under these circumstances the level of decentralization bears no salience for redistribution and inequality.\(^{17}\) All regions have similar patterns of wealth and income distributions and, subsequently, the integration of all regions results in a nation that resembles each of its parts. The distribution of income remains unaltered because the preferences for redistribution do not change. Figure 1 presents a numerical illustration of this claim. Assume a union with two regions where each of the regions has three households \( (h_r) \) with income given by \( h_r = \{1, 3, 6\} \). Calculating the preferred level of redistribution in each of the regions and unions shows that it does not matter at which level of government the power to redistribute is allocated to. As reported in Figure 1, given the distribution of income in union A, the preferred level of redistribution is given by \( t_1 = t_2 = t_u = 0.1 \). Albeit highly unrealistic, this benchmark case illustrates that

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\(^{17}\) Obviously, this does not necessarily imply that decentralization has no consequences in other realms. These may be related to issues of efficiency gains in relation to the provision of other types of public goods or issues of (dis)economies of scale.
decentralization has implications for the distribution of income if and only if it is introduced in places with some pattern of regional inequality. This brings us to unions B and C.

![Figure 1: Redistribution by different levels of government under different distributions of income](image)

In the case of union B, the structure of inequality is similar across regions, but, since \( Y_r \neq Y_u \), the distance between the mean and the median voter’s income is no longer the same at the national level as at the regional level. The point to note here is that, even in the rather unlikely case that the structure of inequality is similar across different regions, a change from decentralization to centralization (or vice versa) would imply a change in the preferred level of redistribution. As with union A, Figure 1 helps illustrate this point. In the case of union B, the distribution of income is given by \( h_1 = \{1, 3, 6\} \) and \( h_2 = \{4, 12, 24\} \). Both regions have the same median to mean ratio, i.e.,

\[
\frac{Y_1^m}{Y_1} = \frac{Y_2^m}{Y_2} = \frac{9}{10}.
\]

However, the ratio at the union level, that is to say pooling the six
households together, is a different one, namely $\frac{Y_u}{Y_a^m} = \frac{15}{25}$. Under these circumstances, an institutional change from centralization to decentralization would alter upwards the preferred level of redistribution without introducing inter-regional differences (from $t_1 = t_2 = 0.1$ to $t_u = 0.4$). Thus, there exists a “between levels” effect of decentralization on the distribution of income.\(^{18}\) The “between levels” effect points to the fact that an institutional change affects the income distribution because changing the scale of the political process shifts in itself the income of the median voter. However, given the conditions specified in B, a shift from decentralization towards centralization would imply no equalization in the levels of redistribution ($t$) across regions.

Finally, in the far more realistic union C, regions differ not only in their average income levels, but also in their internal distributions of income, having as a result different preferences for redistribution. In contrast to B, these preferences diverge not only between a hypothetical central government and all the regions, but also among regions themselves. Thus, a shift towards decentralization would impose a change in the scale of redistribution that would be specific to each region. Conversely, a switch towards centralization would imply not only a change in the scale, but also the homogenization of $t$ across regions. Thus, there is a “homogenization/diversification” effect, conveyed by union C, of decentralization on the distribution of income. Again, Figure 1 provides a helpful numerical example. The distribution of income in union C is given by $h_1 = \{1,1,8\}$ and $h_2 = \{4,6,30\}$. Note that the ratio at the union level is similar to the one in union B, namely $\frac{15}{25}$. Yet, given the structure of regional inequalities

\(^{18}\) Levels refer here to central and regional as distinct realms of political authority.
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\( \frac{Y_1^m}{Y_1} < \frac{Y_2^m}{Y_2} < \frac{Y_u^m}{Y_u} \), a change from centralization towards decentralization would lead both regions to increase their levels of redistribution relative to the union \( (t_1 > t_2 > t_u) \).

The examples presented in Figure 1 suggest that the distributive consequences of decentralization cannot be established 	extit{ex ante}, without reference to the territorial structure of inequality. In other words, the overall impact of the “between levels” and the “homogeneization/diversification” effects of decentralization on the distribution of income is far from obvious. It is certain that decentralization has an effect. Yet such an effect need not work always in the same direction because it is contingent on the patterns of regional inequalities.

In addition, preferences are defined as a function of the internal structure of inequality in a specific territorial unit and not as a direct reflection of its level of income/wealth. Thus, it is not necessarily the case that poor regions always prefer centralization to decentralization while rich regions opt always for decentralizing (Persson and Tabellini 1994: 765-773). A case in point would be the one of a poor region whose citizens rather keep a decentralized system in order to implement more generous redistributive policies (for instance, region 1 in union C above). Moreover, in the presence of unequal regions, the institutional design modifies the preferences for redistribution: citizens who support a particular redistributive policy at the regional level need not automatically support the same one at the national level, and vice-versa.

Suppose \( Y_1 > Y_2 \) and \( \frac{Y_1^m}{Y_1} > \frac{Y_2^m}{Y_2} \). Under these conditions \( t_1 > t_2 \), i.e., the rich region is more redistributive than the poor one. If redistribution were to be centralized, citizens in
region one would support a smaller t since a majority of them would become net contributors whereas a majority of citizens in region two would become net recipients.¹⁹

In sum, the specific direction of the effects of an institutional change depends upon the status quo in terms of the structure of inequality.

As a consequence, it is reasonable to assume that political actors, when deciding about the levels of centralization-decentralization of the welfare state, are aware of the structure of inequality within the different territories, from which they derive an expectation about the level of redistribution to be generated by any specific institutional design. In other words, by deciding on the institutional design they are also making a choice about income redistribution (Dixit and Londregan 1998). Ultimately this is a political process according to which the structure of inequality shapes the levels of fiscal decentralization. The key question then is how the structure of inequality determines the incentives of actors to (de)centralize fiscal policy. This is the question I turn to next.

2.2.- Defining Preferences: inequality, risk-sharing and integration in emerging unions.

Fiscal and social policy integration, much like any other form of integration, requires political leaders to balance and trade-off the costs and benefits of political autonomy. Obviously, a substantial part of the benefits of autonomy derive from avoiding the current and potential costs associated with integration. Likewise, the potential benefits of integration derive from the current and potential costs of remaining a separate entity. Current costs and benefits are directly observable. Potential costs and benefits are

¹⁹ For an argument applied to different policy issues where the process leading to a change in preferences, see Rose-Ackerman (1981: 152-165).
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not, in that they concern some future scenario that may actually occur with some degree of probability. The idea of risk refers to the probability that a particular political leader actually suffers the costs associated with either remaining autonomous or pursuing integration. The incidence of the former type of risks reduce risk-sharing between regions, whereas the incidence of the latter increases it. In doing so, they directly affect preferences about the (de)centralization of fiscal and social policy.

Fiscal policy provides both redistribution and insurance against different types of risks (Varian 1980; Atkinson 1995; Sinn 1995; Mares 2003). Thus, in choosing between autonomy or integration, political leaders must consider their relative standing with respect to each of these two dimensions of fiscal policy. As highlighted by a number of existing models (Bolton and Roland (1997:1057-1090), and Alesina and Spolaore (2003), the redistributive implications of different architectures of power are an important motive behind the politics of integration. Regional incumbents do consider the net benefits to be obtained under alternative institutional configurations and act accordingly. But they also must consider the insurance that each of these institutional configurations is able to provide. Certain types of risks can be insured by autonomous governments, most notably those associated with the specific assets of the regional economy, whereas others, those associated with external shocks on the regional economy (Alesina and Perotti 1998), can only be insured through an institutional setting in which regions pool their resources together.

In this section, I develop a systematic analysis of the ways in which different redistribution and insurance motives shape incumbent’s preferences for fiscal policy.
(de)centralization. The strategy to develop this analysis is based on the concepts of territorial structure of inequality, a concept that refers to the regional income distributions and the differences between them, and the scope of risk-sharing between regions, a concept that refers to the extent to which regions face similar risk profiles when designing their fiscal policies. To facilitate their analysis in detail, it is necessary to simplify other aspects of the political process. Thus, for the purposes of this section I assume that we are in the context of an emerging union, that is to say in a scenario in which several pre-existing sovereign units face the choice between integrating fiscal policy or continue to provide redistribution and social insurance by themselves.

The section is organized as follows. After introducing a set of assumptions about the distribution of income and the underlying model of redistribution (1), I analyze in detail how the different dimensions of the territorial structure of inequality affect the preferences for redistribution and insurance, and therefore, how they shape preferences for fiscal integration in emerging unions (2). Thereafter, I introduce in the analysis two other factors that mediate the link between the territorial structure of inequality and the scope of risk sharing between regions. These are the presence of external shocks and the patterns of interregional mobility among the dependent population.

2.2.1.- The distribution of income and the underlying model of redistribution.

Following Bolton and Roland (1997), consider a country with two regions in which redistribution is performed by a linear tax with an intercept. Departing from Bolton and Roland (1997), regions are assumed to have three sectors: $\alpha$, $\beta$ and $\lambda$. Figure 1 summarizes the main features of the distribution of income.
Figure 1: The Distribution of Income

<table>
<thead>
<tr>
<th>Working Externally Exposed</th>
<th>Working Asset Specific</th>
<th>Non Working</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\alpha$</td>
<td>$(1-t)w_i$</td>
<td>$\beta$ $(1-t)w_i$</td>
</tr>
<tr>
<td>Risks</td>
<td>$(1+S)$</td>
<td>$\sigma^2 w^2 (1-t)^2$</td>
</tr>
<tr>
<td>Utility</td>
<td>$\alpha(1-t)w_i(1+S)$</td>
<td>$\beta[ w_i(1-t) - w_i^2 (1-t)^2 (1+\sigma^2) ]$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$(t-t^2/2)y$ $(S, \sigma^2)$</td>
</tr>
</tbody>
</table>

The $\alpha$ sector represents the share of the working population occupies in a sector exposed to external risks. $\beta$ represents the share of the population who derive their income from work economic activities based on regional specific assets. Hence $\alpha(1-t)w_i$ and $\beta(1-t)w_i$ denote the after-tax income of the people in the two working sectors of the economy. Finally, $\lambda$ represents the non-working population, whose income comes from the share of aggregate output per capita ($y$) that has been taxed ($yt$). So let $(1-t) w_i$ denote the after-tax income of the people in the working sector of the population ($\beta$). Finally, let $(t-t^2/2)y$ be the income of the people ending up in the $\lambda$ sector, where $t^2/2$ captures, conventionally, the deadweight losses of redistribution.

In turn, sectors are subject to different risks, which imply uncertainties about their future income. In the case of the $\alpha$ sector, risks take the form of a shock $(1+S)$ that, following Alesina and Perotti (1998), is assumed to be negatively perfectly correlated between the two regions. In other words, for one lucky ($S=1$) region in the union there is necessarily an unlucky ($S=-1$) one. Let $(1+S)$ represent the external shock affecting
people working in the $\alpha$ sector. In the case of $\beta$, the uncertainties derive from the level of asset specificity of the regional economy. The incidence of this type of risk is modeled using a quadratic utility function (Varian 1980:49-67).\(^{20}\)

On the basis of these assumptions about income and risks, the utility function for any given territory in the long run is defined as the sum of the expected utility across all three states. By implication, the expected utility function becomes a function of two unknown variables and their interaction through the tax rate: (1) whether or not the external shock ($S$) is positive or negative; (2) the incidence of risks associated with the degree of asset specificity; and (3) the fact that the tax base and the tax rate affecting all three sectors themselves a function of the external shock and the degree of specificity of the economy. More formally:

\[
E[U(c)] = \alpha \int \int U_\alpha(S, z_i) \partial F(S) \partial G(z_i) + \beta \int \int U_\beta(S, z_i) \partial G(S) \partial F(z_i) + \lambda \int \int U_\lambda(S, z_i) \partial G(S) \partial G(z_i)
\]

where $S$ captures the unknown external shock and $z_i$ the incidence of risks associated with the asset specificity of the regional economy. $F(.)$ denotes a direct influence of a particular risk on the utility of the sector, whereas $G(.)$ implies that such influence takes place indirectly, through the chosen tax rate.

\(^{20}\) The predictions obtained from the model are not affected by the selection of alternative, and mathematically more demanding, functional forms. Applying Varian’s approach, assume for the sake of simplicity that $z=\beta(1-t)w$, represents the income of the asset specific sector. After introducing uncertainties about income with a quadratic term, the expected utility of the sector is given by $E(u) = E(z - \frac{z^2}{2})$. From here it follows that $E(z^2) = [E(z)]^2 + Var(z)$, and therefore that $Var(\beta(1-t)w) = Var(z) = \sigma^2w^2(1-t)^2$.\(^{20}\)
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In an emerging union, the relevant actor is the incumbent at the regional level. In deciding between fiscal integration or fiscal autonomy, she faces the problem of

\[
\text{Max}\{U_d(c), U_c(c)\}
\]

(2)

where \(U_d(c)\) and \(U_c(c)\) denote, respectively, the value of consumption under decentralization and centralization, as defined in (1). In what follows I analyze this problem in two steps. First, I focus specifically on how the differences between regions in terms of the shape and internal composition of their distributions of income shape the preferences for fiscal decentralization. For the sake of simplicity, I develop this subsection on the basis of two additional assumptions, namely the absence of external shocks (\(\alpha = 0\)) and the restriction that neither citizens or endowments can move between regions in response to the nature of different redistributive policies. Second, I relax these two assumptions to explore how the presence of external shocks and the mobility of welfare dependents affect the scope of risks sharing between regions, thereby modifying the incentives to integrate fiscal redistributive policies.

2.2.2.- Forces pro Fiscal Decentralization in Emerging Unions.

In an economy in which \(\alpha = 0\), the expected utility function of a representative individual at the regional level is defined as follows:

\[
E[U(c)] = \beta \int U_\beta dz_i + \lambda yt - \frac{\lambda yt^2}{2}
\]

(3)

The model is solved by substituting (3) into (2). This in turn requires calculating the relevant tax rates for the region and the union, substituting them into the utility function
and evaluating the differences between the two. Once these steps are taken (details in Appendix I), the following expression is obtained\(^{21}\):

\[
E[U'_d(c)] - E[U'_c] = \frac{1}{2} (y - y_u) + \frac{\beta w^m (2 \beta w^m - \lambda y - \theta)}{2(\lambda y + \theta)} - \frac{\beta w^m_u (2 \beta w^m - \lambda y - \theta)}{2(\lambda y_u + \theta_u)}
\]  

where \( \theta = 2 \beta (w^m)^2 (1 + \sigma^2) \) and \( \theta_u = 2 \beta (w^m_u)^2 (1 + \sigma^2) \) are, respectively, the terms capturing the individual specific risks at the regional and the union level. Since the solution to the model is not self-evident, the comparative statics is best presented graphically. It follows from (1) and (2) that positive values in (4) reflect a preference for decentralization, whereas negative values indicate a preference in favor of centralization.

The final results is the outcome of the influence of three different factors: income differences, asset specific risks and

The effects of income differences and the share of the dependent population are straightforward. In principle, poor regions have a strong incentive to opt for centralization since, under such a policy design, they are able to capture part of the income of their wealthier partners. These, on the other hand, would have no incentive to centralize at all. Likewise, expression (4) speaks to how differences across regions in terms of their share of the dependent population shape the incentives for decentralization. Differences in the incidence of the share of dependent population create differences in the preferences for redistribution across territories. This can be seen from the fact that the tax rate that

\(^{21}\) Notation: the absence of a subscript implies reference to the regional level. Subscript \( u \) indicates reference to the union level. So, for instance, \( w^i \) represents the pre-tax income of an individual of the region whereas \( w^i_u \) represents the pre-tax income of an individual of the union. Similarly \( w^m \) represents the pre-tax income of the median voter of the region whereas \( w^m_u \) represents the pre-tax income of the union’s median voter.
maximizes the utility in any given territory is a direct positive function of the share of dependent population (see Appendix 1).

\[ t^* = 1 - \frac{\beta w}{\lambda y + 2\beta (w^r)^2 (1 + \sigma_z^2)} \]  

(5)

As \( \lambda \) increases, \( t \) also increases. Thus, other things being equal, those regions with a relatively lower share of dependent population have no incentive to centralize fiscal policy.

So far, one might say, no big news. Poorer regions want to reap off part of the tax base of richer ones by centralizing redistribution. However, expression (4) also indicates that the mechanism linking the territorial structure of inequality and the preferences for fiscal decentralization might be a bit more complex. When differences in income and labor market risks are combined, the choice becomes more complex.

Concerning income differences, a decision about fiscal decentralization implies a decision about the tax base and the size of the dependent population. In terms of risks associated with economic specialization, a decision about fiscal decentralization is effectively a decision about the preferred level of insurance in any given territory.

By definition, specialization implies that the number of possible alternatives in the event of an adverse shock is smaller. As a result, both employers and employees in that sector/region bear higher income risks. As argued by a recent stream of welfare state research (Mares 2003; Estevez, Iversen, and Soskice 2001; Iversen and Soskice 2001: 875-895), this fact conditions heavily their preferences about redistribution. The higher the levels of asset specificity (which parallels economic specialization), the higher the
support for redistribution and the more likely it is that employers and employees will endorse a common and more generous insurance system.

This logic is also very relevant for the analysis of preferences regarding different institutional designs, in that economically specialized regions are likely to show a rather different structure of incentives compared to non specialized ones. The losses attached to possible adverse circumstances are larger and so is the uncertainty about future income. In this context, it is possible to conceive of a theoretical link between the degree of specialization and the evaluation of the insurance properties of different territorial designs of the welfare state.

To understand the role played by cross-regional differences in terms of labor market specific risks, consider a scenario in which the region and the union have similar socio-demographic structures ($\lambda = \lambda_u$). However, the region is poorer than the union ($y < y_u$) and has a higher degree of economic specialization ($\sigma_z, \theta > \sigma_{zu}, \theta_{zu}$).

Figure 2 presents a simulation, based on expression (4), that represents this scenario. Figure 2 shows the gains in utility of remaining decentralized for a region.

---

22 Specialization also matters in that it affects factor mobility. In the presence of specialization, perfect factor mobility is no longer in place. A highly specialized sector of the labor force is less re-employable anywhere else in the country. Hence, those individuals have little incentives to move since there is not much demand for their skills. A prominent example here is provided by the fishermen of Nova Scotia (Canada). A similar logic applies to capital: specialized industries need labor with a particular set of qualifications that is not necessarily available all over the country. Thus they have an incentive to sacrifice some of their returns, in the form of taxes, to employ a better equipped labor force, as opposed to moving automatically to any region offering a capital tax reduction equal to or higher than the sum of the moving and the fixed cost left behind. Specialized capital and labor are, overall, less mobile, which in turn increases even further their exposure to risk (Wildasin 1995: 527-546) and binds them to agree on a set of common redistributive policies that suits the working of an economy. The expected pattern of behavioral responses by market actors to redistribution can then be considered a function of specialization.
poorer than the union as the risks associated to its levels of economic specialization \( (\sigma_z) \) increase.

It follows from Figure 2 that poor regions face a trade-off between the inter-regional income transfers implicit to centralization and their capacity to maintain their preferred policy choice in order to cope with their own specific labor market risks. When the degree of risks associated to economic specialization are sufficiently high \( (\sigma_z > 1.5) \), the payoffs of centralization (derived from income differences) are overcome by the costs of having the union’s preferred level of redistribution imposed. A specialized poor region
may choose to stay on its own in order to protect its capacity to choose how much redistribution is to be provided.\textsuperscript{23}

To sum up, poor regions must trade off the cost of having a fiscal policy different from the one they would have chosen for the gains from being able to obtain some of the richer regions’ wealth. The dilemma of wealthier regions is, in principle, easier since they have no incentive to centralize. In conclusion, given a political procedure in which constituent regions have veto power over the decision to (de)centralize fiscal policy, the choice of a particular territorial design of redistribution depends upon the internal composition of the union in terms of regional incomes and risk structures. If two regions have a similar degree of exposure to external shocks (0 in this case) and economic specialization, and their distributions of income are structured similarly, centralization is the expected institutional choice. Alternatively, decentralization is the expected outcome if the degree of exposure to external shocks varies across regions, regions show different degrees of economic specialization, and there are significant income disparities between regions. This is particularly the case in the narrow margins for political decision assumed in this section, since at least one of the regions has no incentive to centralize redistribution.\textsuperscript{24}

\textsuperscript{23} This logic is based on the risks associated with different assets and economic activities. It should be noted, however, that asset specificity may also affect the choice of fiscal decentralization through mechanisms other than insurance. For instance, Boix (2003: 165-168) analyzes how the potential redistribution of wealth derived from immobile natural resources (oil, diamonds, copper) affects the choice of independence by regions/colonies with an average income lower than the average income of the metropolis.

\textsuperscript{24} Note also that the idea that decentralization of redistribution is more likely to take place when social risks are not shared between regions is perfectly consistent with more normative considerations concerning the benefits of decentralization as a tool for dealing with informational problems associated with the functioning of the policy (see, among others, Oates 1999: 1120-1149). However, even so, the model shows that the underlying causal logic is a different one. Informational advantages may well help explain why a particular design remains over time, but tracing its origins to its alleged functional advantages subverts the sequence of causation.
An alternative way of thinking about the incidence of risks associated with asset specificity is the following. Suppose that \( y_u = y, w^m = w^m_u, \lambda_u = \lambda, \) but \( \sigma_z^2 \neq \sigma_{zu}^2 \). From expression (5) it follows that, under the aforementioned conditions, as \( \sigma_z^2 > \sigma_{zu}^2, t''_u > t'' \). Hence, no alternative institutional design is considered unless \( \sigma_z = \sigma_{zu} \), which is to say that any institutional option that implies a change in any of the parameters defining the current structure of inequality will be rejected by the regional median voter. The implications for the relation between the tax preferred in each of these cases and the utilities expected by the regional median voter are presented in Figure 3. Differences
across regions in the level of economic specialization generate incentives for
decentralizing because they produce varying degrees of exposure to income risks by
individuals in different regions, which, in turn, generates differences in the degree of
public insurance demanded by citizens across these regions. Thus, other things being
equal, economic specialization (derived from asset specificity) enhances fiscal
decentralization in that it widens the differences across regions regarding their risk profile
and their preferences for redistribution. Indeed, sufficiently high levels of specialization
may shape the preferences of relevant actors even up to the point of overcoming the pro-
centralization incentives of lower income regions, as illustrated by Figure 2 above.

2.2.3. Forces pro fiscal centralization in Emerging Unions: External Shocks and
Interregional Mobility

So far the argument has proceeded on the assumption that the only source of risks
like with individuals within regions. This unrealistic setting is useful in that it simplifies
the analysis of how different dimensions of the territorial structure of inequality (the size
of the tax base, the share of the dependent population, and asset specificity) shape
preferences for decentralization. These three dimensions derive directly from aspects that
are specific to the distributions of income of each of the regions of the political union.
This section takes the analysis one step further by looking at two factors that, in principle,
are external to the distribution of income of each of the regions, but ultimately contribute
to reshape it, thereby modifying the territorial structure of inequality and the scope of
risk-sharing between regions. These two factors are the presence of external shocks and
the patterns of labor and dependents mobility.
The intuition behind the importance of external shocks on the choice of a particular institutional design is as follows. Decentralized, fragmented institutional settings are unable to offer against unexpected changes in external conditions affecting the distribution of resources in society. In contrast, a centralized fiscal design pools risks across the lucky (e.g. those unaffected by external negative shocks) and the unlucky regions. Hence, insofar as regions lack any certainty about the future probability of suffering from a worsening in external economic conditions, the risk of suffering a negative external shocks affects all regions in the Union. As a result, the levels of risk sharing between them also increases, thereby creating incentives for the adoption of a more centralized fiscal structure.

To prove this intuition formally, external shocks are brought back into the model, by abandoning the assumption that \( \alpha = 0 \). As before, under any of the two institutional designs being evaluated, the tax rate will be the one chosen by the median voter. Both the union’s and the regions’ median voters will chose the tax that maximizes the consumption across the three stages. Then, the regional median voter compares the utility gains under fiscal centralization and fiscal decentralization, and makes her choice accordingly. The formal development of this exercise renders a long and rather tedious algebraic expression, whose main insight is better captured by way of comparing the tax rates that would apply to any given unit under the two institutional regimes.\(^{25}\)

If we define

\[
\theta = \lambda y + [2\beta (w^n)^2 (1 + \sigma_z^2)] \quad \text{and} \quad \theta_u = \lambda y_u + [2\beta (w_u^n)^2 (1 + \sigma_{z_u}^2)]
\]

as the terms capturing the incidence of labor market related individual specific risks on the

\(^{25}\)See Appendix II for a full explanation of the origin of these expressions.
utility of the region’s and union’s median voters; and, in turn, \( \Omega = [2\alpha_4(w^m_m)^2(1+\sigma_y^2)] \) and \( \Omega_u = [2\alpha_4(w^m_u)^2(1+\sigma_y^2)] \) as the terms capturing the incidence of external shocks on the utility of the region’s and union’s median voters, then it follows that

\[
t^m_u = 1 - \frac{(\alpha w^m_u + \beta w^m_u)}{\left(\theta_u + \Omega_u\right)}
\]

\[(6)\]

\[
t^m = 1 - \frac{(\alpha w^m_u + \beta w^m (1+\Omega))}{2(\theta + \Omega)}
\]

A comparison between \( t^m_u \) and \( t^m \) reveals that, other things being equal, the amount of insurance against regional specific shocks is always going to be higher under centralization. To provide a numeric illustration of such comparison, figure 4 displays what happens to the tax rate in both the union and the region as the incidence of external shocks increases in a situation in which all other parameters in the model are identical in both territorial levels.\(^{26}\) Fiscal centralization implies that public social insurance is provided by the union \( (t^m_u) \), whereas fiscal decentralization represents a scenario in which the region is in charge of social security \( (t^m) \).

\(^{26}\) The assumed parameters are \( \theta = \theta_u = 0.5 \), representing a low incidence of risks derived from labor market asset specificity; \( \alpha w_m, \alpha w = 0.4 \); and \( \beta w_m = \beta w = 0.5 \).
Figure 4 provides a graphical representation of how external shocks condition preferences for fiscal (de)centralization. The logic behind these numbers is straightforward. External shocks affect directly the distribution of income of societies. For instance, a negative shock like the Great Depression struck similarly many American States and Canadian provinces. By making them all poorer than before, the Great Depression increased the scope of risk sharing across sub-national units both in Canada and the United States. Accordingly, as I shall develop at length in chapter 5, the option of moving towards a more centralized fiscal system gained political support. The motivation is clear. If a negative external shock occurs under decentralization (S=−1), the unlucky region is unable to provide any insurance. Hence, the incorporation of external shocks into the argument brings into the politics of institutional choice a potential cost for fiscal decentralization. By implication, the more exposed regions are to these types of risks (affecting their sectors $\alpha$ in the model), the more incentives they have to prefer a
centralized design of redistribution; and, furthermore, the higher the number of regions within the union exposed to them the higher the chances for some element of fiscal centralization to be part of the fiscal structure of the union.\footnote{These conclusions are consistent with Persson and Tabellini (1996a: 979-1009) even though they argue from a rather different perspective. They treat designs as exogenously given and compare the outcomes of two possibilities: inter-regional incumbents level bargaining and nation-wide common vote. They find that the former leads to under insurance (the rich region is given more leverage in the negotiations) while the later provides over insurance (pooling potential recipients in a common decision making procedure boosts t). In our model regions are analyzed when deciding the institutional design and, similarly, need to balance whether they want to preserve autonomy (and therefore accept under-insurance against regional specific shocks) or guarantee insurance against a potential negative S (and therefore sacrifice autonomy).}

I turn now to analyze how the patterns of interregional mobility reshape the territorial structure of inequality. As the flow of people and factors moving across regions increases, so does the shape of the of the tax bases as well as the demographic structure of both the regions and the union as a whole (Epple and Romer 1991). Arguably, if the realization of mobility has these effects, the patterns of mobility (or the anticipation thereof) that can be generated under alternative policy designs play a role in the choice of the levels of fiscal decentralization. Highlighting the existence of this link is hardly original. However, in what follows I propose a slightly different way to conceptualize the ways in which interregional mobility shapes up the link between fragmented fiscal institutions, redistribution and inequality.

The conventional view about the effects of geographical mobility paints a picture of incumbents exploiting the fact that both capital and labor are perfectly mobile to try to export costs and increase their tax bases. Since all regional incumbents are aware of this, no one increases redistribution above the equilibrium level (Hindriks 1999:215-234).\footnote{The relationship between mobility and redistribution is an old subject in political economy. For arguments on the mechanisms through which factor mobility constrains decentralized redistribution, see, among many others, Oates (1968), Peterson and Rom (1990), Epple and Romer (1991), Christiansen et al. (1994), Glatzer and Konrad (1994), Prud’homme (1995), Oates and Schwab (1988) and Lejour and Verbon (1996).} In
what follows I work on a different set of premises. For a start, not everybody moves. While some factors may not be willing to, some others are simply not able to move across regional boundaries. This brings me back to asset specificity and economic specialization (Boix 2003). There are at least two reasons why the degree of specialization is likely to affect the mobility patterns of both capital and labor. The first one is that for the sake of common interest, the degree of conflict between capital and labor is reduced in the presence of economic specialization (Hall and Soskice: 2001). Given a degree of specialization, they are more likely to coordinate, and hence their approach to redistribution is not a zero sum game. Both capital and labor benefit from a stable relation (Mares 2001: 184-213): the former enjoy the continuity of an adequately skilled labor force, the latter employment stability and a reasonable level of insurance. Therefore, in this kind of context, capital is not going to move just because taxation is lower (Hiscox 2002: 593-609; Lucas Jr. 1990: 92-96)\textsuperscript{29}, nor is a labor force that (a) enjoys better working and insurance conditions than workers in a non-coordinated environment and (b), in the event of the sector collapsing, is not easily re-employed somewhere else\textsuperscript{30}. In the latter case only a share of the potentially “long term dependent population” may be attracted by the higher benefits provided by some other region.\textsuperscript{31} In sum, specialized capital and labor are, overall, less mobile, which in turn increases even further their exposure to risk (Wildasin 1995: 527-546) and binds them to agree on a set of common redistributive policies that suits the working of the economy. Alternatively,

\begin{footnotesize}
\begin{itemize}
\item[29] Hiscox (2002:603) reports evidence that in the USA for the period 1824-1994 variation in factor mobility depends on the variation, along the different stages of industrialization, in state’s and inter-industry coalitions.
\item[30] The literature on the negative effects on geographical mobility of future labor market prospects is very rich. Indeed, labor economists tend to treat migration as a human capital decision, affected by a similar set of factors. See, for a review of this literature, Benjamin, Gundersson and Riddell (1998:343-357).
\item[31] A prominent example here is provided by the fishermen of Nova Scotia (Canada).
\end{itemize}
\end{footnotesize}
people working in non-specialized sectors are considered to be more mobile given their higher chances of being re-employed. Thus, mobility is understood as happening mainly in the absence of specialization from the poor to the rich regions and, to a lesser extent, from the rest of the country towards the economically successful specialized regions.\textsuperscript{32}

In a context of selective mobility, these flows transform the incentives underpinning the choice of fiscal structures via two mechanisms: (1) a reduction in the differences across regions in terms of the risk profiles of individuals, and (2) by operating a multiplier effect that transmits to the rest of the union external shocks initially affecting a subset of its constituent units\textsuperscript{33}. As a result of both processes, the scope for risk sharing between regions increases, thereby changing the structure of incentives towards a more centralized fiscal structure.

By way of illustration of the first mechanism, I turn now to discuss the interplay between mobility and income differences in the absence of asset specificity. Consider two regions in which a share of the population (e.g. the non employed) of the poor region is free to move to the rich region. In this scenario, in the extreme case of perfect labor mobility, the only possible equilibrium is one in which “the two countries offer an identical tax and public good package” (Bolton and Roland 1996: 102; Hansen and Kessler 1999). To illustrate this logic in the context of our model, consider a hypothetical integration game between two regions that only differ in their income levels because they have different shares of dependent population.

\textsuperscript{32} Specific models of greater mobility of the poor have shown that, contrary to what is conventionally argued, it may lead towards higher equilibrium levels of redistribution. See Wellisch and Wildasin (1996: 187-217), Mazza and Van Winden (1996: 333-363) and Hindriks (2001:95-120).

\textsuperscript{33} On the basis of a 2x2 general equilibrium trade model, Hiscox (2002: 605) comes to conclude that "for any change in relative prices induced by a shift in trade policy or trade flows, the income effects for workers (capitalists) in different industries will be more similar when labor (capital) mobility is higher, all else equal".
In the absence of mobility and external shocks, the preferred level of redistribution is given by directly applying expression (5) above to both the rich (r) and the poor (p) region. In turn, in the presence of an inflow of dependents from the poorer to the richer region, the preferred level of redistribution in the rich region (r) becomes:

$$t^r = 1 - \frac{\beta w^r}{(\lambda^r + \delta \lambda^p) y + 2 \beta (w^r)^2 (1 + \sigma^2)}$$  \hspace{1cm} (7)$$

Where $\delta$ denotes the proportion of dependents in the poorer region that move to the rich region. In turn, the level of redistribution preferred by the poor region (p) is given by:

$$t^p = 1 - \frac{\beta w^p}{(1 - \delta) \lambda^p y + 2 \beta (w^p)^2 (1 + \sigma^2)}$$  \hspace{1cm} (8)$$

Given that the tax rate at the union level, $t^u$, is defined accordingly as a function of $\lambda^u = \lambda^r + \lambda^p$, it follows that

$$\lim_{\delta \to 1} t^r = t^u$$  \hspace{1cm} (9)$$

A recurrent inflow from the poor to the rich region implies that an increase in the share of the dependent population in the rich region is generated by a reduction in the dependent share in the poor one. Other things being equal, this leads to a higher level of risk sharing and, eventually, to a shift in the underlying structure of political incentives towards a more centralized fiscal structure.

I turn now to the interplay between mobility and the other two elements in the argument, namely the variation across regions in terms of asset specificity and the presence of external shocks. Consider a country formed by a rich-asset specific and a poor non-specialized region, where the regions have initially the same average income. Assume, additionally, that, due to exogenous circumstances, the economy in the non-specialized region collapses, creating a mass of redundant workers with general skills. Naturally, migration to the prosperous region constitutes an attractive option for these
workers. In turn, migrants trigger a multiplier effect that translates the shock suffered by the poor-non-specialized region into the rich-specialized one. This process works its effects through two mechanisms:

(a) If the inflow of immigrant workers is actually absorbed by the prosperous region, a homogenization effect on the risk profiles of the two regions will occur through the reduction in the level of specialization of the labor force in the recipient region. Other things being equal, the larger the inflow of non-specialized workers into the specialized region, the smaller the inter-regional differences associated with the regional specificity of labor markets.  

(b) Alternatively, the labor market of the recipient region is unable to absorb the new labor force surplus. As a result, part of this surplus becomes effectively an inflow of dependents, in which case the mechanism depicted in expression (9) operates again.

In sum, regardless of the specific mechanism at work, cross-regional mobility by workers and/or dependent citizens works towards the centralization of fiscal structures by increasing the scope of risk-sharing between regions.

2.2.4.- Balancing Motives: what form of fiscal centralization?

The real world does not abide by the analytical simplifications imposed in the preceding sections. Indeed, modern multi-tiered systems are complex entities whose political elites often find themselves trapped by competing motives. Such is the case when high levels of diversity in income and/or asset specificity overlap with an

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34 In terms of our model, if \( \phi \) denotes the share of the surplus labor force being reinforced being absorbed by the non-specialized industry of the rich specialized region, then \( \frac{\partial \left| \sigma' - \sigma^p \right|}{\partial \phi} < 0 \)
overarching external shock, or with high levels of mobility within the dependent’s population. Given that the former create incentives to decentralize fiscal redistribution while the latter produce the exact opposite effect, how are these competing motives to be balanced?

This conundrum is best exemplified by the options available to the incumbent of rich, highly specialized region facing an inflow of dependents as a result of an economic recession in neighboring regions. I have just shown how, once it occurs, the mobility of workers and dependents will alter the preference of the median voter of a rich specialized regions, driving her towards fiscal centralization. Yet I have also shown that fiscal centralization has an income effect that antagonizes the interests of the median voter of the rich specialized region before mobility occurs. Recall that as income differences between regions increase, the incentives of rich regions to accept fiscal centralization decrease. Thus, given the effects that the actual inflow of immigrants will have on the tax base and the preferred level of redistribution, incumbents in rich regions have a very strong incentive to react to the possibility of an unwanted inflow of dependents before it actually happens. In sum, the issue at stake is how to contain the amount of risk-sharing between regions, such that fiscal centralization remains an unwanted option.

In pursuing this goal of avoiding the prospects of full fiscal centralization, richer regions have incentives to devote significant amounts of resources to improve poor region’s economies. Such effort normally takes the form of a system of inter-regional redistribution (Hansen and Kessler 1999). This transfer can take several forms . (Buchanan 1950; Boadway 2001; Cremer et al.). For instance, to avoid an unwanted
inflow of people who are not easily employed in the local economy, the specialized region has an interest to regulate, for that particular policy, a set of national standards that eliminate anybody’s incentives to move and, accordingly, to substantially increase inter-regional transfers, so that all regions can meet the provisions required by national standards. Alternatively, the rich region may simply transfer some resources to the less favored areas for particular purposes, yet without imposing a particular set of standards to be met (e.g. the structural funds in the European Union). Through these transfers, richer regions insure themselves against the unwanted effects of the economic downturn of poorer ones. Hence, horizontal redistribution can be understood as a second best solution for rich regions in the presence of mobility. Between their ideal word (full fiscal autonomy) and their worst nightmares (full fiscal centralization), moderate horizontal transfers operate as a buffer that allows them to keep (vertical) fiscal autonomy while containing the potential costs of mobility and external shocks.

This possibility broadens the range of institutional choices available to regional incumbents in emerging unions. In a hypothetical situation in which all regions are specialized in different sectors of production, the model predicts that decentralization prevails. In the event of an external shock (S), however, the distribution of preferences will not lead to centralize the fiscal system unless the shock is of an overwhelming magnitude. The cost for wealthier regions would simply be too high. Rather, both regions would agree to develop a system of inter-regional transfers that provides some

35 A similar process would take place if the circumstances of this case were reversed and the region hit by the unit specific shock happened to be the specialized one. An often mentioned example here is the way Canada has handled the economic crisis of its maritime provinces (Coulombe 1999).

36 Even in the case of massive shock affecting a majority of the regions, centralization may not be the outcome if the inter-regional differences in terms of labor market specialization are large enough. To this effect, the case of unemployment insurance in the United States in the context of the Great Depression constitutes a particularly intriguing case on which I will elaborate later in the book (chapter 5).
insurance against S. This system is a second best solution for both poor and rich regions. Poorer regions prefer it to full fiscal decentralization while richer regions prefer it to full fiscal centralization. Yet the important point to note is that a combination of vertical fiscal decentralization with some level of horizontal fiscal redistribution only gains political support when both the forces pro-decentralization (income differences, asset specificity) and the forces pro-centralization (external shocks, mobility) influence simultaneously the scope of risk sharing between regions. In the absence of either set of influences, such bi-dimensional fiscal structure is not considered.

2.3.- Beyond Emerging Unions: historical legacies and institutional contingencies.

In an effort to render analytically tractable the links between the territorial structure of inequality and the choice of fiscal structures, I have so far assumed the simplest version of the political status quo. Fiscal policy integration emerges as a result of an integration process within which every sovereign pre-constituted political unit enjoys effective veto power. While these assumptions fit well the historical evolution of some multi-tiered systems, such as the European Union, they do not make justice to the political status quo in many other realms in which the translation of institutional preferences (as determined by the territorial structure of inequality) into actual choices about the design of fiscal structures is far more complex. This section addresses the issue of how alternative definitions of the status quo shape the main predictions of the model. I

Indeed Alesina et al. (2001) have identified this combination as the most efficient institutional rule for federations in that it respects local differences at the same time as providing insurance to the regions. However, efficiency gains may be undermined by a potential moral hazard problem pointed out by Persson and Tabellini (1996b: 623-646): localities may undertake redistributive policies that increase the probability of having a unit specific shock.
focus on two other types of multi-tiered systems, namely existing federations and dissolving unions.

2.3.1 Existing Federations

Federalism is a specific form of fragmentation of political power. The existence of several levels of government is a necessary, yet insufficient, condition for federalism to exist, as every state is articulated around some vertical hierarchy among different levels of government. What distinguishes federations from unitary states, unions or confederations is the particular way in which this hierarchy is organized. As opposed to emerging unions or unitary states, federations and confederations show an architecture of government with dual structures, driven by a process of bargaining between a number of constituent units and a center. Federations and confederations face a similar dilemma, namely how to address the combination of self-rule and shared-rule (Elazar 1987). Yet, they offer clearly distinctive solutions. Confederations emerge when constituent units join efforts to create a common government that has very limited and well defined powers and is fiscally and electorally dependent on them. Fiscal dependence implies that the common government lacks its own fiscal base, whereas electoral dependence refers to the fact that the members of the central government are delegates of the constituent units. The United States during the period 1776-89 or the evolving European Union are two relevant examples. Thus, confederations befit much better the assumptions about the political process I have relied upon so far.

In contrast, the balance of power between the center and the units is substantially different in federations. In a federal system, both constituent units and the central

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38 It goes without saying that these negotiations (and their outcomes) require a set of guarantees that are only effective in the context of democratic regimes (Dahl 1983).
government have constitutionally recognized autonomous powers to interact directly with citizens (Dahl 1983; Watts 1999; Riker 1975). The autonomy of these two levels of government is effectively guaranteed through formal constitutional protections and a strong judicial review system. In addition, both the center and the regions have their own fiscal bases and are directly accountable through elections. Thus, central governments in federations (as opposed to confederations) enjoy a much stronger institutional position vis à vis subnational governments. Within this particular institutional context, there is a fundamental tension between executives appointed to pursue particularistic (territorial) interests and the federal government, appointed to pursue the general interests of the citizenry. The inherent tension between the two levels of government is the engine behind the institutional dynamics of federations, often seen as a series of evolving unstable equilibria (Bednar 2005). As a result of these dynamics, federations themselves vary both cross-nationally and over time in the way they balance particularistic and general interest in the formation of the general will.

In what follows, I argue that as far as existing federations are concerned, these differences become a key element in the political process linking the territorial structure of inequality to institutional choices about the level of fiscal decentralization and subsequent distributive outcomes.\(^{39}\) A change in the territorial levels of inequality triggers substantially different political processes depending upon the patterns of interaction between national and regional elites. The desire to protect local interests is more likely to shape the overall response of the federation in those cases in which the representatives of territorial interests are directly elected and national, vertically

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\(^{39}\) A number of scholars have recently focused on how these differences plays into other dimensions of the macro-economics of federalism (Wibbels 2005; Rodden 2006; Rodden and Wibbels, 2005; Diaz-Cayeros 2006).
integrated party organizations are relatively weaker. In such cases, interregional inequalities will translate into larger levels of fiscal decentralization, which in turn sustains and reinforces pre-existing inequalities. In contrast, when the electoral system creates incentives for parties to coordinate their actions across regions, and federal institutions are articulated around a nationalized party system, an exogenous transformation in the territorial structure of inequality will not automatically lead to an institutional adjustment driven by the protection of local interests. Local interests will no doubt be present and protected, but they will be tempered by other elements within the broader agenda of national parties. As a result, changes in the territorial structure of inequality will not be directly reflected into changes in the design of fiscal structures.

To capture the mechanisms driving this process, consider the interplay between federal and subnational governments in the event of an exogenous transformation of the territorial structure of inequality. Take a federation of n regions varying in income and moderate levels of fiscal decentralization. Under the status quo the rich regions collect 100% of the revenues generated in its territory but can only keep, manage and spend 50% of these revenues. The other 50% is redistributed by a centralized social security agency to dependent individuals throughout the country. These individuals are unevenly distributed across regions (60% are in the poor regions, 40% in the rich regions). As a result, under the status quo poor regions receive a net transfer equivalent to 30% of the revenues generated by the rich regions. Suppose now that an economic recession alters the distribution of dependent population such that the share of dependents living in the poorer regions increases up to 70%. Absent any reform of the fiscal structure, the net transfer out of the rich regions would mount now to 35% of their revenues. In pure economic logic, the regional incumbents of the rich region must are compelled to challenge the existing
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fiscal structure in that reforms of fiscal structures in federations are a zero-sum game: the gains of one particular region come at the loss of others.\textsuperscript{40} Hence, at the very least, they should file in for a reform to increase the share of revenues they can keep to 57\% so that the net transfer to the poorer regions remains essentially unaltered after the recession (30.1 \%).

Such would be the rational reaction of any regional incumbent exclusively concerned with the welfare of her particular constituency. Nationalist and regionalist parties in places such as Spain or Italy are a case in point. However, a large share of regional incumbents in federations belong to political parties that are either in office or competing for office at the federal level. These parties/incumbents need to maximize the utility of individuals across several constituencies. Thus, incumbents operate as agents of two principals. Subject to the distinctive will of their subnational electorates on the one hand, and their national party (or coalition of parties) on the other, regional incumbents in federations have their loyalty divided.

In consequence, the incentives of regional incumbents to immediately translate a change in the territorial structure of inequality into a demand to reform the existing fiscal structure are less straightforward than it may appear. To the sheer economic calculations, regional incumbents must add now a political dimension. What are the potential costs and benefits of pursuing the adjustment of the fiscal structure of the federation to one’s (regional) interests? And what do they depend upon?

In addressing these questions, it is useful to conceive of exogenous changes in the territorial structure of inequality as triggering an strategic interaction between the regional incumbent and her national counterparts (which for convenience I shall assume are in office) such as the

\textsuperscript{40} If we define $\Delta E[U(c)]_i^r$ and $\Delta E[U(c)]_u^r$ as the change caused by the reform on the expected utility of individuals living in, respectively, region $i$ and the union., this can be seen from the fact that

\[
\Delta E[U(c)]_i^r = \sum_{i=1}^{n} \Delta E[U(c)]_i^r
\]
following. The regional incumbent can opt between challenging or protecting the existing fiscal structure (status quo). Alternatively, for any given proposal by a regional incumbent, the federal government can either accept it or overrule it. The structure and payoffs in this game are self-evident. The federal government will support those regions whose proposal maximizes its expected electoral support. In turn, the regional incumbent will support change in the status quo only if the expected economic gains, together with the political gains derived from the mobilization of supporters, overcome the political costs incurred. These costs, in turn, depend on what the federal government is able to do.

National incumbents (and/or party elites) have several tools at their disposal to create selective incentives conducive to moderate the tendency of regional incumbents to privilege their own electoral fate relative to the national party’s. An obvious device, recently revisited by the Diaz-Cayeros in his study of tax centralization in Latin American federations (Diaz-Cayeros 2006), is the control on the career path (and therefore the life course expectations) of politicians. A regional incumbent behaving against the interest of the party is unlikely to be rewarded in the future with nominations to higher level offices. A second mechanism, that presupposes that the national party is in office, operates through the distributive incidence of other policies controlled by the federal government, either distributive or regulatory. Part of the success of any regional incumbent in federations depends upon her record as a broker in front of the federal government. Public investment decisions, environmental regulations, tariffs or exchange rate decisions, i.e., virtually any major policy decision by the federal government may have highly relevant effects on the regional economy. Thus regional incumbents in

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41 As defined by the differences, within its supporting coalition, between those supporting a change in the status quo and those supporting its continuation.
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federations must build into their calculations the potential responses by the federal
government across the board of government policy. This second mechanism, however, is
contingent upon the relative importance of different regions within the winning coalition
supporting federal incumbents. When making policy decisions, national party elites do
not pay similar levels of attention to all regions within a federation. They will tend to put
more political and economic efforts into those regions that are absolutely necessary to
secure office, and to be less attentive to those other regions in which they not hoping to
draw much electoral support.42

Hence, one could represent the choice of the regional incumbent according to the
following utility function:

\[ EU(ch)^r = \{ E[U(c)_{ch}^r] - E[U(c)_{sq}^r] \} + \pi - (\phi y^r + \psi) \] (10)

from which it is straightforward to see that regional incumbents will only challenge the
status quo to promote their particularistic local interests if

\[ \{ E[U(c)_{ch}^r] - E[U(c)_{sq}^r] \} + \pi > (\phi y^r + \psi) \] (11)

where \{E[U(c)_{ch}^r] - E[U(c)_{sq}^r]\} denotes the fiscal benefits to be expected from the
reform (ch) as opposed to sustaining the status quo (sq) given the new territorial structure
of inequality, \(\pi\) defines the expected political benefits from challenging the status
quo, \(\phi y^r\) represent the costs in terms of aggregate regional income \(y^r\) from the “policy
retaliation” by a federal government supportive of the status quo, and, finally, \(\psi\) depicts

42 The latter may be due to structural conditions (population density) or political reasons (e.g. subnational
units dominated by secessionist movements).
the political costs in terms of career prospects and future support from the national party leadership.

In terms of guiding empirical research, the key question is what factors shape the value of the different terms included in (11). $\pi$ varies depending on the differences in the structure of political competition between the region and the union. The more distinctive the cleavage structure or the nature of the subnational party system, the higher the value of $\pi$, and therefore the stronger the incentives to challenge the status quo.\footnote{Or, if preferred, the larger the political costs of respecting it.} In turn, $\phi$ is a primarily a function of the relative weight of that particular region within the supporting coalition of the national party at the federal level. As the importance of a particular region within such coalition increases, the “retaliation” capacity of the federal government declines, and so does the value of $\phi$.\footnote{In some cases, the relative importance of a particular territory for the national coalition (e.g. Cataluña or Andalucia for the Socialist Party in Spain) limits completely the capacity of the federal government to keep a tight leash on its regional representatives through federal public policy. In those cases, $\phi = 1$.} Finally, $\psi$ brings in the nature of the institutional status quo into the calculations of the regional incumbent.

What determines the capacity of national leaders to condition the behavior of regional incumbents, and more specifically, to modulate reforms to adjust the fiscal structure of the federation in response to a change in the territorial structure of inequality? A rich literature on federalism has addressed closely related issues within a more general effort to understand the variance in the economic performance of federations. I argue that some of the main lessons to be drawn from this literature have direct implications for the
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analysis of $\psi$ as the set of mechanisms through which the territorial structure of inequality conditions the choice of fiscal structures.

The key issue for modern theorist of federalism is precisely how to preserve the autonomy of local elites while limiting their incentives to distort the market at the same time (De Figueirido and Weingast 2005).45 Obviously, the first place to look for an answer to this question is the set of formal decision making rules and procedures (Inman and Rubinfield 1997b; Cremer and Palfrey 1999; 2000).46 The logic is simple and compelling: different procedures create different sets of winners and losers depending upon the composition of preferences within each unit and the federation as a whole (Dixit and Londregan 1998). Hence, under any particular design, actors will make use of their strategic advantage to maximize the rents they are able to extract. In the context of this theoretical rediscovery of the economic consequences of formal political institutions (Persson and Tabellini 2003), upper chambers, as the institutional mechanism linking subnational specific interests to national policy making, have received particular attention. The recent work by Wibbels (2005) on the determinants of market reforms in developing federations has placed the system of representation of regional interests at the

45 This presupposes that a sheer overrule of local authority by central government is not an optimal solution. Economists repeatedly contend that strong executives elected by national constituencies are in order if efficient national policy is to prevail over vested local interests (Inman and Rubinfield 1996; Breton 1996; Eichengreen and Von Hagen 1996; Wildasin 1997; Persson and Tabellini 1996b). Yet, an excessive empowerment of the central executive provides no magic solution. For one, it defeats the very purpose of federalism in that it effectively eliminates the self-rule by constituent units. Second, an unrestrained national executive has plenty of incentives to overrule regional and local governments and extract a larger share of rents. In addition, strong central governments become themselves targets for rent-seeking practices, including bailout claims (Wibbels 2005; Rodden 2006), thereby endangering the workings of the market.

46 This literature complements a second set of theoretical models that focus on the differences between federal and unitary polities. For instance, Persson and Tabellini (1996a) have pointed out that the balance between risk-sharing and redistribution depends upon the formal rules of decision making: while centralization leads to overinsurance and larger levels of redistribution, bargains among constituent units produce underinsurance and a smaller fiscal system.
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center of the analysis. Given that policies are made at the national level, the fate of market reforms is in part explained by the ability of regions to use their formal representation in national institutions to obstruct or shape reforms. Wherever upper chambers play an important role in defining market reforms, the nature and scope of reform reflects the bargaining power of the regional coalitions for and against specific policy changes.47

Yet, as far as the link between inequality and fiscal structures is concerned, the important dimension is not the strength of second chambers per se, but rather how their members are appointed. This, in turn, speaks to a second mechanism mediating the way in which regional incumbents weight their loyalties to their two principals in the event of an exogenous change in the territorial structure of inequality, namely the balance of power between national and regional elites within the party system.48 In fact, to the extent that the degree of nationalization of the party system is itself a function (among other factors) of the way local interests are represented at the federal level, these two mechanisms work their effects jointly.

47 Reasoning along similar lines, Diaz-Cayeros et al. (2003) contend that unicameralism and parliamentarism reduce capital spending since they limit the number of independently elected politicians that must assuage their constituents through particularistic projects. In turn, Gibson, Calvo and Falleti (2004) show that if poor, underpopulated units are overrepresented in the upper chambers, federalism severely constrains macroeconomic efficiency. Finally, Wibbels (2003) shows that strong and malapportioned senates increase the probability that a pro-bailout coalition emerges.

48 Wibbels (2005) analyzes the degree of partisan harmony as a mechanism that facilitates the coordination among regional and national incumbents, thereby facilitating the conditions for a more successful policy change. But it is Rodden’s (2006) analysis of fiscal discipline in federations that analyzes more in detail the mechanisms through which the design of the party system shapes the interplay between national and subnational elites. Under unclear divisions of authority, governments at different levels have incentives to transfer the fiscal burden of their policies to other levels. In particular, subnational governments have an incentive to incur debt and hope to be bailed out by the center whenever the financial crisis reaches its limit. Because regional governments do not know how committed to fiscal discipline the central government is, they will adjust their fiscal behavior according to their expectations regarding the central government’s resoluteness. Integrated national party systems, Rodden argues, make the resoluteness of the central government more credible and facilitates the enforcement of fiscal discipline by reducing the incentives for regional incumbents to behave irresponsibly.
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The key distinction here is whether “senators” are directly appointed by the people in open, competitive, elections, or indirectly appointed through procedures on which national party elites hold a tighter grip. In the former case, “senators” will be re-elected to the extent to which they are able to deliver to their local constituency. This strengthens the links between incumbents and local constituencies, and steers incumbents’ loyalty towards the protection of local interests. Hence, should a change in the territorial structure of inequality require a change in the levels of fiscal decentralization, directly appointed representatives will race to voice their request for an adjustment suitable of their particularistic interests. This reaction is part of their very logic of political survival. In contrast, such logic is very different when appointments to upper chambers and, indeed any other office, are dictated by heavily institutionalized party organizations.

In the latter context, an integrated party system affects the incentives of subnational incumbents in two different ways. First, local elites regarded as a liability for the overall electoral profile of the party face severe consequences in terms of their own political careers. As a result, other things being equal, the opportunistic behavior by local incumbents is likely to be constrained.\(^{49}\) Second, an integrated national party system helps solve the commitment problem between incumbents at different levels of government by intertwining their political fates. As partisan harmony and electoral coattails feed back on each other, they also nurture the long-term cooperation between different levels of government and the party’s organization. Therefore, commitments

\(^{49}\) To see how variation along this dimension shapes the economic outcomes of federations, see Wibbels 2001; Rodden and Wibbels 2002; Enikolopov and Zhuravskaya 2003.
between local and national elites gain credibility, which in turn facilitates the renegotiation of existing federal arrangements.

In addition, there is a second dimension of the structure of the party system that is even more relevant to our concerns, namely the differences across regions in terms of the structure of political competition. By that I refer to the extent to which the structure of relevant political cleavages varies across subnational units.\(^{50}\) This not only depends on the electoral coattails of national party systems, but also on other factors external to them. By way of illustration, consider the cases of Quebec (Canada), Lombardia (Italy) or Cataluña (Spain). The mobilization of special interest politics and identity related cleavages by local parties in these regions forces the representatives of national parties to adjust their platforms in ways that often come very close to the limits of the acceptable by the these parties’ elites. In turn, if the region in question is important for the future articulation of a winning coalition, the margin of national elites to overturn their local representatives is much smaller.\(^{51}\) This dynamics makes the subnational party system very different from the national one, forces the regional branches of national political parties to pursue a more radical platform than they would do otherwise, and limits the ability of national party leaders to steer the behavior of their regional representatives. More importantly, this dynamics directly affects the extent to which the changing patterns of territorial inequalities get translated into changes in the existing fiscal structures.

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\(^{50}\) This analysis of the economic consequences of this dimension of federations lacks scholarly attention. Only recently, Rodden and Wibbels (2005) have tapped on it in their attempt to measure the magnitude of electoral coattails in federations. However, the magnitude of coattails constitutes just one aspect of the structure of political cleavages within subnational units.

\(^{51}\) In contrast, if the national party “discounts” a particular region, then its elites have an incentive to make an example of their representatives there (should they challenge the official party line in an attempt to conquer some electoral presence). In the party leadership’s calculus, the cost of “sacrificing” a local official are overcome by the electoral rewards obtained in other parts of the union.
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Recall our previous example. As a result of a change in the territorial structure of inequality, the relatively richer regions of the union lose 5% of their total revenues. In addition, suppose now that the regional incumbent of the region belongs to the party that is in office at the federal level and that elections at the regional level are coming up soon. In the absence of a strong local party, exclusively committed to the interests of the citizens of the region, the regional incumbent would be willing to moderate, at the request of the national government, the pressure to reform the fiscal system so that the relative position of his region improves. In contrast, subject to the monitoring and competition of a party whose platform is built exclusively on the protection of local interests, the regional incumbent will not be able to attend such request. Rather, she would take the lead demanding an immediate reform to limit the political space of the adversary and increase her own chances of political survival. In conclusion, the value of $\psi$ declines as party systems and patterns of political competition become more heterogeneous across subnational units, thereby facilitating the transmission of new (exogenously) created territorial inequalities into a reform of existing fiscal structures. In contrast, the more homogeneous the patterns of political competition, and the larger the control by national political parties of the selection and functioning of upper houses, the lower the incentives of regional incumbents to challenge existing fiscal structures will be. As a result the reflection of the new territorial structure of inequality into the levels of fiscal centralization will be much paler.

Dissolving Unions

I turn now to analyze briefly the relationship between inequality and the decentralization of fiscal redistribution in those multi-tiered systems that emerge from a previously
centralized polity. I refer to these entities as *dissolving unions*. The status quo in these cases is one of full fiscal centralization. Thus, the national government, and the national parties supporting it, are the key decision-maker in the event of a modification of the territorial structure of inequality. Under such circumstances, a number of regions (e.g. net payers/current losers) will demand an urgent modification of the federal fiscal arrangements to improve their relative position. The question is then under what conditions the federal government will accept such reform. To analyze this decision, consider the utility to be expected by the central government from sustaining the status quo.

\[ E U (sq)^u = \{ E [U (c)_{sq}]^u - E [U (c)_{ch}]^u \} - (\pi - \kappa) - (\phi - \xi) \]  

The first term of the equation defines the expected utility effects of sustaining the status quo (*sq*) as opposed to promoting a change according to the demands of a particular region (*ch*), given the new structure of inequality in the union. If the net value of the first term of the equation is positive, this implies that the government expects to derive electoral benefits from sustaining the status quo (and vice-versa). Yet there are other factors shaping the federal government decision: the second term represents the difference between the scope of the political mobilization in support of the adjustment of fiscal structures proposed by the region (\(\pi\)) and the magnitude of the opposite type of political mobilization, namely that emerging to support the continuity of existing fiscal structures (\(\kappa\)). Finally, the last term in (***) denotes the cost differential for the stability of the party (or coalition of parties) of the federal government between supporting the existing levels of fiscal centralization (\(\phi\)) or their decentralization (\(\xi\)).
From (12) it follows that the federal government will protect existing levels of fiscal centralization if

\[
\{ E[U(c)_{sq}]_i^u - E[U(c)_{ch}]_i^u \} + \kappa + \xi > \pi + \phi
\]  

(13)

Analytically, expression (13) suggests several leads to guide empirical research. The first term suggests that the federal government cares primarily about the economic gains of the citizens of the union, and not of those located in one particular region. As a result, insofar as the potential losers of the reform are scattered around several regions throughout the union, a majority of the citizens (and therefore potential voters) will show positive values in the first term, thereby creating strong incentives for the central government not to accept any move towards fiscal decentralization. In addition, to the extent that the fiscal constitution becomes politicized, the mobilization of supporters of the status quo (\(K\)) adds yet another constraint to the ability of an electorally motivated incumbent to pursue fiscal decentralization. Thus, the mobilization of current winners of a fiscally centralized system limits the possibilities of endorsing the claims of those regions that, given the dynamics of the territorial structure of inequality, would be better off under a more decentralized fiscal structure.

This truism is only tempered by two additional factors, also captured in (13). The magnitude of mobilization efforts by those in support of adjusting the fiscal constitution (\(\pi\)), and, more importantly, the political leverage of regions pro change within the coalition supporting the federal government (\(\phi\)). Indeed, as suggested by the evolution of fiscal federalism in Spain during the 1990s or the constitutional reform in today’s Italy, the bargaining power of regional parties at the federal level can force the national
government to overcome the aforementioned constraints and pass a reform that would not pursue otherwise. Yet even under those special circumstances, the scope of the decentralizing reform will be tempered by the need of national parties not to compromise their own internal stability ($\xi$).

In sum, an exogenous change in the territorial patterns of inequality in a context of fiscal centralization is very unlikely to lead into a process of fiscal decentralization. This will only occur under very specific political circumstances (i.e. the promoters of the reform being part of the coalition supporting the government at the federal level). In contrast, one might generally expect a different political process, one in which current winners mobilize through national political parties in support of the status quo. As a result, I would expect to see continuity, if not further centralization, in existing fiscal federal arrangements, coupled with an ever louder chorus of regional parties challenging them. The resilience of the fiscal constitution will foster the political mobilization of parties defending “special” territorial interests, thereby increasing the salience of the federal fiscal constitution as a political cleavage. This general picture, peppered with those historical junctures in which reformist parties are able to pass partial decentralization efforts, suggest that, within dissolving unions, increasing inequalities do not automatically bring about further fiscal decentralization. Rather, inequality works its effects towards decentralization very slowly, always under the tight leash of national parties (or coalitions).
2.4.- - A summary of empirical implications.

In what follows I present an outline of the empirical implications that can be derived from the argument I have presented in this chapter.

**H1**: the levels of fiscal decentralization are a function of the scope of risk sharing between regions, which in turn are determined by the territorial structure of inequality.

By risk sharing I mean the extent to which regions have a similar profile in terms of the types of risks they are facing. In this sense, it is a function of the combination of the two different types of risks I have incorporated into the model, namely individual specific risks and regional external shocks. Analytically this helps explain the conditions under which a specific fiscal structure is chosen in a particular field / country (e.g. why is it that no pension system in the world is actually decentralized?).

**H2**: the specific design of fiscal structures in federations reflects the balance between those dimensions affecting the territorial structure of inequality that work towards fiscal decentralization (income and asset specificity), and those dimensions of factors (such as mobility and external shocks). As a result, exposure to external shocks and high levels of (potentially) disturbing labor and dependents mobility lead to a larger use of transfers between territories (horizontal redistribution) as a way to overcome the trade-off between the gains of decentralizing (vertical) fiscal redistribution and the lack of protection against shocks external to the region. Thus, it should be observed that the more exposed to external shocks (including potential dependent’s mobility), the larger the flow of horizontal transfers between members of the union (or fiscal imbalance).

**Table 1 summarizes the expectations:**

<table>
<thead>
<tr>
<th>Differences in:</th>
<th>External Shocks/ (potential)Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>*Income</td>
<td>Mixed System.</td>
</tr>
<tr>
<td>*Risks</td>
<td>Generous horizontal redistribution coupled with little vertical redistribution</td>
</tr>
<tr>
<td>*Dependent Population</td>
<td>Fully Decentralized Redistribution</td>
</tr>
<tr>
<td></td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Centralized Redistribution (Efficiency Effect)</td>
</tr>
</tbody>
</table>
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**H3:** The extent to which the territorial structure of inequality reproduces itself into the adoption of (de)centralized fiscal structures is contingent upon the institutional status quo.

**H.3.1** First, the impact of inequality on decentralization is most straightforward in *emerging unions,* that is to say in multi-tiered systems where subnational units are fully represented and enjoy veto power during the early stages of political integration. Under these institutional circumstances, different regional risk profiles facilitate the adoption or resilience of highly decentralized fiscal structures, even when other aspects of political integration progress successfully.

**H.3.2** Second, in the case of *existing federations,* the impact of territorial inequalities on the institutional design will be muted by the existing power sharing arrangements among the members of the federations. Subject to a sudden transformation in the territorial levels of inequality, regional and federal incumbents must adjust the system to the new distributive scenario. In adjusting, regional and national political elites face a trade-off between the protection of their own interests and costs of not-coordinating with the other members of the union. The way in which this trade-off is solved depends upon the balance of power between national and regional political elites. This, in turn is a function of the following three factors: the system of representation of territorial interests at the national level, the level of centralization of the party system, and the degree of heterogeneity in the patterns of inter-party competition.

**H.3.3** Third, the argument predicts that in pre-existing fiscally centralized contexts where regional leaders have little institutional leverage (*dissolving unions*), increasing regional inequalities are reflected into higher levels of polarisation between a minority of mobilized (rich) regions and a majority of supporters of the status quo. Thus, the resilience of fiscal centralization is the likely distributive outcome, in intimate coexistence with increasing levels of regional assertiveness.

[Note: CHAPTERS 3-6 DEVELOP A THOROUGH SCRUTINY OF THESE EMPIRICAL IMPLICATIONS ANALYSIS OF THESE EMPIRICAL IMPLICATIONS, as outlined in chapter 1. In fact, the final part of chapter 1 should probably be expanded a bit and moved here as a small chapter justifying some methodological choices and introducing the empirical chapters. I will decide about this once the rest of the chapters are finalized and the overall Gestalt of the book is clearer].
Appendix I: income differences, dependent population and asset specificity

In an economy in which \( \alpha = 0 \), an individual’s expected utility function of at the regional level is defined as follows:

\[
E[U(c)] = \beta \int U_{\beta} \delta f(z_i) + \lambda y_t - \frac{\lambda y_t^2}{2}
\]

where \( z_i \) depicts the unknown incidence of individual specific risks. Substituting (4) into (a.1) yields,

\[
E[U(c)] = \beta [w'(1-t) - (w')^2(1-t)^2(1+\sigma_z^2)] + \lambda y_t - \frac{\lambda y_t^2}{2}
\]

Any given individual will choose the tax rate that maximizes her after tax income. The relevant partial derivative becomes:

\[
\frac{dE[U(c)]}{dt} = -\beta w' + (1-t)\lambda y + (1-t)[2\beta (w')^2(1+\sigma_z^2)]
\]

The solution to the resulting first order condition follows:

\[
t^* = 1 - \frac{\beta w'}{\lambda y + 2\beta (w')^2(1+\sigma_z^2)}
\]

Similarly, it is possible to define the tax rate that an individual of a union (u) in which one sector of the working population is exposed to a certain degree of individual specific risks while the other sector of the population consists of the dependent population. Note that,

\[
\beta_u = \frac{\beta_1 + \beta_2}{(\beta_u + \lambda_u)},
\]

which is to say that the relative weight of the economically specialized sector in the union is not necessarily similar to the one in the region. Nor is, as a result, the incidence of individual specific risks for workers in \( \beta_u \). By analogy, the tax rate chosen by any
member of the union is the one that maximizes the union’s members after tax income, i.e.,
\[ t^*_u = 1 - \frac{\beta_u w^i_u}{\lambda_u y_u + 2 \beta_u (w^i_u)^2 (1 + \sigma^2_u)} \] (1.6)

From (1.4) it is straightforward to see that the larger the dependent population, the larger the preferred tax rate. In addition, consistent with previous insights (Varian 1980; Iversen and Soskice 2001), expression (1.4) also shows that when the risk inherent to the people working in the specific sector increases, the preferred tax rate also increases, paralleling the demand for insurance. And this holds for any given territorial unit under consideration. Other things being equal, an increase in \( \sigma \) leads to a reduction in \( (1-t) \) and therefore to an increase in \( t \).

At this point, following Bolton and Roland (1997) and Alesina and Perotti (1998), assuming that redistribution is performed via a linear tax with an intercept helps simplify the problem. In this context (1) the equilibrium tax rate is the tax rate chosen by the median voter in both the union and the region and, equally, (2) the decision to centralize/decentralize will be driven by the evaluation of the difference between the expected utility of the median voter under decentralization and the expected utility of the median voter under centralization, i.e., when the tax implemented is the one chosen by the union’s median voter. The development of such comparison requires substituting the relevant tax rates of the two policy designs into the utility function of the regional median voter. The utility function of the regional median voter can be generally defined as:
\[ E[U(c)] = \beta[w^m(1-t) - (w^m)^2(1-t)^2(1 + \sigma^2)] + \lambda yt - \frac{\lambda^2 t^2}{2} \] (1.7)
whereas the relevant tax rates are:
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\[ t^m = 1 - \frac{\beta w^m}{\lambda y + 2\beta(w^m)^2(1 + \sigma^2)} \quad (1.8) \]
\[ t^u = 1 - \frac{\beta w^u}{\lambda_y y_u + 2\beta_y (w^u)^2(1 + \sigma^2_u)} \quad (1.9) \]

By substituting (1.8) and (1.9) into (1.7), the utilities of the regional median voter under the two regimes are obtained. Thereafter, we are in a position to evaluate the differences between the two. Once these calculations are made, the following expression is obtained:

\[ E[U^m(d)] - E[U^m(c)] = \frac{1}{2}(y - y_u) + \frac{\beta w^m(2\beta w^m - \lambda y - \theta)}{2(\lambda y + \theta)} - \frac{\beta w^u(2\beta w^u - \lambda y - \theta)}{2(\lambda_y y_u + \theta_u)} \quad (1.10) \]

where \( \theta = 2\beta(w^m)^2(1 + \sigma^2) \) and \( \theta_u = 2\beta(w^u)^2(1 + \sigma^2_u) \) are, respectively, the terms capturing the individual specific risks at the regional and the union level.

Appendix II: External Shocks

Given the assumption that there are two regions whose external shocks are negatively perfectly correlated, the different values of S can be worked out for each of the institutional regimes. Expression (1.1) can be rewritten as:

\[ EU(c) / S = \alpha w^c (1 - t)[0, 2] + \beta \int U(z) dG(z) + \lambda y - \lambda y^2 / 2 \quad (2.1) \]

On the basis of this expression, the t chosen by the regional median voter, conditional on the value of S can be derived. Thereafter, the properties of each of the tax rates and the two institutional regimes before S is actually known can be evaluated. In what follows these three steps are undertaken for both centralization and decentralization.

Centralization

(for notational convenience I skip the subscript u until the final result, where it is added to denote that w and y are the union level ones).
The Union is defined by the merging of the two regions. Hence by assumption \((1+S)\) becomes \([(1+S)/2 + (1-S)/2]\) and \((1+S)^2\) becomes \((1+S^2)/2\). Since \(S\) is assumed to be either 1 or -1, under centralization, expression (8) can be rewritten, conditional on \(S\), as:

\[
EU_i(c)/S = \alpha[w'(1-t)-[(w')^2(1-t)^2(1+\sigma_i^2)]] + \beta[w'(1-t)-[(w')^2(1-t)^2(1+\sigma_i^2)]] + \lambda y_t - \lambda y_t^2/2 \tag{2.2}
\]

In order to establish the tax rate that maximizes the after tax income of the union, the relevant partial derivative is:

\[
\frac{\partial E_u}{\partial t_u} = -\alpha w'_i - \beta w'_i + (1-t)[2\alpha(w'_i)^2(1+\sigma_i^2)] + (1-t)\lambda y + (1-t)2\beta(w'_i)^2(1+\sigma_i^2)] \tag{2.3}
\]

and the solution to the resulting first order condition is:

\[
t^*_u = 1 - \frac{(\alpha w'_u + \beta w'_u)}{\{\lambda y_u + [2\alpha(w'_u)^2(1+\sigma_u^2)] + [2\beta(w'_u)^2(1+\sigma_u^2)]\}} \tag{2.4}
\]

Thus the tax rate chosen by the union’s median voter is:

\[
t^m_u = 1 - \frac{(\alpha w''_u + \beta w''_u)}{\{\lambda y_u + [2\alpha(w''_u)^2(1+\sigma_u^2)] + [2\beta(w''_u)^2(1+\sigma_u^2)]\}} \tag{2.5}
\]

Decentralization\(^52\)

Because the value of \(S\) is not known a priori, the regional median voter may have to maximize the after tax income under two different scenarios, the lucky and the unlucky one. This fact implies that there are two possible tax rates under decentralization, themselves conditional on the value of \(S\). The simplest way to establish the tax rate under decentralization is to derive it for each of the two possible states, named \(t_i\) in the case of

\(^{52}\) Notation: in this section the absence of a subscript \(u\) implies that the equations refer to the regional level.
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the unlucky region and \( t_2 \) in the case of the lucky one, and then, given that \( S \) is not known a priori, simply assume that \( t_m = \frac{1}{2} t_1^m + \frac{1}{2} t_2^m \)

**The unlucky region**

In the case of \( S=-1 \), it is straightforward to see that the \( \alpha \) sector’s income disappears. Hence the utility function of the unlucky region becomes:

\[
EU_{\alpha}(c)/S = \beta \{w' (1-t) - [(w')^2 (1-t)^2 (1 + \sigma_s^2)]\} - \lambda y_t \lambda y_r^2 / 2
\]

By analogy, given \( S=-1 \), the regional median voter will choose the following tax rate:

\[
t_1^m = 1 - \frac{\beta w^m}{\lambda y + [2\beta (w^m)^2 (1 + \sigma_s^2)]}
\]

**The lucky region (S=1)**

In this case the utility function would be expressed as follows:

\[
EU_{\alpha}(c)/S = \alpha [2w' (1-t) - [(w')^2 (1-t)^2 (1 + 4\sigma_s^2)]\} + \beta \{w' (1-t) - [(w')^2 (1-t)^2 (1 + \sigma_s^2)]\} + \lambda y_t - \lambda y_r^2 / 2
\]

Again, by analogy, given that \( S=1 \), the tax rate of the regional median voter becomes:

\[
t_2^m = 1 - \frac{(2\alpha w^m + \beta w^m)}{\lambda y + [2\alpha 4(w^m)^2 (1 + \sigma_s^2)] + [2\beta (w^m)^2 (1 + \sigma_s^2)]}
\]

The next steps involve deriving the Utility levels of the regional median voter under the two institutional regimes now that the tax rates that would be implemented under each of them have been established.
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The Regional Median Voter under Centralization

One half of the \( \alpha \) sector disappears (the region is still hit by the shock with \( p=1/2 \)). Alternatively the region may be the lucky one even if under centralization with probability \((1-p)\) The tax rate to be substituted in the equations is always \( t_u \) (expression 4). Thus the utility function of the representative individual of the region under centralization becomes:

\[
EU_m(c)/S = \\
\frac{1}{2} \alpha \{2 w^m(1-t_u) - [(w^m)^2(1-t_u)^2(4+4\sigma_z^2)]\} \\
+ \beta \{w^m(1-t_u) - [(w^m)^2(1-t_u)^2(1+\sigma_z^2)]\} \\
+ \lambda y t_u - \lambda y t_u^2 / 2
\] (2.10)

The Regional Median Voter under Decentralization

The \( \alpha \) sector of the region can still disappear with \( p=1/s \) or, alternatively, it receives a positive external shock (\( S=1 \)) with probability \((1-p)\). In addition, this introduces uncertainty about the tax rate. It can be \( t_m1 \) with probability \( p \) and \( t_m2 \) with probability \((1-p)\). Thus, for \( p=0.5 \), the utility function for the purposes of substitution becomes:

\[
EU_m(c)/S = \\
\frac{1}{2} \alpha \{2 w^m(1 - \frac{1}{2}(t_1^m + t_2^m)) - [(w^m)^2(1 - \frac{1}{2}(t_1^m + t_2^m))^2(4+4\sigma_z^2)]\} \\
+ \beta \{w^m(1 - \frac{1}{2}(t_1^m + t_2^m)) - [(w^m)^2(1 - \frac{1}{2}(t_1^m + t_2^m))^2(1+\sigma_z^2)]\} \\
+ \frac{\lambda y}{2} (t_1^m + t_2^m) - \frac{\lambda y}{4} (t_1^m + t_2^m)^2
\] (2.11)

The final step consists in the evaluation of the differences between (2.10) and (2.11). To facilitate the algebraic manipulation of such comparison, assume \( \lambda y = \lambda y_u, \beta w^m = \beta w_u, and \sigma_z^2 = \sigma_{zu}^2 \). Under these conditions the differences between...
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2.10 and 2.11 can be expressed in terms of differences between the tax rates that would apply to the region under the two institutional regimes. To simplify notation, define

\[ \theta = \lambda y + [2\beta (w^m)^2 (1+\sigma^2)] \] and \[ \theta_u = \lambda y_u + [2\beta (w_u^m)^2 (1+\sigma^2_u)] \] as the terms capturing the incidence of both income differences and labor market related individual risks on the utility of the region’s and the union’s median voters;

and

\[ \Omega = [2\alpha 4 (w^m)^2 (1+\sigma^2)] \] and \[ \Omega_u = [2\alpha 4 (w_u^m)^2 (1+\sigma^2_u)] \] as the terms capturing the incidence of external shocks on the utility of the region’s and union’s median voters.

Using this notational simplification, the tax rate chosen by the union’s median voter (2.5) becomes:

\[ t_u^m = 1 - \frac{(\alpha w_u^m + \beta w_u^m)}{(\theta_u + \Omega_u)} \quad (2.12) \]

Now recall that, in presence of external shocks, the tax rate chosen by the regional median voter is conditional on S, such that \( t^m = \frac{1}{2} (t_1^m + t_2^m) \). Hence, we obtain

\[ t^m = 1 - \frac{(\alpha w_u^m + \beta w_u^m (1+\Omega))}{2(\theta + \Omega)} \quad (2.13) \]

By comparing how (2.12) and (2.13) respond to external shocks, it becomes clear that the gains in utility associated with centralization increase in the magnitude of external shocks. In other words, a potential drawback of decentralized fiscal arrangements is that they underinsure against external shocks.

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