DISAGGREGATING STATE CAPACITY: EXPLAINING POLICY EFFECTIVENESS IN LATIN AMERICA, 1996-2006

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Submitted for the degree of DPhil in Politics

To my parents, for their love and support

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ABSTRACT

In this thesis, I use the concept of state capacity to account for cross-national levels of variation in policy effectiveness in Latin America between 1996 and 2006. In doing so, I make four contributions to the literature. Firstly, I develop a theoretically-grounded conceptualization and an empirically systematic measurement of policy effectiveness for 18 Latin American countries along security, welfare and economic policy dimensions. Secondly, I develop a novel conceptualization and operationalization of state capacity along three key dimensions – infrastructural power, bureaucratic capacity and political capacity. By disaggregating state capacity into these three distinct (but mutually reinforcing) constituent dimensions, I integrate different strands of the literature on state capacity and purport to increase the explanatory power of state capacity as a conceptual variable. Thirdly, I develop a simple but theoretically differentiated model of policy effectiveness which maps out and incorporates different kinds of politics-centred explanations of effectiveness, while situating state capacity as a direct (but not exclusive) cause of effectiveness. The final contribution is empirical: I triangulate statistical methods, crisp-set qualitative comparative analysis and an extended qualitative comparison of two countries (Argentina and Chile) along three policy areas (health, citizen security and economic regulation) to provide a rich analysis of the influence the different dimensions of state capacity have on each policy effectiveness dimension. My results suggest, firstly, that state capacity differences are indeed large and important for explaining within-region differences in effectiveness; secondly, that the use of this disaggregated approach provides important theoretical and empirical payoffs for understanding the multiple ways in which states affect outcomes; and thirdly, that differentiating 'institutions as organizations' (such as the state) from the standard understanding of 'institutions as rules' allows us to improve on standard institutionalist accounts of the influence of politics on development.

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Chapter 1

Introduction

As democratic regimes have endured in almost every country in Latin America for about 20 years or more, the challenges facing students of the region's politics have shifted decisively away from issues of regime breakdown, modes of democratic transition and issues of democratic consolidation (at least if understood as persistence), to a broader set of issues no longer solely concerned with the nature of the political regime. Indeed, even as political scientists *"have noticed a decreasing range of variance in their favourite dependent variable: the political regime"*[1], the unsatisfactory nature of these new democracies has been highlighted time and time again because of their alleged multiple failures in form and results –e.g. in upholding the rule of law[2], protecting fundamental liberal rights[3], providing basic citizen security[4], or delivering acceptable economic growth, to name a few. Indeed, it could be said that democratic progress understood as more open and competitive *access* to political power has paradoxically highlighted the region's severe shortcomings in the way that power is *exercised*[5]. Thus, as problems of democratization have been replaced by problems of governance and of political performance, issues of corruption, democratic quality, state weakness and policy failure more generally have become more pressing –all the more so as the region's success in tackling its perennial problems of poverty, inequality and violence has been temporally fitful and geographically variable at best.

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[1] Altman and Perez-Liñan (2002)
[2] O'Donnell (2000)
[3] Zakaria (1997)
[4] Mainwaring (2006)
[5] Mazzuca (2010)

In this work, I aim to contribute to this growing research agenda on the 'exercise of power' side of Latin American politics by shedding light on the relationship between *state capacity* and the achievement of *policy effectiveness* in Latin America. The motivations for studying this particular causal relation are twofold. On the *normative* side, the persistently disappointing performance of most Latin American countries in providing public goods to their populations and in fulfilling basic state functions remains as one of the most intractable problems besetting their polities, threatening their progress in the path towards sustainable, broad-based economic and human development. It is therefore necessary to explore and understand the reasons why this is so. Moreover, although electoral democracy has largely stabilized in the region as a means of accessing power, deepening regime legitimacy and moving towards some sort of (thick) consolidation of such democracies is also likely to require states that 'deliver the goods' to large majorities of the population. Thus, both developmental and democratic concerns suggest policy performance is a central challenge for the region.

The second motivation for addressing the relationship between state capacity and policy effectiveness is conceptual and theoretical: I believe we simply do not have good enough theories of why some political systems are so much better than others at providing public goods and at delivering outcomes beneficial for development. Though I subscribe to a general 'institutionalist' outlook for explaining political outcomes – such as policy effectiveness – and economic outcomes – such as long-run economic development[6] –, I will argue that current institutionalist explanations of these phenomena are unsatisfactory. On the one hand, political scientists have paid much attention to issues of institutional design and institutional form and sought to

[6] As opposed to alternative broad explanations such as geography, culture, or simply the choosing of the 'right' set of economic policies.

study their influences on democratic and policy outcomes, but for the most part have failed to address more basic issues of institutional *strength*. On the other hand, political economists and other social scientists concerned with the long-run cross-national differences in economic development in the world have given pride of place to political and economic institutions in their explanations of these differences, but amidst a very broad and vague understanding of what institutions actually are and of the mechanisms through which they exercise their influences. Moreover, both kinds of institutionalist approaches have usually failed to distinguish between 'institutions as rules' and 'institutions as organizations', thus implicitly ascribing to both a uniform influence over outcomes.

The intuition and hypothesis that guides this work is that the state, as the key organization (or system of organizations) that delivers public goods, is the 'elephant in the room' when it comes to debates about institutions, institutional effectiveness and developmental outcomes. At least outside the set of highly-developed countries (and to a degree, inside that set as well), states vary widely in their ability to deliver the goods and fulfil the functions ascribed to them. The omission of the state is particularly regrettable in Latin America, a region where deficits of stateness have historically been, and arguably remain, at least as acute as its democratic deficits. In Latin America states have been *"fiscal dwarfs"* rather than *"rapacious Leviathans"*[7], and as Centeno remarks, *"we still know surprisingly little about the ability of the state in Latin America to do anything"*[8]. Taking this phenomenon seriously requires placing the Latin American state at centre stage. I will therefore argue for the need to develop a more fine-grained and disaggregated conceptual toolkit regarding the way institutions and politics more generally influence policy outcomes, centred on the

[7] Centeno (2002), p.6
[8] Centeno (2002), p.2

analysis of *state capacity* as a key conceptual variable. I thus conceive of this project as a critique ‘from within’ the institutionalist camp to the way in which institutions affect political, economic and developmental outcomes.

Along these lines, therefore, this research purports to make four contributions. Firstly, it will develop a theoretically-grounded and empirically systematic measurement of policy effectiveness in the region. Policy effectiveness will be understood as the degree to which basic, specific goods and services that are usually considered the state’s ultimate responsibility to guarantee to its population, are actually provided. Such a measurement will contribute systematic and comparable data for 18 Latin American countries, regarding their policy effectiveness across many distinct policy areas. In this way, it hopes to advance the study of the performance of political systems in the region and a fundamental, but relatively under-studied, aspect of democratic quality.

My second contribution will be to develop a novel conceptualization and operationalization of state capacity. This is a concept that is often regarded with suspicion because of its potential tautological properties and consequent lack of true explanatory power. In this work, I will propose a conceptualization that avoids this potential circularity issue and, by disaggregating state capacity into three distinct (but mutually reinforcing) constituent dimensions, integrates different strands of the literature on state capacity and increases the explanatory power of state capacity as a conceptual variable.

My third contribution will be to develop a simple theoretical model of policy effectiveness which tries to organize the different kinds of politics-centred explanations of policy effectiveness (such as regime type, constitutional structures and collective actors) and which situates state capacity as a direct and proximate influence on effectiveness, but is itself influenced by other political factors such as the ones named above. The model's purpose is to help us map out the different influences on a country's policy effectiveness – not all of which are political in nature – and to thus help us differentiate distinct causal paths instead of bundling them all under the heading of 'institutions'. Thus, a disaggregated conceptualization of state capacity is situated in a theoretically differentiated model of the causes of policy effectiveness. Understood in this context, state capacity in and of itself is not a sufficient cause for policy effectiveness, and its grounding in a larger web of historical, institutional, and actor-based influences is explicitly recognized. In this way, I hope to move forward institutionalist theories of political effectiveness and economic development by providing a finer-grained conceptual and theoretical toolkit with which to understand causal relationships between institutions as rules, institutions as organizations, the larger political setting, and political and economic outcomes.

The final contribution of this work will be empirical. By providing novel data on both policy effectiveness and state capacity in the region – in each case disaggregated along conceptually-relevant dimensions – I will provide a region-wide, systematic analysis of the relationship between state capacity and policy effectiveness for Latin America. I will complement this quantitative and comparative analysis in the second part of this thesis with a more historically-sensitive, qualitative and dynamic account of this relationship by focusing on two countries and three specific policy areas. By triangulating three different methodologies (regression analysis, qualitative comparative analysis and comparative case studies), I will provide a rich amount of data over which to evaluate the theoretical claims made in this thesis.

Overall, the findings of these different methodologies will be largely concurrent: in a region with large state capacity and large policy effectiveness differentials, the former indeed matters in quite fundamental ways in explaining differences in the latter across the region, even after controlling for typical correlated of high effectiveness such as high income per capita or favourable social and demographic conditions. Perhaps more interestingly, I will show that different dimensions of state capacity are relatively more important than others for explaining effectiveness in particular policy dimensions. Thus, an analytically disaggregated approach such as the one I will develop turns out to provide important theoretical and empirical payoffs.

Theoretical overview

The guiding question of this thesis is 'What are the effects of state capacity on current levels of policy effectiveness in Latin America?' Answering this question, however, requires first providing an answer to a previous one: What is the current level of policy effectiveness of Latin American democracies? The challenge therefore is to first provide a measure of policy effectiveness, and then to explain variation in this outcome.

i) Policy effectiveness

This research intends to contribute to the growing number of studies that focus on the performance of the political systems of Latin America. Performance itself can be understood in various ways. Following Roller (2005), we must first distinguish between performance of the political system and the performance of democracies: in the first case, we evaluate performance according to criteria applicable to all polities, whether democratic or not. In the second case, we evaluate the performance of democracies *qua* democracies, i.e. according to normative criteria intrinsic to them. Secondly, we must distinguish between evaluating general or procedural attributes of polities, on the one hand, and the achievement of substantive policy goals on the other. Crossing both distinctions we get the matrix in Table 1.1.

Table 1.1: Dimensions of Political Performance

	General performance	**Goal-oriented performance**
Systemic performance	Characteristics of all political processes that promote the realization of substantive policy goals (e.g. efficiency, stability)	Effective realization of substantive goals valid for all political systems (e.g. security, welfare)
Democratic performance	Characteristics of the democratic political process that promote the realization of substantive democratic goals (e.g. accountability, participation)	Effective realization of basic democratic values (liberty, equality) and democratic standards following from the representative character of liberal democracy (responsiveness)

Source: Roller (2005)

The present study will evaluate the *systemic* and *goal-oriented* performance of Latin American states, i.e. according to the criteria specified in the top right-hand quadrant of this matrix. To do so, it will examine performance across a range of policy areas – economic, domestic security and welfare policy – and specifically through a systematic comparison of the degree to which eight public goods, usually considered necessary for development, are delivered. These are thus specific policy goals and not general 'governance' outcomes, such as rule of law, bureaucratic performance, democratic accountability or corruption[9].

[9] Depending on the case, some or all of these factors can be considered either a subset or a superset of a particular policy outcome (for instance, it could be argued that rule of law is a superset of two particular public goods: crime and property rights), or else a causally antecedent condition of given policy outcomes (e.g. bureaucratic performance and corruption).

The focus on political effectiveness thus relates this study with the comparative performance of democracy literature, by examining this performance – and attempting to explain it – in a region that remains relatively unexplored in this regard. Although this literature has important theoretical antecedents in older works[10], its major point of reference is A. Lijphart's *Patterns of Democracy* (1999). The closest study to my own in this tradition is by Roller (2005), whose study can be seen as a critique and a refinement of Lijphart's contribution. She studies the policy performance of 21 OECD democracies from 1975 to 1995 with a clear justification for the policy areas chosen, a clear commitment to measuring policy outcomes instead of governmental outputs and an improved methodology for contrasting 'negotiation' and 'majoritarian' democracies, with the use of veto player theory[11]. My study shares the central concern of this literature with the comparative performance of democratic political systems, and in particular the concern of Roller with evaluating that performance according to the fulfilment of substantive policy goals rather than the general capabilities of the political system (as, for instance, in Weaver and Rockman 1993 or Stein et al. 2005). Nonetheless, my study differs from hers and from most of this literature in the explanatory variables it invokes: in other words, by looking less at specific institutional configurations of countries' political systems, and emphasizing instead more basic and fundamental aspects of politics, such as regime type and, particularly, state capacity.

To my knowledge the measurement of policy effectiveness as construed here – as an outcome-based, multi-dimensional concept – has not previously been attempted for Latin America. There are several reasons why focusing on policy effectiveness is important. Firstly, because it is a fundamental feature of the performance of

[10] e.g. Eckstein (1971); Almond and Powell (1978); Powell (1982).
[11] Tsebelis (2002)

democracies, without which it is difficult to sustain democracy over the long run – in other words, democracy in the region probably needs both 'input legitimacy' and 'output legitimacy' to be viable, and indeed the latter might be the more important in a continent characterized by a shallow democratic culture, extensive poverty and acute inequality. Secondly, because no work exists as far as I know in this dimension of performance for Latin America. Since evaluation is in itself a legitimate and valuable activity of political science (Roller 2005), producing a systematic and theoretically-founded evaluation of policy effectiveness in the region is a contribution to our knowledge of the region's political systems.

Thirdly, this work thus complements the work on the 'quality of democracy' literature by looking at the systemic, rather than democratic, effectiveness of democracies. In this way (fourthly) it provides an empirical counterpart to the claims about defective state performance being at the root of recent problems in the region's democracies (as in for instance, issues of public security being at the root of 'the crisis of democratic representation in the Andes'[12]), and also to the 'development and institutions' literature by examining a broader set of outcomes than mere protection of property rights[13]. Finally, it contributes to the public policy literature of the region, by providing an overview and – crucially – a *systematic* comparison of effectiveness across many policy dimensions.

We will see just how large differences in effectiveness are once I have measured policy effectiveness and its constituent dimensions in Chapter 2, but the fact that such variation is large is suggested both by anecdotal evidence regarding state performance in say, Chile as compared to Honduras, as well as by more systematic data. For

[12] See Mainwaring (2006)
[13] As in Acemoglu, Johnson and Robinson (2001)

instance, as a rough indicator of differences in performance, the Worldwide Governance Indicators show that while the best performing country in the region in their ‘government effectiveness’ indicator is in the 84th percentile of worldwide performance, the worst is only in the 16th percentile – a difference that covers two thirds of the full range of variation in the whole world, and which is considerably wider than that found among OECD countries (see Figure 1.1).

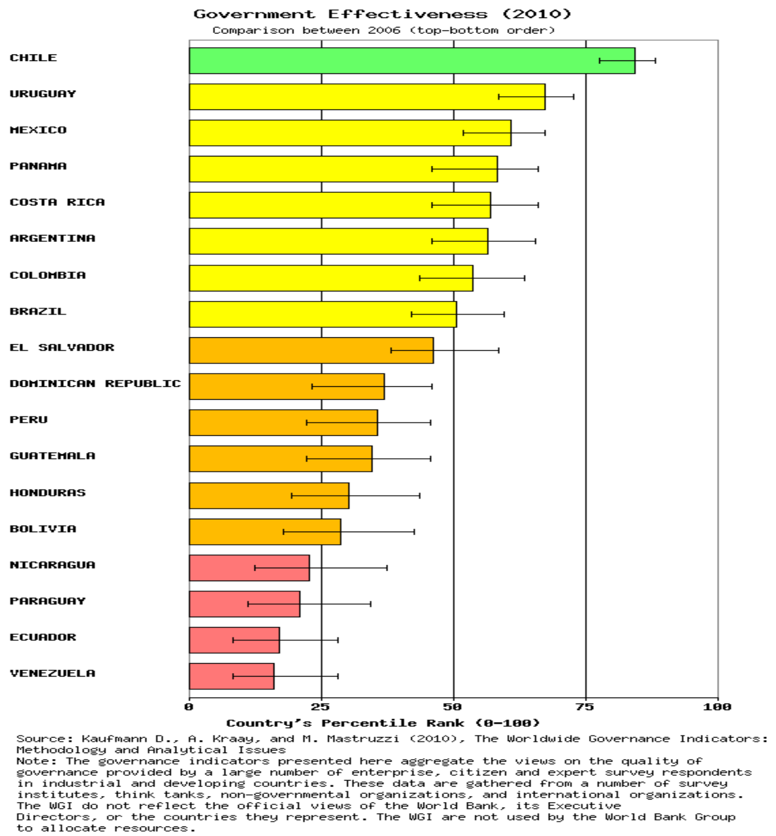

Figure 1.1. Government Effectiveness in 2010. *Source:* World Governance Indicators

Of course, government effectiveness as such is not a specific public good and I will therefore construct my own, systematic measurement of policy effectiveness. It is also not a satisfactory measure of state capacity, given its atheoretical, inductive construction and its focus on performance rather than on capacity itself. Nonetheless, as a first approximation the within-region distances are noteworthy; but how to account for this variation?

ii) Explaining policy effectiveness: alternative approaches

While many partial answers have been given to the question of why some countries provide more public goods than others, I believe we still lack a comprehensive analysis that incorporates simultaneously different policy dimensions into the picture, as well as a framework that takes us towards a more integrated conceptual analysis of different but potentially complementary explanations that have been given in particular policy areas. My own answer will attempt to both provide such a framework, at least as a working model that allows for the influence of various explanations of policy performance – such as institutions and political actors – while at the same time focusing on the role played by a more direct factor that enables, structures and conditions the way political power is exercised: state capacity.

Broadly speaking, I will argue state capacity is a fundamental variable that has been too often ignored but that deeply affects the degree to which states manage to provide public goods to their populations, at least in the developing world – much more so than, say, choosing a particular constitution or having a strong left-leaning party in government. When both the experience with democracy and the level of state capacity have varied as widely as they have in Latin America, I argue that an analysis of political effectiveness in Latin America must start from these 'first order' factors rather than from the ones that the OECD-based literature – which deals with countries much more homogeneous in terms of their institutional strength – prefers, such as institutions or political actors.

This is not to say, of course, that institutions or political actors have played no role at all, but merely that their influence on policy effectiveness is not likely to be as crucial as that of these structural, largely historically-rooted factors. Moreover, democracy and state capacity are very general features of a political system and are therefore ideally suited to a study that will look at policy effectiveness in a general or cross-policy way. In choosing state capacity as the focus of my study, I argue that three alternative approaches to explaining policy effectiveness are unsatisfactory as *main* explanations of effectiveness.

A first explanation comes from the comparative political institutions literature, which broadly speaking attributes variations in policy outcomes (including the level of policy effectiveness) to differences in countries' political institutions, understood as the formal and high-order political rules and constitutional arrangements that structure political actors' basic interactions, as captured in oppositions such as federalism/ unitarism, presidential/parliamentary democracies, majoritarian/consociational democracies, and so forth. Most notable among institutionalist approaches is veto player theory, because of the way it transcends these formal political oppositions to build a flexible and systemic explanation of political outcomes based on the number of veto points in the political system. In the study perhaps closest to this one in approach – Roller's study of the performance of Western democracies between 1974 and 1995 –, the author explains differences in outcomes through the use of two kinds of veto player indices as the main independent variables. She concludes that a more systematic analysis of policy performance than the one pioneered by Ljiphart (1999) shows that 'institutions' matter in some goods, but not always nor across the board, for explaining differences in policy outcomes. The institutionalist approach has also been used to explain many kinds of specific policy and governance outcomes.

Promising as this approach may be, I argue that its relevance for the present project is limited because of particular features of Latin American politics which differentiate it from the more structured and indeed institutionalized systems of Western Europe and North America. Indeed, the relevant differences in Latin America are less between different kinds of democracies and their attendant differences in institutions (and in the way the political process is structured), and more fundamentally about the degree to which the political process is institutionalized at all. As O'Donnell has remarked, the difference between countries like Chile, Costa Rica and Uruguay and most of the rest of the region is that in these countries institutions such as Congress and bureaucracies are nodal institutions that actually structure the political process. It is not institutional *form* that distinguishes them, but simply institutional *strength*[14]. This observation has been recently empirically validated in a study by Caruso et al (2010), who show that the predictions of a wide range of accepted institutionalist theories actually work only within the subset of highly institutionalized countries; in the subsample of weakly institutionalized ones, they break down. Thus, an institutionalist approach to policy effectiveness in Latin America, based on differences in the formal rules and political arrangements of their democracies, seems inadvisable. Differences in effectiveness in the region are unlikely to have been caused by their differences in institutional forms. Given that in Latin America, by contrast, there is impressive variation in both democratic experience (and quality) and in state capacity across countries, I expect these causally prior factors to be more important in explaining differential policy performance in the region.

[14] Levitsky and Murillo (2009). Note that these authors conceptualize strength to have two dimensions: stability and enforcement. In Latin America, arguably both dimensions have been weak in most places and periods. Moreover, given that only four countries are federal and none deviate from the Presidential system / proportional representation combination, major differences in institutional form are not particularly wide-ranging in the region.

A second kind of explanation comes from what I will broadly call the comparative public policy literature. By this term I mean all the different sector-specific literatures that have attempted to explain policy performance (in many guises and through different operationalizations) and have accordingly built sector-specific explanations. In this category we find the literatures on each of the policy dimensions I will formally derive and operationalize in future chapters: security, welfare and economic management. Each of these literatures has developed its distinct corpus of explanations and variables, both political and non-political in nature, that affect policy performance in that specific dimension. This literature will be of central importance in what follows, as its rich evidence base will provide the major control variables for this study.

From the perspective of this research, however, the main problem with the comparative public policy literature is its fragmentation. Many causal explanations seem to work well within a given policy domain, but may not travel well to other ones. For instance, the role of leftist political parties as agents of the creation of more universal and generous welfare states in Europe has been a classic area of study, and some evidence exists that in Latin America they may have likewise played a similar role in this regard[15]. But even if this explanation should prove to be correct for Latin America, it is not at all obvious that the identity of political actors plays a similarly positive role either in the area of public security or in economic policy, where their influence may actually be detrimental[16]. Explanations based on economic or demographic considerations are also likely to work better in particular policy domains. Of course, this does not mean such causal factors should be discarded from

[15] See Huber, Mustillo and Stephens (2008); Huber and Stephens (2012)
[16] As argued by Wibbels and Roberts (2010)

the analysis, but it does mean two things: firstly, that many explanations that appear as obvious suspects when trying to account for differences in policy outcomes – such as income per capita – should be treated with caution, as they may actually be circumscribed in their usefulness when general policy effectiveness is the object of explanation (instead of a particular policy domain); and secondly, that in order to analyze the role of politics in policy effectiveness will require the use of concepts far up the ladder of generality, so that they can be usefully deployed across policy areas. Some such general concepts are *governance*, *institutions*, *democracy* and *state capacity*. However, only the latter will be my main explanatory variables in this research, while democracy – for reasons of space and focus – will only play a subsidiary role, as a major control variable. I have already explained why the 'institutional form' approach is unlikely to be very useful in Latin America, so I now turn to the other of these four concepts that will be discarded – the concept of governance.

The main problem with governance is its conceptual haziness – indeed, *"there are few terms which are as vague in social science and in practice"*[17]. Although this naturally means there are many approaches to the concept[18], of particular relevance here is what we could call the 'political economy' one. Unlike in other uses of the term, in this field it seems to have become associated with a general focus on the outcomes of government action and of political power broadly speaking. For economists, for instance, there seems to be little difference between speaking of 'governance',

[17] Bovaird and Löffler (2003)

[18] Another major approach to the concept, that does not concern me here but for which the use of this term seems to me to have much more sense and analytical usefulness, is as a new approach to the *process* of policy formulation and implementation, and to the new modes of interaction between the state and societal actors in democratic societies (Treib et al 2007; Grindle 1996)

'institutional quality'[19] or 'good government' generally. Both illustrative and of particular importance in this context is Kaufmann and Kraay's (2002) definition of governance[20], which underlies their empirical operationalization of the concept in their Worldwide Governance Indicators (WGI). For these authors, governance is *"broadly"* defined *"as the traditions and institutions by which authority is exercised in a country"*. They go on to specify that this

> "…includes the process by which governments are selected, monitored, and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of the citizens and the state for the institutions that govern economic and social interactions among them"[21]

We see here that what many have understood to be state capacity – "the capacity of the government to effectively formulate and implement policies" – has been subsumed as a particular aspect of governance. But the definition also clearly includes issues of *access* to government, and therefore of issues of 'democraticness' and of the quality of democracies (indeed, it has been claimed that the World Bank definition *"cannot effectively distinguish good governance from liberal democracy"*[22]). The definition includes, in other words, both issues of access to and of exercise of political power, not to mention citizens' respect for institutions, and it is thus hard to think of *any* political phenomenon that is not included under its domain. Understood in this way, governance is a political master-concept indeed.

In sum, while the comparative institutions literature seems *inapplicable* to Latin America as an explanation of differential policy performance, the political economy governance approach is conceptually too *vague* to be a useful starting point for it.

[19] In fact, the authors use the two interchangeably. See Kaufmann and Kraay (2002), p.176
[20] In a recent review article on 'quality of government' – another closely associated term – it has been identified as the *"most frequently used definition"* in the field (Holmberg, Rothstein and Nasiritousi 2009: p.137).
[21] Kaufmann and Kraay (2002), pp.176-177
[22] Holmberg et al 2009, p. 137

Finally, the comparative public policy literature provides extensive evidence on which to build more general accounts of policy effectiveness, but is too *fragmented* to provide by itself such an explanation. I will therefore structure my own explanation around the concept of state capacity as a conceptually general and causally fundamental determinant of policy effectiveness. I will ground that explanation, however, on a more general model of policy effectiveness in which both exogenous (economic, sociodemographic, cultural, etc.) factors and other political phenomena (such as political actors, political institutions and regime type) play a complementary role.

iii) State capacity and institutions

Besides the comparative institutional literature which asks itself whether there are differences in democratic performance associated with differences in institutional form (Lijphart, Roller), there is another institutionalist literature – more interdisciplinary in nature – that is squarely applied to that largest of questions: Why are some countries so much richer than others? Since North (1990), 'institutions' have gained a very wide currency as a key concept and analytical lens through which to approach this question. Indeed, *"most work on national levels of development now emphasizes institutional variables as partially or fully explaining these levels"*[23]. This study sees itself as placed broadly within that tradition[24], but seeks to answer a more limited question regarding the connection between state features and the provision of key public goods which in turn are necessary for development. It does so while providing a somewhat alternative conceptual apparatus through which to explain large cross-national differences in outcomes, based on the notion of state capacity. I argue

[23] Mahoney (2010), p.14

[24] Since it looks for *political* rather than geographical or cultural explanations for differences in development.

that this state capacity approach is a necessary complement to the institutionalist language that dominates current developmental thinking.

As Mahoney states, there is a wide agreement on what institutions are: *"rules or generalizable procedures that provide a guide for behaviour and that promote predictable patterns of interaction"*. These rules can be formal or informal, but must guide behaviour and have to be *"consciously or unconsciously known by individuals in a given population"* for them to have the required effect[25]. An evident problem with such a definition, however, is sheer conceptual breadth: as Portes (2006) has noted, defined in this way institutions hardly have any external boundaries as there is hardly a human behaviour that is not rule-bound in some way. If institutions cover everything from stock-market rulebooks to the incest taboo, theoretical models reliant on such a concept cannot do much work. Of course, we have moved forward somewhat. Historical and econometrical work linking colonial patterns of domination to current economic outcomes has come up with useful dyads such as 'extractive vs. inclusive'[26] or 'liberal vs. mercantilist'[27] institutions that provide a framework which places economic and political institutions at centre stage. While their overall logic is persuasive, the specific mechanisms through which 'inclusive' or 'liberal' institutions actually produce growth and development remains diffuse at best, relying on generalities such as the generation of a 'wide distribution of power in society' to work their magic[28].

[25] Mahoney (2010), pp.14-15
[26] Acemoglu and Robinson (2012)
[27] Mahoney (2010)
[28] For further elaboration of my critique to Acemoglu and Robinson's book, see the Conclusion to this thesis.

I will argue that to move forward we need to bring into the fore a second understanding of institutions, which is often implicit but seldom theorized[29], of *institutions as organizations*. While the distinction between institutions as rules and institutions as organizations is sometimes made[30], most of the time it is not problematized and the latter thus remain invisible, being mere ‘players’ in a game defined by rules (institutions), or else simply being subsumed within them (since after all people within organizations also behave according to prescribed rules). As I hope to show in this work, a problem with ignoring organizations is that a state *is* an organization at least as much as it is a set of rules (laws), and as such it *acts* – it designs and implement policies, it enforces laws, it collects taxes, it fights wars, it imprisons people. And how well it performs these tasks is not simply an issue of the kinds of rules that govern it and its interactions with civil society, but also of what kind of organization it is, including its degree of *organizational strength*. Thus, I emphasize a threefold distinction between institutional forms (kinds of rules), institutional strength (enforcement and stability of rules[31]), and organizational strength (or capacity). Institutions-as-rules are important, but so are institutions-as-organizations if we are to understand the way political power is actually exercised in order to produce outcomes such as the provision of public goods. This is particularly so in a developing-world context, in which the organizational strength of states can vary widely indeed.

[29] A major exception is Portes (2006), who provides the best critique I know of to an understanding of ‘institutions as rules’ from the point of view of sociological theory. In doing so, he justifies an understanding of institutions as ‘blueprints’ for real-existing organizations, which may or may not conform to that blueprint. For an empirical application of this framework to development comparisons, see Portes and Smith (2012).
[30] As in Stein et al. (2005)
[31] Levitsky and Murillo (2009)

Only to a view of a state-as-organization (which to say, to a state-as-actor) can a concept of state capacity be applied[32]. In Chapter 3 I will conceptualize state capacity along three dimensions: bureaucratic capacity, infrastructural power and political capacity. While the first is inherently organizational in nature, we will see that the third partly depends on both rules and organizational strength. Thus, I do not mean to wholly replace a focus on rules with a focus on organizations (even if the accent will be on the latter). Rather, the point is that a state capacity view overlaps with an institutionalist focus, and yet is distinct from it.

My contention will be that a state capacity lens is an analytically more focused category that 'institutions' as defined by Mahoney above, and that this focus provides a necessary complement to institutional thinking on development. Rules are neither free-floating nor self-enforced. By focusing on the state as such, we are focusing on the collective actor that creates, implements and enforces those rules in the first place. By focusing on the organization that exercises power, I am making a clear distinction from questions of regime type (access to power) that institutionalist language usually confounds into a single issue of 'good' or 'better' institutions; indeed, while democracy *may* promote state capacity, this is an empirical and open question. Trade-offs can arise between, say, enhanced democratic quality and diminished state capacity (e.g. through a decentralization reform) that in order to be grasped need a clear conceptual separation of questions of input and questions of output. In such cases, talk of a wider distribution of power is not enough. Finally, and as we will see in Chapter 3, the better conceptual delimitation of state capacity as a conceptual variable allows it to share the causal space with other political phenomena – such as regime type, political actors and indeed with institutions-as-rules – without merging

[32] For a theoretical discussion of different conceptions of the modern state see Chapter 3 of Mann (1993).

all of them into a single, overarching explanation in which 'institutions' are all that matter. Conceptual clarity is necessary for better theory-building and for knowledge accumulation, and I hope to contribute to both through this work, which is itself both a contribution and a critique 'from within' to the institutions-and-development field.

Methodological approach

This study is a cross-national, macro-comparative inquiry into the measurement and explanation of within-region differences in current policy effectiveness across Latin America. The choice of 18 Latin American democracies as the universe of study is based on both intrinsic and instrumental reasons. The intrinsic reasons were sketched at the beginning of this Introduction: Latin America is a region where problems of weak states, poor governmental performance and deficient fulfilment of state functions remain acute, even as they have become decoupled from issues of authoritarianism and regime type as such. Indeed, issues of weak stateness are themselves arguably at the root of many of the region's problems with achieving consolidated, high-quality democracy. Not just issues of horizontal accountability, but problems of everyday violence, social inequality and entrenched corruption – to name a few – are particularly high from a world perspective and are likely to be undermining support for democracy over the short and the long run[33]. Thus, the paradox is that the region displays (with the exception of Cuba) uniformly-democratic regimes (at least from a Dahlian, minimum-threshold definition of democracy), and yet few of these democracies (as Figure 1.1 suggests) are reasonably effective in providing the outputs that help legitimate democracy over the long run. This combination between open access to power and relatively weak stateness (exercise of power) is rather unique from a comparative perspective, since other world regions

[33] Mainwaring (2006)

tend to display either a strong democracy/strong state combination (as in OECD countries), a weak state/weak democracy combination (as in most of Africa, the Middle East and Asia), or a strong state/weak democracy combination (as in parts of East Asia). Thus, if there is one place where the study of state capacity instead of regime type and/or democratic quality is singularly pressing, surely that place is Latin America.

The instrumental reasons for choosing Latin America as the region where to study state capacity are based on its condition as a region ideally suited for cross-country comparisons. Indeed, despite significant cross-national economic, ethnic and political diversity, the region shares important historical and structural similarities, such as having been colonized by an Iberian power, a strong Catholic heritage and culture, having started their independent lives at approximately the same time, a peripheral position in the world economy based on primary exports, intermediate levels of human capital, and high degrees of economic inequality driven by a (whiter) elite of 5% or 10% of the population which control a remarkably high proportion of income and wealth. They are also presidential systems with legislatures elected through some kind of proportional representation; and with the exception of the four largest countries (Brazil, Mexico, Argentina and Venezuela) they are all unitary political systems. For a group of 18 countries, this list of similarities is not small. Since our guiding question lends itself naturally to be studied at the cross-national level, being able to hold many cultural, historical, socioeconomic and institutional factors constant is highly helpful to isolate the influence of core political factors, such as state capacity, on policy effectiveness. This makes Latin America a particularly interesting testing ground for the influence of politics on policy outcomes.

The research design is based on three clearly distinct empirical phases. In the first part of the thesis, the goal is to build a normatively justified model of political performance for development, which then must be operationalized, measured and analyzed. At the end of this stage we will have a complete descriptive analysis of the dependent variable: the policy effectiveness of the 18 Latin American democracies, organized along eight public goods grouped into three distinct policy dimensions (domestic security policy, social policy and economic policy). Methodologically, this will require the building of indices of effectiveness for each public good, their aggregation into policy dimensions and into an overarching policy effectiveness indicator.

The second part of the thesis will be an exploratory analysis of the causal relationships underlying the policy effectiveness patterns found in the first part. I will conduct this analysis by basing myself on a simple theoretical model of effectiveness which I will develop. This model will flesh out the concept of state capacity to be used in the empirical section. After operationalizing this concept and after selecting both democracy and other key variables (taken from the relevant, dimension-specific public policy literatures) as controls, I will proceed to a systematic analysis of state capacity and policy effectiveness through two distinct methodologies. The first is statistical analysis, both in the form of simple correlations and in the form of OLS regressions. Informative as these regressions may be in establishing degrees of association between state capacity and policy effectiveness, it is clear that with only 18 cases their power is limited. A second methodology will therefore be also employed: crisp-set quantitative comparative analysis (QCA), which instead of being based on detecting co-variation between independent and dependent variables looks at the logical relations of necessity and sufficiency between individual (or groups of) conditions, and the generation of particular outcomes. Unlike regressions, QCA is not subject to a degrees of freedom problem, and it has therefore been suggested that QCA is an ideal methodology for research designs with an intermediate number of cases[34]. By subjecting the same data to two different forms of analysis and by comparing and contrasting their results, I intend to provide as rigorous a test as possible to the idea that state capacity is a key factor in accounting for the policy outcome variations within the region.

The timeframe of measurement is roughly the year 2005, but in the economic management dimension, for reasons of stability in measurement, the data is an average for the 1996-2006 decade. Thus, this study is cross-sectional with 18 countries or cases as its universe. Clearly, such a design is meant to provide a focused and systematic comparison of a limited number of individually relevant cases within a clearly defined world-region, rather than to provide as many 'observations' as possible. However, an obvious limitation of such a design is that it ignores temporal, within-country variation in policy effectiveness. As I discuss in Chapter 2, data limitations are a major constraint for going further back in time when dealing with such a diverse set of goods and policy dimensions as I will be dealing with here. Nonetheless, I will also show that temporal variation for all policy outcomes except the economic ones is remarkably small over time, and is largely overshadowed by cross-country variations in effectiveness. Moreover, the key dependent variable – state capacity – is even harder to measure dynamically and, in any case, should move relatively slowly over time as well. Therefore, unless we want to explain regional dynamics over very many decades, a cross-sectional study is ideally suited to the explanation of cross-national differences that are large and stable on both the

[34] Ragin (2000; 2008)

dependent and independent sides of the equation. Moreover, I complement this static analysis in the final stage of my study – which covers approximately the whole second half of this thesis – with a more temporally-sensitive approach.

Indeed, the third and last empirical stage of this work is a focused, qualitative comparison of two countries – Argentina and Chile – along three distinct policy areas. The purpose of such a comparison is to complement the static analysis of the previous phase with a dynamic one which can bring into focus the development and complexities of the relationships between state capacity and each of the policy dimensions previously developed.

As can be seen, the study will triangulate between small-n regressions, QCA and focused comparative case studies. The advantage of this approach is that it allows me to make claims about relationships at a regional level while at the same time allowing greater depth to investigate the precise mechanisms through which those factors operate. If we used only one method this could not be achieved: QCA (or regressions) can only point at relationships that seem to be necessary/sufficient conditions for (or co-vary with) the outcomes of interest, while case studies by themselves cannot be used for generalizing the validity of the mechanisms or relationships discovered. By combining methods the goal is to benefit from the advantages of each approach and achieve a measure of both width and depth.

Chapter overview

The rest of this thesis is structured as follows. In Chapter 2, I construct my dependent variable by deriving a normative and then empirical model of policy effectiveness. Normatively, I identify areas in which the state must guarantee that a minimal amount of key public goods are actually provided, if the country in question is to achieve long-run and broad-based economic and human development. They are thus seen as necessary, but not sufficient, conditions for successful development. From here, three policy dimensions are identified – public security, social welfare and economic policy – and eight specific public goods chosen as the basic units of policy effectiveness: internal security, citizen security, basic health provision, education, social security, property rights protection, economic regulation and macroeconomic stability. I then begin the empirical analysis through the conceptualization, operationalization and measurement of each of the eight public goods identified, by using a wealth of carefully-selected indicators and statistics publicly available in each of the specific policy areas. I then proceed to the aggregation of these indices to build indicators of effectiveness by policy dimension and overall, and analyze the patterns of performance between countries.

In Chapter 3, I move to the explanatory side to present the theoretical model which distinguishes between different kinds of influences on policy effectiveness, locating state capacity as a direct – though not exclusive – cause of the former. I then proceed to a fleshing out of the often-hazy concept of state capacity, and propose an approach that avoids circularity between capacity and effectiveness by defining state capacity as the total set of doings (policies) a state could choose to successfully implement. I then identify three key observable dimensions of state capacity: infrastructural power, bureaucratic capacity and political capacity. Finally, I discuss the ways in which state capacity has been related to effectiveness in each of the three distinct public policy literatures: on security, welfare and economic policies.

In Chapter 4 I operationalize the concept of state capacity and proceed to the statistical and QCA analyses. In doing so, I argue that the most useful analysis of policy effectiveness is at the level of the three policy dimensions, and show how each of the three dimensions of state capacity introduced in Chapter 3 relate to these policy dimensions. We will see that the empirical analysis supports the notion that state capacity is an important explanatory factor for all three policy dimensions, although not necessarily to the same degree. We will also see that the analysis of the data through both statistical and QCA methodologies yields complementary information and that therefore their simultaneous use strengthens the conclusions reached.

In Chapters 5 through 7 I will focus on the relationships between state capacity and the different policy dimensions. I will do this through the comparison, on all three policy dimensions, of Chile and Argentina. Even though we will see that both are relatively high-performing countries at the regional level, I will argue that their dyadic comparison is most fruitful because of their remarkable similarities in almost all non-political factors of importance, such as level of economic development and ethnic homogeneity. This allows for an implicit 'most similar systems design' in which to study the differing state capacities and policy results these countries have achieved. Chapter 5 provides a detailed analysis of the relationships between state capacity and health policy (as the good representing the welfare dimension). In particular, it traces the evolution of infant and maternal mortality results in both countries from about 1960 to 2006, and shows the ways in which different state health policies and organizational structures affected those results, and were in turn affected by the underlying dimensions of state capacity.

Chapter 6 then proceeds to an analogous comparison on the security dimension, by comparing citizen security on both sides of the Andes. The main focus of this chapter is on exploring and explaining differences in police quality between the two countries. As we will see, these differences seem to have existed for a long time and can be clearly related to divergent 20th-century historical experiences and political configurations that conditioned the degree to which police organizations would be centralized, cohesive and clean in each case. In Chapter 7, the analysis moves on to the comparison of economic regulatory performance, through a particular focus on the experience of privatization (and regulation) of electricity and telecommunications utilities in each country during the last (roughly) 30 years. I will show that not only performance varied sharply between the two countries and between industries, but that those differences can be traced to underlying (but variable) differences in state capacity that conditioned the way regulatory policymaking took place in each case. Finally, Chapter 8 concludes by recapitulating the main findings, discussing theoretical implications and avenues for further research, and re-engaging the wider literature on institutions, policy outcomes and governance in Latin America under the light of this work's contributions.

Chapter 2

Policy Effectiveness in Latin America: a within-region comparison

I. A conceptual model of policy effectiveness

The goal of this chapter is to develop a new measure of the *policy effectiveness* of 18 Latin American democracies. Policy effectiveness is itself understood as one key dimension of the *political performance* of political systems. The measure here to be developed will fulfil two related purposes. It will, firstly, be the way in which this work's dependent variable is conceptualized and operationalized; and, secondly, it is in its own right a contribution to the literature on the evaluation of the region's political systems, by providing a rigorous empirical assessment of the degree to which they are in fact providing those goods and services which citizens value and which are necessary for achieving broad-based human and economic development. Specifically, by evaluating the degree to which 18 Latin American democracies have managed to deliver eight key public goods, this chapter hopes to provide a systematic empirical basis to judgments on the political performance of these countries on one key dimension. Rather than avoid evaluations altogether because of their inevitable normative content, evaluation criteria will be derived from an explicitly formulated normative model of policy effectiveness, against which its claims must be assessed. In this sense, this exercise follows the same logic as evaluations of the quality of democracy, which are also derived from explicitly formulated normative models of what a 'good' democracy is[35].

To evaluate the performance of political systems we must begin by defining the term itself. Performance, as Roller (2005) notes, can denote either the *action* of doing

[35] For instance, see Diamond and Morlino (2004)

something, or the *evaluation* of that doing. It is in this second sense of the term that it is used here. Assessing performance, however, implies first defining the domain in which evaluation is to be conducted. A simple twofold distinction is proposed by Roller on two distinct dimensions in order to classify the different ways in which the performance of democracies' political processes can be evaluated. First, she distinguishes between evaluating a democracy according to criteria that Foweraker and Landman (2002) call 'intrinsic' and 'extrinsic' to them – that is, on performance that we expect either exclusively from democracies, or that we expect from all regimes:

> "Performance that is expected of a democracy as a political system is designated as 'systemic performance', while performance specifically expected of a democratic political system is called 'democratic performance'. This pair of terms thus designates two sets of performance criteria that are to be ensured either by democratic or by all political systems"[36]

Like her, in this work I am interested in systemic performance, in my case of Latin America's democracies; evaluation will not concern itself with those actions and processes intrinsic to democracy as such, like the degree of accountability or representativeness of its policy making process. The second distinction Roller introduces is between "goal-oriented" and "general" political performance, with the latter being about performance focused on *"*procedural *goals whose realization promotes the attainment of specific policy goals"*[37], and the former about actually realizing political goals, whatever these may be. General political performance is thus an internal criterion for evaluating procedures themselves, according to whether they contribute or not to the realization of external goals valued by society. The combination of both distinctions gives us a classification of political performance into four types, as seen in Table 1.1 above.

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[36] Roller (2005), p.22
[37] Ibid, p.21. Emphasis in the original.

The present study will evaluate the performance of Latin American democracies according to the criteria specified in the top right-hand quadrant of that table: its concern is with the political system's capacity to deliver socially valuable goods that we would broadly expect of any political system and not just democracies. This highlights its difference from other recent performance studies in the region, and particularly Stein et al's (2005) inquiry into the quality of the policy making process (PMP) and the formal quality of policies in the region's political systems. According to this typology, that study clearly belongs in the upper left hand corner, as it deals with a general, procedural goal (i.e. that policies in general be stable, efficient, coherent, and so forth) that if attained would presumably contribute to the achievement of substantive policy goals over many different areas. Thus, the relationship between the two quadrants may be causal, but each specifies an analytically distinct object of evaluation.

It is important to note that *effectiveness* is a term reserved only for goal-oriented performance: it is a *"criterion of assessment"*, which *"describes the degree to which substantive goals are realized"*[38]. Effectiveness is thus defined as a particular criterion of performance, and not as an equivalent or synonymous term to it as it often is in the public administration literature[39]. In sum, just as performance is one of many forms of evaluation – the evaluation of a doing –, so is effectiveness one of many possible criteria of performance – the degree to which that doing achieves a substantive goal.

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[38] Roller, op.cit., p.23
[39] See Lee and Whitford (2009) for a discussion of this point.

To evaluate political effectiveness we must have a normative model of what political systems *should* deliver to citizens; in other words, of what it is *supposed* to do or provide them with in order to be called good in this regard. Such a model must therefore specify the criteria according to which political effectiveness is to be assessed. For this end I will use development theory as the normative framework from which to derive such criteria. The main reason for this is that achieving development is a fundamental political goal for the region. I mean this in both the external sense that it *should* matter because poverty, illiteracy, premature mortality and other forms of need remain pervasive and persistent realities throughout the entire geography of Latin America, and also in the subjective sense that the idea of development is a really-existing aspiration across the region's diverse political realities and situations. Development discourse has been employed by democracies and authoritarian regimes, by left-leaning and right-leaning governments, by populists and non-populists alike. It has provided what we could perhaps call the meta-narrative of political discourse in the region, and as such it constitutes the ultimate political good that polities can deliver to their citizens.

From this perspective, the question then becomes: what can the political system of a country do to bring about development? In other words, which are those goods that the state must provide if development is to be attained? This is of course development's fundamental question, and the answers given to it have varied across the decades: from the optimistic, state-led developmentalism of the 1950s and 1960s, to state retrenchment from the 1970s to the end of the 1990s, and back again to a more nuanced picture which sees neither the state nor markets as saviours but rather recognizes that 'institutions matter' for the performance of both[40]. Indeed, as a response to past excesses, international development institutions such as the World Bank have tried since the mid-1990s to integrate into one coherent framework the functions of the state and those that should best be left to the market, understanding both as being fundamentally complementary to each other[41]. In this endeavour, the fundamental role of state effectiveness was rediscovered. A landmark publication in this regard was the World Bank's 1997 World Development Report, where a general normative blueprint on what the role of the state should be is laid out. The guiding idea is that states do have crucial and irreplaceable roles in generating development. However, that role is not as direct providers but rather as *"a partner, catalyst and facilitator"*[42] of markets. Moreover, while the *scope* of state action cannot be either too encompassing or too constrained, the state itself must be *effective* at undertaking the tasks set to it. Such a state, far from being part of the problem, is considered a crucial actor in development:

> "An effective state is vital for the provision of the goods and services – and rules and institutions – that allow markets to flourish and people to lead healthier, happier lives. Without it, sustainable development, both economic and social, is impossible."[43]

But which are those goods, services and institutions without which sustainable development is impossible? In an attempt to answer this question, the World Bank itself suggested a list of state functions and categorized them according to their kind and level of complexity, arguing that only states with high capacities should attempt the ones categorized as 'activist' functions, as seen in Table 2.1.

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[40] For a brief account of the different stages through which development thinking has gone through since the 1960s, see Besley and Persson (2011), pp.307-309

[41] As the World Development Report put it, "*The lesson of half-century's thinking and rethinking of the state's role in development is more nuanced. State-dominated development has failed, but so will stateless development.*" (World Bank 1997, p.25)

[42] ibid, p. 1

[43] ibid, p. 1

Table 2.1. Functions of the State

	Addressing market failure			Improving equity
Minimal functions	*Providing pure public goods (1)*			*Protecting the poor (2)*
	Defence			Antipoverty programs
	Law and order			Disaster relief
	Property rights			
	Macroeconomic management			
	Public health			
Intermediate functions	*Addressing externalities (3)*	*Regulating monopoly (4)*	*Overcoming imperfect information (5)*	*Providing social insurance (6)*
	Basic education	Utility regulation	Insurance (health, life, pensions)	Redistributive pensions
	Environmental protection	Anti-trust policy	Financial regulation	Family allowances
			Consumer protection	Unemployment insurance
Activist functions	*Coordinating private activity (7)*			*Redistribution (8)*
	Fostering markets			Asset redistribution
	Cluster initiatives			

Source: Adapted from World Bank (1997), p. 27

Though generating universal consensus on a list like this – which purports to identify the justifications for state action and the hierarchy of state functions – is next to impossible, it provides a reasonable benchmark of policy areas where the state can intervene according to this view of development. The essential point here is that Table 2.1 provides a list of state activities that are considered ‘legitimate’ state functions inasmuch as they are justified by one of the eight reasons thereby given: the provision of pure public goods, protecting the poor, addressing externalities, regulating monopoly, overcoming imperfect information, providing social insurance, coordinating private activity and redistribution. In turn, all of these reasons are justified either as addressing market failures or as improving equity. However, by classifying them into basic, intermediate and activist the World Bank is making a further normative claim: that there is a hierarchy of state functions, with basic and intermediate functions being mandatory areas of state activity – *"the government cannot choose whether, but only how best to intervene"*[44] – and with the more activist functions being reserved as an optional domain of intervention for states with high capabilities.

Although this list is not exhaustive – the provision of basic public infrastructure, for instance, is curiously absent from the list of pure public goods – it provides the criteria needed for evaluating policy effectiveness according to the contribution to development that we were looking for. In particular, the minimal and intermediate functions constitute, according to this framework, a universally legitimate domain of state action over which the state not only can but must perform. Fulfilling these functions – or, equivalently, assuming ultimate responsibility for the provision of these policies, goods and services – forms the core of what the state can do to achieve sustainable economic and human development. Therefore, the policy areas included amongst the basic and intermediate functions in Table 2.1 (plus, arguably, the provision of basic infrastructure) form the *normative* model of political effectiveness.

This means that if we want to evaluate effectiveness according to the degree to which the political system has contributed to the social goal of development, we should evaluate goal-attainment in *all* of these policy areas. But why not in the activist functions as well? Arguing still from a purely normative perspective, those 'activist'

[44] World Bank 1997, p. 27

functions are exactly the ones where contestation exists over their desirability. For instance, Fukuyama notes that from an economist's standpoint the optimal state is one that *"combines limited scope of state functions with strong institutional effectiveness"*, and that as states – even effective ones – increase the scope of their functions, *"growth will fall"* as a result[45]. This is certainly not an uncontroversial argument even within – let alone beyond – the economics profession, where many see industrial policy as a necessary and highly useful state function that moreover played a key role in the East Asian developmental success stories of the second half of the 20th century[46]. The 'basic' and 'intermediate' functions of the state shown above, however, represent something much closer to a consensus regarding the necessity of state intervention. Since in this study I am not concerned with engaging this important debate, but merely with deriving criteria for measuring political effectiveness, the normative model used restricts itself to the basic and intermediate functions only, which provide a purely *minimal* set of necessary state functions. Thus, there is no additional claim regarding either the individual or the joint *sufficiency* of these functions for securing development or as the sole legitimate scope of state intervention.

Necessary as fulfilment of all basic and intermediate functions may be for a state, in an empirical study such as this it is unfeasible to measure effectiveness in all of them. We thus need to go from a normative model in which all basic and intermediate functions are considered, to an empirical one in which only a sample of these are measured. But how are these particular state functions – or what I will henceforth

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[45] Fukuyama (2004), p.15

[46] See, for instance, Johnson (1982); Rodrik (1995); Evans (1995); Woo-Cummings (1999). See also Hausmann, Rodrik and Velasco (2008) for the role of industrial policy as a growth strategy in contemporary economies.

term ‘public goods’[47] – to be selected? I have chosen three criteria to guide this selection, besides availability of comparable information.

First, the importance of each for economic and/or human development must be significant, not peripheral. This rules out some functions such as ‘disaster relief’ sketched in Table 2.1 above. *Second*, it is desirable that as many basic public goods as possible be included, so as to make the difference between the normative and empirical models as narrow as feasible. The *third* criterion is diversity: the goods chosen must cover very different policy areas. This is important because the goods chosen will be a sample of the complete set of functions the state should perform, and as such should not be extracted from one particular policy domain, such as economic or social policy. If all our goods belonged to the same or similar areas, it would be difficult to argue we are measuring political performance instead of policy achievements in that particular field, which may or may not be correlated with achievements in other areas. Indeed, it is only by choosing public goods which are very different amongst themselves in terms of their nature, of the inputs that they require and of the state infrastructures they depend on, that the risk of mistakenly inferring overall high or low political effectiveness for each country is minimized. Moreover, this diversity in policy areas allows us to empirically test an important aspect of political effectiveness itself: whether the level of attainment in some policies is related or not to attainment in other policies, and if so, which ones. Thus, the *structure* of performance can be inferred from the policy patterns that will emerge.

[47] I do not mean this term in the technical sense of the economic literature, where it is reserved for those goods that are non-rival and non-excludable in consumption. In this context, I merely mean goods for which it is commonly accepted that there is an ultimate public responsibility in their provision – even if the actual delivery happens through the private sector.

Following these criteria, I have chosen eight public goods, grouped into three policy dimensions, as the *empirical* model of policy effectiveness (see Figure 2.1). For each good and dimension, an index of effectiveness will be constructed, through which we can comparatively assess the degree to which each country has provided that particular good or dimension. The three policy dimensions are physical security, welfare and economic policy. The first dimension includes internal security and citizen security. The second dimension includes the provision of education, public health and social security. The third includes macroeconomic stability, economic regulation and the protection of private property rights.

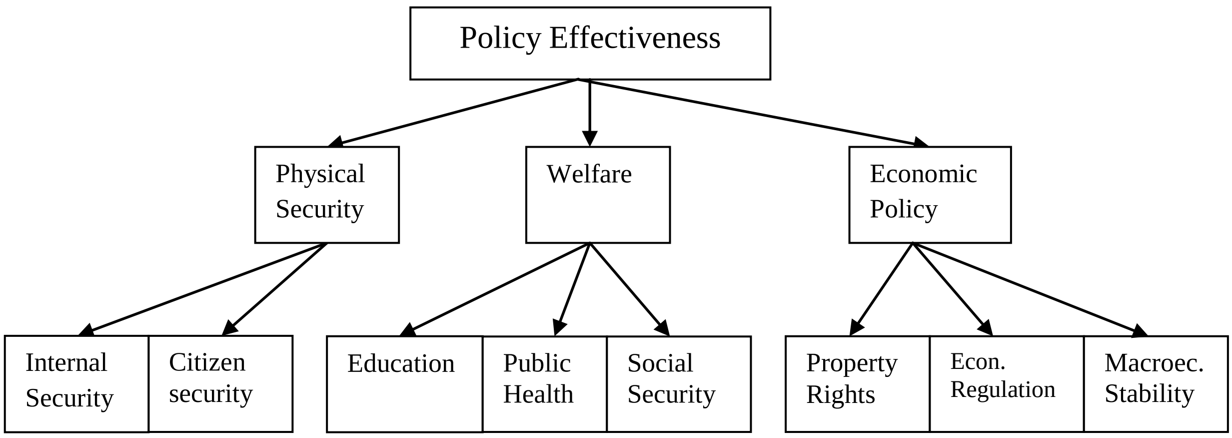

Figure 2.1. Empirical Model of Policy Effectiveness. *Source:* compiled by author

II. Conceptualization and operationalization of the public goods indices

In this section I will operationalize the empirical model of political effectiveness developed in the previous section. This will mean developing an effectiveness index for each of the eight public goods. As Munck and Verkuilen (2002) have remarked, building an index should proceed in three successive steps: conceptualization, measurement and aggregation. Each has its own purpose and success in each is evaluated through criteria specific to it. The eight indices to be developed here face significant difficulties on all three counts. At the conceptualization level, the high level of abstraction of what must be measured – the degree of effectiveness at providing each of these seven public goods – means that in most cases significant choices regarding the dimensions of the concept must be undertaken. At the measurement level, the vastly different nature of these goods and both the limited number and heterogeneity of the data sources available in each case pose particular problems. In particular, the use of perception-based data and other data availability issues mean that measurement cannot always take place at the level of specificity that an ideal conceptualization would prescribe. At the aggregation level, weighting the different sources of information in the absence of clear theoretical guidelines opens up a potentially vast number of linear combinations of the data through which to arrive at a result. Lastly, an additional challenge is raised by the fact that these eight indices, while independent from each other in terms of content, must conform as much as possible to the same structure of methodological choices, so that even if they are diverse in the objects measured, they nevertheless remain similar in their construction.

In what follows, I present and discuss the operationalization of the eight indices through each of the three successive steps of conceptualization, measurement and aggregation. This way of presenting the indices should both be more parsimonious and enhance the comparability of the methodological choices taken in each case.

a) Conceptualization

In this section, the process of conceptualization of each public good will be taken to the very 'leaves' of the concept tree in each case, meaning that below the lowest boxes in each of the diagrams below only empirical referents – or indicators – are left. According to Munck and Verkuilen, the essence of conceptualization is the *"identification of attributes that are constitutive of the concept under consideration"*, which *"amounts to the specification of the meaning of the concept"*[48]. In other words, it is about specifying the dimensions which, together, form the concept itself. However, conceptualization also refers to a second task, which is the vertical organization of these attributes or dimensions according to their level of abstraction. The goal of the first step is to cover the semantic space of the concept in such a way that neither superfluous attributes are included or *"theoretically relevant"*[49] concepts excluded. The goal of the second step is to do this in a logically coherent fashion in which the problems of conceptual conflation and redundancy are avoided. In the conceptualization presented here these methodological standards have been applied as much as possible, bearing in mind the inherent limitations imposed not just by the diverse nature of the data (e.g. perceptions-based or 'hard' numbers) but also by the level of aggregation at which such data is found, particularly in the case of perception-based data. These issues will be taken up below as they appear.

Let us begin then the conceptualization process, starting with the physical security effectiveness dimension. The good 'internal security' is posited to have two fundamental dimensions: the *absence of violent internal unrest* in the form of civil wars, terrorism or armed violence, but also in milder forms such as violent protests; and the *absence of state violence,* notably through human rights violations. These two dimensions cover both the politically-motivated violence committed by citizens against each other and towards state authorities on the one hand, and the violence committed by the state against its citizens on the other. The first is usually thought of as the main dimension as it corresponds closely to the idea of domestic order: this exists when there are no organized threats to the state's monopoly of violence, when

[48] Munck and Verkuilen (2002), p.7
[49] Ibid., p.8

protests are peaceful rather than violent, and when political and social tensions do not threat the institutional stability of the polity itself. In this view disorder stems from society and is in one way or another directed towards the state. However, the converse relation can also occur: state repression can also engender violence and be deeply disruptive of social life, even when targeted at specific, excluded minorities. Unless we also take into account the degree of violence exercised from the state towards society, our view of domestic order would be partial and limited. The above conceptualization can be summarized in Figure 2.2.

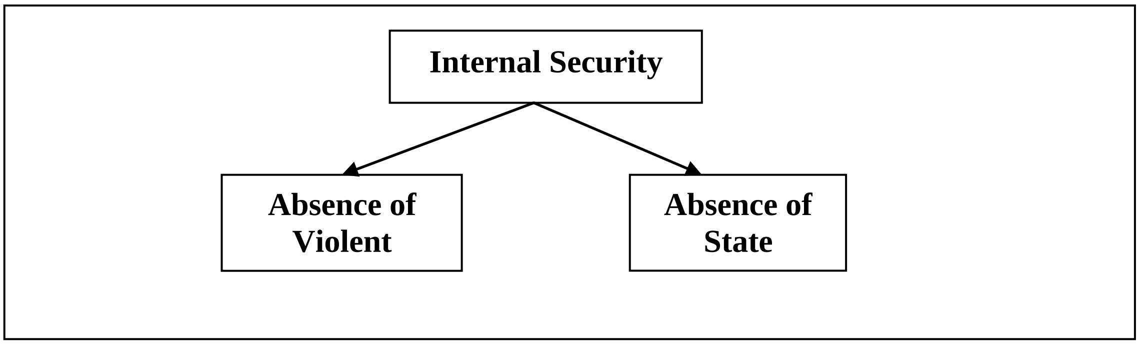

Figure 2.2. Conceptualization of Internal Security. *Source:* compiled by author.

Regarding citizen security, this good can be subdivided into two dimensions: the absence of crime, on the one hand, and trust in public security institutions, on the other. The former is about providing everyone with security regarding their person and property, while the latter is about being able to trust the police and the judiciary, as the key institutions in charge of preventing and sanctioning crime. While the former dimension seems straightforward – the absence of crime is, after all, what we usually mean by citizen security –, the latter is justified by the awareness that insecurity is not increased only by the occurrence of crime itself, but also by the feelings of defencelessness associated with it when it is known that key public institutions such as the police or the justice system are not doing their job or are downright involved in illicit acts. If, for instance, people believe the police are opportunistic bribe takers, protectors of criminal gangs or even independent perpetrators of crime, citizens may avoid ‘calling the police’ when having been the victim of a crime as they fear suffering yet greater costs[50]. Thus, and as summed up in Figure 2.3, trust in public security institutions is considered to be a second constitutive dimension of the public good ‘citizen security’ the state is charged with providing.

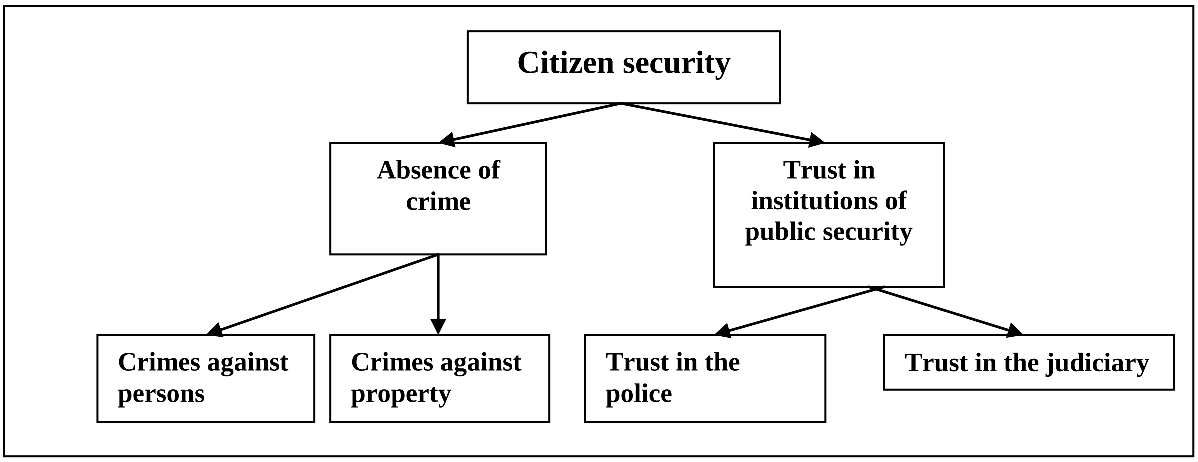

Figure 2.3. Conceptualization of Citizen Security. *Source:* compiled by author.

I turn now to the second dimension, social policy. I start with education. Here, most studies concerned with educational attainment or human capital formation simply take the *quantity* of education as their indicator and leave it at that[51]. This has usually been due not to an unawareness of the problem of differential quality of education between countries, but rather to the absence of comparable data in this regard. This is a serious shortcoming, however, since we now know that indeed very large differences in quality can be found at a cross-country level. For instance, the few participating Latin American countries in PISA studies have consistently ranked very near the bottom of

[50] For instance, it is said that in some Latin American countries people do not call the police when they have been victims of house robbery, as the police can then come and take more belongings out of the house. For other examples of illicit acts committed by the police in the region, see Chapter 7.
[51] Most use some international dataset of years of schooling, such as the one assembled by Barro and Lee (2010)

the list and often more than a full standard deviation below the OECD average[52]. Moreover, a recent study found that once the quality of Latin American education was taken into account – as measured by regional student tests – the differences in quantity of schooling between Latin American countries became statistically irrelevant in explaining their relative growth performance[53].

Given the importance of quality, it has been incorporated alongside quantity as one of the two fundamental dimensions of the concept. In it I rely, among other indicators of quality, on the same student performance scores that Hanushek and Woessmann (2009) use, and which come from two different tests[54]. Regarding 'quantity', the major concept here is the enrolment of students in each stage of the education process, from pre-school to tertiary education. I consider all stages of education – and not just primary or primary plus secondary – because the importance of both 'extremes' (pre-school[55] and tertiary) has risen over time and will probably continue to do so in the future. Figure 2.4 sums up the conceptualization for this good.

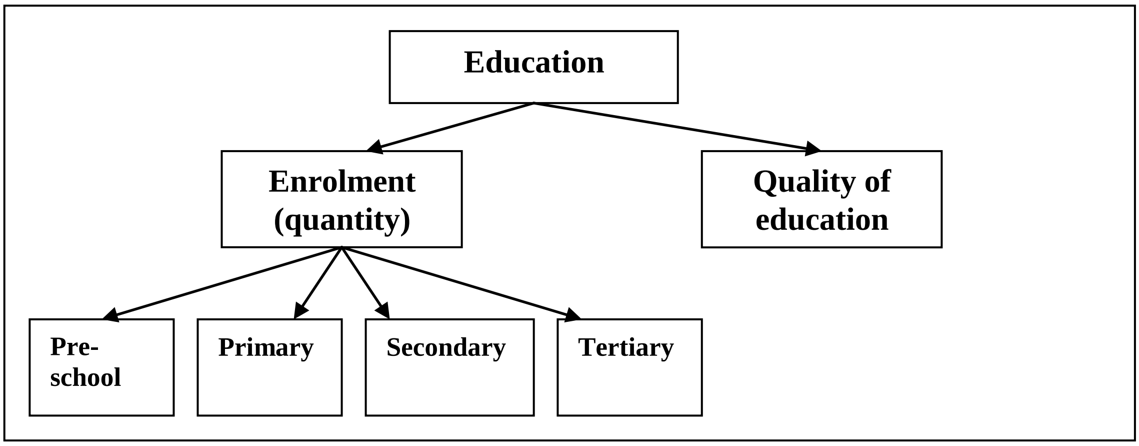

Figure 2.4. Conceptualization of Education. *Source:* compiled by author.

[52] See OECD (2007). See also Hanushek and Woessmann (2009)
[53] Hanushek and Woessmann (2009)
[54] All 18 countries in the sample participated in at least one of the tests, and many participated in both, thus allowing the construction of a single test performance indicator.
[55] For the importance of pre-school attendance, see Heckman (2006)

In the case of health, I have restricted the concept to basic public health provision rather than enlarging it to include more advanced forms of healthcare[56] that in contemporary times have become part of a state's responsibility to provide. This was due partly to data constraints, but also to the higher impact on development and welfare of these more basic forms of health interventions.

The two dimensions of public health here covered are *infant health* on the one hand, and the *prevention of (infectious) disease* on the other. These are arguably the two areas where basic public health and healthcare interventions have historically had their largest impact. Naturally, they are not fully distinct (i.e., there is a degree of conceptual conflation involved) as the prevention of disease – say, through increasing population access to safe water – also benefits infants together with the rest of the population. Nonetheless, a separate focus on infant health as a key outcome of public health provision is justified both because of its strategic importance for improving a population's life expectancy and also because many infant health interventions are actually not related to infectious disease control[57].

As can be seen in Figure 2.5 below, each dimension is in turn divided into logical (rather than conceptual) subdimensions, each grouping intermediate and final outcomes respectively. Intermediate outcomes are those that relate to a specific health service or good. They are not merely outputs, but outcomes in a specific health issue – for instance, sanitation or vaccination coverage rates. These outcomes are valuable in their own right, but also contribute to final outcomes, such as lowering morbidity and

[56] For instance, universal medical insurance coverage and guaranteed access to quality treatment of serious, complex illnesses.
[57] See Chapter 5 for a detailed treatment of this issue.

mortality in the population. The final outcomes are results – such as disease prevalence rates or infant mortality rates – that are partly due to health interventions and partly due to other factors beyond the direct control of the state, but which nevertheless have a direct connection to health policy and which capture the results of many different kinds of otherwise unobservable health interventions. Thus, intermediate and final outcome data complement each other and relying on both better reflects the degree to which infant health and disease control are being provided, than what relying on only one kind of outcome could do.

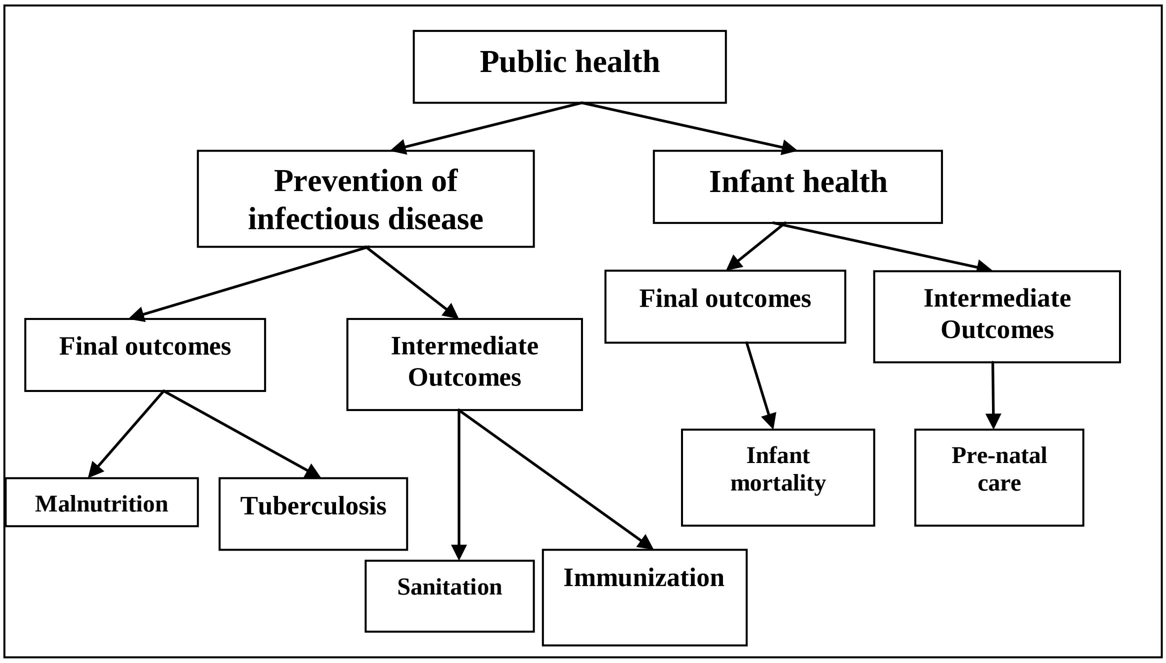

Figure 2.5. Conceptualization of Health. *Source:* compiled by author.

The third social policy good is social security. This is a complex good where, again, data limitations prevent a first-best conceptualization covering with equal care its different dimensions: old age insurance through pensions, work insurance through unemployment benefits, poverty insurance through social assistance. Unfortunately, this data is extremely fragmented and usually not comparable across countries. The area that has received the largest share of attention – and for good reason, as it is fiscally the largest component of social spending – is social security for the aged. Many studies, however, use as their dependent variable the public share of spending on this item[58]. This is problematic for two reasons. First, it is an output measure and not an outcome one – we do not know if many people are covered, or if spending is concentrated on a select but well-funded few. Second, it is misleading in a region where a substantial share of countries has introduced partly or fully private pension schemes[59].

The conceptualization proposed here attempts to measure the degree of provision of security in each of the three areas mentioned above: protection against poverty, work security and old age security. It does so in an admittedly imperfect fashion, in the last two cases solely through coverage measures, but this is judged to be better from the point of view of outcomes than using fiscal spending measures. Thus, this index is good for estimating the universality of pension coverage and of work protection (through measures of labour formality), but – due to data constraints – deficient at estimating the size of transfers or their redistributive targeting[60]. Figure 2.6 shows the corresponding conceptualization.

[58] Huber et al (2008); Segura-Ubiergo (2007)
[59] Mesa-Lago (2007)
[60] We do know, however, that overall fiscal taxes and transfers have a net effect close to zero in Latin America, as opposed to in OECD countries, and that pension spending is particularly regressive (Ocampo and Malagón, 2012). See also ECLAC (2010), Chapter III.

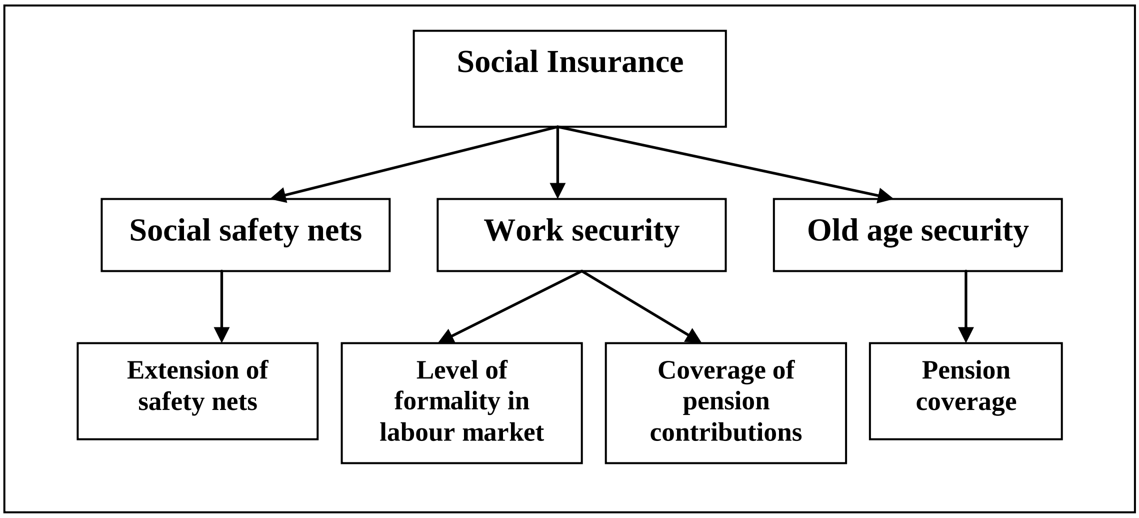

Figure 2.6. Conceptualization of Social Security. *Source:* compiled by author.

We now come to the final dimension, economic policy. I start with the protection of private property rights. In spite of the importance of the concept for so much literature on 'institutions and growth', its conceptualization is not often problematized or much discussed. The most typical measure of property rights in empirical work is the risk of expropriation by the state. This is indeed a major dimension of the concept, describing the vertical relation between the state and citizens (or businesses), but it is by no means the only one: the effective enforcement of contracts can be considered as a second and equally fundamental dimension which covers the horizontal protection of these rights. Moreover, each of these dimensions could be further subdivided by introducing more conceptual distinctions (between, for instance, the enforcement of formal and informal contracts) or else by differentiating between economic areas – the risk of expropriation in natural resources, for instance, has been historically much higher than in retail. Unfortunately, data constraints do not allow conceptual disaggregation beyond this point. In fact, even this simple distinction cannot be easily related to 'clean' indicators of each concept. This is because the most usual source of information for the degree of expropriation risk and for the degree of contract enforcement in an economy are perceptions-based indicators – such as the Global

Competitiveness Survey or the Heritage Foundation – which rely on either business leaders' or experts' judgement of the *overall* property rights protection in an economy. Thus, further disaggregation is empirically unfeasible.

Given this data situation, Figure 2.7 presents a simple conceptualization of property rights protection that divides it into expropriation risk and contract enforcement. From the point of view of conceptualization, this is clearly a second-best solution imposed by the lack of disaggregated data on the appropriate dimensions. In spite of these limitations, this index follows the standard practice in the field of measuring private property rights protection based on perception-based measures and, as long as it measures the two dimensions identified, should better reflect the degree of protection of property rights in each country than many indicators commonly used for this purpose[61].

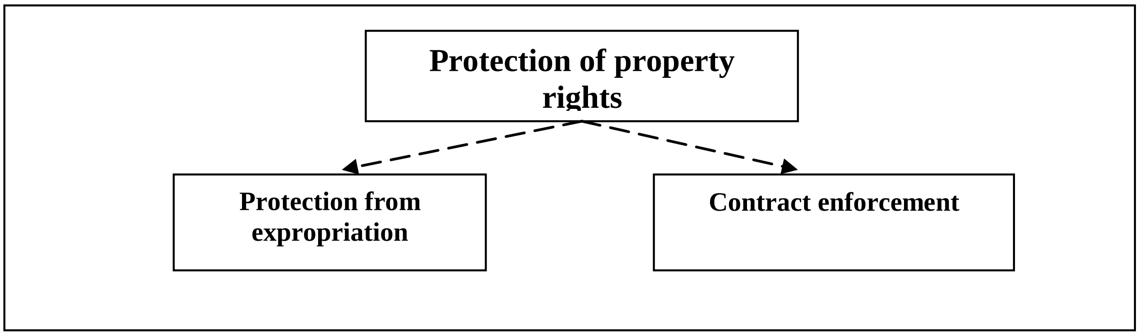

Figure 2.7. Conceptualization of Protection of Property Rights. *Source:* compiled by author. *Note:* Dotted lines represent inability to disaggregate data sources.

I turn now to economic regulation, which shares some of the same problems as the index on property rights protection – namely, the lack of disaggregation. Again, speaking of the quality of economic regulation is too general – we would like to disaggregate this into more specific dimensions, such as the regulation of competition, trade, labour, and so forth. In this case, however, this has so far not been possible

[61] Such as the International Country Risk Guide (ICRG), which only measures expropriation.

because of the lack of public availability of the disaggregated information in the perceptions-based data which form the basis of this index.

This is because my main source of data for this index – the World Bank's Regulatory Quality Governance Indicator – provides data for each of its sources in an aggregated manner, such that one cannot separate, say, the Economist Intelligence Unit's (EIU) assessment of the quality of trade regulation from that of labour regulation for the same country. However, it is of course possible to know which exact questions are included into each source, so that in the final country score provided by the EIU we do know which regulatory areas have been covered and what weight each has on the overall score. For this index, two such sources – chosen for the universality of their regional coverage, the pertinence of their questions to assess the quality of *economic* regulation and for their full data availability for the 1996-2006 period – have been used[62]. Each source was given equal weight in the final result. From this procedure we can reconstruct a *virtual* conceptualization based on the underlying questions included in the data, as seen in Figure 2.8, which shows the thematic areas of regulation which these questions cover.

A remaining problem of course is about the concept of quality itself. Who is to judge what 'good' economic regulation is? The authors of the Worldwide Governance Indicators define regulatory quality as the provision of *"sound policies and regulations that permit and promote private sector development"*[63]. This emphasis on promoting private sector interests rather than on correcting market failures as such[64] suggests that there is a degree of pro-business bias in this indicator. A look at the

[62] The Economist Intelligence Unit and the Heritage Foundation.
[63] Kaufmann et. al. (2009), p.6
[64] Which sometimes imply costs and limits to private sector development, as when externalities must be internalized by business.

specific questions and items used by agencies to score regulatory quality tends to confirm this view. Nonetheless, the fact that there may be some conflict between enhancing markets and promoting business interests does not obscure the larger fact that there is also a very large area of overlap between the two. Providing sound regulations that foster competition across different markets for goods and services is indeed a necessary state function for economic development to occur; and conversely, an excess of economic regulation may be detrimental for that goal[65]. The provision by the state of market-fostering regulation (and its enforcement) is therefore what I take to be the meaning of 'good' or 'quality' regulation. How well actual measurements of the concept correspond to this measure is debatable, but in view of how large the areas of coincidence between private-sector development and strong markets are, the bias introduced by eventual pro-business concerns should be relatively small[66].

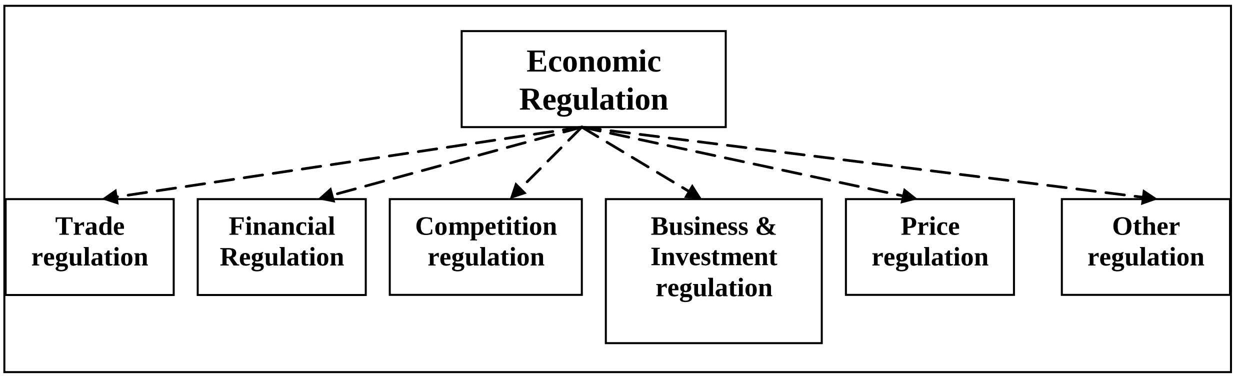

Figure 2.8. Conceptualization of Economic Regulation. *Source:* compiled by author. *Note:* Dotted lines represent inability to disaggregate data sources.

I now turn to the final economic good, macroeconomic stability. Conceptualization here is more straightforward, in that there are clear and measurable dimensions of performance. It is important to note that the good to be provided is macroeconomic stability, which is quite different from 'delivering' economic growth directly through fiscal or monetary policy. The assumption is that the goal of macroeconomic policy is

[65] As shown for instance by Djankov (2002)
[66] See Appendix A and in particular Table A7.2 for a further discussion of this point.

to provide a stable, sustainable framework in which long-term investment decisions can be made. Delivering low and predictable inflation on the one hand, and smoothing the business cycle through counter-cyclical policies on the other, are seen as the main tasks of government.

Macroeconomic stability is conceptualized as having three distinct sub-dimensions. The first is growth stability: a central task of governments is to smooth the business cycle and thus avoid violent oscillations in the growth rate, regardless of whether this growth is high or low. The second one is inflation performance, which in turn is subdivided into inflation levels and inflation stability. Low levels of inflation are generally desirable, but at least as important is that this inflation be relatively predictable by economic agents. Finally, the sustainability of the country's position must be assessed, since growth and inflation performance can often be 'bought' for the present at the expense of the future through external lending, fiscal deficits or other means. Figure 2.9 sums up this conceptualization.

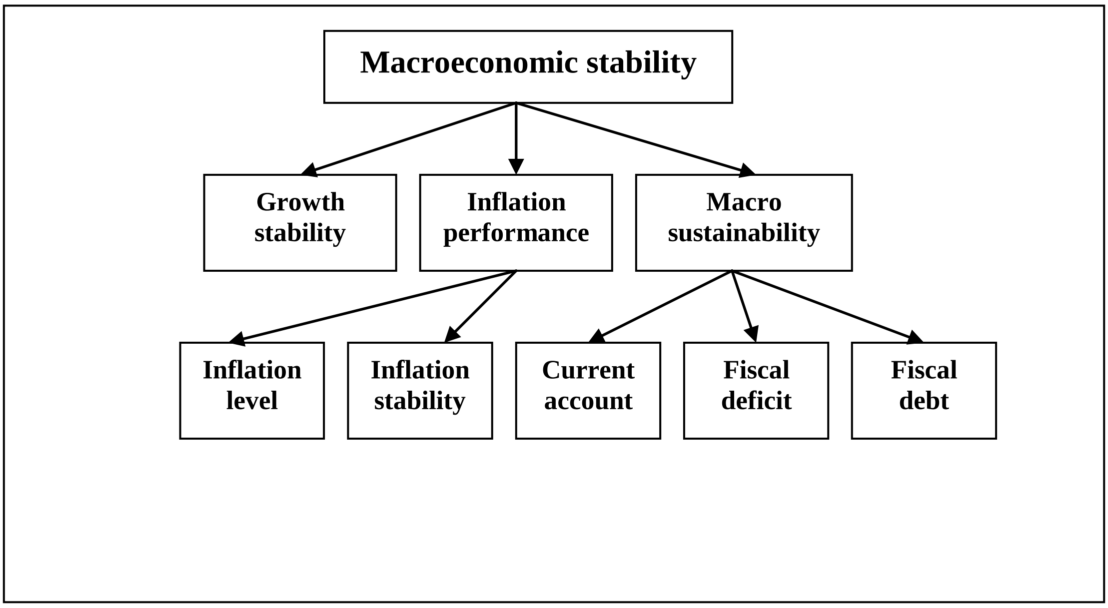

Figure 2.9. Conceptualization of Protection of Property Rights. *Source:* compiled by author.

I have now covered the conceptualization proposal for each of the eight indices. I turn now to some general considerations regarding measurement and aggregation strategies, before proceeding to the fifth section where results will be presented and analyzed.

b) Measurement and Aggregation

The preceding discussion has described and justified a specific choice of conceptualization for each of the eight goods that form my measure of political effectiveness. As mentioned above, such conceptualization was taken to the very 'leaves' of the concept tree, so that below the lowest boxes in each diagram only empirical referents – or indicators – are left. In some cases, particularly but not exclusively for those concepts which are measured through perceptions-based data, multiple indicators have been employed. The description of those indicators and of the sources used can be found in Appendix A. Here, I will limit myself to discussing general aspects of the measurement strategy, to be followed by a similar discussion regarding aggregation choices.

i. Time frame

   The data collected for each of the indices is a cross-section for the year 2006, with some use of data from neighbouring years when needed for data availability reasons. All the perceptions data which were taken from the Worldwide Governance Indicators are for the year 2007, and thus usually refer to 2006. Some exceptions to the use of single-year data must be noted, however. Most notably, all economic dimension goods are calculated as averages for the full 1996-2006 period, calculated with information on even years[67]. The macroeconomic stability data is moreover calculated for each (even) year using data from the last three years[68]. The reason for this different treatment of economic goods is their significantly greater variability over time as compared to the social policy and physical security goods. For non-economic goods, change in outcomes tends to be much more gradual and is largely overshadowed in its significance by the degree of existing cross-national variation. This different degree of variability is illustrated in Table 2.2 below, which shows correlation values between the 2006 index and (for the non-economic goods) a simplified version of each index with enough data availability to be 'built backwards' all the way back to 1996.

Table 2.2. Correlations Between 'Full' 2006 Index for Each Good, and Simplified Index Covering 1996-2006 Period

	Citizen Security	Internal Security	Health	Education	Social Security	Property Rights	Economic Regulation	Macro Stability
1996	**0.74**	**0.85**	**0.96**	-	-	**0.59**	**0.57**	-0.13
1998	**0.76**	**0.83**	**0.97**	**0.91**	**0.95**	**0.63**	**0.56**	-0.06
2000	**0.75**	**0.91**	**0.97**	**0.83**	**0.94**	**0.72**	**0.59**	0.04
2002	**0.76**	**0.91**	**0.99**	**0.87**	**0.97**	**0.93**	**0.84**	0.36
2004	**0.76**	**0.95**	**0.99**	**0.89**	**0.96**	**1.00**	**0.85**	**0.68**
2006	**0.80**	**0.96**	**1.00**	**0.91**	**0.95**	**1.00**	**1.00**	**1.00**

Note: n=18 for all goods except Social Security (n=13). Correlations significant at 5% level in bold. *Sources:* The *Health*, *Property Rights*, *Economic Regulation* and *Macro Stability* indices were calculated using the full set of indicators of the 'original' index. The *Citizen Security* simplified index is built exclusively with the use of the homicide data. In the case of *Internal Security*, only three of the seven expert sources used in the full index are used. In the case if *Education*, only coverage data is used. In the case of *Social Security*, only data on contributions to and coverage of pensions is used. For full indices and source descriptions, see Appendix A.

As can be observed, the economic goods show much more intertemporal variability than the rest. Indeed, once we take into account the imperfect match between the 'full' indicator and its simplified version (the fit can be observed

[67] That is, each index was generated for 1996, 1998, 2000, 2002, 2004 and 2006 and then an average of these scores was taken.

[68] Thus, for instance, the score for inflation stability for the year 1996 is derived from a calculation of the standard deviation for inflation for the years 1994, 1995 and 1996. Likewise, the score for inflation level of 2004 is derived from the average inflation for 2002, 2003 and 2004; and so forth.

for each good in the 2006 row), the non-economic goods show remarkable stability over time. This suggests that using 2006 data is appropriate for these goods, but that doing so would be inadvisable for the economic goods. This is why for the latter the full 1996-2006 period has been considered. Of course, this does not fully solve the problem of variability; nonetheless, measuring policy effectiveness over a decade should say something more about underlying performance in these areas than what could be said about a single year. Given the cross-sectional approach of my research design and the restrictions placed by data availability[69], this is about as much as can be achieved without dropping either cases or public goods. In her study of policy effectiveness in developed countries, Roller (2005) adopts a similar cross-sectional design, though data availability allowed her to consider 21 years of performance. Even for the economic goods, however, it should be noted that cross-country variation in the data is larger, at least for this 10-year period, than within-country variation. Thus, this cross-sectional design focuses on variations across units which form the lion's share of overall variance[70].

ii. Outcomes, not outputs

As has been anticipated in the previous discussion, the focus of this study is on measuring policy outcomes and not policy outputs as such. This is consistent with the way political effectiveness has been conceptualized in this study, i.e. as the delivery of specific public goods that only the state can provide and

[69] 1996 is the first year for which systematized regulatory quality data is available. Property rights protection measures only go back some years further at best. While the International Country Risk Guide dataset goes back to 1984, its 'investment profile' rating (which could be taken as a proxy for property rights protection) is conceptually unclear and therefore unattractive as an outcome measure in a study such as this which is aiming at measuring public goods delivery as precisely as possible.

[70] The exception to this is macroeconomic stability, where the standard deviation of average scores across countries is slightly smaller than the average of within-country scores' standard deviation. For the other two goods, the former figure is between 1.5 and 2 times larger than the latter.

which are important for development. It is the delivery as such that matters, and not the efforts or the specific actions a state undertakes to achieve that delivery. Some authors (e.g. Putnam 1993) have preferred the use of output measures because these, unlike outcomes, are more or less fully under the control of the government and therefore are fairer standards of government performance. While this seems reasonable, the approach is nevertheless problematic. As Almond and Powell stated, *"outputs are intended to produce political goods, but the real test is the outcome"*[71]. As Roller suggests, the output approach basically assumes that outputs are good proxies for outcomes. However, and whatever the merits of this approach in 'good governance' environments may be, its usefulness in Latin America and the developing world generally is highly questionable. In countries with substantial problems of government corruption, incompetence and governance deficits more generally, assuming that there is significant correlation between outputs (or inputs such as spending) and outcomes is highly problematic. If teachers do not show up for work, if public social security spending is geared towards the middle and upper classes instead of to the poor, if funds are 'lost' before they are turned into public works, if the police are corrupt, and so forth, the number of teachers in the educational system, the amount spent on roads or the number of policemen on the streets will be very poor indicators of actual delivery in each policy area.

For these reasons, measuring performance through outcomes – even if they are not fully under government control – is a better strategy than relying on outputs. Indeed, renouncing to measure effectiveness through actual outcomes

[71] Roller (2005), p.32

is akin to saying governments have *no* control over these at all, in which case debates over the proper role of the state in development theory are entirely spurious.

iii. Perception-based data and the Worldwide Governance Indicators

Many of the public goods indices developed have made extensive use of perceptions-based data. Though the use of this kind of data has become popular in the economic and development literature only since the mid-1990s[72], since then a veritable industry has bloomed providing this kind of data[73]. By far the most comprehensive and sophisticated use of perception-based measures has been the Worldwide Governance Indicators (WGI) project, born out of the work of Kaufmann, Kraay and Mastruzzi (KKM)[74]. Under six broad 'governance indicators', they have organized the systematic collection of worldwide perceptions-based data originally generated by other sources (both commercial and non-profit), each for their own specific purposes. The governance indicators generated from this vast collection of indicators have attracted a great deal of attention and also of criticisms. While we need not concern us here with all of these[75], it is important to clarify how this work stands in relation to KKM's indicators and associated methodology.

The first point to bear in mind is that my public goods indices are conceptually distinct from the WGI because while I seek to measure specific public goods

[72] Dellepiane-Avellaneda (2010) identifies the papers by Knack and Keefer (1995) and Mauro (1995) as the forerunners in the burgeoning literature using perceptions-based data as key explanatory variables of cross-national levels of development.

[73] Such as the Transparency International index, the Heritage Foundation's Economic Freedom Index, the Fraser Index, the Bertelsmann Transformation Index for governance in developing countries, the Global Competitiveness Survey, the Economist Intelligence Unit data, among many others.

[74] See World Governance Indicators website and Kaufmann et al (2009)

[75] For example, Arndt and Oman (2006), Kurtz and Schrank (2007a, 2007b), Thomas (2010) and Andrews (2008; 2010).

which have been clearly conceptualized before operationalization, the same cannot be said of the latter.

As Thomas (2010) and Kurtz and Schrank (2007) have pointed out, there is an evident problem of *"content validity"*[76] and conceptual conflation with the WGI. Indeed KKM provide no more than three or four lines of explanation for each of their indicators[77], which may be useful as classification criteria of different information sources but are no substitute for the explicit and careful process of conceptualization that Munck and Verkuilen characterize as the essential first step of the measurement process. Indeed, it has been said that the WGI mix outcomes, processes and policy choices indiscriminately[78]. Their very broad classification criteria allow them to place under the same heading extremely diverse data and phenomena. For example, under the 'Rule of Law' indicator one can find sources that report data on crime, others that report data on respect for property rights, some that mix in the same number data for both, and yet other sources that refer to other issues such as judicial independence, tax evasion, access to land or trafficking of people. This is not just *"definitional nitpicking"*[79], as KKM allege, but a serious conceptual flaw that raises legitimate doubts on what is it exactly that is being measured – all the more so as these diverse kinds of data are not organized into dimensions of the concept (such as crime, property, due process, and so forth) that could give order and conceptual coherence to a broad-coverage indicator. In the case of

[76] Thomas (2010) criticizes the WGI both for their construct validity, which includes both content validity on the one hand and convergent and discriminant validity in the other. While the former relates to adequate conceptualization, the latter two relate to the validity of the empirical proxies used to measure the concept. In this latter case I do not believe the problems are as serious as Thomas suggests. However, the lack of content validity would be enough to annul construct validity, which requires all three kinds of validity simultaneously (Thomas2010, pp. 37-38).
[77] See Kaufman et al (2009), p.6
[78] Andrews, Hay and Myers (2010), p.373.
[79] Kaufmann et al. (2007a), p.24

my public goods indices, the choice of sources and questions used was made with particular concern for their validity in helping us to measure the public good in question and not some vague general construct.

A second set of differences with the WGI are methodological. My public goods indices rely on the use of a carefully-chosen set of indicators which (when belonging to the same conceptual dimension) are all given equal weight. The indicators were chosen both for their conceptual validity and for their full availability for all the 18 countries considered. The data sources and their weights are exactly the same for each country. This fairly standard procedure of index-building is different on both counts from the WGI, which are constructed from an unobserved components model in which different sources may be used for different countries (even to the point of no overlap in sources), and where the weight of each source depends on its degree of agreement with the other sources, so that quite extreme differences in weight can appear[80], while weights themselves are not constant over time. While this procedure may be useful for measuring nearly all countries in the world with the same metric and also for the quantification of the standard errors of the measurement, the procedure relies on a demanding set of statistical assumptions and the partial sacrifice of conceptual validity (so that many different sources can be included). Thus, even at the cost of losing the ability of measuring standard errors, I argue that using i) conceptually valid and ii) fully comparable, transparent and stable weights and sources, are advantages that outweigh this cost.

[80] For instance, Arndt and Oman (2006, p.69) note that for the 'Voice and Accountability' indicator, Freedom's House "Nations in Transition" source gets a weight of 0.39, while mass-based surveys such as Latinobarómetro get a weight of 0.01.

Since many critiques of the WGI are levelled at either their conceptualization or at the use of an unobserved components model for their construction, they do not apply to my public goods indices. The only critiques that the two indices share are those related to the use of perceptions-based measures. As anticipated above, most of the perceptions-based data used for the indices has been obtained from the WGI in its 2007 version. Precisely because this kind of data has been used in the development and the governance literatures for about 15 years, their employment here should not be particularly controversial. As KKM note, there are three reasons for using them: first, sheer availability – for many purposes there is seldom a fact-based or 'objective' measure that measures the phenomena we are interested in. Thus, in many occasions, relying on perceptions-based data is not an option but a necessity. In second place,

> "…perceptions matter because agents base their actions on their perceptions, impression, and views. If citizens believe that the courts are inefficient or the police are corrupt, they are unlikely to avail themselves of their services. Similarly, enterprises base their investment decisions – and citizens their voting decisions – on their perceived view of the investment climate and the government's performance."[81]

This is an important point, as social life is unavoidably about not just facts but also about perceptions about those facts, and this is particularly true for some of the more intangible public goods we are measuring here, such as protection of property rights or the quality of regulation. Finally, the third reason is that 'objective' data in many situations can only capture the "de jure" aspects of the phenomena, which may vastly differ from the "de facto" situation[82].

[81] Kaufman et al (2009), p.4
[82] Kaufmann et al (2009), p.4

Again, particularly in the cases of property rights and regulatory quality this is a very important point, but we may go further than this and point out that measuring quality is usually a more judgment-based task than measuring quantity. Thus, to understand the reliability of the police services, the independence of the judiciary, the effectiveness of property rights protection, the market-supporting character (or not) of economic regulation and even the extent to which the poor are really protected through government safety nets – among other issues – it may well be better to rely on perceptions and judgments than on 'hard' data which will very often only capture a few isolated features of these complex outcomes. Because of these reasons, then, I argue that using perceptions-based information is crucial for a proper evaluation of performance of many of the public goods here examined. Without them, some goods could not be measured at all, while others could but with less validity and precision, thus lowering the overall quality of the measurements.

Nonetheless, two critiques levelled at the WGI regarding their use of perceptions-based data have broader application than just the WGI. These are, first, that these sources tend to have a pro-business bias, particularly in the case of commercial risk ratings agencies whose main clients are businesses (particularly global business); and second, that perceptions are biased by a country's recent economic performance, so that countries that have recently tended to do well are thereby given higher scores by experts[83].

[83] Kaufmann et al (2007a), pp.12-16; Kurtz and Schrank (2007a)

Regarding the first of these critiques, I have already acknowledged above that a degree of bias may be present, particularly in the case of economic goods such as property rights protection and regulatory quality. Nonetheless, KKM argue that commercial agencies, NGOs and other expert judgements are closely correlated to each other, and thus that there is little empirical evidence of private-sector bias. Based on these high correlations, they conclude that *"it is implausible that the preferences of businesspeople regarding good governance differ so dramatically from those of other types of respondents"*[84]. As I show in Appendix A (Tables A6.3 and A7.2), NGO sources such as the Bertelsmann Transformation Index provide a very similar assessment of property rights protection and regulatory quality as commercial agencies such as the Economist Intelligence Unit. Based on these considerations, I conclude that while a degree of bias may be present, it is not the overriding factor in either of those indices.

Regarding the second critique, again the existence of what KKM call "halo effects" is theoretically possible and impossible to entirely rule out. Kurtz and Schrank (20007a) provide some empirical evidence regarding their existence through statistical tests, but which as KKM show, is liable to a different (and innocuous) interpretation and which in any case are not robust to specification changes[85]. Be this as it may, it is always salutary to bear in mind that perception-based measures are based on just that – perceptions – and therefore are liable to measurement error, though of a different kind, than measures

[84] Kaufmann et al (2007a), p.13
[85] For a fuller discussion of this issue, see Kurtz and Schrank (2007a and 2007b) and Kaufmann et al (2007a, 2007b and 2007c). For a discussion of 'subjective' versus 'objective' indicators, see also La Porta et al (2004); Glaeser et al (2004); Woodruff (2006); Feld and Voigt (2003); and Haggard and Tiede (2011).

constructed from ‘hard’ numbers. That is why whenever possible both hard data and perceptions have been combined to reduce measurement error due to the idiosyncrasies of each kind of evidence. For clarity, the kinds of sources used for each index are summed up in Table 2.3 below.

Table 2.3: Public goods Indices and Kinds of Data used to Build Them

Index	Presence of ‘hard’ data	Presence of perceptions-based data
Internal Security		X
Citizen Security	X	X
Education	X	X
Public Health	X	
Social Security	X	X
Property Rights		X
Economic Regulation		X
Macroeconomic Stability	X	

Source: compiled by author

iv. Number transformation strategies

An often overlooked but yet important stage of the measurement process is to transform raw scores into a common scale. Without some sort of standardization of the data incorporated into the different components of an index, their ulterior aggregation into a final figure would be essentially meaningless. This is why a few comments on general strategy are in order here; the full details on the transformation of each data source can be found in the Appendix A.

For all measures on all indices, the final data is composed of numbers that go from 0 as the worst possible outcome, to 1 as the best possible outcome. These are ‘external’ and ‘absolute’ standards, in the sense that 0 and 1 do not simply reflect the best and worst performer on that measure among the 18 cases. This would transform performance into a purely relative measure, in which each country's score would be potentially sensitive to the inclusion or exclusion of other countries in the sample. Instead, the indices are built so as to be able to potentially include all the countries in the world without changing the scores of those already included[86]. The 0-to-1 range is easy to understand and convenient since all the WGI data is already coded on that scale, and many of the quantitative indicators used are coverage percentages, and as such lend themselves easily to that transformation. Whenever the transformation of data into a 0-1 range was not obvious, the criteria used were – whenever possible – substantive rather than purely relative to other countries' performance.

This score transformation strategy has two broad advantages over max-min (or min-max) transformations and also to z-score transformations, and both are related to the fact that performance is assessed in an 'absolute' scale where the extremes of 0 and 1 have inherent meaning: first, this allows us to easily interpret individual country scores as distance from the theoretical maximum[87], and the corresponding performance differences between countries on that same scale; and second, it allows for the inclusion or exclusion of countries from the sample without affecting the remaining countries' scores and the distances between them[88].

[86] In practice, of course, this is limited by data constraints. Nonetheless, in most cases data were taken from international (and not just regional) sources, for which the inclusion of more countries would be straightforward.
[87] In the case of perception data, of course, this maximum is simply getting the maximum score possible from each of the sources used in that component – a very rare occurrence. Though the scores of 1 and 0 are less transparent in these cases, they still represent something closer to an 'absolute' scale than a mere relative ordering of cases does.
[88] Note that z-score standardization is sensitive to the scores of every country in the index, while the min-max or max-min transformations are sensitive only to the inclusion or exclusion of countries with minimum or maximum scores on that measure.

I now turn to *aggregation* issues. Aggregation is always a complex and to some extent arbitrary affair, particularly in the choice of weights given to different dimensions of the concept. This is doubtless a difficult choice, which is often resolved in favour of giving the same weight to all dimensions simply because justifying different weights is so difficult. Nevertheless, in two of the eight goods (Internal Security and Citizen Security) I use subjective weights to reflect the fact that one dimension is clearly more important than another. For instance, in the Citizen Security index the dimension 'crime rates' was weighted with 0.7, while the dimension 'trust in system' was weighed 0.3. The reason for doing this is that achieving actually-low crime rates is more important for the public good 'citizen security' than the degree of trust is in the public security institutions. The details of weighting for each public good index can be seen in the Appendix A, along with detailed data on each dimension per index. Moreover, because of the inherent suspicion attached to subjective weightings different from equal weights to everything (which is, nevertheless, also a subjective choice), the Appendix (Table A.9) shows the changes in results in the two indices where non-equal weighting occurs, when the respective dimensions are weighted equally. This exercise shows that the indices are quite robust to the changes in weights.

The next step is the aggregation of the eight public goods indices into the three policy dimensions defined above. Because the indices may (and in fact do) have each different averages and standard deviations, prior to aggregation the scores are normalized (and thus converted into z-scores). In turn, these dimension scores are aggregated to arrive at a 'policy effectiveness index'. This ultimate aggregation is not unusual practice. For instance, Roller aggregates her eight policy components (representing four distinct policy areas) into a single “general performance” index[89]. Stein et al (2005) also aggregate the six features of the policy making process, each originally measured separately, into a single ‘quality of policies’ index. Nonetheless, and as we will see below, given that the three policy dimensions are only moderately correlated between themselves, explaining variation in outcomes at the policy dimension level may be more informative than doing so at the highest level of abstraction represented by a single, summary index. Therefore, the policy effectiveness scores by dimension will be our key dependent variables in the chapters that follow.

A final point of concern is the aggregation method. According to Munck and Verkuilen, the method should be dependent on the theoretical relationship between the components of an index. For instance, if high performance on one component or dimension can compensate for low performance on another, then the right aggregation rule is additivity. On the other hand, if all the components are necessary conditions then we should multiply them to get the final index. An empirical problem with multiplication, however, is that differences between countries become amplified and it is not always clear that the resulting indices provide a ‘truer’ representation of cross-country differences. At the level of each public goods index, I will follow additivity rules since high performance in one dimension of the good should compensate for low performance on another. Just as in the case of the consumer price index, there is no requirement here that all variables move together: the degree to which the state fulfils its function in each policy area (or, equivalently, the degree to which it provides each ‘public good’) is best understood as the weighted sum of performance on each dimension rather than as a combination of necessary, non-substitutable factors. On the

[89] Roller (2005), chapter 4

other hand, at the level of the aggregate 'policy effectiveness index' it could be argued that, if all goods are necessary for development, then understanding each dimension as 'necessary' for effectiveness makes more sense. In this case, I will provide both an additive and a multiplicative index, and should any significant differences between the two be found, the multiplicative one will also be retained.

III. Results: general and disaggregated policy effectiveness

In this section, I present and discuss the public goods indices and their aggregation into policy dimensions and into an overall measure of policy effectiveness. As a first approximation Table 2.4 below presents the raw scores for each public good index.

Table 2.4: Raw Scores of Public Good Indices

Countries	Citizen Security	Internal Security	Health	Education	Social Security	Property Rights	Economic Regulation	Macro Stability
Argentina	0.53	0.77	0.93	0.66	0.60	0.53	0.57	0.60
Bolivia	0.55	0.64	0.65	0.52	0.48	0.43	0.62	0.68
Brazil	0.43	0.67	0.89	0.57	0.70	0.50	0.61	0.67
Chile	0.68	0.91	0.95	0.64	0.75	0.90	0.80	0.80
Colombia	0.39	0.31	0.89	0.57	0.39	0.40	0.63	0.70
Costa Rica	0.59	0.91	0.93	0.65	0.67	0.50	0.73	0.62
Dominican Rep.	0.53	0.74	0.82	0.43	0.30	0.30	0.49	0.67
Ecuador	0.51	0.60	0.80	0.55	0.35	0.40	0.53	0.59
El Salvador	0.27	0.68	0.88	0.52	0.31	0.53	0.64	0.82
Guatemala	0.30	0.64	0.77	0.41	0.30	0.40	0.55	0.75
Honduras	0.39	0.66	0.79	0.44	0.26	0.43	0.53	0.60
Mexico	0.52	0.66	0.91	0.64	0.43	0.50	0.66	0.69
Nicaragua	0.62	0.72	0.79	0.44	0.25	0.30	0.56	0.57
Panama	0.65	0.86	0.86	0.57	0.50	0.40	0.61	0.71
Paraguay	0.48	0.66	0.82	0.47	0.28	0.33	0.49	0.69
Peru	0.49	0.60	0.79	0.56	0.35	0.40	0.68	0.70
Uruguay	0.68	0.92	0.94	0.69	0.75	0.67	0.63	0.54
Venezuela	0.36	0.53	0.85	0.55	0.43	0.40	0.48	0.48
Average	**0.50**	**0.69**	**0.85**	**0.55**	**0.45**	**0.46**	**0.60**	**0.66**
St Dev	**0.12**	**0.15**	**0.08**	**0.09**	**0.17**	**0.14**	**0.09**	**0.09**
Coeff of Var	**0.25**	**0.22**	**0.09**	**0.16**	**0.38**	**0.31**	**0.14**	**0.13**

Source: author's calculations

As can be seen in Table 2.4, both averages and dispersion vary widely across indices. For instance, *Social Security* and *Property Rights* display particularly low averages, suggesting that Latin American countries are a long way from providing either full protection of property rights or giving broad work, pension and social assistance coverage to their populations. Conversely, the average score of 0.85 in *Health* suggests that most Latin American countries (with the exception of Bolivia) are well on their way to full provision of (basic) public health coverage and care to their populations. In terms of variability, the last rows of Table 2.4 display both the standard deviation and the coefficient of variation for each index. Again, we can see variability in results: while in *Health*, *Education*, *Economic Regulation* and *Macroeconomic Stability* almost all countries have broadly similar results, so that the standard deviation represents between 9% and 16% of the average, in the cases of *Property Rights* and *Social Security* that value is above 30%. For both this reason and for clarity of exposition I have normalized the results before aggregating them into policy dimensions, though results do not materially change either way[90].

Table 2.5 below provides the normalized scores for each index. This time, I have shaded in dark grey those scores that represent one or more standard deviations *above* the regional mean score fort that index, and in light grey those that represent one or more standard deviations *below* the regional mean. In this way, for each good and each country, we can see at a glance instances of over- and under-achievement in comparison with the region as a whole.

[90] The correlation coefficients between policy dimensions aggregated from the raw scores and from z-scores are above 0.99 for all three policy dimensions. The same holds for the summary Policy Effectiveness Index in Table 2.6 below.

Table 2.5: Z-Scores of Public Good Indices

Countries	Citizen Security	Internal Security	Health	Education	Social Security	Property Rights	Economic Regulation	Macro Stability
Argentina	0.26	0.51	1.02	1.31	0.84	0.50	-0.38	-0.66
Bolivia	0.46	-0.38	-2.56	-0.31	0.18	-0.21	0.21	0.25
Brazil	-0.56	-0.19	0.58	0.25	1.41	0.26	0.15	0.06
Chile	1.48	1.44	1.35	1.06	1.74	3.08	2.29	1.62
Colombia	-0.88	-2.55	0.55	0.25	-0.36	-0.44	0.36	0.47
Costa Rica	0.74	1.44	1.11	1.20	1.28	0.26	1.54	-0.44
Dominican Rep.	0.25	0.31	-0.34	-1.38	-0.87	-1.15	-1.28	0.07
Ecuador	0.07	-0.65	-0.60	0.04	-0.56	-0.44	-0.87	-0.79
El Salvador	-1.84	-0.08	0.44	-0.38	-0.79	0.50	0.48	1.81
Guatemala	-1.61	-0.35	-0.97	-1.61	-0.87	-0.44	-0.64	0.99
Honduras	-0.91	-0.22	-0.79	-1.30	-1.10	-0.21	-0.85	-0.72
Mexico	0.22	-0.21	0.78	1.03	-0.13	0.26	0.75	0.30
Nicaragua	1.01	0.17	-0.78	-1.26	-1.14	-1.15	-0.47	-1.04
Panama	1.24	1.11	0.11	0.22	0.31	-0.44	0.16	0.60
Paraguay	-0.18	-0.21	-0.34	-0.88	-1.00	-0.91	-1.32	0.39
Peru	-0.07	-0.61	-0.79	0.14	-0.58	-0.44	0.90	0.50
Uruguay	1.46	1.53	1.23	1.64	1.75	1.44	0.31	-1.32
Venezuela	-1.13	-1.06	0.01	-0.01	-0.12	-0.44	-1.34	-2.10

Note: Dark shading represents performance significantly above the regional mean, while light shading represents performance significantly below the regional mean. *Source:* author's calculations.

As we can see in the Table, Chile, Uruguay and Costa Rica are 'high achievers' across the board, with at least one exceptional performance (in comparison with the region) in each policy dimension. Panama is a high achiever in the Physical Security goods, Brazil is so in Social Security, while Argentina does relatively well on the Welfare goods. Interesting contrasting cases are El Salvador, Uruguay and Nicaragua, who are high achievers and low achievers in at least one good each[91]. Finally, we have systematic underperformers such as Venezuela, the Dominican Republic, Nicaragua itself, and to a lesser degree Guatemala and Honduras with two goods each below a standard deviation from the regional mean. Overall, however, the pattern of 'over-achievement' is more concentrated on a few countries – Chile, Uruguay and Costa Rica – than under-achievement, which is distributed across more countries.

[91] Though in the case of Uruguay, its low performance in Macro Stability is easily explained by the collateral effects of the Argentine 2001-2002 crisis on its economy.

The next step is to aggregate these good-specific scores to generate into policy dimension scores and into a measure of general policy effectiveness[92]. This is done in Table 2.6 below. The first three columns display the aggregated scores by policy dimension. The results confirm that Chile, Uruguay and Costa Rica have the best performance by a distance from the rest of the region, with Argentina on Welfare and Panama on Security achieving effectiveness in that particular area. Amongst low performers, only Venezuela averages less than a standard deviation in the goods of two dimensions. This confirms that high achievement is more concentrated than low achievement, or in other words, there is some skewness in the distribution with Chile, Uruguay and Costa Rica forming a distant, 'high-achievement' tail. This can also be seen in the Index of Policy Effectiveness in column 4, which is the simple average of the three policy dimension scores. Finally, column 6 recalculates this index by multiplying, instead of averaging, the values of the first three columns[93], while column 7 shows the new ranking. The multiplicative index (and its normalized or z-score version) show that the results do not vary in any meaningful way from the additive index; indeed, the correlation between the two is 0.97, and the correlation between the rankings produced by each formula is 0.98. Ranking reversals are concentrated in the lower half of the Table, where effectiveness differences are smaller, though in no case is the change in ranking larger than three positions. I therefore retain the additive index, given its simpler nature, for what follows – although, as anticipated above, the main dependent variables for the following chapters will be the policy dimension scores of the first three columns rather than their average.

[92] Roller (2005)

[93] To avoid the problem of multiplying negative and/or below-unit values, I added a scalar (2.72) to all numbers, so that the *lowest* value in the transformed scores was exactly 1.

Table 2.6: Z-Scores by Policy Dimension, Policy Effectiveness Index and Rankings (Additive and Multiplicative Versions)

Countries	Physical Security (1)	Welfare (2)	Economic Policy (3)	Index of Policy Eff. (4)	Additive Rank (5)	Product Policy Eff. (6)	Multipli-cative Rank (7)
Chile	1.46	1.38	2.33	**1.73**	1	86.4	1
Uruguay	1.49	1.54	0.14	**1.06**	2	51.2	2
Costa Rica	1.09	1.20	0.45	**0.91**	3	47.2	3
Panama	1.18	0.21	0.11	**0.5**	4	32.2	4
Argentina	0.38	1.06	-0.18	**0.42**	5	29.6	5
Mexico	0.01	0.56	0.44	**0.34**	6	28.1	6
Brazil	-0.37	0.75	0.16	**0.18**	7	23.3	7
El Salvador	-0.96	-0.25	0.93	**-0.09**	8	15.8	9
Peru	-0.34	-0.41	0.32	**-0.15**	9	16.6	8
Bolivia	0.04	-0.90	0.08	**-0.26**	10	14.0	10
Nicaragua	0.59	-1.06	-0.89	**-0.45**	11	10.0	14
Ecuador	-0.29	-0.37	-0.7	**-0.45**	12	11.4	11
Dominican Rep.	0.28	-0.86	-0.79	**-0.46**	13	10.7	12
Colombia	-1.72	0.15	0.13	**-0.48**	14	8.1	15
Paraguay	-0.2	-0.74	-0.62	**-0.52**	15	10.4	13
Guatemala	-0.98	-1.15	-0.03	**-0.72**	16	7.3	17
Honduras	-0.56	-1.07	-0.59	**-0.74**	17	7.5	16
Venezuela	-1.1	-0.04	-1.29	**-0.81**	18	6.1	18
Average	**0**	**0**	**0**	**0**		**23.13**	
StDev	**0.92**	**0.90**	**0.81**	**0.70**		**20.81**	

Note: Dark shading represents performance significantly above the regional mean, while light shading represents performance significantly below the regional mean. *Source:* author's calculations.

A graphical representation of effectiveness on the three policy dimensions is provided in Figure 2.10. It can be seen that there is a group of countries that shares moderate-to-high achievement in both the Security and Welfare dimensions: Brazil, Mexico, Argentina, Panama, Costa Rica, Chile and Uruguay (more or less in that ascending order). On the economic dimension, Chile is a clear outlier – which probably reflects its unique combination of strongly market-oriented policies, institutional strength for enforcing property rights and regulation, and very stable macroeconomic outcomes throughout the period. After Chile, there is a large group of countries with intermediate performance. The strong showing of countries such as El Salvador and Peru in this group reflects both successful macroeconomic numbers and their pro-market orientation. At the very bottom we find countries such as Venezuela, the Dominican Republic, Paraguay, Ecuador, Honduras and Nicaragua.

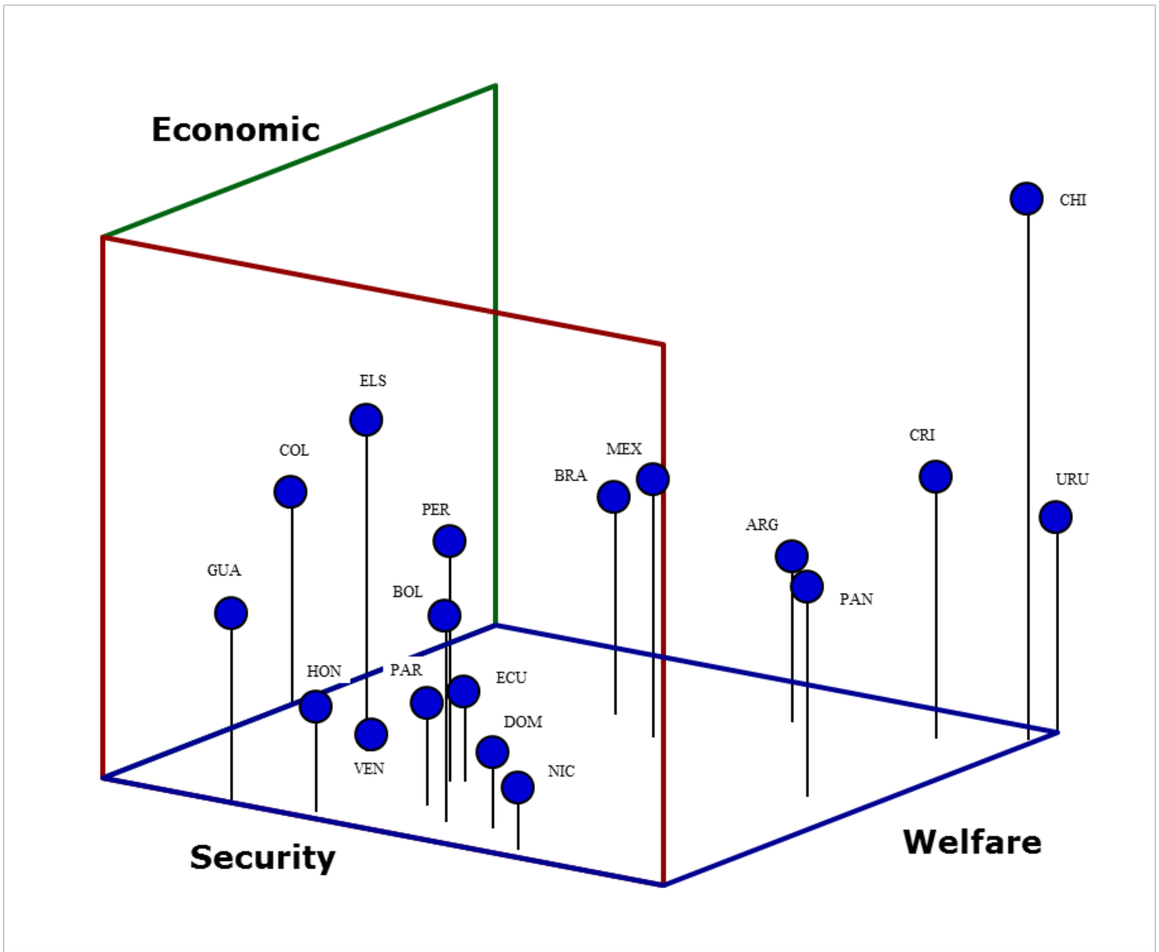

Figure 2.10. Performance by Policy Dimension. *Source:* author's calculations.

The data reviewed so suggests that effectiveness across goods and dimensions is correlated. To explore what could be called the structure of effectiveness, Tables 2.7 and 2.8 below provide correlation coefficients between the eight public goods and between the three dimensions, respectively. In Table 2.7, we can see that all goods are significantly correlated with at least one other good belonging to their dimension. In fact, and reassuringly, all within-dimension dyads show significant positive correlation, with the exception of the *Property Rights - Macroeconomic Stability* dyad. From the Table it is evident that the latter good behaves very differently from the other seven, being uncorrelated with all except for *Economic Regulation*. Leaving *Macro Stability* aside, the seven other goods all correlate with at least three other ones. *Property Rights* correlates with five others, while *Social Security* correlates with all six. In spite of this, the point estimates of within-dimension correlations are almost always all higher than between-dimension correlations.

All in all, the public goods indices behave in a way that gives empirical support to the theoretical decision of grouping them according to policy dimensions[94]. The hypothesis that goods belonging to the same policy dimension depend on more or less similar types of state infrastructures and similar exogenous socioeconomic and demographic conditions gains some plausibility by the fact of somewhat higher within-dimension than between-dimension correlations among goods. Nonetheless, it is also clear that most goods are positively correlated amongst themselves. From this, it is clear that at least the Latin American countries here studied do not seem to be facing a 'political Pareto-frontier' forcing policy trade-offs between, say, economic and social policy, in which gains in one dimension (e.g. macroeconomic stability) can be had only at the expense of the other (e.g. social security)[95]. Naturally, testing this proposition would require longitudinal, within-country data rather than a cross-section, but as a first indicator, there is at least absence of any indication that such

[94] The partial exception to this is *Macro Stability*, but even this good correlates significantly with *Economic Regulation* in spite of correlating with nothing else.

[95] See Roller (2005) pp.46-61 for a discussion of theories of policy trade-offs in an advanced-democracy context.

trade-offs are operating[96]. As Roller (2005) found for OECD countries, so in Latin America complementarity between policy areas seems to predominate[97].

Table 2.7: Correlations between Public Good Indices

	Citizen Security	Internal Security	Health	Education	Social Security	Property Rights	Economic Regulation	Macro Stability
Citizen Security	1							
Internal Security	**0.67**	1						
Health	0.22	0.39	1					
Education	**0.48**	0.37	**0.71**	1				
Social Security	**0.53**	**0.56**	**0.60**	**0.83**	1			
Property Rights	0.34	**0.51**	**0.61**	**0.67**	**0.76**	1		
Economic Regulation	0.39	0.38	*0.47*	**0.64**	**0.62**	**0.72**	1	
Macro Stability	-0.15	0.03	0.04	-0.10	-0.05	0.27	**0.48**	1

N=18. *Note:* correlations significant at 5% are in bold; correlations significant at 10% are in italics. *Source:* author's calculations.

Table 2.8: Correlations between Policy Dimensions

	Physical Security	Welfare	Economic Policy
Physical Security	1		
Welfare	**0.52**	1	
Economic Policy	0.34	**0.56**	1

N=18. *Note:* correlations significant at 5% are in bold. *Source:* author's calculations.

To gain a more aggregate view, in Table 2.8 we can see that the correlations between the three dimensions are all contained in the fairly narrow 0.34-0.56 range, suggesting the existence of positive but moderate association between dimensions. As with the individual goods, this associations could be due to common underlying political factors, to common economic, societal and generally non-political ('exogenous') conditions, or to both simultaneously. However that may be, Tables 2.7 and 2.8, in addition to Figure 2.10, clearly show that using the aggregate Policy Effectiveness Index as the main dependent variable for studying the influence of state capacity

[96] Even after controlling for GDP per capita, no negative correlations – indicating a trade-off – appear (result not shown).
[97] Roller (2005), pp. 198-210.

would in fact ignore a quite significant amount of underlying diversity in relative effectiveness that the countries do, in fact, display. Take, for instance, the case of Panama. Its Effectiveness Index places it in a surprising fourth place, ahead of Argentina, Mexico and Brazil. Its dimension-specific rankings however are third in the Security dimension, seventh in the Welfare dimension, and ninth in the Economic dimension. In other words, an exceptional Security performance pulls it ahead in the rankings, but its performance is not consistent across dimensions. It is below Brazil and Mexico in both Welfare and Economic Policy.

More generally, consistently *high* performance is only achieved by Chile, Costa Rica and perhaps Uruguay[98]. Argentina also displays significant performance variability, doing quite well on Welfare, acceptably well on Security, but quite underwhelmingly in Economic Policy. As these examples suggest, along with the fact of positive correlation among most goods and dimensions comes the fact of significant remaining variability in performance, because the correlations are just not very high. Instead of hiding this issue under a single, aggregate indicator of policy effectiveness, in this research I will try to account for this variation in performance among dimensions. In doing this, I depart from the literature on public goods provision and policy effectiveness, which has generally tried to explain either aggregate performance (as, most notably, Roller 2005), a single policy dimension (such as social policy), or a set of casuistically chosen policy and governance outcomes[99]. By problematizing the structure of policy effectiveness itself, I hope to provide a richer and more nuanced picture of how political systems influence policy outcomes.

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98 If we except its *Macroeconomic Policy* score on the grounds given above.
99 Ljiphart (1999); Gerring et al (2005); Bueno de Mesquita et al (2003); Keefer and Khemani (2005); Scartascini et al (2008b); Scruggs (1999).

As anticipated in the Introduction, I will do so through the development of the concept of state capacity and a theoretical exploration of the ways in which it may be causally linked to the policy outcomes and dimensions I have explored here. It is to this task to which I now turn.

Chapter 3

State capacity and policy effectiveness: a conceptual and theoretical framework

In Chapter 2, I conceptualized, operationalized, measured and analyzed the key dependent variable of this work: policy effectiveness. In this chapter, the task is to develop the theoretical framework that will structure the *explanation* of policy effectiveness. As was anticipated in the Introduction, the focus of my framework will be on the role of state capacity as a main driver of higher policy effectiveness in Latin America. To start, I build a simple analytical model of the different possible sources of policy effectiveness in order to structure the discussion and locate various past explanations of policy performance in Latin America within an integrated framework. I then develop a more detailed conceptual operationalization of state capacity that will provide a precise meaning to the way this concept is used throughout this study. In the final section I review and discuss the ways in which the specialized public policy literatures on security, welfare and economic policies have understood the connection between state capacity and policy effectiveness in their respective domains.

I. A causal model of policy effectiveness

To begin, I start by differentiating between three different sources of policy effectiveness, that is, between three distinct kinds of causal influences on the level of provision of a given public good. The first of these corresponds to all non-political factors that influence the level of provision of a given public good: for instance, the level of economic development, of ethnic homogeneity, the level of economic inequality, the level of urbanization, or the stage of the demographic transition in which the country is at. Depending on the good in question, different social, economic or demographic factors are likely to be relevant. Analytically, they are characterized by exercising an influence on provision which is more or less independent of political circumstances. For instance, old-age pensions, unemployment benefits, universal healthcare and primary and secondary education are all examples of goods that poor countries cannot afford to the same degree as richer ones. However, other societal factors that produce different levels of 'demand' for universal provision of certain goods must also be considered. Notorious among these are the demographic and the ethnic composition of societies. While younger societies have been linked to higher levels of violence and also to lower educational and social security expenditures[100], ethnically more fragmented ones have been linked to lower human development and less universal welfare states[101]. While these and other non-political factors are doubtlessly important, they are more useful in explaining some kinds of policy outcomes – such as social policy – than others – such as economic policy outcomes like inflation or regulatory quality –; and even within the social policy domain, they are unlikely to tell the whole story, as specifically political factors must also be considered.

A second kind of influence on public goods provision is the *specific policies* (past and present) that have been implemented in the relevant policy field. These are the actual laws and decrees promulgated in the relevant domain, or the actions executed by the relevant mandated organizations such as Central Banks. These include, for instance, the formal laws regulating an industry (such as utilities or the stock market); the social security laws; the interest rate and other money-supply policies of the Central Bank; the penal laws establishing sanctions for criminal offenders; and so forth. In whatever policy area one is interested in, there is always a given set of policies – laws, programs, projects, public works, and so forth – which are put in place and which are

[100] Haggard and Kaufmann (2008), pp. 41-42
[101] See for instance Alesina and Glaeser (2005), and in the Latin American context, Mahoney (2010).

meant to drive what the state *does* in that field. As such, this is the area where political contention over policy is located. Political actors of all kinds and experts in every field will want to see their preferred policies chosen, whatever these may be. I will call this factor *policy content*, as what is at stake is precisely what substantive policies are chosen. The age-old dispute between left and right is obviously one about policy contents, or about *what* the state does with its resources and authority. Demands by civil society actors are also about policy courses of action. It should be clear that the actual policies enacted in a given country are an obvious and very relevant source of variation of policy effectiveness among different countries: choosing 'neoliberal' or 'socialist' economic policies, enacting or not an educational reform, and so forth, should have a crucial impact on outcomes. If they did not, political contestation over policy choices would be largely pointless.

The third and final source of policy effectiveness is state capacity. If policy content is about the *what* of state action, state capacity is about its *how*. This 'how', however, has to be understood in two distinct ways: as how policy is actually enforced and implemented, but also as how policy is decided upon in the first place. The idea that the state has to have the adequate infrastructure and logistical means to enforce its decisions and implement its policies is a rather familiar and intuitive notion of state capacity. Without presence in the whole territory, without the minimal funds and state organizations to exercise control and carry out decisions, states would be largely impotent. Policy content would be largely irrelevant in the absence of the state capacities necessary to carry out a given policy choice. This is therefore a key aspect of the concept. However, implementation is not the whole story. In modern democratic states with separation of powers, the issue of deciding which policies to implement is far from straightforward. Specifically, in order to attain any policy goal the policies chosen must not only be the ‘right’ ones in a technical sense but must also be both *stable* enough so that they are given time to work and are perceived as credible by social actors, and *adaptable* to changing states of the world. No matter how good a policy may be substantively, if it is changed continuously, perceived as not credible or allowed to endure unchanged beyond its period of usefulness, it will not achieve its goals and thus policy effectiveness will be lowered. I argue therefore that state capacity refers both to decision-taking and decision-implementing features of the state, and I return below to this discussion. In Figure 3.1 below, the model is summarized.

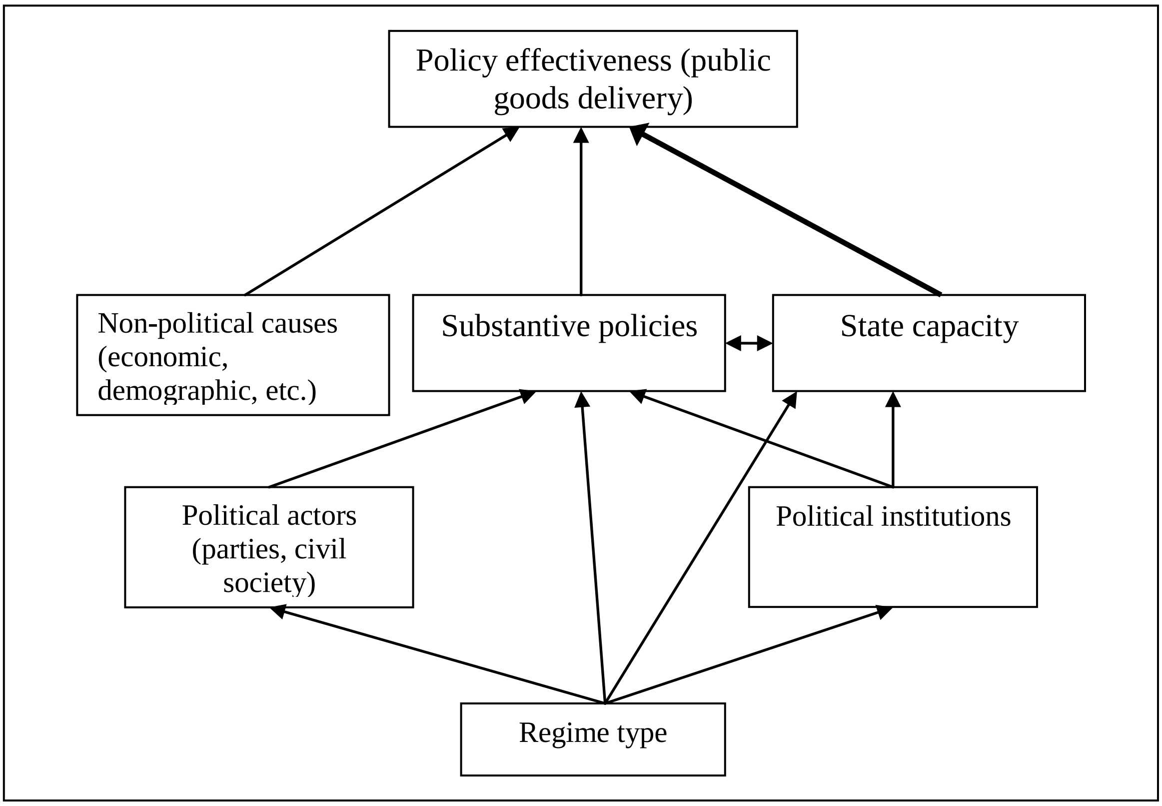

Figure 3.1. A Model of Potential Sources of Policy Effectiveness. *Note:* The bold arrow represents the main hypothesized causal relationship studied in this thesis.

It can be seen in Figure 3.1 that I also identify three *indirect* political causes of policy effectiveness; they are indirect influences because, in the conceptual logic of the model, they must exercise that influence *through* either policy choices or state capacity. Each of the three corresponds to a broad kind of theoretical explanation in the literature on policy outcomes. For instance, political actors (such as parties and unions) may matter for bringing about specific policy choices, such as a more generous welfare state[102]. For their part, political institutions (understood as rules) are likely to affect *both* policy choices and state capacity. For instance, Lijphart's (1999) famous argument that consociational democracies are 'kinder and gentler' refers to the fact that the inclusive institutional rules that underpin these democracies (such as a proportional representation electoral system) incentivize the choosing of higher levels of welfare provision and less harsher penalties for crime offenders (as well of course as being more inclusive in terms of their politics). Likewise, the claim that federalism is detrimental for equality can also be interpreted in this light. On the other hand, if constitutional or electoral rules make for a poorly-coordinated or highly fractionalized system of government[103], in which policies are neither stable nor adaptable (see next section), then this will affect a state's *capacity* to implement policies more generally[104].

Finally, the political regime itself is a 'deep' causal factor, which is drawn at the bottom of the causal diagram because it refers to a truly fundamental aspect of politics: the possession and distribution of power. Concretely, *democracy* as a regime type has many possible paths through which it could influence policy effectiveness: through the political actors it fosters (such as leftist parties or unions), through the institutions it allows to form and develop (such as different constitutional arrangements for the distribution and exercise of power), through the specific policies

[102] Huber and Stephens (2012); Huber et al (2008); Segura-Ubiergo (2007).
[103] Birchfield and Crepaz (1998)
[104] In the Conclusion to this thesis I will argue that in Argentina, federalism indeed raises within-government coordination costs and, more generally, has been detrimental to the build-up of state capacity in that country. Conversely, of course, 'good' rules that incentivize long-run cooperation between actors may enhance state capacity.

that get chosen because of electoral incentives (e.g. the greater influence of the poor), and even through state capacity itself, by providing long-term incentives for the building of a better bureaucracy. The latter may happen through the demands for greater transparency, accountability and performance that a democracy provides and which may lead to lower corruption and more 'Weberian' state structures – at least after a certain level of 'democraticness' has been reached[105].

Of course, the fact that institutions and regime type *influence* state capacity does not mean they *determine* it. Current state capacity is in many respects a largely historical phenomenon, where path dependencies from the period of state formation may still endure and where past investments in that capacity largely condition today's possibilities[106]. I therefore understand regime type and institutions as partial and by no means decisive influences on state capacity, which follows its own historical and autonomous logic. In other words, my hypothesis is that state capacity has a strong, direct, and partially autonomous influence on effectiveness which cannot be reduced to those factors that have caused that current state capacity, whatever those might be.

My focus in this work, however, is restricted to the consequences of state capacity and not to its causes, or in other words, to the influence of state capacity on policy effectiveness (the bold line in Figure 3.1). My hypothesis is that this very fundamental variable has had a 'first order' impact on levels of policy performance in the region, and that this influence is not reducible to actors, institutions, or regime type. To proceed further, however, it is now necessary to develop in greater detail what state capacity will mean in the present context.

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[105] See Bäck and Hadenius (2008).

[106] On state formation in Latin America, see Centeno (2002) and López-Alves (2000). On the relationship between past investments in state capacity and its current levels, see Besley and Persson (2009) and Cárdenas (2010).

II. What is state capacity? A new conceptualization

While state capacity is far from being a new concept in political science, its use has been patchy and uneven, too often being imprecisely defined and – consequently – questionable in terms of its theoretical utility. Indeed, it remains *"a concept in search of precise definition and measurement"*, according to a study who found no less than 19 distinct operationalizations of the term in a review of recent research on civil conflict[107]. Nonetheless, there are some broad conceptual strands of the term that can be recognized in the literature. For instance, Soifer and vom Hau (2008) identify two *"broad and well-developed research programs [that] trace variations of state capacity to the relative autonomy of the state from societal actors (…) and the professionalization (or "Weberianess") of its bureaucracy"*[108]. To these two, they add the need for developing infrastructural power as a third research program that taps into variations in the societal and spatial reach of the state. Yet other authors have included in their conceptualization more relational aspects of state capacity, such as its ability to process societal demands[109], and yet others have adopted more explicitly functionalist approaches to capacity whereby that capacity is understood as the state's ability to fulfil a pre-specified list of its functions (such as policy design, regulation, implementation, etc.)[110]. My own approach will combine several of the contributions of these distinct research programs into a multidimensional conceptualization of state capacity, but under a more general understanding of capacity taken from the human capabilities literature.

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[107] Hendrix (2010), p.273
[108] Soifer and vom Hau (2008), p.220
[109] Grindle (1996)
[110] Alonso (2007); Weaver and Rockman (1993)

Nonetheless, I contend that an approach concerned with the *autonomy* of the state should be conceptually distinguished from a *state capacity* approach. This is because state autonomy can mean several different things, not all of which should be included under the concept of state capacity. In a democratic context such as the one I am dealing with in the case of contemporary Latin America, autonomy in the basic sense that the state fills decision-making posts through institutionalized procedures (such as elections) is taken as a given. But beyond this basic autonomy from society, a distinction must be made between influencing the *making* and influencing the *application* of the law. Influencing the making of the law through normal democratic procedures (including less savoury ones such as lobbying or campaign financing) or by increasing state receptiveness to demands by members of class alliances is part and parcel of a democratic state where the state is by definition *not* autonomous from civil society[111]. On the other hand, where civil society groups manage to control or unduly influence bureaucratic nomination procedures, decree-making by bureaucratic bodies or judicial decisions (to name a few instances), clearly the application of democratic decisions is being subverted by lack of impartiality in their application or implementation.

In this second sense, lack of state autonomy – particularly bureaucratic autonomy – is also lack of state capacity since a state machinery permeated by special interests is damaged in its ability to implement its own laws. In Latin America, the social group that has been closest to controlling the state has been the rich elite. Few if any states in the region have ever managed to break free in a significant way from this upper-class influence and be fully autonomous in this Marxian sense[112]. For my purposes,

[111] Mann (1993). Receptiveness to demands from civil society groups that are part of the coalition of interests that has gained control of the state also occurs in authoritarian regimes (eg Waldner 1999). In this case, as in the democratic case, this 'lack of autonomy' does not fall within the remit of a state capacity approach.

[112] Mahoney and vom Hau (2005)

however, insofar as these upper-class interests prevail by influencing decision-making, they fall beyond the scope of a state capacity analysis. Only if elites subvert bureaucratic autonomy does such a phenomena fall within the scope of the present work.

A final issue before proceeding to a conceptualization of state capacity takes us to the utility of the concept itself, which has not been free from questioning. For instance, Matthew Kocher (2010) has suggested that the term should simply not be used on its own as an explanatory variable of social phenomena, because capacity is never free-floating (it is always a capacity to do something) and because of its circularity: if the occurrence of an outcome means the state had the capacity to produce that outcome, and from its absence or failure to occur we infer the state did not, then we are not explaining anything at all[113]. Kocher therefore recommends using the term only as a sort of empty vessel which may be useful to group state-centred explanations of political phenomena – such as the monetary, bureaucratic or military resources at the disposal of the government, the centralization and decisiveness of its political system, and so forth – which can thus be distinguished from more society-centric explanations. However, he contends that it is these more specific explanations that do the actual work, and that they cannot be combined into an overarching theory of state capacity as it is not clear how these different state-centric explanations interrelate[114].

Kocher's objections to the term are important and must be dealt with. The first thing to note, therefore, is that in the policy effectiveness model presented in Figure 3.1,

[113] Kocher (2010), pp. 137-140. Indeed, he notes that this sort of empty explanation is of the same kind that used to be provided in medieval medicine and which was abandoned after *"Enlightenment-era critiques of such related notions as 'faculties', 'dispositions' and 'virtues' (...) led to a widespread modernist rejection of this mode of explanation in the natural sciences"* (Kocher 2010: 144, fn. 3).
[114] Kocher 2010, p. 143.

state capacity is not an overarching cause of policy effectiveness, but merely one causal factor among many. This means that state capacity is at most a necessary – but never a sufficient – condition for reaching a given level of policy effectiveness. If that level fails to be reached, it does not follow that state capacity was absent, since societal factors or bad policy might be to blame for the negative outcome. The U.S. did not lack for decades a universal health insurance scheme because of insufficient state capacity, but because of policy choice. On the other hand, if policy effectiveness *is* observed, then – depending on the theoretical assumptions regarding the substitutability of the different causal factors – a certain level of state capacity consistent with the observed outcomes can be legitimately inferred. In any case, circular reasoning is broken when state capacity is placed within a multi-causal model of effectiveness, since there is no longer a one-to-one relationship between state capacity and policy outcomes.

In second place, I argue that state capacity can be made to do actual theoretical work, as opposed to being an empty box which merely groups state-centred explanations. To avoid both emptiness and circularity, I take my cue from Amartya Sen's (1992) work on human capabilities. For him, a person's 'capability set' consists of all the *combinations of functionings* a person can potentially achieve. Functionings, in turn, are all those 'beings and doings' a person has reason to value. More or less like with a budget restriction in the theory of consumption, where a consumer will choose one specific vector of goods as his consumption basket among the set of all his achievable consumption vectors (given his income and the prices he faces), a person chooses to actualize one particular vector of functionings among all the possible vectors he could achieve. The capability set is therefore the extent of that person's actual freedom, since it contains all the beings and doings the person could choose to actualize. For

Sen, expanding a person's capability set depends both on that person's *resources* and on the *social relations* in which she is embedded (since for instance the ability to participate in the life of the community will depend among other things on racial, caste and/or social status within the group).

Can we make this reasoning travel well into a theory of state capacity? I argue that we can, as long as we take note of the key difference between the two domains – that the state is a collective actor – and adjust the theory accordingly. Formally, the set of doings (not 'doings and beings' any longer) a state can undertake also depends, just as in the case of the individual, on both the internal resources at its disposal and on the relationships in which this state is embedded. There is, however, an additional element which is a consequence of the collective nature of the state: its capacity also depends on the nature of the relationships *within* the state, particularly their degree of cooperativeness and coordination. Let us explore each dimension in turn.

The internal resources of the state must be thought of at an equivalent level of generality than in the case of the individual, where money, education and health share the key feature of being goods that substantially expand a person's ability to do and be many things in life. In the case of the state, money is again a key resource, but I argue that a cohesive, competent and efficient bureaucracy is the most fundamental resource a state possesses. Without a set of specialized agencies that regularly and professionally deal with specific aspects of policy, a state will see its capacity for policymaking and above all policy-implementing substantially limited. Indeed, the more differentiated and specialized these agencies are, the more capacity a state has to perform its tasks better and indeed to move into the ever-new tasks society demands of it.

This preoccupation with the conditions under which state agencies can successfully achieve their goals underlies the closely associated research on bureaucratic 'Weberianness'; that is, on the extent to which a given state's bureaucracy follows the rational and meritocratic criteria for hiring and promotion that Weber considered to be distinctive of modern bureaucratic organization as a technology of domination. As Lange has remarked, *"a bureaucratically organized administrative institution prevents actors from pursuing their individual self-interests and therefore provides an effective coordination mechanism that makes possible corporate state action"*, while in its absence *"rampant rent-seeking and unstable hierarchies of power dominated by individuals"* become the norm and such coordinated state action is prevented. Bureaucratic states thus contribute to human development by *"preventing state actors from abusing their position for personal gain"*, but also by solving collective action problems in the provision of public goods[115].

For instance, the agencies that effected industrial transformation in East Asian countries were not just characterized by their autonomy from private interests and short-term political pressures so that they could focus on the country's national and long-run interest, they were also staffed by highly competent and qualified bureaucrats who had been selected through strict meritocratic criteria, and could expect a career of advancement in accordance with their performance. This led scholars to the examination of the quality of the civil service as a key variable affecting economic performance[116]. Under slightly different terminology, such as

[115] Lange (2005), pp. 55-56
[116] Evans (1995); Evans and Rauch (1999)

corruption[117] or patrimonialism, the focus on Weberian state structures continues to be at the heart of conceptualizations of state capacity and explanations of state performance. For instance, recent work[118] has operationalized state capacity precisely as the combination of bureaucratic quality and low corruption, in line with the idea that the essential feature of good governance or 'quality of government' is the provision of impartial rule[119]. Likewise, Lange and Rueschemeyer (2005) conclude their edited study of the influence of states on development by noting that *"[p]atrimonialism emerges (...) as a major explanatory factor"* of developmental failure, and that therefore it is *"an important obstacle that must be overcome for broad-based development"* to take place[120].

If effective agencies staffed by competent, clean and cohesive bureaucracies are the core, multi-purpose internal resource of the state, a *second* key dimension of state capacity is its degree of penetration and control over its territory and society.

At a very basic level, for a state to exert monopoly of violence over its territory and to rule by law through a permanent bureaucracy it needs a set of basic capabilities without which its very stateness could be compromised. Although the precise list of these can vary slightly, I identify them as the capability to *penetrate* its territories (and thus exert territorial control), *regulate* social relations (and thus govern according to the dictates of law), and *extract* resources from society (and so maintain its army and bureaucracy, and thus itself)[121]. These correspond closely to Whitehead's *"three*

[117] Corruption is clearly a sign of lack of autonomy and debilitates internal cohesion, and as such it is a feature of the predatory states that Evans opposes to developmental ones, and where each functionary is concerned exclusively with his own welfare and not with collective projects (Evans 1995: 45-47)
[118] e.g. Charron and Lapuente (2010)
[119] Rothstein and Teorell (2008)
[120] Lange and Rueschemeyer (2005, pp. 246-247). See also Geddes (1990) and Geddes (1996).
[121] This terminology follows Migdal (1988), although I omit his fourth capability, the capacity *"to appropriate or use resources in determined ways"*.

essential and interrelated characteristics – territoriality, administration and command over resources"[122] of modern statehood. At the extreme, when these basic capacities are not met at a minimal level, and particularly when issues of basic security and loss of territorial control are at stake, we can talk of 'failed' states[123]. But beyond this extreme case, Soifer (2008) notes that even within countries whose monopoly of violence is not in question there is wide variation in *"the reach of the state"* and in the degree to which they can exert *"authority over distance"*, to use two phrases that try to capture the idea of territorial penetration and social regulation.

Although Migdal (1988) refers to variations in these basic capabilities as pertaining to the 'strength' of the state, and others have spoken of variable 'stateness' when referring to this elemental aspect of state functioning, the most useful concept in this regard was coined by Mann (1984), who refers to these capabilities as the *infrastructural power* of the state[124]. This power can be defined as the state's *"institutional capability to exercise control and implement policy choices within the territory it claims to govern"*[125]. As such, it must be fundamentally distinguished from what Mann called the 'despotic power' of the state, and which refers to *"the range of actions that the state elite is empowered to make without consultation with civil society groups"*[126]. As his famous example of the Red Queen in Alice in Wonderland illustrated, despotic power is about the Queen's ability to shout 'off with her head!'

[122] Whitehead (1994), p.11

[123] In fact, Bates (2008) argues that it is the *combination* of territorial dispute and a predatory state – whereby public officials entirely cease to seek the public good and seek instead to extract resources from those who lack political power – which is the distinctive characteristic of state failure.

[124] I agree with Soifer and vom Hau (2008) that explicitly using Mann's concept *"creates greater conceptual clarity and generates significant payoffs for knowledge accumulation"* (p.221), since it avoids confusion with other terms such as state strength, social control (Migdal) or the ones cited above, such as 'reach' of the state. Mann's concept is explicitly developed and related to other aspects of state power (notably 'despotic power') within an overall theory of the state, so it makes sense to use his term explicitly, precisely for the reasons given by Soifer and vom Hau.

[125] Soifer and vom Hau 2008, p.220

[126] Mann (2008), p. 355

while infrastructural power is about her ability to actually find Alice and enforce the decapitation[127]. In essence, then, infrastructural power is precisely about the fundamental capabilities of the state outlined above, particularly territorial penetration and social regulation[128]. Because of this, I argue that it constitutes a fundamental dimension of state capacity, without which states would be largely crippled in terms of their chances of providing a wide range of public goods.

It is important to note that infrastructural power is fundamentally territorial, and therefore it relies on the building of logistical techniques and organizational networks by the state that can enforce the orders emanating from the centre:

> "State elites need to rely on representatives to act on their behalf as they implement policies and seek to control and regulate social relations within the territory it claims to govern (…) State infrastructural power relates to the set of relationships that link these institutions of control to the local communities they penetrate, and to central state elites"[129]

As the last sentence of the quote implies, infrastructural power is relational. Indeed, a central distinction between the mostly despotic power of ancient polities and the infrastructural power of modern states is that the first is a distributive form of power, where the sovereign imposes something on society, while the second is a form of collective power, where states act not over but *through* civil society[130]. This means the state's infrastructural power rests more on consent and legitimacy than on its bare monopoly of force[131].

[127] Soifer and vom Hau (2008), p.223
[128] And *only indirectly*, as a necessary condition for this, about fiscal extraction.
[129] Soifer (2008), pp.234-235.
[130] Weiss (2006), pp.171-172. This is not to deny that modern states also vary in their degree of despotic powers, with democratic states having low despotic power and single-party states, high despotic power (Mann 2008, p.357)
[131] See also Soifer and vom Hau (2008).

Historically, the building of infrastructural power was a slow and lengthy process of penetration of territories by representatives of the central state, down to the last corners of the realm[132]. In Latin America, that process was slow and very uneven across the region. Economic poverty and the sheer scale and geographic ruggedness of most Latin American countries meant acute logistical difficulties had to be overcome. According to Whitehead (1994), by around 1930 most Latin American countries did not have effective control or penetration of all their territory, although the Southern Cone countries were much more advanced in this regard.

A second point to note is that, as Soifer and Hau (2008) have remarked, the essence of infrastructural power is social and spatial *control* and not policy implementation as such. This distinction is crucial for this research[133], since public good provision is only one among many outcomes an infrastructurally powerful state can be used for. Although, some goods do both things – provision of basic security is a good through which control is simultaneously exerted –, this need not be the case generally; for instance, providing public sewers or health clinics hardly enhances the state's infrastructural power[134]. Therefore, the latter is not coterminous with successful policy implementation or public goods provision, and variations in infrastructural power may well account for variations in such provision, as Ziblatt (2008) showed for the case of provision of public health by German cities.

It should be noted that an infrastructurally powerful state is capable of both territorial and social penetration. For instance, a typical limit of state power in developing

[132] A notable analysis of this process is Weber's (1976) "Peasants into Frenchmen", which argues that the penetration of the central state into the French countryside became thorough only after its push into it in the aftermath of the defeat in the Franco-Prussian war.
[133] And, as they also note, for the institutional economics literature generally, which assumes the necessity of public goods provision for growth but then fails to distinguish between such provision and state infrastructural power. Soifer and vom Hau (2008), p.227 fn. 13
[134] Soifer and vom Hau (2008), p.227

countries is the power of local elites to have their interests largely untouched by state policies. In Latin America, historically the reach of the central state into provinces clashed with the interests of local oligarchies who wanted to retain control over their clients and over local institutions. For this reason, the Chilean state – a comparatively infrastructurally powerful state in the region – oversaw primary public schooling in the region through a strict system of centrally-mandated inspectors, who rotated residency over time so as to prevent their collusion with local power-holders[135]. As we will see in Chapter 6, this practice is used by the Chilean national police force (Carabineros) to this day.

In sum, infrastructural power is the concept that best captures the state-society relational dimension of state capacity. As such, it is a complement to the idea of a competent state bureaucracy, in that both are necessary for a state to possess a high *policy implementation* capacity. This is because implementation requires both the competency and honesty of the implementing bodies (i.e. bureaucracies), and the logistics, information and legitimacy that constitute infrastructural power. Thus, just as a competent bureaucracy is a state's key (if not only) internal resource, so its infrastructural power reflects the degree to which a state can penetrate society and secure institutionalized routines of state-society cooperation. When these are in place, clearly a state has expanded the set of policies that it can successfully choose and implement. Infrastructurally more powerful states will be able to implement a wider range of policies and achieve a larger set of goals than its weaker counterparts, and is therefore a fundamental dimension of state capacity.

[135] Soifer (2009)

The *third* and final element of state capacity points to the idea that the set of doings a state can achieve is also limited by a *decisional* aspect that is specific to collective actors, who have to agree internally to some degree before being able to act at all. This is particularly so in democratic states such as the ones I am concerned with here, where decisions include not just the Executive power but also Parliaments, courts and – through their presence in the first and third – political parties. The policymaking process of modern democratic states can be quite complex, and the actors that participate in it vary to a degree according to the policy in question (for instance, some social actors such as unions will have influence on some policy domains but not in others). Indeed much of institutionalism is concerned with understanding the effects of different institutional designs on both policy content and on the formal properties of those policies. Of these formal properties, two are of particular importance here: the *stability* of policy choices in the face of political shocks (say, a change in government) and their *adaptability* in the face of real-world shocks (say, an economic crisis).

Unlike veto player theory, which can only see rigidity or flexibility in the decision-making process, Scartascini, Stein and Tommassi (2008a; 2009) have rightly pointed out that policy effectiveness requires that policies be stable over time to achieve the desired results, and at the same time that they be adaptable enough to changing circumstances. They have found that, far from there being a trade-off between stability and adaptability, countries with more cooperative policymaking processes simultaneously have greater degrees of adaptability *and* stability. This underlying cooperation is thus a feature of state capacity related to (organizational and individual) actors' interactions under a given institutional framework, of which Constitutional and electoral rules are the most overarching. When that framework and the characteristics of the organizations that inhabit them tend to produce cooperation among state actors, we can say that a state's *political capacity* is enhanced because of the greater stability and adaptability in policymaking this generates.

This political capacity, like its bureaucratic and infrastructural counterparts, is a general feature of the state at a given point in time and, when it is higher, certainly increases the set of feasible policy alternatives. For instance, within a non-cooperative political environment, rigid currency rules may be the only way to establish monetary credibility; in such a case, a flexible currency regime is not a policy choice a state could successfully implement. Likewise, it is well-known that beyond the specific features of a trade-opening policy, its *credibility* is fundamental for it to have any effect[136]; but credibility itself depends on the perceived stability of the policy. More generally, in the absence of long-term cooperation between political actors that secures a degree of policy stability, one administration's reform can become the next administration's overhaul (or downright reversal) of the original reform[137]. In such a case, reform is not a feasible policy goal for the state, even if the bureaucratic capacities and infrastructural logistics to implement them are in place, and even if the reform was undertaken legally by the current administration. Policy instability and rigidity thus limit *any* given administration's (and thus, the state's) feasible policy set. Of course, specific policy disagreements and occasional reversals in course are part of normal politics even in the most cooperative of countries. And of course, there are times when politics itself – with no changes in the rules of the political game in between – becomes for a time more confrontational and polarized. But over and above these conjunctural situations, when a low degree of *intertemporal* cooperation between political actors is or becomes a *structural* feature of a nation's politics, then

[136] Rodrik (1989)
[137] See Chapter 6 for an example of this dynamic applied to the case of police reform in Argentina.

this affects not just a given government's success but effectively limits what the state-as-actor can accomplish; it limits, in other words, the set of policies it can successfully choose to implement.

I therefore argue that political capacity is a third dimension of state capacity, more related to decisional aspects than to the implementation of policy, but which is different from the actual policy content of the chosen policies. Just like the other two dimensions, it is also a relatively enduring aspect of a state's configuration – based as it is (at least in part) on the underlying institutional arrangements which shape actors' incentives to cooperate or not. Although the authors that have introduced this approach based on the (formal) 'quality of policies' do not generally use the term state capacity as such, they have noted that universal, technically-optimal policy recommendations have *"lost considerable ground to concerns about states' ability to formulate and carry out policies"*, have interpreted their 'quality of policies approach' as building along these lines and as reflecting 'state capabilities', and defined the latter term as *"a pattern of government influence on its environment that produces substantially similar outcomes across time and policy areas"*[138]. Thus, conceptualizing these political capacities as part of state capacity is not a major stretch of the focus and intentions of researchers in this tradition, and in fact may further it by establishing a theoretical link between this work done in political economy[139] and the focus on implementation capacities of the state captured by the focus on bureaucratic capacity and infrastructural power.

Figure 3.2 below summarizes the discussion so far. State capacity is composed of three dimensions: bureaucratic capacity (the key internal resource the state possesses),

[138] Scartascini, Stein and Tommassi (2008b), p.4
[139] The starting point for this literature on state capabilities is Weaver and Rockman (1993).

infrastructural power (the degree to which the state can control populations and territory and logistically implement its decisions through society) and political capacity (the degree to which its internal decision-making process allows it to produce adaptable and stable policies). While infrastructural power and bureaucratic capacity mostly enhance the decision-implementation capacities of the state, political capacity points to its decision-making capacities[140]. Similarly, while bureaucratic capacity is a resource, infrastructural power corresponds to the state-society relational aspect of capacity, while political capacity corresponds to its (mostly) within-state relational aspects that cannot be ignored in a highly complex, collective actor such as the state. When the three are present to a high degree, we can talk of a high-capacity state: a state that can *potentially* pursue a great many different policy vectors, even if it will 'actualize' only one. The degree to which each of the three capacities is substitutable by the others is an empirically open question, but it is clear there are synergies between the three. For instance, many specific bureaucracies – such as a police force or an education ministry – are resources in themselves that can be deployed to implement new policies, but at the same time enhance through the fulfilment of their basic functions of policing and of teaching the infrastructural power of states[141]. Similarly, a technically competent and clean bureaucracy can act as a stabilizer of policy in the face of political shocks and can indeed be used to delegate complex or politically divisive issues by politicians; for instance, Stein et al (2005) found that countries with strong bureaucracies tended to have better policies (in a formal, not substantive, sense) than those without.

[140] Though, as argued by Stein et al (2005), more professional bureaucracies may contribute to more stable and adaptable decision-making as well. I have therefore drawn arrows from bureaucratic capacity to both policy-implementation and policy-decision capacities in Figure 3.2.
[141] Soifer and Hau (2008)

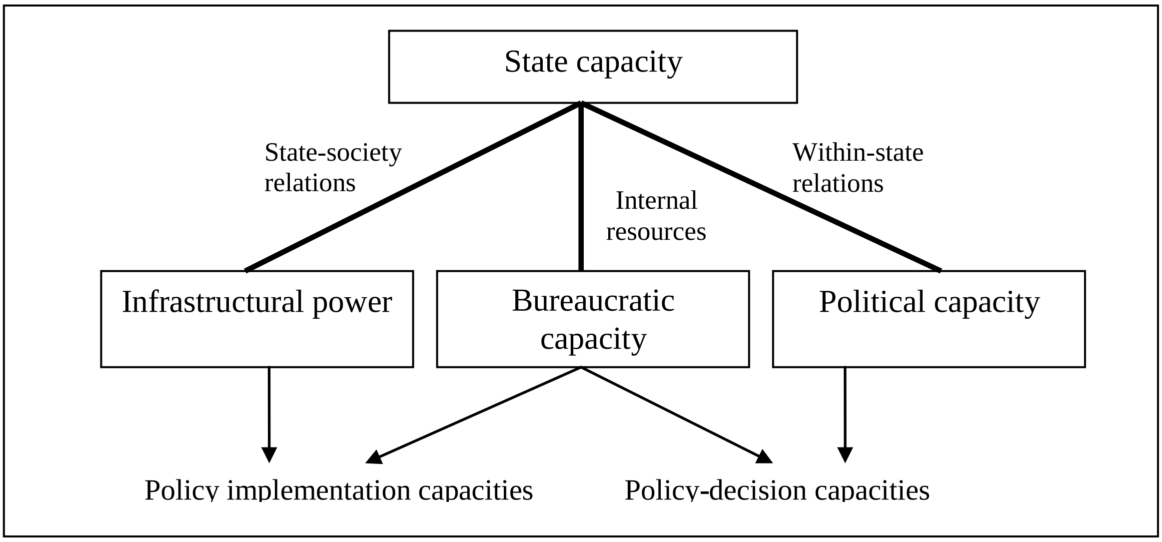

Figure 3.2. State Capacity and its Dimensions. *Note:* Bold lines represent the conceptualization of state capacity along the three dimensions to be studied in this thesis. Arrows represent hypothesized causal links.

Through this conceptualization of state capacity, the central objections to the use of the term raised by Kocher have been met. Each of these dimensions can be observed independently of any particular policy result, as indeed none of them is policy-specific. All dimensions relate to general features of the state and point to resources and relationships that will condition the state's ability to successfully pursue different policy courses across policy domains. The dimensions form part of a coherent concept derived theoretically from the human capabilities literature. Because of this, state capacity is not understood as an empty box in which the lower-level concepts are doing all the explanatory work, but as a proper multidimensional concept in which its three analytical dimensions are understood to be necessary components – the complete absence of any of them would render a state impotent – of the whole. State capacity is the total set of policy vectors a state could choose to (successfully) implement[142]. This 'capability set' is expanded as the state increases its bureaucratic and political capacities and as its infrastructural power grows, because they contribute

[142] Note that successful implementation is not the same as a successful policy in terms of its outcomes, which depend not only on the state but also on external circumstances and on the substantive quality of the policy itself.

to the two key functionings of a state: its ability to decide policy in a certain (stable, adaptable) way, and to adequately implement that policy.

Of course, there is no intrinsic *requirement* that these three dimensions of capacity should move together, even if there are likely synergies between them. This means that observing one or two dimensions is not enough: all must be observed simultaneously to apprehend the full extent of state capacity. On the other hand, some dimensions are likely to be more important than others in specific policy areas. To achieve, say, universal coverage in basic education the implementation capacities of the state are surely more important than its decisional capacities, since this is not a particularly hard area on which to achieve consensus (at least by now), but where the logistical challenges were (and in some countries in the region still are) formidable. Likewise, in economic policy an implementation infrastructure must exist, but results are much more sensitive to the stability and adaptability of – for instance – monetary policy, property rights protection or regulation of specific markets. Therefore, while conceptually all three dimensions are part of state capacity, and each contributes positively to its enhancement, empirically some dimensions will be central to understanding effectiveness in particular policy areas.

III. State capacity and policy effectiveness: a review of the literature

In this section, the specific relationships of state capacity to each of the three policy dimensions identified in Chapter 2 are here discussed, both theoretically and through a brief review of the findings in the literature in each of those policy areas. The goals of this exercise are, firstly, to explore the paths through which state capacity affects policy outcomes, and secondly, to establish conceptual bridges with – and criticisms of – the way in which 'state capacity'-related explanations have been approached and operationalized in the policy-specific literature. This is particularly important in this case because state capacity is such has not been a concept frequently used outside the civil war literature, and even there it has been (as I will argue) poorly operationalized.

i. Domestic security

We saw in Chapter 2 that domestic security has two dimensions: internal security and citizen security. The first is directly related to the level of political violence, while the second is related to the level of non-political or everyday violence and law breaking. I discuss each of these in turn.

Political violence comes in many forms, including violent protests, assassinations, coups and terrorist attacks, but its most extreme form is civil war. As such, its literature is a good starting point to understand the possible relation between state capacity and internal security. In this regard, concern with the possibility of outbreak of civil wars has led researchers in this area to focus on the 'stateness' of currently-existing states and on their fragility or possibility of becoming 'failed states'. A veritable industry of stateness indices has flourished in this regard; but, like its 'good governance' counterparts, has usually lacked a clear distinction between causes, constitutive features and outcomes in their construction[143].

Civil war research has been concerned not just with measuring stateness but also with the concept of state capacity as such. This is because the two main approaches to understanding the outbreak of civil war are on the one hand the study of the motivations of potential rebels (e.g. 'greed' and/or 'grievance'), and the political opportunity structure on the other. The concept of state capacity is clearly useful in

[143] See Altman and Luna (2012) for a brief review of some of these indicators and their application to Latin America.

this second approach because higher-capacity states can either accommodate or repress potential rebels, thus diminishing either their interest in, or the effectiveness of (respectively), collective action[144]. In spite of this evident causal connection, Sobek (2010) complains that *"recent quantitative research on civil wars appears to have left the state out"*[145]. It is perhaps ironic therefore that one of the most well-known and cited quantitative articles relating poor state capacity to a higher likelihood of civil war outbreak (Fearon and Laitin 2003) operationalizes the concept so poorly. The authors ascribe to the state's *"police and military capabilities and the reach of government institutions into rural areas"*[146] a central role in crushing nascent insurgencies, even after controlling for traditional suspects such as ethnic fractionalization and polarization. The problem, however, is that their empirical measure of state capacity is simply GDP per capita, an indicator which is consistent with multiple alternative explanations of why civil wars break out, and thus is uninformative of the role played (if any) by state capacity in this regard[147].

More generally, studies employing the concept of state capacity tend to find that higher degrees of it lower the risk of onset of civil war[148] and increase the likelihood of successfully negotiating peace during a civil war[149]. Nonetheless, the problem of conceptualization (let alone operationalization) of state capacity remains acute. As Hendrix (2010:274) notes, the capacities needed to accommodate rebels through the redistribution of resources and powers are very different from the capacities needed to repress them. Are both 'state capacity', and how do they relate to each other? Indeed, he identifies 15 different definitions of the term, which theoretically he classifies as

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[144] Hendrix (2010), p. 273
[145] Sobek (2010), p.267
[146] Fearon and Laitin (2003), p.80
[147] See Kocher (2010) and Hendrix (2010), p.274.
[148] Gleditsch and Ruggeri (2010); Braithwaite (2010); Thyne (2006); but see Thies (2010).
[149] De Rouen et al. (2010)

pertaining to a state's military capacity, to bureaucratic/administrative capacity, and to the coherence of political institutions. By the latter, he refers to regime type, since some research has found that anocracies – those regimes which mix features of democratic and autocratic regimes – have a higher likelihood of civil war outbreak than either full autocracies or full democracies[150]. From this work's perspective, the third dimension is not constitutive of state capacity at all, being at most a factor which causally affects it. The regime and the state are different concepts and for good reason, as there is a crucial difference between how power is accessed – which is the primary aspect that defines a regime – and how (and how much) power is exercised, which depend at least in part on the state. As for military capacity, it is irrelevant for the dimensions of policy effectiveness with which I am concerned here.

This leaves only bureaucratic capacity. I suggest, however, that what the civil war literature is most sorely missing is the notion of infrastructural power, as developed by Mann. It is precisely the penetration of the state into society and the degree of control it can exert which decisively shapes the opportunity structure available to potential rebels. More generally, as Centeno argued for the case of Latin America, *"many of the deaths produced by political violence have resulted from the inability of the state to impose its authority in a definitive and permanent manner"*[151]. Fearon and Laitin's emphasis on state penetration into the countryside is precisely the kind of logistical challenge that is not captured by bureaucratic capacity per se – nor is it captured by military capacity (and even less by political regime). This territorial dimension of stateness requires a relational concept of state capacity that captures the

[150] Hendrix (2010), p. 276; Hegre et al (2001); Fearon and Laitin (2003). But, see Vreeland (2008) and Cheibub et al (2010).
[151] Centeno (2002), p.8

notion of "authority over distance" that we saw above, and such a concept is infrastructural power.

The second dimension of domestic security is citizen security, understood as the absence of 'common', non-political violence and of crime more generally. The relationship between state capacity and the former fits quite neatly under a well-known state-centred theoretical tradition, even if not usually related to state capacity as such. Indeed, at least since Gary Becker's (1968) seminal contribution, economists and other social scientists have considered the *deterrence* capabilities of the state as one of the key variables for explaining crime rates[152]. Deterrence is both about the severity of sanctions for convicted lawbreakers, and about the probability of being caught, prosecuted and sentenced. This *second* aspect is particularly important from the point of view of state capacity, since it refers quite directly to the ability of the state to enforce the law in a regular and predictable manner. According to Soares (2010),

> "Policies to curb the incidence of crime include incarceration of offenders and harsher penalties for criminals, large police forces, effective judicial systems, and, overall, respect to the law and a clean and efficient government apparatus"[153]

In empirical studies, however, studies have usually centred on the more easily measurable of these variables, such as the density of policemen and judges in the population, and on the incarceration rate. Referring to recent previous econometric work on the subject, Soares confidently states that *"careful statistical analyses have confirmed beyond doubt the crime reducing role of police presence and incarceration*

[152] The other one being the economic value or profitability of engaging in criminal activities, as compared to legal ones.
[153] Soares (2010), p.16

of criminals"[154]. In Latin America, however, the deterrence capabilities of states are likely to differ significantly. An indication of this can be seen in Figure 3.3, which shows that in Latin America there is a positive relationship between a higher score in the Citizen Security indicator developed in Chapter 2, and imprisonment rates in 2007.

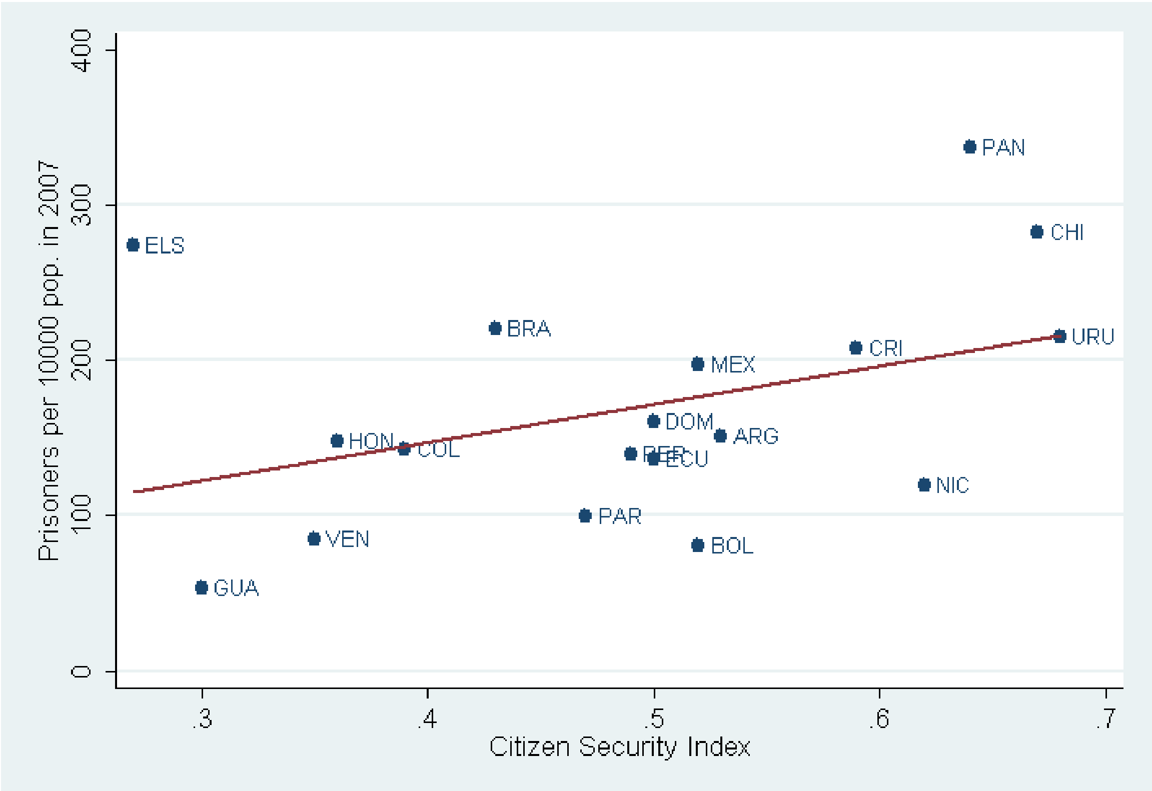

Figure 3.3. Citizen Security and Imprisonment Rates in Latin America, 2007. Source: author, based on data in Appendix A and the International Centre for Prison Studies.

Important as deterrence capabilities are, they are too policy-specific to be used as a measure of state capacity in this study, which aims to assess the importance of state capacity across very different policy domains. That is why, while recognizing that imprisonment rates could be a good proxy for state capabilities in the security dimension, I will instead use a measure of state capacity derived from the dimensions

[154] Ibid, p. 16. Although this seems a reasonable conclusion, it is perhaps not quite so indubitable as Soares implies. See Fajnzylber et al (2002) and Dills et al (2010)

explained above. Indeed we saw that infrastructural power, in particular, points – at a more general level – to the degree of control a state has over its territory and population, and should therefore be particularly important in this policy dimension. Indeed, infrastructurally powerful states should possess higher degrees of police penetration of territories, as well as better coordination of citizen security policies across levels of government and (in conjunction with bureaucratic capacity) better coordination between institutions such as police, the judiciary and the penitentiary system.

In sum, the review of the internal security and the citizen security literatures suggests weakly coincident conclusions. In the case of the latter, state capacity understood as deterrence capabilities seems to be associated with better security results. In the case of internal security, although the concept of state capacity is frequently used, the variable and theoretically loose way in which the concept is generally deployed (as denounced by both Hendrix 2010 and Kocher 2010), makes some of the most famous empirical findings in this regard (i.e. Fearon and Laitin 2003) rather dubious. On the whole, however, state capacity should be associated with better overall security outcomes.

ii. Social policy

The area of social policy includes the goods of education, health and social security. As such, it has a recognizable correlate in the literature on the emergence, consolidation and changes to the welfare state. Such literature is abundant and detailed in the case of rich OECD countries, but less so for the case of developing countries. Nonetheless, state capacity is not a concept appearing often in this literature. This is not too surprising, considering that the political determinants of welfare provision have been much more studied under the question of regime type (access to power) than in association with issues of the quality of the state (exercise of power). Indeed, an abundant literature has examined whether democracies provide more health, education and social security – whether in the form of spending and/or actual outcomes –, with most of it finding that indeed they do[155]. Focusing directly on state capacity is, however, necessary. Even among regimes with similar democratic histories and similar policy choices regarding welfare provision, one could expect states to differ in their capacity to deliver the goods enacted by legislation – for instance, if states cannot raise or collect the required taxes to give secure and sustainable funding to these projects; if the policy process itself is so unstable that programs and entitlements shift frequently; if the state cannot reach into the countryside or into remote/poor areas; if corruption is so rife that the money does not reach the intended beneficiaries; or if the state cannot control shirking or incompetence in its own frontline personnel (such as teachers and health workers), to name but a few ways in which a state could fail to deliver on its own legislation.

From the point of view of state (as opposed to regime) influence on welfare outcomes, the issue has been studied using concepts such as corruption and rule of law, or, more generally, by what Holmberg et al. (2009) call the 'quality of government'(QoG). Under this heading they group measures such as the Worldwide Governance Indicators of Control of Corruption, Government Effectiveness and Rule of Law. Holmberg et al. find that all three indicators are positively and significantly correlated with better outcomes regarding infant mortality, social security laws and the Human

[155] Quantitative reviews of the evidence can be found in Haggard and Kaufmann (2008) and Lake and Baum (2001). See also Bueno de Mesquita et al (2003); for a dissenting view, see Ross (2006). For Latin American evidence, see Haggard and Kaufmann (2008); Kaufman and Segura-Ubiergo (2001); Huber et al (2008); Avelino et al (2005); Segura-Ubiergo (2007); Huber and Stephens (2012).

Development Index[156]. Given the high correlation of the indicators with GDP per capita, however, the former finding is hardly surprising. Nonetheless, more careful studies tend to confirm these findings. A particularly studied area is public health, where corruption has been viewed as a particularly serious problem[157]. For instance, Gupta et al. (2001) find that for 89 countries over a 13-year period (1985-1997), corruption had negative effects on health outcomes such as infant mortality and low birth-weight of newborns. Likewise, Rajkumar and Swaroop (2008) find that in countries with lower corruption and a better bureaucracy, increases in health and education spending translate into significantly better outcomes than in countries where the former are absent – even after controlling for other societal variables such as ethno-linguistic fractionalization or income inequality.

In the same vein, Holmberg and Rothstein (2011) use a cross-section of more than 120 countries to explore the relationship between corruption, health spending and health outcomes. They report that their measures of QoG (the three WGI mentioned above) are positively and significantly associated with higher healthy life expectancy, and with lower infant and maternal mortality outcomes, while their relationship with health spending are much weaker. This suggests that it is not money *per se* that matters. This is also suggested by their finding that public health spending is more closely associated to better health outcomes than private health spending, which is not correlated at all with the latter[158]. In this sense, it would seem the *how* money is spent matters at least as much as the *how much*, and this clearly points to the importance of the state in organizing health systems and in assigning spending in a social-welfare-maximizing way. Other empirical work ratifies that state quality conditions the

[156] See Holmberg et al. (2009), Tables 1 and 2.
[157] Holmberg et al (2009), p.149
[158] Holmberg and Rothstein (2010)

effectiveness of health spending[159], while yet others have found that the quality of the health sector becomes more crucial, instead of less, as countries grow richer and populations healthier[160].

The above focus on corruption and on the differential effectiveness of health spending across higher-quality and lower-quality governments (to use Holmberg et al.'s terminology) suggests quite strongly the centrality of bureaucratic quality for health and (by inference) welfare outcomes generally. It is impartial, competent and well-managed bureaucracies the ones who can design, implement and control the huge amounts of money and human resources that go into educational, health and social security systems. The cleanliness and diligence of bureaucracies, particularly in front-line organizations, coupled with well-designed programs which maximize allocative efficiency, appear as potentially key factors explaining positive welfare outcomes. This might work both through greater service coverage and particularly through better overall results – such as greater enforcement of social security contributions, better test results in education and lower rates of children mortality and general morbidity.

On the other hand, the aspects of welfare I am measuring as my outcomes are to a great degree simply issues of coverage, which suggests a natural link with the concept of infrastructural power and its emphasis on social and territorial penetration. Finally, the role of political capacity may seem somewhat less relevant given that the greatest challenges in the welfare arena are financial and logistical rather than about policy stability per se. Nonetheless, as Lewis and Lloyd-Sherlock (2009) have showed in their study of social security systems in Argentina and Brazil, institutional fragility and recurrent financial crises have been the historical norm. This suggests that all

[159] Baldacci et al (2009); Lewis (2006); Wagstaff and Claeson (2004).
[160] Klomp and de Haan (2008); Lazarova and Mosca (2008).

state capacity dimensions should be positively correlated to welfare outcomes, though infrastructural power and – especially – bureaucratic capacity appear as potentially more central.

iii. Economic goods

As we saw in Chapter 2, the economic goods considered are the provision of macroeconomic stability, market-supporting economic regulation and the protection of private property rights. Firstly, it is important to ask ourselves why economic goods show more variability over short periods of time than welfare goods and even than domestic security. Clearly, variability is not a mere artefact of measurement: anyone acquainted with events in Latin America during the 1996-2006 decade has seen some large policy swings and divergent outcomes regarding all three economic goods among countries in the region, in a way hardly comparable with the evolution of other, non-economic goods. Changes in protection of property rights protection after Chávez's rise to power in Venezuela, Argentina's macroeconomic instability during the 2001-2003 period as opposed to before and after those years, or changes in the regulatory environment in post-2003 Argentina, Ecuador and Bolivia are all examples of significant changes in outcomes. All in all, it would seem that politics matters in a relatively more direct and immediate way for economic goods than for other policy areas – not least because of the permanent possibility of policy reversals.

Precisely because politics seems to matter quite directly and immediately for economic policy and outcomes, the concept of state capacity has been comparatively absent from the literature which attempts to explain economic outcomes as a function of political variables. Evoking as it does images of rather 'structural' or relatively permanent features of a state, state capacity seems ill-equipped to account for the high variability that characterizes economic performance. Given this state of affairs, is it reasonable to attempt to use such a concept? As my discussion of state capacity at the beginning of this chapter hopefully makes clear, the answer is 'yes'. But it is important to explore just what a role state capacity may play in explaining outcomes in the fields of property rights, economic regulation and macroeconomic stability.

In general, economists have understandably been more focused on establishing the effect of each of these economic outcomes on growth than on establishing the determinants of these outcomes in the first place[161]. Nonetheless, new institutionalist theory has addressed the problem of the supply of these desirable economic outcomes through at least two (related approaches). The first looks at corruption and the enforcement of the rule of law as a necessary condition for good economic outcomes. Starting with Mauro's (1995) seminal work arguing for a causal effect of corruption on economic growth, a host of later studies followed along this line[162]. The adverse effects of corruption on property rights protection and regulation work through various channels. For instance, corrupt courts may cease to be a reliable contract enforcement and dispute resolution mechanism, hurting security of property rights. Corruption also induces rent-seeking, which may be pursued through regulations that raise barriers to entry[163] and diminish competition, and more generally, through *"protectionism, misallocation of government spending, and private expropriation of*

[161] In the case of property rights protection *"a broad literature has found that more robust property rights protections is associated with better long-run economic performance"* (Haggard and Tiede 2011, p.674). Major works exploring this connection are Barro (1997), Knack and Keefer (1995), Keefer and Knack (2002), Acemoglu et al (2001) and Asoni (2008), among many others. For the relationship between economic regulation and growth, see Djankov et al. (2006); Jalilian et al. (2006); Nicoletti and Scarpetta (2003); and Besley and Burgess (2004). For the impact of macroeconomic stability on growth, see Sirimaneetham and Temple (2009); Aghion et al. (2009); Ramey and Ramey (1995); Khan and Senhadji (2000); and Judson and Orphanides (1999).
[162] E.g. La Porta et al (1999); Knack and Keefer (1995); Ades and Di Tella (1997); Treisman (2007).
[163] As in Djankov et al (2002)

assets through managerial malfeasance"[164]. Weak enforcement of laws, particularly regulations and contracts, has an analogous detrimental effect. In a work that innovates on this literature by explicitly conceptualizing state capacity as a key explanatory variable for differential cross-country performance, Besley and Persson (2011) model enforcement capacity as one of the two key state capacities.[165]

The second approach focuses on the predatoriness of state elites and the associated 'commitment problem', whereby it is often rational for rulers to betray their promises to respect property rights so as to appropriate the gains accruing from past private investments[166]. In this tradition, the central question is how states manage to credibly constrain themselves so as to enhance property rights protection over the long run, and thus to boost investment. A key institutional innovation in this regard is an independent judiciary, which can block opportunistic moves by the Executive and thus enforce time consistency. In a well-known contribution, La Porta et al. (2004) found that judicial independence had a positive effect on property rights security. More generally, scholars in this tradition have searched for all kinds of constraints during the policymaking process and that condition the ease with which a unilateral move by a player (such as the Executive) may alter the policy status quo[167]. In this regard, using a comprehensive "institutional checks on government" database, Henisz (2004) found this measure had a negative effect on policy volatility, as well as influencing positively other outcomes such as economic growth and investment in infrastructure and on telecommunications[168]. The effect of institutional constraints may not be circumscribed to property rights and regulation, but may also influence

[164] Haggard and Tiede (2011), p.675
[165] The other is taxation capacity.
[166] North and Weingast (1989); Olson (1993); Weingast (1997)
[167] See Cox and McCubbins (2001); Tsebelis (2002); Levy and Spiller (1994)
[168] Haggard and Tiede (2010), p.675

macroeconomic instability, which Acemoglu et al. (2003) argue is no more than a symptom of deeper institutional weakness. Using their settler mortality instrument to control for reverse causation, they show that countries with fewer constraints on the Executive have lower macroeconomic stability.

What is clear from this brief review is that the institutionalist literature is pointing at relatively enduring features of states – such as their degree of corruption or lack of institutional constraints – that go far beyond mere policy content. Thus, to restate the question in terms of state capacity is not a huge conceptual stretch of institutionalist approaches; it merely situates them within an argument made at a higher level of generality. In the language of this thesis, while corruption is essentially a feature of (less-Weberian) organizations – including Executive bureaucracies but also courts –, political capacity is the dimension that bridges the gap between institutionalist theories and state capacity. The focus on the stability of policies is, after all, the central point of veto player theory and of the commitment problem literature more generally. To this, Stein et al (2005) have added adaptability as a complementary and no less desirable feature of policies, while insightfully noting that both are positively correlated, and attributing this to the level of cooperativeness of a country's policymaking[169].

In sum, it makes sense to treat these institutional features as part of a larger theory of state capacity. Neither corruption nor policy instability are free-floating entities travelling across an empty political system. Corruption is always organizationally embedded, defined as it is by the use of public *office* for private gain. And if policy

[169] Scartascini et al (2008a). For further discussion of their 'transaction costs approach' to intertemporal cooperation in policymaking, see Spiller and Tommasi (2003); Spiller et al (2008); and Scartascini (2008).

instability partly results from the strength and independence of state organizations (such as courts, but also bureaucracies and Congress), and also partly from the *de jure* and *de facto* rules governing their interactions, then it follows than changes in those state organizations and/or those interaction rules will have a systematic impact on stability. In sum, the organization of the state conditions its capacity *as a collective actor* to act cooperatively and coherently. Political capacity, therefore, is both a constitutive dimension of state capacity, and a central lens through which to examine the relationship between the state and its provision of economic goods.

Figure 3.4 below provides a schematic way in which to sum up the way in which state capacity is related to economic outcomes. Just as in Figure 3.1 above, the provision of these 3 goods is viewed as a combination of the 'right' policies in the technical sense[170] and of state capacity to implement those policies. In turn, this latter capacity can be subdivided into two kinds of institutional assets: the *bureaucratic-organizational base* in charge of implementing economic policy – courts that are clean and well run and thus protect property rights; agencies that are not captured and have the required technical expertise to regulate the economy; Central Banks staffed by competent economists; and so forth – and what I have called *political capacity*. The latter is about having a political system that is capable of institutionally underpinning cooperative policymaking among political actors, which in turn leads to stable (and thus, credible) and adaptable economic policymaking. In this way, bureaucratic capacity and political capacity are hypothesized to be the two relevant aspects of state capacity in economic policy.

[170] Such as laws that actually provide protection against expropriation and are useful for enforcing contracts, regulations that are well-designed, and macro policy which is based on sound economic theory.

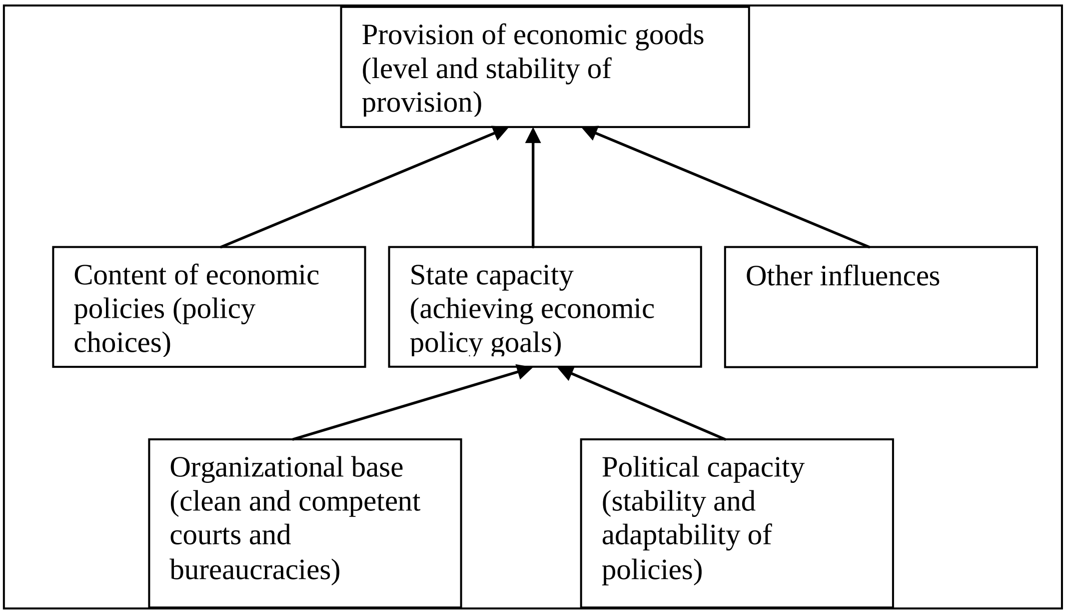

Figure 3.4. Hypothesized Causal Influences on Provision and Stability of Economic Goods.

Overall, we have seen that the literature on all three policy dimensions (Physical Security, Welfare and Economic Policy), and on most of the eight specific public goods to be measured (see Chapter 2), supports the idea that state capacity should positively affect the relevant policy outcomes. In the next chapter, I provide a systematic empirical analysis of these relationships, by operationalizing the three dimensions of state capacity and introducing a series of control variables that may account for alternative causal paths leading to higher policy effectiveness.

Chapter 4

Explaining policy effectiveness: a combined multiple regression and QCA approach

Chapter 3 developed in detail the hypothesis that differences in state capacity are a major political cause of differences in current policy effectiveness between Latin American countries. In this chapter, this proposition will be empirically tested. The aim is to do so in the most rigorous way the limited number of countries and observations will allow. For this purpose, two methodologies will be used.

The first is statistical analysis, including both correlations and regression analysis; here, the aim is to assess how strong the association is between the political variables and the public goods indices, and also to see how robust that association is to the inclusion of control variables derived from competing theoretical explanations of policy performance. The second is qualitative comparative analysis (QCA), which is a case-based approach that aims to detect the logically necessary and/or sufficient conditions that produce a given outcome[171]. By focusing on the combinations of characteristics each case has in a given property space, QCA looks at causality in a complex, conjunctural way, in which set relations of inclusion and exclusion are central in establishing the potentially multiple paths of causation through which different cases arrive (or not) at a given outcome. Since it does not rely on the co-variation between independent and dependent variables to establish causality (nor on any of the standard assumptions needed for statistical inference), but rather on the logical and set relations between conditions and outcomes, it is a powerful

[171] Rihoux and Ragin (2009); Ragin (2000)

complementary tool through which to establish the general importance of state capacity for policy effectiveness among the 18 countries under study.

In order to test the influence of state capacity on policy effectiveness, however, a methodological decision regarding the level of aggregation of the analysis must be taken. This refers to the fact that state capacity is understood to be a concept composed of the three core dimensions of state capacity that I identified: infrastructural power, bureaucratic capacity and political capacity, which in turn affect the two key state functionings – the ability to *decide* on policy in a certain way, and to *implement* that policy. While I claim that the more a state has of each of the three dimensions the more capable that state is (since it can choose to adopt and implement a greater number of policies), there is no claim that these three dimensions will *necessarily* go together (even if the existing synergies between them make this likely). Moreover, the literature review and the theoretical claims made in the previous chapter suggest that some policy areas depend more on one or other of the key functionings (decision and implementation), and therefore more on one or other of the three dimensions specified. For instance, the control of crime requires (among other things) an effective police organization that is deployed throughout the whole territory and is reasonably uncorrupted. These territorial and organizational requirements suggest infrastructural power and bureaucratic capacity are more important elements than political capacity in this particular field. The opposite is also true: the control of inflation, for instance, does not require a state that logistically penetrates its territories above a very bare minimum (so that at least the same currency is in circulation everywhere); much more important is that the monetary authority's inflation target is credible and that fiscal policy plays its part according to internal and external constraints. In other words, here political capacity should be much more important. I therefore suggest that the more fruitful empirical analysis can be done at a disaggregated level, that is, by looking at the relationship between the more theoretically-relevant dimension of state capacity and a particular policy dimension.

Consistent with the examples just discussed, I argue that infrastructural and bureaucratic capacity should be the most relevant state capacity dimensions for the security goods, while political capacity should be used when analysing the relationship between state capacity and the economic goods. The case of bureaucratic capacity is more indeterminate: as we saw in Chapter 3, there are reasons to believe it could affect all policy dimensions significantly, although it appeared as particularly important in the welfare goods dimension. The first part of the empirical exercise will thus be to test the correlations between each of the state capacity and policy dimensions, and test whether these preliminary hypotheses hold, and from that analysis select (inductively) the most appropriate state capacity dimension to be used in each case in what follows.

In the remainder of this section, I proceed in four steps or sections. The first operationalizes the concept of state capacity and presents the scores for each dimension. In the second, I examine the correlation between the different dimensions of state capacity and all goods and policy dimensions. In the third, I undertake a multivariate regression and a crisp-set QCA analysis for each policy dimension. In the final section I draw some general conclusions and discuss the case selection for the comparative case studies that follow.

I. Operationalizations and Results

Operationalizing state capacity requires the operationalization of its three observable dimensions: infrastructural power, bureaucratic capacity and political capacity.

a) *Infrastructural power.*

Although the concept of infrastructural power was introduced by Michael Mann almost three decades ago[172], efforts at successful operationalization of the concept are still ongoing. In fact, I do not know of any comprehensive attempt at quantitative measurement of this concept across a large sample of countries. This is perhaps not so surprising if we consider the difficulties associated with capturing its fundamentally relational nature, in which state and society become interpenetrated. My measurement of infrastructural power is based on what Soifer (2008) calls a *"national capabilities"* approach to the concept, whereby the key relationship analysed is between the state and society, rather than the *"radiating institutions"* of the state which mediate that relationship[173]. While the former approach tends to ignore the subnational variation of infrastructural power, it is more appropriate for international comparisons of overall state capacity.

My conceptualization of infrastructural power relies on four dimensions, each of which points to a distinct state-society relationship and to the control, by the state, of a key resource. The first dimension is the true monopoly of organized violence, as reflected in the lack of insurgencies. This is a core issue for any state that claims to possess full control of its territory and its people[174]. The second is the capacity of

[172] Mann (1984). See also Mann (2008).
[173] Soifer (2008), pp.236-237
[174] Undoubtedly, there is a relevant circularity issue between this area of control and the 'internal security' public good as measured in Chapter 2, which will be dealt with in the empirical estimates. Conceptually, however, the monopoly of organized violence cannot be omitted from an

the state to extract resources for its functioning, as measured by the tax intake of the state as a proportion of GDP[175]. These two aspects closely reflect what Mazzuca (2012) calls the *"coercion/extraction cycle"* which is at the core of the Weberian definition of the state[176].

The third dimension is territorial and social penetration, as reflected in primary schooling coverage rates. The assumption is that only states that reach into the countryside and into the poorest segments of society can enforce universal, or near-universal, school attendance. Primary education is in turn a key means to the production of state legitimacy, which *"facilitates the actual exercise of state infrastructural power"*[177]. The final area is the state's possession of social information and the basic administrative capacity to process it, as measured by the frequency and accuracy of population censuses. Again, this is a very rough indicator, but the idea is that control and logistical implementation of decisions requires a minimum of cognitive capacities[178] in the central apparatus of the state. A state that has only a very general and rough idea of how many people live in the country, and where, is unlikely to be able to find people (social control) or adequately plan and implement policies.

Thus, this operationalization taps into the means of violence, money, legitimacy and information as four key resources that enhance state power and are obtained through

operationalization of infrastructural power, particularly since insurgencies and organized violent groups will, almost by definition, limit the territorial reach of the state.

[175] This is a rough and imperfect indicator. Better measures, such as the proportion of direct taxes to GDP, were not used for data availability reasons.

[176] As a consequence, he claims that states that have less of a monopoly of violence have less 'stateness' than those who do, since coercion (and extraction insofar as it makes coercion possible) is a definitional attribute of the state. Mazzuca (2012), p.555

[177] Soifer and vom Hau (2008), p.227. See also vom Hau (2008); Soifer (2008); Weber (1976).

[178] Whitehead (1994).

a successful centralization of political power in the hands of the state[179]. In other words, the adequate obtainment of each of these four resources reflects a situation in which the state has successfully penetrated society, i.e. has the capacity to coerce, tax, educate and find its citizens, or more generally, to impose its will on other social actors and to enforce laws[180]. This operationalization is fairly close to the one recently suggested by Soifer (2012), whereby he identifies three dimensions of infrastructural power: security, extraction and basic administration. Since he suggests measuring the latter through censuses and vaccination rates, the difference with my primary attendance and census registering measures is in fact small.

For all four indicators, the measurement timeframe for the data is from about 1950 to 1995. This historical approach to infrastructural power is based on the assumption that such power evolves very slowly, and that if it influences the policy outcomes under study it must do so over the long run[181].

b) Bureaucratic Capacity

In constructing the measure, I follow Evans and Rauch's (1999) distinction between bureaucratic *structure* and bureaucratic *performance*. Performance is about the degree to which a given set of functions is adequately fulfilled, such as working predictably, with little 'red tape' or delays, or being efficient. Structure is about the

[179] Mann (2008)
[180] Mann (2008); Migdal (1988)
[181] The income tax to GDP ratios are taken as an annual average from 1950 to 1995 and are calculated with data from the Montevideo-Oxford Latin American Economic History Database (MOxLAD). Primary enrolment data also come from this database, and are an average from 1950 to 1990 (taken every 10 years; population estimates for each year used are from the UN). The insurgency data is from Fearon and Laitin (2003), and consists of years of civil war or with an existing insurgency in a country between 1946 and 1995. Finally, the census data is an average of the *frequency* (50%) of censuses between 1900 and 1979 (with maximum one per decade counted), the *quality* (25%) of the census information as measured by the Whipple index in the censuses between 1950 and 1979, and the *extent* of information (25%) requested in the survey in that same period. Census data is from Goyer and Domschke (1983).

composition of the bureaucracy and its formal institutional makeup – for instance, the degree to which it is 'Weberian' in its hiring and personnel promotion policy. For the present purposes, I argue that both structure and performance matter. Structure matters because it points to the relatively permanent, slowly-changing fundamentals of how the bureaucracy is organized and constituted. In this sense, it is closer to a capacity understood as potential. The assumption is that more 'Weberian' bureaucracies are *ipso facto* more capable in this sense. On the other hand, the correspondence between structure and performance need not be one to one, particularly over the short run. Weberian structures are surely not sufficient for high performance. Performance provides an indirect measure of capacity, particularly of its more *de facto* (as opposed to *de jure*) aspects. In sum, both structure and performance reveal potentially different information about a country's bureaucratic capacity, and therefore will be used together.

My measure of bureaucratic structure comes from Echebarría's (2006) IADB-sponsored report on the civil services of Latin America, which apart from detailed country chapters includes a series of indices of bureaucratic quality. These indices are built from a thorough assessment of the region's civil service systems, understood as those institutional arrangements, through which public employment and personnel are articulated and managed, with the goal of guaranteeing the existence of a professional civil service[182]. These assessments were conducted during 2002 and 2003. There are five indices, each measuring a distinct (if interrelated) aspect of these arrangements: their efficiency, merit, structural consistency, functional capacity and integrative capacity[183]. My bureaucratic

[182] Longo (2006)

[183] Efficiency refers to the degree of efficient use of available human resources (such as control of absenteeism and personnel management systems). Merit refers to the existence of a merit-based system

structure measure is the simple average of these five indices. The quality of this index should be highlighted, as it is based on a deep, specialized and purposeful study of the civil services of the entire region.

My measure of bureaucratic performance is itself the average of two subdimensions: bureaucratic quality as measured by experts in commercial agencies, and the level of corruption in the public sector[184]. Commercial agencies' measures are much more tilted towards performance than structure[185]. As for corruption, the measure is Transparency International's Corruption Perceptions Index. For both the commercial ratings and the corruption measure, the scores are averaged for the

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of hiring and promotion. Structural consistency refers to i) the degree of adequacy between human resource policies and governmental strategic objectives; ii) degree of development of professionalized top management functions as they relate to management of personnel (e.g. lack of, or excessive, scope of decision-making for managers); and iii) consistency of human resources processes. Functional capacity refers to i) the competence of personnel to fulfil assigned tasks; ii) the existence of performance-based incentives to increase productivity, learning and service quality; and iii) the flexibility of the system to adapt to new tasks and to implement innovations. Finally, integrative capacity measures the effectiveness of the civil service system in aligning expectations between actors and thus reducing overall levels of conflict and increasing organizational self-identification. For more details, see Longo (2006). See also Iacovello (2006).

[184] The inclusion of corruption as part of the indicator of bureaucratic capacity is consistent with the theoretical discussion of this concept presented in Chapter 3. Firstly, the existence of corruption would go very much against the grain of the impersonal, technocratic and autonomous decision-making the developmental literature has been concerned with. Corruption is a sign of lack of autonomy and debilitates internal cohesion, and as such it is a feature of the predatory states that Evans opposes to developmental ones, and where each functionary is concerned exclusively with his own welfare and not with collective projects (Evans 1995: 45-47). Secondly, corruption directly diminishes organizational performance and may itself be interpreted as a necessary de facto measure of capacity that complements the somewhat more de jure aspects captured by the bureaucratic structure index. Finally, recent work (e.g. Charron and Lapuente 2010) has operationalized state capacity precisely as the combination of bureaucratic quality and low corruption, in line with the idea that the essential feature of good governance or 'quality of government' is the provision of impartial rule (Rothstein and Teorell 2008), which of course corruption directly undermines. Therefore, the inclusion of corruption should make for a better indicator of bureaucratic capacity.

[185] Three agencies' scores are used: the Economist Intelligence Unit's score in the 'Government Effectiveness' indicator of the Worldwide Governance Indicators, the Global Insights' World Markets Online score for that same WGI indicator (government effectiveness), and Political Risk Service's 'bureaucratic quality' indicator. The EIU measure is the combination of expert evaluations of a) 'bureaucratic quality / institutional effectiveness', and b) 'excessive bureaucracy / red tape'. The Global Insights measure is the average of two assessments as well: a) "***Bureaucracy:*** *An assessment of the quality of the country's bureaucracy*"; and b) "***Policy consistency and forward planning:*** *How confident businesses can be of the continuity of economic policy stance – whether a change of government will entail major policy disruption, and whether the current government has pursued a coherent strategy. This factor also looks at the extent to which policy-making is far-sighted or conversely aimed at short-term economic advantage*". All data is taken from the Worldwide Governance Indicators website.

1996-2006 period, measured every two (i.e., in even) years. Thus, the final measure of bureaucratic capacity is composed 50% by the bureaucratic structure measure, 25% the quality measures of the three commercial agencies, and 25% by the corruption measure.

c) Political Capacity

My concept of political capacity is derived from Scartascini, Stein and Tomassi's work on six formal capabilities of states, among which the stability and the adaptability of policy decisions are two of these. For all six capabilities, they first developed measures for all Latin American countries – partly based on regionally-specific sources, including a survey on state capabilities delivered to experts and formerly high-ranking politicians in the region –, but then developed a second measure for a large set of countries, based exclusively on international sources. My measure of political capacity is thus the average of the adaptability and stability scores in the Latin American and the international measures[186]. These two sources are in any case highly correlated at 0.9, so the averaging is simply meant to attenuate particular biases in one of the two measures, but results should not vary significantly were one of the two measures chosen on its own. These scores should be understood as indicators of the underlying cooperativeness of the policymaking process, which in turn is highly influenced by the quality of the institutional environment in which policies are formulated and negotiated (as discussed in the previous chapter).

[186] In other words, the average of the adaptability and stability scores in the Latin American measure is averaged with the adaptability and stability average score in the International measure. Since both measures share the same scale, such averaging is straightforward. Sources are Stein et al (2005) and Berkman et al (2008).

The scores derived from these operationalizations can be seen in Table 4.1. For simplicity, only the z-scores are shown. Figure 4.1 graphs these results for further ease of visualization.

Table 4.1: Z-scores by State Capacity Dimension

Country	Infrastructural Power	Bureaucratic Capacity	Political Capacity
Argentina	0.21	0.80	-0.27
Bolivia	-0.76	-0.50	-0.65
Brazil	0.42	1.30	1.30
Chile	1.54	2.33	2.25
Colombia	-1.06	0.55	0.94
Costa Rica	0.19	1.04	0.68
Dominican Rep.	0.01	-0.42	-0.65
Ecuador	-0.20	-0.91	-0.89
El Salvador	-0.80	-0.80	0.24
Guatemala	-1.33	-0.62	-1.08
Honduras	0.11	-1.05	-0.12
Mexico	0.25	0.61	0.54
Nicaragua	-0.53	-0.83	-0.74
Panama	0.81	-0.59	-0.49
Paraguay	-0.28	-1.24	-1.07
Peru	-0.44	-0.48	0.03
Uruguay	0.72	1.12	1.37
Venezuela	1.07	-0.30	-1.38

Note: Dark shading represents performance significantly above the regional mean, while light shading represents performance significantly below the regional mean. *Source:* author's calculations.

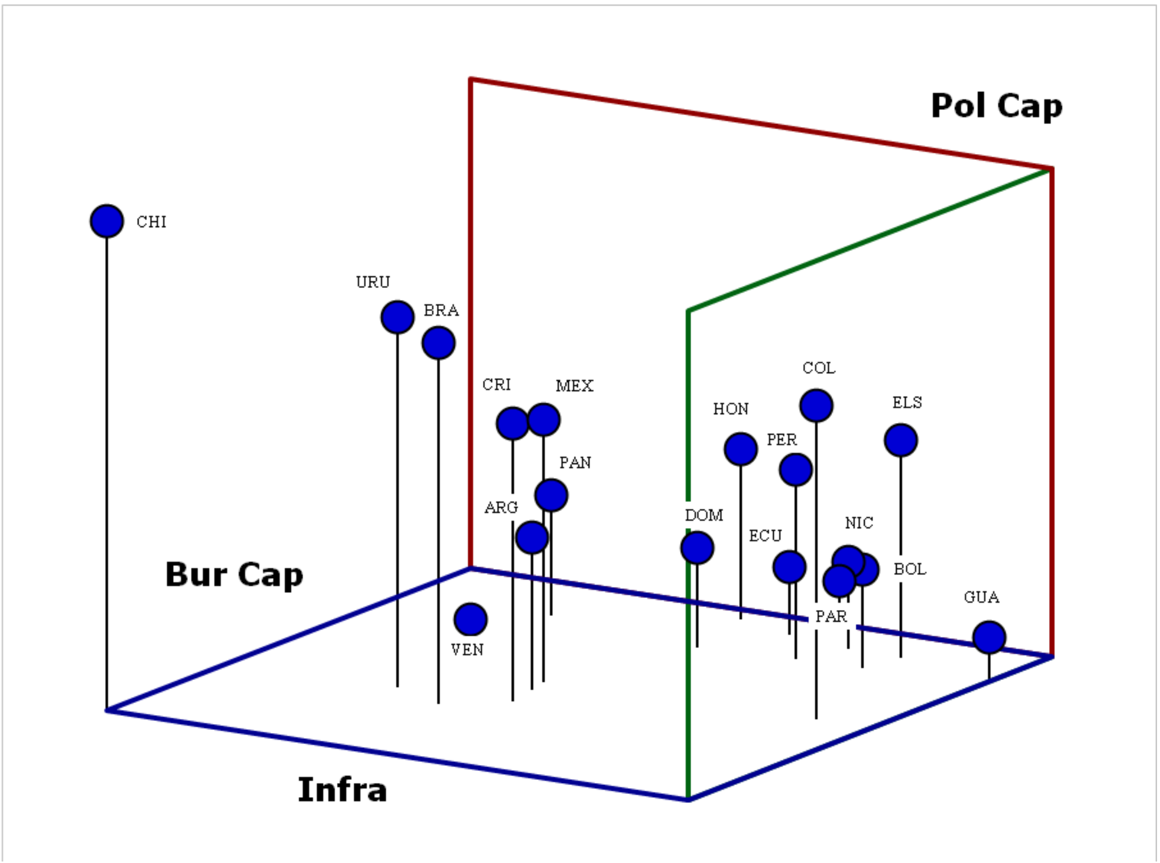

Figure 4.1. Scores by State Capacity Dimension. *Source:* author's calculations.

The results show a clear pattern, not unlike the one we saw for the three policy dimensions. First, there is a group of consistently high-capacity states, clearly led by Chile but with Uruguay, Brazil and to a lesser extent Costa Rica as high performers. These countries, plus Mexico, are the only countries that are above the regional mean on all three state capacity dimensions. At the bottom, there is a group of consistently low-capacity states, such as Paraguay, Bolivia, Ecuador, Guatemala and Nicaragua, all of which have below-the mean scores on all dimensions. To these we could add the Dominican Republic, Peru, Honduras and perhaps El Salvador, which have only one barely-above-average dimension. Finally, in the middle there is a group of highly variable performers. The most notable of these is Venezuela, who comes a surprising second in terms of infrastructural power, but is somewhat below-average in terms of bureaucratic capacity and dead last in political capacity[187]. Colombia is almost as extreme in its variability and in exactly the opposite configuration, with a very low infrastructural power score and a high political capacity score[188]. Panama is also surprising in having a quite high infrastructural power score but markedly low scores on the other two dimensions. Finally, Argentina exhibits somewhat above-average infrastructural and (especially) bureaucratic scores, but below-average political capacity.

An important question is how these indices correlate with each other and with other existing indices that purport to measure some aspect of stateness, state fragility, state capacity or effectiveness. I compare my results to six indices reviewed by Altman and Luna (2012). These are the Stateness indicator from the Bertelsmann Transformation Index (BTI); the Global Peace Index (GPI, which measures internal and external peace in countries through 23 indicators); the Failed States Index (FSI); the Peace and Conflict Instability Ledger (PCIL, from the University of Maryland); the Political Instability Index from the Economist Intelligence Unit (PSI); and the State Fragility Index (SFI, from George Mason University)[189]. I also add the 2006 'Government Effectiveness' governance indicator (GOV_EFF) of the World Bank, and a 'state capacity' indicator recently built by Besley and Persson (2011). I add their state capacity index (BP_SC) because their book is an important recent contribution from the economics literature which, coming from an 'institutionalist' tradition, claims to

[187] It should be noted that Venezuela's high infrastructural power score is not reliant on a single subcomponent, but was consistently high across tax, schooling, insurgency and census measures. Nonetheless, its tax component (the highest for all countries) is probably boosted by easy-to-collect oil profits. It is possible that the historical figures used for this component could be hiding severe deterioration in infrastructural power in the last 20 or so years, but with the chosen operationalization all that can be said is that Venezuela's score is robust to the exclusion of particular dimensions.

[188] Colombia's low infrastructural score is not dependent on the insurgency dimension, as might be thought. Eliminating it only improves Colombia's regional ranking on this indicator from 17th to 16th.

[189] For a brief review of each see Altman and Luna (2012). For a detailed review of these and many other indices, see Fabra Mata and Ziaja (2009).

be breaking new ground by introducing a state capacity framework into the discussion on long-run development. Despite the sophistication of their mathematical modelling, their state capacity index is remarkably simple. It is the average of their fiscal capacity indicator – the share of taxes in government revenue for the year 1999 – and their legal capacity indicator – the 'contract enforcement' indicator from the World Bank's Doing Business 2006 survey[190].

In Table 4.2 below, we can see the correlations between my three state capacity indices and the other 8 indices. For comparative purposes, I also add in column (4) the average of my three state capacity dimensions, so as to possess a single index with which to compare the state capacity conceptualization developed here with other work – even if, as we will see, I will not be using this aggregate index in what follows. Finally, in the last row I add, like Altman and Luna, a GDP per capita indicator to see how the indicators map into economic development generally[191].

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[190] Both are normalized to the 0-1 range before averaging.

[191] The GDP measure is the World Bank 1990-2005 GDP per capita average, corrected for PPP. The numbers for the six indicators reviewed by Luna and Altman are taken from their article, and correspond to years between 2010 and 2012.

Table 4.2: Correlations between 3 State Capacity Dimensions, their Average, and Other 'Stateness' Indices

		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Infrastructural Power	-												
2	Bureaucratic Capacity	**0.54**	-											
3	Political Capacity	0.38	**0.85**	-										
4	State Capacity Average	**0.75**	**0.93**	**0.87**	-									
5	BTI	**0.68**	**0.68**	**0.58**	**0.76**	-								
6	GPI	**-0.50**	*-0.41*	-0.28	**-0.47**	**-0.84**	-							
7	FSI	**-0.67**	**-0.70**	**-0.57**	**-0.76**	**-0.89**	**0.82**	-						
8	PCIL	**-0.60**	-0.36	-0.34	**-0.51**	**-0.58**	**0.49**	**0.72**	-					
9	PII	-0.23	**-0.54**	**-0.63**	**-0.55**	**-0.59**	*0.42*	**0.55**	**0.62**	-				
10	SFI	**-0.53**	**-0.63**	**-0.57**	**-0.68**	**-0.81**	**0.65**	**0.90**	**0.70**	**0.62**	-			
11	Gov_Eff	*0.45*	**0.83**	**0.86**	**0.84**	**0.64**	-0.37	**-0.74**	**-0.50**	**-0.56**	**-0.78**	-		
12	Besley-Persson	0.03	0.10	0.10	0.09	0.10	-0.05	0.07	-0.08	-0.10	0.03	0.03	-	
13	GDP per capita	**0.77**	**0.86**	**0.66**	**0.89**	**0.67**	*-0.41*	**-0.75**	**-0.49**	-0.36	**-0.64**	**0.72**	-0.06	-

Note: Correlations significant at 5% are in bold; those significant at 10% are in italics. Shading of the first four columns highlights the comparison of my three state capacity dimensions and their average with the other indices. For an explanation of the other indices see the text and Altman and Luna (2012). *Source:* author's calculations based on data in Table 4.1 and in Altman and Luna (2012).

The first thing to note is that my bureaucratic and political capacity indicators are very highly correlated among themselves, but both are significantly less correlated with the infrastructural capacity dimension. This could mean the latter is tapping into a genuinely distinct dimension of capacity from the other two, which are tapping into more or less similar phenomena. An alternative possibility is that since both the bureaucratic and political capacity indices use perception-based data from international sources[192], they are more alike simply because of this, with the 'hard-data' infrastructural capacity index tapping into an entirely different informational base. In this case, measurement strategy rather than conceptualization would be driving similarities and differences. The second thing to note is that the three dimensions correlate significantly with almost all other indices (and with the income

[192] In the case of bureaucratic capacity the bureaucratic structure dimension comes from a unique, specialized source, but the other 50% (corruption and performance) come from international agencies. In the case of political capacity, almost all data comes from such sources.

indicator), but at moderate levels which suggest that substituting indistinctly one index for another would be unadvisable. These indices are likely to be measuring related, but distinct phenomena, though it is interesting to note that in some cases one of my dimensions is significantly more (less) correlated with a specific indicator, suggesting that each of the three dimensions is capturing a distinct aspect of state capacity. Meanwhile, my state capacity average correlates with all indicators save for the Besley-Persson index. Thirdly, this latter index is quite singular in being entirely uncorrelated with all other indices (and the income indicator).

A closer look at its data suggests why. Nicaragua is ranked a very distant first in state capacity, while countries like Uruguay and Brazil are near the bottom. Figure 4.2 below plots my state capacity average against their indicator. As can be seen, their relative ranking of countries is very counter-intuitive. This would not in itself be sufficient to discard the index, if it were the product of a careful process of conceptualization and operationalization; but, being the product of a tax measure and a contract enforcement indicator, both taken from a single year, it hardly fits the bill. I therefore highlight the dangers associated with a careless conceptualization and operationalization of key concepts.

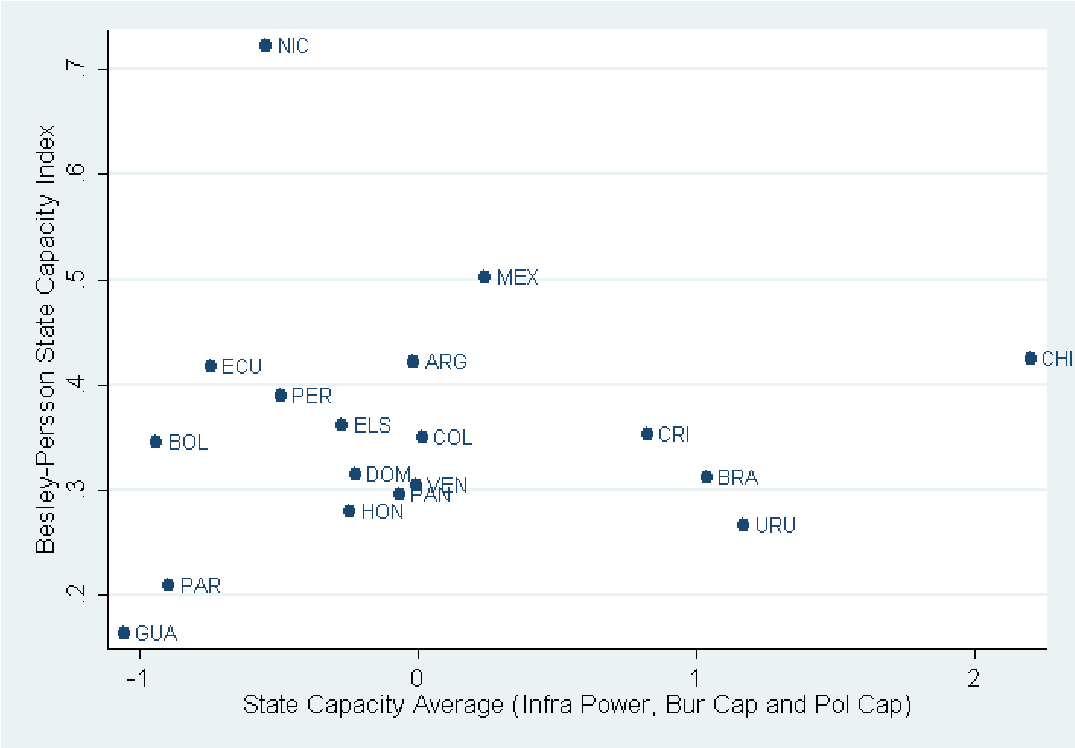

Figure 4.2. Comparison Between State Capacity Measures. *Source:* author.

II. Correlations

In Table 4.3 we can see the correlations between different measures of state capacity and the different policy goods, the three dimensions and the aggregate index of policy effectiveness (as built in Chapter 2). Note that I also include in the table two measures of *democracy* as a second possible major (political) source of variation in policy effectiveness. As will be recalled from the previous chapter, I argued that regime type is a 'deep' causal factor that, operating either directly or indirectly, and through policy content or through state capacity, could be the source of major differences in effectiveness across countries. I hypothesize this is particularly true in a region like Latin America, where the cross-national differences in length and depth of democracy have been substantial indeed. In the one hand, there are some countries in the region that have lived some of the largest amount of years under a democratic regime within the developing world, and that are currently amongst the most democratic countries in the world (such as Costa Rica and Uruguay). On the other, there are countries (such as Paraguay or Nicaragua) which hardly knew democracy during most of the 20th century. Therefore, regime type is a major candidate for alternative explanations of policy effectiveness in the region, and for this reason in what follows it will be included as the main control variable, over and above dimension-specific controls that will be introduced when relevant (I develop this further below).

The first measure of democracy is the current degree of democracy, for the 1995-2005 period. The second is the historical degree of democracy, taken for the 1930-1995 period. In both cases the measure is the average Polity 2 score, taken from the Polity IV dataset. This variable is preferable to the widely-used democracy measure from Freedom House (which considers the effective political and civil rights enjoyed by a country's citizens) because it is much less of an 'outcome' variable than the latter, and is thus less endogenous to the outcomes being analysed. I use two different timeframes for democracy. For the security and economic dimensions, I use the 1995-2005 Polity 2 average score, since the literature suggests current democracy should have an effect on the current provision of goods on both those dimensions. Welfare provision, however, is extremely stable over time and as the literature on the welfare state has made clear, it is built over much longer time periods. Consistent with the welfare literature, therefore, I examine the long-term influence of democracy on the welfare dimension by focusing on the 1930-1995 Polity 2 average democracy score[193].

[193] The choice of 1930 as a starting point is that it was in that decade that 'pioneer' countries in the region (Mesa-Lago, 2007, p.4) began enacting and implementing social or welfare legislation (with the exception of Uruguay, whose initial period occurred about two decades earlier)

Table 4.3: Correlations between state capacity, democracy and policy effectiveness measures

	Infra-structural Power	Bureaucratic Capacity 96-06	Political Capacity	Polity 2 1995-2005	Polity 2 1930-1995
Citizen Security	0.52**	0.41*	0.33	0.6**	0.08
Internal Security	0.56**	0.38	0.32	0.68**	0.02
Physical Security	**0.59****	**0.43***	**0.35**	**0.70****	**0.06**
Health	0.55**	0.73**	0.67**	0.29	0.32
Education	0.54**	0.76**	0.64**	0.37	0.46*
Social Security	0.64**	0.88**	0.71**	0.65**	0.46*
Welfare	**0.64****	**0.88****	**0.75****	**0.49****	**0.46***
Property Rights	0.56**	0.79**	0.8**	0.36	0.27
Economic Regulation	0.24	0.7**	0.8**	0.28	0.41*
Macro Stability	-0.27	0.09	0.31	-0.13	-0.23
Economic Policy	**0.22**	**0.65****	**0.78****	**0.21**	**0.18**
Index of Policy Effectiveness	**0.61****	**0.81****	**0.77****	**0.59****	**0.29**

Note: Double asterisks represent correlations significant at 5%; single asterisks represent correlations significant at 10%. *Source:* author's calculations.

Consistent with expectations, infrastructural power is most highly related to the two domestic security goods. Nonetheless, we can see that its correlation with *all* goods except economic regulation and macroeconomic stability are high and significant. This is consistent with the notion that it is precisely in these two economic goods that infrastructural power should be least important, inasmuch as they are the least territorial goods of the eight. The high correlation with security and welfare goods is consistent with the idea that social and territorial control lies at the core of the concept of infrastructural power, since for these both dimensions (and for protection of property rights) the state requires to have an effective presence throughout the territory and a degree of penetration of society so as to be able to deliver these goods. It should be noted that while infrastructural power is about equally correlated with the security and the welfare dimensions, the expectation that it is the most important for explaining domestic security holds.

Turning to bureaucratic capacity, we can see that this variable shows some association with the security goods, at borderline significance levels (p-values around 0.1); it shows, however, a very strong association indeed with all welfare goods and with two of the three economic goods – macroeconomic stability being an exception. Bureaucratic capacity turns out to be significantly correlated with all three policy dimensions – unlike both infrastructural power and political capacity – in a way which is consistent with the theoretical framework summarized in Figure 3.2, which suggested bureaucratic capacity is the key internal resource of the state and as such was likely to affect the two key state functionings (implementation and decision-making).

Finally, empirically political capacity turns out to be not too different from bureaucratic capacity, but with slightly lower levels of association to security and welfare goods, and a slightly higher association with all economic goods. Though positively associated with macroeconomic stability, this measure of state capacity also fails in achieving statistical significance for this good. Nonetheless, the hypothesis that political capacity is more important for economic policy than for the other policy dimensions is consistent with the results. Lastly, all three dimensions of political capacity are strongly correlated with average or general performance, as can be seen in the last row of Table 4.3.

In the case of democracy, Table 4.3 shows that the recent democracy measure is highly correlated with both the security and welfare dimensions but not the economic dimension, while the long-term democratic experience measure is only correlated with the welfare dimension. This is consistent with the hypothesis that democracy exerts a long-term influence over social policy. The very high correlation between current democracy and the security goods should be viewed with some caution, however, as Cheibub et al (2010) have shown that some of the components of the Polity 2 measure actually incorporate political violence into its scores, and so the correlation may be circular, at least to a degree.

III. Regressions and QCA

Although the correlations in Table 4.3 above suggests the potential importance of the often-neglected variable of state capacity on policy performance, more demanding tests will be performed in this section through the complementary use of two very different methodologies: multiple regressions and crisp-set qualitative comparative analysis (QCA). In both cases, the goal is to assess how important state capacity actually is as an explanatory variable when used in conjunction with key additional variables – both 'political' and 'non-political' – that the literature on each policy field regards as crucial. The use of two alternative methodologies with very different underlying assumptions is meant to increase confidence in findings should results be alike in both, and to put into perspective results that are valid only though one of the two.

In the analysis below, the most important political and non-political variables that the specialized literature on each dimension has found to be important are included in the analysis as control variables[194]. For simplicity and comparability, the same independent variables are used in both the regressions and QCA, and are limited to no

[194] A list of these variables and their sources can be found in Appendix B.

more than five variables in total in each case (including state capacity and democracy). Clearly, limiting control variables to three or four is not ideal. There is an unavoidable degree of arbitrariness in choosing some over others. To mitigate this problem, the chosen variables were those that showed the highest pairwise correlation with the dependent variable, and in some cases their inclusion into the model was also tried to see if results changed in any significant way[195]. The idea is to provide at all times the most demanding test for the relevance of the state capacity and democracy variables. In this sense, this study goes beyond Roller (2005), who only controlled for GDP per capita when evaluating the usefulness of an institutional, veto-player approach in explaining policy effectiveness in OECD democracies.

As anticipated in the Introduction, the regression analysis design – as in Roller (2005)[196] – is a simple OLS cross-section. Given the limited availability of time-series data for both policy effectiveness and especially for state capacity; given the significant temporal stability of the data and the predominance of cross-country over temporal variation in the dependent variable (and, presumably, in state capacity); and given that the main hypothesis of this work regarding differences in *levels* of state capacity and *levels* of policy effectiveness is clearly cross-national in focus (as opposed to focused on within-country development), this cross-sectional design is appropriate to the research question at hand. An artificial multiplication of observations through the use of yearly data would likely provide little actual new information given the short time-spans that could be constructed with the full indices and the relatively small 'true' (as opposed to measurement-error-induced) variability they would provide. Thus, rather than making the estimation procedure more complex

[195] Tables showing correlations between each control variable included in the full analysis and the dependent variables can be found in Appendix C (Tables C.1-C.3).

[196] Her analysis focuses on a similar problem, regarding the influence of institutional design on policy effectiveness across the OECD.

in exchange for scant analytical gain by expanding on what are essentially the same set of numbers[197], I will explore the temporal dimension of state capacity through detailed, qualitative case studies in Chapters five to seven of this work. It is there where the complexities, interrelationships and dynamics of the state capacity- policy effectiveness relationship will be given their proper due. By contrast, here and in the QCA I focus on the cross-country, static analysis of differences.

a) Security

We saw that the state capacity dimension most relevant for this policy dimension is *infrastructural power*. However, for its use in this policy dimension regression, I have recalculated this measure leaving out the insurgency indicator (which as will be recalled, was one of the four used to build it), to avoid circularity issues with the dependent variable. Likewise, the democracy measure is the Polity 2 1995-2005 average, but without including two of its components. This is because, as mentioned above, Cheibub et al (2010) have shown that these two components[198] already incorporate issues of political violence into their scoring, and therefore findings that relate democracy to political violence using the entire Polity 2 measure (e.g., Fearon and Laitin 2003) are falling into a circularity trap. I therefore use a 'clean' Polity 2 measure that removes these components, so that tests of the relationship between democracy and presence of violence are valid. As for the control variables chosen, they are average economic growth between 1995 and 2005; the income inequality Gini index; the proportion of males between 15 and 29 years of age in the population; and an ethnic fractionalization index[199].

[197] See Roller (2005), pp.244-247 and Kittel (1999) for a critique of the "N x T" solution to the problem of 'small N, many variables' (Lijphart, 1971).
[198] Called PARREG and PARCOMP in the Polity 2 dataset.
[199] The sources for these and all other control variables can be found in Appendix B.

The regressions can be seen in Table 4.4. The first column shows only the democracy variable plus the four control variables, while the second shows a stepwise regression which only leaves those regressors significant at 10%[200]. The third and fourth columns show the same procedure but with infrastructural power instead of democracy as the independent variable of interest. The sixth and final column drops the least significant control variable so as to include simultaneously democracy and state capacity.

The fifth column deserves separate mention, as it substitutes *centripetalism* for both democracy and state capacity. In chapter 3 I argued against trying to explain variations in policy performance in Latin America in terms of 'institutions' understood as constitutional structures, because – among other things – these structures often had little bearing on the actual way policymaking was carried out in most of the countries in the region, and they had scarce stability over time. As an empirical check on these claims, preliminary as it may be, I use Gerring, Thacker and Moreno's (2005) centripetality index. This index has two advantages. First, it combines different constitutional structures into one index claiming to represent the proximity of each country to the 'ideal' institutional design: a unitary (i.e. non-federal) country with a parliamentary regime and one, or at least congruent, Houses in parliament. This combination is claimed by the authors to provide the best combination of representativeness and decisiveness in government decisions. The second advantage of using this index is that Gerring et al go on to find that in a large cross-section of countries this centripetalism index is consistently related to a host of policy and governance outcomes, including health, education, bureaucratic quality and other indicators. It therefore refers precisely to the kind of outcomes I am

[200] Since there is no generally accepted model of policy effectiveness, a reduced model may be used to better identify the statistically significant variables, particularly given the small sample size. This strategy is used by Gerring, Thacker and Moreno (2005).

interested in here, and its previous success in explaining similar outcomes makes for a demanding test of the (comparative) irrelevance of the 'institutional' argument for Latin America. As it is a causal variable that its authors pitch at the same level of generality than I here claim for state capacity, I use it as a test of the 'institutional' argument[201].

Table 4.4: Regression of Security dimension on democracy, state capacity and key control variables

	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
Infrastructural Power (state capacity)			**0.64**	**0.74**		**0.42**
			2.87**	**4.22*****		**2.31****
Polity 2 Score, 1995-2005	**0.48**	**0.51**				**0.47**
	2.44**	**2.66****				**2.73****
Average GDP growth, 1995-2005	**0.39**	**0.40**	0.11	**-**	0.41	**0.34**
	2.07*	**2.07***	0.52		1.76	**2.01***
Gini Index	-0.23	-	-0.28	-	-0.20	
	-1.11		-1.30		-0.74	
% 15-29 males	-0.05	-	-0.05	-	-0.20	-0.03
	-0.22		-0.22		-0.74	-0.14
Ethnic Fractionalization	-0.15	**-**	0.11	**-**	-0.13	-0.12
	-0.66		0.45		-0.47	-0.60
Centripetalism Average, 1901-1995					0.02	
					0.10	
Outliers	-	-	VEN	VEN	-	-
Adjusted R-squared	0.39	0.37	0.46	0.51	0.09	0.53
N	18	18	17	17	18	18

Note: Dependent variable in all models is the Physical Security Score (average of Citizen Security and Internal Security scores). As explained in the text, the Polity 2 measure is 'cleaned' of the PARREG and PARCOMP components and the infrastructural power index is 'cleaned' of the insurgency component. Venezuela is excluded from models 3 and 4 as it was classified as an outlier[202]. Values are standardized (beta) coefficients. The t-statistics are given below each coefficient. * p<0.1; ** p <0.05; *** p<0.01

[201] Empirically, there is one difference between their centripetalism variable and the one I use. Gerring et al cumulate their variable over the entire 20th century (from 1901 to 1995), viewing favourable institutional structure as a stock that only slowly depreciates. However, obviously this can only happen during democratic periods. Therefore, their measure of centripetalism partly captures democratic experience instead of any particular institutional feature. Since degrees of freedom in multivariate regressions will be an issue in the present context, meaning I cannot always control simultenously for centripetalism and democratic experience, I therefore average over the 1950-1995 period the centripetalism score for each country and use this as my centripetalism measure instead.

[202] For all regressions, an observation was classified as an influential observation if its dffit value was greater than the square root of the number of independent variables in each regression

The results show clearly that both infrastructural power and democracy are significantly associated with better security outcomes, even when placed simultaneously in the regression. This is all the more remarkable considering that both measures were 'cleaned' of their components parts that could be associated by construction with past or present political violence. Of the control variables, only average growth seems to be weakly significant. For its part, the centripetalism violence does not seem to be at all associated with domestic security outcomes. Moreover, the relative stability of the state capacity and democracy coefficients and their consistent significance, even when both variables are used simultaneously, suggests democracy and state capacity play significant and complementary roles in securing higher levels of political effectiveness.

I proceed now to the crisp-set QCA[203]. Here, the crucial operation is to binarize all variables. In technical terms all sets must be *calibrated*, this is, it must be defined where the dividing line between 'in' and 'out' of a set will lie. Since the purpose of the present analysis is to differentiate between more and less successful cases of policy effectiveness in each policy dimension and overall, the line will generally be drawn, for both conditions and outcome, near the median value of the 18 countries[204].

(abs(dfit)>sqrt(k)). This is a less demanding cut-off point than the standard 2*sqrt(k/n), and it is motivated by the very small sample size, the consequent larger influence of individual observations, and the associated need to avoid losing observations unless they have a truly overbearing influence on the coefficients.

[203] I choose crisp-set QCA over fuzzy-set QCA because of the greater transparency of its algorithm, the greater parsimoniousness of its results and the clarity and usefulness of its associated Venn diagrams (see below); and, most importantly, because I am already using regressions as a technique that is sensitive to fine gradations in the data. For a detailed discussion of the differences between crisp-set and fuzzy-set QCA, see Ragin (2000).

[204] The ideal calibration is one that is theoretically derived rather than inducted from the properties of the sample (Ragin 2008). In the present instance, however, 'policy effectiveness' is an attribute with few *a priori* theoretical properties, in the sense that effectiveness is relative rather than absolute. Therefore, since the goal is to explain greater or lower effectiveness among Latin American countries, the median is a reasonable starting point for choosing the threshold of inclusion in the set of effective countries.

On the other hand, because the threshold of inclusion establishes a qualitative, critical gap between ‘in’ and ‘out’ countries, it is recommended that that threshold follow a significant or natural gap in the data wherever possible[205]. Therefore, in each case the choice will be guided by these two general criteria: the goal is to use a natural gap in the data, that lies as near as possible to the median value[206].

Figure 4.3 below displays a Venn diagram showing how cases are distributed across the different combinations of conditions. Each box or cell represents a unique combination of these, while its shading represents the outcome of the cases grouped in that cell: diagonal stripes are for a ‘positive’ outcome (‘Outcome 1’ in the legend of Figure 4.3 below, i.e. cases inside the set of higher policy effectiveness), checkered dark striping for a ‘negative’ outcome (‘Outcome 0’, i.e. outside the set of higher policy effectiveness), and light checkering represents a contradiction (‘Outcome C’), i.e. a combination whose cases exhibit differing outcomes.

We can see in the figure that there is one contradictory cell, which groups the Dominican Republic (which is within the set of higher security countries) and Peru (which is outside): both countries are less democratic (condition 4), have had higher growth in the 1995-2005 period (condition 2), have a relatively high ethnic fragmentation (condition 1), and are amongst the states with relatively lower infrastructural power (condition 3), and in spite of sharing the same explanatory space, have differing outcomes[207]. Other than this contradiction, we see that there are roughly three kinds of cases with higher security effectiveness. The first type is cases with favourable long-term social conditions, i.e. a favourable ethnic and demographic

[205] Rihoux and De Meur (2009)
[206] All data and calibration thresholds can be seen in Appendix D.
[207] The Gini and age variables were left out of the figure for simplicity; they do not qualitatively affect the results.

composition, along with favourable political conditions – historically more infrastructurally powerful states and higher current levels of democracy. In this group we find the three Southern Cone countries, plus Costa Rica. These are all countries with relatively high security levels – indeed, with the exception of Argentina they are all over a standard deviation above the regional mean score.

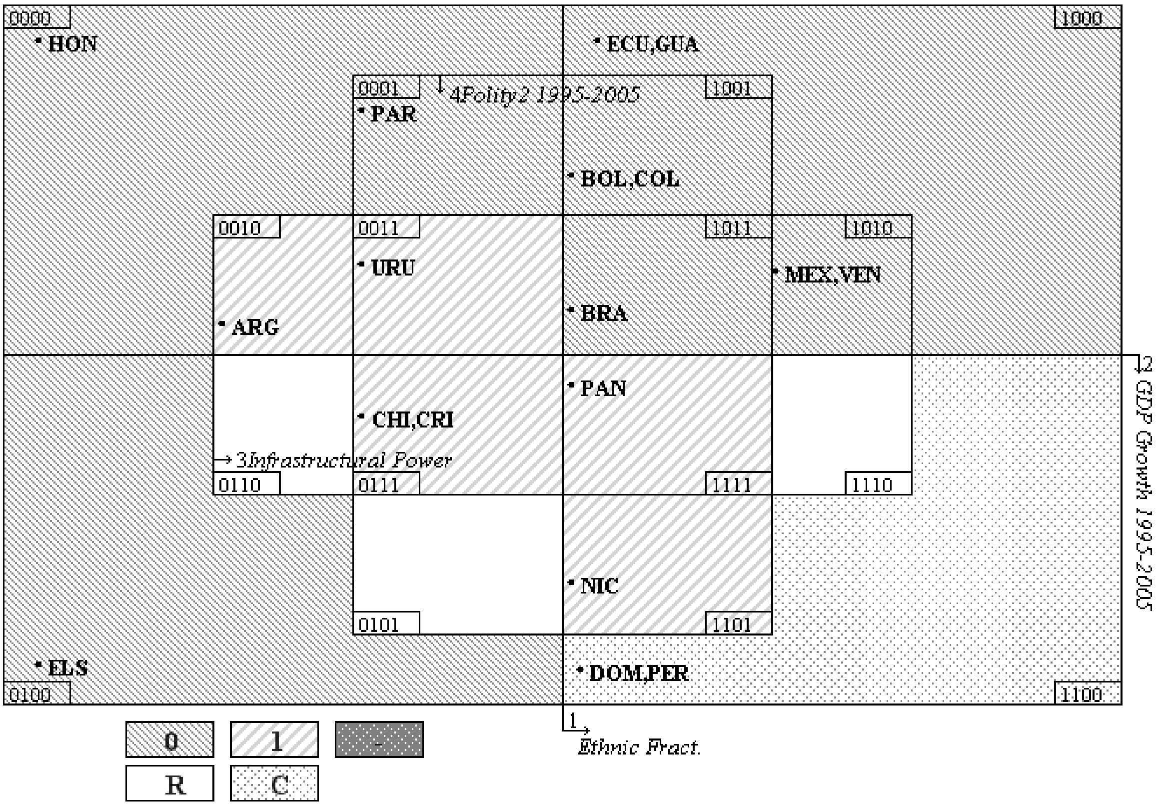

Figure 4.3. Venn Diagram of QCA determinants of Physical Security effectiveness. *Note:* As explained in the text, the Polity 2 measure is 'cleaned' of the PARREG and PARCOMP components and the infrastructural power index is 'cleaned' of the insurgency component.

On the other hand, there is a group of countries that achieves relatively higher policy effectiveness even in the absence of long-run favourable conditions. These are Nicaragua, Panama and the Dominican Republic. Interestingly, all these countries have had higher growth, while two of them are also in the set of more democratic countries (Nicaragua and Panama).

Thus, the solution term for this QCA analysis is:

EthnicFract{0}InfrastructuralPower{1}+ GDPGrowth{1}Polity2{1}
(ARG+CHI,CRI+URU) (CHI,CRI+NIC+PAN)

This solution means that there are two distinct paths to higher security: either a country has ethnic homogeneity (absence of ethnic fractionalization) coupled with relatively high infrastructural power, *or* it is relatively democratic and relatively higher-growing. In parentheses below we see which countries are 'covered' by each solution term. Note that Chile and Costa Rica – both of which are above a standard deviation above the regional mean in their Security score – are in fact covered by both solutions simultaneously.

If we now look at the results produced by both methodologies, it is apparent that for this dimension both infrastructural power and democracy seem to matter, as confirmed in both instances. Regressions suggest that they matter more than any of the control variables incorporated into the analysis[208], but QCA shows that neither of them is by itself a sufficient or a necessary condition for higher security, since there are democratic countries and also infrastructurally more powerful ones that have nevertheless low security, such as Brazil, Mexico and Colombia, among others[209]. What QCA shows us is that favourable environmental conditions – such as ethnic homogeneity and recent growth – do matter. Interestingly, seven of the eleven countries outside the set of higher security are located in the upper right-hand quadrant, that is, in the quadrant that marks simultaneously adverse economic and demographic conditions. Nonetheless, favourable environmental conditions by themselves are not enough, as the case of El Salvador shows. Successful countries in

[208] As confirmed by the magnitude and significance of their coefficients.
[209] In fact, Brazil is simultaneously more infrastructurally powerful and more democratic, and yet achieves a relatively low security score.

the security dimension – with the exception of Dominican Republic[210] – have at least one favourable environmental (non-political) condition, but also have at least one favourable political condition (i.e. democracy and/or infrastructural power).

b) Welfare

The state capacity dimension most relevant here is bureaucratic capacity, as we saw in Table 4.3 above. In terms of democracy, the relevant measure is the long-term democratic stock or experience of a country, which is measured through the 1930 to 1995 average Polity 2 score. The most relevant non-political control variables are GDP per capita, ethnic fragmentation and demographic structure (i.e. relative youth of the population, as measured by the proportion of people between 5 and 14 years of age over the 1995-2005 period). The most relevant political control variable is the historical strength of unions (measured as the 1995 rate of union density)[211].

Table 4.5 below shows the multiple regressions, following the same order as Table 4.4, first with the two democracy regressions, then the two state capacity ones, then the centripetalism regression, and then the joint democracy and state capacity one.

[210] Interestingly, if the 2002 prison rate is added to the analysis – as a complementary and more policy-specific measure of state infrastructural power – the extant contradiction would be resolved, since the Dominican Republic has a much higher imprisonment rate than Peru, suggesting that its state does possess (at least in this policy area) higher infrastructural powers than its Peruvian counterpart.

[211] Another political variable, the historical relative strength of the left (measured as the number of years between 1945 and 2000 in which the country was governed by a centre-left or leftist party) had the lowest correlation among all control variables (see Appendix C) and was thus excluded. Its inclusion in either the regressions or QCA does not change the main results.

Table 4.5: Regression of Welfare dimension on democracy, state capacity and key control variables

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Bureaucratic Capacity (state capacity)			**0.35**	**0.39**		**0.31**
			2.86**	**3.39*****		**2.78****
Polity 2 Score, 1930-1995	**0.28**	**0.28**				0.10
	3.73***	**3.73*****				1.34
GDP per capita 1990-2005	**0.43**	**0.43**	0.22		**0.28**	0.23
	3.17***	**3.17*****	1.58		**1.82***	1.78
% Age 5-14	**-0.33**	**-0.33**	**-0.44**	**-0.59**	**-0.66**	**-0.42**
	-2.46**	**-2.46****	**-2.95****	**-5.19*****	**-4.41*****	**-3.04****
Ethnic Fractionalization	**-0.21**	**-0.21**	**-0.15**	**-0.14**	-0.13	**-0.16**
	-3.45***	**-3.45*****	**-1.95***	**-1.94***	-1.41	**-2.30****
Union Density 1995	**0.18**	**0.18**	-0.01		0.03	
	2.31**	**2.31****	-0.11		0.21	
Centripetalism average, 1901-1995					-0.05	
					-0.38	
Outliers	VEN	VEN	-	-	CRI	-
Adjusted R2	0.95	0.95	0.92	0.91	0.90	0.93
N	17	17	18	18	17	18

Note: Dependent variable in all models is the Welfare Score (average of health, Education and Social Security scores). Venezuela is excluded from models 1 and 2 and Costa Rica from model 5 as they were classified as outliers (as explained in footnote to Table 4.4). Values are standardized (beta) coefficients. The t-statistics are given below each coefficient. * p<0.1; ** p <0.05; *** p<0.01

The results show that, again, both the democracy and state capacity variables are significantly related to welfare outcomes. This is all the more remarkable if we consider that some of the control variables are very highly correlated with the outcome (for instance, the age variable is correlated at 0.9 with the welfare score) and issues of collinearity between regressors is a potentially serious issue. We can see that age and ethnic fractionalization – the demographic variables – are consistently significant in the expected way, with older and more homogeneous societies exhibiting better welfare outcomes. Interestingly, however, GDP per capita's coefficient becomes lower when Venezuela (which is an outlier in the democracy regressions) is included and loses statistical significance. We can also see that the centripetalism variable is not at all significant, while the joint state capacity and democracy regression in the last column shows that in this case only the former retains statistical significance. This suggests that democratic experience (consistent with the theoretical framework presented in Figure 3.1) may actually be working *through* enhancing bureaucratic capacity, as Bäck and Hadenius' (2008) work on democracy and state administrative capacity has suggested.

The existence of outliers and issues with multicollineairty in the welfare dimension, where many highly-correlated variables must be considered simultaneously and where outliers may have a large effect on estimations, reinforces the usefulness of complementing its results with an alternative method. The QCA and its Boolean – rather than covariational – approach is therefore a particularly useful tool here, and its use below helps to address these concerns by looking at the *combinations* of variables into which the cases are grouped, and to thus detect the necessary and sufficient combinations of conditions for a country to have relatively high welfare outcomes.

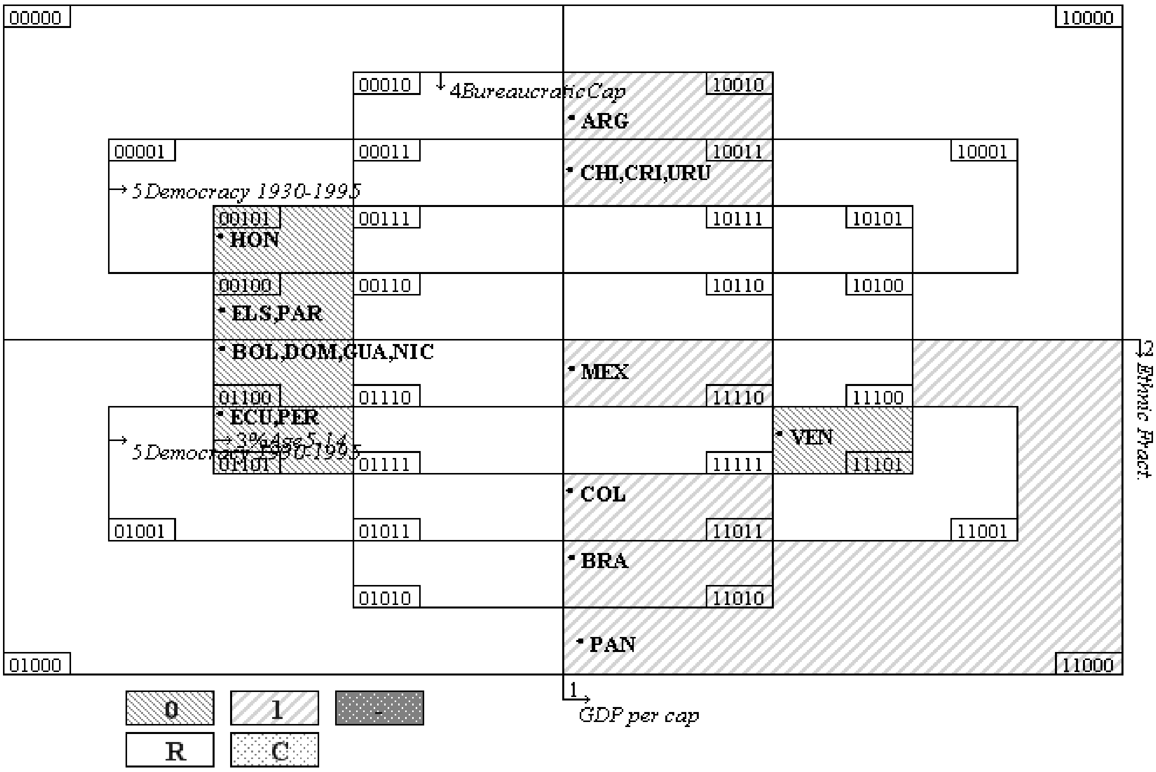

Figure 4.4: Venn Diagram of QCA determinants of Welfare effectiveness

Interestingly, Figure 4.4 above reveals that democratic experience (condition 5) is not a very helpful predictor of high performance, including as it does low performing countries such as Ecuador, Peru, Honduras and Venezuela, as well as higher-performing ones such as Chile, Costa Rica, Uruguay and Colombia. Indeed, it is not part of the logical solution and could be excluded from the analysis without loss of explanatory power. On the other hand, GDP per capita (condition 1) is a *necessary but insufficient* condition for high welfare performance. Key for this result is the case of Venezuela, which is the only 'rich' country that is not part of the set of 'higher welfare' countries[212]. In this case, Venezuela shows that a high income per capita is simply not a sufficient condition for higher welfare outcomes. This result is all the more significant because Venezuela had, in fact, one of the highest regional incomes in the period under consideration (much higher than, say, Brazil or Colombia), and in spite of that has a below-the-mean score in the welfare dimension.

For describing the positive cases, it is useful to make a distinction between the very high scorers in this dimension and the rest. The former, as we saw in Chapter 2, are Uruguay, Chile, Costa Rica and Argentina. These four all lie at the top right-hand quadrant in Figure 4.4, which is characterized by the combination of high GDP and ethnic homogeneity. These are precisely the two conditions to which James Mahoney (2010) attributes the historically higher human development of exactly these four countries vis-à-vis the rest of the region. My analysis is consistent with that finding, but I note that these four countries also possess an older demographic profile (this is particularly true for the Southern Cone countries) and higher bureaucratic capacity.

[212] In QCA, cases that inhabit an otherwise empty cell – and thus exhibit a unique configuration of conditions – may theoretically and empirically be of great interest. While statistically an outlier in some of the regressions in Table 4.5, a QCA perspective shows that the Venezuelan case may be particularly illuminating for the analysis rather than one that should be excluded because of its difference from the mean results.

This suggests that the high-income, high-ethnic homogeneity combination may have led to higher welfare outcomes at least in part precisely because it was functional to the building of bureaucratic capacity[213].

However that may be, my threshold of welfare effectiveness is lower than Mahoney's and therefore includes a second tier of countries with acceptable performance and quantitatively relevant differences in welfare with the rest of the region. This is particularly true of Mexico and Brazil, but Panama and Colombia are also above the regional mean and are thus included within the set of higher-welfare countries. The countries in this second tier all have relatively higher GDP but are not ethnically homogeneous. In these semi-favourable conditions, three countries exhibit high bureaucratic capacity (condition 4): Brazil, Mexico and Colombia, while two do not – Panama and Venezuela. While all three that do have this condition are in the set of relatively effective countries in the welfare dimension, of the two that do not only Panama is also relatively 'effective'. The difference between them is that Panama has a somewhat older demographic profile (i.e. is not inside the set defined by condition 3). Note that all countries within the set of 'bureaucratically capable states' and all those within the set of 'low proportion of 5 to 14 year-olds' are welfare-effective; thus, both conditions are sufficient for the outcome to occur.

The final QCA solution, incorporating both necessary and sufficient conditions, is thus:

GDPpercap{1}%Age5-14{0} + GDPpercap{1}BureaucraticCap{1}
(ARG+BRA+CHI,CRI,URU+COL+PAN) (ARG+BRA+CHI,CRI,URU+COL+MEX)

[213] In other words, we observe no cases that have high income, high homogeneity and low bureaucratic capacity. The counterfactual exercise would be to evaluate whether such a case would have a low or high welfare score. Although impossible to answer with the data, the (not strictly comparable) case of Venezuela suggests that the former is likelier.

In other words, a high GDP coupled with either high bureaucratic capacity or with a low proportion of youths leads to higher policy effectiveness. Note that both paths cover seven of the eight countries, with Panama only being covered by the age path and Mexico only being covered by the bureaucratic capacity path.

Overall, the joint analysis of the statistical and QCA methodologies suggests that bureaucratic capacity is a key factor for welfare effectiveness: it is highly and robustly correlated to this outcome (even in a multivariate setting with only 18 cases), and is part of the solution term in the Boolean logical minimization procedure in a path that covers seven of the eight countries with higher policy effectiveness (including the top six scorers). The role of democratic experience is, perhaps surprisingly, weaker: its significance in regressions is only statistically significant in the absence of a state capacity measure, and is not part of the solution term in the QCA analysis.

This last result merits a brief discussion. One possible explanation was suggested above: the influence of democracy on welfare may have operated through its effect on bureaucratic capacity, that is, by helping to build effective bureaucracies that have in turn been able to deliver the educational, health and social security outcomes promised to voters. Where such a capacity was not built, as in Venezuela, outcomes were substantially weaker. Indeed, Venezuela is a key case in this regard: it is a comparatively democratic country with one of the strongest historical leftist experiences in the region, and yet it has lower welfare achievements than the regional mean, in spite of having one of the highest regional incomes. Crucially, it is also a low-bureaucratic capacity country.

In sum, in both the multivariate and the QCA analyses bureaucratic capacity trumps democratic history as an explanation of welfare outcomes, but this result hinges to a significant degree on the Venezuelan case. Leaving it aside, we would find that the 'demand side' explanation of welfare outcomes – through (wealthy) democracies allowing for the demands of unions and leftist parties to be granted – works reasonably well. This suggests that more than claiming that democratic history was not important, the present analysis has highlighted that state capacity may be an equally important – but often overlooked – part of the story of welfare success within the region.

c) Economic policy

We saw that the measure of state capacity most appropriate to the study of economic performance is political capacity: if there is an area of policy that depends most on coherent, credible and flexible decision making this is surely the economic one. In terms of democracy, the measure used in the Polity 2 average score for 1995 to 2005. This is the same than as for the security dimension, except that here all components of the measure are used since there are no potential circularity issues between it and the economic policy score.

The control variables that could be used in this dimension are potentially many. Moreover, an additional complexity is introduced by the fact that the literature on macroeconomic performance suggests that the causal factors for this good are potentially quite distinct for those used in the analysis of property rights or economic regulation, which tend to be more similar amongst themselves. This is consistent with the correlation between policy outcomes we observed in Chapter 2, and which showed that macroeconomic policy behaves in a quite distinct way compared to the other two economic goods (and even more so when compared to non-economic goods). For this reason, individual regressions for each of the three goods were conducted under the same conditions previously discussed (i.e. no more than five regressors overall) and the most significant control variables were incorporated into the economic policy dimension regression.

The control variables tested included several political and non-political ones that showed no significant relationship with the economic goods[214]. The ones that were incorporated into the final analysis due to their preliminary importance were GDP per capita, ethnic fragmentation, the Lora index of policy reform average between 1996 and 1999 (which measures the objective 'neoliberalness' of a country's policies), the degree of export concentration of a country's exports[215] (higher concentration is indicative of higher macroeconomic vulnerability and of a simpler productive structure) and the 1995-2005 average union density of a country (in past studies unions have been found to damage macroeconomic performance, presumably through their political influence on policy choices such as minimum wages or by blocking a more coherent response to adverse economic shocks[216]). While the first two were significant in the property rights regression, the Lora index was significant in some of the economic regulation regressions, and the final two variables were significant in the macroeconomic stability regressions.

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[214] Variables suggested by the literature and tested and discarded in preliminary correlations or in multiple regressions with at least one of the three economic goods were: the average trade openness of the economy between 1995 and 2005; the average ideological balance of the Executive between 1995 and 2001 (i.e. whether it was right- or left- leaning, measured once each year); population size (possibly relevant for macroeconomic stability); the fragmentation of Congress (as more fragmentation induces policy paralysis); and the durability of the regime (i.e. years since its transition to democracy). See Appendix B for definitions and sources and Appendix C for correlation results.

[215] I refer to product concentration (e.g. copper, oil), not commercial concentration (e.g. the US market).

[216] Wibbels and Roberts (2010); Remmer (2002)

The results for the economic dimension as a whole can be seen below in Table 4.6. It should be noted that the regressions follow a slightly different logic than in the previous dimensions. The difference is that Models 2 and 4 are not reduced regressions arrived at through a backward stepwise regression procedure as before. Rather, they regress the same variables as Models 1 and 3 (respectively) but on the average of the property rights and economic regulation scores *only*; they leave out, in other words, the possibly-different macroeconomic stability good. This is to check that the result for the economic policy dimension is not purely driven by the specific dynamics of macroeconomic performance, and can thus be considered robustness checks.

Table 4.6: Regression of Economic dimension on democracy, state capacity and key control variables

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Political Capacity (state capacity)			0.11	**0.55**		0.14
			0.37	**2.03***		0.47
Polity Score, 1995-2005	-0.02	0.16				-0.02
	-0.12	0.86				-0.11
GDP per capita 1995-2005	**0.46**	**0.65**	0.39	**0.51**	0.41	0.38
	2.07*	**2.97****	1.41	**1.97***	1.79	1.38
Ethnic Fractionalization	-0.07	-0.04	-0.05		-0.04	
	-0.40	-0.23	-0.28		-0.25	
Lora Index				0.28		
				1.60		
Export Concentration	**-0.89**	**-0.70**	**-0.80**	-0.27	**-0.88**	**-0.78**
	-4.41***	**-3.46*****	**-2.61****	-0.97	**-4.48*****	**-2.60****
Union Strength	**-0.61**	**-0.50**	**-0.56**	-0.34	-0.50	**-0.54**
	-2.51**	**-2.08***	**-2.04***	-1.4	-1.73	**-2.00***
Centripetalism average, 1901-1995					0.14	
					0.66	
Outliers	CHI	CHI	CHI	CHI	CHI	CHI
Adj R2	0.5	0.51	0.51	0.65	0.52	0.51
N	17	17	17	16	17	17

Note: Dependent variable in models 1, 3, 5 and 6 is the Economic Policy Score (average of Property Rights, Economic Regulation and Macroeconomic Stability scores). Dependent variable in models 2 and 4 is the average of the Property Rights and Economic Regulation scores *only*. Chile is excluded from all models as it was classified as an outlier (as explained in footnote to Table 4.4). Values are standardized (beta) coefficients. The t-statistics are given below each coefficient. * p<0.1; ** p <0.05; *** p<0.01

The first thing to notice about the regressions is that in all of them Chile is an outlier. This is due to its much higher performance in this dimension as compared to the rest of the region: it is a full 2.87 standard deviations above the regional average, far ahead of the runner-up El Salvador (which is 1.14 standard deviations above the regional mean). The regression results apply therefore to the other 17 countries only. This has the immediate effect of weakening the influence of political capacity on the results, since Chile also outperforms all other countries in the region in this measure by a wide margin.

With respect to the two key political variables, it seems safe to say that recent level of democracy plays no significant role in economic performance: whether or not we also include political capacity, and whether or not we exclude macroeconomic performance, the standardized coefficient for democracy is always very close to zero[217].

Turning now to political capacity, the results are somewhat different: while its influence is not significant on the economic dimension as a whole (it would if Chile were included), its coefficient rises sharply – and is marginally significant – when regressed against property rights and economic regulation only. This suggests that it is the irrelevance of the political capacity measure for macroeconomic performance that is driving this particular result. Issues of regression specification remain important however, and therefore while the role of democracy can be discarded for this dimension, the role of political capacity remains inconclusive: the key case of Chile

[217] Because the coefficient is so consistently close to 0, it seems unlikely that the lack of statistical significance is due to the small sample size and the consequent lack of power in the statistical inference tests.

changes the result dramatically, while its exclusion – which narrows the range of variation on both the dependent and independent variables – still leaves room for an effect of political capacity on this dimension when macroeconomic performance is excluded. It is advisable therefore to turn to QCA for a complementary analysis of these issues.

Calibration of the outcome set for this dimension is complicated by the fact that there are qualitatively three groups of countries. Firstly, there is Chile and perhaps El Salvador, far ahead of the pack. Secondly, there is a large group of intermediate performers packed between the z-scores of 0.45 score of Costa Rica and the -0.18 of Argentina[218]. Finally, there is a group of distinctly poor performers: Nicaragua, Honduras, Paraguay, Dominican Republic, Ecuador and Venezuela. Since the 'high performing' group is very small, and casting a qualitative dividing line in between the mid-performing ones would be arbitrary, I have cast the threshold of higher economic performance between the low and the mid-performing groups. This, it should be clear, is not at all a demanding standard of performance, and therefore the focus is rather on asking what conditions allow avoiding (very) low economic policy performance.

Figure 4.5 below provides an interesting answer. The low-performing countries are all grouped in the left-hand lower quadrant of the figure, characterized by a high concentration of exports (into one or very few products; condition 2), and the absence of political capacity (condition 1). All countries that do not share this particular combination avoid having low performance. However, Bolivia and Panama, while sharing these two negative conditions, still manage an intermediate level of performance. They are different from the six low performers, however, in that they

[218] See Table 2.6

additionally combine an absence of dense trade unions and a policy orientation that was closer to the Washington Consensus recipe (at least during the first part of the 1996-2006 decade, as measured by the Lora index – condition 4).

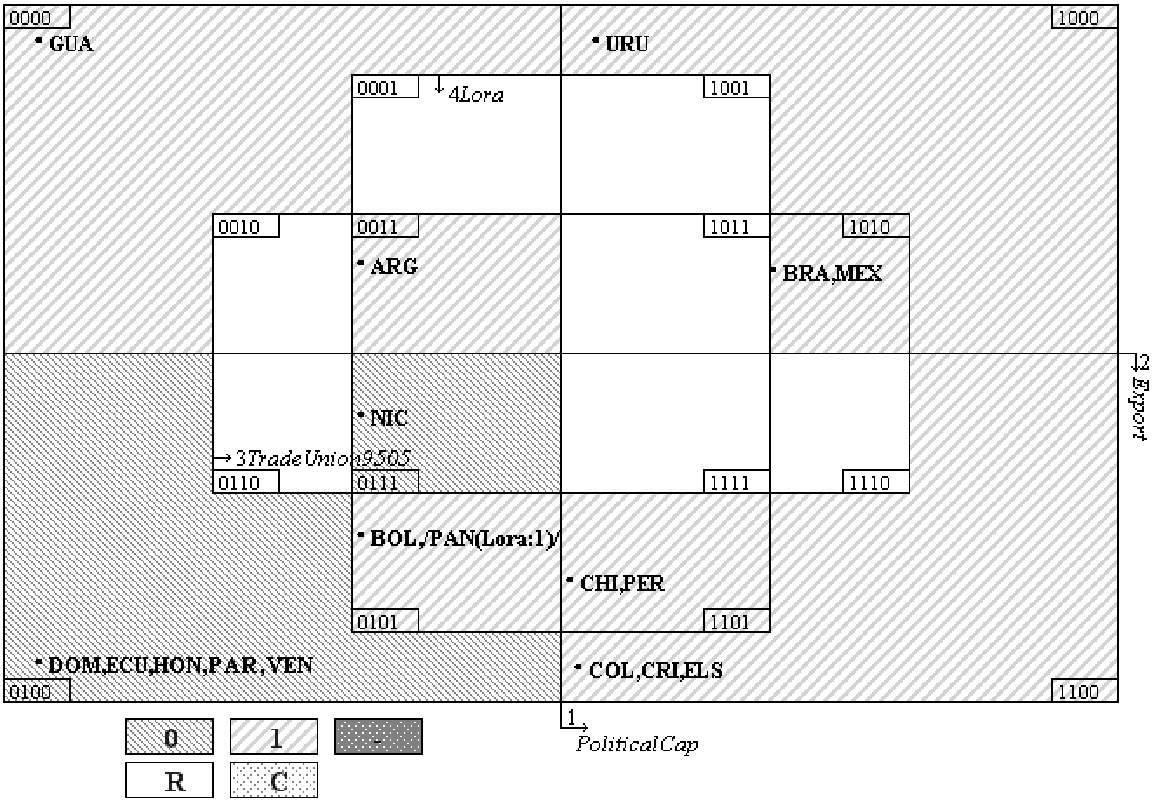

Figure 4.5: Venn Diagram of QCA determinants of Economic Policy effectiveness

The logical minimization is thus simple: there are three ways of avoiding (very) low economic performance: having an export structure which is less concentrated; possessing political capacity; and having a pro-business policy environment, as reflected in the simultaneous presence of low trade union density and more 'neoliberal' policies[219].

[219] It should be noted that there is one piece of missing data, Panama's Lora index score. Since Panama avoided (very) negative economic outcomes as here defined, the full consistency of the solution term specified requires that Panama should have a high(er) Lora Index score, so that it joins Bolivia in the same cell of the property space. If its Lora score is low, on the other hand, it would represent a contradiction, not solved by the present QCA, since it would join low-performance Ecuador, Honduras and the rest of the countries in the lower left-hand side of the diagram. In other words, this solution covers 17 counties, leaving Panama aside, as in the regressions above.

PoliticalCap{1} +Export{0} +TradeUnion9505{0}Lora{1}
(BRA,MEX+CHI,PER+COL,CRI,ELS+URU)(ARG+BRA,MEX+GUA+URU) (BOL,[PAN]+CHI,PER)

The political capacity path to avoiding low policy performance covers eight of the twelve cases, more than either of the other two paths (even if it *uniquely* covers only three cases: Colombia, Costa Rica and El Salvador). This finding tends to confirm that political capacity does matter for economic performance; indeed, it is suggestive that the four countries that avoid low performance but have lower political capacity (i.e. Argentina, Bolivia, Guatemala and Panama) are precisely the four lowest-performing countries among the 12 countries that are not low performers[220]. On the other hand, looking at the 3 uniquely-covered cases (by the political capacity path), we can see that the only difference between Colombia, Costa Rica and El Salvador and the low performing countries is simply that the former have a higher capacity to make stable and adaptable decisions[221]. More generally, it would seem that countries with higher political capacity can handle the vulnerability implied by a high concentration of exports, in a way that low-capacity states cannot[222]. Even among countries with a low export concentration (i.e. top half of the figure), those with higher political capacity (Brazil, Mexico and Uruguay) outperform those with lower capacity (Argentina and Guatemala).

Overall, therefore, it seems that having a concentrated basket of exports (and thus being vulnerable to commodity price shocks amidst a relatively simple productive structure) is a necessary but insufficient condition for very low economic

[220] In other words, they rank exactly from the 9th to the 12th place in terms of regional economic performance.
[221] In other words, the implication is that given their export, trade union and policy content characteristics (the other three conditions considered), Colombia, Costa Rica and El Salvador would join the group of low performers if it wasn't for their political capacities.
[222] Perhaps the most paradigmatic case of this is Chile's structural-surplus budget rule, specifically designed to avoid copper prices dictating the year-to-year availability of fiscal resources and pro-cyclical spending.

performance, while possessing political capacity is *sufficient* for avoiding this vulnerability and, more generally, is conducive to having a higher economic performance.

The QCA analysis thus partially confirms the regression results by reaffirming the role of export concentration as a cause of poor performance, but also complements them by highlighting the important role of political capacity in avoiding low economic performance, a result which was not evident from the regressions.

IV. Conclusion and the way ahead

a) Main findings

The empirical exercise in this chapter, based on the information synthesized in the policy effectiveness and state capacity (disaggregated) indices, has provided us with a first set of answers to the research question of this thesis: namely, whether or not state capacity exerts a substantial influence on policy effectiveness in Latin America.

This exploratory research found that, *firstly*, state capacity and (to a lesser degree) democracy are indeed important determinants of policy effectiveness – at least as importantly so than usual suspects such as income per capita or demographic factors – but also that that influence varies by policy dimension. *Secondly*, it found that while both democracy and state capacity are important for security, state capacity seems to be more important than democracy both in the case of welfare goods (a somewhat counterintuitive finding) and also in the case of economic goods, where democracy plays no discernible role. *Thirdly* and finally, it found that the differentiation of state capacity into the three dimensions of infrastructural power, bureaucratic capacity and political capacity plays an important analytical and empirical role in these results:

while the three dimensions are positively correlated, they point to different resources and relations that a state needs in order to have a large set of potential doings (policies) it could successfully choose to implement. Their empirical use in different policy areas allows the concept of state capacity to be usefully deployed, in a non-circular yet flexible way, as an explanatory variable of policy effectiveness. Since some policy areas depend more on territorial penetration, financial resources and logistical implementation, the concept of infrastructural power is a more appropriate measure of state capacity in those areas; while in others, the cohesiveness of the bureaucracy or the credibility and flexibility of decision making have a larger role. While the countries with higher capacities on each state capacity dimension tend to be the same, the exceptions highlight the importance of differentiating appropriately. Thus, for instance, El Salvador's policymaking capacities are not accompanied by bureaucratic or infrastructural power; Argentina's situation is the exact opposite, and each country's policy performance in fact faithfully reflects these different state capacity profiles. Based on these findings, I suggest therefore that a closer look at the role of state capacity as such – and not just at policy content, at 'institutions' or at 'governance' – seems advisable when trying to explain policy outcomes.

b) Moving forward: qualitative case comparisons and case selection strategy

The objective of Chapters two to four inclusive was to test the validity of the guiding hypothesis of this work regarding the importance of state capacity for policy effectiveness in Latin America, and the usefulness of disaggregating both the independent and dependent variables into key constituent dimensions. Based on the process of conceptualization, operationalization and measurement of the key variables and dimensions, in the preceding paragraph I reviewed the key findings of this exercise. Based as they are on the successive use of regressions and QCA to cross-check and complement each individual methodology's findings, they represent a preliminarily validated set of general claims regarding the relationships between state capacity and policy effectiveness for Latin America as a whole.

Looking ahead, the central challenge is twofold: firstly, to further validate the argument developed in this comparative exercise, ideally through the use of a methodology that does not rely on the same informational base (i.e. the state capacity and policy effectiveness indices) as the regressions and QCA. A triangulation not just of methodologies but also of sources should increase confidence in the results presented here. The second challenge is to explore the causal mechanisms at work, to see if – beyond correlations and logical relations of sufficiency – the different dimensions of state capacity actually do any work in producing higher policy effectiveness. Clearly, these two challenges point to the need for an analysis of these relationships from a historical and qualitative point of view. This will naturally require a shift from a broad, indicator-based systematic comparison of the 18 countries to an in-depth, time-sensitive analysis of one or a few cases.

In particular, I will approach the case material from what Skocpol and Somers (1980) called the 'parallel demonstration of theory', whereby *"the reason for juxtaposing case histories is to persuade the reader that a given, explicitly delineated hypothesis or theory can repeatedly demonstrate its fruitfulness – its ability convincingly to order the evidence – when applied to a series of relevant historical trajectories."*[223]. Unlike the other uses to what macrosocial comparative history can be applied – which these authors call 'macro-causal analysis' and 'contrast of contexts' –, parallel demonstration of theory approaches the material deductively, that is, through a pre-

[223] Skocpol and Somers (1980), p.176

specified hypothesis that is to be tested through its application to cases. This is exactly the situation in which this thesis is at, whereby a pre-specified hypothesis has already been developed and tested, and where a central purpose of the in-depth case studies is to use these as a further test or validation method of the preliminary findings. Of course, a possible danger with this methodology is to select cases arbitrarily in order to simply corroborate the pre-specified hypotheses. I hope to avoid this danger by using a rigorous case selection method that will also provide multiple instances where to test the relationships between state capacity and policy effectiveness.

In choosing the cases, it will be immediately appreciated that striking a balance between thoroughness in coverage and depth of analysis is particularly hard in this case because with three policy dimensions and three dimensions of state capacity, the pool of potential links to be studied is 9 times the number of countries chosen for study[224].

These links will therefore be analysed through a focused comparison of *two* countries, since any more would again increase the complexity of the analysis beyond the available space. The purpose of comparing only two cases out of the 18 thus far included in the analysis is, of course, to gain an in-depth understanding of the relationship between state capacity and policy effectiveness, and in particular of the way the three state capacity dimensions affect effectiveness in different policy dimensions. Given the information-consuming nature of this task, drastically reducing the number of cases is unavoidable. On the other hand, why choose *two* cases instead of just one which can then be analyzed in greatest depth across all state and policy dimensions? The reason is that combining within-case process tracing with cross-case

[224] There are 3 independent variables (3 dimensions of state capacity), and each has a potential link to each of the three policy dimensions, in each country.

comparisons provides greater analytical leverage on the relationship between state capacity and policy effectiveness than the study of a single case. As Rueschemeyer (2003) has argued, going beyond the first case is particularly fruitful since only then *"does the impact of factors on the outcomes of interest come into view that does not show up in within-case analysis because these factors are – completely or largely – held constant"*[225]. More generally,

> "…work that uses both within-case and cross-case analysis can explore more complex interactions among causal factors, it can better trace multiple paths of causation, and it does not make the assumption of a linear relation between independent and dependent variables that – in the absence of historical information suggesting other relations between causal factors and outcomes – multiple regression analyses often adopt"[226]

More formally, a *comparative* within-case analysis can serve to either corroborate the findings of a single typical case by choosing for process tracing another such case, or alternatively to compare a typical case with a deviant one so as to understand the reasons for such deviance[227]. In both instances, going beyond a single case should contribute to a more valid and robust general argument that goes beyond the particular cases chosen for analysis.

In the present work, should the comparison centre on two 'typical' cases, or on one typical and one deviant case? Although both alternatives would be illuminating in their own right, I argue that, given the exploratory nature of this study, studying the dynamics of two cases reasonably well-covered by the model is a better strategy towards a fuller understanding of state capacity/policy effectiveness relationships. Before studying the exceptional cases, it would be better to first have strong grounds

[225] Rueschemeyer (2003), p.320
[226] Ibid, p. 324
[227] Schneider and Rohlfing (2013). Logically, one could also compare two deviant cases. However, the usefulness of such a comparison is doubtful in the absence of at least one typical case or onlier which can confirm that the causal mechanisms specified in the model actually unfold more or less in the expected way in such a case.

for believing the proposed model actually does explain satisfactorily the cases it seems to cover well. For this reason, choosing two 'typical' cases for comparison is preferred.

Nonetheless, for the comparison to enhance our understanding of the capacity-effectiveness link the cases chosen should vary in their independent and dependent variables' values. In this way, the comparison of both cases should reveal whether the logic implied by the general model – in which greater state capacity is conducive to greater policy effectiveness – can be validated through the cross-case comparison. Since *"the inferential aim is to increase the confidence that there is a causal mechanism linking X to Y"* [228], finding that two cases with different values on both the independent and dependent sides of the equation are affected by the same causal mechanism increases our confidence on the importance and validity of that mechanism. This is especially so if we can show that this mechanism also explains the *differences* in outcome between the two cases. In sum, I will study two 'onlier' or 'well-explained' cases which differ in their *degrees* of capacity and effectiveness[229].

To guide this choice, Figure 4.6 below plots average policy effectiveness (of the three policy dimensions) against average state capacity (of the three state capacity dimensions) for all 18 countries. The two horizontal and two vertical lines represent the thresholds of a cluster analysis which separates countries into high, intermediate and low performers on each variable[230]. For instance, Brazil and Mexico are cases of relatively high state capacity and intermediate policy effectiveness. Moreover,

[228] Ibid, p.25
[229] This strategy follows the spirit, if not the formal logic, of the methodology Schneider and Rohlfing (2013) have proposed for choosing cases for comparison after a fuzzy-set QCA.
[230] Chile was in a cluster of its own on both dimensions, so it was fused with the next group so as to have three groups of relevant size on each variable.

countries represented through circles are countries with favourable economic and demographic conditions: higher than average income, low ethnic homogeneity, and a lower proportion of youths. Countries represented with squares have higher-than-average income, but unfavourable demographic conditions (either ethnic heterogeneity or a high proportion of youths), and countries represented through triangles have unfavourable conditions on all fronts. Distinguishing between cases with different exogenous conditions is important because these also affect, as we saw, policy effectiveness. For instance, comparing Uruguay and Guatemala on the welfare dimension would not be very useful, as differences in income, age structure and ethnic composition make for very different kinds of societies which have naturally led to vast differences in performance. A more focused comparison among relatively similar countries but which nevertheless differ in both the state capacity and outcome measures seems therefore more appropriate.

Figure 4.6. State Capacity and Policy Effectiveness.

Although more than one pairwise comparison fulfils the criteria of comparability, typicality and variation in conditions and outcomes[231], I will compare *Argentina* and *Chile* along the three policy dimensions and the three dimensions of state capacity. The choice of these two countries is recommendable for several reasons.

Firstly, they share a series of enabling environmental conditions that have led to relatively successful (for the region's standards) policy outcomes in welfare and security. Indeed, both countries are – along with Venezuela and Mexico – in the tier of richest countries in the region for the period going from 1990 to 2005. They are also among the least ethnically fragmented and are (together with Uruguay) among those with the most advanced demographic transitions in the region. In spite of these similarities, and in spite of the fact that by (economic and demographic) history Argentina should be the higher performer, Chile outperforms Argentina in all three dimensions. As Figure 4.6 suggests, this may well be due to differences in state capacity between the two countries. Both countries are indeed 'typical cases' in the sense that they conform to the dominant linear relationship between capacity and effectiveness observed in the Figure; but, even more to the point, both cases were well explained by the regressions in this chapter[232] and were covered by QCA solutions that included state capacity in the solution term[233]. Finally, in spite of similar exogenous conditions, the differences in effectiveness and outcome are significant; indeed, no other comparable dyad has such differences in both variables. In the end,

[231] At a low level of capacity and achievement, the Peru-Guatemala dyad meets the three criteria as well. Though less 'typical', A Colombia-Brazil comparison would also be promising, as in both cases it is the security dimension which brings down their effectiveness average (relative to what we would expect given their level of state capacity).
[232] In five of the six cases, the real effectiveness score of the country was within half a standard deviation of the predicted one. The only exception is Chile on the economic dimension, where the observation was an outlier.
[233] With the sole exception of Argentina on the economic dimension.

as Bergman has noted, Chile and Argentina *"have more in common with each other than either of them has with any other country in the world"*[234]. It is precisely because of this that their differences in policy effectiveness seem so noteworthy, and make for the best choice of cases to fulfil both the within-case process tracing and the between-case comparison goals of this research design. Finally, Argentina and Chile possess an ample, dense secondary literature on different policy areas and on state capacity dimensions, to a much larger degree than either Costa Rica or Uruguay, thus allowing for a deeper and more informed comparison.

Despite all the similarities and attractive conditions for comparison the Argentina-Chile dyad displays, a possible objection to their fruitful comparison is that they differ on a quite fundamental political factor: Argentina is a federal country, while Chile is not. If this factor proves to be a source of differences in outcomes, does this not invalidate state capacity as a key mechanism? My answer to this question harks back to the model of policy effectiveness I presented in Chapter 3 (see Figure 3.1). In that model, I locate federalism as a constitutional structure (an 'institution-as-rules') that does not *directly* affect policy effectiveness, since it can only conceivably do so either through changing policy preferences (policy choice), or through its effect on state capacity.

There is no strong *a priori* reason for believing that federal countries systematically *choose* different economic, social or security policies than unitary countries; at least, variation in policy choice between, say, the United States and Germany seems as wide as that to be found among advanced unitary countries. On the other hand, it is also hard to see why we should suppose federalism to be either a systematic enhancer or a

[234] Bergman (2009), p. 6. Naturally, Uruguayans might raise an eyebrow at this statement.

systematic reducer of state capacity. Canada, the United States, Germany and Australia, to name but a few countries, show that federal countries can develop high state capacity. Argentina, on the other hand, shows that federalism is not in itself a sufficient condition for that. As Kocher himself admits, the unitary/federal divide is orthogonal to state capacity, and therefore the relationship between the two is empirically contingent. Should we find that Argentina's federalism is a cause of poor policy effectiveness, this does not invalidate a state capacity argument as long as its federalism is found to affect effectiveness *through state capacity itself* – by weakening infrastructural power, lowering bureaucratic capacity or hurting political capacity. This difference in political structure between Argentina and Chile may turn out therefore to be an analytic advantage: it may show that my proposed framework is theoretically flexible and can accommodate (rather than exclude) institutional explanations of differences in policy effectiveness between countries.

The final remaining question relates to the choice of specific policy areas to be studied in Argentina and Chile. The purpose of this comparison is of course to trace the influence of state capacity on policy effectiveness across the two countries, and to do so across the three policy dimensions I have thus far studied. In other words, I will carry through the differentiated structure of my state capacity/policy effectiveness argument into the qualitative comparison itself. Thus, the design follows two specific purposes: firstly, to observe through which causal mechanisms the three dimensions of state capacity affect (or not) each policy dimension; and secondly, to provide a six-case (two countries, three policies) comparison of the state capacity-policy effectiveness link. If we can observe how in each of the six cells capacity affects effectiveness, and does so in the expected way (with greater state capacity being conducive to greater policy effectiveness), then this will increase our confidence in the argument I have developed. The study of these six cases – to be studied through three successive Chile-Argentina comparisons – will thus constitute the arena where the 'parallel demonstration of theory' will take place.

The three specific policy areas chosen for comparison are *health*, *citizen security* and *economic regulation*. For reasons of space and scope, I will further delimit the object of study in each case: infant and maternal mortality in the case of health; crime in the case of security; and utilities regulation in the case of economic regulation. As it can be seen, the choice of policy area was made so as to have one good from each dimension included in the qualitative analysis. The specific choice of each good among its companions was made on grounds of relevance, analytical value and practical convenience. Citizen security was chosen over internal security due to its greater usefulness for isolating state capacity influences. Internal security, based as it is on issues of political violence, may tap into a fundamental aspect of infrastructural power in the case of civil wars, but in more mild manifestations (such as violent protests) it may well be more related to political polarization and to the quality of democratic institutions than to capacity per se. In the case of health, the choice over social security was made in order to study a good which, because of its universal bent, requires vast territorial and organizational logistics in order to be delivered. It was chosen over education – which shares this territorial, universal-delivery focus – because of a larger availability of secondary literature and data. Finally, economic regulation was chosen because it was, unlike property rights protection, a non-territorial (or at least, less-territorial) good that requires a quite different set of state inputs than health or citizen security. The least territorial good of all is of course macroeconomic stability, but its analysis was discarded on the grounds that this good was not well explained by this chapter's empirical analysis and would therefore not constitute a valid test of its causal mechanisms. Thus, health, citizen security and economic regulation are the goods I will focus my comparison on in the following three chapters, and to these comparisons I now turn.

Chapter 5

State capacity and health outcomes in Argentina and Chile

I. Introduction

In this chapter, I will compare the Argentinean and Chilean experience with infant and maternal mortality reduction over the last 60 years, from the point of view of the public health systems of each country and the interventions they implemented to reduce both kinds of mortality. Infant and maternal mortality are key outcomes of any public health system, both because preventing these deaths is intrinsically valuable and because swift reduction in these rates is within reach of even poor countries, since they depend – at least in a first stage – on non-expensive and highly cost-effective public health interventions. They are also a key indicator of health outcomes more generally, with infant mortality rates in particular being highly correlated with life expectancy. Since infant mortality rates are closely linked with maternal mortality rates because of the synergy (and indeed indivisibility) of some of the policies aimed at either pregnant mothers or infants, inquiring into the reasons behind the differential performance of Argentina and Chile regarding their infant and maternal mortality rates allows for a valid, yet more focused application of the state capacity approach to health outcomes.

The health index measured in Chapter 2 already included a wide range of basic health indicators, such as infant mortality, tuberculosis incidence, immunization rates and safe water and sanitation coverage. That index showed Chile to have an overall somewhat better performance than Argentina (about 0.4 standard deviations higher). Nonetheless, Chile's better performance is not reliant just on those indicators. In Table 5.1, we can see some additional morbidity and mortality indicators taken from the Panamerican Health Organization's health statistics. These indicators show a very consistent difference in Chile's favour in terms of better health outcomes.

Table 5.1: Other health outcome indicators, 2006

	Argentina	Chile	Difference
Life expectancy at birth	75.1	78.5	-5%
AIDS incidence/100,000	4	2.5	38%
Tuberculosis incidence /100,000	24.1	15.1	37%
Estimated mortality rate from communicable diseases per 100,000 population	79.2	29.6	63%
Estimated mortality rate from external causes per 100,000 population	48.3	47.4	2%
Low birthweight proportion (%)	7.2	5.9	18%
Maternal mortality ratio per 100,000 live births	47.8	18.1	62%
Estimated under-5 mortality rate per 1,000 live births	15.9	9	43%

Source: Pan American Health Organization, Regional Health Observatory. Country Statistics.

It is clear, therefore, that Chile has better health outcomes than Argentina across the board and not just on a few arbitrarily selected indicators. The choice of studying infant and maternal mortality differences as representative of wider health outcomes is thus justified.

Table 5.1 above shows that Chile's under-5 and maternal mortality rates in 2006 were about 40% and 60% lower than in Argentina's, respectively. Interestingly, however, this was not always the case. A long-term perspective shows quite clearly that a 'reversal of fortunes' occurred between the two countries in this regard. In Figure 5.1, we see that the descent in Chile's infant mortality rate (IMR) between 1960 and 1990 was dramatic, and considerably faster than any other's in the region. Indeed, McGuire reports that among the 171 countries with available data for both 1960 and 1996, Chile ranks as the fifth most successful country in the *world* in reducing its IMR[235]. In part of course this is due to the exceptionally high initial levels, but even after its

[235] Mcguire (2001a), p.1675

levels had converged with those of comparable countries like Argentina and Uruguay, Chile's IMR kept declining. This can be better observed in a one-to-one comparison with Argentina. As we can see in Figure 5.2, Chile's IMR was very high in 1950, but began to fall in earnest in the 1960s, while Argentina's much lower rates tended to fall only slowly. While in both countries rates fell significantly during the 1970s, in Chile the 60% reduction in a single decade meant that by 1980 Chile's infant mortality was equivalent to Argentina's. That did not stop Chile's rates from falling faster than Argentina's for at least the next 26 years, by which time Chile's rates were slightly above half of Argentina's. By 2006, Chile's IMR of 7.6 per 1,000 live births was not far from developed-country standards[236].

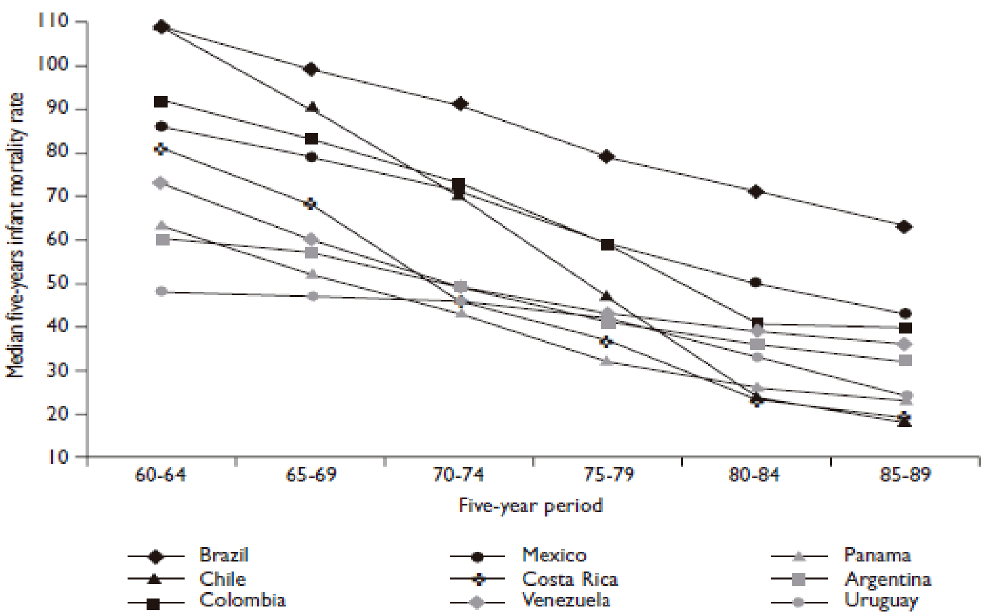

Figure 5.1. Infant mortality trends in Latin America (1960-1989). *Source:* Mardones-Restat and Azevedo 2006.

[236] For instance, the United States had in 2006 an infant mortality rate of 6.8 per 1,000 live births.

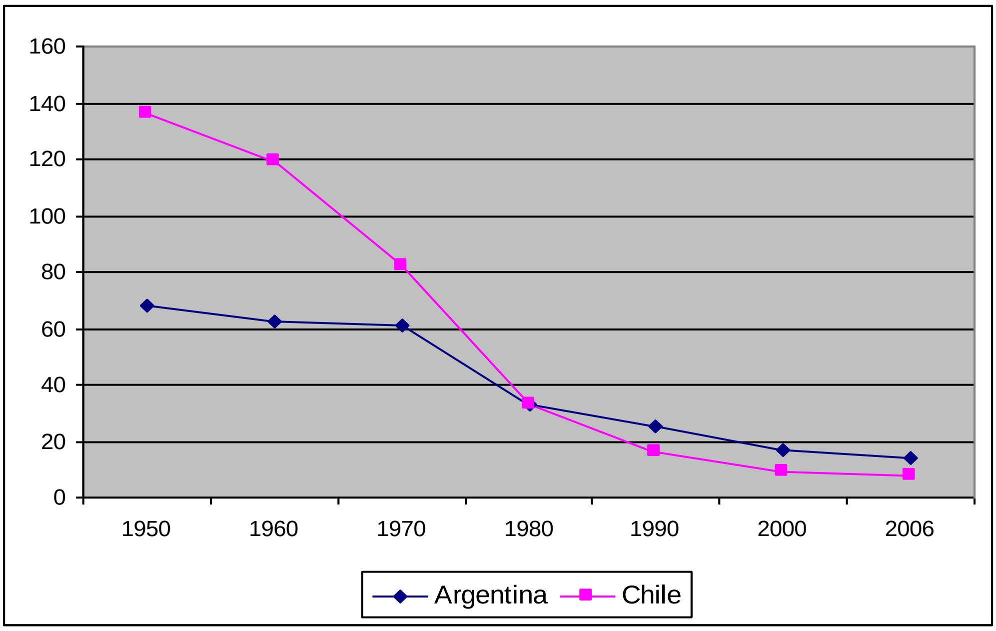

Figure 5.2. Infant mortality rates in Argentina and Chile. *Sources:* Celton and Ribotta (2004); González (2010); Jiménez and Romero (2007).

In the case of maternal mortality, available data suggests a similar story of very high mortality figures in Chile in 1950 and regionally-low rates for Argentina at that date, but followed by a fast and sustained descent in Chile, which by about 1980 had caught up with Argentina (see Figure 5.3).

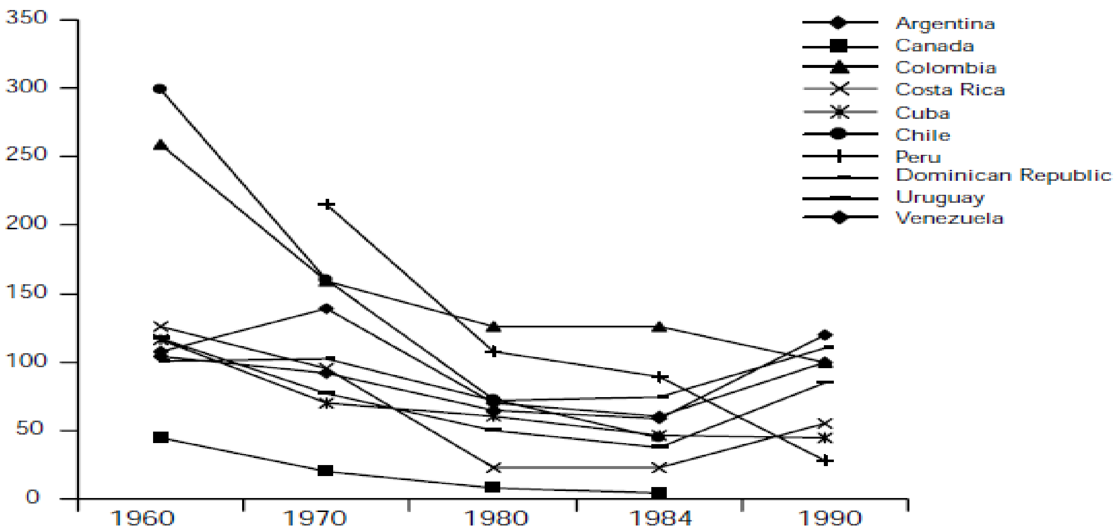

Figure 5.3: Maternal mortality per 100,000 live births, selected countries in the Americas, 1960, 1970, 1980, circa 1984 and 1990. *Source:* Pate, Collado and Solis (2001)

Even when focusing only in the 1990-2006 period, we can see that Chile significantly outperformed Argentina in reducing infant, under-5 and maternal mortality in spite of starting from already lower levels than the latter in all three categories (see Table 5.2). While Chile more than halved mortality rates for all three groups, Argentina's reduction was about 45% for infants and under-fives, and a mere 8% among mothers.

Table 5.2: Infant, under-5 and maternal mortality rates in Argentina and Chile, 1990 and 2006

	Infant Mortality		<5 yrs mortality		Maternal mortality	
Year	1990	2006	1990	2006	1990	2006
Argentina	25	14	29	16	52	47.8
Chile	16	8	21	9	40	18.1
LAC	43	22	55	27	180	130

Sources: González (2010); PAHO (website) for maternal mortality in Argentina and Chile. LAC data is for 25 countries.

In sum, both statically and dynamically Chile's health performance is clearly superior to Argentina's. The question is how to explain these differences: how is it, in short, that Chile achieved such a 'reversal of fortunes' vis-à-vis its richer neighbour? I will argue that it was the decided intervention of the Chilean state in this policy area, through the mid-20th-century creation of the Chilean National Health Service and its strong focus on primary care and maternal and infant protection, which made the central contribution to the dramatic reduction in Chile's mortality rates. Likewise, Argentina's slower progress was the effect of a state that did not intervene as decidedly in this issue, and that in any case lacked the bureaucratic, logistical, coordinative and political capacities of its Chilean counterpart in public health matters.

II. Infant and maternal mortality: Introductory concepts and results

To understand the causes of reduction in infant mortality, it is useful to separate its reduction into 'early' and 'late' historical phases:

> "Generally speaking, in a first phase environmentally related factors are more influential because of infections, mediated by a lack of access to safe water and sanitation, as is typical of poverty. In a second phase, with a higher proportion of infant mortality due to neonatal causes, medical care becomes more relevant because the prevalent conditions benefit more from technology and the improved organization of care systems"[237]

While in the first phase postneonatal mortality (deaths of infants between 28 and 364 days of age) is higher than neonatal mortality (deaths between 0 and 27 days of age), in the second phase the reverse is true[238]. In the first phase, broad environmental and public health interventions are most useful for reducing, often dramatically, infant and maternal mortality rates. Among such measures, the increase in access to safe water and sanitation systems, female education, family planning programs and access to contraceptives, delivery by skilled health attendants, infant vaccination programs and nutrition programs are relevant[239].

In the second phase of infant and maternal mortality reduction, which is usually slower, further progress is more closely linked to a high-quality health care system, in both its preventive and curative functions. In its preventive role (with coverage by nutrition, family planning and skilled delivery programs at already high levels), the timely, frequent and high-quality check-up of pregnancies becomes crucial for preventing or mitigating complications arising during the perinatal period[240]. Prenatal

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[237] Jiménez and Romero (2007), p. 459

[238] The neonatal period goes from the moment of birth to the 28th day of life of the newborn; the post-neonatal period goes from day 29 until day 365. Infant mortality is the sum of neonatal and postneonatal mortality.

[239] See Koch et al (2012); Moore et al (2003)

[240] The perinatal period goes from the 22nd week of pregnancy until the 7th day of life of the newborn. Perinatal conditions are those that arise during pregnancy, and may lead to fetal or early neonatal death.

controls have been shown to reduce the probability of low birthweight, which in turn is the source of many perinatal conditions[241]. Prenatal controls also help control hypertensive complications and other direct and indirect obstetric conditions relating to the mother's health[242]. In its curative role, access to timely (often immediate) and high-quality/high-technology medical services (such as neonatal intensive care units or emergency obstetric care) are critical for saving infant and maternal lives[243]. In Table 5.3 below I sum up the kinds of interventions that have primacy in lowering infant and maternal mortality in the early and late phases.

Table 5.3: Main forms of intervention to reduce infant and maternal mortality, by phase of reduction

<table>
<tr><td colspan="2" rowspan="2"></td><td colspan="2">Type of mortality</td></tr>
<tr><td>Infant</td><td>Maternal</td></tr>
<tr><td rowspan="2">Phase</td><td>Early</td><td colspan="2">Sewerage; Safe water; Vaccinations; Female education; Family planning; nutrition; Skilled delivery</td></tr>
<tr><td>Late</td><td>High-quality prenatal care; Intensive neonatal care</td><td>High-quality prenatal care; Emergency obstetric care</td></tr>
</table>

Source: compiled by author

With this basic theoretical framework in mind, let us return to the analysis. Between 1950 and 1980, Chile caught up with Argentina in terms of infant mortality; between 1980 and approximately 2000, it leapt ahead to a point at which it had slightly above half of Argentina's rate. How did this happen? A first useful clue is provided by looking separately at the neonatal and postneonatal mortality rates in Figure 5.4. Clearly, though Chile improved faster on both fronts between 1960 and 1980, the main reason it caught up with Argentina was its very fast reduction in postneonatal rates. By about 1980, both countries had very similar IMRs and a fairly similar mortality composition in which postneonatal rates had caught up with neonatal rates.

[241] Bortman (1998); McGuire (2010)
[242] Donoso (2010), p.281
[243] De Sarasqueta (2001) pp. 60-61; De Sarasqueta (2006); Koch et al (2012)

Thus, 1980 marks (roughly) a double watershed: the moment when Chile caught and surpassed Argentina, and the moment when both countries entered the 'advanced' phase of infant mortality reduction.

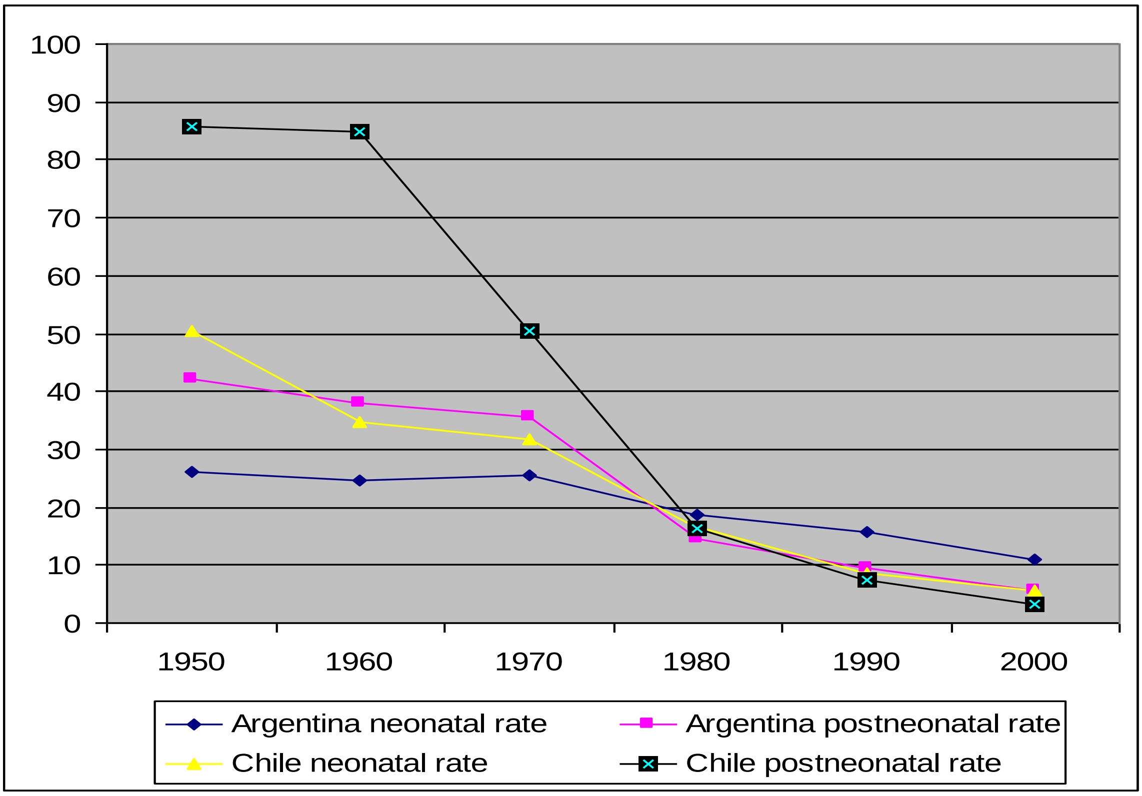

Figure 5.4. Neonatal and Postneonatal Mortality rates in Argentina and Chile, 1950-2000. *Source:* Compiled by author based on data in Jiménez and Romero (2007) for Chile and Celton and Ribotta (2004) for Argentina.

It therefore makes sense to divide the analysis into these two periods: one which asks why Chile caught up with Argentina and focuses on public health interventions, and a second asking why Chile leapt ahead (or Argentina lagged behind) focusing on more advanced, neonatal health care interventions. Thus, in this second stage I go further than McGuire (2010), whose rich historical analysis of infant mortality descent in Argentina and Chile (among other countries) limits itself to analysing the broad public health measures noted above. I argue that this focus is not the most useful in a situation such as the one shown by Figure 5.4, in which neonatal mortality rates are clearly driving post-1980 differences in IMRs.

This leads to a second difference with McGuire's account, this time of interpretation: just as he emphasizes democracy as the driving political factor behind faster reduction of infant mortality in Chile than in Argentina, I will emphasize state capacity. I will argue that the Chilean state's greater penetration of civil society in the health sector, and the build-up of its organizational, logistical, coordinative, supervisory and delivery capacities provides a complementary explanation to McGuire's policy-focused one. In my account, state capacity made a difference in *both* the early and late phases of infant mortality reduction: in the early one, because it allowed greater coverage, targeting, coordination and continuity of those broad public health interventions relevant for reducing mortality. I thus stress the organizational underpinnings of those interventions. In the later phase, I will argue that state capacity mattered because the better organization of the public health system allowed for better delivery of preventive and curative care within a system that was better coordinated and more efficient.

III. The catch-up phase: 1950-1980. Organizational and policy differences

1. Historical and organizational aspects

Although there was some degree of public involvement by Latin American republics in some specific health areas – particularly issues of public health – in the 19th century, it was only by mid-20th century that the Argentinean and Chilean states took upon themselves to provide a leading and central role in the organization of the health sector as a whole. In both cases, this was done through the creation of public health services which aimed to provide (at least potentially) universal healthcare to its population. The degree to which each state managed to actually become the central actor in the health area in each case was quite different, however, with the Chilean one succeeding to a significantly further degree in this regard.

Chile

Chile had developed a tradition of collaboration in the health sector between private and public actors that went back to the end of the 19th century[244]. Already in that period, private charities dealing with health issues had began to merge into a coordinating institution called the "National Public Welfare Commission" with a strong public presence. A Ministry of Health was created in 1924 along with the first raft of social legislation, including the Mandatory Workers' Insurance Law which provided for health protection for workers. Likewise, in 1942 the creation of the National Office for Protection of Children and Adolescents *"permitted the consolidation into a single national agency of all activities involving immunization, food supplementation, support for abandoned children, and other problems affecting this age group"*[245]. Thus, the Chilean state already had an important presence as a coordinating entity in the health sector. This fact, together with the creation of a School of Public Medicine in the University of Chile in 1942 and a series of other public health measures, provided a favourable socio-political background for the creation of the *Servicio Nacional de Salud* (SNS) or Chilean National Health Service in 1952. The name was hardly a coincidence: Chilean doctors had visited, and been inspired by, the then recently-created UK National Health Service[246]. The creation of this organization marked a watershed in Chile's health sector history, since the Service provided the backbone to Chile's public health system as it would develop to

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[244] Mardones-Restat and Azevedo (2006). This, and all other quotation translations, were done by the author.
[245] Ibid, p. 505
[246] Labra (2002), p. 1043. A delegation of Chilean doctors traveled to the UK to study the British NHS on the ground the year before the initiative was approved in Chile (I thank Dr. Pedro Zitko for this information).

this day – private sector insurance reform in the 1980s notwithstanding. Most crucially from an infrastructural power perspective, it managed to bring all other public and semi-public health providers under its aegis, plus workers' insurance schemes and medical facilities, thus avoiding duplication and instituting from the start a unified and strongly centralized public health system[247]. The SNS did this by merging previously autonomous 16 health services[248] and other public health institutions into a single service which by the 1970s covered around 60% of the population, particularly the middle class and the poor[249]. A further 25% were covered by a separate (but also public) system for white-collar workers (the middle-upper class), which worked in coordinated fashion with the SNS[250].

The organizational efforts of the SNS extended into several distinct tasks. Firstly, the SNS designed for itself a highly inclusive governing board including authorities from Congress and the Executive, in addition to business and labour leaders. The goal was to secure political autonomy for the high-level public-health technocrats that were at the core of the project:

> "This group of technocrats, constituted into a veritable lodge, secretly agreed prior to the 1952 [Presidential] elections to unite around those whose candidate won, to give structure to the newly-created Service. They did so and thus occupied its leading positions, protected by the political autonomy of the SNS, whose General Director was chosen by the President but with the consent of the Senate"[251].

The SNS leadership was thus a technocratic elite of Rockefeller Foundation-trained doctors unified around a state organization, much in the same way as CORFO had

[247] Jiménez (2001), p.489; Mardones-Restat and Azevedo (2006), p. 505
[248] Jiménez (2001), p.489
[249] Technically, and unlike the British NHS, the Chilean SNS was only for those poor and middle-class people formally employed and contributing through their wages; in practice and informally, however, the uninsured also had access to it (Labra 2002, p.1044).
[250] Annick (2002); Mardones-Restat and Azevedo (2006). The remaining 15% was covered by the Armed Forces' health system or else paid out-of-pocket (the upper class).
[251] Jiménez (2001), p. 490

played that role for engineers since the 1940s. Autonomy – a key aspect of bureaucratic capacity – allowed for technical rather than political decision-making: while the SNS doctors wanted a service with a strong focus on prevention and the primary level, politicians and the public at large wanted to privilege curative medical care. According to Jiménez (2001), the founding fathers of the Service were able to defend their 'uncomprehended' vision against adverse political winds[252].

In second place, the SNS worked towards ensuring an adequate supply of health professionals for the public health system. Firstly, it implemented in 1957 the Rural Practitioners Program, which provided financial, scholarship and civil service career path incentives for recently graduated physicians to work in rural and underserved areas for three or more years. This program is to this day the main mechanism through which scarce medical resources are deployed to the remotest areas of the country[253]. Secondly, it developed a cooperation program with universities to increase the supply of doctors and particularly other health professionals. Between 1965 and 1970 seven Nurse Schools, five Midwives' Schools and four Nutrition Schools were created in various universities throughout the country[254]. There was an explicit focus on physicians' joint education with these other health professionals; interdisciplinary work was a key characteristic of the primary health centre model the SNS developed[255].

In third place, the SNS technically (and hierarchically) regulated the Service so as to achieve standardization and uniformity across the territory. It created a technical council which drew up the *"technical norms for application at every level of the*

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[252] Ibid, p.490
[253] Mardones-Restat and Azevedo (2006), pp. 507-508
[254] Szot (2002), p.131
[255] Mardones-Restat and Azevedo (2006), p. 508.

service's structure (...) these technical experts may be credited with the debate over and ultimate acceptance of a number of important changes introduced by the SNS in health practices as a consequence of the unification of public health services"[256].

In fourth place, it placed a strong policy focus on reducing infant and maternal mortality. This was closely linked with (fifthly) a philosophy and a territorial expansion strategy which placed strong emphasis on primary health centres as a key location for delivering many of the SNS' key services. Infant and maternal health programs "*were progressively developed in a vigorous collaboration among public health experts from government and academe"*[257]. Interventions in this area were *"based on technical criteria related to a systemic approach"* which included *"a preference for healthcare in ambulatory and community settings"*, multidisciplinary health teams, integration between universities and the Service for training and research through action, permanent evaluation of programs and instruments, and a *"permanent improvement of the quality and reliability of epidemiological data, including medical certification of deaths and audit of infant deaths"*[258]. Preventive medicine and local health centres, including the creation of rural health posts throughout the country, were an integral part of this outreach effort[259]. The strategic importance of primary health centres in explaining Chile's better infant and maternal outcomes is an issue I return to below.

Argentina

In Argentina, the crucial reform period was the first Perón presidency, and particularly Dr. Ramón Carrillo's time as first Minister of Public Health, an

[256] ibid, p. 507
[257] Jiménez and Romero (2007), p. 459
[258] ibid, p. 460
[259] Jiménez (2001)

organization which was created in 1949. Under his leadership, plans were drawn up to create a universal insurance system, centralize the administration of the health system and increase its articulation, increase installed capacity, develop ambulatory medical attention through local health centres, and develop planning capacities for the system as a whole[260]. Indeed, during the Perón era there *"emerged a conception of the health centre as a site for the delivery of both preventive and curative services, integrating treatment with monitoring of the environment and serving a defined and limited population"*[261]. This conception was remarkably similar to the one we observed in the Chilean case in the 1950s. However, while installed hospital capacity was indeed expanded at an impressive rate[262], the primary level, universal insurance and system articulation were not:

> "The 1940s and 1950s had seen the development of an impressive network of publicly funded hospitals and other health facilities, under the aegis of the Ministry of Health (MOH). This had led to rivalry with the labour unions and the Ministry of Labour and Welfare, with each side aspiring to establish the dominant national health-care system. Over the next decade it became clear that the SHI [social health insurance] sector had won, and direct state funding for the MOH was scaled back and became more erratic. By the 1990s Argentina's publicly funded health sector had suffered from decades of underfunding, leading to a significant deterioration of the quality of public provision."[263]

As Belmartino (2005a) has noted, Carrillo's universalist health project ran into the particularist limits of Perón's own political project. On the one hand, the need to develop and strengthen clientelist loyalties to the regime dictated that system articulation could not be carried entirely through. For instance, the hospitals controlled by the Eva Perón Foundation would remain separate from the public network, and the construction of new (Foundation) hospitals would be solely determined by political (as opposed to technical or sanitary) considerations. On the

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[260] Perrone and Teixidó (2007), pp.28-30
[261] Argentina Ministry of Health, 1985, in McGuire (2010) p.131.
[262] By 1951, Argentina had a rate of 7.4 public hospital beds per 1000 inhabitants, an extraordinary figure at the time. See Tobar (2001), p. 7.
[263] Lloyd-Sherlock (2006), p. 357

other hand, the already-existing dense network of mutual aid societies and unions' closed insurance schemes (the *Obras Sociales*) meant that organized labour – a key Perón constituency – was free to continue administering their own health insurance without government interference or indeed regulation.

Their victory meant that the principle of a work-related or Bismarckian social health insurance system operating in parallel to the public sector was established. Moreover, powerful unions such as the railroad workers built their own (exclusive) health facilities network modelled on the public hospital system. Most other, smaller, Obras Sociales would contract out their health provision to the growing private sector[264]. Thus, on both the insurance and supply sides, parallel – and uncoordinated – systems would develop. Even within the public system, and unlike in Chile, there was a split between doctors – trained to cure illness – and the organization of the health system, which was left to *"politicians, local authorities and medical administrators"*[265]. Partly as a consequence, a *"historical characteristic of health services"* in Argentina would be *"the confrontation between technical and political rationality (...) result[ing] in the long run in a model [which was] fragmented, heterogeneous, inefficient, stratified and exclusion-reinforcing"*[266].

The fragmentation of the system would only increase over time, as successive governments in the 1950s and 1960s reversed Dr. Carrillo's centralization policies and started a 'devolution' programme of public hospitals to the respective provinces[267], which in any case have the constitutional mandate in this policy area. Over time, this meant the public system itself was fragmented as health provision

[264] Belmartino (2005b), pp.161-162
[265] De Sarasqueta in De Mucio (2011), p.26
[266] Belmartino (2005b), p. 162
[267] Perrone and Teixidó (2007), pp. 30-32

became a provincial responsibility and federal resources injected into the system eventually became marginal. The public system would begin during the 1960s a *"slow process of deterioration"* even as health authorities would show a *"scant inclination to regulate"* the developing form of funding and organization of medical provision through the union-controlled Obras Sociales (on the insurance side) and the oligopolical control of private supply by the medical associations, on the provision side[268]. These corporatist arrangements were further institutionalized by a 1970 law that gave legal backing to the social health insurance sector and increased its scope by mandating coverage of all worker dependents.

As a result of this processes, the current Argentinean health system became territorially fragmented even within the public provision sector, while at the same time it is a veritable mosaic of institutions on the insurance side:

> "The diverse coverage that is available affects the 24 provincial public systems, approximately 300 national social security institutions, 24 provincial social security institutions, a few dozen health insurance plans, private health insurance plans, and many mutual insurance systems (….) The fragmentation and lack of coordination of this group of institutions have curtailed the establishment of a unified, efficient, universal health system."[269]

One consequence of this evolution was that "*the federal Ministry of Health (MOH) [became] a relatively marginal figure in national health policy*"[270]. As a consequence, all three subsectors (private, social and public) were overly fragmented and lacked regulation[271]. The guidance capacity of the MOH, strong during the first decade of its existence, would be progressively eroded[272]. Recovering this guiding and coordinating role of the system as a whole has been recognized by some as a priority of health

[268] Belmartino (2005b), p.162
[269] Pan American Health Organization (2007), p.41
[270] Lloyd-Sherlock (2005), p.1895. See also Cavagnero et al (2006), p. 9
[271] Lloyd-Sherlock (2005), p. 1896
[272] Wilner and Stolkiner (2007), p.5

reform, so that the federal government can once again define sanitary priorities, synchronize efforts, strengthen provincial capacities, and achieve better definition of every actor's role, including those between different levels of government (federal, provincial and municipal)[273].

2. Organizations, programs and implementation: a comparison

Why was it that Chile caught up with Argentina in both infant and maternal mortality rates between 1950 and 1980? The first thing to note is that, as McGuire (2010) rightly stresses, economic factors were not the explanation. Though income per capita differences are often ascribed a major role in explaining cross-country variation in IMRs and MMRs, in this case Chile caught up with Argentina despite being significantly poorer (in 1980 Chile's GDP per capita was barely 60% of Argentina's), more unequal and slower-growing than its neighbour. Not only that, it achieved it while spending less public (and total) money than its neighbour on health, in both absolute and relative terms (see Table 5.4). This is about as strong a counter-example to economically-driven explanations of health outcomes as one could find.

Table 5.4: Economic and health care spending data in Argentina and Chile, 1960-2000

		1960	**1970**	**1980**	**1990**	**2000**
GDP per capita	ARG	7838	9821	10921	8195	11332
	CHI	5086	6157	6675	7120	11430
Avg. yearly growth of per capita GDP (10 years)	ARG	-	2.3%	1.1%	-2.8%	3.3%
	CHI	-	1.9%	0.8%	0.6%	4.8%
Gini index of income inequality	ARG		36	43	44	50
	CHI		46	53	55	55
Pubic health care spending as % of GDP	ARG		3.6	3.6	4.3	4.7
	CHI			2.1	2	3.2
Total Health care spending as % of GDP	ARG		7.7	6.4	7.8	11.2
	CHI			5.5	5.5	6.3
Total Health care spending per capita	ARG		756	699	639	1298
	CHI			367	392	735

Source: Compiled by author from McGuire (2010), pp.315-325. Yearly growth data are my calculations (compound rate) based on GDP per capita levels reported in the first row.

[273] Tobar (2002), p.279. See also Soratti (2007), pp.6-7; Stolkiner et al (2011), p. 2814

Data on schooling and public health interventions reveals some clues as to where some of the major differences did lie. As can be seen in Table 5.5 (I have shaded those comparisons that show large differences), by 1980 Chile had a significantly higher coverage of safe water and sanitation, of immunization of children, and – probably – of family planning programs, children nourishment programs and of attended deliveries. This suggests that Chile's health system had managed the logistics of reaching into virtually all territories and contacting almost all populations by 1980, while Argentina had not. Note however that Argentine was only slightly behind: most coverage differences disappear by 1990 and beyond, amidst rapid water, sanitation and immunization coverage growth in Argentina. The exceptions are family planning/fertility and malnutrition, two areas where, as we will see, Chile had intervened decidedly for decades[274]. Finally, note how schooling differences over the period actually favoured Argentina. It is therefore clear that educational attainments, which are fundamental to reduce infant and maternal mortality over time in a country[275], in a *comparative* setting such as this one cannot be the explanation of the differences in performance between Argentina and Chile, since Argentina did slightly better in terms of expanding education after 1960, and yet eventually trailed behind in terms of mortality reduction.

[274] Even though McGuire's data very likely exaggerates Argentina's malnutrition levels (it defies credulity to believe Argentina had in 1995 higher infant malnutrition than Chile did in 1960, even if hyperinflation in Argentina at the end of the 1980s may have produced a temporary spike in malnutrition). Data for 2005 places under-5 underweight rates at 0.6% in Chile and 2.3% in Argentina (WHO Global Health Observatory Data Repository).
[275] Koch et al (2012)

Table 5.5: Basic public health intervention in Argentina and Chile, 1960-2000

		1960	1970	1980	1990	2000
Literacy 15 older (%)	ARG	91	92.3	94	95.6	97.2
	CHI	84	88.2	91.6	94.1	95.7
Secondary enrolment (%)	ARG	23	44	56	71	97
	CHI	24	37	53	74	83
Mean years of schooling in adult population	ARG	5.25	6.21	7.04	8.13	8.83
	CHI	5.21	5.65	6.42	6.97	7.55
Safe water access (%)	ARG		55	67(1985)	79(1995)	96
	CHI		59	83	94	94
Sanitation (%)	ARG		34	93(1985)	89(1995)	91
	CHI		31	67	81	90
Family planning effort (expert rating 0-100)*	ARG				21	30
	CHI		53	44	58	61
Fertility rate (children per woman)	ARG	3.1	3.1	3.3	3	2.5
	CHI	5.5	4	2.7	2.6	2.1
Under-5 Malnourishment (%)	ARG				6.6(1995)	2.3(2005)
	CHI	5.9	3.5	1.6	0.3	0.3
% of births attended by trained staff	ARG				95	98
	CHI	67	81	91	98	100
% of children immunized DPT	ARG			44	87	83
	CHI			93	95	91
% of children immunized MCV	ARG			61	93	91
	CHI			94	97	97

Note: Numbers in parentheses indicate year of the data, when column year specified is not available. * The actual years of the family planning effort ratings are: 1972 (1970), 1982 (1980), 1989 (1990) and 1999 (2000). *Source:* Compiled by author from McGuire (2010), pp.318-327.

So, how *did* Chile catch up with its wealthier and more educated neighbour? Within the context of a sharp reduction in infant mortality in *both* countries, amidst a near-simultaneous, large expansion in schooling and access to sewerage, safe water and vaccinations, I conclude that there were three key, enduring differences in Chile's favour that account for its better performance: the better implementation of policies, the strength of the primary health centre as a locus of health services, and the reach and standardization achieved by the SNS throughout the entire territory.

a) Implementation of programs: targeting, coverage and long-run continuity

In Chile, a coordinated and sustained effort to reduce infant and maternal mortality began in the 1950s with the creation of the SNS itself:

> "Malnutrition was challenged with food programs and breastfeeding promotion; diarrhea, with oral rehydration; perinatal mortality with professional care of deliveries and family planning programs; measles and polio, with early vaccination strategies; and so on"[276]

The nutrition component was particularly important as even in 1968 about 57 percent of infant deaths were related to malnutrition as an underlying condition. Thus, since the 1950s a free powdered milk program for pregnant mothers and children under six has been in place in Chilean ambulatory SNS clinics. Breastfeeding promotion brought its rate up from 19 percent in 1974 (following a sustained reduction since the 1950s because of the powdered milk program) to 87 percent in 1998. Malnutrition in under-6s dropped from 37 to less than 3 percent between 1960 and 2000, with most of the reduction occurring before 1980[277].

This experience contrasts sharply with Argentina's, where nutrition and mother-and-infant programs were not so successful. These two aspects are closely linked because the provision of free milk is usually tied to (or associated with) check-ups for pregnant women and infants. In Argentina, since 1937 the federal government had sponsored the National Mother and Infant Program (PNMI) which was supposed to provide integrated care to pregnant women and children of up to 2 years of age that fell below a poverty threshold, through promotion of prenatal care, professional birth delivery and the creation of general guidelines for treating pregnant mothers and infants[278]. This program, like its Chilean counterpart of that epoch, was credited with a sharp reduction of infant mortality in Argentina in the 1940s, but by the late 1990s

[276] Jimenez and Romero (2007), p. 461
[277] ibid, pp. 460-461
[278] McGuire (2010), p. 130

was devoting more than 90% of its budget solely to milk[279], which suggests that its integrated approach had been lost along the way.

After disappointing performance in the 1980s regarding infant mortality, in 1993 the Menem government introduced (by presidential decree) the Mother and Infant Nutrition Program (PROMIN) – which strongly suggests PNMI was perceived to not be doing its job. PROMIN was partly funded and designed by UNICEF and the World Bank and implemented with their help. However, PNMI was not discontinued, and tensions arose between the staff of the two programs, which *"were poorly coordinated and competed for employees and beneficiaries"*[280]. McGuire (2010) reports high levels of financial instability in both programs, unhelpful splits in authority over design, hiring and actual implementation between the national and provincial health ministries, and lack of outreach efforts and of tools with which to target the poorest. As a result, McGuire estimates that while PNMI was reaching 30-35% of its theoretical target (needy mothers and children), Chile's programs were reaching between 70% and 95%[281]. Finally, neither PNMI nor PROMIN were linked to education or social assistance programs, and therefore their approach was less integrated:

> "Whereas beneficiaries in Chile referred to the 'health and nutrition program for mothers and children', beneficiaries in Argentina described the PNMI as 'the milk program'. When milk was not available, Argentine mothers tended not to bring their children for check-ups"[282]

Thus, I coincide with McGuire in that nutrition and mother-and-infant healthcare were two closely related areas where there was a key difference

[279] Ibid, pp.129-130
[280] Ibid, p.140. See also Acuña and Chudnocsky (2002), pp.10-11
[281] McGuire (2010), p. 141
[282] Ibid, p.141.

between Argentina and Chile. The difference was largely of program implementation:

> "A main reason, then, why Chile's infant mortality rate went from being almost twice as high as Argentina's in 1960 to being just over half as high in 2005 is that public maternal and infant health care and nutrition programs in Chile covered a higher proportion of needy people and were better designed, targeted and implemented"[283]

Thus, McGuire places the difference between the two countries in the coverage, targeting and execution of the respective programs[284]. The first thing to note is that in doing so he is interpreting these differences very much from a state capacity perspective: it is not that Argentina *lacked* nutrition and health care programs, but rather that their delivery was disappointing. To his analysis I would add, however, broader differences in strategic orientation and continuity of infant and maternal mortality-oriented policies. In Argentina, it is hard to trace through its history a coherent and sustained public sector-led effort to reduce infant and maternal mortality over time, but we do find a series of isolated or poorly implemented initiatives[285]. A supply-based approach without specific programs, targeting of beneficiaries or focus on delivery has been typical of Argentine health (and social) policy in successive governments.

In Chile, on the other hand, a remarkable aspect of the Chilean maternal and infant health care policies has been their purposefulness and continuity over the decades, through Christian Democratic, Socialist, neoliberal and social democratic governments and through democratic, dictatorial and again democratic regimes. The priority of maternal and infant health, the programs, and the general primary-health-

[283] Ibid, p.141
[284] For a detailed analysis of the failures in coverage, coordination and continuity in PNMI and PROMIN, see Idiart (2007).
[285] See McGuire (2010) for an historical account of Argentine infant mortality policy since the 1950s.

centre-based strategy to reach and care for this population group have been largely stable over time. For instance, it was the Frei government (1964-1970) that made a first major step-up of health efforts and, among many other measures, introduced in 1965 the National Program of Fertility Regulation, which added an educational component to the SNS' maternal and child care program[286]. This program was in no small part responsible for the acute reduction in fertility rates observed in Chile, and in this way contributed to both lower infant and to an almost immediate, major and sustained descent in maternal mortality rates (see Figure 5.5)[287]. Between 1965 and 1971 maternal mortality was cut in half. The coincidence in dates between the introduction of the family planning program and the beginning of fast and sustained descent in both infant and maternal mortality bears emphasizing.

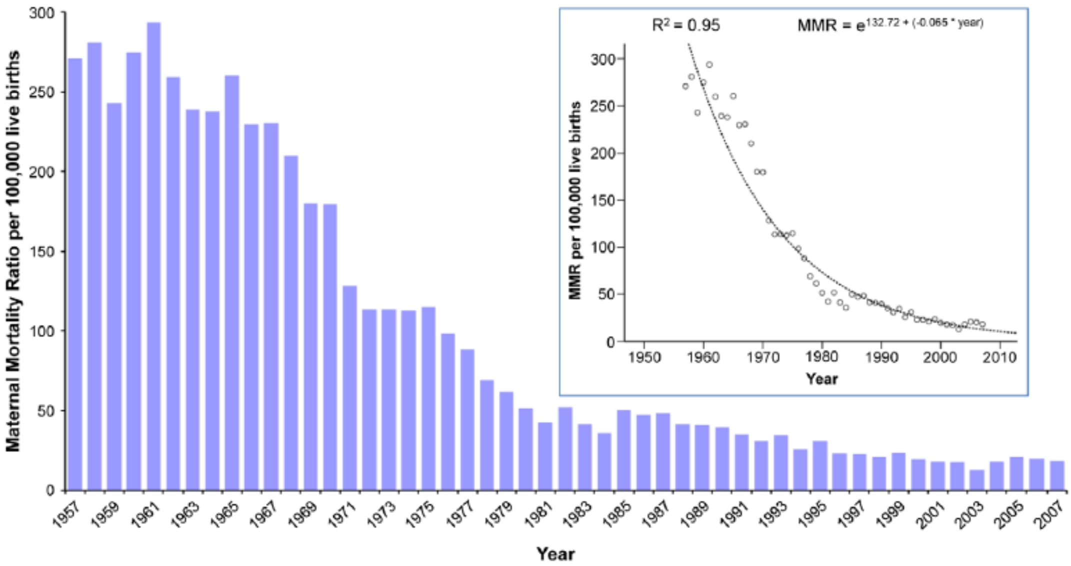

Figure 5.5. Maternal mortality ratio in Chile, 1957-2007. *Note:* The secondary graphic shows the best adjustment of total trend for Maternal Mortality Ratio (MMR) over time. *Source:* Koch et al (2012)

[286] Though it also may have had a darker side in the form of systematic, unconsented sterilization of women with more than three or four children. For an example see MAPU (1985), p.8

[287] Koch et al (2012); Szot (2002) pp. 130-131; Mardones-Restat and Azevedo (2006), p. 508

In the 1970s and 1980s, and under the very different ideological orientations of the governments of Salvador Allende and General Pinochet, not only was the fertility plan maintained, but even more emphasis was placed on strengthening the primary health level. While Allende did this by expanding supply, Pinochet did so by targeting resources at maternal and infant health, even as his government shrank funding for the public health sector as a whole[288]. An important innovation was the construction of a 'poverty map' which was then used to target health and other social spending to the very poorest households[289]. Both the Allende and Pinochet governments emphasized nutrition programs. The extended free milk program for mothers and children of up to 13 years of age was one of Allende's most popular measures. Pinochet limited free milk to children of up to 6 years, but otherwise established a program for undernourishment monitoring for about 75% of under-6 children in surveillance stations set up by the government, plus intensive care for undernourished children, and state-sponsored check-ups for pregnant women[290]. When democracy returned in 1990, a new step-up of efforts to strengthen primary care took place, and new programs to reduce infant mortality (from an already-low 16 per 1,000) were implemented[291]. Thus, strategic policy continuity has been an important element of Chile's success, which stands in sharp contrast to Argentina.

b) The primary health centre – midwife connection

In Argentina, primary health level weakness has been an enduring factor. Before the 1990s primary health was almost entirely marginalized due to the *"extreme curative bias"*[292] of the Argentine health system. A World Bank report lamented the lack of

[288] McGuire (2001b), pp. 1684-1685
[289] Ibid, p.1685
[290] ibid, p. 1685
[291] Jiménez and Romero (2007), pp. 462-463; Szot (2004)
[292] Lloyd-Sherlock (2005), p. 1894

recognition of primary interventions as a cost-effective alternative and complement to a disease-and-treatment approach[293]. Indeed,

> "At least until the early 1990s, (…) no coordinated national primary health care initiatives existed in Argentina (…) Health workers in public clinics delivered primary health care, but these initiatives, though often heroic, were uncoordinated and inadequate"[294]

As we will see in the next section, the weakness of the primary health sector persists until this day. On the other hand, the review of the Chilean experience in reducing infant and maternal mortality between 1960 and 1990 suggests that a strategic component of success was the strength of the primary health centre as a locus for a series of maternal-infant health interventions, such as vaccinations, fertility control and health-related education. I suggest that one major reason why the Chilean health system managed to deliver these services effectively and in an integrated way to beneficiaries was because of the importance of the primary health centre as a key delivery point where the public health system met the community. If the Chilean state was better able to identify its targets, make outreach efforts, cover all geographical areas, and better integrate nutritional, educational, check-up and curative components, it was because the primary health centre was a key node in the system.

In this regard, a comparative study identified three key organizational features of the Chilean system that have been central for its success, and all are related to the primary level. The first is the vertical structure of the system that meant it followed a strict geographical organization of services, in which *"assignation of health infrastructure was made based on the catchment areas of primary health care clinics"*. This is called the *regionalization* of health services in the literature when (as in Chile) the primary

[293] In McGuire (2010), p. 140
[294] McGuire (2001a), p. 15

health network is geographically-based and coordinated with the secondary and tertiary level of care so as to efficiently refer patients that require more complex care. Based on the success of regionalization strategies internationally, including Portugal in the 1970s plus Chile and the Argentinean province of Neuquén in 1970, Argentina was at the end of the 2000s promoting the regionalization of all its provincial health systems. In contrast, systems organized by the type of insurer (such as Colombia or Argentina) cannot guarantee geographical coverage or adequate proximity of services[295], and complicate the delivery of integrated service packages.

The second distinctive feature was the university-trained midwife so characteristic of Chile's public health system, which, by 1992, *"was one of the professional health cadres most closely correlated with the geographic distribution of the population. In this year, 99.4% of the deliveries were attended by a health professional, of which 80% were deliveries by midwives. Likewise, over 90% of prenatal, puerperium care, and family planning and gynaecological services were carried out by public sector midwives"*. This coverage was reached precisely because midwives are located in primary level health clinics and rural posts, which in turn follow the geographical logic mentioned above. They are also trained in detecting pregnancy complications and in referring such cases to more specialized care. Finally, the third distinctive feature was the *"comprehensive service package (...) delivered at the primary care level in the municipalities"*[296]. These services included family planning as well as promotion and prevention maternal care activities, as opposed to the more reactive pregnancy, delivery and spontaneous curative treatment typical of other health systems. Since many of the complications of pregnancies can be avoided or mitigated

[295] For the importance of proximity see Fernandez et al (2006)
[296] Ruiz-Rodriguez et al (2009), pp.151-153

through early detection and care, it follows that systems in which preventive care is emphasized should achieve better maternal mortality results.

More generally, I suggest the combination of the 1965 Fertility Program and its implementation through the primary sector midwife provides a key difference with the Argentinean experience and which helps understand why Chile caught up and surpassed Argentina in terms of infant and especially maternal mortality rates. Through the primary health centres, poor and relatively low-education Chilean mothers received an integrated package of services related to pregnancy care and infant health which had a strong educational component. I suggest the public-sector midwife was the crucial link in providing reproductive and infant health information and education to mothers. Through this channel, *and not through the formal education system,* poorer Chilean mothers were empowered to assume care of their own and their children's health in ways that their Argentinean counterparts were not. A closer link with the public health system translated into better information flows that, in turn, helped reduce posteneonatal mortality and helped reduce the number of abortion-related maternal deaths in Chile. The latter is a difference that, as we shall see, persists with Argentina up to this day.

c) An organizationally-induced descent in regional inequality

A final difference lies squarely with the creation of a unified and centralized public health system in Chile, as opposed to the financially, organizationally and normatively (in terms of medical treatment protocols) decentralized and uncoordinated Argentinean health system. The lowering of infant mortality inequality among Chile's different administrative regions over time stands in sharp contrast with the lack of progress in this regard in Argentina. As we can see in Figure 5.6, while in 1970

Argentina and Chile had approximately the same level of territorial inequality, by the year 2000 Chile's had been reduced to roughly half that value but Argentina's had hardly changed. Indeed, with the exception of the 1990 data point, Argentina's territorial inequality has remained remarkably stable over more than 50 years. Moreover, that inequality has also been stable in terms of the relative performance of territories: the correlation of the 1970 regional IMRs and the 2004 ones is 0.66, while the corresponding value among the Chilean regions was -0.01. Thus, in Argentina the lowest-performing regions have been the same ones over the decades, while in Chile that has not been the case.

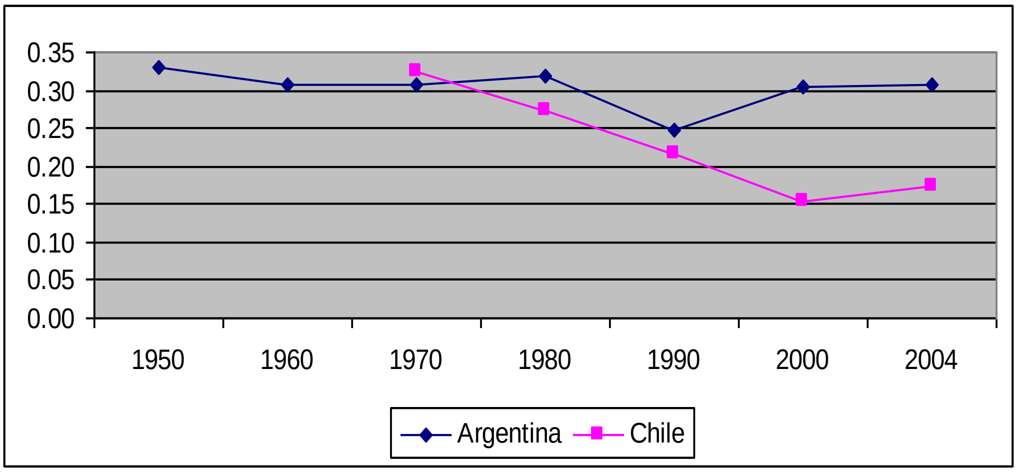

Figure 5.6. Coefficient of Variation of the Infant Mortality Rate in Argentina and Chile, 1950-2004. *Note:* 2000 value for Chile corresponds to 1998. N = 6 in Argentina (macro-regions: Metropolitan, Pampa, Patagonia, Cuyo, Northeast and Northwest), N = 13 in Chile (regions). *Source:* Author's calculations based on data in Celton and Ribotta (2004); Trifiró (2007); Kaempfer and Medina (1982) and Biblioteca del Congreso Nacional (2002).

The territorial reduction of inequality is indirect evidence of equalization of resources, standardization of treatment protocols and services, and ultimately some degree of homogenization of the quality of medical care between different regions[297]. The evidence presented suggests Chile managed to institute a unified and standardized

[297] It should be noted that standardization and homogeneity in service quality are far from absolute in Chile. Important variations in service provision still exist. See Arteaga et al (2002).

health service across its whole territory, while Argentina did not. This geographical dimension of improvement underscores the state-organizational roots of the Chilean path to accelerated reduction of its infant mortality rate.

Finally, it should be noted that all three differences are strongly related, if not directly dependent on, the creation of the Chilean SNS and the way it structured the Chilean public health system. The integration of service delivery through the primary health network was a strategic choice made by the SNS during the creation of the system, while the greater coverage and territorial uniformity achieved were a joint consequence of the SNS' deliberate goals of centralization and universal coverage. In short, the decided, sustained and articulated intervention of the Chilean state into the health sector through a specific organization created for that end was a key difference with Argentina, where the lack of a functional equivalent to the SNS stands out as perhaps the most relevant historical difference between the two countries in this regard.

IV. The advanced reduction phase: 1980-2006

1. The situation by 2000: infant and maternal mortality levels and composition

Whatever the policies and programs that Argentina and Chile implemented in the past to reduce infant and maternal mortality, by 1980 and even more so by the year 2000 the dominating causes of death in both countries were not related to infections but rather to complications of the pregnancy itself, i.e. to perinatal and other endogenous causes. Indeed, by the year 2001 by far the largest difference in performance between the two countries was in mortality due to conditions arising in the perinatal period. This category alone explains over 60% of the overall *difference* between the two countries (in Chile's favour), while mortality due to congenital malformations explains a further 12%[298]. Thus, almost three-quarters of the difference was attributable to endogenous causes. What is distinctive about these two categories is that they are more dependent on timely and appropriate detection, diagnosis and medical intervention than on general environmental conditions. Thus, differences in infant mortality at this stage are quite closely related to the preventive and especially curative functions of the health system, often (but not necessarily) in the context of complex medical conditions.

For its part, of the total difference in the maternal mortality ratio between Argentina and Chile, abortion explained 36% while the rest was almost entirely explained by other direct obstetric causes[299]. Indirect causes are related to deaths where there is an underlying condition (such as diabetes) without which the death would not have occurred. Overall, differences in abortion and in direct obstetric causes jointly suggest that both reproductive education and emergency obstetric care are lagging in Argentina relative to its neighbour. Overall, at this relatively advanced stage in maternal mortality reduction *"access to primary care facilities and delivery by skilled birth attendants no longer suffices to reduce maternal mortality and an expansion and opportune referral to specialized medical services is required"*[300]. The availability of *"immediate medical services"* becomes thus crucial to deal with this more difficult *"residual pattern of maternal morbidity"*[301]. In turn, a highly-organized health system is required to deal with such complications: one where pregnancy controls are thorough enough to assess the risk of complications (so as to assign the patient to a

[298] Composition data is from Trifiró (2007), for both Argentina and Chile in 2001. Infant mortality rates for 2001 for both countries are official government figures.
[299] Own calculations based on INDEC (Argentina), DEIS (Chile) and OSSyR (2010).
[300] Koch et al 2012, p.12
[301] Koch et al. 2012, p. 12

maternity unit with the appropriate capacity), and a transport and logistics system capable of referring emergency patients to the required hospital in due time. This leads me to a comparison of the quality of the organization of the respective health systems.

2. Organization of the health systems

Chile

In terms of health provision, the Chilean system's distinctive feature is its high degree of normative and programmatic direction from the centre, along with its relatively functional articulation of primary health care with the (hospital-based) secondary and tertiary levels. Central direction means the whole system is strongly hierarchical:

> "Directives and resources from the Ministry of Health in Chile constitute compulsory activities that have to be carried out. The Ministry organizes its core activities around a number of programmes to different age or sex groups: child, adolescents, women, adults and elderly. The programmes set policy, strategies and targets across the country."[302]

This mode of organization is characteristic of the Chilean state in almost all policy areas. While centralization has obvious limits and problems of its own *vis-à-vis* more decentralized and/or federal structures, in the Chilean case health centralization was historically the means through which standardization and system-wide coordination were achieved. The extension of primary health care into the countryside was just as much directed from above as the construction of hospitals or the collaboration with universities to train physicians and nurses.

Nonetheless, during the military dictatorship (1973-1990) health provision was partly decentralized, with the aim of adapting health services to local needs. Firstly, the

[302] Atkinson et al (2005), p. 170-171

National Health Service was de-concentrated into 27 regional health services, which were given degrees of operational and financial autonomy. The *Servicio Nacional de Salud* became the *Sistema Nacional de Servicios de Salud (SNSS)*. Secondly, primary health care was unilaterally transferred to the 341 municipalities, and thus placed outside the direct control of the national government. Nonetheless, the ministry of Health retained its financial, normative, supervisory, evaluative, coordinating and directive roles, and thus the system's hierarchical nature remained unchanged[303]. The devolution to municipalities explicitly provided for a commitment from the latter to provide immunization and other services along with primary care, while the regional services committed themselves to providing them with technical assistance and to provide care for patients referred from the primary health centres[304]. During the Concertación (1990-2010) governments, a major thrust of health policy was to strengthen both the regional health services and municipal primary health care, as well as improving the latter's initially-low[305] level of effective articulation with hospitals[306]. Reforms at the primary level were generally successful in drastically reducing waiting times and improving user satisfaction, as recognized by the WHO[307]. These included the analysis of epidemiological data to reassign staff and resources to where most needed; the prioritisation of patients according to clinical criteria instead of order of arrival; outreach initiatives to rural and indigenous populations; extended opening hours; and (among others) a new "local network management" model which *"gives increased autonomy to closely integrated local networks of primary care*

[303] See Annick (2002), p.63
[304] Annick (2002), p.64
[305] Unger et al (2008), p. 0544
[306] Annick (2002), pp.65- 66; Azevedo (1998), p. 195
[307] Jong-wook (2003)

centres and referral facilities (...) [t]hese locally networked facilities coordinate their activities to achieve service improvements"[308].

Thus, even with its downs and (more recent) ups, the public health system has managed to operate as a relatively coordinated *network* of health facilities, defined by its high coverage of services (even in remote rural areas), and organized through a rigorous geographical logic in which each local health centre is ascribed to a single municipality and to a single regional service[309]. A per capita funding system was implemented for primary health centres in 1997, in which payment by the central government to the municipalities is made according to the number of enrolled patients[310]. The existence of such an enrolment registry allows for some measure of financial planning at the local level and for knowledge of the health status and needs of the local population, thus improving local planning capacity for health promotion and prevention as well as for health care. In turn, the primary level constitutes an effective (even if not exclusive) gateway into the more complex secondary and tertiary treatment facilities, as required by patient needs. Coordination means above all cooperation between different levels and between administrative jurisdictions in a system, that is, in a network where the whole is more than the isolated sum of its parts. Crucially, this network is managed from the Ministry of Health, which is ultimately responsible for regulating and (in the public system) directing the interactions of the different organizations and actors within the health sector[311].

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[308] Jong-wook (2003), p. 2087, Panel 2.
[309] Azevedo (1998), p. 198
[310] Annick (2002), p.67. Socioeconomic vulnerability is an additional criterion for these central government payments. Municipalities are free to add from their own budget to the funding of their own health centres, which translates into important degrees of funding inequality between local health centres belonging to richer and poorer municipalities.
[311] Annick (2002), p.63

Argentina

Argentina's health system has very high territorial coverage, as evidenced by its high skilled deliveries and vaccination rates. In spite of this, severe inefficiencies and deficiencies in coordination exist, stemming from overlapping jurisdictions and the systematic lack of a coordinating central actor.

In terms of efficiency deficits, authors have noted the "extreme curative bias" that has historically focused most funding and policy efforts at the hospital level, on recruiting doctors rather than nurses and other health professionals, on medical specialists, and expensive equipment and treatment rather than on cost-efficient prevention and promotion activities[312]. There seem to be substantial management inefficiencies as well in Argentina's public hospitals. For instance, Table 5.6 below compares some input and output indicators in Chile and Argentina during the 1996-2006 decade.

Table 5.6: Inputs and Outputs of Health System in Argentina and Chile

	Argentina	Chile	Year
Hospital beds ratio [per 1,000 pop.]	4	3	2000
Physicians ratio [10,000 hab.]	27	13	-
Professional nurses ratio [10,000 hab.]	5	10	-
Outpatient health care visits ratio [per 1,000 pop.]	2434	4498	1999-2006
Hospital discharges ratio [per 1,000 pop.]	59	102	1999-2006

Source: Compiled by author, based on PAHO data for hospital beds and on Schwarcz (2011), p.63 for physicians and nurses ratios.

The data suggests striking differences in productivity in the hospital sector, with Chile having 25% less hospital beds per 1,000 population and 52% less doctors (though twice as many nurses) and yet achieving 85% more outpatient visits and 73% more hospital discharges (per 1,000 population). Thus, we can infer that Argentina produced 901 outpatient visits for every doctor per year per 10,000 population, while

312 Lloyd-Sherlock (2005), pp.1894-1896

Chile produced 3460 – 3.8 times as many. Likewise, Argentina produced 14.75 hospital discharges per year per every bed in the system per 1,000 population, while Chile produced 34 – or 230% more. At a more micro level, the failure of Argentina's public hospitals at recovering costs and in general at improving their management after a 1990s reform that granted them some autonomy is suggestive of low management capacity[313]. Indeed, a study estimated that Argentina could have maintained its level of hospital inpatient services with 27% less beds than it actually had, and that with the same level of physicians it should have been able to undertake between 20% and 40% more appointments, depending on the province[314].

Turning now to delivery of health services, we saw above that public healthcare in Argentina is not a federal but a provincial responsibility. This has introduced significant degrees of variability in quantity and quality of provision across the system, as *"provinces and municipalities [have] developed public health services characterized by their particular resources, strengths, and weaknesses"*[315]. Provinces freely determine their health budgets, which range from 8% to 28% of total provincial spending[316]. Thus, while is some provinces health infrastructures, systems and programmes have been developed, in others almost the entire health budget goes to personnel expenses[317]. As we will see in the next section, infant and maternal health outcomes indeed vary strongly and consistently by province.

To variation between provinces, fragmentation and overlap of services between provinces and municipalities must be added, with no intergovernmental division of

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[313] Belmartino (2005b); Cavagnero (2008); Lloyd-Sherlock (2005)
[314] Belmartino (2005b), p.159. Lloyd-Sherlock (2005:1898) notes that hospital staffing is a *"key source of patronage"* in many provinces.
[315] Stern et al. (2011), p. 11.
[316] Tobar et al (2006), p.3
[317] Lloyd-Sherlock (2005), p.1898

responsibilities. For instance, the 6433 primary health centres in the country are more or less evenly divided between those operated by provincial authorities (54%) and by municipalities (45%)[318]. At the same time, there are about 300 municipally-operated hospitals in the country[319]. Integration of the primary health centres with the larger public health sector is variable. Over 90% of them have developed referral systems for patients who need laboratory exams or specialist services (though this means up to 10% of them have *not*); however, in most cases waiting times and referral procedures are not agreed on. More generally, modalities of articulation are heterogeneous and depend more on local initiative than on an established norm[320]. Indeed, patients face the risk of being required a re-examination before being admitted at a hospital, since their doctors have low trust in primary health centres' medical staff. This has unsurprisingly led to an 'irregular' operation of the system in terms of an integrated network of services[321]. Moreover, the opening of new primary health centres has not followed a planning-based logic in either geographical or health-needs terms. This has led to an overlap of services in some areas and under-coverage in others in a dynamic often related to short-term political reasons, such as territorial competition between provincial and city authorities to provide services, or the need to strengthen clientelistic loyalties in certain areas[322].

Finally, the primary health level is weakened by its lack of information and planning capacities. Unlike in Chile, primary health centres function on the basis not of catchment areas but of spontaneous demand, which means that people are not

[318] Stolkiner et al (2011), p. 2812
[319] Tobar et al (2006), p.2
[320] Stolkiner et al (2011), p. 2813-2814
[321] Tobar et al.(2006), p.7-8
[322] See Enria and Staffolani (2004). Belmartino (2005b) has also drawn attention to the political, as opposed to the technical, logic that has historically driven health policy in Argentina.

registered in a particular centre[323]. At the same time, most primary health centres do not have information systems. Taken together, these facts mean that epidemiological and georeferential information is not gathered, processes and procedures are not recorded, potential demand cannot be reliably assessed, specific programs tailored to the health-risk profile of the population cannot be designed, existing programs cannot be monitored or evaluated, and in general resources cannot be optimally assigned[324].

Argentinean practitioners and researchers are well aware of organizational deficits in the country's health care system. For instance, a group of physicians pointed out that the main cause of (relatively) high infant mortality because of acute respiratory infections (ARI) was *"doubtless (...) the poor quality of health care services in preventive and curative functions of infancy, which provokes, among other things, problems with the accessibility of services and the lack of longitudinal tracking of patients at risk"*[325]. They noted further failures in the lack of appropriate risk assessment of patients; treatment focused only on dealing with the stated reason for the appointment; lack of medical files for patients (that included treatment, evolution, later check-ups and past referrals to hospitals); deficient conditions for the referral of seriously ill cases because of poor coordination between primary health centres and hospitals; and lack of evidence-based treatment (e.g. an abuse of antibiotics when dealing with a viral condition)[326]. Moreover the system was *"disorganized"*, lacked planning ahead of demand and *"demonstrated structural deficiencies in the entire system of care, independently of its level of complexity [i.e primary care or hospitals]"*[327]. Another study found wide variability among provinces in the way they

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[323] Tobar et al (2006), p. 7
[324] Paganini et al (2010), p. 22 ; Stolkiner et al (2011), p. 2813
[325] Speranza et al (2005), p. 282
[326] Ibid, pp. 282-285
[327] Argentine Ministry of Health (2004), p.11

diagnosed and treated ARI cases in primary health centres, with the chances of being diagnosed bronchiolitis varying by up to a factor of four, and with an antibiotics prescription being handed out anywhere between 12% (Buenos Aires City) and 71% (Santiago del Estero) of times in dealing with this condition[328]. Thus, calls were being made for imitating the successful Chilean experience based on a uniform protocol for treatment of ARI[329][330].

In terms of perinatal-related mortality, quality of care during pregnancy is known to be a key variable for reducing its risk[331]. According to PAHO data, coverage of prenatal care is slightly higher in Argentina than Chile (84% to 76%), but in Chile first trimester coverage – an indicator of quality prenatal care – reached 72%, while in Argentina it was only 40%[332]. This suggests strong differences in pre-natal education among women (regarding the importance of an early check-up) and greater accessibility of primary health centres in Chile. Perinatal-related mortality descent in Argentina has probably been more related to the same investments in high-technology equipment and curative services than in Chile, such as mechanical respiration equipment, lung surfactant, and a growth in availability of neonatology specialists and neonatal intensive care units[333]. Nonetheless, access to those services is territorially biased, with greater concentration in wealthier cities and provinces[334], and as

[328] Bernztein et al (2008); see also Argentine Ministry of Health (2004), p.8
[329] Speranza et al (2005); Argentine Ministry of Health (2004)
[330] For a detailed account of the (home-grown) development of this protocol in Chile, see Girardi, Astudillo and Zúñiga (2001)
[331] Bortman (1998)
[332] Coverage of prenatal care is from PAHO (2005), but Donoso (2010) puts the Chilean figure at over 90%. Data on first trimester coverage is from the PAHO Health Information Platform (Indicator Time Series). Values for Argentina and Chile are averages for 1999 and 2005.
[333] De Sarasqueta (2001), p. 61; Speranza and Kurlat (2011).
[334] De Sarasqueta in Schwarcz (2011), p.26

corroborated by the sharp regional inequalities in perinatal-related mortality rates[335]. Moreover, as a well-known Argentinean neonatologist noted,

> "…there is a fascination with new equipment and techniques, but these advances are housed in services that have high infection rates, scant trained nursing personnel and that do not take measures for the control of nocosomial infections, lack working guidelines and norms and that have not completed training in one technique by the time they incorporate a novel one (…) But the most serious flaw afflicting neonatology services (…) is that very few public and of the most expensive private institutions meet an adequate standard of nursing in quantity and training"[336]

Thus, deficits in human resources (and thus in system-level human resource planning) and in the basic quality of health services undermine the advantages of having a high density of specialists, equipment and neonatal intensive care units (NICUs). Lack of regionalization or territorial planning led to an anarchic growth in NICUs in Argentina: while in Chile's public health system there are 28 – one per regional health service – for 16 million people, in Argentina's public health system there are 300 for 38 million people. Thus, there is one NICU per 126,000 inhabitants in Argentina, as opposed to one per 536,000 in Chile, one per 400,000 in the UK and one per 1,450,000 people in Canada (which has the lowest infant mortality rate of the four countries)[337]. This bears out De Sarasqueta's claim that *"…in the origin of mortality and morbidity poor organization is as important as the lack of clinical competence"*[338].

The analysis of maternal mortality also suggests problems with uneven access to essential medical services amidst wider deficits in health system organization. A study covering six Argentinean provinces found that pregnant women who had been attended at hospitals which lacked a 24-hour active duty obstetric/gynaecology

[335] Ceballos (2005), Annex, Table 5, p. 23
[336] De Sarasqueta in Schwarcz (2011), p. 26
[337] Argentine Ministry of Health (2009), p.34
[338] De Sarasqueta in Schwarcz (2011), p. 26

specialist or which could not provide essential obstetric care were eight times as likely to die. Because many clinics are small and do not attend a great number of births per year (the average maternity in Argentina delivers 600 babies per year, as opposed to 1,000 in Chile), not every maternity had a specialist or a residency programme. Thus, maternal death was nine times likelier in a small hospital than in larger ones. Lack of essential supplies (such as blood for transfusions) in smaller hospitals compounded their relative lack of specialists. The study also detected *"lack (...) of staff proficiency in the management of obstetric emergencies"*, as well as *"delays in referrals and lack of coordination within the health-care network response"*. The study recommended a "*reorganization of the health-care network to promote timely referrals"*, as well as greater availability of specialists and supplies, improved access for rural areas and an improvement in coordination in information systems and statistics department so as to provide better monitoring of maternal deaths[339]. Overall, the problem of too-small and inadequate maternities seems to be central: over 60% of maternities that attended fewer than 1000 births per year did not comply with the minimal Ministry of Health conditions for providing adequate maternal care, though deficiencies were widespread in the public sector at large[340]. Risk assessment of pregnancies was deficient as well, and would help explain the relatively high maternal mortality ratio in spite of the high prenatal coverage achieved in Argentina[341]. Only in 2008 (beyond the period of study of this work) the Federal Health Council of Argentina approved a resolution that called for provinces to take measures to regionalize their maternal-infant health services, i.e. to establish a network of health centres of differing complexity according to level of risk for perinatal care throughout each province[342].

[339] Ramos et al (2007)
[340] Speranza and Kurlat (2011), p. 41
[341] Quero et al (2009), pp. 258-259
[342] Speranza and Kurlat (2011), p.42

All in all then, Argentina was trailing Chile in both maternal and infant mortality reduction not only because of lower-coverage nutrition programmes and other broad public health interventions, but because the public health care system itself was less organized, less efficient and less coordinated. Of particular relevance are the comparative weakness of its primary care network, on the one hand, and the poor integration of establishments with differing levels of complexity, on the other. In short, it would seem that in both the preventive and curative dimensions of the health system, Chile was performing significantly better than its neighbour.

3. Territorial inequalities

A final way to understand the differences between Argentina and Chile is to look at the data through a geographical focus. Interestingly, major differences arise between the two countries in this regard. Not only is regional variation in outcomes smaller in Chile (particularly in the case of infant mortality), but perhaps more importantly the *distribution* of that inequality is uncorrelated either with other maternal-infant health outcomes or with regional poverty rates. Thus, bad outcomes in infant mortality do not imply bad outcomes in maternal mortality, and a high degree of poverty does *not* predict higher infant nor maternal mortality rates[343]. On the other hand, in Argentina provincial infant and maternal mortality rates are significantly correlated with each other and with provincial poverty rates, thus configuring clearly identifiable territorial clusters of disadvantage. This strongly suggests that Chile's health system is capable of delivering a degree of coverage and quality which, even if not fully uniform, at least is not systematically biased in favour of wealthier regions.

[343] It should be noted that this does *not* mean that in Chile there are no socioeconomic differences in infant and maternal mortality (there are), but only that the territorial distribution of poverty does not predict the territorial distribution of mortality.

In Table 5.7 below, I show the level and variance of maternal mortality ratios, infant mortality rates and poverty rates, by province in Argentina and by region in Chile. We can see that while mortality rates are lower in Chile, the coefficient of variation – which is a non-mean-dependent variance measure – shows only modest differences in Chile's favour in the case of maternal mortality, but a larger one in case of infant mortality. This suggests that geographic variation in infant mortality rates is lower in Chile than in Argentina, while maternal mortality and poverty rate territorial variation are approximately equal.

Table 5.7: Infant Mortality Rate, Maternal Mortality Ratio and Poverty Rates in Argentina and Chile, and their provincial/regional coefficient of variation

	Argentina	**Chile**	**Difference**
Infant Mortality Rate 2006	12.9	7.5	
IMR 06 Coefficient of Variation	0.26	0.16	-39%
Maternal Mortality Ratio 2005-2007	43.7	19.1	
MMR05-07 Coefficient of Variation	0.53	0.48	-11%
Poverty rate	32.8%	13.7%	
Poverty Coefficient of Variation	0.35	0.34	-3%

Note: Poverty rate for Chile is for 2006; for Argentina it is from De Maio (2007) and appears to be from 2001. Argentina has 24 provinces and Chile has 15 regions. Maternal mortality is accumulated between 2005 and 2007 to smooth out regional values (since maternal deaths are relatively infrequent). Poverty rates between the two countries are not comparable since they use different methodologies. Sources: De Maio (2007); INDEC; Ministerio de Desarrollo Social (Chile); DEIS; INE (2009).

Interestingly, while variation in the territorial distribution of poverty in the two countries is almost identical, in Argentina – but not in Chile – provincial poverty is highly and significantly correlated with infant mortality rates and with maternal mortality ratios. Table 5.8 below shows correlation coefficients and their p-values between poverty rates and infant and maternal mortality outcomes for Argentina and Chile.

Table 5.8: Correlation coefficients between infant mortality rates, maternal mortality ratios and poverty rates in Argentinean provinces and Chilean regions

	POV ARG	IMR Arg	MMR Arg	POV CHI	IMR Chi	MMR Chi
IMR Arg	0.76**	1				
MMR Arg	0.48*	0.72**	1			
IMR Chi				-0.17	1	
MMR Chi				0.23	-0.30	1

Note: *significant at 5%; ** significant at 1%. N = 24 for Argentina and N = 15 for Chile. *Source:* Author's calculations based on data sources detailed in Table 5.7.

What is striking about the correlations is that they have high values in Argentina, allowing for significance even with only 24 cases, while in Chile the correlations are so low that they actually have the 'wrong' sign in two out of three instances. Thus, the lack of significance of the correlations in Chile is hardly due to the low number of cases. Nonetheless, to check for the possibility that Chilean regional data may be too aggregated and thus could be concealing underlying covariation between territorial poverty and mortality outcomes, I correlated infant mortality rates and poverty rates for 2006 in Chile at the provincial level, thus increasing the number of cases to 41. The correlation now had the 'right' (positive) sign, but was only 0.22 and lacked significance. Thus, it is safe to say at the very least that in Argentina health-related inequalities were much more driven by general socioeconomic disadvantage than in Chile. Since poorer provinces are also those with higher infant and maternal mortality, health and socioeconomic disadvantages cluster together territorially in ways that do not occur in Chile (see Figures 5.7 to 5.9).

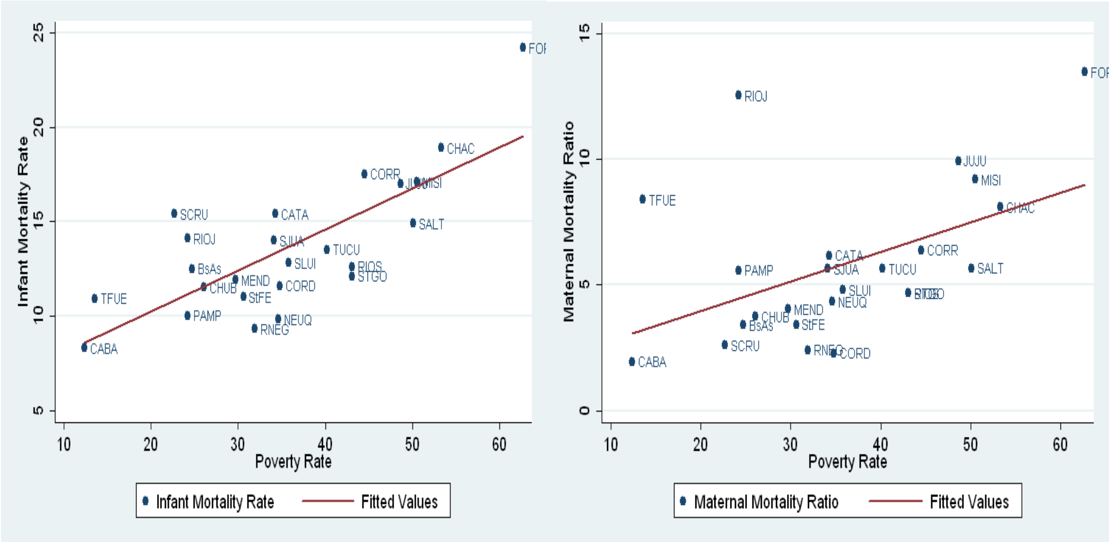

Figure 5.7. Infant mortality rate, maternal mortality ratio and poverty rate in Argentina, by province. *Source:* author's calculations, based on data sources detailed in Table 5.7.

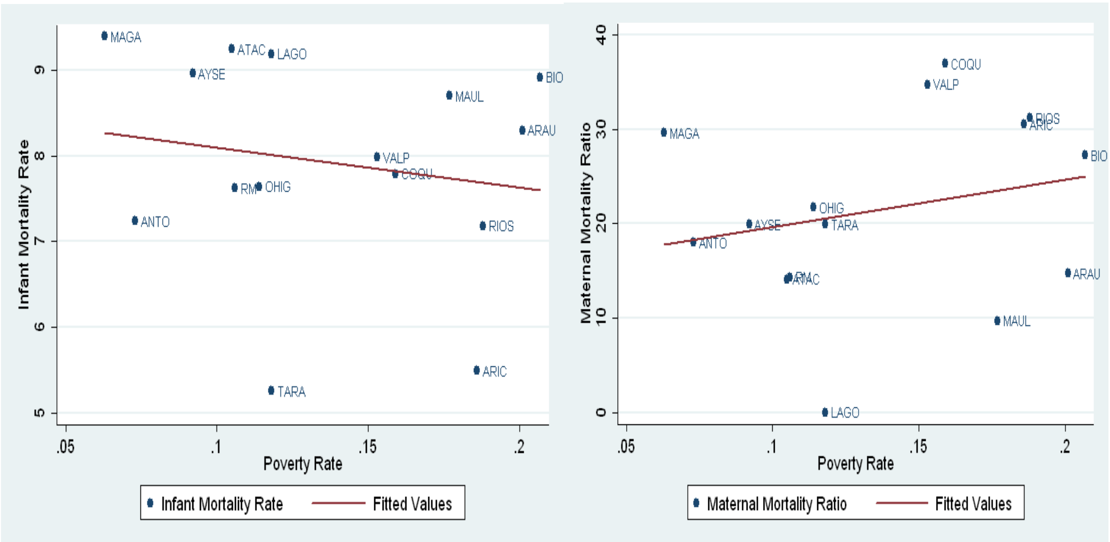

Figure 5.8. Infant mortality rate, maternal mortality ratio and poverty rate in Chile, by region. *Source:* author's calculations, based on data sources detailed in Table 5.7.

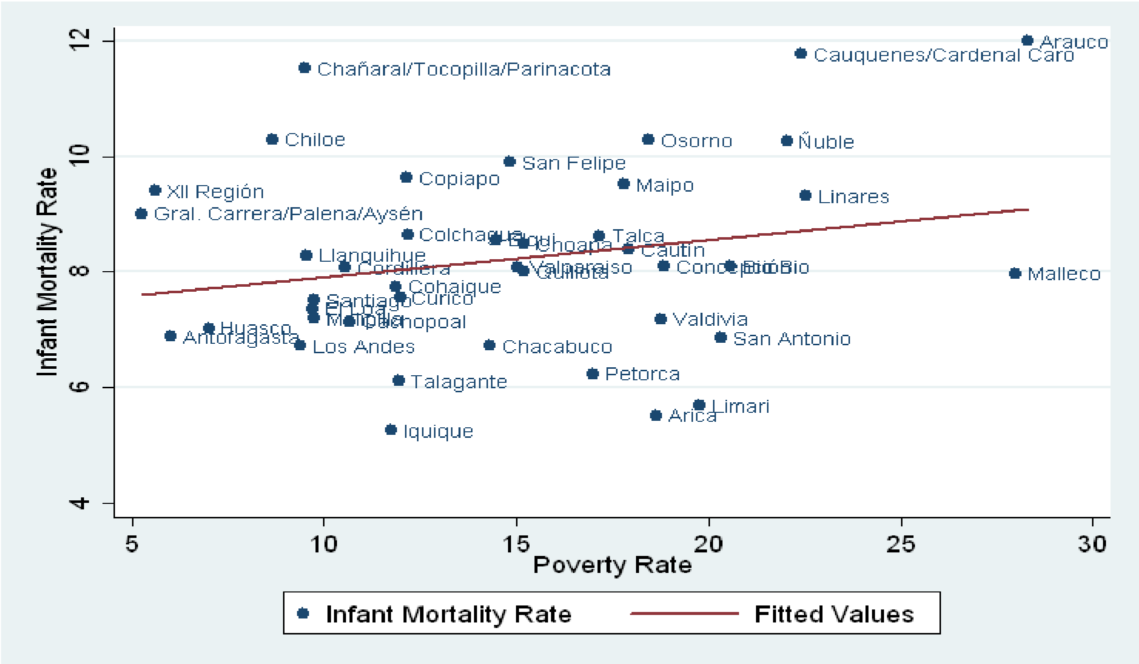

Figure 5.9: Infant mortality rate and provincial poverty rate in Chile, 2006. *Note:* Some provinces with fewer than 1,000 births in 2006 were grouped (along geographical lines). *Source:* author's calculations based on Ministerio de Desarrollo Social (Chile) and INE (2009).

In sum, the preceding analysis suggests that there are important differences in the quality of the organization of these countries' public health systems that translate into differences in capacity to deliver adequate and timely care to mothers and infants at this advanced stage of mortality reduction. Overall, two differences between the systems stand out. The first key difference is the regionalization of the Chilean health system, based on a comparatively strong primary health network which is fairly well coordinated with the secondary and tertiary levels. The coordination deficits in the Argentinean system, partly due to the lack of regionalization, were seen to be recurrent and affected response in both infant and maternal health care. The second, and related, difference is the lack of central planning and authority in the Argentinean system, which translates into a series of deficits, such as lack of standardization of treatment protocols and norms; over- and under- supply of primary health centres and hospitals; over-supply of (manifestly inadequate) maternities; lack of nurses and some specialists amidst an anarchic availability of expensive equipment (such as NICUs);

and major, persistent and socioeconomically-based differences in the quality of provincial health care. These are not deficits of policy, but of organization and delivery, and as such they reveal a historical weakness of the Argentinean state in its role as ultimate guarantor of the quantity and quality of health services received by its population.

V. Conclusion

The preceding analysis of the comparative dynamics of infant and maternal mortality evolution in Argentina and Chile has singled out some key factors that, amidst the shared rise in female schooling, sanitary infrastructure and in skilled birth delivery, made a difference between the two countries. From a policy perspective, along this chapter I have identified three key differences that worked in Chile's favour. The first was the introduction in the mid-1960s of a strong and universal family planning program that quickly brought down fertility rates, helping lower both maternal and infant mortality rates, spreading reproductive education among poorer women, leading to fewer unwanted pregnancies and, perhaps, to safer (illegal) abortion methods. The second was the higher coverage, better targeting and continuity of nutrition and mother-and-child health care programs. This helped lower pregnancy risks and perinatal-related complications such as low birthweight, as well preventing postneonatal complications. The third was the higher availability of timely and high-quality neonatal and emergency obstetric care. While all three affected infant mortality rates in both the early and late phases of reduction, the first two were relatively more important in the early phase, while the latter was relatively more important in the second. Of these differences, McGuire emphasizes only the second, which I argue is insufficient as an explanation of relative performance over the entire 1950-2006 period.

Illuminating as a policy perspective is for identifying the immediate causes of differential performance between the two countries, I have argued that to understand why these causes came themselves to be we must look at the underlying organizational framework of the public health systems in each country. It is at this once-removed level of causality that explains why differences in performance were persistent and sustained over so many decades and under highly varying economic, demographic, social and indeed political conditions. I have argued that three interrelated organizational factors help explain the 'immediate' causes and their endurance over time. The first was the considerably greater strength of the primary health centre in Chile as a key node between the public health system and the community, and particularly the poor. The primary health centre was the (main) organizational locus of the family planning, nutritional, pregnancy check-up and infancy check-up services. The second factor was the greater planning and coordination capacities of the Chilean public health system as a whole, as seen in its system of referrals and counter-referrals between establishments of differing levels of complexity and in its ability to better match the supply of health-sector human resources with the public health system's demand. The third was the better territorial coverage (avoiding gaps and duplication) and relatively greater standardization of health services across geographical spaces seen in the Chilean case. All three are related to (without being the inevitable consequence of) the regionalization of health services applied in Chile since 1952. In turn, regionalization was in Chile a policy choice implemented by the SNS, the actor without which the entire Chilean story in this field cannot be understood. I have tried to show that the creation of the SNS was a critical juncture in Chilean public health history which constituted a key investment in state capacity which, by unifying organizations, centralizing policies and decision-making, standardizing protocols, monitoring compliance and sustaining policies over time allowed for a decided, coherent and sustained drive for infant and maternal mortality reduction in a way that was not seen in Argentina.

In this latter country, we saw that Dr. Carrillo's original project of a regionalized public health system based on a strong primary care network was quite similar to the Chilean one. Nonetheless, bureaucratic fragmentation (as observed in the dispute between the Ministries of Health and Labour), labour opposition, the lack of a strong pre-1946 state presence in the health sector, federal-provincial governance dynamics and recurrent political instability all conspired against its success. Fragmentation and lack of coordination became conspicuous, and once entrenched, raised coordination costs and inhibited the development of centralized planning and systemic coordination. The federal government lacked authority over the public health system, while the 'state' as a whole fragmented organizationally along provincial lines with the 1960s decentralization of health services. In this context, federal health policies would have no organizational locus in which to reside and routinize themselves: without the equivalent of a SNS only the Argentine Ministry of Health (which is a policy setter, not a policy doer) could have insisted on policy continuity and improved implementation. However, the Ministry itself was hardly an 'island of excellence' within the national bureaucracy, and in any case was subject to all the shocks from continued political instability at the federal level.

More generally, the evidence presented in this chapter suggests some salient differences between the two countries' political context that help explain differences in capacity in the health sector. We saw that the Chilean state managed to unify health system provision and (largely) insurance because it had a longer history of coordination and participation in the health sector; thus, it had more legitimacy and also created more of it through an inclusive and diverse SNS governing board. It also, undoubtedly, faced weaker special interests than its Argentine counterpart, particularly organized labour. Finally, it was a state with a more cohesive bureaucracy, and was highly centralized and authoritative. This allowed the SNS both to become a truly hegemonic actor in the health sector, and to create a highly coordinated and authoritative system of national reach. In Argentina, on the other hand, special interests were strong and the bureaucracy divided; federalism eventually splintered the public health system; and recurrent political instability was deeply damaging to the investment in logistical, coordinative and supervisory capacities by the federal Ministry of Health.

In both countries, most of these forces were largely autonomous from the nature of the regime. Despite McGuire's contention that it is democracy and its pro-poor incentives that lead to greater investments in infant mortality reduction, I have showed that state capacity played an independent (and partly self-reinforcing) role, greater pro-poor incentives in the Chilean political system notwithstanding. Democracy is simply not the whole, or even the main, story behind infant (and maternal) mortality reduction.

Of course, the two explanations are not mutually exclusive. The increase in spending in infant and maternal mortality in Chile in the 1960s was undoubtedly related to the increased (and polarized) electoral competition in Chile during that decade. This happened after a reform assured secrecy of the ballot in the countryside in 1958, as McGuire documents. But without the prior decade's investment in health infrastructure the drastic lowering of infant mortality could not have happened as quickly. It was, so to say, the 1952 organizational tracks that made the 1964-1965 resource expansion so successful. Indeed, the key bill which created the SNS in 1952 and unified health services was *"almost contraband"* since only doctors cared for it, and it thus *"did not have much support, but neither did it finally meet opposition"*[344]. Thus, state capacity preceded pro-poor democratic pressures at least as much as the other way around. Equivalently, in Argentina it was not during authoritarian regimes but during the democratic Perón government, and amidst strong pressure to secure popular support, that Dr. Carrillo's universalist and pro-poor health system was undone by bureaucratic division within the government and the power of organized labour. So all in all, looking for the roots of greater investments in health capacity in Chile vis-à-vis Argentina in democratic electoral pressures is insufficient. The greater influence and involvement of elite groups – notably doctors – in the politics of health in Chile, along with previous greater infrastructural power and capacity to create autonomous bureaucratic bodies[345] that acted along technical, rather than political, lines seem to be strong complementary explanations to democracy as roots of state capacity.

I turn now to the final question, regarding the relative importance of each of the three state capacity dimensions identified in this work to the outcomes observed in Argentina and Chile. In particular, what do these two cases and their comparison tell us about the role of infrastructural power, bureaucratic capacity and political capacity in reducing infant and maternal mortality? On one level, it is clear that all three sources of state capacity contributed to explaining the difference in outcome between Argentina and Chile. Greater infrastructural power in Chile resulted in a health system which was more coordinated, where norms were better enforced and lines of command more clear and authoritative. But this happened in no small measure

[344] Jiménez (2001), p. 489
[345] Like CORFO in the 1940s and the SNS in the 1950s.

through the SNS, the key bureaucratic body that, I have argued, Argentina distinctly lacked. Finally, we saw that in Chile the ability to sustain policies over time (policy stability) was an essential aspect of its infant and maternal mortality history. Emphasis on child and maternal nutrition and check-ups endured over the decades, as did the reliance on and continuous strengthening of the primary health system.

In sum, all three aspects of state capacity were present, were better in Chile, and contribute to explain the better policy outcomes observed in that country. In part, they are simply three different lens through which we can choose to explain differential state capacity (and differential outcomes) in both countries. But only in part: I believe they also describe only partially overlapping realities, and that I can therefore say something more regarding 'ultimate' causality within the three state capacity dimensions. My story during most of this chapter has emphasized infrastructural power differentials between the two countries, and the key role of the SNS. When trying to illuminate which kind of state capacity is more fundamental to success in the health sector, I suggest that the *combination* of infrastructural power and bureaucratic capacity is the key. My account has emphasized infrastructural power – authority, enforcement, logistics – but in turn these were built by and through the SNS in the Chilean case, and failed to be built in Argentina to the same degree because (I argue) no functional equivalent of the SNS existed beyond provincial health services. But in turn this happened in no small degree because in Chile the state had a higher previous degree of infrastructural power. In the account I have told, therefore, *infrastructural power and bureaucratic capacity were thus partially constitutive of one another*, and *together* were the key aspect of state capacity that differed between the two countries. As far as they can be separated, political capacity was here more of an epiphenomenon, partly caused by infra-bureaucratic power. When the latter was strong, the health sector could endure political instability, as in Chile in 1973 and 1989. The role of the SNS as a well-entrenched and highly legitimate bureaucracy that provided an element of continuity and routinization of policy amidst wider change was therefore important. In Argentina, policy instability was not as important as the lack of standardization across provincial public health systems and of coordination between primary, secondary and tertiary levels.

All in all, the joint emphasis on the infrastructural and bureaucratic dimensions of state capacity constitutes an empirical refinement of my theoretical argument in Chapter 3 and the quantitative/QCA results of Chapter 4. Rather than health being primarily dependent on bureaucratic capacity alone, what this analysis suggests is that even if analytically this capacity may be separable from infrastructural power, empirically and historically they may not be. In the health sector in Argentina and Chile, they co-developed in ways that were mutually reinforcing and indeed partly mutually constitutive. I will return to the theoretical implications of this finding in the Conclusion.

Chapter 6

State capacity and citizen security performance in Argentina and Chile

In this chapter, I compare crime outcomes and public security performance in Argentina and Chile. Compared with the case of infant mortality, the connection between state performance and policy outcomes is less direct and harder to establish. As reviewed in Chapter 4, there is no consensus in the specialized literature as to the relative importance of state action and societal forces in shaping criminal patterns and outcomes. Issues such as demographic structure and (male) youth bulges; social and economic inequality and exclusion; unemployment rates; urbanization rates; past history of civil war and political violence; and the influence of the drug trade, amongst others, have been posited – alone or in conjunction with others – as causes of observed crime rates.

In this context, public security policies by governments are just one more influence shaping these outcomes, though possibly a major one. Of course, many of the social factors mentioned above – such as unemployment and inequality – are themselves shaped by short-term and long-term government policies in the economy, education, social transfers, and so forth. Thus, when we talk about public security policies we are only dealing with that part of government intervention that affects crime outcomes directly through *deterrence*. The deterrence capabilities of a state can be usefully subdivided into three subsystems: police, justice and penal (prisons). Of these three, I will here focus only on the police, as the first and most direct link between citizens and the deterrence system: if the police does not prevent crimes or catch any wrongdoers, there is little work to be done (except, one would hope, absolving innocents) by the justice system and none at all by the penal system. The comparison I thus will attempt regarding the relationship between crime outcomes and state capacity between Argentina and Chile is necessarily incomplete. A full assessment would also require incorporating these two additional deterrence subsystems, but as I briefly argue at the end of this chapter, doing so is not likely to alter the conclusions I reach through a comparison of police forces only.

In what follows, I proceed in three steps. In the first, I compare different measures of crime and public security *outcomes* in Argentina and Chile. In the second (and main) step, I compare in some depth the main police forces of each country: the Federal Argentinean Police and Buenos Aires Province police on the Argentinean side, and *Carabineros* on the Chilean side. The comparison will assess both their performance and their organizational characteristics, which go some way into explaining differences in effectiveness. In the third section, I compare political capacity in the citizen security area in each country, while the final section concludes.

1. Comparing crime outcomes

The citizen security index developed in Chapter 2 ranked Chile first among Latin American countries, and Argentina seventh; the difference in scores between the two countries represents more than a full standard deviation. However, the magnitude of this difference is driven more by differences in the institutional trust dimension than in the crime dimension. I will return to the former in the next section when I discuss police trust; here, I provide a more dynamic view of crime outcomes in the two countries to complement the (static) information of that Index. There are different kinds of data available and different kinds of sources – such official crime statistics, victimization surveys, expert assessments, and so forth – that can be used to assess the overall crime situation and evolution in the two countries. In the case at hand, all sources point to a persistent, if modest, lower degree of crime in Chile than in Argentina.

Let us begin with homicide data, perhaps the most popular crime indicator in international comparisons (since issues of differences in definition are less complex than for other kinds of data). In Figure 6.1, I show the longest available time series for homicide rates across 17 countries in Latin America, starting in 1985, based on the Panamerican Health Organization's (PAHO) mortality statistics. The data shows that with some exceptions at the higher end of the distribution, homicide rates have been quite stable over the last 25 years, and particularly so in the relative rank order of individual countries[346]. Particularly in the case of Argentina and Chile, the data shows that both countries have been very stably amongst the lowest homicide-incidence countries in the region, together with Uruguay and Peru.

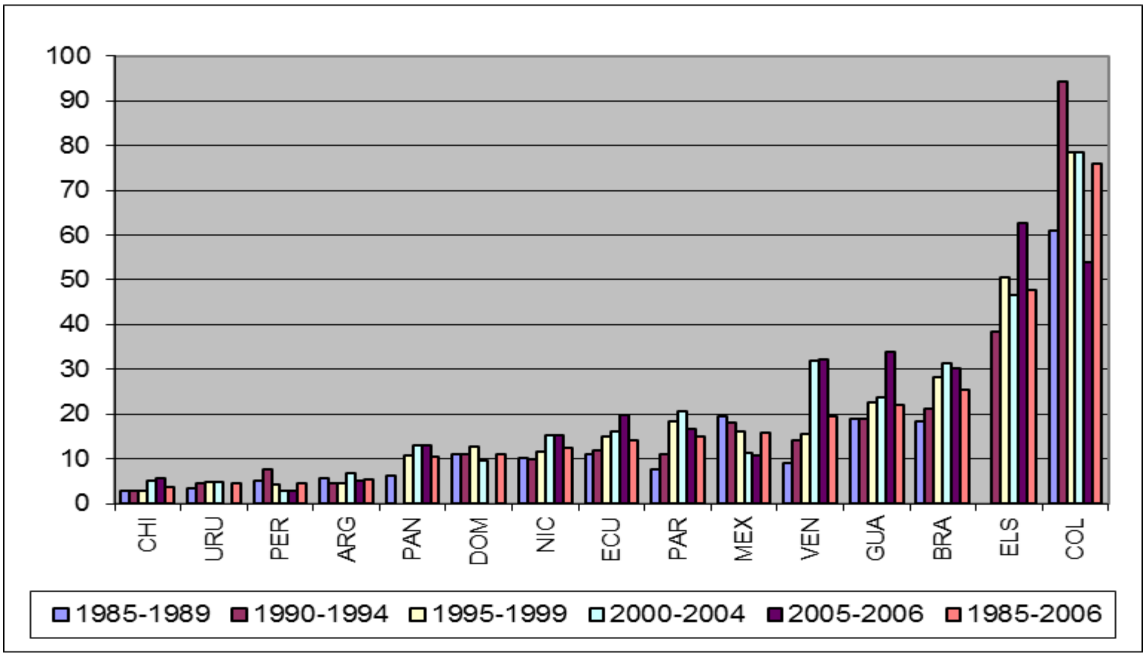

Figure 6.1. Homicide rates in 15 Latin American countries, 1985-2006. Source: PAHO

[346] This graph nicely illustrates the point made in Chapter 2, regarding the dominance of cross-national variation over longitudinal variation.

In Figure 6.2 below we can see the PAHO yearly homicide data for Argentina and Chile. It shows that Chile's homicide rate was lower in 20 of the 22 years covered in the series, but suffered a sharp rise in 2000. Argentina, on the other hand, had a rising homicide rate between 2001 and 2003, coinciding with its severe economic crisis, but with a sharp drop from 2004 onwards, back to historically more 'normal' levels. All in all, homicide data shows that Chile had historically lower levels of homicides than Argentina, but overall differences were always small, similar to the differences, say, between New Jersey and Texas (the former being a state slightly below the U.S. state median and the latter a state somewhat above).

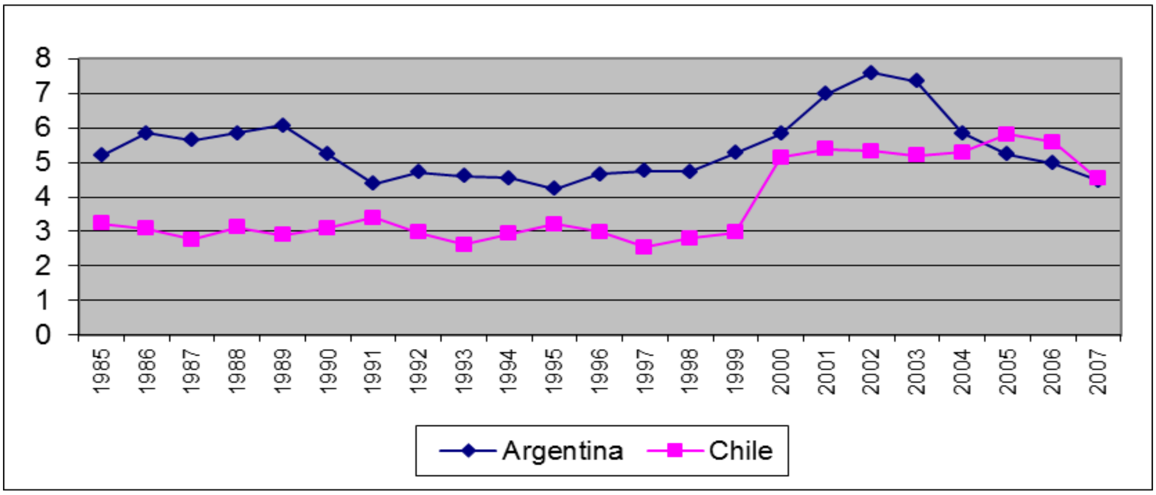

Figure 6.2 Homicide rate in Argentina and Chile, 1985-2007 (homicides per 100,000 persons). *Source:* PAHO

Other sources that cover wider crime outcomes also coincide, if by varying margins, in attributing stably lower crime rates to Chile than to Argentina. Figure 6.3 reports the official crime rate in each country according to each country's police statistics. Since in Chile people tend to report crimes to the authorities more frequently[347], statistics should represent a lower bound of difference. On the other hand,

[347] For instance, in 2000 the Latinobarómetro survey asked respondents who claimed to have been a victim of a crime in the past 12 months whether they had gone to the authorities to register the offense. While 61.5% of Chileans had gone to the police (and 2.4% to the courts), in Argentina the figures were only 53.3% and 0.9%, respectively.

victimization surveys suggest a smaller difference in crime rates (see Figure 6.4), with the 1996-2006 victimization average for Argentina being 42% of respondents, as against 35% for Chile.

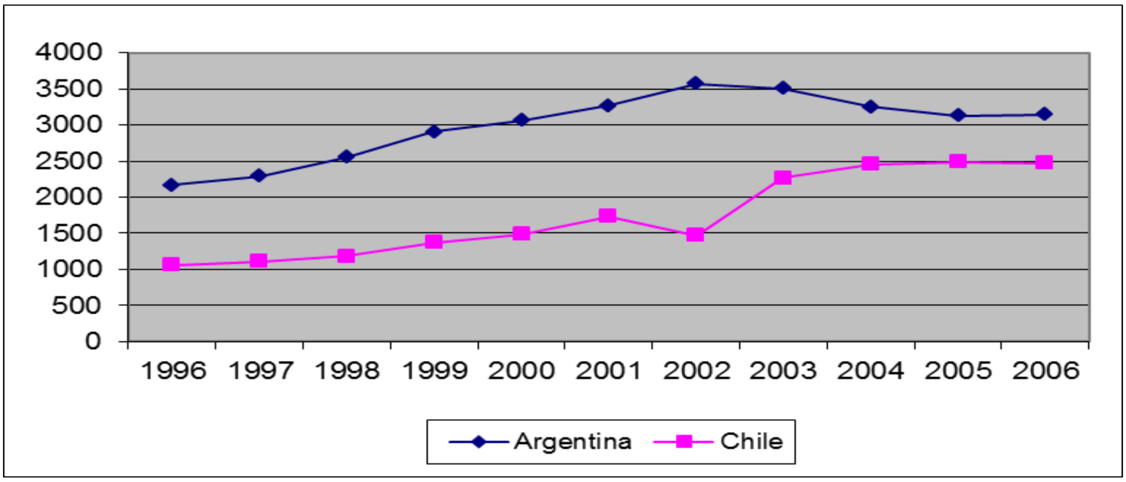

Figure 6.3: Official crime rate per 100,000 persons in Argentina and Chile, 1996-2006. *Source:* Romano (2005) for data from 1996 to 2003. For Argentina 2004-2006, data is from Argentina Ministry of Justice; for Chile 2004-2006, it is compiled by the author from Paz Ciudadana (2009) and official population estimates from INE[348].

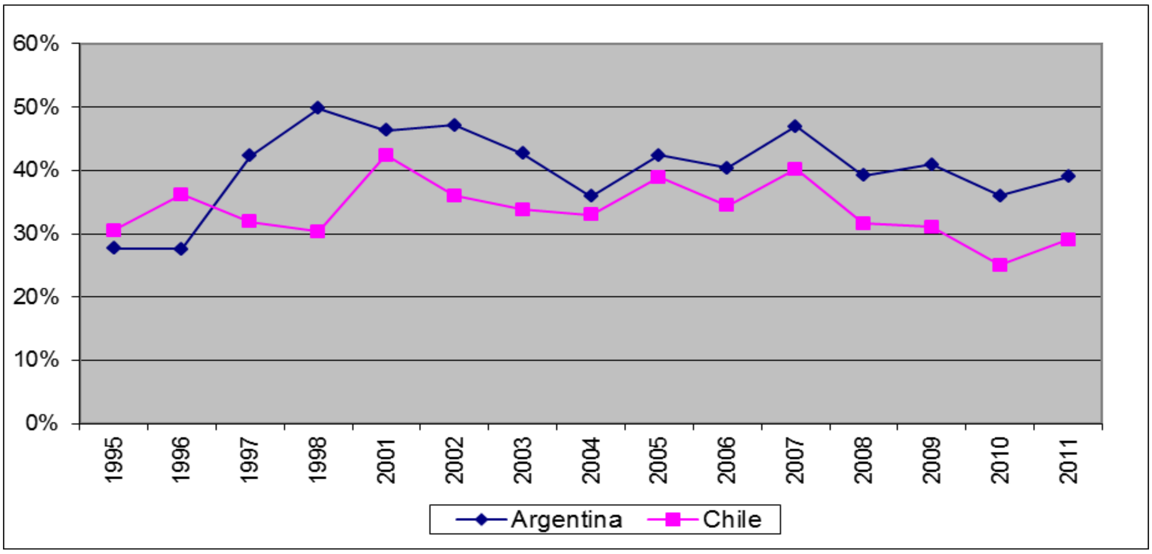

Figure 6.4: Have you or a family member been a victim of crime in the past 12 months? (% 'yes') 1995-2011. *Note:* Data for the years 1999 and 2000 is unavailable. *Source:* Latinobarómetro.

[348] Since all sources are based on each country's official police crime statistics, there is substantial agreement between all of them, as comparison for overlapping years shows.

Finally, qualitative assessments are also consistent with the view that in Chile the crime situation was better than in Argentina. Although in both countries there was a definite rise in criminality during the 1990s and early 2000s – which was felt not just in official figures and victimization surveys but also in fast-rising levels of fear and increasing political and media attention to the crime situation[349] –, only in Argentina was this phenomenon also accompanied by a higher level of *organized* crime. Among the main organized criminal activities in Argentina Saín (2008) identifies drug trafficking, weapons trafficking, traffic of persons, the car theft and auto-part resale industry, 'asphalt pirates' (on-the-road, in-transit robbery of merchandise), kidnap and contraband[350]. Of these, he identifies drug trafficking as the most lucrative. While drug trafficking and car theft are also problems in Chile (though probably of lower magnitude, particularly in the case of drugs), the other forms of illegal trafficking and contraband, kidnappings and on-the-road merchandise robbery are very infrequent or non-existent. Indeed, the core issue for Chile during the period under study was the increase of crimes against property and other forms of common crime[351]. Overall, therefore, available information suggests that there are modest, but fairly consistent differences in Chile's favour regarding crime outcomes.

It should be noted that exogenous or environmental factors did not systematically favour one or the other country during the analysed time period. Both countries are at near-identical levels of income, have low population growth, are largely ethnically homogeneous and neither is on a drug trade route[352]. Table 6.1 shows some further

[349] Valdivieso (1999); Vargas (2005); Romano et al (2005); Lagos and Dammert (2012); Dammert (2006); Saín (2008)
[350] Saín (2008), pp. 62-63
[351] Dammert (2006), p.59
[352] Johnson et al (2012), p.23

factors (taken from data used in Chapter 4) that in that chapter were identified as potentially important for explaining crime rates.

Table 6.1: Income, demographic and inequality differences between Argentina and Chile, 1995-2005

	Argentina	Chile
Average GDP growth 1995-2005	0.9%	3.5%
Male youth between 15 and 29 years (% of population)	12.6%	12.5%
Income inequality (2000-2005, Gini index)	0.51	0.55

Sources: See Appendix B

As can be seen, these factors do not show systematic environmental differences in favour of one or the other country. While both countries are demographically almost identical, differences in long-run inequality favoured Argentina, while short-term differences in economic performance favoured Chile. Certainly, short-term economic factors seem to have played a part: Argentina's crime levels rose during the 1998-2003 recession and crisis years, as did Chile's after the 1998-1999 (milder) 'Asian Crisis' recession; in both countries, post-2003 strong economic growth coincided with stabilization of crime rates. Nonetheless, we have seen that differences were persistent and not dependent on particular cycles; for instance, homicide data – the only one which goes back to the 1980s – shows that Chile consistently had a lower homicide rate all through the 1980s, 1990s and early 2000s, with 2005 and 2006 being the only exceptions. This suggests that, beyond the fluctuations caused by economic factors, Chile had a lower underlying level of crime all along. Indeed, with demography even and inequality playing in Argentina's favour, the 1998-2003 economic crisis in Argentina is not enough to account for long-term lower homicide rates in Chile and consistently lower victimization rates in the 1996-2006 decade (and beyond). This suggests state action may have played a part, and to this I now turn.

2. Comparing police forces

In this section, I compare police bodies on either side of the Andes along two main dimensions: their performance and their internal organization. Under the performance dimension I will compare two aspects: the levels of trust and confidence they generate in the citizenry, and their degree of corruption and involvement in criminal activities. While some information (for instance, survey data) refers to all police forces in Argentina, other refers to either the Federal police – *Policía Federal Argentina* (PFA), its most prestigious force[353] – or to the Buenos Aires provincial police force (the *Bonaerense*), which is the largest of provincial forces. These two are the natural comparators for Carabineros de Chile, that country's main national police force[354].

a. Police Performance

It is interesting to note that Boruchowicz and Wagner (forthcoming) report anecdotal evidence suggesting that a 'reversal of fortunes' occurred between the Santiago and Buenos Aires police forces over the 20th century. In the late 19th century both the city mayor and an observer criticized the (then) local Santiago police, the latter author contrasting it with a superior Buenos Aires police:

> "[In Chile you can easily see] policemen drunk in the street, […] supporting thieves and covering up crimes for a small tip. […] In contrast, the Buenos Aires police admirably fulfills its mission"[355]

Likewise, Boruchowicz and Wagner note that policemen had high status in Argentina in the early 20th century – so much so that one of their ranks, no less a figure than Hipólito Yrigoyen, became President in 1916 –, and that "*Argentina was the centre of many innovations in (...) Police practices in the region, as evidenced by the Latin*

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[353] Hinton (2005)
[354] There is also a smaller investigative police in Chile, the Policía de Investigaciones.
[355] Vera in Boruchowicz and Wagner (forthcoming)

American police meetings held in Buenos Aires in 1905 and 1915". Likewise, *"[b]y 1964 the CIA still reported that the Argentinean Federal Police was 'universally considered one of the best police forces in Latin America, only behind Carabineros de Chile in its efficacy'*", in spite of the deteriorating social status of the Police the same report noted by that time[356].

It is significant that already by the 1960s an external observer such as the CIA could place Carabineros de Chile above the Argentinean police. Interestingly from the viewpoint of the health comparison undertaken in the previous chapter, Boruchowicz and Wagner identify as the key 'reversal' moment of the Chilean police its centralization in 1927 during the government of General Carlos Ibáñez, who unified all local police forces and merged them with a gendarmerie unit lodged in the Army and of which he had formed part. Out of this fusion Carabineros de Chile was born, as a national, centralized and militarized police – features which it maintains to this day[357]. In Argentina, on the other hand, the authors do not pinpoint a specific moment in which a process of institutional decay may have begun, but assume it to have begun somewhere between the 1920s and the 1950s. In particular, the breakdown of democracy in Argentina in 1930 inaugurated a decade of police politization and political policing[358], which some identify as coincident with a deterioration of the police; others point the blame to the 1940s and Perón's reorganization of police forces[359]. However that may be, the 'reversal of fortunes' thesis suggests that, as in health, differences in effectiveness may have been the product of investments in state capacity (or their lack), rather than differences being due to cultural reasons, static 19th century inheritances or purely exogenous (non-state) forces.

[356] Boruchowicz and Wagner (forthcoming), pp. 6-7
[357] ibid, p. 6
[358] Kalmanowiecki (2000)
[359] Boruchowicz and Wagner (forthcoming), pp. 6; see Barreneche (2010)

i) Confidence in the police

There is a very marked contrast between trust in the police forces in Argentina and Chile, with confidence in the police being over twice as high in the latter country (see Figure 6.5).

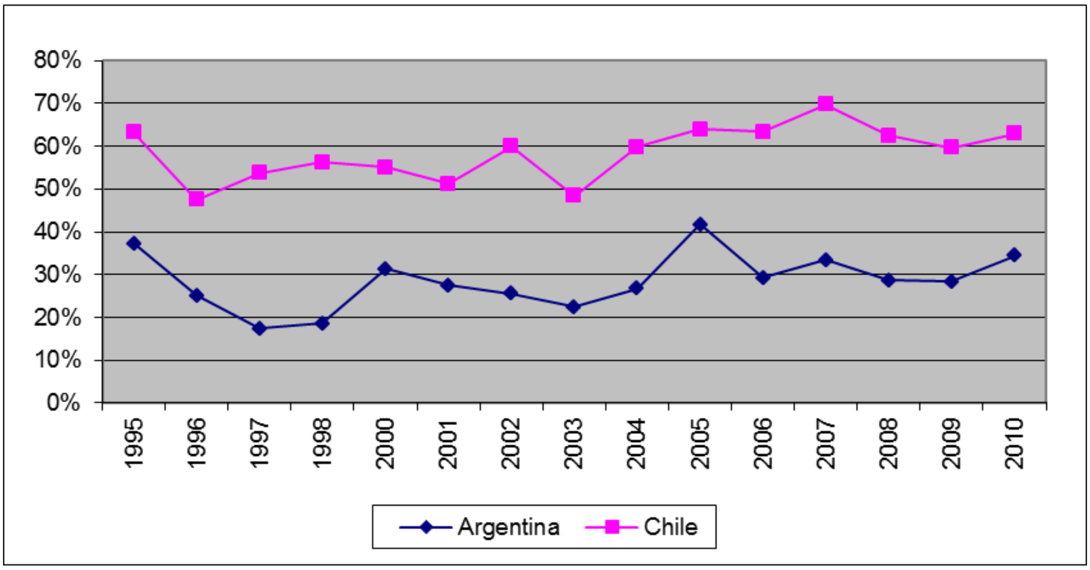

Figure 6.5. Trust in the Police, Argentina and Chile 1995-2010. *Note:* Question is: *How much trust do you have in the police?* Figure shows the added percentages of those who declared 'some' or 'a lot' of trust. *Source:* Latinobarómetro

Between 1996 and 2006, on average 56% of Chileans but only 27% of Argentineans declared that they had either 'a lot' or 'some' trust in the police. This 30-point margin, as we can see above, is broadly stable on a year-to-year basis and is thus not very influenced by specific contingent events. Interestingly, while confidence in institutions is generally somewhat higher in Chile than in Argentina, the difference shown is particularly large and responds to different relative evaluations of the police on either side of the Andes: while in Argentina, as in many developing countries, police forces are amongst the *least* trusted institutions in the country, in Chile Carabineros is one of the *most* trusted ones. Thus, country-level trust in institutions cannot explain the trust gap observed in Figure 6.5 above. But what can?

To answer this it is useful to unpack the concept of trust. Two central dimensions of trust are *integrity* and *competence*[360]. Thus, to trust we need, first, to believe that the trustee will act according to the prescribed rules of conduct as befits his institutional role and not deviate from these in pursuit of self-interest; and, second, that he will execute his prescribed duties in a reasonably efficacious manner. As we can see in Figures 6.6 and 6.7 below, Argentineans exhibit lower trust in their police on both dimensions, but particularly so regarding integrity, where over 60% of respondents in 2004 thought success in bribing a police officer was either 'quite' or 'very' likely and less than 20% thought it unlikely or impossible; in Chile the respective figures were 24% and 48%[361]. Thus, it is clear that Argentines and Chileans have vastly differing ideas as to whether bribes on policemen are likely to work, thus conforming two distinct orientations towards the police as an institution. As regards competence, differences are still significant: almost 80% of Argentines thought that police was being inefficient in its fight against crime, while only 55% of Chileans thought so. Overall, therefore, Chileans trust their police much more than Argentines do, and that trust is not a simple reflection of higher overall trust in institutions; rather, it is based both on integrity and competence evaluations, but especially in the former[362].

[360] Carlin (2011), pp.2-4
[361] This question was asked again in 2008 and the differences between the two countries for this year were even more acute.
[362] Unsurprisingly, the 2010 Latinobarómetro survey identified 'corruption' as the main problem Argentines saw in their police force, while in Chile the first mention by far went to 'not enough personnel'.

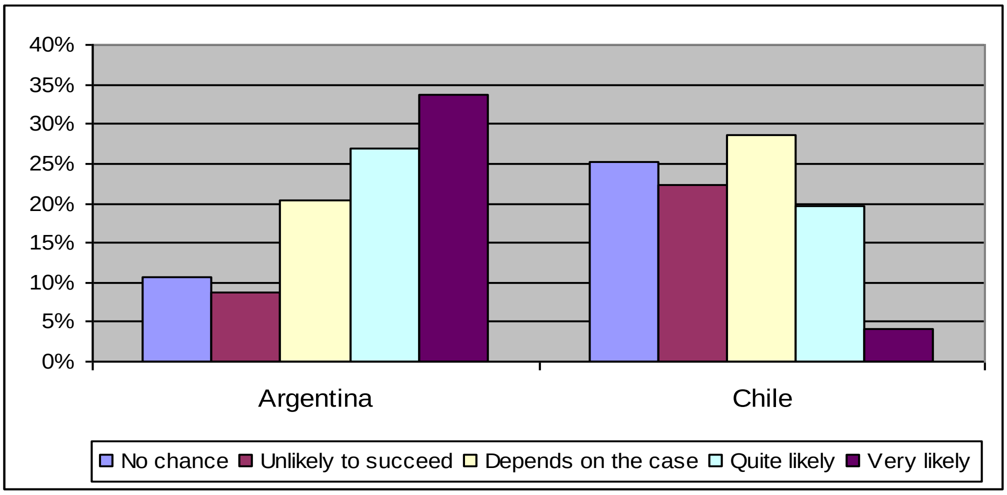

Figure 6.6. Perceived likelihood of bribing a policeman, 2004. *Note:* Question is: *Imagine that a foreign friend of yours, who doesn't know our country, asked you what chances there are around here of bribing policemen in order to avoid an arrest. What would you reply? Source:* Latinobarómetro

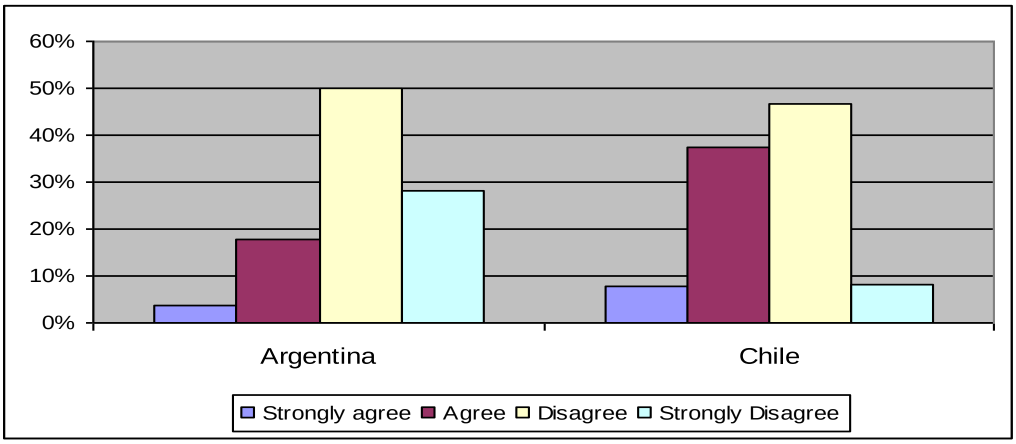

Figure 6.7. Perceived efficiency of police in its fight against crime, 2000. *Note:* Question is: *Do you think policemen in this country are efficient in their fight against crime? Source:* Latinobarómetro

ii) Police corruption and criminality

While police on both sides of the Andes have enjoyed inordinate levels of independence from civilian authorities and from the public at large[363], only in Argentina has this lack of external oversight translated into very serious problems of outright police corruption and even criminality.

[363] Saín (2008); Fuentes (2004)

These two issues in Argentina are closely linked because the central corrupt activity undertaken by police is the protection of organized crime in specific illegal markets (which are thus are informally regulated and kept under some control). Indeed, the *'administration of crime for personal benefit'* goes so far back in time that Isla and Míguez call it one of the police's *'constitutive traditions'*[364].

According to Saín, there is a direct link between the historical use of extra-legal violence by the police, the blurring of the legal/illegal distinction in police action, and the recourse by police to *'direct and indirect involvement in illicit activities developed by diverse organizations or criminal groups through different forms of complicity, cover-up and protection of such groups or through regular police intervention in them, thus leading to a veritable subterranean penal system'*[365]. Gambling, prostitution, adulteration of evidence and protection of small businesses were typical operations in which the police was involved, often through organized involvement from the top hierarchy down to lower-rank officials[366]. In the 1990s and 2000s, however, the crimes in which police became involved were more serious, such as stolen car and auto parts trafficking, human trafficking, drug trafficking, firearm trafficking and kidnapping for ransom, composing *'a ladder of illegality that [went] from street-level police officers and districts' political brokers to top rank officers, politicians and businessmen'*[367]. These ties have been regularly denounced by public figures and police reformers in the country[368].

[364] Isla and Míguez (2011), p.247
[365] Saín (2008), p.78
[366] Fuentes (2004) p.22; Saín (2008), p.83; Eaton (2008) p.19
[367] Fuentes in Isla and Míguez (2011) p.249. See also Eaton (2008) p.19; Saín (2008) p.63; Hinton (2005) p.83
[368] Eaton (2008), p.20

The profits to be had from the protection of these different illegal markets go in three directions. One is the personal enrichment of police agents and also of former police officers who set up private security companies and, using their police and criminal contacts, can very efficiently provide protection and intelligence to private customers[369]. A second flow of money goes into the maintenance and funding of the police institutions themselves, which are chronically under-funded by the federal and provincial governments. An Argentinean police expert estimated that if the Buenos Aires police suddenly stopped collecting illicit funds, they would be able to continue functioning only for the first ten days of any given month[370]. And thirdly and most significantly, the money goes into the personal pockets and campaign coffers of politicians, *who 'offer political protection to police officers in exchange for a cut of the funds that the police raise through a variety of protection rackets'*[371]. This deal is what Marcelo Saín has called a 'reciprocity pact' between the police and politicians based on the sharing of the proceeds of illegal markets[372]. Thus, the police lie in the middle of a triad that includes criminal organization on the one hand, and politicians on the other.

This stable interaction between the organized criminal underworld, police and politics is a distinctive feature of Argentine politics vis-à-vis its Chilean neighbour. In Argentina, a *'grey zone'* of politics exists in which *'the obscure and obscured actions of local [politicians], grassroots brokers and cops meet and mesh in seemingly coordinated ways'*, as was also notorious during the 2001 lootings in Buenos Aires and other cities, in which local (opposition) Peronist mayors, in apparent collusion

[369] Föhrig and Pomares (2004), p.250. Services include protection of property and protection from kidnapping, among others.
[370] Dewey (2011), p.15. He reports a key informant stating that provincial money for office supplies and small repairs for the Buenos Aires Police had not arrived in over 6 months.
[371] Eaton (2008), p.19
[372] Dewey (2011), p.14; Eaton (2008), p.16

with the police, selectively induced and/or tolerated lootings largely orchestrated by Peronist grassroots activists[373]. Protection of corrupt officers by important politicians has also acted as an impediment to police cleansing and reform, and indeed the police has been deployed as a weapon *"in the service of partisan political objectives and as a resource in struggles with members of their own parties"* – as was clearly the case in Duhalde's defence of corrupt officers in his fight for political control of Buenos Aires Province against Néstor Kirchner at the beginning of the 2000s[374].

The security problems police corruption and criminality posed, particularly from the 1990s onwards, should not be underestimated. Indeed, police criminality *'emerged as one of the most pressing and intractable political problems in Argentina's post-authoritarian period'*[375]. As an example of the deleterious effects on security of police corruption, according to one key informant the reason why crime goes up and drug seizures go down in Buenos Aires during campaign time is that police and politicians let the rackets 'do their work' in order to collect more protection money for the campaign[376]. Even more worryingly, as a consequence of protecting a wide array of serious criminal activities, the police was implicated (sometimes directly) in some of the most shocking crimes that Argentina witnessed in the period,

> "…including the 1991 fatal beating of seventeen-year old Walter Bulacio in a Buenos Aires police station, the 1994 bombing of the Argentine-Israeli Mutual Aid Association, the 1997 death of photojournalist José Luis Cabezas, and the 2003 torture and dismemberment of Leyla Nazar and Patricia Villalba in Santiago del Estero"[377].

[373] Auyero (2006), p.261
[374] Eaton (2008), p.21. A more extreme example was provided by the remote province of Santiago del Estero, where in 2004, after federal intervention, governor Juárez – a local caudillo with a 50-year grip on power – was found to have over 30,000 illegal files "detailing police surveillance on legislators, government officials, journalists, members of the clergy and ordinary civilians" (Hintom 2005, p.85)
[375] Eaton (2008), p.6
[376] See Dewey (2011), p.16
[377] Eaton (2008), p.6

To this list we could add the 1992 bombing of the Israeli Embassy and the 2004 kidnap and murder of Axel Blumberg, among others. Between 1993 and 2001, 1468 civilians were shot by either the PFA or the Buenos Aires police in the Buenos Aires Province (and City) alone. While in Chile police killings are rare, fully 31% of all homicides in Buenos Aires City and 10% of those in Buenos Aires Province during the 1990s were committed by police forces[378]. Public insecurity was also increased by the remarkable wholesale and systematic invention of crimes by the PFA since the 1990s – according to one estimate, they amounted to at least 83 cases between 1993 and 2003[379]. The invention of crimes is a practice in which innocent victims were framed so as to conduct high-profile police operations, arrests and seizures of (planted) items such as drugs and heavy weaponry in order to emphasize the effectiveness – and funding and weaponry needs – of the PFA itself[380]. Highly publicized prevention of supposed bank robberies and interception of drug deals clearly generated not just a direct damage to the vulnerable individuals so framed, but increased the general sense of citizen insecurity as a consequence.

All in all, then, a major difference between the Chilean and Argentinean police forces is the involvement of the latter in a wide range of illegal activities that thus contributed to increased citizen *in*security. Through regular participation in or protection of many different and serious criminal activities; through shady connections with local and national politicians that established a ‘grey zone’ of stable interactions between criminals, police and politicians that also involved the police in political feuds and political surveillance; through involvement in highly visible blood crimes and even terrorist activities; through the invention of crimes that increased

[378] Fuentes (2004), pp.18-20. Police abuse more generally seems more widespread in Argentina than in Chile (Cruz, 2009).
[379] Stanley (2005), p.78
[380] Stanley (2005), p.79

citizens' sense of insecurity; and through the regular use of excessive and lethal force against civilians, Argentine police forces have helped to *increase* crime levels and public insecurity. While Carabineros de Chile is no more of a sophisticated police force than the PFA or other Argentinean counterparts, a key difference that emerges is that in its case we are dealing with a police force that is not known to be systematically implicated in criminal activities.

b. Police organization

The generalized existence of corruption within the Argentinean police forces already marks a major difference from the point of view of bureaucratic capacity between them and Carabineros, since ingrained corruption is inherently and centrally antithetical to the successful fulfilment of the mission of any organization. Indeed, corruption in police forces such as the *Bonaerense* is so institutionalized that at least until recently there was an established fee for being promoted or for being nominated to certain 'interesting' positions within the organization[381]. But the question then becomes what is it about Carabineros that has allowed it to be a cleaner and more professional organization than either the PFA or the Bonaerense. Thus, explaining differences between Argentinean and Chilean police forces regarding corruption levels necessarily involves a more detailed look at the organizational differences between police forces.

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i) Selection, training and socialization

Although the police are a public bureaucracy like so many others, it is at the same time highly distinctive in that it is an armed one in which members have sworn to give their life if necessary in the fulfilment of their duties. As Candina (2006) notes, other

[381] Arslanian (2008), p.64

public institutions do not usually have martyrs[382]. At the same time, because police cannot enforce all laws at all times and usually work in the street alone or in pairs with little direct supervision, they command significant amounts of discretionary power. In organizations which combine strong mission orientation and discretion, an unusually high level of indoctrination and socialization into organizational values must be accomplished by police forces in training their new members[383].

Carabineros has a dual advantage in this regard[384]. Firstly, it has been able to select somewhat better educated personnel for the lowest rank-personnel, which makes up to 80% of the force and is crucial in shaping the street-level relationship with citizens. In Chile more than 90% of Carabineros at least completed high school; in Argentina, a 1995 report declared that over a third of policemen had not even completed primary school[385]. Moreover, while training for officers in both the PFA and Carabineros is long (about 4 years), enrolled (low-level) personnel in Chile have between one and one and a half years of training, as opposed to six months of training for the PFA and as little as 3 months in the case of the Bonaerense police. Moreover, there is more continuous training for enrolled personnel in Carabineros, such as workshops and the possibility of attending a Sub-officers school[386].

Boruchowicz and Wagner note that the long, militarized and demanding training of Carabineros may help weed out those only interested in enjoying the discretionary powers of being a policeman. Moreover, it is certainly the first and probably the most

[382] Candina (2006) p.146
[383] Boruchowicz and Wagner (forthcoming), p.8; Hinton (2005) p.82
[384] This and the next paragraph are based on Boruchowicz and Wagner (forthcoming), pp.8-9
[385] Ibid., p.8
[386] Ibid., p.8

influential instance for instilling the values and role expectations of the institution. In this sense, a longer training is functional in socializing recruits into the organization.

In the case of Carabineros, it should be noted that the institutional identity out of which those values and role expectations are derived is strong and clearly defined. It is a force which is *'proud of its clean hands'*[387]. It is a police which conceives of itself as *'being 'everywhere' (...) fulfilling a mission when other public servants cannot or will not'*[388]; it is a a servant and protector of the community and not just in crime-related matters (its functions include emergency disaster relief and even the delivery of babies in emergencies, among many others). It is also, however, an unflinching protector of law and order which will not hesitate in employing force against those who they see as threatening these values. It is an institution, in other words, with strong self-identity,

> "…proud of its social function and of its history, its high acceptance rates and its efficiency (…) [It possesses] an identity of autonomous, unitary, national and hierarchical character, that resolves its problems internally and that gives solutions to society. In these terms, Carabineros shows a powerful coherence over time (…) it is possible to identify a line of thought and a construction of identity inherited and sustained over time, in which there are almost no radical changes or contradictions."[389]

It is such an institution that new entrants buy into and which will provide them with new elements of personal self-identity (as a Carabinero), companions and peers and even new circuits of acquaintances, as the organization still *'checks the family records of a potential wife of a policeman to avoid incompatibilities with policing tasks (...) [and also] encourage[s] strong socialization with the families of other Carabineros'*. Indeed, a 1996 study found that higher-rank officers in Carabineros had decided to

[387] Stone and Ward in Candina (2006), p.149 (my translation)
[388] Candina (2006), p.153
[389] ibid, p.164

join precisely because they had been motivated by relatives in the Force, as well as for a deep respect for the uniform, a 'calling' of service to the community and the prospect of job stability, even if low-paid[390].

All in all then, Carabineros both possesses a strong organizational identity and invests more than its Argentine counterparts[391], through both training and other socialization practices, in reshaping the personal identity of its members so that being a Carabinero who embodies institutional values becomes a part of it. This is what Boruchowicz and Wagner call a *'fundamental transformation'* of individual preferences when joining such an organization and which once effected much increases the cost for the individual of being forced out of it through a dishonourable discharge.

In the Argentinean police forces, on the other hand, not only is training shorter but organizational self-identity weaker. For instance, in the corporatively weaker Buenos Aires Province police force,

> "…when [Buenos Aires policemen] went to play soccer, they carried their uniforms in their bags and didn't show them. To work as a Buenos Aires officer doesn't give you any prestige and there is no feeling of belonging to the institution. Besides, there is a feeling of being inferior to the federal police. Being a police officer is just a job opportunity. You have a steady income, a health plan and a retirement plan. There is no sense of belonging."[392]

Clearly, no kind of 'fundamental transformation' is at work here, and the psychological divide between an 'in' and an 'out' of the organization is notoriously weaker – the decision to remain 'in' the organization is defined in strictly utilitarian terms, which does not act as a barrier to (indeed, is consistent with) being involved in illegal activities for profit while working as a policeman.

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[390] ibid, p.150

[391] Boruchowicz and Wagner (p.9) note that Argentinean police forces do not interfere as much with their agents' private lives as Carabineros does.

[392] M. Sirimarco, in Dewey (2011), p.23

ii) Personnel rotation and labour practices

While strong socialization into the organization is an important element for the creation of a cohesive and clean bureaucracy, the existence of the correct incentives is another. In this respect, Boruchowicz and Wagner show that while in both sides of the Andes the long-term structure of monetary and non-monetary compensation is similar[393], there are two important differences between the two countries in day-to-day job incentives.

These differences are on the policy on second jobs and extra hours on the one hand, and on personnel rotation on the other. Carabineros does not pay for extra hours – even though they are regularly required – and prohibits Carabineros from hiring themselves out for part-time or occasional jobs. In other words, Carabineros 'are policemen "24/7"'. Argentinean policemen, on the other hand, have the de facto freedom to work privately – for instance, as security guards in a soccer match or a public event – and they can also work extra time on police duties, for which they get compensation at a higher rate than their normal wages. In both instances, it is usually the local police chief who sub-contracts his personnel to private companies and who decides whether his subaltern will get extra hours. Beyond the obvious potential for diminished performance by policemen on their main (police) job, the possibilities for corruption are obvious. Subcontracting police services has led to *'the police routinely over-represent[ing] the number of officers subcontracted for private shifts in order to overcharge their clients and pocket the difference'*[394]. Even beyond this damaging corruption, the very possibility of working for private patrons dilutes the line between

[393] That structure is characterized by low wages (particularly in Chile) coupled with pension, healthcare and credit-access compensations.
[394] Hinton (2005), p.85

the state and civil society, and between membership in a police organization and other forms of earning a livelihood. The gulf between the police organization and the rest of society, which Carabineros is keen to preserve, is here undermined[395]. Corruption possibilities are also present in the payment for extra hours which are assigned by the police chief but at the request of the subordinate officer, since they open up the potential for a long-term relationship of exchange of favours within the force, such as cover-up or silence for the chief's wrongdoings in exchange for extra hours[396].

Such long-term relationships of collusion are precisely what are meant to be avoided by the second practice of Carabineros: routine and geographically-unpredictable rotation of personnel throughout the country, more or less every three years. Police in Argentina, on the other hand, do not rotate, particularly those at the street level[397]. This opens up a series of possibilities for collusion and corruption, both within the police force and between agents and local power holders, not least politicians. Interestingly, Boruchowicz and Wagner note that the Argentine Gendarmerie – a more militarized police mainly in charge of roads and border control – also rotates its personnel and is considerably better evaluated by the Argentine public. Rotation of personnel is not, however, exclusive to police forces. As far back as the late 19th century, the Chilean state was rotating its public school inspectors – sent from Santiago to supervise schools throughout the country – so as to avoid their collusion with local bigwigs[398]. This brings us to the final distinctive characteristic: Carabineros is a national police.

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395 This practice however is not particular to the police in Argentina: second jobs have historically been common within Argentine state bureaucracies (Orlansky 1989, p.83).
396 Boruchowicz and Wagner (forthcoming), pp.11-12
397 Ibid, p.12. This is an aspect which shows deep historical continuities. See Barreneche (2010).
398 Soifer (2009)

iii) A national police

Before 1927, police forces in Chile were local, *'making it really difficult to enforce [the] law against local chiefs and powerful landowners'*[399]. In countries with high inequality and wealth concentration such as Chile and Argentina, enforcing the law at the subnational level – particularly in regions far away from the capital – was a problematic feature in the 19th century and beyond. In Chile, unification, centralization and nationalization of the police were the answer. Centralized control together with rotation of personnel effectively broke the connections between local elites and the police. This is a clear instance of investment in infrastructural power, in which the central state manages to enhance its authority over powerful elites and thereby increase its effective penetration of society.

In Argentina, on the other hand, interactions between the police and political parties have been remarkable for their endurance, having existed since the founding of police bodies in different parts of Argentina at the end of the 19th century[400]. But the key aspect is that these police/political networks have always operated at the *local* level since even before Peronist times. In the 1930s

> "…an effort was made (…) to professionalize and bring the police force under the control of a central administration, [but] local political leaders of the same party conspired with elements of the police force against these initiatives or simply disregarded them"[401]

The centralizing game would be played again with some initial success by Perón, but was to be undone once the Peronist party penetrated local power networks and realized the benefit to be had from stable police-party networks at the local level[402]. In

[399] Boruchowicz and Wagner (forthcoming), p.12
[400] See Dewey (2011) p. 13 and references therein.
[401] Isla and Míguez (2011) p.247
[402] ibid, pp.247-248

the end, *'the central government was unable to destabilize the connection between the Police and local fat cats'*[403]. Under this light, it is possible that the lack of rotation within police forces in Argentina may be just as much consequence as cause of these stable local networks of influence, since such a measure would be resisted by local power holders, who thus have the capacity to influence and penetrate police organizations to a much larger degree. In this respect, the multiple governance layers of Argentina's federal structure undermine the capacity of provincial governments – on whom provincial police forces formally depend – to actually rule those police forces. This is because mayors – who lack formal authority over the police – are nevertheless implicated in the nomination and protection of police officers within their jurisdictions. If the provincial government wants to fire a policeman – say the chief of the local police station –, it may meet the stark opposition of the mayor, who may intercede directly with the provincial governor to argue his case. The governor cannot ignore the mayor's will without incurring in some political cost, which will be greater the more electoral power the mayor has[404]. Thus, subnational political dynamics shape security outcomes even beyond the formal rules established in Argentina's federalist Constitution, an issue I return to below.

Taken together, the three differences detected in organization – in training and socialization; in job incentives and personnel management; and in the national scope of the organization – point to clear and marked differences in the kinds of bureaucracies Carabineros is on the one hand, and the PFA and Bonaerense are on the other. Harking back to the concept of bureaucratic capacity, Carabineros is clearly a much more Weberian and indeed Evans-type bureaucracy: it is above all a *cohesive*

[403] Boruchowicz and Wagner (forthcoming), p. 12. For an account of the historical failure of reform attempts of the Buenos Aires Province police up to 1960, see Barreneche (2010)
[404] Föhrig and Pomares (2004) p.246; see Dewey (2011), pp.15-16 for a clear example of this dynamic.

organization, with mission-orientated personnel with very clear boundaries from the outside world which the organization invests heavily in protecting. It is organizationally autonomous from local and national politicians, as well as from wealthy citizens, municipal authorities, judges, and other power holders. While it may lack some of the 'embeddedness' Evans wanted (for economic bureaucracies at least), and which is manifest in its lack of accountability for police abuse, it is clear that its proximity to the ideal of a 'developmentalist' bureaucracy is much greater. As an organization, Carabineros fulfils its basic mission of providing security and protecting from crime, even if imperfectly.

Argentinean police organizations, on the other hand, while also fulfilling that function to a basic degree are simultaneously involved in corruption, crime and insecurity-generating activities, and are thus closer to the *predatory* pole of Evans' bureaucratic continuum. More deeply, they are not autonomous but heteronomous: they have never really *'broken with traditional personalistic and politicized forms of police control'*[405]. While autonomous in the sense of being unaccountable to and ungovernable by formal democratic institutions and authorities (and largely self-funded through corruption), they are particularistically controlled by individual politicians in connivance with police officers inside the organization. This is still, as Eaton has insisted, a form of control over the police, but at the service of the political ends of individual politicians and of party factions[406]. The police as such, however, has been and remains open to all kinds of external and irregular influences – from politicians who protect or fire them, from businesses who hire them, from crime rings who pay them. Penetrated from without and undermined by collusion from within, they thus lack internal cohesion, coherence and clear divisions between the 'in' and

[405] Hinton (2005), p.78
[406] Eaton (2008), p.21

the 'out' of the organization – a particularly serious shortcoming for an arms-wielding, discretionary bureaucracy such as the police.

3. **Politics of police reform**

The involvement of Argentine police in cases of unacceptable police violence, in corruption and crime scandals, plus its evident shortcomings in containing the rising crime wave provided powerful incentives for police reform. In Chile, rising crime and faster-rising subjective insecurity also generated demands for greater security and better police performance. In this section, I briefly review the varying fortunes of police reform in each country over the last decades in order to illuminate the *political capacity* of both countries in the citizen security policy area: that is, their capacity to keep stable policies in the face of political shocks, and their capacity to adapt policies to the reality of rising crime.

In Argentina during the 1990s and early 2000s, many police forces were the object of reform, including the PFA and several provincial forces such as those of Buenos Aires, Neuquén, Mendoza, Córdoba, Santa Fe and Río Negro[407]. Overall, however, it cannot be said that police reform attempts in Argentina have been successful. Although some reform attempts have been far-reaching and ambitious, they have been beset by lack of continuity and repeated instability at all (policy, organizational and political) levels. In the end, reforms *'have had few concrete effects in effectively altering behaviour and operational routines of police forces'*[408].

The case of the Province of Buenos Aires is particularly illustrative. As demands for security mounted in the 1990s, the provincial government initiated a police reform

[407] Föhrig and Pomares (2004), p.231
[408] Ibid, p.231

process. Between 1997 and 1998 it 'intervened' the police force[409]. In April 1998, León Arslanian assumed the post of Minister for Security. He designed and partly implemented a deep and ambitious reform that created severally functionally specialized police bodies out of the Bonaerense (notably separating preventive from investigative roles), decentralized its hierarchical command structure, regionalized the police force to make it more coherent with judicial zones (thus creating an intermediate layer between municipalities and the provincial government), and attempted improved accountability by creating neighbourhood councils and independent municipality-level ombudsmen[410]. However, his reform was fiercely resisted by mayors, who objected to the independent ombudsmen and especially to the intermediate layer that would cut their direct line of communication (and pressure) with the governor, limit their influence over police chiefs and potentially disrupt local police-political networks of funds collection[411]. Growing opposition to his already-partly-implemented reforms forced his resignation from the post. Three months later, a new governor elected on a hard-line stance against crime (he promised "bullets for delinquents") reversed nearly all of Arslanián's reforms.

The opportunity for police reform came again in 2004 after the notorious kidnap and murder of Axel Blumberg[412], which generated a 150,000-strong manifestation in demand of greater security[413]. Arslanián was re-appointed to a job *'widely considered to be the worst of the country'*, and where he promptly

> "…fired the Chief of Police (who had assumed only three months earlier), named a former judge to replace him, announced a massive purge of the

[409] Frohlig and Pomares (2004), pp.242-243
[410] Eaton (2008), p.12-15
[411] ibid, pp.15-21
[412] The police was shown to have been implicated in the crime.
[413] Eaton (2008), p.6

Bonaerense and launched plans to create a new police force for Buenos Aires Province"[414]

Arslanián wasted no time in announcing he would *'reverse Ruckauf's reversal'*[415] of his own prior reforms. This time around he lasted in his post for three years and attempted an even more ambitious reform[416]. All in all, between 1995 and 2004 there were 14 Ministers of Security in the Province[417], three major reforms (1998, its reversal in 1999 and the re-reversal in 2004) and several police purges, but in the end most reform proposals were *'defeated, reversed subsequent to their adoption, or adopted but effectively gutted by their reform opponents'*[418]. Indeed, lack of implementation of measures (often hastily) approved by the legislature is another way of making reforms ineffectual[419]. At the Federal level, things were not much different. The PFA has also suffered frequent purges, was also implicated in cover-up of the Blumberg murder (the recently-nominated chief of a special anti-kidnap squad was forced to resign), and the President's response to the murder was to announce a new security *megaplan* that was promptly deactivated three months later when he fired the Minister of Security, his undersecretary and the Chief of the PFA[420].

While much could be said about the reasons for the failure to reform the police, here I want to underscore four factors that are hindering success. The first is the resilience and financial importance of the police-political fund-collection networks described above. Since they allow both the police and politicians to fund their regular and legitimate activities (policing and campaigning), focusing merely on illegal

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[414] Hinton (2005), p.76
[415] Eaton's expression, in Eaton (2008) p.16
[416] While the results of this second reform attempt fall beyond the time scope of this study, anecdotal evidence suggests that his policies were discontinued and the Bonaerense continues to be a corrupt and ineffectual police force.
[417] My estimate, based on the information in Föhrig and Pomares (2004) p. 243 and Hinton (2005), p.76
[418] Eaton (2008), p.11
[419] See Föhrig and Pomares (2004), p. 247
[420] Hinton (2005), p.76 and p.95

enrichment misses the point and avoids dealing with the fiscal pact that would be needed to fund both activities in legitimate ways.

The second factor is weak bureaucratic capacity. The historical 'delegation' of security policy on police bodies themselves[421] has meant the Executive has very weak inherited technical capacities to design and implement security policies and to effectively oversee police work. Awareness of this technical weakness acts as a further discouragement for police bodies to follow directives perceived as uninformed and non-consulted[422]. The third is political instability[423], which further inhibits reform success because police organizations realize that political reform projects are likely to be reversed after the current and transient figure is removed from his post. In this situation, the dominant strategy for police organizations unwilling to accept a risky change in the status quo is to drag their feet and wait it out[424]. In the end, there is a *'permanent change in formal rules while the temporal horizon is given by the informal rules'*[425].

The fourth factor is Argentina's federal institutions, which are deeply dysfunctional for collaborative security policymaking:

> "[a]lthough provincial police forces in Argentina are under the control of governors, politicians at the federal and municipal levels have actively deployed their separate power bases and sources of legitimacy to influence how governors use their policing authority (…) Repeatedly, politicians at one level of government have sought to close those brief reform windows that have occasionally opened up at lower or higher level of government".[426]

[421] See Sain (2008)
[422] Föhrig and Pomares (2004), p.248
[423] Note that political instability does not *necessarily* imply policy instability, i.e. frequent changes in authorities need not imply frequent changes in policy. In Argentina, however, this is the case.
[424] ibid, p.247, 253
[425] ibid, p.252
[426] Eaton (2008), p.14

Those conflicts are not just between provinces and mayors, but also between governors and the President and even between the federal government and municipalities (particularly the City of Buenos Aires)[427]. Lack of cooperation has also manifested itself in an almost complete lack of a national strategy to combat crime: though a 1991 law specifically created a Federal Internal Security Council meant to coordinate the federal government with the provinces in security matters, it has only functioned as an instance to negotiate transfer of funds for police equipment; in fact, it took 10 years for the first meeting to happen at all[428]. In Spiller and Tommasi's (2007) terms, federalism, by multiplying the number of relevant actors in the security policy area (most of which have very short-term horizons), makes cooperation for sustainable reform highly unlikely. Non-cooperation leads to policy instability, since committed reformers must attempt large-scale, 'shock-therapy' reforms whose effects must be *'immediate, wide-ranging and irreversible'*. It follows the logic of imposition rather than of consensus, and is thus subject to swift reversal[429].

In Chile, on the other hand, reform attempts followed a much more consensus-based approach which is again consistent with this country's policymaking environment and political capacity. As crime and (especially) subjective insecurity rose in the 1990s, citizen security rose to the top of the political agenda and the government – as in Argentina – was confronted with the task of providing policy answers while working with a police that had been recently implicated in atrocious crimes during the previous military dictatorship. However, although Carabineros is a strongly corporatist, secretive, politically powerful and semi-autonomous (from control by democratic authorities) institution, it is not corrupt and it is a national organization operating in a

[427] Ibid, pp.12-19
[428] Hinton (2005), p.84
[429] See Föhrig and Pomares (2004), p.252

unitary country. Thus, two major impediments to reform in Argentina – police/crime/party networks on the one hand, and federalism on the other – are not present in Chile. Amidst a wider stable political environment, successive democratic governments engaged Carabineros in collaborative reform efforts which were orientated only partly to police reform as such, and mostly to producing innovations in security policy itself.

Efforts at police reform in Chile were gradual, collaborative, and mostly orientated to improving effectiveness and efficiency in preventing crime. No purges were involved, and effectiveness rather than police accountability or reorganization was the focus:

> "…the strategy of the democratic administrations was to avoid interfering with the internal organization of the Carabineros. Emphasis was placed on consolidating police operations, maintaining the force's institutional nature, and strengthening its community relations".[430]

In spite of these limitations, Carabineros did reform on some key fronts. Firstly, it drew away from defending the military dictatorship and especially its human rights abuses, in which Carabineros was deeply implicated. This discursive change was part of a more comprehensive move away from National Security doctrines (typical of Latin American dictatorships in the 1970s) and closer to a 'citizen security' paradigm[431]. A second front of improvement was operational: Carabineros experienced not just technological modernization but also important advances in operational strategies and efficiency. This included a joint collaborative work with government experts in developing performance indicators suitable to helping with the internal and external evaluation of Carabineros, amidst a drive to focus more on

[430] Dammert (2006), p.69
[431] Dammert (2006), pp.70,73. For similar efforts in the investigative Chilean police, the Policía de Investigaciones, see Lünecke and Candina (2004)

impacts than on process[432]. Finally, Carabineros also made improvements in its community relations and in community policing strategies.

In this general context of gradual institutional reform, a larger focus was placed by both government and Carabineros in improving security policy itself. Major efforts were made in data collection and systematization, in developing governmental bureaucracies and expertise in citizen security matters, and in testing and rolling out innovative programs that could help fight crime and lower citizen insecurity[433]. The most notorious of these was the Block Watch Program (Plan Cuadrante), which divides large cities into blocks which are then patrolled continuously by specifically-assigned policemen. Positive internal evaluations of the program in diminishing citizen insecurity and in improving police-community relations meant it was rolled out nationally after its pilot phase ended. While rigorous evaluations of the program's impact are lacking, Dammert et al found in a quantitative study that after controlling for many individual (micro-level) factors, the community-policing approach followed by Santiago vis-à-vis various Argentinean and Brazilian cities showed a statistically significant positive effect in diminishing fear of crime[434]. More generally, an emphasis on security policy evaluation has permeated both the government and Carabineros. To this end, since 2003 the government funds a large yearly victimization survey that covers all of the country's major urban areas, and which is considered a key input for policy evaluation (as well as being a highly-publicized instrument of accountability)[435].

[432]Frühling (2009b); Dammert (2006), p.71
[433] Dammert (2006), pp. 71-73; Bailey and Dammert (2006), p.16
[434] Dammert and Malone (2006).
[435] Argentina also had a victimization survey since 1996, but it was discontinued in 2003.

In sum, the Chilean policymaking environment was marked by stability, collaboration and gradualism in reform, even at the cost of making little progress in bringing the police under the full control of democratically elected authorities. Although progress was slow and citizen dissatisfaction with the security situation remained relatively high, in the decade between 1996 and 2006 clear advances were made in developing organizational capacities in both the police and government to diagnose crime, combat it better and to develop, implement and evaluate new security policies. In fact, the most notable of these policy innovations was associated not with the police but with a key criminal law reform that dramatically increased the justice system's efficiency, demonstrably reduced public insecurity as it was rolled out across the country, and by sharply reducing the amount of pre-trial detainees was able to simultaneously improve defendants' rights[436]. That such a major, long, complex and expensive reform was able to succeed is testament to the high political capacity of the Chilean state during the 1990s and 2000s.

4. Conclusion

In this chapter, I have compared crime outcomes and police performance in Argentina and Chile, as a means of assessing whether either state is providing more or better security to its citizens. I have showed that the data suggests consistently better security outcomes in the Chilean case, but that the difference is not large – certainly not in regional terms, where both Argentina and Chile are among the safest countries in Latin America. Both countries experienced a rising crime trend during the 1990s and early 2000s; I argued, however, that that rise is likely to have been caused by exogenous factors, particularly rising inequality and unemployment (and especially so in Argentina). In this context, establishing a direct causal link from state performance

[436] See Tiede (2012)

in the citizen security arena to actual crime outcomes is difficult, and certainly less obvious than the dramatic impact that sustained public health state action made on infant mortality.

Although admitting the difficulty in making hard inferences from state performance to crime figures, a systematic comparison of police forces on either side of the Andes nevertheless suggests important differences in their relative contribution to citizen security. I first showed survey data that shows a large and stable difference over time in the trust (in the two dimensions of integrity and competence) citizens have on the police in each country.

In second place, I showed that there are large differences in the actual contribution to security made by the respective police forces. While Carabineros is an institution broadly committed to its citizen security role – that through the actual fulfilment of its prescribed tasks makes a contribution to security in Chile –, in Argentina that same contribution is diminished and partly undone by police forces' involvement in the protection of organized criminal activity. While in Chile Carabineros contributes to security, in Argentina police forces contribute to security *and* insecurity simultaneously. I then argued that a main reason for this state of affairs lies in the specific organizational history of Carabineros vis-à-vis Argentinean police forces. While in both countries police forces are militarized and very hierarchical, only in Chile the police managed to become an autonomous organization in Evans' sense of a bureaucracy that is not penetrated in its internal functioning by political, economic or personalistic influences. The strong boundaries Carabineros maintains between itself and the outside world through investment in training, socialization and personnel management practices stand in a strong contrast to the permeability of Argentine police forces to political and economic influences at every level of their organizations. Thus, I argue that the difference in bureaucratic capacity between Carabineros and Argentine police forces – particularly the Argentine Federal Police and the Buenos Aires Province police – is largely responsible for their differences in performance. Finally, I showed that Chile had been more successful at police and security-sector reform than Argentina, and that this was due to Chile's higher political capacity, marked (unlike Argentina) by few actors with long-term horizons working in a wider collaborative policymaking environment.

In terms of my overall theoretical argument, I therefore advance two conclusions. Firstly, that even though this is less obvious than in the case of infant mortality and health, in the security sector the Chilean state has been more effective than its Argentinean counterpart in 'producing' the public good called citizen security. Though this analysis has centred on the police, where the differences found are stark, there is not much reason to suppose that an analysis of the justice or the penal systems would reverse this conclusion[437]. In fact, though we saw Chile has a lower victimization rate than Argentina, throughout the 1996-2006 decade it had a considerably higher rate of imprisoned population than Argentina, suggesting a more efficient justice system and a greater effective deterrence capacity than in Argentina[438].

The second conclusion points to the relative importance of each of the different dimensions of state capacity in explaining Chile's better performance. Since all three

[437] In fact, authors have pointed to deep inefficiencies in Argentina's justice system (Sain 2008, p.68; Eaton 2005). In Chile, while far from ideal, justice reform has been considered the most successful in Latin America thanks to its simultaneous improvement of judicial efficiency and of the rights of the accused (Tiede 2012).
[438] See Figure 3.3 in Chapter 3 for prison figures in Latin America.

have been found to be higher in Chile's case, it is difficult to say which is 'the' dimension responsible for this state of affairs. Chile showed it had higher infrastructural power when it managed to successfully unify, centralize and nationalize what had hitherto been separate police forces, and to do so in a way that successfully broke local connections between local power holders and police officers. In turn, this increased the state's infrastructural power by increasing the universality and effectiveness of its law enforcement capacities. Successful centralization and bureaucratic 'autonomization' of the police constituted a valuable institutional legacy that has shaped Carabineros ever since. In Argentina, the process was the exact inverse: failed centralization during the 1930s and 1940s that could not break police forces' local connections, and an institutional legacy of weak bureaucratic autonomy and enduring corruption. As in the case of health policy, therefore, I conclude that infrastructural power and bureaucratic autonomy are very closely interlinked and mutually reinforce one another.

So what about political capacity? Since organizational reform is also a policy, only states able to change the status quo in enduring ways can change their current state capacity. In other words, political capacity turns out to be the 'flow' that either adds or subtracts value from the inherited infrastructural-bureaucratic capacity 'stock'. But, according to Spiller and Tommasi's (2007) framework, countries with better bureaucracies (more bureaucratic capacity) tend because of this (among other factors) to have higher political capacity in the first place. This is in fact what we find in this bi-national comparison: Chile's legacy of higher bureaucratic capacity, both in its police force and its state (security) bureaucracy, was an element that contributed to its greater capacity for effective reform in its security sector. The three dimensions of state capacity are thus closely related. Nonetheless, can we say if there is a 'dominant' dimension in the security sector?

Since a clean and competent police force – together with a clean and minimally competent justice system – are the basis of a state's deterrence capabilities, it makes sense to identify bureaucratic capacity as the key state capacity dimension. On the other hand, a full analysis of the citizen security sector would need to look not just at the three separate subsystems (police, justice and penal) individually, but at their *interaction* and at their *coordination* throughout the national territory. This is an issue of infrastructural power, as we saw when looking at the health system in the previous chapter. In security, as in health, large bureaucracies collectively covering the entire national territory and working in coordination are needed to produce the desired public good. I therefore conclude, as I did in the case of health, that the infrastructural power- bureaucratic capacity interaction is the key aspect of state capacity that explains a state's security performance. Political capacity, on the other hand, helps to explain the success or failure of reforms and changes *at the margin*, and is therefore a better predictor of whether the future performance of the state in the sector will improve or deteriorate.

Chapter 7

State capacity and economic regulation performance in Argentina and Chile

1. Introduction

In this final chapter, I will compare Argentinean and Chilean policy outcomes and state capacity in the field of economic regulation. As before, the goal is to evaluate, firstly, whether state capacity influenced observed policy outcomes; and secondly, the relative importance of the three dimensions of state capacity in affecting (if at all) those outcomes.

For the comparison to proceed, it is first necessary to establish what I will understand as the relevant policy outcome. If secure private property rights are the basis for the very existence of a working market economy, economic regulation is the means by which a complex, modern capitalist system prevents different kinds of market failure and/or the abuse of market power by dominant players. In other words, by regulating different aspects of the economy, governments seek to ensure that different markets do in fact serve the public interest instead of serving the interests of the few. Thus, the normative assumption is that well-regulated markets are better than either statism or unregulated markets. As discussed in Chapter 2, this is precisely the line followed by the World Bank since its influential 1997 World Development Report[439]. The very idea that markets need to be 'well'-regulated, however, means that not any regulation will do. Regulations which hurt markets (by preventing entry[440], by inefficiently raising business costs, by protecting or reinforcing market power of incumbents, etc.) are likely to damage the economy. By contrast, when regulation prevents

[439] World Bank (1997)
[440] Djankov et al (2002)

anticompetitive behaviour, when it helps internalize costs and benefits and when it solves information asymmetries, it prevents market failure and thereby benefits the economy and fosters growth[441]. Thus, the relevant outcome to be compared is the *quality* of market regulation, with 'quality' measured as being conducive to well-working markets.

More specifically, I will understand good regulation as having two properties. One is that it is pro-competition, that is, that it enhances rather than obstructs the competitiveness of markets. The second is that it is reasonably stable over time, since whatever the content of the outstanding regulation, its stability allows business to make rational investment plans. When regulations are unstable, markets work less efficiently because all actors operate under higher degrees of uncertainty and are therefore less likely to make long-run investments and commitments.

Having defined the outcome to be compared, in the next section I will compare Argentina and Chile in terms of the quality of their economic regulation and the associated competitiveness of their markets. Such a comparison is necessarily broad; therefore, to enhance the validity of the exercise and to explore in some depth the mechanisms involved in the generation of regulatory outcomes, I will then turn to a more specific assessment of outcomes and processes in each country in two related economic sectors: the electricity and telecommunication industries. Through these more in-depth comparative case studies, I will be comparing and evaluating Argentina's and Chile's states' performance in the role of regulating their respective economies, and causally assessing the role of state capacity in producing observed outcomes in those industries in each country.

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[441] Rodrik (2007), p.157; Jalilian et al (2007).

2. Results comparison

Comparing economic regulatory quality or the competitiveness of an economy's internal markets is a much more subjective exercise than comparing either crime rates or infant mortality outcomes, and this must be recognized from the outset. At a macro-comparative level the primary tool for evaluating regulatory quality is expert evaluations and surveys, as was discussed in Chapter 3. Because this line of evidence was already explored in the construction of the regulatory quality index, in this section I provide very succinct additional evidence to argue that, at a macro or economy-wide level Chile achieved systematically better regulatory outcomes than Argentina in the 1996-2006 period.

I begin reviewing the regulatory quality index built in Chapter 3, but disaggregated for the full 1996-2006 period. It will be recalled that this index was built from specific quality-of-regulation data from the Heritage Foundation's Index of Economic Freedom and from the Economist Intelligence Unit. In Figure 7.1 we can see that Chile scored systematically better through the whole 1996-2006 period and had a very stable score, whereas Argentina had an unstable performance, deteriorating sharply from 2002 onwards.

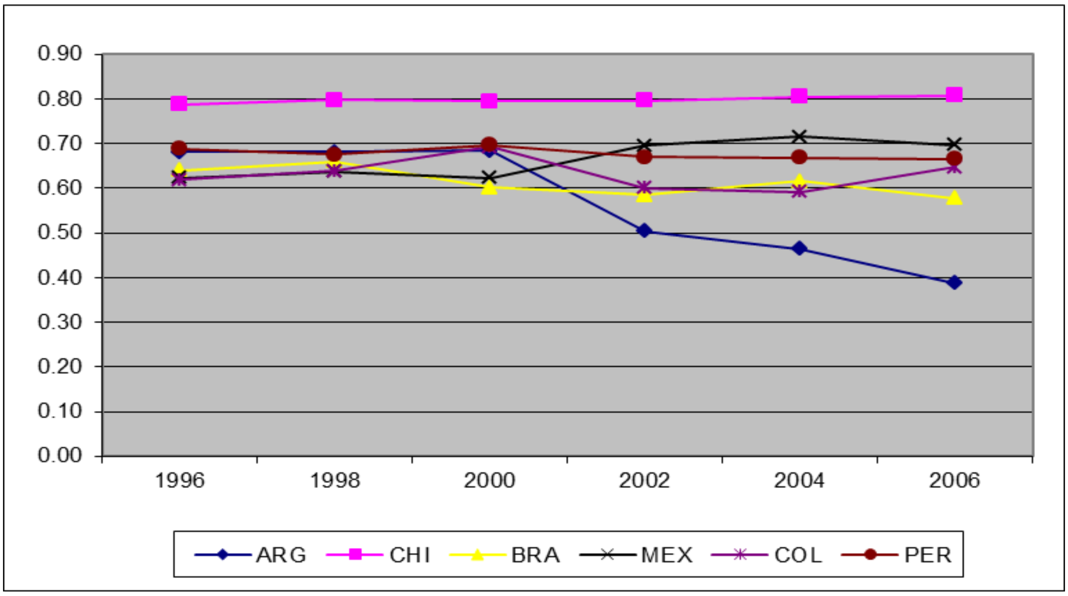

Figure 7.1. Index of Economic Regulation, 1996-2006. *Note:* As explained in Chapter 2, the Index has a minimum value of 0 and a maximum value of 1. *Source:* created by author from data in Appendix A.

A largely similar result is observed in the World Bank's Regulatory Quality Governance Indicator, which uses a very broad range of sources[442]. Beyond differences in levels, however, there are important differences in the stability of results, as Figure 7.1 above shows. Over the longer run, Argentina went from being a strongly statist economy in the pre-1989 period to being a highly liberalized one by the end of the 1990s[443], and then partly back again to a more market-suspicious model of development. This long-run regulatory instability can be seen in Figure 7.2, which plots Argentina's (and Chile's, among other countries) Fraser Index of Economic Freedom from 1970 to 2003. While Chile also shows large variation, it is a one-way variation, not an oscillatory one.

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[442] Though, as was discussed at length in Chapter 2, suffers from some validity concerns and was therefore not used as the main regulatory quality indicator in this study.

[443] For instance, the Lora Structural Reform Index for 1999 placed Argentina as the 4th most liberalized economy in Latin America and surpassing Chile (Lora 2001, p.22). Likewise, Figure 7.2 above shows Argentina almost reaching Chile's score on the Fraser Index of Economic Freedom by the year 2000.

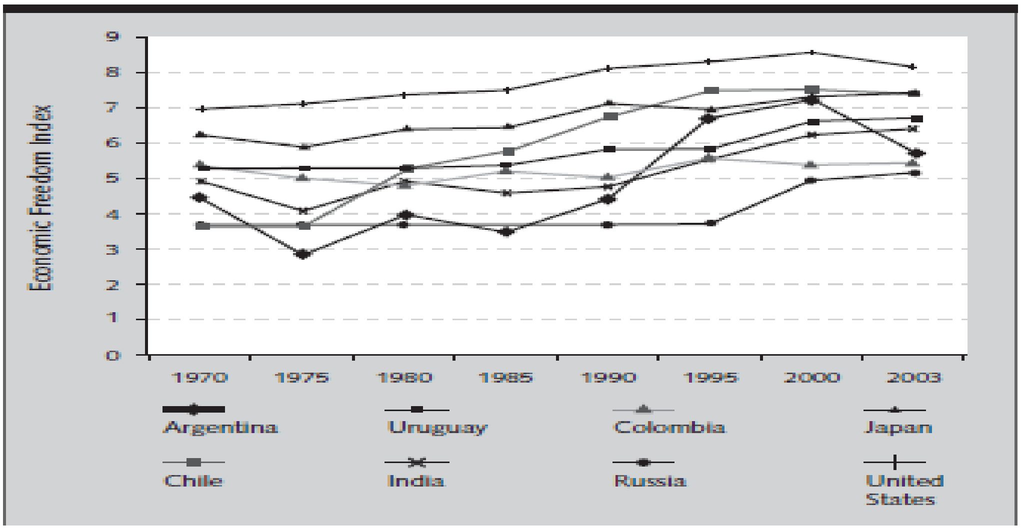

Figure 7.2. Fraser Economic Freedom Index, 1970-2003. Source: Spiller and Tommasi (2008), p.72.

A more microeconomic perspective, better focused on regulations as such, similarly suggests better regulatory quality and enforcement in Chile. For instance, Figures 7.3 and 7.4 below show that the interviewees of the Global Competitiveness Survey considered Chile to have the most intense competition in local markets in Latin America and its most effective anti-trust policy. Of special note is the perception among the business people (interviewed in 2006) that Chile's anti-monopoly policy effectiveness is by far the greatest in the region, in spite of an economy in which large business groups are in fact heavily present in a wide array of economic sectors. Thus, it would seem that Chile has more competitive markets than Argentina and that this fact is at least in part due to its better regulation of those markets, in this case through antitrust regulation and its application.

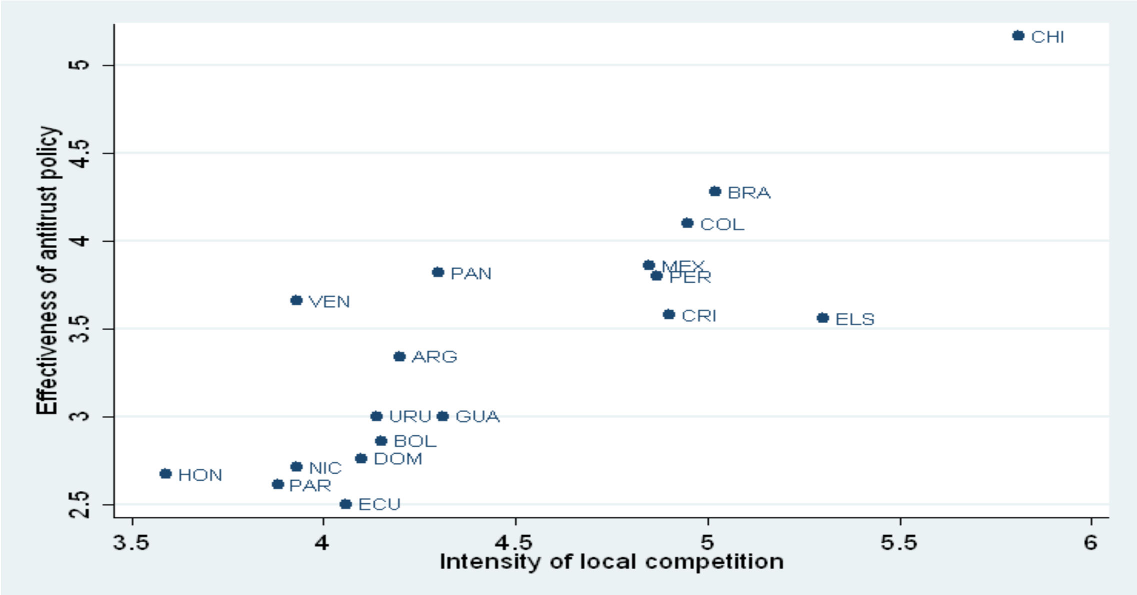

Figure 7.3: Effectiveness of antitrust policy and Intensity of local competition in Latin America, 2006. *Note:* Questions: *How would you assess the intensity of competition in the local markets in your country?* [1 = limited in most industries; 7 = intense in most industries]. *To what extent does anti-monopoly policy promote competition in your country?* [1 = does not promote competition; 7 = effectively promotes competition]. *Source:* World Economic Forum (Global Competitiveness Survey 2006).

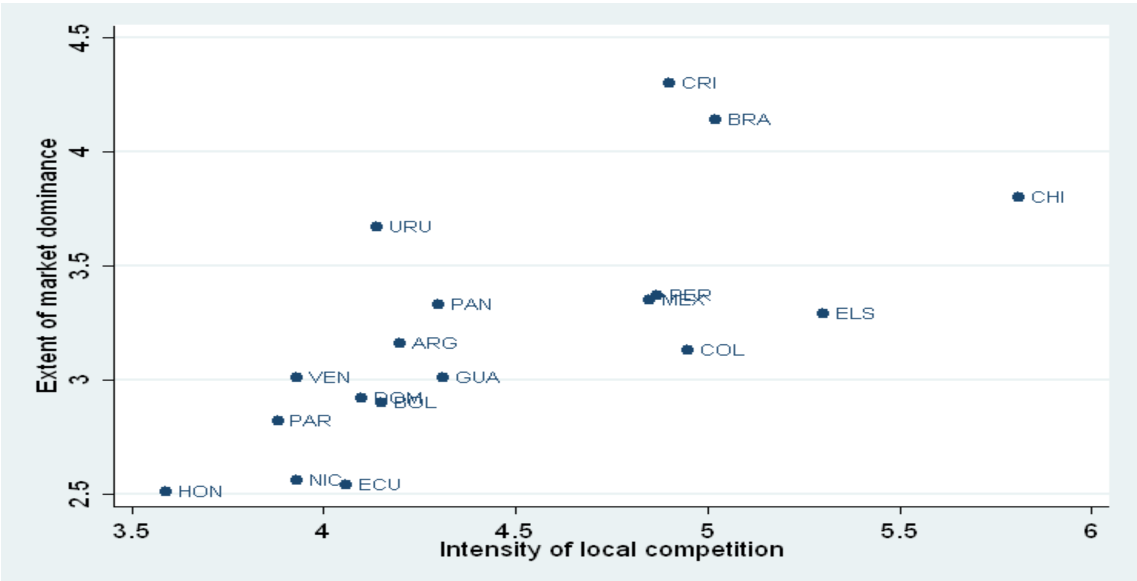

Figure 7.4: Extent of market dominance and Intensity of local competition in Latin America, 2006. *Note:* Questions: *How would you assess the intensity of competition in the local markets in your country?* [1 = limited in most industries; 7 = intense in most industries]. *How would you characterize corporate activity in your country?* [1 = dominated by a few business groups; 7 = spread among many firms]. *Source:* World Economic Forum (Global Competitiveness Survey 2006).

Examples could be multiplied – for instance, interviewees of the Doing Business Survey of the World Bank considered Chile to have the least obstacles to business operation and growth in the region, and complained significantly less than about Argentina regarding the existence of anti-competitive policies and of policy instability[444]. Other kinds of evidence, such as financial sector development data – a sector that due to its intangibility and intertemporal nature is particularly reliant on regulation that properly assigns and protects property rights and corrects informational asymmetries – show that Chile has the most developed financial market in Latin America (with Brazil a close second), while Argentina is a distinct laggard[445].

In sum, comparative, aggregate evidence suggests that Chile has done much better than Argentina in generating stable, pro-competition regulation, and as a result deeper and more competitive markets. Both perception-based and 'hard' data support this view. I conclude therefore that significant differences exist in the quality of regulation between Argentina and Chile.

However, does this mean anything in terms of a state capacity argument, when post-2002 Argentina so manifestly refused to 'play by the rules' of international financial institutions? Isn't this a particularly stark instance of a country choosing the 'wrong' policies (from the normative perspective adopted above) rather than of differentials in capacity leading to such divergent outcomes? In other words, how can we judge post-2002 Argentina by the normative claims of a regulatory blueprint it manifestly did not follow?

[444] Khemani and Carrasco-Martín (2008), p.72
[445] See Bleger (2010), p.7,Table 1.

My answer to these questions is twofold. Firstly, I accept that policy *content* is the main driver in differences in outcome, as measured in different indicators and data shown above. Chile's regulations were more business- and more competition-friendly (though the two are not the same), particularly after 2002, and this is reflected in the indicators. Just as in crime non-state factors (such as economic cycles or unemployment) could be a cause in explaining differences in crime rates, so here it is policy *content* rather than state capacity which plays an important – perhaps even dominant – role.

Nonetheless, beyond policy content (such as the business-friendliness of regulations), *regulatory stability* is a further good because it enhances business predictability and therefore allows longer time horizons in investment decisions. Stability, in and of itself, is a desirable aspect of regulations which should also be taken into account when analyzing the effects of such regulation on investment and growth; and as I have already shown but as I will further show in greater detail below, Argentina's regulatory policies were highly unstable before and during the period considered in this study. This is not an issue of friendliness or unfriendliness to market policies, but of time consistency. And secondly, because in the pre-2002 period Argentina did in fact follow a neoliberal template quite close to the one Chile had developed since the 1980s (and throughout all our period up to 2006), a 1990-2002 comparison of the two countries permits a more fine-grained analysis of state capacity in designing and applying those regulations in specific sectors of the economy in either case. Most specifically, by focusing in privatized public utilities markets and their evolution on either side of the Andes, I will compare Argentinean and Chilean state capacity in the economic arena in such a way that isolates to a substantial degree the issue of divergences in the overall economic model adopted in Argentina in the post-2002 period.

Thus, by analyzing the implementation and practice of regulation in privatized public utilities markets, I seek to circumvent a purely content-based comparison of regulations and to look instead at state capacity in the economic regulation arena. In other words, I seek to assess whether state capacity differentials can be connected to differences in regulatory quality in either side of the Andes. My main argument will be that over and above the differences generated by the more business-friendly content of Chile's economic regulation, its greater political capacity – as observed in the stability of its policies and the strength of some specific state institutions (notably Congress, the judiciary and the anti-trust tribunal) – led to more competitive markets and to an overall more growth-facilitating and sustainable economic environment. In Argentina, by contrast, even at the height of its pro-business orientation during the 1990s the country could not do away with the politicization, opportunism and instability of its regulatory interactions between government, business and consumers; moreover, the economic crisis of 2002 triggered a partial reversal of the previous decades' reforms, thus preventing the consolidation of the chosen economic development model in what constituted yet another historical swing of the country's policy pendulum.

3. Public utilities in Argentina and Chile: a case comparison

The choice of the electricity and telecommunications sectors for comparison is based on several reasons. Firstly, both industries are large in both their economic weight within the economy and in terms of their importance for (and coverage of) the national population. Voice and light – to use Murillo's (2009) happy expression –

matter a lot to people and they matter to nearly all people, and because of this their impact on aggregate welfare is large. Secondly, both industries are largely non-tradable and therefore minimally open to international competition – at least in the case of Argentina and Chile, importing electricity (to say nothing of telecommunication services) to remedy lack of competition or efficiency in the local market is not a viable option[446]. They are also industries that for most of their existence have been considered natural monopolies, and in which therefore the role of the state in either accepting such monopolies or generating competition in them is direct and decisive – the state, in other words, is a key player in these markets, whether as producer or as regulator. They are therefore ideal industries in which to study the relationship between state capacity and economic regulatory outcomes.

Finally, both Chile and Argentina privatized both utilities in the closing decades of the 20th century – Chile in the 1980s, and Argentina in the 1990s. Moreover both did so under governments (Pinochet in Chile and Menem in Argentina) who adopted more or less comprehensive neoliberal policy orientations and of which these privatizations were but part of a larger move away from statism and towards more market-oriented economies. They therefore shared, at least until Argentina's macroeconomic crisis in 2002 and the ensuing (if partial) economic policy re-orientation under the Kirchners, a fundamentally similar economic strategy. For these reasons, comparing the fate of these two industries in each country since their privatization in Argentina at the beginning of the 1990s provides about as economically relevant, analytically apt and methodologically clean a regulatory comparison as one can hope for between these two countries.

[446] Argentina has some electrical interconnection with Brazil and other neighbouring countries which can help palliate a shortfall in production. However, price and quantity of electricity are, for all practical purposes, the product of internal market conditions rather than of imports. Chile, on the other hand, has no electrical interconnection with neighbouring countries.

In what remains of this chapter, I structure the comparison through four subsections, followed by the chapter conclusion. In the first subsection, I present a short theoretical overview. In the second, I review the privatization process in each country. In the third, I contrast the differences in design between the Argentinean and the Chilean regulatory systems. In the fourth and main section, I compare the actual experience of regulation in both countries and both industries, from the point of view of its implementation, stability and evolution.

a) Theory: the regulatory problem

In the regulation of privatized utilities the main problems are how to avoid regulatory *expropriation* on the one hand, and regulatory *capture* on the other, so that the regulated firms behave *as if* they were in a competitive market, i.e. with 'normal' rate of returns on investment adjusted by risk.

Expropriation risk is the product of a particular regulatory problem in privatized public utilities: that of credible *commitment* of the state to the rules of the game set down at the privatization moment. The dilemma is simple: at time zero (privatization) states need to offer reasonably attractive conditions (in terms of market regulation) to investors in order to sell the firms at a good price and to generate conditions so that the new owners will realize usually much-needed and expensive investments in fixed assets. At time one, however, when firms have already invested, the state has every incentive to change the rules so that the benefits of those investments accrue either to itself directly or to consumers (who tend to approximate the full set of voters) through changes in market regulation that redistribute income from producers to consumers (indirect expropriation). In other words, *'[t]he combination of significant investments* *in durable, specific assets with the high level of politicization of utilities (...) [means that] utilities are highly vulnerable to administrative expropriation of their vast quasi-rents'*[447]. A second problem for the state, however, is the exact inverse of the first: how to avoid regulatory capture by the regulated firms themselves so that firms do not end up perceiving through regulatory means extraordinary rates of return on their investments, in detriment of consumers. Thus, the ideal situation is that of a market where regulation successfully emulates the conditions of a competitive market.

The main regulatory challenge faced by the state is therefore the creation of the appropriate regulation so that companies enter the market, invest, and behave as they generally would in a competitive situation in which they do not fear expropriation. At this point an important distinction must be made between the regulatory *incentives* that are put in place – *'the rules governing utility pricing, cross- or direct subsidies, entry, interconnection, etc.'* – and the regulatory *governance structure* that specifies *'the mechanisms that societies use to constrain regulatory discretion and to resolve conflicts that arise in relation to these constraints'*[448]. Levy and Spiller (1994) note that although most academic work has focused on finding the right set of incentives, *'their impact (...) comes to the forefront only if regulatory governance has successfully been put into place'*[449].

Both regulatory incentives and governance are choices[450] and thus part of what I call policy *content*, because when a privatization is designed, policymakers specify both regulatory incentives and the (formal) regulatory governance structure in the content

[447] Levy and Spiller (1994), p. 204. On the other hand, even if investments are bulky they are not a one-off affair, so as long as there is high prospective demand for more infrastructure governments – particularly fiscally-constrained ones – will be mindful of maintaining attractive conditions for firms (ibid, pp.204-205).
[448] Levy and Spiller (1994), p.205. See also Heller and McCubbins (1996).
[449] Levy and Spiller (1994), p.205
[450] Ibid., p.205

of the law or decree. Nonetheless, the way the governance structure *actually works in practice* is influenced by state capacity, because independently of what that structure is, states will vary both in the way they are able to apply it (and respect it) and in their capacity to modify it in non-arbitrary and non-opportunistic ways (i.e. without violating its previous regulatory commitments). In other words, states influence outcomes in privatized public utility markets through both the specific policies they adopt (choice of incentives and choice of formal regulatory mechanism) and through its ability to apply that framework impartially on the one hand (implementation), to respect it (stability and avoidance of opportunism) and yet to modify it in welfare-enhancing ways whenever needed (adaptability). This last feature is important because contracts are always incomplete (new technologies, new players, new conflicts, etc. give rise to new regulatory needs) and also because the game itself is dynamic – regulators and players learn from each other and from past events and may form new preferences regarding regulation. From a social welfare perspective, policy adaptability is fundamental to learn from mistakes, adapt to new states of the world, and to introduce regulatory changes that tend to lead to the ideal 'competitive' situation.

b) Privatization

Chile was a worldwide pioneer in the privatization and liberalization of public utilities, particularly in the case of electricity where it was the first country to introduce competition into the sector in the early 1980s[451]. Its privatization experience would serve as a model for other countries around the world, including Argentina in the following decade[452]. In both electricity and telecommunications, the first steps toward privatization were taken at the end of the 1970s with the creation of proto-

[451] Stein et al (2005), p.210; Murillo (2009), p.80
[452] Pollitt (2004), p.2; Murillo and Le Foulon (2006)

regulatory agencies, would continue in 1982 with the privatizations laws that would lay down the rules of each regulated market, and proceed until the late 1980s (and in some cases into the 1990s) with the gradual sale of state-owned assets. In electricity, before privatization the market had been controlled by Endesa, mainly a generator, and Chilectra, which was mainly a distributor. At privatization Endesa was split into four generation companies, six distribution companies and a (sole) transmission company, while Chilectra was split into one generation company and two distribution companies[453]. Nonetheless, since no rules preventing reconcentration were established[454] a single holding company – Enersis – was able to establish a dominant market position. In telecommunications, no unbundling of existing companies took place, which meant that at the start the market was dominated by the same companies as before privatization, i.e. CTC (Compañía de Teléfonos de Chile) in local calls and by ENTEL (Empresa Nacional de Telecomunicaciones) in long-distance calls.

While in Chile privatizations were not introduced due to fiscal duress or to international pressure, in Argentina the opposite was the case. Following a deep inflationary crisis at the end of the 1980s, the newly-assumed Peronist government of Carlos Menem was hard pressed to defeat hyperinflation, reverse fiscal deficits and to regain the trust of international markets[455]. His freedom of manoeuvre was exceptional because the depth of the crisis allowed him to overcome resistance from the public, workers and politicians to the idea of privatizing essential public utilities. He passed through Congress in 1989 the State Reform Law, which gave the Executive full autonomy to divest major state-owned companies, including ENTEL (the main telecommunications company) and SEGBA (the Buenos Aires vertically integrated

[453] Murillo and Le Foulon (2006), p.1582
[454] Stein et al (2005), p.211
[455] Murillo (2009), pp.92-95

electricity company)[456]. Overall, *'the scale and speed of privatisation were staggering'*, with privatised companies representing 13% of Argentina's 2002 GDP and 80% of the revenue raised in a very short period (1990-1993)[457].

Privatizations were executed not just very fast but also in a decentralized fashion, with each ministry deciding on the terms of the privatization processes under its incumbency. They thus lacked coordination, coherence and were extremely variable in their quality, so that *"the privatization processes as well as the resulting regulatory frameworks were highly diverse and idiosyncratic"*[458]. Though the natural gas and electricity sectors had coherent frameworks, all other sectors – in transport, water, telecommunications, and others – did not. Unlike in Chile, in Argentina the three moments of constitution of a regulatory authority; unbundling of firms and opening up of markets; and the sale of firms, were almost simultaneous, and in some cases meant that the regulatory authority was actually constituted (as opposed to legally enacted) *after* privatization and the signing of concession contracts had already taken place[459]. While electricity (and gas) operated under clear and relatively stable rules, in telecommunications *'credibility (...) was damaged right from the beginning'*, as contract conditions were frequently changed even during the bidding process, thus discouraging many interested players[460] – and indeed prices were renegotiated ('*producing a huge transfer from consumer to producer surplus'*[461]) between the signing of the contracts and the beginning of the operation of the system.

[456] Ibid., p.95
[457] Pollitt (2008), p. 1537
[458] Spiller and Tommasi (2007), p.202
[459] Oszlak and Felder (1997); Abdala (2001), p.222
[460] Abdala (2000), p.16
[461] Abdala (2000), p.16-17

In Argentina, entry into both sectors was limited, but in different ways: in electricity, the general design of regulatory incentives *'drew on best practice design experience at the time'* (including Chile's and the UK's pioneering experiences)[462], and so limits were placed on vertical and horizontal integration through explicit rules (such as prohibition that transmitting companies buy distribution assets) and requirements of regulatory approval for ownership changes[463]. This soon led to a highly competitive market: by 1993 there were more than twenty generation and distribution companies, plus six transmission companies (one managing the main grid and the rest managing regional grids)[464]. In telecommunications, on the other hand, the old state monopoly ENTEL had simply been divided into two still-vertically integrated companies, each serving the north (Telefónica) and south (Telecom) of the country while sharing Buenos Aires. New entrants were simply excluded from participation in fixed telephony as the two privatized companies were granted seven-year monopoly licenses – and at their end only a very partial liberalization took place (liberalization occurred only in the year 2000)[465]. In sum, by the early 1990s it could be said that while electricity sector competition was more intense in Argentina than in Chile, the reverse was the case in telecommunications – at least after (as we will see below) regulatory decisions in Chile limited the capacity of telecom incumbents to protect their dominant positions[466].

Finally, in both Argentina and Chile, specialists have concluded that the net welfare gains from privatization were large. In both countries and in both industries, coverage rates across all social groups increased dramatically, as did quality, waiting times,

[462] Pollitt (2008), p.1550
[463] Murillo (2009), pp. 115-116.
[464] Murillo (2009), p. 185. There was no trend towards re-concentration afterwards. By 2001, there were over 40 generation and over 30 distribution companies, most of them private. In 2002, the four largest generators had only 40.5% of market share (Pollitt 2008, pp.1540-1542).
[465] Murillo (2009), pp. 120-121 and 198-203
[466] Ibid, pp.166-173

labour productivity and – crucially – new investments. Thus, and independently of the differences in the process of privatization and the quality and stability of its implementation (issues I will deal with below), the social welfare gains of privatization outstripped by far its costs (such as price increases in some services and market segments)[467].

c) Regulatory governance

In terms of regulatory *governance*, the main difference was in the powers assigned to the regulatory agencies: while Argentinean agencies had substantial power to set prices and to resolve conflicts – both between itself and providers, and between these –, in Chile agency discretion on all these fronts was minimal. This was because the Pinochet government wanted to eliminate chances of regulatory expropriation of investments and therefore enacted highly specific regulation through law. In fact, Chilean laws in both sectors are so specific that, for instance, not just the methodology to conduct tariff reviews is specified in detail, but so are details like the methodology for cost-of-capital valuation[468]. This introduces substantial rigidity into the Chilean regulatory framework, but effectively eliminates agency discretion. According to Murillo (2009), the differences in powers and discretion between the Chilean and Argentinean regulators derives from the differing ideologies of 'true believers' in market liberalization, such as Pinochet and the Chicago Boys, and of 'pragmatic populists' like Menem and the Peronists, who privatized only out of necessity. While 'true believers' in Latin America would design 'market conforming' regulatory frameworks (in both the regulatory incentives and regulatory governance dimensions), pragmatic populists would design 'market controlling' ones.

[467] For an anlysis of these gains and costs, see Fischer and Serra (2007); Murillo (2009); Paredes (2001); Pollitt (2004); Galetovic and de Mello (2005); and Saavedra (2005), for Chile; and for Argentina, see Murillo (2009); Pollitt (2008); Abdala (2000)

[468] Levy and Spiller (1994), p.235

From a theoretical perspective, however, neither country complied with the now-dominant institutional blueprint of a fully independent regulatory agency, though Argentina came closer to it. For instance, in Argentina the regulatory agencies are funded from a specific tax on the regulated industries (to isolate its budget from Executive and legislative politics), and appointees are selected for a fixed term – and in the case of the electricity regulator (ENRE), the head is selected by the Executive through a competitive process and after hearing the (non-binding) opinion of Congress[469]. Instead, in Chile the agencies are funded from the general budget and both are part of their respective ministries, are subject to ministerial authority, and their heads are nominated by political authorities without Congress approval and can be dismissed with equal ease. Different indexes of formal 'regulatory independence' of agencies show that while Argentina's agencies are above the regional mean, Chile's are at the lower end[470]. Thus, according to this blueprint Chile's formal regulatory governance is worse than Argentina's.

On the other hand, Levy and Spiller (1994) argue that instead of looking for a particular one-size-fits-all blueprint, solving the commitment problem requires three simultaneous constraints on *arbitrary administrative action*: substantive restraints on the regulator's discretion, constraints (formal or informal) on changing unilaterally the regulatory system, and the existence of institutions (notably an independent judiciary) that can enforce the first two constraints, on both substantive and procedural matters[471]. The specific institutional form which best fulfils these institutional functions, however, is left open by the authors because governance of regulated

[469] Spiller (1999), p.10; Oszlak and Felder (1997)
[470] For telecommunications agencies, see Montoya and Trillas (2007); Trillas and Montoya (2008). In electricity the difference was probably even larger.
[471] Levy and Spiller (1994), p.202

utilities should be a function of the institutional endowments of each country. In other words, the commitment problem will be better solved using different institutional arrangements in different countries, depending on factors such as the existence of a strong bureaucracy, the separation of powers and the existence of a truly independent judiciary[472]. In this vein, they argue that in Chile the commitment problem is solved through a design that emphasized eliminating regulatory agencies' discretion by writing down in law and in great detail a great number of issues which could have been left to the regulator. Thus, because agencies lack discretion, the fact that they are not independent of the government becomes immaterial. According to these authors, while Chile has the institutional endowments needed to operate a more flexible framework – thanks to its strong bureaucracy and independent judiciary – it can also support credibility through legislation because of its Presidential system with a lack of majority for the governing party in Congress, due to the binominal electoral system in place. Argentina, on the other hand, does not possess an independent judiciary and Presidents can either secure support in Congress through Peronist dominance, or bypass it altogether through the use of decrees. Thus, the independence of the regulatory agencies and the stability of legislation more generally cannot be secured. Thus, in this alternative perspective, Chile may have a better regulatory governance framework in the sense that it better solves the commitment problem.

d) Regulatory performance in public utilities: a comparison

In this section, I will compare the way electricity and telecommunications sectors actually worked in each country, by looking at the way the regulatory framework (both incentives and governance) was actually applied, by looking more specifically at the way whether the commitment problem was solved or not in each country, and

[472] Ibid., pp. 205-211.

by looking at the issue of the stability and adaptability of the regulatory frameworks over time. To make comparisons sharper, I will first compare the electricity sectors across countries, and then I will compare telecoms.

Electricity

In Argentina, the electricity (and gas) regulatory frameworks were designed by the Secretary of Energy and approved by Congress, thus creating the regulatory body for electricity – ENRE – through legislation. As we saw above, the privatization process was successful in introducing large amount of competition into the sector, so much so that during the 1990s Argentina had the least concentrated generation market in the world[473] and returns on equity were rather low, considering the country risk involved[474]. There is consensus that ENRE (together with the gas regulator) were the most professional, independent and capable regulatory bodies created in the utilities privatization process, and that the electricity market was the best performing of utilities markets[475]. Indeed, an electricity specialist says the system *'performed impressively until the macroeconomic crisis of 2002'*[476]. The fact that ENRE was created by law gave it a greater degree of protection from politicization, since any changes to its functions or nomination process had to go through Congress[477]. Thus, for a decade it performed its considerable range of responsibilities quite satisfactorily.

Nonetheless, politicization was not entirely absent from the governance of the sector even before 2002. For instance, in 1998 the tariff review for transmission prices – conducted using the contractually-specified methodology – mandated a 20% descent

[473] Pollitt (2008), p.1565
[474] Pollitt (2008), p.1546
[475] Murillo (2009); Stein et al (2005); Spiller (1999); Abdala (2001)
[476] Pollitt (2008), p.1537
[477] Though not for the removal of agency heads. Nonetheless, ENRE had much higher top personnel stability than the telecommunications agency (Abdala, 2001).

in prices, but after the affected company protested and a public hearing was held, only a 9% reduction was agreed (in spite of generators' opposition)[478]. This was an instance of politicization since the technically-appropriate decision could not be implemented due to direct political pressures. Also, in 1999 a serious and publicly damaging (for privatizations) power outage in Buenos Aires translated into very high fines being imposed by ENRE – much higher, in fact, than what was legally specified[479]; however, the affected company backed down from challenging the fines judicially after a change in ownership. Thus, administrative arbitrariness was not entirely contained.

In spite of these episodes, the electricity market was the best performer of privatized utilities until the macroeconomic crisis in 2002. That year, however, abandonment of the peso-dollar parity meant that all utilities' tariffs were pesified and the tariffs of *all* utilities (including natural gas which up till then was unregulated) were frozen. This was done through a State Emergency Law which gave the Executive powers to both freeze and renegotiate tariffs with affected companies (whose debts were still in dollars). As Spiller and Tommasi noted, *"[t]he tariff freeze was a drastic deviation from the regulatory framework instituted in national and provincial regulatory laws and in the respective licenses"*. The damage to companies in regulated sectors was severe, and many foreign investors sold their stakes for as little as 10% of the value of the original investment[480].

As Pollitt has noted, a one-off loss due to currency parity abandonment was probably unavoidable given the depth of the macroeconomic shock. However, the complete

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[478] Abdala (2001), p.242; Abdala (2000)
[479] Pollitt (2008), p.1558
[480] Spiller and Tommasi (2007), p.205

discrediting of the neoliberal model within the Argentine public and its elite meant that Peronism returned, post-2002, to its more statist roots and the regulation of the sector did not go back to its pre-2002 rules even after economic recovery was well on its way. In an attempt to attract middle-class voters, tariffs remained frozen for many years after 2002[481]. Pricing in the post-2002 era has been a much more political affair, with the Secretary for Energy using ENRE's regulatory discretion to set access charge and seasonal contract prices below what was recommended by ENRE's methodology[482]. This was part of a more general trend of political undermining of ENRE's autonomy and downgrading of its human capacities[483], as the new administration *"let ENRE's credibility and expertise wither away because of deliberate policy"*[484]. New policies had a clear impact on the electricity sector. While low prices (thanks to the continued tariff freeze amidst inflation) and economic recovery meant that maximum power demand grew by 4400MW between December 2002 and December 2006, new generation capacity grew by only 1200MW[485], and even this was partly due to direct public investment. Lengthy renegotiations of contracts after 2002, lack of incentives for further investment and a much more politicized policymaking environment for the sector marked this as a case of major regulatory instability between the pre and post-2002 periods.

In the case of Chile, the main agency in charge of regulating the electricity sector is the CNE, created in 1976 but assigned regulatory responsibilities in the 1982

[481] Murillo (2009)
[482] Pollitt (2008), p.1559
[483] ibid, p.1559
[484] ibid, p.1561
[485] Ibid, p.1563

Electricity Law[486]. It is a technically-competent but small agency, with a plant size limited to only 45[487].

In general, the system has worked well and within the parameters set down by the Electricity Law and relevant decrees. Tariff reviews in the regulated distribution market have been conducted according to the law and did not generate major tariff shocks in the system that could imply significant surplus transfers from consumers to producers or vice versa, though they may have failed in reflecting (and thus passing on to consumers) efficiency gains by distributors, as reflected in these companies' rising profitability over time in spite of price stability[488].

Politicization of decisions was generally speaking minimal, though exceptions did occur. For instance, a major episode centred on the 1998-1999 extraordinarily severe drought and the power outages it led to. In the run-up to the crisis a dispute regarding the spot market price among firms was referred (as required) to the Minister for a decision. He asked the CNE for its advice, which it returned in 5 days. Nevertheless, the Minister *'took almost 4 months to confirm this recommendation'*, thus worsening the crisis, in a context in which lobbying by the involved firms seems to be *'the only reasonable explanation for the delay'*[489]. He also delayed until the last moment in declaring rationing – which allowed interfering with water rights – because of the political costs involved, thus preventing the electricity system from reacting to the adverse conditions in a sensible way[490]. Then in the aftermath of the power outages, a law was passed with large cross-party support in Congress (in the run-up to a competitive Presidential and legislative election) which by imposing even rationing

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486 A secondary regulatory body is the Superintendency of Electricity and Fuel, which among other things oversees quality and safety standards.
487 Pollitt (2004), p.27
488 Fischer and Serra (2007)
489 Pollitt (2004), p.26
490 Stein et al (2005), p.212

on all consumers and severe fines for outages on generators regardless of cause, effectively altered existing property rights (large users had paid higher prices for priority supply in case of rationing) and introduced climatic risk on generators' business, disincentivizing investment[491]. Thus, in both regulatory and legislative decisions in this episode a measure of politicization and administrative expropriation was present, reflecting *'an abandonment of technical solutions in favour of political considerations, with inefficient results'*[492].

Overall, however, this episode was *not* characteristic of the usual workings of the sector. Both prior and subsequent modifications to established rules were based on technical considerations, and indeed an important law passed in 2004 corrected some of the flaws in the 1999 law while substantially fostering competition. Overall, expert recommendation has been to give the Chilean regulator (along with more independence) *greater* discretionary powers, as too many crucial parameters are set down by law and thus introduce significant rigidity into the regulatory framework and limit its adaptive capacity:

> "Many of the problems of the Chilean electricity sector are hence problems of loosening the restrictions which the initial legislation placed around changing the regulatory regime in ways that might disturb those initial [property] rights (…) for most developing countries the opposite bias prevails: a tendency to renege on regulatory contracts with initial private property holders leading to high costs of capital and failed reforms"[493]

Thus, it could be said that the commitment problem in the electricity market is over-solved: Chile's regulatory regime can gain in discretion, without losing credibility in its commitment to contractual obligations[494].

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[491] Murillo and Le Foulon (2006)
[492] Stein et al (2005), p.212
[493] Pollitt (2004), p.28
[494] This exact same point is made by Levy and Spiller (1994) regarding the Chilean telecommunications sector.

In terms of evolution of the regulatory regime, it shows some degree of long-term adaptability in spite of the short-term rigidity mentioned above. This occurred because successive governments had a continuous and consistent policy of introducing more competition to a market with a dominant (and originally vertically integrated) player – the Enersis group, that through Endesa in generation, Transelec (a monopoly) in transmission , and Chilectra in distribution controlled a significant share of all three sectors. With the exception of the 1999 bill discussed above, all other changes in the sector were intended to be pro-competition. As early as 1994 the National Economic Prosecutor (the antitrust authority) pressed charges against Endesa for its property of Transelec. However, the Anti-Trust Commission ruled in favour of Endesa in 1997, but – crucially – simultaneously required the government to legislate transmission line use and Transelec to transform itself over a reasonable period into a public corporation open to diversified ownership[495]. Endesa chose to sell Transelec to a Canadian firm in 1999, thus reducing the degree of vertical integration in the market. The government also privatized its last remaining participation in the generation market in 1997, and did so with an explicit no-entry rule for existing generators as the intent of the privatization was precisely to generate competition for Endesa. Thus Colbún-Gener was born as a second major player in the generation market, after Endesa. The government also gave backing to the construction of gas pipelines from Argentina, again with the object of introducing competition to Endesa's hydro-based generation dominance.

Lastly, both the 1997 decree and the 2004 and 2005 laws were pro-competition in the sense that they were orientated at solving specific problems, inefficiencies, conflicts and anti-competitive situations that had arisen over time. For instance, the 2004 law

[495] Murillo (2009), p.157

created an Experts' Panel to solve disputes within the dispatch operator (controlled by the large generation companies) without requiring lengthy ministerial arbitration; it also placed bans on vertical integration in *new* transmission lines and projects (so as to respect existing property rights); and specified a more transparent system of tolls in transmission to improve competition between generators in supplying large users located within a distribution company's area[496]. In short, and with the partial exception of the 1999 crisis, the political system consistently pressed for improved competition in spite of market concentration (and the consequent political power of Enersis, the major player) while respecting the existing rules of the game. In this sense, *'a succession of gradual policy decisions'*[497] ensured that an electricity expert could conclude that *'Chile's electricity reforms very clearly reveal how the protection of property rights within a regulatory system which limits the ability of incumbents to exploit market power can capture most of the gains from reform'*[498]. Thus, policy adaptability was at the service of improving a regulatory system that grew over time in effectiveness at avoiding both expropriation and capture.

Telecommunications

In Argentina, before 2002 the telecommunications sector was usually contrasted to the successful electricity sector reform as a case of deficient regulation that highlighted the high degree of heterogeneity inherent in Argentina's privatization processes. In this sector the regulatory agency was ad-hoc, created not by law but by mere executive decree. As we saw above, the privatization process in telecoms was so hurried and conducted in such a volatile political environment that not only monopoly concessions had to be offered to bidders, but the conditions specified in the licenses

[496] Galetovic and De Mello (2005), p.13; Murillo (2009), pp.164-165
[497] Murillo (2009), p.177
[498] Pollitt (2004), p.28

had to be changed even after the contracts were signed but before they went into effect. The licenses tried to contain political risk by granting tax stability, inflation indexing, compensation in the case of possible future price controls, and so forth[499]. Nonetheless, the actual regulatory practice combined continuous contract renegotiation, government and firm opportunism, and an almost immediate undermining of (purported) regulatory independence.

Contracts ran soon into trouble with the 1991 Convertibility Law, which would form the centrepiece of Argentina's fight against hyperinflation by granting full convertibility of pesos to dollars on a one to one basis. This law prohibited price indexation in pesos, as was contemplated in the contracts. Instead of devising a compensation mechanism for firms for this change (as per contract specification), the regulator CNC/CNT refused by saying that *"prices were already high enough"*[500]. Companies appealed directly to the Secretariat for Communications, which agreed to allow indexation to the US Consumer Price Index instead, thus overruling the CNT. Nonetheless, as domestic inflation was initially still much higher, companies appealed to the courts, but these sided with the government[501]. Then in February 1992 a first price rebalancing (not allowed in the concession contracts) was agreed between the two major firms and the government, in which companies reduced long distance rates in exchange for monopoly rights in five provinces where they had recently acquired assets, plus the grant (for free) of a band for cellular telephony[502].

[499] Abdala (2000), p.16
[500] Ibid, p.18
[501] Since 1993 domestic inflation converged with US inflation, thus eliminating this source of administrative expropriation.
[502] Abdala (2000), p.20

In 1994, a new judicial ruling (regarding call back services) again favoured the government against incumbent companies. But these pressed that same year for a deeper price rebalancing between local and long distance calls. This time the process was long and adversarial, with consumer representatives in public hearings fiercely opposing rebalancing and provincial governors favouring it. The dispute rapidly left the CNT's hands and the Secretary for Communications took over the issue. In 1997 the rebalancing was passed, introducing major hikes in domestic call prices in a way that seemed to suggest regulatory capture by the incumbent companies – and the Argentine public perceived it so[503]. Litigation by the Buenos Aires ombudsman and consumer associations soon ensued, but once again the Supreme Court sided with the government.

In Figure 7.5 below, we can appreciate the magnitude of the price rebalancing conducted by the Secretariat, which generated large redistribution from consumers to producers[504]. Notably, *'CNC was put in charge of the ex-post control on the revenue caps set in the rebalancing exercise. This control was never seriously undertaken due to the inherent institutional weakness of CNC'*[505]. It is instructive to compare the price rebalancing of 1997 not just with the electricity sector in Argentina but also with the Chilean electricity and telecom industries (see Figure 7.6), all of which show substantially greater stability over time.

[503] IDB, pp.208-209. See also Abdala and Murillo
[504] Aside from redistribution from local callers to long distance callers.
[505] Abdala (2000), p.28

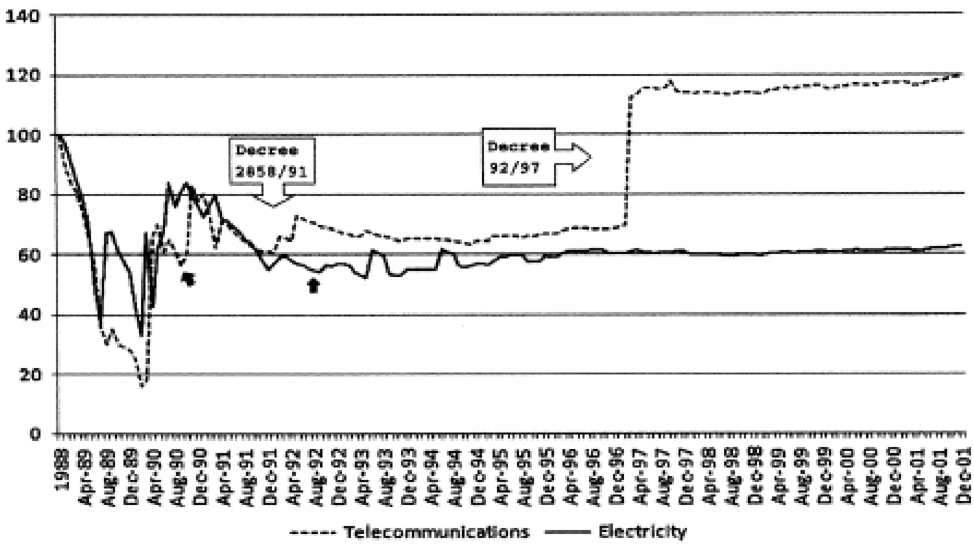

Figure 7.5. Retail price variations in electricity and telecommunications in Argentina, 1988-2001. *Note:* Arrows mark tariff reviews, as set by law. *Source:* Murillo (2009)

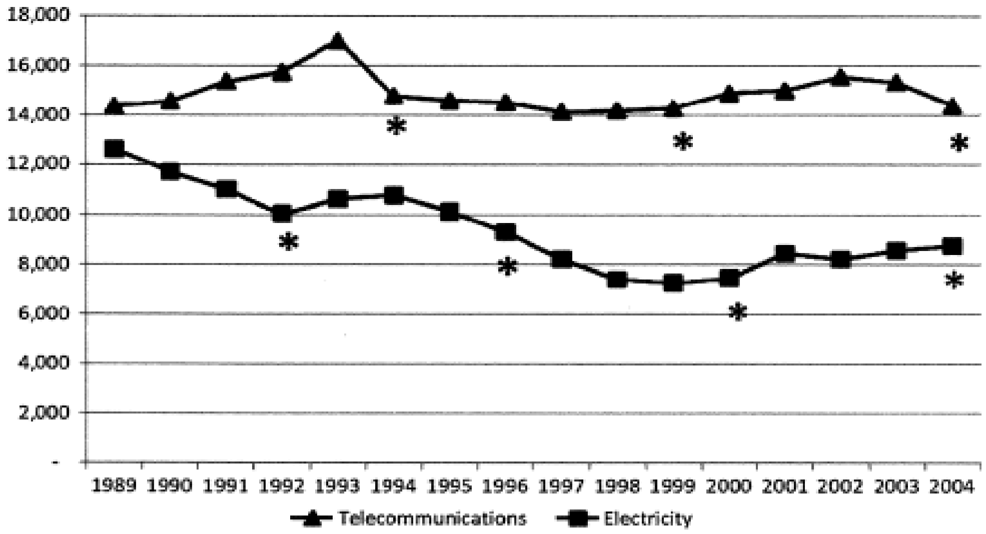

Figure 7.6. Retial price variations in electricity and telecommunications in Chile, 1989-2004. *Note:* Stars mark tariff review years, as set by law. *Source:* Murillo (2009).

The next controversy regarded the end (in 1997) of the seven-year monopoly granted to the two major telephone companies, which was in principle extendable for another three. In a non-transparent and discretionary decision, the Secretariat extended the contracts for two further years (until 1999) while a 'liberalization plan' of the market was introduced for the post-1999 scenario. That plan, however, created many barriers to entry so that instead of free competition the intent was to have ‘a government-regulated oligopoly’, in what according to Abdala (2000) was a clear case of industry-wide collusion between incumbent firms and the authorities[506], though eventually a more pro-competitive legislation would be introduced under the De la Rúa administration[507]. After 2002, this situation of relative capture of government by the regulated companies reversed to one of relative expropriation. The 2002 abandonment of convertibility implied – by the same law as in electricity – the prohibition of charging consumers in dollars or re-adjusting prices in nay way, and ordered contract renegotiation. As a result, *‘the telecommunications sector fell into a deep crisis, various companies defaulted on their debt payments, and others shut down their operations’*[508]. Nonetheless, recovery would come quicker to the telecom than to the electricity sector, in great degree thanks to a booming – and unregulated – mobile telephony market[509].

Policy instability was accompanied by bureaucratic instability. Indeed, the fate of the CNT during the 1990s is an example in itself of political interference with regulatory autonomy. The regulatory commission was created in 1990 and initially operated with personnel from the Secretariat of Communications which had not led – nor had been supportive of – the privatization process[510]. But as soon as 1991 the Minister of Economy asked for the removal of its Board of Directors, and in January 2002 a presidential decree was issued ordering the intervention of the agency. Intervention lasted until October 1993, when a new board was nominated, the agency was placed under the orbit of the Secretariat of Communication, and many of its formal powers

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[506] Abdala (2000), p.29
[507] Murillo (2009), p.202
[508] Stein et al (2005), p.209
[509] Murillo (2009), pp.204-205
[510] Abdala (2000), p.18

(such as setting the regulatory fee on regulated companies which gave it budgetary autonomy; the granting and termination of licenses; and powers to advise the president whether a service should be provided competitively or under exclusivity; among others[511]) were removed. By this date, the CNT was already hardly more than 'a puppet' of the SC[512]. Some time later, however, the government made the secretary of public works and the head of the commission switch jobs; then in 1995 all members of the commission were either removed or resigned and the agency was again intervened, but then the government had to reinstate most of them because of a judicial resolution; and in 1996 the Commission was again transferred, this time directly to the Presidency where it was merged with the postal service regulatory commission to create the National Communications Commission, with new directors named in 1997[513]. While in the entire 1990-2004 period the Chilean telecommunications regulatory agency had four heads, the CNT had eleven[514]. In the end, all major decisions in the sector were taken by the Secretariat of Communications, and not by the CNT, which became progressively more irrelevant over time as decisions were re-politicized.

Such regulatory instability at both the incentive and governance ends might have hurt investor confidence and made for a poorly performing telecommunications market. But this was not the case, as we saw above: investment, line expansion and quality improvements were dramatic. So what happened? It would seem that CNT's fate was largely irrelevant to companies, which quickly realized that the Secretariat of Communications – in other words, the government – was really in charge of all major decisions, and indeed until 2000 they obtained most of what they wanted from it. So

[511] ibid, p.20
[512] Ibid, p.21
[513] Spiller and Tommasi (2007), pp.202-203; Abdala (2000), pp.21-23
[514] Montoya and Trillas (2009), p.121

regardless of uncertainty and instability, companies were willing to invest firstly because they were given monopoly rights and high prices[515], and successively because of the continued political support granted to them by the Menem administration. The commitment problem was thus not institutionally solved, but its non-appearance was contingent on good standing relations with the Menem government; indeed, as soon as the government changed, first competition ensued (in 2000) and then after 2002 tariffs were frozen, thus reverting in a few years from a situation of relative capture to one of relative expropriation.

In Chile, the telecommunications sector – as the electricity sector – had a regulator, SUBTEL, with very little discretion regarding tariffs or powers to solve disputes between firms. Unlike the electricity sector, however, the combination of a fast pace of technological change and a post-privatization market structure without a dominant player placed high demands on the regulator, which had to continuously adapt – particularly during the 1990s – to a conflictive inter-firm environment and to the evolving regulatory needs of a rapidly changing sector. Privatization in 1982 had left Entel as the dominant player in long-distance calls and CTC-Telefónica as the dominant player in local calls, though both sectors were open to entry. Lack of entry rules allowed the Spanish firm Telefónica to acquire shares in both CTC and Entel during the privatization process. However, in 1992 the Anti-Trust commission forced Telefónica to sell its shares in one of the companies, and it chose to divest its Entel shares.

In terms of the application of the prescribed regulatory framework, it has been fairly similar to that of electricity in Chile. In spite of SUBTEL being politically dependent

[515] As also pointed out by Spiller and Tommasi (2007), p.204

on the Ministry of Transport and Telecommunications, its authorities have enjoyed substantial stability over time. Politicization has not been a regular feature of its decisions. Tariff reviews have been conducted according to the pre-specified methodology, and though they have not been as effective as competition in capturing for consumers the gains in efficiency, in at least some tariff reviews the regulator has imposed solutions not to the taste of the regulated companies (notably in 1999 and 2004)[516]. Before the mid-1990s profits in both firms (and particularly Entel) were extraordinary[517]; however, introduction of competition and stricter tariff regulation pushed profits down to low levels and incentivized dramatic gains in labour productivity within firms as a response[518]. Despite the fact that – as Murillo (2009) shows – both companies had considerable capacity to influence legislators' votes, even to the point of producing a breakdown in coalitional discipline over key bills, capture of the regulatory system by the incumbents did not occur. This outcome was no doubt encouraged by the conflicting interests of the two companies, and which prevented coordination of preferences against competition, as had occurred in Argentina[519]. The original legislation also helped, as since 1982 there was free entry (even if for many years ineffective) to both local and long distance markets, so when competition was de facto introduced incumbents could not claim – as in Argentina – prior or acquired rights.

Two key conflicts would define the evolution of the sector in the period under study: the opening up of the long distance calls market to multiple competitors though a multicarrier system in the mid-1990s, and the regulation of the emerging mobile

[516] Fischer and Serra (2007), pp.26,33.
[517] Fischer and Serra (2007); Stein et al (2005)
[518] In the 1997-2001 period, Telefónica *'pushed by the tariff review of 1999 and by the threat of competition, increased its [labour] productivity by 143%'*. Fischer and Serra (2007), p.3
[519] Murillo (2009)

phone market in the late 1990s and early 2000s. In the long-distance market, pressure by CTC-Telefónica to enter it necessitated a ruling by the Anti-Trust Commission to allow what was in effect vertical integration. After a legal battle that began in 1989, in 1993 – in a landmark ruling – the Commission authorized free entry and free prices in the long distance market and mandated the government (this was crucial for effectiveness) to implement a multicarrier system through which users could choose their long-distance provider through a simple system of access-code dialling, which meant users could costlessly switch from one provider to another[520]. Many firms entered the market aside from CTC-Telefónica. The effect was dramatic:

> "[Tariffs] fell abruptly overnight and traffic doubled in less than one year. Price competition has been intense ever since and tariffs have remained low. For example, one can today call the United States [from Chile] during business hours for less than US$0.25 per minute. By contrast (…) the price per minute would be US$2.40 had tariffs remained regulated"[521]

Entel's profits suffered accordingly, with a descent from almost 50% of return on equity to 17% in 1994, as can be seen in Figure 7.7.

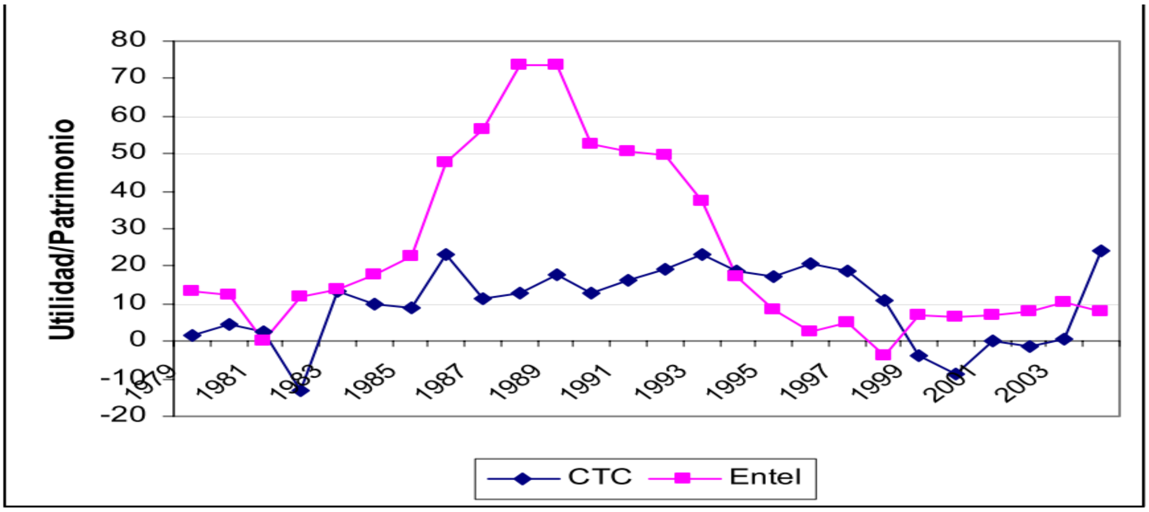

Figure 7.7. Return on Equity (%) for CTC and Entel, 1980-2004. *Source:* Fischer and Serra (2007), p.34

[520] For the politics of the reform process, see Murillo (2009) pp.166-173.
[521] Galetovic (2007), p.13

As in electricity, conflict also arose over rights of use of essential facilities and their pricing, as the owner of those facilities (transmission lines) could use them to discriminate against competitors. This was at the heart of the second conflict of the 1990s, which arose over the regulation of the emerging mobile telephony market and the corresponding access charges to CTC-Telefónica's fixed-line network. The appearance of digital mobile phone technology prompted SUBTEL to encourage competition in this market by establishing a bid for the available licenses. Entel won two of the licenses and based its recovery on this emerging market[522]. This in turn prompted Entel to request a ruling by the Anti-Trust Commission, which in 1998 specified a series of technical issues regarding the pricing of interconnection charges between different companies and services (such as in a call from a fixed line to a mobile phone). Based on this ruling, in the 1999 tariff review Subtel, apart from lowering by 11% domestic calling rates, lowered interconnection fees by 72% and introduced a 'calling party pays' rule, which meant that from February 1999 onwards users of mobile phones would only be charged for outgoing calls. This triggered an explosive increase in mobile telephony, as poor users could now have a phone with no fixed charge (a system of pre-paid calling cards was also introduced as an alternative to contracts), and use it mainly for receiving calls. Mobile phones grew by over 400% in 1998-2001 alone[523], and households with at least one mobile phone went from 1% in 1992 to 51% in 2002[524]. CTC-Telefónica opposed the new rules, and it attempted a judicial challenge even as its profits fell sharply (as seen in Figure 7.7 above).

Pro-competition regulatory outcomes soon translated into Chile being a regional leader in low prices for long distance calls as well as in fixed line and mobile phone

[522] Murillo (2009), p.171
[523] ibid, p.172
[524] Fischer and Serra (2007), p.36

penetration – and indeed in internet coverage as well as companies moved quickly to capture shares in this market on the back of previous investments in fiber-optics lines (see Table 7.1).

Table 7.1: Fixed telephone, mobile telephone and Internet penetration, selected countries, c.2003

	Fixed line density (2001)	Mobile phone density (2004)	Internet coverage (2001)	Internet coverage (2005)
Argentina	21.6	34.8	8	17.8
Chile	23.1	62.1	20	28.9
Brazil	21.7	36.3	4.6	19.5
Mexico	13.5	36.3	3.5	17.4
Uruguay	28.3	18.5	11.9	20.6
Spain	43.1	-	18.3	35.4
USA	66.5	-	50	63

Source: Compiled by author from data in Fischer and Serra (2007), pp. 31 & 37-38

In sum, we can see that, abetted by technological change and conflictive interests among incumbents, the regulatory system was highly successful in transforming what in 1990 were two de facto monopolies (in long-distance and local telephony) into competitive markets with more players, even as new markets were created, regulated and contested. Indeed, while fully respecting existing property rights, regulation successfully adapted to very fast change in technology in pro-competitive ways. Rather than favouring either Entel or CTC-Telefónica in their multiple confrontations – or both against new entrants in mobile phone, internet and other emerging markets – there was a consistent government preference (as in electricity) for competition as such. In achieving it, the independent Anti-Trust Commission played a key and unique role, *'as it could force the government to regulate at the request of providers, thereby introducing an institutional venue for regulatory conflict among providers'*[525].

[525] Murillo (2009), p.173

By contrast, in Argentina the anti-trust authority was largely irrelevant for outcomes in both electricity and telecommunications.

4. Conclusion

Overall, privatization was hugely successful in terms of coverage and quality of services in both countries and in both sectors. For all the problems that the regulated sectors may have had, the first-order comparison with the preceding decades of state ownership suggests the move towards privatization was a good policy *choice*. Nonetheless, the comparison of the regulatory experiences in privatized public utilities between Chile and Argentina suggests there were important differences in processes and in long-term outcomes between the two countries. On the one hand, the countries differed in terms of their regulatory design (including both regulatory incentives and regulatory governance), which had important effects on variables such as market concentration, prices charged, and the powers of the regulators. At this level, arguably the Argentine regulation was better than its Chilean counterpart in electricity (thanks to its limits on concentration and integration), but much worse in telecommunications (due to the granting of monopolistic concessions instead of competition). On the other hand, and most importantly, the actual practice of regulation suggests that the Argentine state proved ultimately unable to avoid either capture (in telecommunications) or administrative expropriation (in electricity and telecoms), while in Chile both – and particularly expropriation – were avoided to a larger degree. This occurred amidst a larger policymaking environment which yielded fundamental instability in Argentina (between the pre-2002 and post-2002 period) while yielding both stability and (some) adaptability in Chile. What is the conclusion to be drawn from a state capacity perspective?

The analysis has shown that policy design cannot – neither in terms of regulatory incentives nor regulatory governance – account by itself for the observed differences in outcome between the two countries; rather, it provides support for Levy and Spiller's argument that outcomes ultimately depend on the capacity of states to solve the commitment problem in a credible way. In electricity, the experience of Argentina before 2002 clearly showed that the country had the legislative and administrative capacity to design, approve and run a system which received worldwide acclaim for its success. The fact that ENRE was created by law rather than by decree gave it an administrative stability and a degree of independence from the Executive that shielded it from (most) immediate politicization. The larger institutional environment in which it was set, however, eventually proved its undoing. Not only did the 2002 tariff freeze – which was a legislative act – constitute a fundamental alteration of rules, but as we saw the agency's independence and autonomy were undermined under the new administrations.

In telecommunications, politicization was severe almost from the start, where the Executive soon developed the capacity to intervene at will on the resolution of any conflict[526]. It was precisely the continued political support of the Secretariat of Communications that kept the regulated companies happy and the investment flowing, but this support was political and not institutionally guaranteed, and thus contingent. After the 2002 tariff freeze and forced contract renegotiation, foreign investors by and large did not challenge the government in the (not independent) Argentine courts but went directly to the International Centre for Settlement of Investment Disputes (ICSID) for redress[527]. International guarantees provided by bilateral investment treaties – which not coincidentally Argentina signed with several rich countries right

[526] Spiller and Tommasi (2007), p.204
[527] ibid, p. 205

before privatizations began – are the last (and imperfect) safeguard against expropriation in a system where local institutions (as Levy and Spiller had emphasized in 1994) do not provide credible checks on the government's will. Indeed, an observer writing even before the 2002 crisis about the Argentine post-privatization experience in many industries concluded that *'[d]espite all sort of formal efforts to grant some autonomy (budget independence, appointment and duration of directors, etc.) the truth is that whenever the Executive felt that regulators were taking decisions that could harm its short-term interest, no formal barriers to the removal of appointees seemed to be effective'*[528].

In Chile, on the other hand, the commitment problem was by and large solved through detailed and hard-to-change legislation and the existence of independent courts to safeguard investors from arbitrary administrative action. The system had important degrees of rigidity and initially had few mechanisms for satisfactory conflict-solving, amidst weak regulatory powers of the agencies and the government at large. Over time, however, regulatory governance was gradually strengthened and major shortcomings remedied, with intensified competition as the final regulatory goal in both sectors. Thus, the system combined limited politicization of regulatory decisions with fundamental stability in the basic rules of the game, plus some degree of adaptability of rules, particularly over the long run.

In achieving these stable but adaptable outcomes, the role of two institutions bears emphasizing. On the one hand, Congress was the arena where different interests were represented and consensus was negotiated, providing adaptability coupled with stability as new legislation is not easy to overturn in Chile because of the balance of

[528] Abdala (2000), pp.32-33

power generated by the binominal electoral system between the two large, ideologically coherent coalitions. On the other hand, the role of the Anti Trust Commission as an arbiter of conflicts between companies and the government, with the power to mandate the crafting of new legislation by the authorities, was key in moving the system forward. Indeed, the anti-trust institutions themselves have been subject to gradual strengthening in Chile (a major reform increasing its funding, professionalism and powers was passed in 2003), while in Argentina the technically-sound 1999 law establishes a truly independent anti-trust authority, but this part of the law was not implemented even as its new powers were incorporated into the pre-existing and government-dependent anti-trust agency[529]. Thus, on the two issues of politicization (opportunism) and regulatory stability/adaptability, Argentina and Chile displayed over the last two decades distinct patterns, with Chile showing a higher capacity to *implement, sustain and adapt* the regulatory designs it had chosen.

The final question refers to which dimensions of state capacity were most important in explaining these divergent outcomes. In this case, the answer is quite straightforward: bureaucratic capacity on the one hand, and political capacity on the other, have been much more important than infrastructural power. Infrastructural power is less salient in the regulation of industry, simply because the regulated firms are large, discrete and easily observable. Enforcing their compliance is not as difficult and regulatory agencies need not have the capillary penetration of society that police institutions or health systems need. For its part, bureaucratic capacity is potentially a very important dimension since regulatory agencies need human and financial resources and significant degrees of autonomy from both politicians and regulated businesses to work well and avoid capture. In this particular case, both the Argentine and Chilean

[529] See the respective OECD competition review reports for Argentina (OECD 2006) and Chile (OECD 2007).

regulatory agencies have been criticized for their relative lack of specialized personnel, insufficient funding, lack of standardized procedures and transparency, potential capture by business, and lack of independence from politicians[530]. In this sense, in both countries institutional strengthening of regulatory agencies would be a step forward in securing a regulatory quality closer to that achieved by developed countries.

However, the analysis undertaken here suggests one important difference between the two countries in this respect: the degree of politicization of regulatory decisions was higher in the Argentine case, and as we saw this constituted an important difference between the two cases. Specifically, the Argentine telecommunications agency was particularly weak vis-à-vis the other three agencies, though ENRE's autonomy and capacity were also downgraded after 2002. At a deeper level, the lack of coherence and of coordination among different industries in the Argentinean privatization process suggests that bureaucratic fragmentation – an enduring feature of the Argentinean state[531] – was an important cause underlying such variable performance. This was unlike the Chilean case, where privatizations were more orderly and more consistent in design and agency quality across sectors.

In the last instance, however, the greatest difference in state capacity between the two countries doubtlessly lies in the political capacity dimension. As we saw above, stronger institutions in Chile – particularly Congress, the judiciary and the independent Anti-Trust Commission – were crucial for delivering a policy environment in which government opportunism (and, to a lesser degree, business

[530] See Murillo (2009); Estache (1997); Abdala (2000); Oszlak and Felder (1997); Pollitt (2008); Pollitt (2004); Saavedra (2005).
[531] Spiller and Tommasi (2007), pp.167-175; Grindle (2010); Ferraro (2006); Zuvanic and Iacovello (2010)

opportunism) were curtailed, rules were sticky, and yet gradual improvement to existing rules was possible. This analysis is coherent with Spiller and Tommasi's (2007) framework, and indeed highlights the importance of including political capacity as a feature of state capacity. If we had focused solely on infrastructural power and bureaucratic capacity when analysing the causes of divergent regulatory outcomes, we would have missed an essential difference between the Argentine and the Chilean case, which is the temporal inability of the Argentine state to avoid opportunism and to maintain stable rules of the game. Just as states with poor infrastructural power cannot implement decisions on the ground in policy areas that require this (such as security or health), states with poor political capacity are bad regulators. As a consequence, its poorly regulated markets deliver poorer outcomes than if it were able to commit to a single, sustainable model, whatever its ideological sign.

Chapter 8

Conclusion

In this work, I have argued the need of developing a finer-grained conceptual toolkit with which to build theories of how institutions and politics more generally influence development. I have sought to advance this task by developing a mid-range theory of how a specific – if large and crucial – institution/organization, the state, affects the achievement of policy effectiveness within a specific world-region. In line with authors such as Levitsky and Murillo (2009) and Caruso et al (2010), I have stressed the need to redirect at least part of the focus in the institutional debate away from questions of institutional form or design and into questions of institutional strength. By connecting this literature with an older concern for the capacities and strength of the state – be it through an infrastructural power or bureaucratic capacity focus –, I have argued for the importance of both expanding and making more precise our understanding of state capacity as a conceptual variable that can fruitfully help explain large differences in policy effectiveness and public goods provision across countries. In this sense, this work has made four contributions to the literature.

Firstly, this work has made a contribution to the Latin American development and quality of democracy literatures by moving forward the measurement of policy effectiveness, understood as the effective realization of intrinsic goals expected of any regime (whether democratic or not). Because in Latin America this democratic 'output legitimacy' remains frail, effectively tracking achievements in this regard in a systematic fashion is a policy-relevant contribution of this work. Moreover, as Roller (2005) emphasises, the evaluation of political regimes along this systemic dimension is an important task of political science. Nonetheless, most indicators of effectiveness in the literature either rely on one or very few indicators of public goods provision or quality, or else are a mixture of very different and analytically unrelated sets of outcomes, only some of which are public goods. Because of this, I theoretically derived, built and empirically measured a set of eight public goods indices measured over three (non-exhaustive) policy dimensions. To my knowledge, the multidimensional policy effectiveness index I built in Chapter 2 is the first index that covers policy effectiveness systematically and across very different policy areas for Latin America.

As that chapter showed, while outcomes along dimensions are somewhat correlated, they are by no means equivalent and there is important variation in performance between dimensions, particularly among countries situated in the middle of the performance range. Thus, the exercise reaffirmed the importance of developing specific, diverse and systematic policy effectiveness measures that are conceptually distinct from fuzzier measurements such as the Worldwide Governance Indicators. Substantively, the policy effectiveness measures showed (as expected) that there are three countries – Chile, Uruguay and Costa Rica – that systematically outstrip all others on most measures, but that they are followed by a set of countries whose rank order depends on the policy dimension in question. For instance, a country like El Salvador does very poorly on the security dimension but quite well in terms of economic goods such as property rights protection, while Argentina showed the reverse outcome. Overall, the indices highlight that taking a single indicator such as infant mortality or property rights protection as the policy outcome measure on which to build a general institutional explanation – a typical strategy in much of the economics and development literature – is a risky and generally inadequate strategy.

The second contribution of this work is conceptual. In it, I have sought to clarify, re-conceptualize and operationalize a concept of state capacity that is general (not tied to a particular policy area or state function), not circular, that integrates different but complementary literatures on state capacity, and differentiates this concept from the too-broad notions of 'institutions' and 'good governance'. By conceptualizing state capacity as the total set of policies a state could successfully implement, I have sought to fruitfully adapt the human capabilities approach to the nature of a collective actor such as the democratic state. In turn, this conceptualization underpins the identification of the internal resources of the state, the reach and penetration of the state in society and the cooperativeness of within-state relationships as the fundamental dimensions of state capacity. In this way, the more traditional focus on infrastructural power and bureaucratic capacity is linked to the stability and adaptability of the policy-making process within the democratic state.

As I argued in Chapter 3, ignoring the political capacity of the democratic state is a mistake, because democratic states are not unitary actors that simply choose whatever policy is willed by the sovereign, to be then implemented by the state bureaucracy. Executive capacity is a subset of *state* capacity, and the latter includes the capacity of states to coherently choose, maintain and adapt a given policy over time amidst time-variable political and power relations within and between the Executive, the legislature, parties, the judiciary and other actors. The empirical analysis of the Argentinean case highlighted the relevance of this state capacity dimension. As was showed in chapters five through seven, policy instability has been an enduring and significant feature of the Argentine state which has inhibited both the creation of a more stable (and thus more effective) bureaucracy and the effectiveness of specific policies in areas as diverse as infant mortality, police reform and telecommunications policy. Focusing on the infrastructural and bureaucratic dimensions alone would thus miss an essential element that explains much of the Argentine state's relatively poor long-term performance. Likewise, we saw for the case of Chile how there was a large degree of policy continuity even between the dictatorial regime of Pinochet and the democratic governments that preceded it (as in infant mortality policy) and succeeded it (as in electricity and telecommunications regulation), while nonetheless policies were gradually but continually adapted to changing circumstances. Thus, I have argued (and hope to have showed) that political capacity is a relevant state capacity dimension and not simply a feature of a particular administration's political abilities or fortunes.

A third contribution is theoretical. I have proposed a simple theory of policy effectiveness whereby state capacity is a direct or immediate cause of policy effectiveness, while political institutions ('as rules'), along with regime history and political (collective) actors play an indirect role through either policy choices (content) or through their effect on state capacity. While the theory itself is simple enough, it is surprising how little sophistication is usually built into theories that seek to explain desirable social outcomes (such as public goods provision or economic growth) through the use of 'institutions' as an independent variable.

The main point I have made is straightforward. Policy effectiveness is partly a function of non-political factors – such as income, ethnic homogeneity, inequality and other social and demographic conditions that may help or hinder effectiveness in achieving better crime rates, educational coverage and test scores, and so forth. It is also partly a function of 'good' policies, in the technical sense of a policy choice that is actually conducive to better or more public good provision. And it is also partly a function of state capacity, that is, the potential a state has to adequately implement (and temporally sustain and adapt) whatever policies are chosen. Thus, state capacity may be thought of as a necessary but not sufficient condition of policy effectiveness, and in this way this conceptualization avoids the circularity of so many analyses of the relationship between the two concepts. Moreover, the theory allows for an indirect role for other political factors such as the power and resources of collective actors such as parties or social movements, the length and depth of democratic rule, and indeed institutional arrangements such as federalism or the electoral system. The point is that to affect policy effectiveness, these factors must operate either through their role in the policies that are chosen or in their (short- or long-term) effect on state capacity[532]. For instance, in chapters five through seven the comparative analyses of state capacity and policy effectiveness in Argentina and Chile found that the unitary/federal divide is an important historical contributing factor to differences in effectiveness between the two countries, and that this channel operates through state capacity – an issue I develop further below.

The final contribution of this work is empirical. By supplying quantitative, qualitative- comparative and three (two-case, historical-comparative) analyses of the relationship between state capacity and policy effectiveness, I have triangulated different methodologies using a rich amount of empirical data to arrive at a set of conclusions regarding that relationship. The overarching conclusion is straightforward: state capacity is a very relevant contributing factor to policy effectiveness within countries. For seven of the eight public goods analysed and for all three dimensions, at least one state capacity dimension was statistically significant

[532] An exception may be the democracy-peace link, through which a democratic regime achieves lower violence by affecting citizens' 'supply' of violence directly (i.e. their desire to engage in political or other kinds of violence), rather than through the preventive or repressive capacities of the state.

in explaining effectiveness even after including several controls, in spite of the low number of cases involved. A complementary QCA analysis showed that those state capacity dimensions were, for all three dimensions, part of at least one causal path that led to high policy effectiveness. Countries that achieved high effectiveness without possessing high values in the relevant state capacity dimension were very few.

The result of this empirical exercise was to show that state capacity is simply not reducible to typical correlates of high effectiveness such as income per capita or favourable background conditions (such as ethnic homogeneity or low inequality). State capacity is indeed a causally distinct and independent variable which also affects policy effectiveness, often in quantitatively more significant ways than these other factors. Finally, the in-depth comparison of Chile and Argentina across three policy areas – infant/maternal mortality, crime and utilities regulation – showed that in all three cases specific state organizations were crucial in explaining differing effectiveness between the two countries. The role of the Chilean National Health Service, Carabineros and the Anti-Trust Tribunal – respectively – played major roles in the comparative narrative of each chapter. The role of these agencies, however, is not reducible to bureaucratic capacity; as I showed in the respective chapters; their better performance was grounded in the coordinative and authoritative capacities of the Chilean state (particularly in the formation and continued leading role of the Chilean SNS and in the formation of Carabineros as a national police force) and the role of Congress and the judiciary as strong veto players that prevent violent policy swings and unilateral policymaking by the Executive (particularly important in utility regulation). Overall, infrastructural power, bureaucratic capacity and political capacity were all found to matter and to reinforce each other, but nonetheless they played distinct roles. It is to a more detailed final analysis of these roles to which I now turn.

State capacity dimensions and policy effectiveness

This work made the theoretical decision to not use an aggregate state capacity summary index as its main explanatory variable. Though depending on research purposes such an aggregate index may make sense, an important purpose of this research was to explore the analytical leverage of the threefold distinction between infrastructural power, bureaucratic capacity and political capacity.

What did we learn regarding the role of these three state capacity dimensions in increasing policy effectiveness? As a first approximation, the quantitative and qualitative comparative analyses undertaken in Chapter 4 detected that infrastructural power was most effective at explaining the security dimension, bureaucratic capacity was best at explaining the welfare dimension, and political capacity was better at explaining the economic policy dimension. Nonetheless, the bureaucratic capacity indicator was the most highly correlated both with the other two state capacity dimensions, and on average had the highest correlation with the three policy dimensions. This reinforces the idea that the bureaucracy, as a core internal resource of the state, lies at the heart of state capacity.

However, a problem with the analysis of Chapter 4 – based on indicators for eighteen countries at one (averaged) point in time – is that they ignore both the interrelationships between dimensions and temporal variation in both capacity and effectiveness. That is why the comparative analysis of the Chilean and Argentinean cases in their effectiveness in delivering three specific public goods provided an important complement to the index-based (quantitative and qualitative) analyses. What these comparisons revealed was that the dynamic interrelationships between state capacity dimensions provides a richer explanation of the influence of state capacity on policy effectiveness than what a single-dimension focus would suggest.

In the cases of crime and health policy, we saw a similar dynamic in play. In both policy areas, Argentina was probably outperforming Chile in the early part of the 20th century, and in health would continue to do so until the late 1970s. However, in both cases a 'reversal of fortunes' occurred that was probably linked to mid-century institutional divergence between the two countries. The creation of Carabineros in 1929 and of a National Health Service in 1952 were milestones in the growth and strengthening of the Chilean state, and in Chapters 5 and 6 we saw how these organizations have been central ever since to citizen security and infant mortality reduction, respectively. Meanwhile, in Argentina the 1940s Peronist reorganization of the state was the critical juncture at which both health and police functions were reorganized. However, we saw that both attempts – to create a unified health service and centralized police forces – failed in the light of the central state's inability to break the influence of special interests that wanted to preserve fragmentation and segmentation. In the case of the police, we saw that local police forces were already by then a locus of influence for local political elites, which the central state was unable to overcome. In the case of health, we saw that the initial centralizing impulse of Perón (through for instance the building of massive health infrastructure in provinces with federal funds) did not consolidate into the equivalent of a national health service or even a federalized version of one. This was because labour unions objected to the creation of a universal system and forced the Ministry of Health's hand (via the Ministry of Labour), eventually forcing the continuation of a

Bismarckian social security system along segmented class lines where the public insurance sector would play a residual role. Organizational fragmentation, lack of health policy coordination and segmented insurance and provision were the result, both within and across provinces.

From a theoretical standpoint, the central lesson of the crime and health stories is that infrastructural power and bureaucratic capacity are analytically distinct but in practice operate in such a closely interrelated way that it may be useful to speak of infra-bureaucratic power to denote the dynamic interaction between the two. The dynamic is essentially mutually reinforcing or mutually debilitating. In the case of Chile, a centralized state that had subdued the power of local elites more thoroughly than its Argentinean counterpart during the 19^{th} century was able to implement the reorganization and centralization of previously territorially fragmented police and healthcare bodies. In turn, the creation of these national organizations enhanced not just the bureaucratic capacity of the state but also reinforced its infrastructural power, as these newly-created bureaucracies penetrated the national territory more evenly (reducing territorial inequalities in the process, as we saw in Chapter 5), intensively regulated and extensively coordinated the state's activities, and through increases in effectiveness increased state legitimacy (as we saw particularly for the case of citizens' trust in Carabineros). Thus, infrastructural power and bureaucratic capacity positively reinforced each other.

In Argentina, on the other hand, lack of centralization, of control of local elites across the territory and of state cohesion (necessary to go against powerful special interests such as organized labour) made the creation (despite the deeply statist ideology of the first Peronist government) of unified police or health organizations unachievable. This lack of a permanent central bureaucracy would in turn hinder the state's ability to deliver better public goods across the territory and to plan, control and coordinate policy through multiple layers of government. Because coordination needs are probably greater in the case of health, the lack of such a coordinating body would be felt more acutely in that sector, while in citizen security the corruption of the police (a 'delivery' organization) would be a more debilitating factor as protection of crime rings and low citizen trust went hand in hand. In both cases, however, the circle going from (relatively) low initial infrastructural power to (relatively) low bureaucratic capacity and thus to (relatively) low infrastructural power would be fulfilled.

The close linkage between infrastructural power and bureaucratic capacity suggests that these two dimensions could perhaps be fruitfully merged into a single one. However, whether merging them is useful or not will depend on the specific research objectives of a study. When infrastructural power is used as the conceptual equivalent of state capacity (as in Soifer 2012), bureaucratic capacity may be subsumed under that general rubric because the bureaucracy is indeed central in explaining state effectiveness. But in this case, we must understand the bureaucracy as a variable that goes beyond the mere presence of basic administrative capacity, as it is sometimes understood when part of the infrastructural power concept[533]. Just as stateness is a bare minimum above which large variations in infrastructural power may exist, the existence of a basic administration is the bare minimum above which vast differences in bureaucratic capacity may also exist.

On the other hand, if state capacity is taken to mean – as here – not just the policy implementation capacity of the Executive but the total set of policies a state can

[533] As for instance in Soifer (2012). See also Whitehead (1994) and Soifer and vom Hau (2008).

sustainably choose, adapt and implement, separating the two concepts may be more useful. This is because the bureaucracy is not just highly instrumental in implementing policies and in increasing a state's penetration of society, but also – as shown by Spiller, Stein and Tommasi[534] and ratified in this work – in formulating and stabilizing policy over time in the presence of multiple actors. As such, it is also instrumental in achieving greater *political* capacity. The analytical distinction between a state's internal resources, state-society relations and within-state relations which lies at the heart of my operationalization of state capacity is also useful when distinguishing between cases in which the state's internal resources are underdeveloped from those in which it is state-society relations that limit state capacity. For instance, Colombia showed up as a case with a relatively developed bureaucracy and which yet, because the Colombian state lacks territorial penetration of large swathes of the country, lacks infrastructural power. Subsuming bureaucratic capacity under the rubric of infrastructural power in this case would tend to hide the fact that Colombia's low infrastructural power is much more a matter of territorial reach than of bureaucratic development. Thus, if we want to understand whether state-society relations or a state's internal development are limiting state effectiveness, it can be useful to separate the development of the bureaucracy from the notion of infrastructural power. In this case, infrastructural power as a concept is understood in a less comprehensive way than when it is identified with state capacity as a whole, while bureaucratic capacity is freed to play a linkage role with political capacity: for the reasons outlined above, a strong bureaucracy *helps* achieve – without ensuring – a state with both strong infrastructural power and high political capacity.

[534] Stein et al (2005); Spiller and Tommasi (2007); Stein and Tommasi (2008).

If security and health performance are best explained by infra-bureaucratic power, regulatory performance in utilities is best explained by political capacity. As we saw in Chapter 7, more than the role of specific bureaucracies (such as regulating bodies) – which nonetheless played non-trivial roles –, the most decisive state influence on regulatory performance was the stability of the regulations themselves. Particularly in the Argentinean case, the difference in performance – as judged by specialists – between the electricity and telecommunications reforms during the 1990s was largely due to regulatory instability (and capture) in the telecommunications sector. However, the deeper nature of this instability was revealed after the 2002 crisis, when price freezes and the abandonment of the post-1990 regulatory framework signalled a major policy reversal and the financial ruin of many of the companies that had entered either market within that framework. The link between bureaucratic capacity and political capacity observable here is a subtle one. The existence of specific bureaucracies or organizations that fulfil their assigned task was doubtlessly important for policy stability and adaptability; for instance, the Argentinean electricity regulator was probably the strongest one of the four regulators studied (i.e. including the two Chilean regulators and the Argentine telecom regulator), and its organizational strength certainly contributed to the excellent performance of the Argentine electricity sector after privatization and until 2002.

On the whole, however, the denser institutional web of veto players in the Chilean regulatory system played a more decisive role over the long term. As we saw in Chapter 7, the Anti-Trust tribunal, Congress and an independent judiciary together guaranteed the stability of the existing regulatory framework and its adaptability to changing market and technological circumstances to a much larger degree than in the case in Argentina, where the Executive was for all relevant purposes a unilateral policymaker. This suggests, much along Levy and Spiller's (1994) line of argument, that over the longer run expropriation (and successful rent-seeking) will be better prevented in countries with stronger institutional endowments. Not just the bureaucracy, but also Congress and independent arbiters (such as competition tribunals and the Supreme Court) matter for regulatory stability and for political capacity more generally. It is here that institutions-as-organizations meet institutions-as-rules in producing higher political capacity: strong organizations acting within enforceable rules (such as judicial independence) produce the institutional environment conducive to stable and adaptable policies.

Going beyond the original framework: two extensions of the theory

So far I have analyzed the relationships between each state capacity dimension and each policy dimension along the lines of the analysis undertaken in Chapter 4. Nonetheless, the comparison between Argentina and Chile also suggests two additional, complementary ways of analyzing the relationships between the capacity and policy dimensions. While they did not form part of the original theoretical framework presented in Chapter 4, they suggest avenues of future research through which to continue the exploration of the relationship between state capacity and policy effectiveness.

The first extension introduces a stock/flow distinction between infra-bureaucratic power on the one hand, and political capacity on the other. While infrastructural power and bureaucratic capacity can be jointly considered a stock of resources, organizations and stable state-society relationships through which policies are routinely implemented, political capacity conditions the flow of policies that either improve or decrease both infra-bureaucratic power *and* policy effectiveness *at the* *margin*. Essentially, investments in state capacity can only be made through policies, and the effectiveness of policies is conditioned by the capacity of the political system to not change the said policies every other day and yet to adapt them as required. Thus, political capacity *today* affects infra-bureaucratic power (and policy effectiveness) *tomorrow*. Because investments in bureaucratic and infrastructural power yield benefits only over the long run, they can be seen largely as the product of long-past policy decisions: whether to make a civil service reform or not, whether to build a national health organization or not, whether to backtrack on the previous administration's health reform or not, whether to undertake a police reform effort or not, and so forth. In cooperative policymaking environments – which are usually those with high political capacity – difficult reforms such as these have a higher chance of succeeding and of being sustained over time than in low political capacity environments. Thus, today's flow of reforms becomes tomorrow's stock of resources, organizations and programs.

The review of the politics of reform in each country in previous chapters showed that, generally speaking, cooperative policymaking has been much more the norm in Chile than in Argentina. Particularly since 1990, gradual but sustained reform has been the norm across sectors in Chile, while in Argentina reforms have either tended not to happen at all (as for a long time in the public health sector); to be announced as dramatic overhauls of the existing situation but fail to be sustained over time (as in health insurance or police reform); or to actually happen and constitute a violent policy reversal of whatever policy was previously in place (as in utilities regulation). Chile's higher underlying political capacity has allowed it to accumulate, through successful reforms, more state capacity over the last two decades in all three analysed policy areas, and to a much greater extent than its neighbour. Thus, a prediction can be made regarding Argentina and Chile: as long as the latter country continues to exhibit more cooperative policymaking than its neighbour, allowing it to undertake major reforms in a sustainable fashion[535], the gap in both public good delivery and in infra-bureaucratic power between the two countries will continue to widen over time.

A second way of extending the theoretical toolkit regarding the relationship between state capacity and policy effectiveness is by identifying public goods not only by the policy dimension they belong to, but also by the size of the target population of the good or service being provided by the state. At one extreme the state provides a good to a large subset of the total population. Health, education and police (security) services are all classical examples, even if in both health and education, the state may not be a universal provider but simply a subsidiary one, in which case it is engaged in delivering health or education to a subset of the population and delivering regulatory services to the other (private and NGO) actors who in turn serve the rest of the population. At the other extreme, the state provides a service to a very small set of actors, which may nonetheless be very important; for instance, regulated monopolies such as utilities fall in this category. In this case, the difficulty in providing the good is not related to territorial, infrastructural, financial, organizational or logistical obstacles, but to the technical and political difficulties associated with 'getting the regulation right', this is, designing it and enforcing it in such a way that it neither expropriates nor gives extraordinary rents to the regulated companies.

[535] Between 1990 and 2006, Chile undertook a major criminal justice reform (as was mentioned in Chapter 6), an important civil service reform, a pension reform, and a health reform, among others. In Argentina, most major non-economic reforms introduced in the 1990s were by the late 2000s entirely reversed, including the privatization of the pension system and the civil service reform. On recent civil service reform in Argentina and Chile, see Grindle (2012), pp.184-189 & 195-200.

It is important to emphasize that this is not merely a distinction between delivery for the many and regulation for the few, as many regulations indeed apply to the many: property rights, traffic laws, contract enforcement, and so forth all are regulations that need to be applied at a very decentralized level by large bureaucracies such as the police or (local-level) courts. The distinction between services provided for the many and those provided for the few may be important when trying to link specific state capacity dimensions and more specific policy outcomes. For instance, the effective protection of land or housing titles may operate quite differently from the protection of large investments made by multinational companies. While both are instances of property rights protection, the relevant state capacity dimension in each case may be different. In the former case, infrastructural power (particularly effective territorial reach) and bureaucratic capacity (in the form of efficient and clean local courts) are likely to be decisive, given that this is a relatively less contentious and volatile area from a regulatory point of view; in the latter case, political capacity – in the form of stable investment rules and politically independent high-level courts – are likely to be the more relevant. This implies that state performance in one property rights area may not necessarily go hand in hand with its performance in another. Thus, an interesting extension and refinement of the current investigation would be to combine the 'policy dimension' category with other categories related to more specific characteristics of the public good in question, such as the size of the target group, to generate a more complete theory of state capacity and public goods provision.

State capacity: how useful a category is it?

In Chapter 4, I reviewed extant conceptualizations of state capacity and argued both for the analytical relevance of using state capacity as a conceptual variable and for the usefulness of a conceptualization of state capacity that was broad enough to include the political economy concern with the stability and adaptability of policies themselves. In this section, I synthesize the main ways in which this research suggests a way forward in the theoretical debates regarding these two issues.

As we saw in Chapter 4, Matthew Kocher (2010) has forcefully argued against the use of state capacity as a conceptual variable on the grounds that it is a concept without *"any independent analytical leverage"* once the true state-related causes of a phenomenon – such as a professional bureaucracy or a state's access to financial and other resources – are factored in. These are not indicators of an underlying theoretical construct (state capacity), but are rather *"bases for theories in their own right"*. Thus, state capacity as a concept would, at best, be no more than a generic category for grouping state-centric (as opposed to society-centric) explanations. While indeed a professional bureaucracy or access to resources may help explain much in terms of public goods delivery, this research has shown two reasons why it is analytically useful to group these and other variables into an overarching concept of state capacity.

The first is conceptual: as long as we understand state capacity to mean the total set of policies a state could choose to implement with a reasonable chance of success, it makes good analytical sense to group the individual variables that contribute to the expansion of this set as dimensions of this concept. We group them not just to collect them under a common heading, but because each of them expands the 'capability set' of policies that are within the reach of the state. More importantly (this is the second reason), these variables – as we have repeatedly seen – do not act in isolation of each other. Their effects are not simply additive but *interactive* and, in the case of infrastructural and bureaucratic capacity, synergic to the point of each being – at least in part – mutually constitutive of the other. Thus, and unlike what Kocher suggested as his most important reason for not using state capacity as an independent conceptual variable, the dimensions that make up state capacity *do* tend to reinforce each other in an analytically coherent fashion and tend to empirically cluster in predictable ways.

If we accept the usefulness of state capacity as a conceptual variable, the discussion then moves into the usefulness of the particular conceptualization of it I presented here.

My proposed conceptualization of state capacity and the results of the empirical investigation here undertaken, suggest some ways in which this conceptualization improves on the extant literature on the relationship between states, state capacity and policy outcomes. As we saw in Chapter 4, in this literature we have works which focus on infrastructural power, works that focus on bureaucratic capacity, and others that focus (though not with this name) on political capacity. The main contribution of this research is to unite all these under a single conceptual framework. Thus, it complements each perspective by putting it into dialogue with the other two.

For instance, this three-dimensional conceptualization of state capacity can improve on those approaches that put the bureaucracy at the centre stage of explanations of state performance. For instance, Lange and Rueschemeyer (2005) conclude their edited volume on the influence of states on development asserting that *"[the book's] findings suggest that patrimonialism is an important obstacle that must be overcome for broad-based development (...)"*, and that for states to *"independently affect developmental outcomes"*, they "*must have the institutional capacity to act corporately and engage societal actors (...) [which] requires that states are organized in ways which promote corporate coherence (...) states that are centralized and* *bureaucratically organized have superior capacities for this than those that are fissiparous and patrimonial"*[536]. Certainly this work coincides with such a diagnosis; patrimonialism is the opposite of the Weberian kind of bureaucracies which this work has showed matter for public goods provision, and 'centralized and bureaucratically organized' states will perform better than those that are not. However, what this research says to Lange and Rueschemeyer[537] is that state performance depends on other capacities besides a strong bureaucracy. On the infrastructural side, it depends on the territorial reach and the extractive capacities of the state, both of which take us into questions of state penetration of civil society. The Colombian case, mentioned above, highlights the insufficiency of focusing on bureaucracies alone when trying to gauge a state's actual influence on a country's development. Moreover, the 'centralization' that Lange and Rueschemeyer mention is partly a function of coherent bureaucratic organization but it is, more deeply, the political result of power struggles between the central state and subnational and regional actors – a classic issue of infrastructural power.

Meanwhile, on the political capacity side, the insufficiency of bureaucratic performance alone becomes even clearer. The Argentinean case showed quite clearly how even a strong organization like ENRE, the electricity regulator, was powerless to stop policy reversal and instability in the electricity sector after the economic crisis in 2002, and even to protect its own independence from political interference. Bureaucracies cannot lift themselves out of the larger political environment they are embedded in, and conflictive or polarized policymaking environments will make policy swings more likely. Thus, again, in order to explain the performance of the state in the economic sphere (or indeed any other sphere), a look at meritocratic hiring

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[536] Ibid., pp.247-248
[537] And, of course, to other work such as Evans and Rauch (1999)

and promotion practices is manifestly insufficient. Over the long run, the infrastructural and political capacities of the state – both of which are influenced, but not determined by, bureaucratic capacity – will also matter.

Likewise, this research suggests that works which explain policy performance from a political economy standpoint alone would also benefit from paying closer attention to all three dimensions of state capacity developed here. Though authors such as Stein et al (2005) and Spiller and Tommasi (2007) have modelled the quality of policy implementation and of policy coordination (in addition to policy stability, adaptability and other 'state capabilities') as a function of the cooperativeness of the policymaking game, this game cannot explain the *accumulated stock* of infra-bureaucratic resources a state counts on to implement policy. As discussed above, at most such an approach can tell us whether and how fast such stock is increasing (decreasing), since more cooperative policymaking games will make capacity-increasing reforms likelier to succeed. But for all its dysfunctional and non-cooperative politics, Argentina retains a much higher implementation capacity of health, education or security policies than high-political-capacity El Salvador, an infrastructurally much weaker state. Moreover, such an approach cannot explain territorial unevenness in performance (the case of Colombia is again noteworthy) because neither standard game theoretical cooperation models nor 'quality of the bureaucracy' approaches are conceptually sensitive to territorial variation, while the concept of infrastructural power is.

By recognizing that the current implementation performance of a state is not just the result of a currently-cooperative equilibrium but of a deeper accumulation of capacities (internal resources and state-society relations), we can situate institutional and political economy explanations of policy performance within their larger historical and political context. In turn, this suggests that even though short-run policy performance may fluctuate in ways that political economy models may capture appropriately, over the long run these results may be less variable than it may seem when focusing on shorter time spans. Indeed in the last three chapters I have argued that Chile's relatively better performance in all three policy areas is not of recent origin. The concept of infrastructural power can help account for this stability in relative performance better than an approach that focuses on the equilibrium outcome of a policymaking game or even of one which focuses solely on the quality of the bureaucracy and other institutions. Thus, explaining state 'capabilities' requires joining infrastructural, organizational and strategic considerations, as in the conceptualization of state capacity developed in this work.

Institutions and causes of state capacity

Throughout this work, the focus has been placed on examining the links between state capacity (and its constitutive dimensions) and policy outcomes. However, the comparison of Argentina and Chile along three policies has thrown some light on factors that influenced the relative accumulation of state capacity in these two countries. Thus, in this section I briefly comment on the contribution this research makes to the literature concerned with the determinants of state capacity. Naturally, this contribution does not claim to be generalizable to the whole of Latin America (let alone other world regions) since it is based on the comparative experience of only two countries; however, it may help scholars working on these two countries and inform the larger debate on the historical sources of current state weakness and strength.

The comparison between Argentina and Chile in the last three chapters shows that at least between these two countries, major political differences originating in the 19th

and 20th centuries shaped differing trajectories in state capacity. Among these differences, the most important ones were the federal organization of the Argentinean state at the point of its consolidation in the 1860s – as opposed to the triumph of unitarism in Chile in 1833 – and the lack of regime stability in Argentina between 1930 and 1982, through a succession of coups, democratic restorations and new coups. Thus, I suggest, in line with previous work[538], that federalism and political instability were two major debilitating factors of the Argentinean polity, and account for much of the observable differences in state capacity between the two countries. I discuss the issue of federalism in some depth and then comment briefly on the issue of political instability.

As we saw in Chapters 5 and 6, in Argentina federalism was deeply inimical to coherent state action in the health and security arenas, damaging in different ways the directing and coordinating capacities of the central state, inhibiting the creation of more autonomous and less corrupt bureaucracies, introducing conflict between layers of governance, generating variations in provincial performance that merely reproduced the underlying socioeconomic and territorial distribution of the population, and raising the coordination and implementation costs of almost any policy initiative. The question that naturally arises is *why* this should be the case, since there is no a priori reason for supposing that federalism is detrimental to state capacity.

I suggest the particular problem with the Argentine brand of federalism is that it historically represented, and institutionally has been, a way to limit political centralization and thus for provincial elites to retain their power at the expense of the

[538] Spiller and Tommasi (2005); Levitsky and Murillo (2005)

national state's. Though basic political centralization was successfully achieved in Argentina by around 1880 – after decades of civil war between Buenos Aires and the provinces – this was done not so much as the product of one side decisively defeating the other as much as through pacts made by provincial and Buenos Aires elites that would allow all to benefit from the booming export economy. This pact gave Buenos Aires a 'primus inter pares' position but also secured the political autonomy of the interior provinces[539]. According to Acemoglu and Robinson (2012), the pact was basically a compromise in which *"the warlords [such as those] of La Rioja agreed to leave Buenos Aires alone so that it could make money. In return, the Buenos Aires elites gave up on reforming the institutions of "the interior""*[540].

Indeed, through the substantial autonomy granted to them by the 1853 Constitution, the evolution of fiscal-federal arrangements over time, their control of local party machines and their joint control of the Senate, provincial governors have emerged as very powerful political actors in the national arena in spite of having little interest in national (as opposed to provincial) outcomes[541]. Thus, they are able to use their considerable bargaining power to extract resources and concessions from the centre. In this way, in Argentina *"national and subnational politics and policies are intertwined to a much larger (and more convoluted) extent than in other federal polities"*[542]. This is indeed a non-cooperative policymaking framework, as Spiller and Tommasi emphasise, but which emerged out of what was essentially a stunted centralization process. In this it differed from federal countries in which successful centralization was achieved through definitive military victory by a regional contender over all competitors – for instance, Germany's 'unification' by Prussian

[539] See Oszlak (1982); Centeno (2002), pp. 109-113 and 145-146; López-Alves (2000), pp. 140-192
[540] Acemoglu and Robinson (2012), p. 386
[541] Spiller and Tommasi (2007)
[542] Spiller and Tommasi (2007), p.54

conquest or the North's thorough victory over the South in the United States Civil War[543].

It is also a significant contrast with Chile, where the continuing primacy of Santiago was secured as early as 1829 when a conservative faction decisively defeated liberals, federalists and other groups and imposed a unitary political organisation on the country through the 1833 Constitution. Political rebellions against the Conservative regime would occur in 1841, 1851 and 1859, but all were soundly defeated and – despite some regionalist undertones – in all three national-political cleavages were paramount[544]. In the 20th century, this early centralization of political power would lead to the creation of successful national, centralized and hierarchical bureaucracies such as the SNS and Carabineros, among others. While this pyramidal political structure has had its own costs, there is little doubt that it generated a more standardized and homogeneous state presence and state quality that what would have been the case with less centralized arrangements. Nowadays in Chile decentralization is a buzzword of political reform, but what this research suggests is that adequate institutional design may be key to avoid trade-offs between increased sensitivity to local demands and diminished policy performance.

The second factor that has contributed to differences in state capacity between Chile and Argentina has been the greater political stability of the former during the 20th century. In Chile, though there was a period of institutional instability in 1931-1932 and a major coup in 1973, political stability was the norm in Chile during the 20th century. By contrast, in Argentina in the 1930-1983 period *"twelve executives (both elected presidents and heads of de facto regimes) were removed from office by force"*.

[543] Centeno (2002), p.128
[544] Collier (2003)

In addition, after 1983 both the Alfonsín and De la Rúa governments failed to complete their constitutionally-mandated periods, and during the 2001-2002 crisis three different executives took office before the elections that brought Néstor Kirchner to power.

This political instability has *"left an imprint on how political and institutional actors operate"* in the country, notably by shortening the relevant time horizons of all players involved. Two particular routes through which political instability weakened state capacity have been the constant change in Executive preferences (and thus directly on policy instability) because of high Executive rotation, and the *"even higher rotation in the upper echelons of the bureaucracy (...) [which] has hindered the development of cooperation among government agencies and has made it difficult to build a strong civil service"*[545]. While the first factor has lowered political capacity, the second has undermined bureaucratic capacity. In Chapters 5 to 7, we saw how both bureaucratic weakness and policy instability undermined policy effectiveness in Argentina in different policy areas. Thus, over and above the institutional influence of federalism on state capacity, the political reality of high-level political instability also contributed to the differential in state capacity between Argentina and Chile that this work has highlighted.

To be sure, other political factors may have influenced state capacity as well. Democracy as a regime is definitely a candidate. Beyond the issue of political stability per se, the long stretch of competitive party democracy in Chile[546] strengthened the parties and made Congress an important arena for political bargains. Moreover, there

[545] Spiller and Tommasi (2005), p.47
[546] Even if in terms of participation it may be catalogued for much of that time as an exclusionary democracy.

is some evidence that Congress supervision of the bureaucracy may have been a major factor in keeping it relatively free of corruption[547]. Thus, the existence of strong parties and a relatively strong Congress helped the build-up of both bureaucratic and political capacity. Finally, as we saw in Chapter 7, the competitive dynamics unleashed by democracy for the poor's votes in Chile (as described by McGuire) increased the incentives for state-building and for investing in capacity to deliver goods and services such as healthcare. In all these ways, all of which were conspicuously lacking in unstable and often authoritarian Argentina, democracy during the middle half of the 20th century helped build a more capable state in Chile. Thus, other competing explanations of policy effectiveness – such as democracy – actually operated at least in part *through* their influence on state capacity.

Institutions, state capacity and development: the long run macro view

The outcomes of this research speak not only to the causes of state capacity, but also to its consequences. By stating that high-capacity states will tend to deliver more and better public goods than its less-capable counterparts, and that these goods are necessary (if not sufficient) for long-run, broad-based development, this work situates itself broadly within an 'institutions and development' literature.

Nonetheless, this work has sought to improve on the conceptual vagueness of this literature by, firstly, providing a conceptual organization of the different routes through which standard explanatory institutional factors in political science – such as regime type and durability, or constitutional and electoral rules – affect policy effectiveness. By differentiating between direct causes (such as the nature of policies and the degree of state capacity) and indirect ones, it forces greater theoretical

[547] Valenzuela (1984), p.268; Rehren (2002), p. 152; Sanchez (2011), pp.165-166

specification of the precise ways in which a given institution or historical institutional trajectory is claimed to have influenced development. In turn, and secondly, by forcing clearer causal path specifications this work contributes greater conceptual clarity to the debate by in fact 'bringing the state back in' as a (conceptual) variable. The absence of the state in the causal picture is altogether surprising given that, in fact, it is quite hard to think of ways in which political institutions broadly conceived can affect long-run development without passing through the state. Problematizing the state itself is thus an indispensable part of understanding the full causal chain that goes from the most general 'institutions' to final policy outcomes. The specific contribution that 'bringing the state back in' can make to the institutions and development debate can be seen by taking a recent work in this field as an example.

Acemoglu and Robinson's (2012) recent book, *Why Nations Fail*, posits that over the long run only countries that have both 'inclusive economic institutions' and 'inclusive political institutions' will develop. Their definition of 'inclusive political institutions' is remarkably vague, however:

> "We will refer to political institutions that are sufficiently centralized and pluralistic as inclusive political institutions. When either of these conditions fails, we will refer to the institutions as extractive political institutions"[548]

It should be noted that their notion of 'pluralistic' institutions is very broad, meaning those *"that distribute power broadly in society and subject it to constraints"*[549], and as such it seems to include not just formal rules such as democracy or constitutional limits to Executive power, but also practices such as the absence of clientelism or

[548] Acemoglu and Robinson (2012), p.81
[549] Ibid, p. 80

even outcomes such as the existence of a competitive party system[550]. If indeed anything that prevents broad distribution of power within society can count towards lack of pluralism, then this seems to be an outcome (distribution of power) more than any kind of institutional arrangement, i.e. a set of formal or informal rules of the game. The vagueness of their 'pluralistic' institutions allows them to classify Argentina as a country without these, as opposed to countries such as Chile, Brazil and even Mexico which *have 'made significant strides towards nascent pluralism'*[551]. The greater inclusiveness of political institutions in these latter countries as opposed to Argentina is a disputable judgement at best.

Secondly, however, the most surprising aspect of the definition of inclusive political institutions is that it includes centralization as a constitutive dimension of the term. Centralization involves a concentration of power at the centre, and as such, as a process it redistributes power from territorial peripheries and the elites who control them to elites at the centre. This is hardly an inclusive outcome. This is not to say that a degree of basic political centralization such as the authors have in mind is not necessary for long-run development; it doubtlessly is. As the authors rightly point out, a state that cannot monopolize the legitimate means of violence *'and the degree of centralization that it entails (…) cannot play its role as enforcer of law and order, let alone provide public services and encourage and regulate economic activity'*[552]. Indeed, this basic insight has been a core assumption of this work. But political centralization, the achievement of basic stateness and (in the language of this thesis) of a degree of infrastructural power are processes that have nothing to do with the inclusiveness of political institutions. In their effort to adhere to institutionalist

[550] As suggested by their discussion on Argentina's alleged lack of pluralistic political institutions, pp.385-388
[551] Ibid, p.436
[552] Ibid, p.80

language, the authors have in fact smuggled into their definition of political institutions issues of state performance, thus conceptually stretching the notion to the breaking point. Whether states are able or not to provide basic services and enforce contracts is simply not an issue of the nature of the inclusiveness of the rules of the political game, but of state capacity. Therefore, we gain more by thinking of rules and capacity as potentially orthogonal variables rather than as two sides of the same coin.

We would also gain conceptual clarity and theoretical rigour by avoiding using the term ‘institutions’ to name both the (formal or informal) rules of the game – the standard definition since North (1990) –, and the organizations that play the game within those rules. In this sense, a focus on state capacity means seeing the state as an actor, and as such it should be viewed as an organization – or perhaps as a centrally directed system of organizations – which is analytically separate from the constitutional, electoral, and other formal and informal ‘rules of the game’. The state-as-an-actor is not a set of rules but a player. Therefore, I argue that Acemoglu and Robinson’s argument would be enriched by reformulating it in a way that brings the state back in and (also going back to my first critique) restricts ‘pluralistic’ institutions to actual rules of the game. Thus, instead of saying that inclusive political institutuions – in conjunction with inclusive economic institutions – are conducive to long-run development, we would say that high-capacity states combined with liberal democracies (i.e. that distribute power and yet constrain its use) are conducive – in conjunction with inclusive economic institutions – to long-run development. At the very least, this is a more falsifiable proposition.

Policy implications

The focus of this research has been on gaining a greater understanding of the relationship between Latin American states and their policy effectiveness. Thus, though theoretical and comparative insights have been its main goal, the conclusions arrived at have at least some practical – if general – policy implications worth highlighting.

The first, most obvious and yet most critical policy implication is that, because state capacity matters and matters considerably, investing in it is has large payoffs. Though these payoffs are not immediate, the long-term differences in effectiveness and development between states that invest in capacities and those that do not can be significant. Perhaps more interestingly, these investments may well overshadow in their significance some sexier institutional reforms such as constitutional modifications or electoral law reform. A good example may be decentralization, which – its normative democratic desirability notwithstanding – may well undermine state capacity, diminish policy effectiveness and erode democratic 'output legitimacy'.

Thus, in order to improve the provision of public goods this research emphasises the importance of other, well-known, perhaps rather dull but yet crucial reforms that increase state capacity along one or many dimensions. For instance, investment in citizen information (from ID cards to whole-of-government data sharing) or in tax collection capabilities will increase infrastructural power; bureaucratic capacity will be increased by civil service reform or by initiatives to increase functional and territorial coordination across government agencies and layers; and political capacity will be strengthened by reforms that increase the organizational capabilities of

Congress and the judiciary as well as by specific institutional reforms (rule changes) that improve the cooperativeness of the policymaking process as a whole[553]. As this last example makes clear, institutional reform is not off the agenda from a state capacity perspective, but it is simply viewed as one of many routes through which overall state capacity may be enhanced.

Besides this main policy recommendation, two other more specific ones are worth pointing out. The first is to actually use wherever possible existing state infrastructures to deliver new policy initiatives, and to do so in ways that create synergies between enhanced state capacity and improved service delivery. As we saw in Chapter 5, this logic was under way when in 1964 the Frei government used the then recently-created Chilean National Health Service as the instrument through which his promises on maternal and infant health initiatives would be delivered. In contemporary Chile, a similar dynamic of higher investment and improved delivery can be observed after the introduction in 2005 of AUGE, a system of explicit treatment guarantees for pre-specified conditions which disproportionately benefits the poor[554].

Though from a developed-democracy point of view enhancing already-existing state infrastructures to deliver the goods may sound as a rather obvious recommendation, in Latin America it is by no means the sole way of implementing new policies. In Argentina the creation of new, parallel, bureaucracies for almost any new program or policy initiative is endemic and is a significant contributor to that country's

[553] These could indeed be of varied kinds, from securing greater independence for the Judiciary to an electoral reform that reduces extreme party fragmentation in Congress.
[554] Bitrán et al (2010); Vargas and Poblete (2008)

bureaucratic instability and organizational fluidity[555]. Likewise, as Weyland et al. (2010) discuss, a significant difference between the 'moderate' (Chile, Brazil) and the 'radical' (Venezuela, Bolivia) left in Latin America during the first decade of the 21st century was that the former *"enact[ed] or continu[ed] reforms in the institutionalized social programs administered by line ministries and other established state agencies (…) [b]y contrast, the contestatory left has prioritized the creation of ad*-hoc schemes, *especially the vast system of 'missions to save the people' in Bolivarian Venezuela"*[556]. As these authors note, the advantage in the latter case of bypassing the *"ossified, sclerotic existing state institutions"* is that beneficiaries can be reached much more quickly; however, the underside is that *"the lack of institutionalization exposes these initiatives to the risk of administrative chaos and to the danger of retrenchment should windfall rents dry up"*[557]. By their very nature, they also have no effect on upgrading those 'ossified, sclerotic' state bureaucracies, thus doing nothing to diminish future incentives to bypass them once again and to reverse a country's low-state-capacity, unstable/low-quality policy equilibrium.

Finally, and harking back to the distinction between minimal, intermediate and advanced state functions introduced in Chapter 2, the empirical examination of state capacity and policy effectiveness in Latin American countries suggests that some countries are indeed more prepared to successfully attempt the fulfilment of new, more complex state functions than others. Take, for instance, the classic issue of industrial policy. This is an issue that, like utilities regulation, is highly sensitive to the stability and adaptability of policies and that places in close and frequent contact important business interests and small, highly-technical bureaucracies. In this case,

[555] Spiller and Tommasi (2007), pp.167-175; Ferraro (2006).
[556] Weyland et al (2010), p.162
[557] ibid, pp. 162-163

however, the danger of capture is probably even greater as consumers feel its effects much more indirectly than in the case of utilities. Therefore, only countries with high bureaucratic and (especially) political capacity can be reasonably expected to successfully undertake this function. Therefore, this research suggests that countries such as Uruguay, Chile, Costa Rica and Brazil are in a better position to attempt complex industrial policies than countries such as Argentina or Venezuela. It is perhaps ironic that ideological reasons have made such policies be pursued in Argentina but not in Chile, when this research suggests that, from a state capacity perspective, the reverse should be the case.

Future research and conclusion

This empirical investigation of state capacity and policy effectiveness in Latin America has proposed a novel conceptualization, operationalization and measurement of state capacity and an (adapted) application of an existing conceptualization of policy effectiveness (Roller, 2005) to Latin America. It has also proposed a simple theoretical model through which to understand the different influences on policy effectiveness. In this sense, the overarching ambition of this work has been to suggest a somewhat novel way in which to think about the relationships between states, institutions, policy outcomes and development.

Naturally, all of these concepts and relationships would benefit from further research, as – in spite of the advances made by sociologists, economists and political scientists in the last decades – much remains to be understood regarding the ways in which politics ultimately affects development. In this conclusion, I have suggested several ways in which this research could be further extended, particularly as regards furthering our understanding of the ways in which the proposed three state capacity dimensions relate to each other and to the policy dimensions. For this purpose, studies that extend the geographical coverage of this study – whether quantitatively to new world-areas or qualitatively through new focused country comparisons – would be needed. Comparisons between countries that show more variability vis-à-vis one another regarding their state capacities would be particularly useful; for instance, between low-infrastructural power, high(ish)-bureaucratic and political capacity Colombia and a country such as Venezuela or Argentina, who have roughly the reverse profiles. Extended coverage of policy dimensions is also needed; for instance, infrastructure and environmental protection are two key policy dimensions that in this work were not considered.

More generally, however, the research agenda this thesis supports is conceptual and theoretical as much as it is empirical. Of particular importance is a renewed attention on agreeing a common definition of state capacity and of developing a common, valid and reliable measurement of the concept. For long rather ignored in the political science conceptual toolkit – and used almost exclusively for the study of 'weak' or 'failed' states in civil-war prone contexts –, recently-revived interest in state capacity within Latin American political science comparativists is a most promising sign[558]. In this sense, and beyond the specific conceptualization and measurement strategy adopted in this work, the main message of this research has been that we must theoretically unpack state capacity in a way that avoids circularity and policy-contingent definitions. The clear separation between capacity and policy outcomes on the one hand, and the emphasis on three dimensions that are general and not definitionally tied to performance in any one policy area, are the ways in which I have suggested this may be achieved.

[558] See the special issue by the Revista de Ciencia Política (2012)

Theoretically, I have attempted to model relations between these very abstract entities – state capacity, policy effectiveness, institutions, regimes, etc. – in a way that avoids circularity and that encourages the formulation of more precise causal chains from ‘institutions’ (understood in their broadest sense) to final policy outcomes. In this sense, the agenda forward is precisely to improve our understanding of ‘what causes what’ by avoiding reliance on vague, somewhat undemarcated concepts such as ‘inclusive institutions’. This is fundamental if our explanations are to remain falsifiable.

This thesis has made at heart a very simple argument: state capacity matters for policy outcomes and thus for development. In its support, it has provided different kinds of empirical evidence to show how and why this is so, using a mid-range theory and a mid-sized, historically and theoretically sensible group of countries as its laboratory. For developing regions such as Latin America, this analysis has shown that rehabilitating ‘state capacity as a conceptual variable’ is a useful analytical strategy through which to understand the existing, large differences in policy effectiveness within the region. By integrating extant literatures on state capacity and institutions in sociology, political science and political economy that are clearly related but tend to talk past each other, I hope to have contributed to the task of creating some theoretical common ground and thus the possibility of knowledge accumulation and collaborative theory-building. In the last resort, I hope this thesis has allowed us to improve on current explanations of differences in policy effectiveness within Latin America. If its analysis is correct, it also suggests where we should focus governance reform efforts as the neoliberal tide recedes in Latin America: namely, on the strengthening (not growth) of its historically and comparatively weak states – in terms of their infrastructural power, their bureaucratic capacity and their political capacity. This is, I believe, a necessary component of any strategy to achieve broad-based development and, ultimately, to also strengthen democratic legitimacy in the region.

APPENDICES

Appendix A: Details of public goods indices' construction

1. The public goods indices in detail

The eight public goods indices were constructed using the conceptualizations shown in Chapter 2. Below the last leaves of each concept tree, only empirical sources remain. In the tables below each index is presented in detail.

a) Citizen Security

Table A1.1: Citizen Security

Dimensions	Crime rates (0.7)			Trust in System (0.3)	
Kind of data	Hard data (0.5)		Perceptions (0.5)	Perceptions	
Indicators	Homicide Rate (0.5)	Victimization Rate (0.5)	Assessments (1)	In Police (0.5)	In Judiciary (0.5)
Final weight	**0.175**	**0.175**	**0.35**	**0.15**	**0.15**
Argentina	0.888	0.565	0.511	0.310	0.327
Bolivia	0.702	0.645	0.515	0.312	0.368
Brazil	0.436	0.661	0.340	0.387	0.396
Chile	0.850	0.626	0.733	0.687	0.359
Colombia	0.000	0.692	0.316	0.551	0.503
Costa Rica	0.845	0.667	0.540	0.470	0.429
Dominican Rep.	0.437	0.719	0.485	0.407	0.458
Ecuador	0.640	0.574	0.510	0.413	0.347
El Salvador	0.000	0.638	0.084	0.468	0.415
Guatemala	0.208	0.651	0.119	0.351	0.386
Honduras	0.260	0.653	0.222	0.416	0.393
Mexico	0.785	0.638	0.435	0.403	0.416
Nicaragua	0.673	0.692	0.685	0.530	0.420
Panama	0.739	0.838	0.695	0.430	0.402
Paraguay	0.656	0.671	0.464	0.289	0.245
Peru	0.883	0.550	0.378	0.394	0.289
Uruguay	0.893	0.652	0.755	0.477	0.467
Venezuela	0.222	0.543	0.293	0.324	0.426
AVERAGE	**0.56**	**0.65**	**0.45**	**0.42**	**0.39**
ST DEVIATION	**0.31**	**0.07**	**0.20**	**0.10**	**0.06**

Weights

1. The ‘final weight’ row shows how much indicator weighs in the index. For instance, the weight of the homicide rate is 0.7*0.5*0.5=0.175=17.5% of the total index. **This is true for all tables in this Appendix.**

Sources and years

2. The homicide rate data is for the year 2005, with the exception of Bolivia, Dominican Republic, Guatemala, Honduras, Panama and Peru, where it is from 2004. Because of the disagreement between health and police/justice data in homicide rates in some countries, for all countries two homicide rates were obtained, one based on each kind of source. The higher estimate was weighed 0.75 and the lowest 0.25, under the assumption that under-estimation is likelier than over-estimation of the homicide rate. All data comes from the United Nations Office on Crime and Drugs.
3. The victimization rate is an average of three different polling sources’ results regarding national victimization data: Gallup World Poll, Latinobarómetro and LAPOP (Latin American Public Opinion Project). The Gallup data is for 2008, the Latinobarómetro data is an average of the 2007 and 2008 waves, and the LAPOP data is an average of the 2006 and 2008 waves (except for Argentina where only the 2008 data is available). The Gallup data is a weighted average of the questions regarding having been a victim of theft (one third) and having been assaulted/mugged (two thirds), both in the last twelve months. For the other two surveys the question refers to having been a victim of crime in the last twelve months.
4. The expert assessments come from two sources: the Economist Intelligence Unit’s (EIU) evaluation of the ‘level of violent crime’ in each country in 2007 (taken from the Global Peace Index website), and the World Economic Forum’s Global Competitiveness Survey (GCS) 2008 data on two questions regarding the costs of common and of organized crime to business.
5. The Trust in Police and Trust in Judiciary data comes from polls. Trust in police is the weighted average of six questions: two which directly ask about trust in the police (from the 2008 Gallup World Poll and LAPOP 2008)[559], and four related questions, two from LAPOP 2008, one from the GCS 2008 and

[559] The Gallup question asks about trust in local police and the LAPOP question asks about trust in the national police.

one from Latinobarómetro (with a weight of 12.5% each)[560]. Meanwhile, the Trust in Judiciary data is a simple average of three questions, two asking directly about trust in the judicial system (GWP, LAPOP) and one (LAPOP) on degree of trust that the judicial system will punish the guilty.

Method of calculation

6. The homicide rates were converted into the 0-1 range through linear transformation between a theoretically-imposed minimum and maximum homicide rates. The minimum homicide rate of 0 was assigned the (maximum) score of 1, while a maximum rate of 50 was assigned the (minimum) score of 0. Any country with a homicide rate above 50 was thus assigned a score of 0 on this indicator. For example, Brazil had an estimated homicide rate of 28.8 per 100,000 of population. Thus, (1-28.8/50) = 0.436, which is the score assigned to Brazil on Table A.1.1 above.
7. The victimization rate is the average of the three polls, but re-scaled so that they all have the same mean. This rate is converted into a score by subtracting the rate from 1 (so that a rate of 0 would become a score of 1, and vice-versa). For instance, the average victimization rate of Argentina is .435 (or 43.5%), so its score is 0.565. The correlations between the three polls range from 0.52 to 0.69.
8. The assessment score is the average of the EIU and the GCS scores. The GCS score is the average of the two questions included. The original EIU assessment is a score between 1 (no violent crime) and 5 (high level of violent crime), while the GCS questions are scored between 1(very high costs) and 7 (minimal costs). All questions are normalized to the 0-1 range before averaging. The correlation between the two sources is 0.84.
9. The Trust in Police score is obtained by a weighted average of the six questions. The two direct questions on police trust get half the weight (25% each). The other four questions, coming from three different sources, get equal weight by source, so that the two LAPOP questions together get the same weight (16.7%) as the Latinobarómetro and GWP questions. This is done to minimize source-specific bias. All answers were first linearly normalized to

[560] The two additional LAPOP questions ask people to state whether they agree or not with the statement ‘the police helps protect people around here’ and the degree of confidence they have on the police catching the perpetrator of a crime against themselves. The GCS question asks people to grade (from 1 to 7) the reliability of police services in the country. The Latinobarómetro question regards the probability of bribing a policeman.

the 0-1 range, where 1 is a theoretical maximum (100% of respondents giving the most trusting or positive answer available) and 0 is the theoretical minimum (100% of respondents giving the most distrusting or negative answer). The Cronbach alpha of the six questions is 0.93. The Trust in Judiciary score is a simple average of the three questions, normalized into the 0-1 range in the same way just described. Their Cronbach alpha is 0.86.

b) Internal Security

Table A2.1 Domestic Security

Dimensions	Internal Unrest (0.7)	Respect for Human Rights (0.3)
Kind of data	Perceptions	
Indicators	Expert Assessments	Expert Assessments
Final weight	**0.7**	**0.3**
Argentina	0.805	0.688
Bolivia	0.609	0.698
Brazil	0.852	0.229
Chile	0.904	0.927
Colombia	0.427	0.031
Costa Rica	0.890	0.958
Dominican Rep.	0.861	0.458
Ecuador	0.637	0.500
El Salvador	0.705	0.625
Guatemala	0.710	0.479
Honduras	0.729	0.500
Mexico	0.780	0.385
Nicaragua	0.732	0.688
Panama	0.819	0.958
Paraguay	0.694	0.583
Peru	0.627	0.542
Uruguay	0.892	1.000
Venezuela	0.596	0.385
AVERAGE	**0.74**	**0.59**
ST DEVIATION	**0.13**	**0.26**

Sources and years

1. The Internal Unrest dimension uses 4 sources taken from the 2007 World Bank Governance Indicators (and thus referring to 2006 data), plus one source (the Economist Intelligence Unit) from 2007. For each WGI source, a single, summary score is available; for the EIU, I averaged the different components available into a summary score. Table A2.2 details the sources and the dimensions of unrest each score refers to.

Table A2.2: Sources

Source	Dimensions
Economist Intelligence Unit	Deaths from Organized Conflict Level of Organized Conflict Potential for Terrorist Acts Likelihood of Violent Demonstrations
DRI	Military Coup Risk Major Insurgency/Rebellion Political Terrorism Political Assassination Civil War Major Urban Riot
Global Competitiveness Survey	Business Costs of Terrorism
WMO	Civil Unrest Terrorism
Political Risk Services	Civil War/Coup Threat Terrorism/Political Violence Civil Disorder

2. The Respect for Human Rights score is taken from two sources. The first comes from the WGI: the Cingranelli-Richards Human Rights Dataset (CIRI) and the Political Terror Scale (PTS), which are constructed from the same underlying publications and thus are treated as a single source. The data refer to the 2006 Governance Indicator score for Political Stability and Absence of Violence from this source:

> "The Cingranelli-Richards dataset is a numerical coding on a 2 or 3 point scale of data on 13 human rights, as reported in Amnesty International Human Rights Reports and the U.S. Department of State Country Reports on Human Rights Practices (…) The Political Terror Scale is a numerical coding on a 5-point scale of state-sponsored domestic political terror through imprisonments, torture, disappearances and violations of the rule of law"[561]

The second source is the Economist Intelligence Unit's assessment of the degree of disrespect for Human Rights in each country (2007), also taken from the WGI dataset.

[561] Worldwide Governance Indicators (www.govindicators.org)

Method of calculation

3. All WGI are already normalized to the 0-1 range. The EIU data was scored on a 1-5 scale, which I normalized to 0-1 and averaged. The Internal Unrest score is the weighted average of the five source-specific scores. The weights by source are in Table 2C. The weights are assigned so as to make those sources which cover more dimensions of internal unrest weigh more than those that cover less dimensions, but weights are capped so as to avoid over-reliance on any one source. In any case, the sources are highly correlated (the associated Cronbach Alpha is 0.91). The same procedure holds for the Human Rights score. In this case, the correlation between the two sources is 0.91 and the score is a simple average of the two sources.

Table A2.3: Weights

Source	**Weight**
DRI	**0.25**
GCS	**0.08**
WMO	**0.17**
EIU	**0.25**
PRS	**0.25**

c) Health

Table A3.1: Health

Dimensions	Infectious Disease (0.5)						Infant Health (0.5)		
Kinds of data	Hard data								
Sub-dimensions	Final Outcomes (0.5)		Intermediate Outcomes (0.5)				Intermediate Outcomes (0.5)		Final Outcomes (0.5)
Sub-dimensions	Under-nourishment (0.5)	Tuberculosis Incidence (0.5)	Sanitation (0.5)		Immunization (0.5)		Pre-natal care (1)		Infant Mortality (1)
Indicators	% of population under-nourished	Incidence per 100,000	% Sanitation	% Safe Water	% Measles	% DPT	% Pre-natal care	% Attended Deliveries	Per 1,000 live births
Final weight	**0.125**	**0.125**	**0.0625**	**0.0625**	**0.0625**	**0.0625**	**0.125**	**0.125**	**0.25**
Argentina	0.950	0.893	0.910	0.960	0.970	0.940	0.996	0.994	0.846
Bolivia	0.770	0.490	0.430	0.860	0.880	0.830	0.780	0.662	0.495
Brazil	0.940	0.835	0.770	0.910	0.990	0.990	0.978	0.970	0.796
Chile	0.950	0.956	0.940	0.950	0.910	0.940	0.996	0.998	0.924
Colombia	0.900	0.875	0.780	0.930	0.950	0.930	0.940	0.964	0.824
Costa Rica	0.950	0.962	0.960	0.980	0.900	0.890	0.908	0.997	0.896
Dominican Republic	0.790	0.737	0.790	0.950	0.790	0.810	0.988	0.955	0.716
Ecuador	0.870	0.736	0.840	0.950	0.660	0.750	0.893	0.763	0.774
El Salvador	0.900	0.887	0.860	0.840	0.980	0.960	0.908	0.901	0.818
Guatemala	0.840	0.786	0.840	0.960	0.950	0.800	0.887	0.505	0.693
Honduras	0.880	0.730	0.660	0.840	0.910	0.870	0.917	0.669	0.727
Mexico	0.950	0.929	0.810	0.950	0.960	0.980	0.942	0.934	0.832
Nicaragua	0.790	0.830	0.480	0.790	0.990	0.870	0.894	0.726	0.747
Panama	0.830	0.842	0.740	0.920	0.940	0.990	0.866	0.910	0.802
Paraguay	0.880	0.841	0.700	0.770	0.880	0.850	0.953	0.795	0.751
Peru	0.870	0.557	0.720	0.840	0.990	0.940	0.910	0.710	0.749
Uruguay	0.950	0.925	1.000	1.000	0.940	0.950	0.975	0.998	0.875
Venezuela, RB	0.880	0.888	0.740	0.840	0.550	0.710	0.978	0.955	0.833
AVERAGE	0.783	0.883	0.817	0.776	0.902	0.897	0.889	0.928	0.856
ST DEVIATION	0.096	0.060	0.129	0.149	0.069	0.119	0.083	0.055	0.150

Sources and years

All data comes from the World Development Indicators, version April 2010, and are for the year 2006.

Missing Data

For some indicators and countries, data was not available for 2006. In these cases, 2005 data was used. If that was not available either, then the most recent previous data available was used, corrected so as to preserve that country's relative position in the new data. The cases where this method was applied, per indicator, are shown in Table A3.2

Table A3.2: Missing data

Indicator	Country (year of original data)
Prenatal care	Guatemala (2002); Panama (1998); Venezuela (2000)
Attended Deliveries	Colombia (2005); Costa Rica (2004); Ecuador (2004); El Salvador (2002); Guatemala (2002); Uruguay (2004); Venezuela (2002)
Sanitation	Venezuela (2004). In this case, data is from Mesa-Lago (2008) and is not corrected.
Improved water	Venezuela (2004). In this case, data is from Mesa-Lago (2008) and is not corrected.

Method of calculation

All dimensions, sub-dimensions and indicators (measuring the same sub-dimension) are weighted equally.

All indicators which are percentages are already in a 0-1 range. The two exceptions are infant mortality and tuberculosis prevalence, which are rates per 1,000 live births and per 100,000 people, respectively. In the case of infant mortality, the rate was simply divided by 100 and subtracted from 1, so that any country with a rate of 100 per 1,000 live births or higher would get a score of 0[562]. This is quite a high rate, equivalent to a rank of 181 among 191 countries for which there is available data in the world for 2006. In the case of tuberculosis an analogous formula was chosen, with 300 as the rate of prevalence (per 100,000) that gains a score of 0. Again, this is a very high rate of prevalence, equivalent to being ranked 166 among 197 countries with available data for 2006.

[562] The formula is 1-IMR/100. Therefore, a country with a rate of 0 would get a score of 1.

d) Education

Table A4.1: Education

Dimensions	Enrolment (quantity) (0.5)				Quality of Education (0.5)		
Kind of data	Hard data						Perceptions
Indicators	Pre-Primary (0.25)	Primary (0.25)	Secondary (0.25)	Tertiary (0.25)	Test scores (0.33)	Youth Literacy (0.33)	GCS (0.33)
Final weight	**0.125**	**0.125**	**0.125**	**0.125**	**0.167**	**0.167**	**0.167**
Argentina	0.664	0.995	0.794	0.646	0.333	0.987	0.336
Bolivia	0.415	0.949	0.709	0.399	0.086	0.970	0.226
Brazil	0.509	0.935	0.778	0.255	0.334	0.961	0.276
Chile	0.518	0.932	0.858	0.478	0.423	0.992	0.346
Colombia	0.356	0.916	0.676	0.300	0.309	0.976	0.456
Costa Rica	0.625	0.916	0.689	0.253	0.524	0.986	0.552
Dominican Republic	0.292	0.781	0.498	0.333	0.029	0.925	0.193
Ecuador	0.745	0.968	0.573	0.353	0.103	0.979	0.254
El Salvador	0.502	0.943	0.545	0.229	0.204	0.900	0.328
Guatemala	0.271	0.944	0.381	0.090	0.103	0.816	0.272
Honduras	0.275	0.964	0.492	0.171	0.020	0.873	0.295
Mexico	0.924	0.979	0.691	0.247	0.440	0.977	0.286
Nicaragua	0.525	0.902	0.435	0.180	0.152	0.732	0.221
Panama	0.595	0.985	0.642	0.439	0.137	0.974	0.307
Paraguay	0.299	0.924	0.577	0.255	0.137	0.976	0.180
Peru	0.630	0.970	0.712	0.332	0.224	0.976	0.185
Uruguay	0.795	0.997	0.664	0.446	0.541	0.992	0.444
Venezuela, RB	0.539	0.911	0.663	0.431	0.095	0.986	0.301
AVERAGE	0.527	0.939	0.632	0.324	0.233	0.943	0.303
ST DEVIATION	0.188	0.049	0.127	0.133	0.167	0.071	0.099

Sources and years

All enrolment data comes from the World Development Indicators. Pre-primary, primary and secondary are net enrolment rates, while for tertiary education they refer to gross enrolment rates. All rates refer to 2006 except for tertiary enrolment which is 2005 data. Missing data was estimated using neighbouring years and gross enrolment rates, as shown in Table A4.2.

Table A4.2: Missing data

Indicator	Countries with missing data (years used to estimate 2006 data)
Pre-primary	Brazil (2005 and 2007, net); Chile (2007 net and gross); Costa Rica (1999-2007 gross)
Primary	Argentina (2003 and 2005, net and gross); Brazil (2005 and 2007, net); Chile (2007, net and gross); Costa Rica (1999-2007 gross)
Secondary	Brazil (2005 and 2007, net); Chile (2007, net and gross); Costa Rica (1999-2007 gross); Honduras (2007 gross + net/gross ratios for 1999-2006 from 5 countries with similar 2007 gross enrolment rates- Ecuador, El Salvador, Guatemala, Nicaragua and Paraguay.
Tertiary (estimated year is 2005)	Bolivia (2004, 2007); Dominican Republic (2004); Ecuador (2007); Guatemala (2003, 2006); Honduras (2004); Nicaragua (2003); Uruguay (1999 and 2006); Venezuela (2003 and 2004).

The data for youth illiteracy refers to the percentage of illiteracy of people between 15 and 24 years, is 2005 data, and comes from UNESCO. The test scores index is built mainly from the scores in SERCE (Valdés et al 2008), a Latin American 6th grade reading and math tests in which 14 out of the 18 countries participated in 2006. Missing data for the four remaining countries (Bolivia, Dominican Republic, Honduras and Venezuela) was obtained from a 1997 math and reading international test, in which ten of the eighteen countries here considered participated, including all four that did not participate in SERCE. Finally, the perception data comes from the 2008 Global Competitiveness Survey, where respondents grade the (perceived) quality of the education system (50%), of primary education (25%) and of math and science education (25%).

Method of calculation

Enrolment rates and illiteracy rates are percentages, so their transformation into 0-1 scores is straightforward. In the case of GCS, the weighted average of the three questions was then linearly transformed from the original 1-7 scale into a 0-1 scale. Regarding the test scores, I use the joint presence of six countries (Argentina, Brazil, Chile, Colombia, Mexico and Paraguay) in both the 1997 and 2006 tests to estimate a SERCE score for the four missing countries. I do this by calculating each of the four countries' 1997-test z-score in relation to the 1997 sample average for the six countries that participate in both tests, and using this z-score to obtain the SERCE equivalent test score. In other words, their SERCE score maintains their relative position vis-à-vis the 1997 average of the six countries that participated in both tests. Finally, I transform these scores into the 0-1 range by rescaling all 18 SERCE scores according to the mean and standard deviation of the 2006 average (math and reading)

PISA 2006 score of the six Latin American countries who participated in the test. The purpose of this SERCE-PISA transformation is to give the 0-1 score a maximum and minimum that do not depend on sample-specific performance, and to thus place Latin American countries' educational performance on an international (instead of purely regional) scale..

e) Social Security

Table A5.1: Social Security

Dimensions	Safety nets (0.33)	Work Security (0.33)		Old age Security (0.33)
Kind of data	Perceptions	Hard data		
Indicators	Social safety nets (1)	% formal work (0.5)	% Contributing to pensions (0.5)	% of >65 with pension (1)
Final weight	**0.33**	**0.17**	**0.17**	**0.33**
ARGENTINA	0.600	0.630	0.339	0.705
BOLIVIA	0.300	0.372	0.118	0.898
BRAZIL	0.700	0.581	0.484	0.853
CHILE	0.800	0.714	0.623	0.787
COLOMBIA	0.500	0.556	0.273	0.251
COSTA RICA	0.800	0.686	0.558	0.592
DOM. REP.	0.400	0.570	0.190	0.119
ECUADOR	0.400	0.476	0.230	0.310
EL SALVADOR	0.400	0.505	0.256	0.162
GUATEMALA	0.400	0.459	0.237	0.154
HONDURAS	0.400	0.458	0.198	0.053
MEXICO	0.600	0.586	0.320	0.233
NICARAGUA	0.400	0.444	0.178	0.047
PANAMA	0.500	0.655	0.539	0.417
PARAGUAY	0.400	0.462	0.110	0.149
PERU	0.500	0.400	0.147	0.277
URUGUAY	0.800	0.574	0.631	0.856
VENEZUELA	0.600	0.461	0.292	0.313
AVERAGE	**0.53**	**0.53**	**0.32**	**0.42**
ST DEVIATION	**0.16**	**0.10**	**0.17**	**0.30**

Sources and years

The 'extent of social safety nets' comes from the 2006 Bertelsmann Transformation Index (BTI). As many other questions, the safety nets item corresponds to a qualitative assessment, on a 1 to 10 scale, done by experts. The other three indicators are 'hard' data. The percentage of people in formal work is taken from Mesa-Lago (2008, p.42) and refers to data from the 2001-2004 period. The percentage who contribute to pensions and the percentage of over-65s who receive some pension (including non-contributory pensions) is taken from Rofman et al (2008), who provides detailed calculations based on national household surveys from each country for the year 2006. In this respect, they represent particularly high-quality data. There is a small amount of missing data. In the 'percentage of workers contributing to pensions' indicator, data for Bolivia, Nicaragua and El Salvador is from 2005, and for Panama is from 2004. Meanwhile, in the 'percentage of over-65s receiving a pension', data for Bolivia and El Salvador is from 2005, while data for Nicaragua is taken from Mesa-Lago (2010, p.50) and corresponds to the 2000-2003 period.

Method of calculation

The BTI score is divided by 10 and the other three indicators are percentages. All numbers are therefore easily re-interpreted in a 0-1 scale.

f) Property Rights Protection

As mentioned in Chapter 2, the Property Rights Protection Index is simply the Heritage Foundation's Property Rights Index, averaged over all even years between 1996 and 2006.

Table A6.1: Property Rights

	1996	**1998**	**2000**	**2002**	**2004**	**2006**	Average
Final weight	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**	
Argentina	0.7	0.7	0.7	0.5	0.3	0.3	0.53
Bolivia	0.5	0.7	0.5	0.3	0.3	0.3	0.43
Brazil	0.5	0.5	0.5	0.5	0.5	0.5	0.50
Chile	0.9	0.9	0.9	0.9	0.9	0.9	0.90
Colombia	0.5	0.5	0.5	0.3	0.3	0.3	0.40
Costa Rica	0.5	0.5	0.5	0.5	0.5	0.5	0.50
Dominican Republic	0.3	0.3	0.3	0.3	0.3	0.3	0.30
Ecuador	0.5	0.5	0.5	0.3	0.3	0.3	0.40
El Salvador	0.5	0.5	0.7	0.5	0.5	0.5	0.53
Guatemala	0.5	0.5	0.5	0.3	0.3	0.3	0.40
Honduras	0.5	0.5	0.5	0.5	0.3	0.3	0.43
Mexico	0.5	0.5	0.5	0.5	0.5	0.5	0.50
Nicaragua	0.3	0.3	0.3	0.3	0.3	0.3	0.30
Panama	0.5	0.5	0.5	0.3	0.3	0.3	0.40
Paraguay	0.5	0.3	0.3	0.3	0.3	0.3	0.33
Peru	0.5	0.5	0.5	0.3	0.3	0.3	0.40
Uruguay	0.5	0.7	0.7	0.7	0.7	0.7	0.67
Venezuela	0.5	0.5	0.5	0.3	0.3	0.3	0.40
AVERAGE	0.51	0.52	0.52	0.42	0.40	0.40	**0.46**
ST DEVIATION	0.13	0.15	0.15	0.17	0.17	0.17	0.14

According to Heritage, their property rights index measures

> "…the degree to which a country's laws protect private property rights and the degree to which its government enforces those laws. It also assesses the likelihood that private property will be expropriated and analyzes the independence of the judiciary, the existence of corruption within the judiciary, and the ability of individuals and businesses to enforce contracts."[563]

[563] http://www.heritage.org/index/property-rights

Is the Heritage index biased?

To explore the possibility that the Heritage index may be biased, a Property Rights Protection Index was built for the year 2006, based on four independent sources, as detailed in Table A6.2.

Table A6.2: Sources for an expanded 2006 index

Source	Description
Heritage Property Rights Index	As above. Expert assessment. Score range: 0-100.
Bertelsmann Transformation Index- property rights protection	Expert assessment. Measures the extent to which *"government authorities ensure well-defined rights of private property and regulate the acquisition of property"*. Score range: 0-10.
Global Competitiveness Survey	Average of two questions, one regarding the extent of protection of property rights (0.67), and one regarding the degree of impartiality of courts (0.33). Both scores on a 1-7 scale.
Doing Business (World Bank): Contract Enforcement	This is a 0-to-10 transformation, taken from the Gwartney et al (2012), of the original Contract Enforcement data. This data purports to register 'objectively' how much time and money is required to *"... collect a clear-cut debt [which] is assumed to equal 200% of the country's per-capita income where the plaintiff has complied with the contract and judicial judgment is rendered in his favor"* (Gwartney et al 2012, pp.274-275).

Each source was normalized into a 0-1 range and weighted equally to construct this 2006 Index. The correlations between sources and with the 2006 Index can be seen in Table A6.3 below.

Table A6.3: Correlations between sources for expanded index

	Index	HER	GCS	BTI	DB
Index	1				
HER	0.93	1			
GCS	0.81	0.69	1		
BTI	0.92	0.78	0.81	1	
DB	0.24	0.21	-0.25	0.03	1

As can be seen in Table A6.3, Heritage is highly correlated with the other expert assessment- BTI- and also with the business survey respondents of the GCS. The only indicator that behaves differently is the Doing Business value, which is not a subjective assessment and which moreover looks specifically at the contract enforcement dimension. This suggests that this dimension may indeed behave differently from the protection from expropriation dimension which the subjective assessments also cover- and to which they may well give primacy. In sum, and given the 0.93 correlation between the Heritage scores and the overall 2006 Index, I conclude that the loss in precision by relying solely on Heritage as a source is small, and offset by the availability of its data for the full 1996-2006 period.

g) Economic Regulation

Table A7.1: Economic Regulation

	1996	1998	2000	2002	2004	2006	Average
Argentina	0.68	0.68	0.68	0.50	0.46	0.39	**0.57**
Bolivia	0.63	0.64	0.64	0.66	0.65	0.49	**0.62**
Brazil	0.64	0.66	0.60	0.59	0.62	0.58	**0.61**
Chile	0.79	0.80	0.79	0.80	0.80	0.81	**0.80**
Colombia	0.62	0.64	0.69	0.60	0.59	0.65	**0.63**
Costa Rica	0.74	0.74	0.76	0.73	0.73	0.70	**0.73**
Dominican Republic	0.49	0.48	0.49	0.49	0.45	0.53	**0.49**
Ecuador	0.57	0.60	0.58	0.50	0.50	0.41	**0.53**
El Salvador	0.63	0.63	0.68	0.65	0.65	0.62	**0.64**
Guatemala	0.53	0.56	0.56	0.56	0.54	0.53	**0.55**
Honduras	0.52	0.52	0.52	0.53	0.51	0.56	**0.53**
Mexico	0.62	0.64	0.62	0.70	0.71	0.70	**0.66**
Nicaragua	0.54	0.55	0.54	0.57	0.57	0.59	**0.56**
Panama	0.62	0.62	0.62	0.61	0.60	0.61	**0.61**
Paraguay	0.52	0.52	0.50	0.44	0.42	0.51	**0.49**
Peru	0.69	0.68	0.70	0.67	0.67	0.67	**0.68**
Uruguay	0.67	0.68	0.68	0.59	0.58	0.58	**0.63**
Venezuela	0.54	0.55	0.54	0.49	0.39	0.39	**0.48**
AVERAGE	**0.61**	**0.62**	**0.62**	**0.59**	**0.58**	**0.57**	
ST DEVIATION	**0.08**	**0.08**	**0.09**	**0.09**	**0.11**	**0.11**	

This Index is the average of two sources, each weighted equally: Heritage and the Economist Intelligence Unit. The Heritage data is itself a simple average of four dimension scores, all taken (as the Property Rights Index) from their Economic Freedom Index. These four dimensions are: Business Freedom, Trade Freedom, Investment Freedom and Financial Freedom. The EIU data is taken from the World Bank Governance Indicators, and represents an average of assessments of: degree of unfair competitive prices; degree of price controls; discriminatory tariffs; excessive protections; and discriminatory taxes. Both sets of data are for all even years between 1996 and 2006. The Heritage scores are in a 0-100 range which I normalize to 0-1, which is the EIU range. The correlation between the sources is 0.61 for the year 2006 and 0.58 for 2004, but decreases steadily the further back in time we go, so that by 1996 the correlation is -0.14. The average correlation across all years is 0.27, thus suggesting that before 2004 the indicator is not measured precisely. Nonetheless, since we cannot know which source is 'right' and which is 'wrong', error is minimized by retaining the two.

As with the Property Rights index, for robustness check purposes a fuller Economic Regulation index was built for the year 2006, including, in addition to the EIU and Heritage sources, two additional ones: data from the BTI and from the GCS. The BTI data is an average of four questions: degree of existence of market-based competition, of safeguards to prevent monopolies and cartels, of liberalization of foreign trade, and of establishment of a 'solid' banking system and a capital market. In turn, the survey (GCS) data refers to seven questions, referring to the burden of government regulations, to how distortionary is the tax system, to the degree of trade barriers, to the ease of starting a new business, to anti-monopoly policy, and to the quality of environmental regulations. In Table A7.2 we can see the correlations between the four sources.

Table A7.2: Correlations between sources, 2006

	GCS	BTI	EIU	HER
GCS	1			
BTI	0.71	1		
EIU	0.76	0.79	1	
HER	0.57	0.71	0.61	1

As we can see, the correlation between the sources is relatively high. The degree of correlation between this 'full' index and the one actually used (EIU+HER) is 0.97 for the year 2006, thus again suggesting that the loss of precision due to data unavailability for these sources for years prior to 2006 is not overly large.

h) Macroeconomic Stability

Table A8.1: Macroeconomic Stability

	1996	1998	2000	2002	2004	2006	Average
Argentina	0.68	0.77	0.66	0.42	0.34	0.74	0.60
Bolivia	0.76	0.68	0.58	0.70	0.72	0.65	0.68
Brazil	0.51	0.66	0.68	0.75	0.65	0.75	0.67
Chile	0.73	0.72	0.76	0.88	0.84	0.88	0.80
Colombia	0.62	0.64	0.56	0.83	0.78	0.77	0.70
Costa Rica	0.65	0.57	0.59	0.71	0.63	0.58	0.62
Dominican Republic	0.74	0.88	0.83	0.67	0.48	0.41	0.67
Ecuador	0.67	0.59	0.32	0.54	0.62	0.81	0.59
El Salvador	0.75	0.81	0.86	0.87	0.84	0.79	0.82
Guatemala	0.79	0.76	0.76	0.73	0.75	0.68	0.75
Honduras	0.49	0.59	0.52	0.60	0.65	0.73	0.60
Mexico	0.45	0.68	0.69	0.62	0.82	0.87	0.69
Nicaragua	0.61	0.61	0.55	0.52	0.48	0.64	0.57
Panama	0.87	0.66	0.64	0.78	0.63	0.69	0.71
Paraguay	0.64	0.72	0.70	0.65	0.66	0.79	0.69
Peru	0.50	0.59	0.72	0.72	0.88	0.83	0.70
Uruguay	0.51	0.74	0.61	0.49	0.36	0.56	0.54
Venezuela	0.53	0.45	0.49	0.44	0.40	0.53	0.48
AVERAGE	0.64	0.67	0.64	0.66	0.64	0.71	0.66
ST DEVIATION	0.12	0.10	0.13	0.14	0.17	0.13	0.13

Like the other economic goods, the Macro Stability Index is a 1996-2006 average calculated every two years. The composition of each year's index can be seen in Table A8.2.

Table A8.2: Composition of yearly index

Indicator	Weight	Description	Source
Growth variance	0.33	Standard deviation of growth over the last 3 years	WDI (World Development Indicators)
Inflation variance	0.167	Standard deviation of inflation over the last 3 years	WDI
Inflation Level	0.167	Average inflation of the last 3 years	WDI
Government Surplus	.113	Average government surplus as % of GDP over the last 3 years	ECLAC (Economic Commission for Latin America and the Caribbean)
Government Debt	.113	Average government debt as % of GDP over the last 3 years	ECLAC
Current Account	.113	Average current account balance as % of GDP over the last 3 years	WDI

There were a few instances of missing data. For the Government Surplus and Government Debt indicators, data was available from 1997 onwards. In these cases, the 1996 data was imputed as equal to the 1997 value, and the 1998 data was imputed as the average of the last two years (1997 and 1998). In the case of Nicaragua, there is no inflation data available before the year 2000. Therefore, for its inflation level indicator, the 2000 value was imputed for 1998 and 1996, while for the inflation variance indicator the 2002 value was imputed for 1996, 1998 and 2000.

Method of Calculation

Transforming all of these data into a 0-1 range is not straightforward, particularly if we want the 0 and 1 values to be meaningful qualitative benchmarks defining the minimum and maximum scores. Whenever possible, qualitative benchmarks adapted from the Economist Intelligence Unit (2006) were used to define 0, 1 and some intermediate points. When such benchmarks were not available, performance was defined as distance from the worst and/or best performance in the world, depending on the case. Table A8.3 explains these transformations and benchmarks.

Table A8.3: Scoring transformation and benchmarks

<table>
<tr><th>Indicator</th><th>Type of transformation</th><th>Benchmarks</th></tr>
<tr><td>Growth variance</td><td>Average variance is transformed into a z-score in the world distribution (i.e. number of standard deviations from the world average)</td><td>If variance = 0, score = 1. If z-score=0 (i.e. the country's variance = average world variance), score = 0.5. If z-score<=2, score=0. Linear transformation in between these benchmarks.</td></tr>
<tr><td>Inflation variance</td><td>Same as above</td><td>Same as above</td></tr>
<tr><td>Inflation Level</td><td>Inflation level is scored according to qualitative benchmarks. Source: Adapted from EIU (2006).</td><td>
<table>
<tr><th>Inflation Level</th><th>Score</th></tr>
<tr><td>3</td><td>1</td></tr>
<tr><td>6.5</td><td>0.75</td></tr>
<tr><td>15</td><td>0.5</td></tr>
<tr><td>30</td><td>0.25</td></tr>
<tr><td>50</td><td>0.00</td></tr>
</table>
Inflation lower than 3% gets a score of 1 and above 50% a score of 0. Scores in between benchmarks are a linear function of distance.</td></tr>
<tr><td>Govern-ment Surplus</td><td>Surplus level is scored according to qualitative benchmarks. Source: Adapted from EIU (2006).</td><td>
<table>
<tr><th>Surplus as % of GDP</th><th>Score</th></tr>
<tr><td>-8</td><td>0</td></tr>
<tr><td>-6</td><td>0.25</td></tr>
<tr><td>-4</td><td>0.5</td></tr>
<tr><td>-1.75</td><td>0.75</td></tr>
<tr><td>-0.5</td><td>1</td></tr>
</table>
Deficit higher than 8% gets a score of 0, and lower than 0.5% (including surpluses) get a score of 1. Scores in between benchmarks are a linear function of distance.</td></tr>
<tr><td>Govern-ment Debt</td><td>Debt level is scored according to qualitative benchmarks. Source: Adapted from EIU (2006).</td><td>
<table>
<tr><th>Debt as % of GDP</th><th>Score</th></tr>
<tr><td>40</td><td>1</td></tr>
<tr><td>50</td><td>0.75</td></tr>
<tr><td>70</td><td>0.5</td></tr>
<tr><td>90</td><td>0.25</td></tr>
<tr><td>110</td><td>0</td></tr>
</table>
Debt higher than 110% gets a score of 0, and lower than 40% gets a score of 1. Scores in between benchmarks are a linear function of distance.</td></tr>
<tr><td>Current Account</td><td>Debt level is scored according to qualitative benchmarks. Source: Adapted from EIU (2006).</td><td>
<table>
<tr><th>Current Account Balance as % of GDP</th><th>Score</th></tr>
<tr><td>-6.00</td><td>0</td></tr>
<tr><td>-4.50</td><td>0.25</td></tr>
<tr><td>-3.25</td><td>0.5</td></tr>
<tr><td>-1.75</td><td>0.75</td></tr>
<tr><td>-1.00</td><td>1</td></tr>
</table>
CA deficit higher than 6% of GDP gets a score of 0, and lower than 1% (and surpluses) get a score of 1. Scores in between benchmarks are a linear function of distance.</td></tr>
</table>

2. Robustness check: Equal weights by dimension

The two security good- internal security and citizen security- include subjective weights in their operationalization. Table A.9 below shows each country's z-score change (or change in standard deviations) between an equal-weights scheme and the original subjective weights. As it can be seen, almost all changes are quite small, with only one case (Brazil in the internal security dimension) exceeding (barely) a change of half a standard deviation. The last row in the table shows the correlation for each index between the equal-weights and the subjective-weights version. As it can be seen, in both the correlation is 0.98, which confirms the high degree of similarity between both versions.

Table A9: Difference in z-scores between equal-weight and subjective-weight versions of the Citizen Security and Internal Security Indices

	Citizen Security	Internal Security
Argentina	-0.29	0.04
Bolivia	-0.22	-0.32
Brazil	-0.01	0.51
Chile	0.24	0.02
Colombia	0.42	-0.10
Costa Rica	0.07	-0.03
Dominican Rep.	0.07	0.34
Ecuador	-0.09	-0.11
El Salvador	0.24	-0.09
Guatemala	0.00	0.04
Honduras	0.07	0.06
Mexico	-0.01	0.25
Nicaragua	0.12	-0.09
Panama	-0.07	-0.16
Paraguay	-0.41	-0.07
Peru	-0.20	-0.16
Uruguay	0.08	-0.06
Venezuela	-0.01	-0.09
Correlation	**0.98**	**0.98**

Appendix B: Operationalization and sources of control variables

The control variables in this study have been taken from many different sources, as detailed below.

i. **GDP per capita.** The indicator of wealth per capita is the 1990 to 2005 GDP per capita average for each country, corrected by purchasing-power parity, as reported by the World Bank.

ii. **Growth of GDP.** The 1995-2005 average GDP growth is used; data comes from the World Bank.

iii. **Economic inequality.** The Gini index is used to measure economic inequality. All observations available for a country between 2000 and 2005 are averaged to give the respective country's value. Data comes from the World Bank, and the number of observations per country varies between 2 and 4.

iv. **Population.** The proportion of young males in the population is measured as the percentage of males between 15 and 29 years of age in the total population. The proportion of young people is measured as the percentage of children between the ages of 5 and 14 in the total population. The proportion of older people in the population is measured as the percentage of people aged 65 or older. In all cases the value given is the average of the 1995, 2000 and 2005 values, as given by the UN Population Division. The total population variable is also calculated as the average of these 3 years, but then the natural logarithm of this average is taken and used as the final figure, to moderate the extreme non-normality of the original distribution (given by extreme outliers such as Brazil).

v. **Ethnic fractionalization.** This is measured by a standard ethnic fractionalization indicator which measures the probability that two randomly selected persons in a given population belong to different ethnic groups. The data comes from Alesina, Devleeschauwer, Easterly, Kurlat and Wacziarg (2003).

vi. **Strength of the left.** The political strength of the left may matter (positively) over the long run for welfare goods and over the short run (negatively) for economic goods. Therefore, the *historical strength of the left* is measured as the number of years between 1945 and 2000 in which the Executive was controlled by a left or centre-left party, according to the classification given by Huber, Mustillo and Stephens (2008). Meanwhile, the *recent strength of the left* is measured as the average political balance in the Executive. This is done by assigning a score in each year of 1 for a rightist Executive, a -1 to leftist ones, and intermediate corresponding values for centre-right, centrist and centre-left ones. The average for the 1995-2001 period is then taken for each country. The last year is 2001 because that is the last available date in the Huber dataset[564].

vii. **Trade Union strength.** This variable is measured in two points in time, 1995 and 2005, through trade union density figures. For the welfare goods regressions, only the 1995 data is considered, as it is used as a proxy for the historical influence of trade union strength on welfare policy. For the economic goods, the average of the 1995 and 2005 figures is used, as what should matter is the current trade union strength during the 1996-2006 period. Following Wibbels and Roberts (2010), the 1995 data comes from the International Labour Office (1997), while the 2005 data comes from the US State Department's 2005 Human Rights Report.

viii. **Trade Openness.** This is measured as the proportion of imports and exports over GDP, observed and averaged over each year in the 1995-2005 period. The data comes from the World Bank.

[564] In both the historical and recent measures of the strength of the left, secular and Christian parties of the same political (right/left) orientation were treated alike.

ix. **Export concentration.** This is measured as the export concentration index averaged over the 1995-2005 period, as calculated by UNCTAD. The higher this number, the larger the concentration of exports of a country in a single or few products.

x. **Party Fragmentation.** This is measured with Beck, Clarke, Groff, Keefer and Walsh's (2001) index of party fragmentation, which measures the probability that two randomly selected legislators come from different parties. The index has a yearly value, so here it is averaged for the 1995-2005 period.

xi. **Regime Durability.** This measures the age of the current political regime, i.e. after the last transition from non-democracy. I measure it as the amount of continuous democratic years from the transition until 1996. I use Huber and Stephens' data and classification of democracy in a four-point scale of 'hard' authoritarian years, 'soft' authoritarianism, restricted democracy and full democracy. For the purposes of the index I consider both restricted and full democratic years as democratic years.

xii. **Lora Index.** Measuring policy orientation is difficult, but a way of doing so (beyond the left/right orientation of the government) is by using the Lora Index of Economic Reform as a proxy for the 'neoliberalness' of the economy. This index attempts to 'objectively' measure the degree to which the actual laws in a country are in line with the 'Washington Consensus' reform recommendations in labour, financial and goods markets, as well as in tax and trade policies. This index is only available until 1999, so the average of 1996 to 1999 is used. This index is not available for Panama.

Appendix C: Correlations between control variables and policy dimensions

a) Security goods

For the security regressions five relevant control variables were identified, to which I add the centripetalism variable as an additional 'institutional' control. The correlations with the two security goods and the security dimension can be seen in Table C.1.

Table C.1: Correlations between control variables and Security goods and dimension

	Crime Score	Internal Score	Security Score
AvgGrowth 95-05	0.37	*0.41*	*0.43*
p-value	0.13	*0.09*	*0.08*
Gini	-0.18	*-0.43*	-0.33
p-value	0.48	*0.08*	0.18
age15_29_male	-0.17	**-0.47**	-0.35
p-value	0.50	**0.05**	0.15
ethnic_fract	-0.05	**-0.52**	-0.31
p-value	0.84	**0.03**	0.20
GDP_pc 90-05	0.26	0.25	0.28
p-value	0.29	0.31	0.26
Centrip_8500	-0.13	0.14	0.00
p-value	0.60	0.59	0.99

b) Welfare goods

Just as for the security goods previously, Table C.2 below gives the correlation between each control variable (plus centripetalism) and each of the welfare goods and the Welfare dimension as a whole.

Table C.2: Correlations between control variables and Welfare goods dimension

	Education Score	Health Score	Social Security Score	Welfare Score
GDP_pc 90-05	**0.84**	**0.75**	**0.72**	**0.86**
p-value	**0.00**	**0.00**	**0.00**	**0.00**
Ethnic Fractionalization	-0.14	**-0.54**	-0.20	-0.32
p-value	0.59	**0.02**	0.43	0.19
% of age 5-14	**-0.88**	**-0.72**	**-0.85**	**-0.90**
p-value	**0.00**	**0.00**	**0.00**	**0.00**
% of age > 65	**0.72**	**0.62**	**0.69**	**0.75**
p-value	**0.00**	**0.01**	**0.00**	**0.00**
Years of Left-leaning Executive, 1945-2000	0.17	-0.14	0.38	0.15
p-value	0.50	0.58	0.12	0.55
Trade Union Density, 1995	0.34	0.26	0.38	0.36
p-value	0.17	0.30	0.12	0.14
Centripetalism 1901-1995	0.10	-0.07	0.08	0.04
p-value	0.71	0.77	0.75	0.88

c) Economic goods

In the case of economic goods, we saw in Chapter 2 that macroeconomic stability behaves differently from the other economic goods- property rights and economic regulation. Moreover, the literature identifies a series of economic and political causes behind macroeconomic performance which are quite distinct from those that should influence property rights protection and economic regulation. For all these reasons, it seems more adequate to analyse separately the performance in macroeconomic stability from the other two goods. Therefore, in the correlations in Table C.3 below there is a clear separation between the variables that are relevant for property rights and regulation, on the one hand, and those relevant for macro stability, on the other; the correlations between a given control variable and not-relevant dependent variables are omitted for clarity. However, since all included variables matter in principle for the economic dimension (which is but an average of the three economic goods), the correlations with it are presented in all cases.

Table C.3: Correlations between control variables and Economic goods and dimension

	Property Rights 96-06	Economic Regulation 96-06	Macro Stability 96-06	Economic dimension 96-06
GDP_pc 90-05	**0.59**	0.39	-0.13	0.35
p-value	**0.01**	0.11	0.61	0.16
Trade Openness 1995-2005	-0.22	-0.12	0.10	-0.10
p-value	0.38	0.63	0.69	0.70
Ethnic Fractionalization	*-0.44*	-0.10	-0.07	-0.25
p-value	*0.07*	0.70	0.80	0.32
Lora Index 1996-1999	-0.04	0.26		0.19
p-value	0.87	0.32		0.46
Export Concentration			-0.37	*-0.41*
p-value			0.13	*0.09*
Trade Union Density 1995-2005			-0.20	0.03
p-value			0.43	0.92
Executive Balance 1995-2001			0.19	-0.09
p-value			0.46	0.73
Regime durability			-0.39	-0.23
p-value			0.11	0.36
Congress Fragmentation 1995-2005			0.11	0.19
p-value			0.66	0.44
Ln of Average Population 1995-2005			0.04	0.10
p-value			0.87	0.70

Appendix D: Calibrated values and (original values) for QCA analyses

	Secu-rity	Welfare	Econo-mic	Infrastr Power (w/o Insur-gency)	Bureau-cratic Capa-city	Political Capa-city	Polity 1995-2005	'Clean' Polity 1995-2005	Polity 1930-1995	GDP per capita	Ethnic Fract.	% Age 5-14	Growth 1995-2005	Export Concen.	% Trade Union 95-05	Lora Index
ARG	1 (0.38)	1 (1.06)	1 (-0.18)	1 (0.48)	1 (45.7)	0 (-0.27)	0 (88.2)	0 (17.9)	0 (7.6)	1 (8038)	0 (26)	0 (18.3)	0 (0.9)	0 (0.14)	1 (30)	1 (0.61)
BOL	0 (0.04)	0 (-0.90)	1 (0.08)	0 (-1.14)	0 (28)	0 (-0.65)	1 (93.6)	1 (20)	0 (8.7)	0 (2774)	1 (74)	1 (25)	0 (1.74)	1 (0.24)	0 (12)	1 (0.7)
BRA	0 (-0.37)	1 (0.75)	1 (0.16)	1 (0.27)	1 (52.5)	1 (1.3)	1 (90)	1 (18.5)	0 (9.3)	1 (6459)	1 (54)	0 (20)	0 (1.15)	0 (0.09)	1 (24)	0 (0.57)
CHI	1 (1.46)	1 (1.38)	1 (2.33)	1 (1.76)	1 (66.6)	1 (2.25)	1 (92.7)	1 (19.3)	1 (11.3)	1 (7911)	0 (19)	0 (18.6)	1 (3.47)	1 (0.29)	0 (13)	1 (0.59)
COL	0 (-1.72)	1 (0.15)	1 (0.13)	0 (-0.73)	1 (42.3)	1 (0.94)	0 (85)	1 (18.5)	1 (15.2)	1 (5528)	1 (60)	0 (21.6)	0 (0.99)	1 (0.24)	0 (6)	0 (0.55)
CRI	1 (1.09)	1 (1.20)	1 (0.45)	1 (0.13)	1 (49)	1 (0.68)	1 (100)	1 (20)	1 (20)	1 (6253)	0 (24)	0 (21.2)	1 (2.2)	1 (0.26)	0 (11)	0 (0.55)
DOM	1 (0.28)	0 (-0.86)	0 (-0.79)	0 (-0.11)	0 (29.1)	0 (-0.65)	0 (88.6)	0 (18.2)	0 (7)	0 (4073)	1 (43)	1 (22.9)	1 (3.57)	1 (0.25)	0 (13)	0 (0.5)
ECU	0 (-0.29)	0 (-0.37)	0 (-0.7)	0 (-0.56)	0 (22.5)	0 (-0.89)	0 (86.4)	0 (18.2)	1 (11.9)	0 (4647)	1 (66)	1 (22.7)	0 (1.66)	1 (0.41)	0 (6)	0 (0.53)
ELS	0 (-0.96)	0 (-0.25)	1 (0.93)	0 (-0.68)	0 (23.9)	1 (0.24)	0 (85)	0 (16.9)	0 (7.3)	0 (4051)	0 (20)	1 (24.5)	1 (2.36)	1 (0.23)	0 (8)	0 (0.53)
GUA	0 (-0.98)	0 (-1.15)	1 (-0.03)	0 (-1.21)	0 (26.4)	0 (-1.08)	0 (87.7)	0 (17.9)	0 (7.8)	0 (3188)	1 (51)	1 (27.5)	0 (1.18)	0 (0.21)	0 (4)	0 (0.54)
HON	0 (-0.56)	0 (-1.07)	0 (-0.59)	0 (-0.14)	0 (20.6)	0 (-0.12)	0 (83.2)	0 (16.4)	1 (10.5)	0 (2329)	0 (19)	1 (27.1)	0 (1.7)	1 (0.28)	0 (6)	0 (0.51)
MEX	0 (0.01)	1 (0.56)	1 (0.44)	1 (0.32)	1 (43.2)	1 (0.54)	0 (83.6)	0 (16.9)	0 (5.3)	1 (8256)	1 (54)	1 (22)	0 (1.45)	0 (0.13)	1 (28)	0 (0.51)
NIC	1 (0.59)	0 (-1.06)	0 (-0.89)	0 (-0.4)	0 (23.6)	0 (-0.74)	1 (90)	1 (20)	0 (4.8)	0 (1559)	1 (48)	1 (26.9)	1 (2.58)	1 (0.25)	1 (17)	1 (0.6)
PAN	1 (1.18)	1 (0.21)	1 (0.11)	1 (0.79)	0 (26.8)	0 (-0.49)	1 (95)	1 (18.5)	0 (8.6)	1 (6243)	1 (55)	0 (20.7)	1 (2.27)	1 (0.23)	0 (14)	-
PAR	0 (-0.2)	0 (-0.74)	0 (-0.62)	0 (-0.49)	0 (18)	0 (-1.07)	0 (85.9)	1 (18.7)	0 (4.3)	0 (3408)	0 (17)	1 (24.8)	0 (-0.51)	1 (0.39)	0 (12)	0 (0.56)
PER	0 (-0.34)	0 (-0.41)	1 (0.32)	0 (-0.19)	0 (28.3)	1 (0.03)	0 (75)	0 (15.2)	1 (11)	0 (4378)	1 (66)	1 (22.4)	1 (2.26)	1 (0.23)	0 (5)	1 (0.64)
URU	1 (1.49)	1 (1.49)	1 (0.14)	1 (0.66)	1 (50.1)	1 (1.37)	1 (100)	1 (20)	1 (12.7)	1 (7464)	0 (25)	0 (16.3)	0 (1.11)	0 (0.18)	0 (14)	0 (0.46)
VEN	0 (-1.1)	0 (-0.04)	0 (-1.29)	1 (1.13)	0 (30.7)	0 (-1.38)	0 (84.5)	0 (17.5)	1 (12.7)	1 (8087)	1 (50)	1 (22.2)	0 (0.23)	1 (0.58)	0 (13)	0 (0.51)
Thres-hold	**0.2**	**0**	**-0.22**	**0**	**33.56**	**0**	**89.9**	**18.33**	**10**	**5000**	**35**	**21.85**	**2**	**0.22**	**15**	**0.58**

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